TERRITORIAL ANALYSIS

of the next Hungary-Serbia INTERREG IPA CBC programme

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Contents

1 Introduction

1.1 Context and territorial scope

The Ministry of Foreign Affairs and Trade of Hungary as the Managing Authority and the Ministry of European Integration of the Republic of Serbia as the National Authority on the Serbian side of the current INTERREG-IPA Cross-border Cooperation Programme Hungary-Serbia (2014-2020) requested the Central European Service for Cross-Border Initiatives (CESCI) to prepare the programming process of the next INTERREG-IPA Cross-border Cooperation Programme Hungary-Serbia (2021-27). The mission is not identical with the designing of the next programme: its main goal is to identify those potential thematic areas which can be selected as priority areas of the next programme. The project is justified by the fact that due to the EU elections held in 2019 and the time needed for the set-up of the new Commission, the protracted Brexit negotiations, and the COVID-19 virus the new Cohesion Policy package has not been adopted yet (the final regulations are expected to be available in the second half of 2020). However, the next programme should start in 2021 which is not feasible if the partners do not make preparatory measures in due time.

Within the framework of the present project, those steps were taken which do not presuppose the adoption of the EU Regulations.

The next programming period will have special significance for Serbia since – as it is expected according to the current plans (see EC 2018e 2) – the country will become a member of the European Union in 2025, in the middle of the programming period (including the n+2 rule). In our case, this fact offers special significance to the 'mission statement' of the IPA III programmes since these programmes are aimed at preparing the candidate countries for EU membership (see: (EC 2018a Art. 3).

Consequently, the main objective of the territorial analysis (as the basis of the joint strategy prescribed by Art. 17 of the INTERREG Regulation[1]) is to provide the stakeholders involved in the Programming Committee (PC) with an overview on the territorial processes of the borderland and information on the intentions and opinions of the territorial and sectorial actors on the content of the future programme. The mission does not contain the designing of the next programme but the elaboration of the territorial analysis, which can be carried out without the final adoption of the Cohesion Policy Regulations and the 7-year budget of the EU. Thanks to the delivery, the PC members will be enabled to select the thematic areas, the specific, and the relevant, policy objectives of the future programme, which should be drafted later on.

The territorial scope of the next INTERREG-IPA Cross-border Cooperation Programme Hungary-Serbia (2021-2027) covers the area identical with the current INTERREG-IPA Programme. Consequently, the upcoming chapters including the results of the territorial analysis, the online survey and the territorial workshops target the same border area. The total analysed area covers 34 335 km^2 (larger than that of Belgium) with 2.76 million inhabitants[2] (Latvia has a population of similar size). The border area covers as many as 9 distinct territorial units and it is divided into two by a 174.72 km long external border of the European Union and the Schengen Area.

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1 See: https://eur-lex.europa.eu/procedure/en/2018_199

2 Population in 2018, Source: Hungarian Central Statistical Office, Statistical Office of the Republic of Serbia

Figure 1: Programme area

The analysed area of the Programme on the Serbian side includes the following 7 districts, equivalent to NUTS 3 regions ('окpyг', Romanised: 'okrug'), of the Autonomous Province of Vojvodina, giving home to 1.86 million people[3] altogether:

- RS121 - Zapadnobački okrug
- RS122 - Južnobanatski okrug
- RS123 - Južnobački okrug
- RS124 - Severnobanatski okrug
- RS125 - Severnobački okrug
- RS126 - Srednjobanatski okrug
- RS127 - Sremski okrug

The analysed area of the Programme on the Hungarian side includes the following 2 NUTS 3 regions ('megye'), giving home to 0.90 million people[4] altogether:

- HU331 - Bács-Kiskun megye
- HU333 - Csongrád megye[5].

3 Population in 2018, Source: Statistical Office of the Republic of Serbia

4 Population in 2018, Source: Hungarian Central Statistical Office

5 The name of the county was officially changed to 'Csongrád-Csanád megye' on 4th June 2020, after the compilation of this document's content had been finished. Consequently, this territorial analysis still refers to the county as 'Csongrád megye'.

1.2 Methodology, preparation process

The methodology has been designed with the goal to collect as much quantitative and qualitative data/information as possible about the different aspects of the topic. To achieve this aim, the following four activities have been realised.

Cohesion analysis of the border region

The main aim of the analysis is to measure the level of economic, social, and territorial cohesion of the joint Hungarian-Serbian border area. Cohesion analysis is an approach developed by CESCI, which provides a basis for cross-border planning and strategy making. It does not interpret the given border region along by the traditional, 'container-based', administrative logic, but as a coherent unity and an independent planning entity. In the course of this type of situation analysis, the main question is: how could the cohesion between the two neighbouring border areas be intensified and what are the obstacles to a more dynamic internal spatial organisation?

- **Territorial cohesion:** First, the planners interpreted, and territorially analysed, the region in a wider context. Not only were the internal spatial relations examined, but also references were made to the main trends and development orientations produced by the changes of the last decades. In the course of the analysis, the typical landscape and environmental factors (such as landscape structures, climate conditions, water regime, soil conditions, land cover, etc.); characteristics of the urban network (based on gravity models and function analysis[6]); the status and permeability of the border (the type of the border regime; the density and capacity of border crossings); existing cooperation structures and their governance frames have been examined.
- **Economic cohesion:** To get a realistic picture on the status of the economic cohesion of a given region, it is worth conducting an economic analysis focusing on cohesion rather than on sectorial features. All economic sectors (primary, secondary, tertiary) were analysed by applying traditional methods, however, the induction is shaped differently when emphasising the factors of economic cohesion of the cross-border region. The examination is focused on the common and complementary economic characteristics of the two sides of the border (presence of parallel or complementary economic sectors; development potential of vertical integration; set of economic infrastructure, etc.).
- **Social cohesion:** The success of cross-border cooperation is fundamentally determined by how local actors are involved in its realisation, how they can rephrase the narrative, which might once have been hostile. With a view to describing the level of social cohesion of a border area, the planners analysed its demographic characteristics, the features of migration, social differences, labour force supply and its mobility, level of education and employment, interethnic and cultural relations.

To carry out this exercise statistical information of the two national statistical offices and data from the Eurostat, further statistical data gathered by the national partners were used along with the most

[6] I.e. the major infrastructural assets and institutions [e.g. schools, post offices, ports, transport hubs, etc.].

relevant and up-to-date studies and evaluations. The applied methods combined desk research, data gathering and processing, GIS-based mapping[7] and figures as well as textual analysis.

To support the programming process in delineating future applicants and programme areas within the analysed region a short list of functional areas at the end of each chapter of the territorial analysis is provided. These can be considered as suggestions based on the analysis what type of such areas would be advised to be defined. It must be noted that the descriptions of functional areas are not binding, they should only be regarded as examples.

Furthermore, apart from the cohesion analysis, a comprehensive assessment of the policy framework has also been conducted synthesizing the relevant EU, macroregional and national level documents in order to offer an overview of the policy context in which the programme will function.

Chapter 7.2 contains a summary of the results of the territorial analysis. A table is provided for the sake of clarity of the summary, with appropriate cross-references to the relevant chapters of the territorial analysis. The table also points forward in the planning process, as it also identifies potential cross-border responses and relevant POs.

Finally, a thorough revision of the already contracted projects in the calls for proposals of the Interreg-IPA CBC Hungary-Serbia Programme has been carried out with the cut-off date of September 2019. During this process, the projects have been classified to each topic (where one project could appear in more than one category) and the list has been included at the end of each chapter. Such list is missing for the topics of cross-border functions, economic logistics and employment market as no project with a pronounced focus on these areas has been identified. It also must be taken into account that not each and every project is mentioned in this document but only those which are really linked to the chosen topics. The descriptions of the projects are taken from the official webpage of the programme without modifications.

Online survey

The main purpose of the online survey was to gather information from the local stakeholders on their preferences, potential project ideas and their opinion on the tools and solutions, which can be applied by the programme. The pool of the respondents was defined in close cooperation with the national authorities.

The questionnaire included 4 major topics:

- experiences in the field of IPA projects of the respondents (previous experiences, difficulties, identified needs for assistance) and their opinion on the priorities of the current INTERREG IPA programme;
- relevance and significance of cross-border topics (the respondents were invited to assess 38 CBC topics that they had the opportunity to complete with further ones if they found it necessary);

[7] A geographic information system (GIS) is a method for gathering, storing, checking, analysing and displaying different kinds of geographical, economic, social and environmental data with spatial information. Through layering an abundance of seemingly unrelated information on a map, GIS offers deeper insight into data by uncovering spatial patterns and relationships that supports decision making in a comprehensive way. To perform the GIS analyses mostly ArcMAP and QGIS programs were used.

- project ideas for the future programme (each respondent had the opportunity to give a brief outline on the topic, the planned activities, the preparedness, the partnership and the budget of, at maximum, three project ideas; and they were invited to classify the projects according to the 11 potential aggregated thematic areas);
- opinions on the specific tools (Strategic Projects, Small Project Fund, project integration) whether it is worth applying them under a thematic area in the future.

Since the survey was already available in a previous format in 2019, then in an improved version repeated in 2020, the results of the two surveys are presented in this document side by side.

Workshops

The series of workshops were designed to shed light on the preferences of the territorial stakeholders regarding the thematic areas to be selected for the future programme. In order to achieve this, the series of workshops are divided into two phases: in the first phase, the inputs of the participants were collected for the identification of the most important thematic areas; while in the second phase, the thematic areas selected by the PC will be discussed more in detail in order to feed into the design of the intervention logic of the programme.

In 2019 two workshops were held, one in Mórahalom, Hungary, and one in Novi Sad, Serbia, which then, following the PC decision, were repeated in 2020. This year four workshops were held: two in Vojvodina (Novi Sad and Subotica) – co-organised in cooperation with the Serbian National Authority; and two in Hungary (in Szeged and Kecskemét) – co-organised in cooperation with the two regional authorities (Csongrád and Bács-Kiskun counties, respectively).

In the course of these workshops, the participants were involved in an interactive process where they could express their opinion on the territorial challenges of the borderland; the level of integration of the borderland; and the potential tools and solutions by which these challenges could be addressed. During the workshops moderated conversation leading methods were widely used as well as a scoring game, brainstorming and constructive debate (in 2019) and voting and open-ended discussions (in 2020).

At the next PC meeting the selection of the thematic areas of the next INTERREG IPA programme will be made based, among others, on this document. Following this, the list of the participants of the second-phase workshops will be finalised (by the NA in Serbia and by the two regional authorities in Hungary) in line with the selected thematic areas. The PC will select 5 thematic areas at maximum: each of them will be addressed by one (bilingual) workshop where the potential developments and interventions can be drafted and the tools to implement can be fine-tuned. Alternatively, 10 separate workshops will be organised in case the stakeholders request to hold them in national languages. These pieces of information will be used as inputs during the PC meeting when identifying the specific objectives of the programme – in compliance with the relevant policy objectives.

Consultation

In order to validate the selected thematic areas from the point of view of the national and EU level priorities and policies, ministries of both countries relevant in terms of the selected topics will be requested to comment on the proposals in writing. CESCI will summarise the outcomes of the

selection phase in both languages and the two national authorities will be asked to forward the request to the relevant ministries.

Timing

The table below shows the updated timing of the preparation process. The letters X represent the original deadlines indicated in the Inception report, Y stands for the updated timing, while (X) indicates the original timing, which could not be realised. As it can be seen from the chart, the finalisation of the territorial analysis was postponed by three weeks, mostly due to the fact that the assembly of data and information necessary for the updates took more time for the commissioned authorities than it was planned originally. Furthermore, the territorial analysis has been sent back to CESCI from quality check by MA and NA on 19th of June so further modifications in the timing have become necessary. The updated territorial analysis was sent on 2nd September 2020 to the participants of the Programming Committee Meeting. The Programming Committee's discussion was held on 17th September 2020. This document represents the finalized territorial analysis based on the remarks mentioned at the Programming Committee Meeting.

Table 1: Updated timing

Activities / half-moons		02/1	02/2	03/1	03/2	04/1	04/2	05/1	05/2	06/1	06/2	07/1	07/2	08/1	08/2	09/1	09/2
Territorial Analysis	Re-drafting of the analysis	X	X	X	X	X	Y	Y									
	Data gathering			Y	Y	Y											
	Quality check (MA and NA)					(X)	(X)	Y	Y	Z	Z						
	Finalization of draft territorial analysis						(X)		(Y)	(Y)	Z	Z	Z		X		X
Workshops	W 1_HU			X													
	W 2_HU			X													
	TW 1_SRB		X														
	TW 2_SRB			X													
Online survey	Gathering of responses		X	X													
	Analysis of the results			X	Y	Y											
Programming Committee discussion									(X)			(Y)				(X)	

1.3 Factors negatively affecting the results

The conclusions of the analysis are affected by unfavourable conditions, which resulted from a limited access to available and analysable data and information. As a consequence, the new developments may (even completely) overwrite some of the statements of the analysis within a short timeframe. Below some of these special circumstances are listed and briefly described in order to make the consideration of these factors a part of the whole programme designing process, if necessary.

1) **We are just before the next nationwide census in both countries**

   Even though a pronounced effort has been made to identify and use the latest available data when compiling the analysis, it should be borne in mind that the latest census was conducted in 2011 in both countries. This means that in many cases no exact data but only estimates are available. The next census is planned for 2021, which will provide the latest, up-to-date information on the border area based on which the whole programme may need remarkable corrections.

2) **There are no good/sufficient cross-border data**

   As several EU documents and studies have already pointed out, national statistical authorities show a general deficiency in collecting specifically cross-border data, primarily flow indicators[8], which undoubtedly makes the exploratory work targeting cross-border interactions more difficult. It is worth including the set-up of a data and information collection system on cross-border flows in the next programme. These data can be used also for assessing the impacts of the programme itself.

3) **The relevant strategic documents are mostly out of date**

   Due to the rules of the programming process the strategic compliance assessment is hard to deliver, since the strategic documents regarding the next period are currently in the development phase, too. A detailed overview is made in the chapter dedicated to policy framework, however, out of the 65 identified documents only 24 have validity until 2022. (Let us mention again that at

[8] The typology of Henk van Houtum (2000) consisting „cross-border flows" has been taken as a basis for CESCI's cross-border Territorial Impact Assessment framework as published in the book called „Territorial Impact Assessment" (Medeiros 2020). In the publication, the following flow indicators are mentioned: infrastructural conditions of cross-border flows (average distance of border crossing points, average distance between the major regional centres of the border region *(travelling time and geographic distance), v*olume of cross-border traffic within the programme region, number of cross-border transport lines), cross-border mobility (number of cross-border commuters, number of commuting students across the border, number of visitors / overnights produced by citizens coming from the neighbouring country, frequency and average length of visits in the neighbouring country, number of registered residents originating from the other side of the border, number of travellers using cross-border transport lines), cross-border business activity (number of SMEs with owners from the neighbouring country, number of their employees and value of their annual turnover, number of cross-border joint ventures, number of their employees and value of their annual turnover, differences in real estate and fuel prices according to the physical distance from the border, value of investments in the borderland made by investors from the neighbouring country) and cross-border services (number of cross-border services, their cross-border clients and the frequency of their use by these clients, number of employees of cross-border service providers, annual turnover of cross-border service providers).

the time of the preparation of the current document, the Cohesion Policy regulatory package is still under formulation.)

4) **COVID-19 crisis**

The crisis generated by the new type of coronavirus has burst into Europe in the middle of the current planning process, which, besides the obvious health risks, may have subversive, currently unforeseeable consequences regarding this programme as well. In this regard, the four most important aspects may be:

- due to the coronavirus crisis, Ms. Ursula von der Leyen, President of the European Commission announced that the Commission plans to come forward with a whole new proposal for the MFF, which "must be a strategic investment in our future," adding that more money should be spent for "innovative research, for digital infrastructure, for clean energy, for a smart circular economy, for transport systems of the future"; which can completely change the direction of the current programming process;
- the borders will probably be re-opened after the pandemic is over, but there may be changes in border regime and security policy, which could affect the next programme;
- the crisis breaks those trends, outlined from statistical data, that the analysis was based on; the length and potential effects of the crisis are currently unpredictable. These unpredictable effects will obviously be answered in the future, on EU and national level as well. These answers may pose tasks to the next programme, which are unforeseeable today (e.g. the employment conditions are rapidly changing resulting in serious social challenges);
- even though all planned workshops could be organised according to the original schedule, the last one in Kecskemét took place just before the introduction of the restrictions. This was shown in the fact that less participants attended the event compared to the number of stakeholders registered previously.

The effects of the abovementioned circumstances are clearly unforeseeable; however, they can fundamentally affect the timelessness of the statements of the present analysis. As a consequence, an interim programme analysis seems to be inevitable in order to adjust the objectives of the programme to the expected changing environment after the mentioned processes are terminated (conducting the census, creating the relevant operative strategic documents, understanding the post-virus situation and the consequences of the expected economic crisis, establishing the regulatory environment orienting the budget and even the content of the programme).

2 Territorial analysis

2.1 Territorial cohesion

In the course of the analysis of territorial cohesion, three main topics are examined: 1. environmental protection and environmental sustainability (such as the landscape structures and soil conditions, the climate characteristics, the impacts of climate change, the hydrographical characteristics, the renewable resources, energy potentials); 2. transport connections considering the status and permeability of the border (the context of macroregional transport connections, the internal and external transport connections of the region i.e. border crossings, railway transport, road transport, public transport, water transport, air transport, cycle paths); 3. development of cross-border functions based on gravity models and function analysis (the main characteristics of the settlement network's spatial structure, the areas of functional cooperation, the healthcare service cooperation).

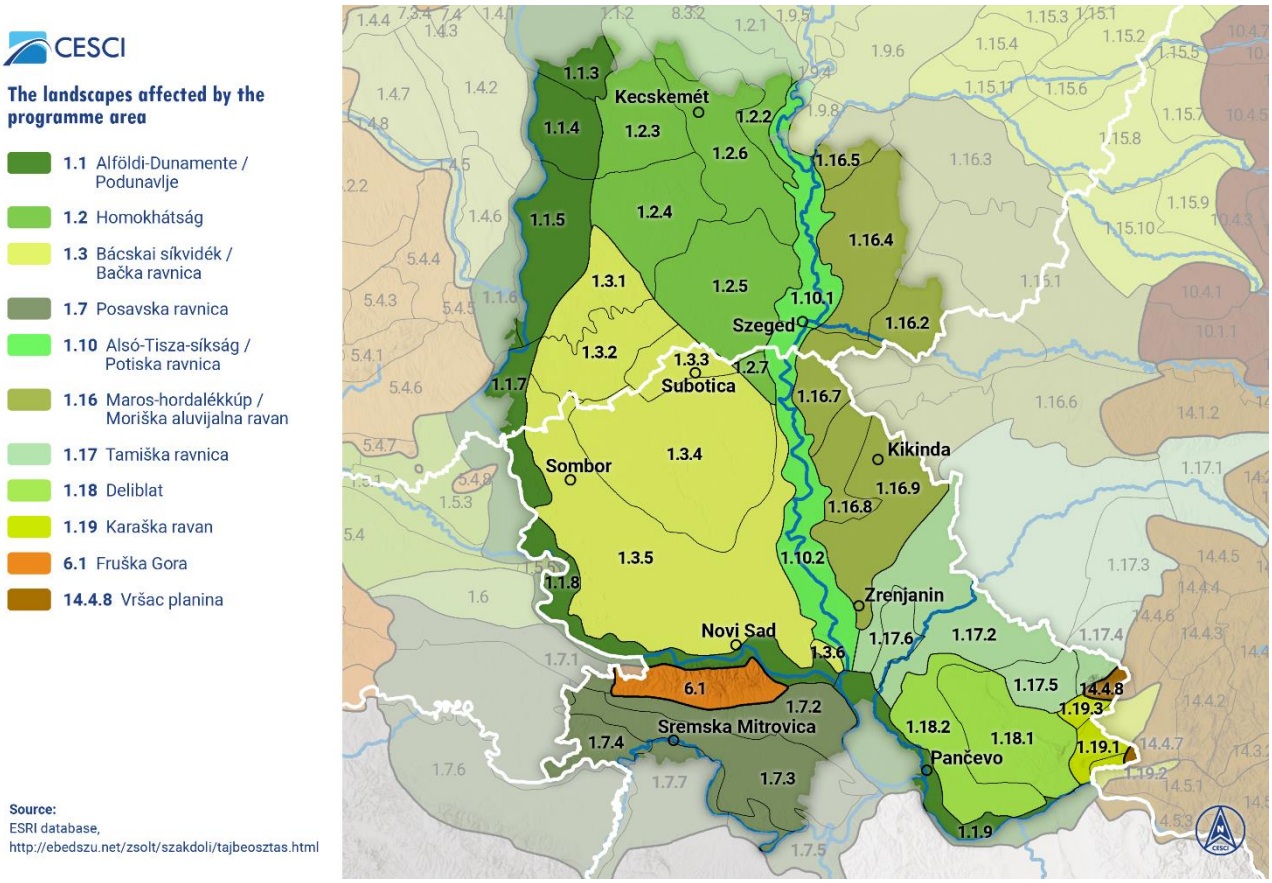
2.1.1 Environmental protection and environmental sustainability

2.1.1.1 Landscape structure, soil conditions

A geographic region is a characteristic part of the terrestrial surface, different from the neighbouring regions. The characteristics of a region is determined by its natural features and the social-economic impact of its population. According to the natural landscape, the study area is part of the Carpathian-Pannonian Region. Almost the entire programme area belongs to the Great Pannonian Plain macroregion's territory. The Alsó-Tisza-síkság/Potiska ravnica (1.10) is the territorial artery of the region, which expands across almost the entire study area in a north-south direction. The plain, defined by the landscaping activities of the river Tisza, is bordered by two wide mesoregions from the west: the Homokhátság (1.2) on the northern side of the region and the Bácskai síkvidék/Bačka ravnica (1.3) on the southern part of the region. The Fruška Gora (6.1), south from the small region Južnobačka aluvijalna ravan (1.1.8) defined by the Danube, divides the lowlands of the Srem (Posavska ravnica) (1.7) from the northern part of the programme area. The Alsó-Tisza-síkság/Potiska ravnica mesoregion (1.10) is bordered by the Maros-hordalékkúp/Moriška aluvijalna ravan (1.16) on the east, and the Tamiška ravnica (1.17), defined by the river Temes/Tamiš, on the south. On the southern part of the programme area, the region of Karaška ravan (1.19), stuck between the Vršačke planine (14.4.8) and the Deliblat (1.18), is divided as a mesoregion. This is the area where the Karaš and the Nera rivers merge, which is blocked from the wider area of the Great Pannonian Plain by the Vršac planina.

The following is a detailed description of the centre parts of the programme area, including their characteristics affecting landscaping.

Figure 2: Macro- and mesoregions in the border region



Alföldi-Dunamente/Podunavlje (1.1): the region includes the former floodplain of the Danube. Its topography is rolling plain formed by the environmental shaping effect (erosion, accumulation) of the Danube. The marshy and swampy floodplains characteristic of the region has almost completely disappeared due to the regulation and drainage of the Danube. Today it is mostly comprised of agricultural areas, settlements, pastures, lawns, and floodplain forest areas. Medium dense, fertile alluvial soil cover most of its area, where every field crop can be grown successfully. There are larger spots of salines that are disadvantageous to plant production, located on the east side of the region, which are covered by grassland that is valuable from a nature conservation standpoint.

The flood plains of the Banat have consisted of swamps, marshes, reeds covered with water seasonally and permanently, rushes, meadows, and pastures. The floodless hills (e.g. alluvial fans, loess terrace islands, loess ridges, sand deserts rich in eolian forms, etc.) rise from these hills, only a few meters sometimes, providing better settlement and life quality conditions for the population, dividing the plainlike microregions of the Banat with their diverse morphological treasures. This couples with advantageous agro-ecological impacts, therefore the dominance of grassland management has prevailed in these hills for centuries.

Homokhátság (1.2): mainly made up of extended ranges of quicksand dunes covered by chalky sand shroud, and wet pits in between. The sand shroud flat surfaces are covered by humic or low humus sandy soils, the loess surfaces wedged in between are covered by chernozem, and the pits are covered by meadow and marshy soils. The Mid-Danube-Tisza Plain lowland is the biggest connected sand area of Hungary, where economic activity is restricted by the limited and irregularly distributed precipitation, as well as the poorly fertile soils. The sand ridge does not have many surface

waters. The ephemeral water courses flow in a southeast direction, from the region towards the Tisza/Tisa. The cultivated land, besides the forests and swamps, became heaths after the Mongol invasion, as the already established settlement network was practically destroyed. Waves of deforestation and the livestock of market towns have contributed to the erosion of the surface as well, later the river regulations, afforestation, the appearance of farms and the agricultural cultivation along with collectivization formed the land. Most of the canals built during regulatory work dried out because of lowered soil water tables caused by climate and anthropogenic impacts. Viticulture and pomology, extensive field cultivation and cattle keeping had an important role in homestead farming, which used to be (and partly still is) characteristic of the landscape.

Bácskai síkvidék/Bačka ravnica (1.3) is located on the southwestern part of the Mid-Danube-Tisza Plain and it continues through the national border, in the Telečka-loess plateau to the west. It continues to the valley plain of the Danube with a steep rim, while the transition on the Mid-Danube-Tisza Plain's ridge is the sandy area of Illancs. The Old Sárvíz built and formed the surface of the land until the last glacial period, then eolian processes formed the surface. The Banat - and the Subotička peščara - used to be a heath formed by the wind 200 years ago, due to a lack of vegetation. The diverse forms of quicksand on the alluvial fan are covered by a few metres thick typical sandy loess, and excellent, nutrient-rich, calcic chernozem formed on it. Each crop can be grown successfully, there are mainly forests on the northern part covered by sandy soils, but viticulture and pomology are significant as well.

Posavska ravnica (1.7): its main landscape is the Srem. The western part of the Srem is in Croatia, the eastern part in Serbia. Fruška Gora mountain is surrounded by the Srem loess plateau. Its northern part reaches the alluvial plain of the Danube with 20-30 m high loess walls, the ridge covers a much bigger area by the southern slopes, and it continues until the Srem loess terrace with its gentle slopes. Apart from the loess plateau and the low hills, most of the area consists of extensive alluvial floodplains with oxbow lakes, meanders, tributaries, ponds, swamps, and wet meadows. Along and in the vicinity of the river Sava, which forms the southern border of Vojvodina with Central Serbia and heavily determines the landscape, flora and fauna, large wetland habitats can be found rich in forest resources, birds, reptiles and certain mammals (e.g. deer, boars) in particular. Among areas with outstanding biodiversity as well as potential in ecotourism Special Nature Reserve Obedska bara (Obed swamp), Special Nature Reserve Zasavica or the century-old oak forests around Morović can be highlighted.

Alsó-Tisza-síkság/Potiska ravnica (1.10): The development of the landscape has been characterized by subsidence and recharge from Miocene until today. Most of its surface is covered by holocene sediment today. Backwaters, bywaters and forms of wind accumulation raised by an erosion rim diversify the holocene alluvial plain. Mineral waters, thermal springs and oil and natural gas fields in Algyő are the important natural resources of the region. This is the sunniest area of Hungary, which is utilized in heat demanding cultures.

Maros-hordalékkúp/Moriška aluvijalna ravan (1.16): The plain surrounded by the Körös/Kriš, the Maros/Moriš and the Tisza/Tisa is the result of the alluvial fan building activities of the Old Maros/Moriš. Floodplain and terrestrial loess formed on the fanlike alluvial fan at the end of the Pleistocene. The abandoned riverbeds diversify the surface of the land, besides the occasional dunes. Great quality prairie soils were formed on the southeastern parts, on the plains also known as the

loess plateau in (Békés-Csanád. The oil and natural gas fields identified in the area and the thermal wells are significant on a national level in Hungary as well. The eastern part of the Maros/Moriš-alluvial fan is mostly covered by fertile meadow soils and fluvisols, the middle part connected to the floodplain of the Tisza/Tisa is covered by heavy meadow soils and fluvisols. The floodplain of the Bega/Begej is also covered by humic sediment, and traces of peat formation are also present.

Tamiška ravnica (1.17): there has been a recharge in the valley of the asymmetrical Temes/Tamiš, established in a tectonic ditch. The recharge of the Temes/Tamiš-valley in the tertiary era was followed by an accumulation-erosion terrace formation in the Pleistocene, which is covered by river sand and gravel, loess, and glacial loam. The Temes/Tamiš loess plateau, on the region of Banat, lies between the Bega/Begej and Temes/Tamiš rivers, and it is lower than the other plateaus, it creates a loess amount of 10-35 m.

The Bačka/Bácska and the west Banat are the extension of the sandy plain filled by the rivers, the Great Pannonian Plain. The big rivers of the Carpathian Basin merge in this area, therefore the Banat used to be a swampy area, which has been drained from the 17th century. However, the only desert-like region of Europe is also located here: ***Deliblat (1.18)*** sands. There are lanes, sand hills, residual ridges, and sand dunes on its rough surface. Today, most of the heath is covered by grassy pastures and woodlands, as the sand threatening the neighbouring settlements was successfully set with afforestation in the 19th century. There are orchards and vineyards on its southern part.

The ***Fruška Gora (6.1)*** is a narrow mountain range, which is raised from the Great Pannonian Plain as an island mountain. It is framed by rivers – the Danube and the Sava – in the north and south. The east–west mountain range diverts the Danube, previously southbound, towards east. Dense, deciduous woods cover the areas of the mountain above 300 meters, while there are pastures, arable lands, vineyards, and orchards in the valleys.

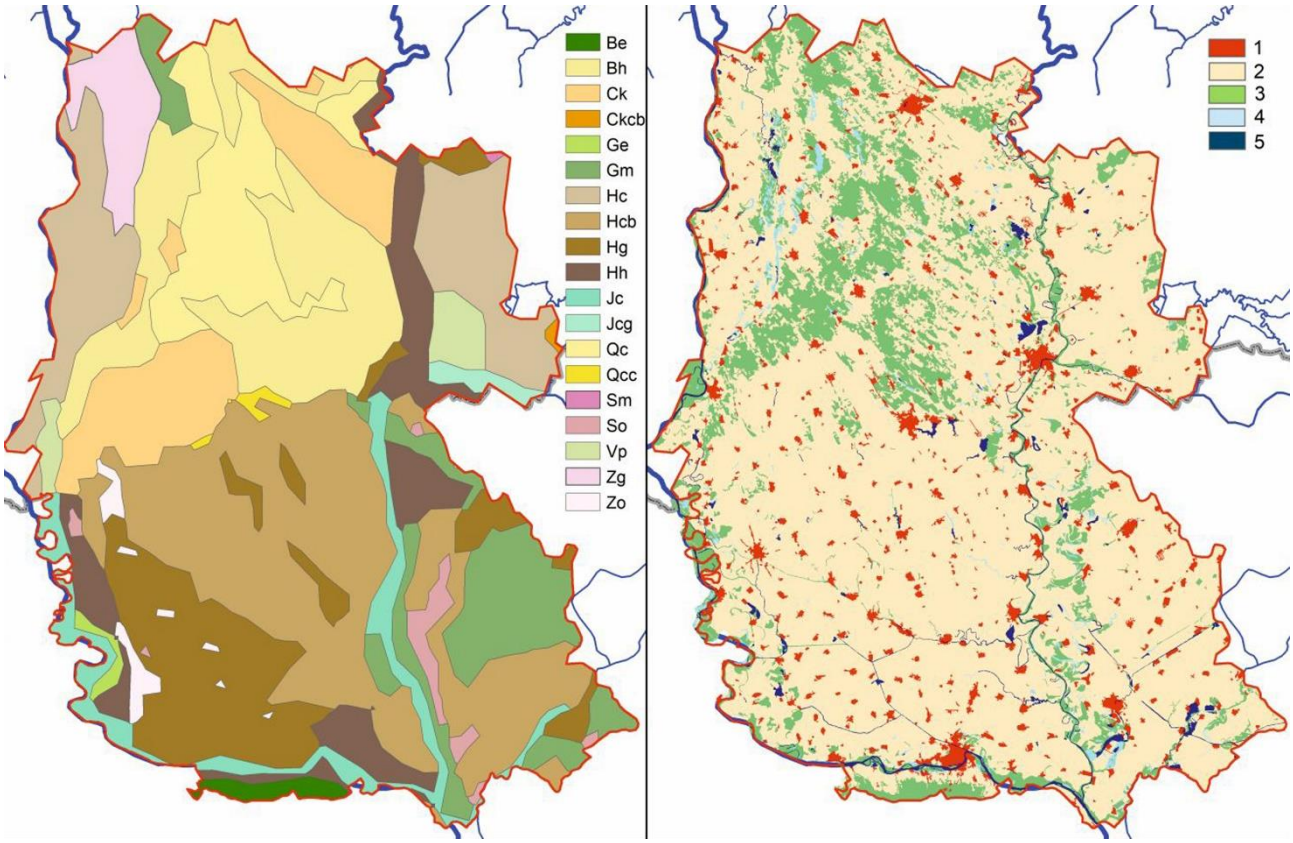
The Gudurički vrh (641 m) is the highest point of Vojvodina in the Banat, which is the peak of the ***Vršac planina (14.4.8)*** connected to *Muntii Banatului (14) in Romania*. The northern slope is steep, while the southern slope is gradually approaching the hillsides of the vineyards in Vršac. The Vršac planina are one of the island mountains, along with the Fruška Gora, which used to be an island in the Pannonian Sea. These form the northernmost hump of the Serbian-Macedonian mountain mass. The Bega/Begej, the Temes/Tamiš, the Brzava, the Karaš and the Nera are collecting the water of the Banat mountains, and they are bringing it to the Danube. These rivers are usually flooding twice, when the snow melts in spring and during the big amount of precipitation at the beginning of summer.

To conclude the short introduction of landscapes in the region, we need to emphasize that most of the mesoregions (1.1, 1.3, 1.2, 1.10, 1.16) building the character of the border region are crossing the border, which is splitting the region administratively. This landscape factor can be considered one of the most important cohesion factors of the programme area. However, after reviewing the landscape structure, certain landscape elements should be reviewed as well.

The study area is remarkably diverse regarding both its soil types and the physical and water management types of the occurring soils. The chernozem soils and their different versions can be considered as a dominant soil type, and thanks to their crumbly texture, they provide great water and nutrient management for agricultural cultivation. The amount of sandy soils (quicksand, humic sandy soils, chernozem-like sandy soils) is also significant, but their water management conditions

are disadvantageous, as they have a strong water absorption ability, but a weak water holding capacity. Regarding geographic scope, it is important to mention meadow soils, which have a mediocre or bad water absorption ability, but a great water holding capacity. The dominance of the agricultural lands can be established regarding the land cover and land use of the region. Significant areas of the region were involved in cultivation over the last two centuries, so there are many agricultural lands, but not that many natural vegetations survived. Unfavourable processes can be observed on the remaining natural areas, as wetlands have started to dry out due to the climate change and human activities of the past few decades, followed by the degradation and transformation of vegetation.

Figure 3: Soil types of the study area (FAO 1985) (Be: Eutric Cambisol; Bh: Humic Cambisol; Ck, Ckcb: Calcic Chernozem, Vermi-Calcaro-Calcic Chernozem; Ge, Gm: Eutric Gleysol, Mollic Gleysol; Hc: Calcaric Phaeozem; Hcb, Hh: Vermi-Calcaric Phaeozem, Haplic Phaeozem; Hg: Gleyic Phaeozem; Jc, Jcg: Calcaric Fluvisol, Gleyo-Calcaric Fluvisol; Qc, Qcc: Cambic Arenosol, Calcaro-Cambic Arenosol; Sm: Mollic Solonetz; So: Orthic Solonetz; Vp, Vpg: Pellic Vertisol, Gleyo-Pellic Vertisol; Zg, Zo: Gleyic Solonchak, Orthic Solonchak) and the land use of the study area (Corine 2018) (1: Artificial surfaces; 2: Agricultural areas; 3: Forest and semi natural areas; 4: Wetlands; 5: Water bodies) (Source: http://www.geo.u-szeged.hu/wateratrisk/sites/www.geo.u-szeged.hu.wateratrisk/files/maps/soil_hu.jpg)



2.1.1.2 Climate characteristics, the impacts of climate change to the atmospheric and hydrological processes

One of the major global environmental problems of our time is climate change. The climate of the Earth in fact has been and will be changing in every timescale, but now human activities probably also have contributed to the current climate change. The average temperature of the Earth has

increased by 0.74°C between 1906 and 2005, and there have been some adverse changes regarding precipitation as well. The time pattern of precipitation has a double drawback on the widespread temperate regions of both hemispheres, since both the number and length of periods with precipitation deficit and the frequency of big amounts of precipitation at once have increased. The natural water balance of a region is also affected by evaporation besides rainfall. The strongest meteorological condition of evaporation is temperature. In view of the above, temperature is definitely increasing in almost every land surface and season. This can lead to a significant deterioration in regions with decreasing rainfall, and it can balance out rainfall in many regions.

Climate change strongly effects the Carpathian Basin as well, it is one of the regions worldwide with an average temperature increasing more than the global average, and the periods with extreme precipitation are getting more frequent as well. The described changes especially affect the lowland areas, therefore the study area as well. There are extreme changes in the irrigation potential of the region because of climate changes and geographical conditions, droughts and inland waters which can occur in consecutive years, or even in the same year, affect this region negatively. Therefore, the geographical observation of problems connected to climate change and hydrological extremes is especially important.

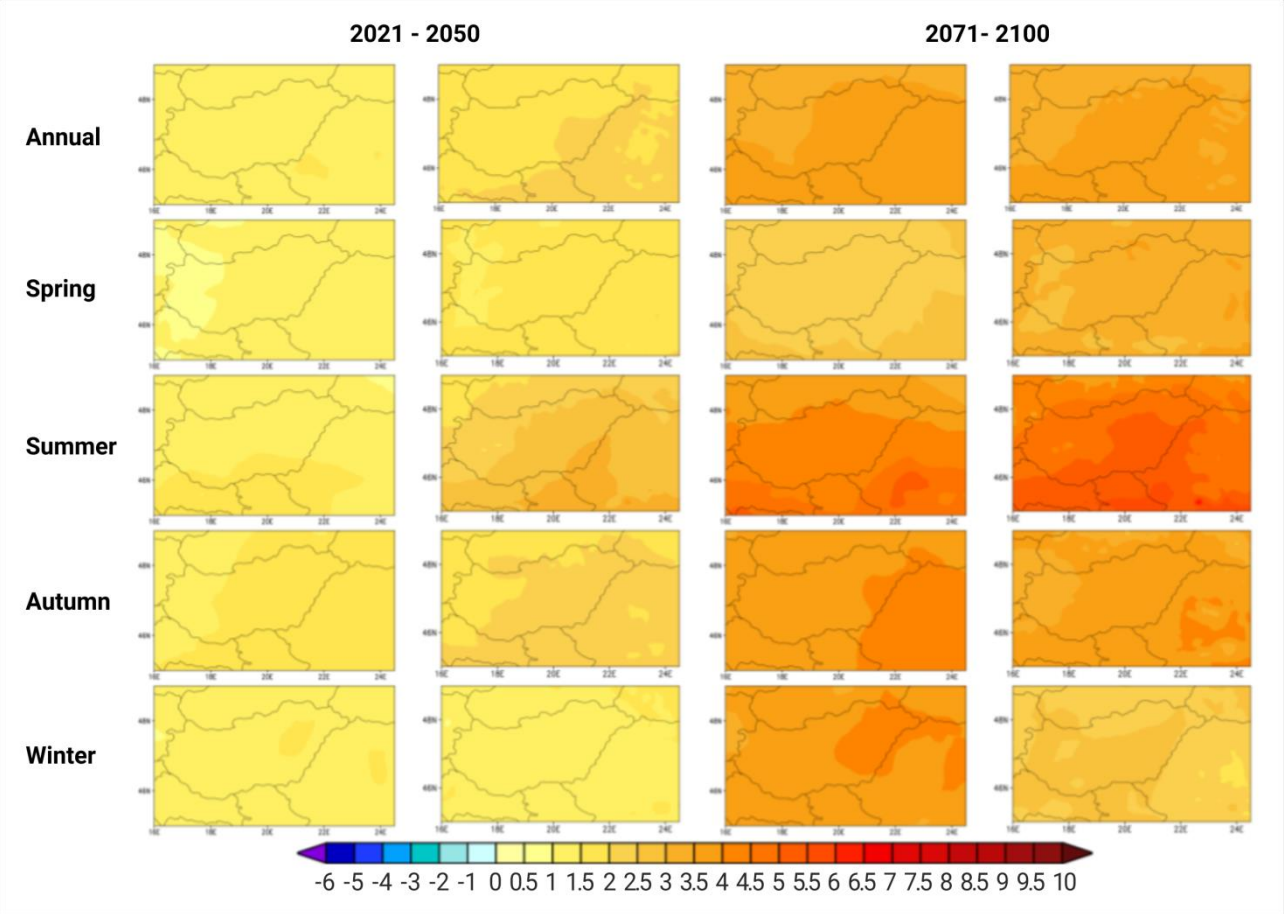
The lowland area taking up most of the region has a moderately warm – dry, and a warm – dry climate. The mean annual temperature on the southern edge of the Great Pannonian Plain is 10.5°C-12°C, the summers are warm (the mean temperature in July is around 21°C-23°C), the winters are cold, but it rarely snows. There are fewer clouds, the relative humidity is lower, the scarce and inconstant rainfall often leads to droughts (when the so-called potential evapotranspiration possible in the climate significantly exceeds the precipitation quantity). The annual rainfall is only around 500-550 mm, and 290-340 mm of it falls during the period of April to August.

Climate change has a quicker pace in the Carpathian Basin than globally, the mean annual temperature has increased by 0.8°C over the last 100 years and the annual precipitation has decreased by 60-80 mm. The prevalence of extreme weather conditions has changed as well. Climate change comes with the clear increase of warm extreme weather conditions and the decrease of cold extreme weather conditions. The daily precipitation intensity (the quotient of the amount of precipitation and the number of precipitation days) has also significantly increased over the summer, which indicates that precipitation is more and more likely to fall in the form of short but intensive showers.

The expected changes in the 21st century can be quantified using climate models (but they have many uncertainties). We can see a review of the changes in the Carpathian Basin in the future with the results of two regional climate models of 10 and 25 km for the 2021–2050 and the 2071–2100 periods. The changes are modelled compared to the average of the 1961–1990 period. Regional climate models predict warming for the Carpathian Basin in the 21st century, in a statistically significant way for every season and model (so the magnitude of change exceeds the degree of variability). However, this does not mean that the warming will continue every year: there still might be years and seasons colder than the 1961–1990 average. The average annual temperature will probably increase by 0.5-1.5°C and 3.5-4.0°C until 2050 and 2100, respectively, compared to the reference period of 1961–1990. The forecast for the turn of the century includes a decline in rainfall by 30-100 mm. The amount of summer days will increase by 30-40 days on average.

According to the forecast, years affected by drought will increase on both the Hungarian and the Serbian side. The frequency of droughts increased in the inspected areas over the 50 years between 1962 and 2011. Extreme droughts have become more and more frequent in the second half of the period, besides the increasing trend. Between 1901 and 2016, extremities regarding warm temperature increased and extremities regarding cold temperature decreased because of climate change.

Figure 4: Average temperature changes (°C) in the Carpathian Basin based on two regional climate models for 2021–2050 and 2071–2100, compared to the average of the models between 1961–1990 (Source: 23/2018. (X. 31.) National Assembly resolution about the second National Climate Change Strategy covering the period of 2018-2030, providing information for the period until 2050.

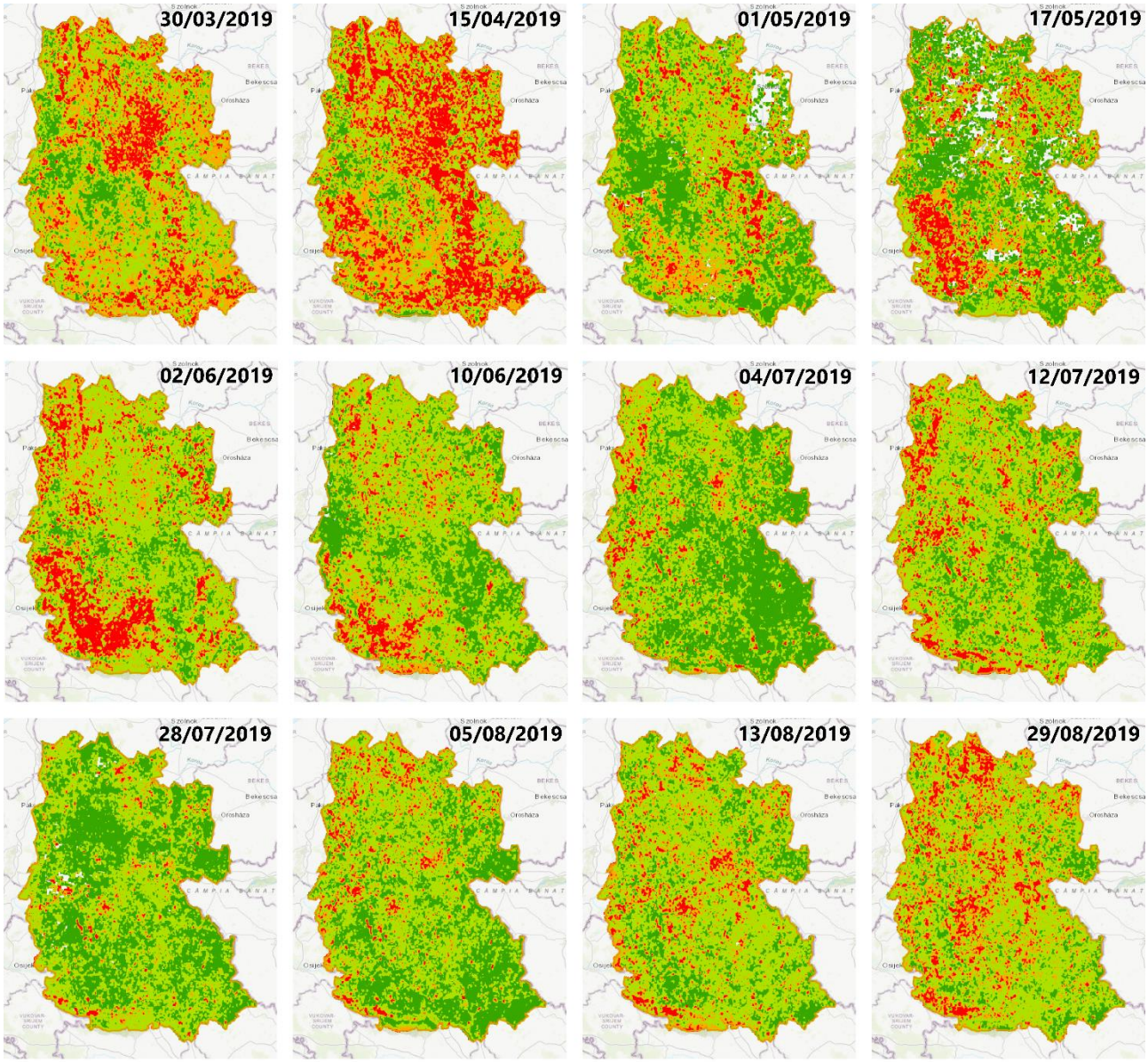


Over the next decades, 30-50% of loss of production will probably be caused by the increasing risk of droughts in the period between July and August. Water scarcity and aridification will not only become more frequent and prolonged, it will also affect the natural environment, natural resources, and agricultural, horticultural and forestry production bases. They also draw attention to the increasing uncertainties of the population's water and food supply and the deteriorating quality of drinking water and food ingredients, while production costs and the risks of corporations and investors increase. Since these risks and challenges are of a regional nature, a close cross-border cooperation is needed to solve the problems. Such cooperation started in 2017, the project called

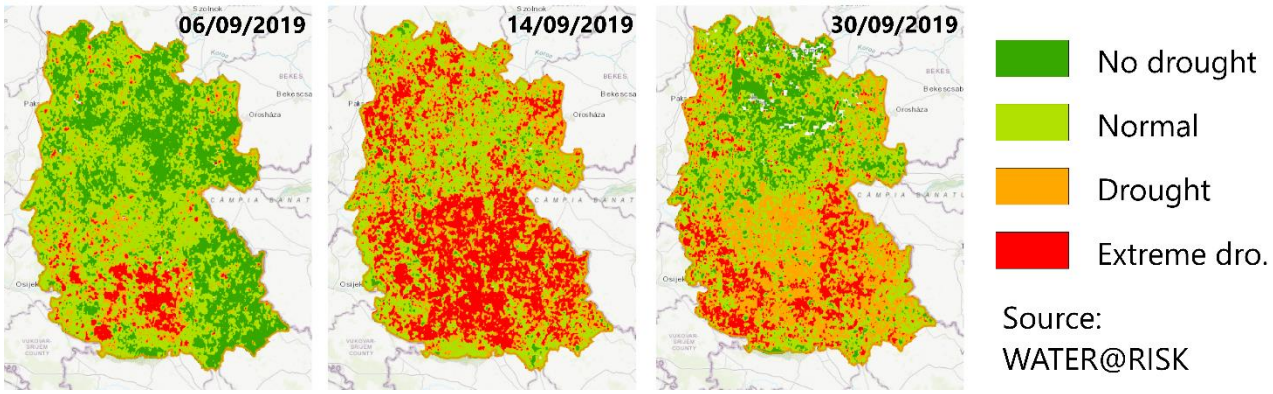
"Improvement of drought and excess water monitoring for supporting water management and mitigation of risks related to extreme weather conditions" WATER@RISK (HUSRB/1602/11/0057)[9].

The interactive, online map service, established under the WATER@RISK project, provides an opportunity to use the vegetation index data to examine droughts temporally and spatially, among other things. The following figure illustrates droughts of 2019 in the border region.

Figure 5: Droughts in 2019 according to the standardized NDDI rates



9 Hereinafter: **WATER@RISK research**. To the elaboration of this subchapter, both the project's research report and its online map service were used. More about the WATER@RISK research in the subchapter: Water projects previously carried out in the region. **Research report:** Ladányi Zs. (szerk.) Blanka V. (2019): Monitoring, risks and management of drought and inland excess water in South Hungary and Vojvodina. http://www.geo.u-szeged.hu/wateratrisk/sites/www.geo.u-szeged.hu.wateratrisk/files/pdf/kotet.pdf; **Interactive map**: https://aszaly.geo.u-szeged.hu/wateratrisk/map/?locale=en



The extreme, droughty vegetative states can be clearly defined with the standardized NDDI (Normalized Difference Drought Index[10]) anomaly. Besides the evaluation of the average of many years, the standardized anomaly will provide the exposure measure to the projected, increased hydrologic extremities, and based on this, the water scarcity of the study period can be defined as well, which reduces biomass production or shifts its dynamic. The indicators of herbaceous vegetative areas are usually consistent with the appearance of a drought, but the forests do not necessarily show similarities with meteorological anomalies. High NDDI rates imply droughts, which is important when interpreting lower rates; the NDDI rates of floodplain forests not suffering water scarcity are obviously the lowest. Regarding NDDI anomaly, the range above 1.0 indicates drought. If a surface approaches or exceeds this rate, that area is probably affected by droughts. In 2018, only the territories of hilly forests approached or exceeded the value of 1.0, but it was not continuous due to the precipitation and temperature conditions, therefore we cannot talk about severe droughts. In spring, early summer and autumn of 2019, the anomaly was constantly above 0.5 on lawns, meadows, pastures, and wetlands. Unexpected great changes (NDDI deviation >2.0) can occur in the spatial distribution of the value referring to various human impacts (Ladányi 2019, p 218).

According to the NDDI based, vegetative map above (Figure 5), extreme droughts were a problem in several stages of the vegetative period all over the border region in 2019. One of the most affected regions last year was the agricultural Bačka ravnica.

Water conservation, utilizing the usable water content in soil as much as possible, is the foundation of preventing drought damage. Thus, farms can decrease the mentioned evaporative losses, and can provide the appropriate amount of water to the vegetation, even in the driest period. This is especially important because water is the only nutrient that cannot be substituted. Harvest can be significantly increased in territories that receive the appropriate amount of water, even if they lack other nutrients. Although, besides reducing agricultural damage, we must pay attention to the environmental benefits of water conservation. When using irrigation water properly, much less water is used up, therefore farms using this method save water. However, results of the WATER@RISK research show that the irrigation of agricultural lands is problematic, as watercourses are currently hardly suitable for irrigation despite the dense network of courses. Due to the lack of surface waters needed for irrigation, farmers irrigate during

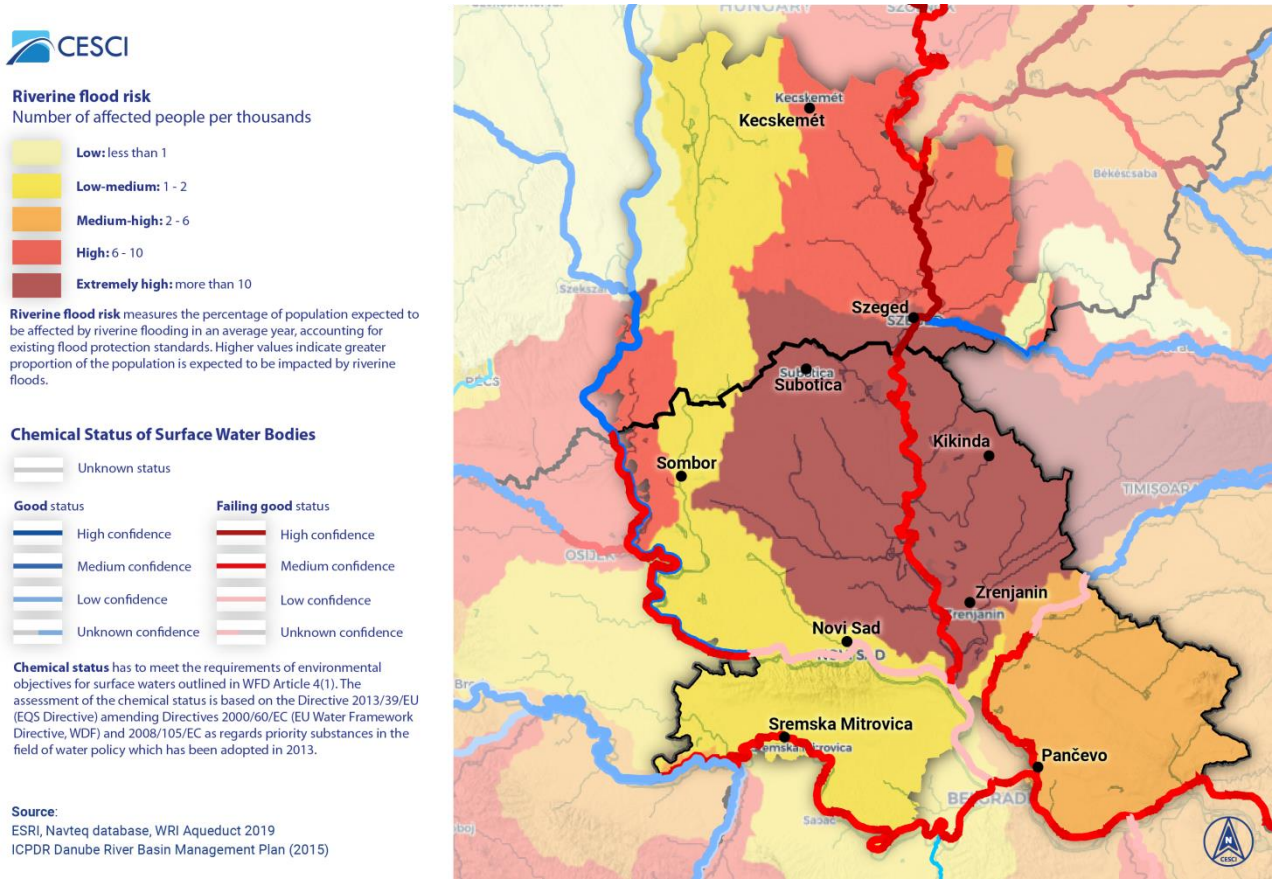
[10] Normalized Difference Drought Index is a method for measuring drought delineation using Moderate Resolution Imaging Spectroradiometer surface reflectance data as presented in the paper by Gu et al. (2007).

aridity/drought from groundwater resources, which further increases the lack of groundwater inventories already decreasing for climatic reasons. Another problem is that water retention and the utilization of used water is still undeveloped in the region therefore the resulting water supplies are not utilized properly in the region.

Extreme weather conditions, posing serious hydrological danger, occur more frequently as a consequence of climate change. The amount of precipitation days decreases, but that of days when a large amount of precipitation falls at once increases. This tendency affects the agricultural sector negatively on both sides of the border, damages soil erosion and flood control systems, and as the soil is unable to absorb intense precipitation, surface run-off can significantly increase. The increase of the sudden downpour of precipitation and rainwater not drained by the soil requires the development of urban drainage systems and the building of rainwater reservoirs. The extremely severe storms and hails are becoming increasingly common environmental phenomena, and they are posing significant risks to agricultural production.

A further consequence of climate change is the increased frequency and severity of floods in the warmer and wetter water period. The risk of floods can also be increased by factors like the mismanagement of floodplains, mud silting up or the incapacity of protection systems. The development of these areas and stepping up protective measures against floods is a common goal and a fundamental interest in the inspected region.

Figure 6: Cross-border character of river (basin) management



The spatial and temporal variability of the amount of surface waters are present as well, parallel to the climate change. Besides the increasing risk of flood (e.g. Danube in 2013, Tisza/Tisa in 2006 and

2010, Sava in 2014) and inland flooding, this results in extended low water periods, which have an increasing economic, social and environmental effect on the study area. Overall, the annual water balance shows a decreasing trend in the region regarding both surface waters and groundwaters. Most of the year, surface run-off is insignificant, which strongly contributes to the climate sensitivity of the territory and the expected increase of water stress (Ladányi 2019, p 189). The phenomenon is described this way: the lack of rainfall leads to reduced level of ground water and a persistent lack of runoff, resulting in a decrease in soil moisture content, groundwater levels, and the amount of water transported in rivers. As groundwater levels fall, the soil can absorb even more precipitation, which results in even less runoff, and the groundwater supply of smaller watercourses also decrease.[11]

The inland water concerning mainly the landscape of the Alsó-Tisza Síkság/Potiska ravnica and the Maros/Moriš Alluvial Fan is in a significant hydrological danger in the programme area, which occurs when the soil pores are filled with water due to unfavourable meteorological and water regime factors. Flooding causes big economic, social, and environmental problems. Inland water production is affected by natural factors like hydro meteorological (regular precipitation, water storage in the form of snow or ice, low evaporation, frozen ground), geomorphologic and topographic (local pits, edges of alluvial fans), hydrogeological (the location of aquifers and reservoirs) and soil properties. Among artificial factors, we need to mention the water management infrastructure (sewerage system, dams), land use (built-up areas, railways, highways), irresponsible cultivation and the lack of appropriate agro-technics. The combination of many unfavourable natural factors is needed for inland water to appear, and its effects can be enhanced or moderated by human intervention.

Since inland water is not a regularly occurring phenomenon, damage caused by inland water is variable. Inland water mainly causes damage in agriculture: it decreases the quantity and quality of agricultural products, which can decrease income even in short-term. Moreover, it is hard for the farmer to cultivate the land and harvest the crops, which causes additional costs. Temporary embankments and channels built to reduce flood damage and draining water entail significant spending. This direct damage is present all the way through the inland water period.

There are other consequences besides its economic impacts on the inland agricultural sector, prevention, protection, and restoration. Flooding can cause environmental problems as well, as water transports contaminants like pesticides or fertilizers. Sometimes there are oil wells in areas threatened by inland water, like in Algyő. A little leakage can contaminate inland water, through which oil can reach other areas, even cross-border. Longer inland water periods could cause changes in vegetation. Inland water near farms or in urban areas has social consequences as well (impassable roads, uninhabitable buildings).

The changes in land use can have spatial implications: rural areas become wetlands again because of the continuous flooding, or they switch to producing crops on arable lands that are more resistant to water. They are looking at water as a value in a new approach of the inland water problem. In many places, there is water scarcity in dry periods and inland water in wet periods. Using considerate water management programmes, water stored in soil or reservoirs during wet periods could be used during the dry months. The more diverse land use enables the presence of agricultural lands, fallows,

[11] See: Lendér H. (2016): A klímaváltozás hatása a felszíni vízgazdálkodásra (The effects of the climate change for water resource management) p. 3.

forests, moors, lakes etc. even in the immediate vicinity of each other. The buffering role of the territories could prevail more like this in the wet periods.

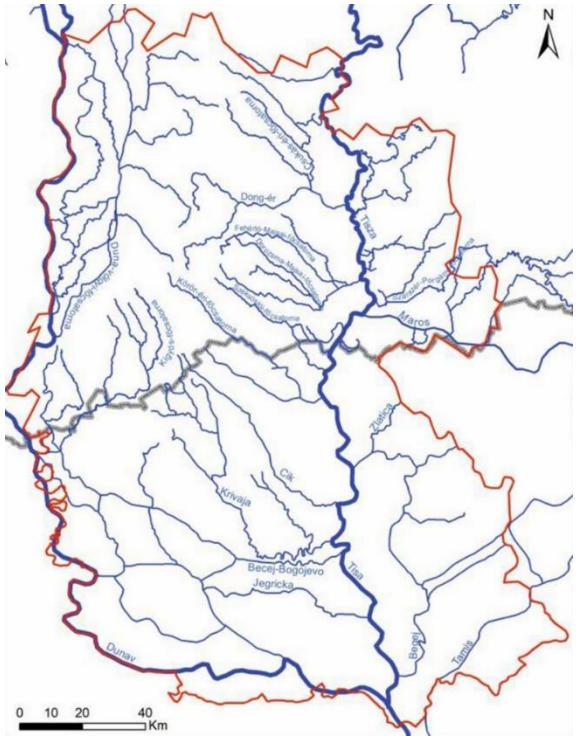
The hazard of inland waters has increased in both Hungary and Serbia, which requires targeted measures supported by well-coordinated warning and information systems. Therefore, a balanced joint water management programme is inevitable to handle and develop the land's water supplies.

Therefore, reducing the disadvantageous effects of droughts and inland waters and tackling the land use and water management problems became some of the most important complex environmental problems of the region that need to be solved. Collecting precise and updated information about the current water balance situation and the recognition and quantification of the negative effects and risks, which can provide basis for efficient intervention planning, are important for effective treatment. The preparation of water supplies and water management on a (small) catchment level is inevitable, and the participation of the actors of planning and execution is also important, it is in the focus of the joint water management research of this programme area.

2.1.1.3 Hydrographic characteristics

The study area belongs to the drainage basin of the Danube, just like most of the Carpathian Basin. Most of the territory was established by the Danube, the Tisza/Tisa, and their tributaries. Other main rivers of the region are the Mureș, the Körös/Kriš, the Sava, the Temes/Tamiš and the Bega/Begej. Besides the natural water network, the 690 km long Dunav–Tisa–Dunav drainage system, located in Vojvodina AP, is one of the biggest man-made drainage systems in Europe. The water regime of the main rivers is very variable: floods and water scarcity are serious problems. Surface waters maintain significant ecological networks, provide water to agriculture and tourism, provide the replacement of groundwater bodies, and serve as important waterways, especially in the Vojvodina.

Figure 7: The water network of the study area (Source: http://www.geo.u-szeged.hu/wateratrisk/sites/www.geo.u-szeged.hu.wateratrisk/files/pdf/kotet.pdf)



The quantitative and qualitative protection of the water supplies is a continuous, prioritized task both on a national and an international level since some of the surface waters are cross-border environmental compartments. Water quality is determined by physical, chemical, and ecological properties. Bodies of groundwater constitute a coherent system from a hydrodynamic aspect between the Danube and the Tisza/Tisa and they are reaching across the border. Water treatment and water management are two of the most important environmental issues in the programme area. The 2000/60EK directive of the European Union, the EU Water Framework Directive is of decisive importance regarding the situation of surface waters and groundwaters. It created a new basis for water protection in the EU member states. The Hungarian National Water Strategy (Kvassay Jenő Plan) was adopted in 2017 and it contains the strategic framework of water management until 2030 and a mid-term action plan until 2020. The Water Management Strategy of the territory of the Republic of Serbia[12], under the Water Law in Serbia[13], is a framework document that includes the execution schedule of the reforms concerning the water sector until 2030, the aim of which is the achievement of the necessary water management requirements on a regional and local level, and the achievement of the water management objectives.[14] It helps with the execution of the joint water management tasks, based on the bilateral agreement signed on the government summit in Subotica on 14-15 April 2019: Agreement between the Government of Hungary and Serbia on Sustainable Water Management and the Cooperation of Transboundary Waters and River Basins of Common Interest[15].

Many processes, like climate change, urbanization, or the increasing biological and chemical loading, pose new and increasing risks to our waters. The status of surface waters is mainly determined by the industrial and agricultural activities in drainage basins and the processing rate and efficiency of the resulting industrial, agricultural, and communal wastewaters. The quality of the rivers is endangered by both Hungarian and Serbian municipalities. The water quality of the Tisza/Tisa is quite good and the water quality of the Danube has increased as well over the last few years due to the lack of significant industrial installations and as a result of the establishment of municipal sewage treatment plants. However, besides the well-known, so called conventional pollutants (e.g. natural organic matters, nitrite/nitrate, heavy metals and heat output), science and the public opinion have turned their attention to the new types of threats, mainly the diverse compounds increasing because of pharmaceutical and chemical research and production. Besides micro plastic, which people are currently concerned with, the aquatic dispersion of drug residues, hormones, substances having a hormonal action and antibiotic-resistant micro-organisms causes further problems. The quality of surface waters is also important because drinking water is currently extracted from riverside filter wells in Vojvodina AP, but a clear shift is visible towards artesian wells.

The levels of arsenic in some of the water catchments cause problems. According to the water aquifer geochemical layers, the arsenic is of natural origin. Drinking water supplies are contaminated with arsenic in more than 100 settlements on the Hungarian side of the programme area, and this problem is present on the Serbian territories close to the border as well. The amount of arsenic in produced

12 See: Strategija upravljanja vodama na teritoriji Republike Srbije do 2034. godine

13 See: https://www.paragraf.rs/propisi/strategija-upravljanja-vodama-u-srbiji-do-2034.html

14 See more information about these strategies in the chapter "Policy frameworks".

15 See: https://www.vizugy.hu/index.php?module=content&programelemid=75&id=78&page=8

drinking water in the artesian waters of the region exceeds the European threshold of 10.0 µg/l. There is a high amount of methane, iron, manganese, ammonium, and boron components - of a natural origin, just like the arsenic - in some of the water resources as well, which causes problems.

Public drinking water service is ensured in every settlement on the Hungarian side of the border, nearly 100% of the properties located on the inlands of settlements and parts of settlements are provided with drinking water from public drinking water networks. The water quality status of the counties significantly improved with the introduction of the technologies initiated by the Drinking Water Quality Improvement Programme. The quality of drinking water in Vojvodina AP is unsatisfactory, they are using groundwater for water supply. These groundwaters contain more arsenic, ammonia, organic matters, borate, sodium, iron, and manganese than allowed. According to the Spatial Plan of the Republic of Serbia only a small number of local governments in the Republic of Serbia have a municipal wastewater treatment plant, with the largest cities (Belgrade, Novi Sad and Nis) discharging untreated wastewater to recipients. Based on the results of an analysis carried out by the Environmental Protection Agency between 1998-2008 using 143 measuring points it can be concluded that the most endangered are rivers and canals in Vojvodina.

The JOINTISZA ITRBMP joint programme of measures also included in the Tisza MoU signed by the Ministers of the 5 Tisza countries stated that 40% of the Tisza/Tisa river basin's (TRB) agglomerations lack wastewater collection systems. The document also predicts that Serbia is going to construct a specific number of sewer systems and wastewater treatment plants, however, to find appropriate financial sources to achieve progress in this field remains a challenge. It has to be taken into consideration that the total water quantity in the TRB for present use (like irrigation, other agricultural use, public water supply, industrial water supply and other uses) is approximately 54% smaller than the planned water demand by the end of the next planning period.

Furthermore, the biggest water processing site purifying the alluvion of the Danube (1500 l/s) is in Novi Sad. There are no water purifying sites in the areas where there are arsenic and organic substances in the groundwater. Therefore, the percentage of drinking water provided to the public with inadequate quality is extremely high (depending on the district, it is 77-100% regarding physical-chemical parameters, and 8-33% regarding microbiological parameters). The special features of the drinking water resources of some areas of Bačka/Bácska and Banat is that they require much more complex water processing technologies than the standard procedure in most settlements, because of the quality of the resources. Utilizing new, better quality water springs and using new technologies for purifying drinking water could be a solution.

Figure 8: Public utility drinking water testing data in municipalities with arsenic in Hungary, 2017 (Source: http://www.ksh.hu/docs/hun/xftp/idoszaki/pdf/kornyhelyzetkep18.pdf)

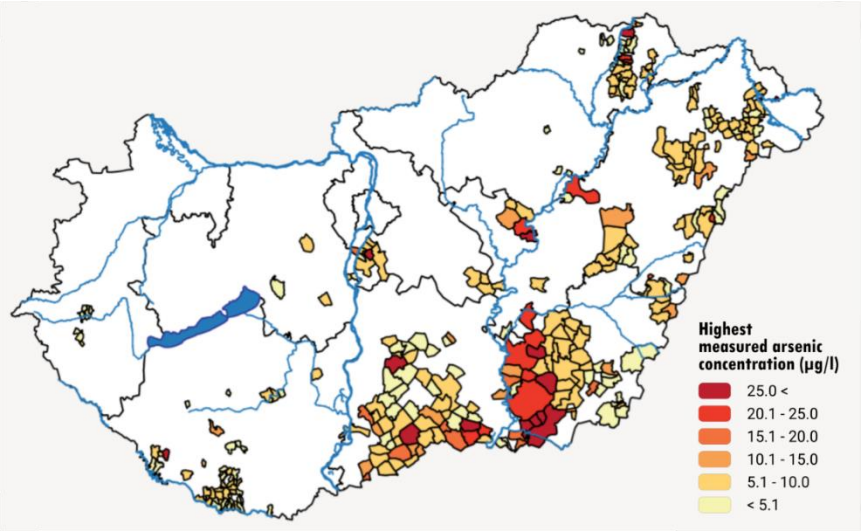
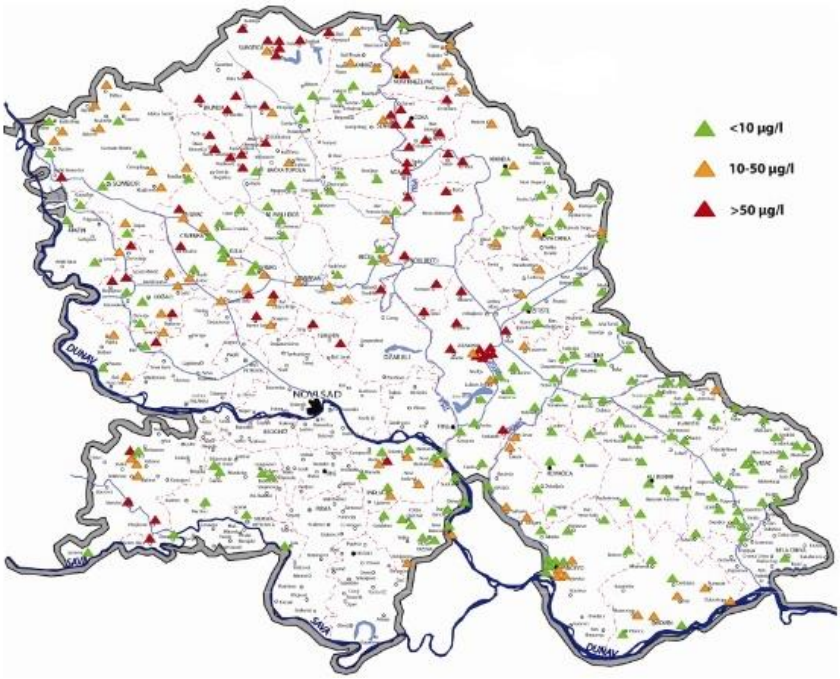


Figure 9: The concentration of arsenic in Vojvodina AP (Source: https://docplayer.hu/72601337-Pilot-kutatasok-feladata-a-vizellatas.html)



Improving drinking water is essential for the entire programme area. In both Hungary and Serbia, drinking water development projects are financed by operative programmes initiated on a national level. The water supply of the areas where the drinking water contains toxic arsenic, a high amount of organic matters and sodium is prioritized. Developing and renovating water distribution networks could be a solution to the problem of microbiological quality.

The JOINTISZA ITRBMP Joint Programme of Measures included in the Tisza MoU signed by the Ministers of the 5 Tisza countries declared that the groundwater level is continuously decreasing due to over abstraction. At the Tisza River Basin level, the number of groundwater bodies with poor quantitative status increased from 22 to 29. During the last ICPDR Tisza Group Meeting the Serbian

Side initiated future projects on groundwater management.Overall, an integrated river basin-based economy is still needed to preserve the high quality and sufficient amount of surface waters and groundwaters, considering and strictly applying the EU directives in Serbia[16]. For this, a jointly coordinated water quality monitoring system and hydrologic database of the environmental and health risks (e.g. from droughts, floods, hydrologic situation, drinking water contamination, sharing the best practices of drinking water resource management, and corrective actions for preventing drinking water contamination (e.g. with arsenic)), the joint planning of water retention and infiltration reservoirs are needed. A joint research centre and a web-based platform were established during the previous programme period to solve the problems of droughts and inland waters in the study area. Nevertheless, infrastructural development still belongs to the national competence of each countries.

Water projects previously carried out in the region[17]

WATER@RISK - HUSRB/1602/11/0057 - The development of drought and inland water monitoring solutions supporting water management and the mitigation of risks from extreme weather conditions (1 October 2017-30 September 2020)

In liaison with these beneficiaries: Szegedi Tudományegyetem, Alsó-Tisza vidéki Vízügyi Igazgatóság, Univerzitet u Novom Sadu, Prirodno-matematički fakultet u Novom Sadu, Univerzitet u Novom Sadu, Poljoprivredni fakultet, Javno Vodoprivredno Preduzeće Vode Vojvodine.

Extreme weather conditions, posing serious hydrological danger, occur more frequently because of climate change. Out of these hazards, droughts and inland waters are the most significant regarding their geographical scope and their agro-economic effects, and these two hydrological hazards threaten the sustainable development of the cross-border region the most. Despite the significant progress of the previous initiatives and developments, risk assessment and mitigation have not reached the operative level. Since these risks and challenges are of a regional nature and they are equally affecting the Southern Great Plain and Vojvodina, a close cross-border cooperation is needed to solve the problems.

The primary goal of this project is the development of innovative and coordinated monitoring solutions and the preparation of operative water management plans, which promote the establishment of early warning systems and the elevation of results to an operative level. The jointly established Drought and Excess Water Research and Monitoring Centre comprises the coordination of research and monitoring research and development tasks and the broad communication of results with the partners. The achievements of the project have significantly contributed to the development of cross-border water management and risk prevention systems, the improvement of the ecological and quantitative status of water bodies and the reduction of the risk of drought and inland water flooding. The results also support the sustainable development and the resilience towards climate change of strategic industries and the entire cross-border region.

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16 Directive 2000/60/EC of the European Parliament and of the Council and EU flood framework directive of 23 October 2000 (directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on flood risk assessment and management)

17 Source: http://www.interreg-ipa-husrb.com/hu/projectek/protect-husrb1602120132/

BABECA - HUSRB/1601/11/0001- Complex water management development in the region of the Baja-Bezdan Canal (29 September 2017-28 September 2020)

In liaison with these beneficiaries: Alsó-Duna-völgyi Vízügyi Igazgatóság, Javno vodoprivredno preduzeće "Vode Vojvodine" Novi Sad, Fond "Evropski poslovi" AP Vojvodine.

The aim of the project was to decrease the flood risk of the target area and to restore the drainage capacity of the Baja-Bezdan Canal. The interventions of the project improved the cross-border water management and risk prevention systems. Another aim was for the results to provide a solid foundation for further research.

The concrete activities included the building of driftwood removal platforms at 3 localities in Hungary; the reconstruction and rehabilitation of the Bezdan and Šebešfok Locks; the dredging of 5 600 m section of the Baja-Bezdan Canal in Hungary; the procurement of special equipment for maintenance in Hungary and Serbia; the development of studies and plans; and the activities related to project management and information and publicity. These activities are expected to prevent or at least reduce flood risks, to enhance the movement of people and goods between Hungary and Serbia, as well as Serbia and other countries given that the Bezdan Lock is the first lock on the Danube in Serbia which in turn enhances the movement of people between the settlements in Serbia and Hungary improving the quality of life of local population. At the same time it also has a positive impact on restarting the production at the Bezdan shipyard and creating improved conditions for better cross-border cooperation and transport in the future and established better conditions for the commencement of business activities pertaining to tourism development. Notwithstanding the project also resulted in an improved ecological and chemical status of the whole canal.

URBAN-PREX – HUSRB/1602/11/0097 - Extreme precipitation and flash flood monitoring and the development of a forecast and early warning system in Hungarian-Serbian cross-border urban areas (1 November 2017-31 October 2019)

In liaison with these beneficiaries: Univerzitet u Novom Sadu, Prirodno-matematički fakultet u Novom Sadu, Szegedi Tudományegyetem, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Szeged Megyei Jogú Város Önkormányzata, JKP Vodovod i kanalizacija Novi Sad.

In the framework of the project, two precipitation measuring networks have been established in the two most populated towns of the project area: Novi Sad (Serbia) and Szeged (Hungary). As a result, the amount of rainfall can be observed in a territorial resolution much bigger than ever before. The continuously collected data of the system and the real-time display of the measures can significantly help the citizens with personal level protection in time of extreme precipitation events, or the local decision-makers and utility companies in mitigating the damage of potential crisis situations. The establishment of the warning system will be based on data collected with remote sensing and measurements by precipitation monitoring systems in Szeged and Novi Sad.

WASIDCA - HUSRB/1601/11/0004 - The development of water supply and water transport infrastructure in the drainage basins of the border region (1 June 2017-31 May 2020)

In liaison with these beneficiaries: Alsó-Tisza vidéki Vízügyi Igazgatóság, Skupština opštine Kanjiža, Pokrajinski sekretarijat za poljoprivredu, vodoprivredu i šumarstvo.

The project aimed at improving the region's water management, increasing safety and protection of people living in the border region, contributing to ecological water management, having higher quantity and quality water, and thus improving the socio-economic situation of the municipalities and the border region. Establishing water recharge based on the surface water supplies is a key element in the region, as the current surface and groundwater resources are not enough for the agriculture activities and the everyday activities of the population. Regarding flood prevention and flood management, the water agencies operating on the two sides of the border shared the technical methods and resources applied. On the Serbian side, the experts, and volunteers of the two countries received a training to learn a defence technique. The aim of this initiative was to develop the technical and human resources of flood prevention on both sides of the border with joint action and the procurement of the flood protecting hose dam. The purchased tool can be used in both countries if necessary, as a quick, low weight and efficient alternative.

PREVENT!FLOOD SUSTAINABLY - HUSRB/1602/11/0225 Increasing the efficiency of municipalities' flood protection with intelligent metering (1 October 2017-31 March 2020)

In liaison with these beneficiaries: Baja Város Önkormányzata, Opština Novi Bečej.

The aim of the project is to improve the flood prevention and flood protection capacities of Baja and Novi Bečej with key infrastructure developments, technology-based disaster prevention tools, planning activities and training and awareness-raising activities. Flood protection has a great significance in Baja and Novi Bečej because of their geographical location. Both settlements are responsible for the protection of areas along the rivers, and they want to increase the efficiency of flood protection.

ECOWAM - HUSRB/1602/11/0010 - Fighting against extreme weather conditions in the border region with environmentally friendly water management (1 October 2017-31 March 2019)

In liaison with these beneficiaries: Alsó-Tiszavidéki Vizügyi Igazgatóság, Javno vodoprivredno preduzeće "Vode Vojvodine" Novi Sad, Fond „Evropski poslovi" Autonomne pokrajine Vojvodine.

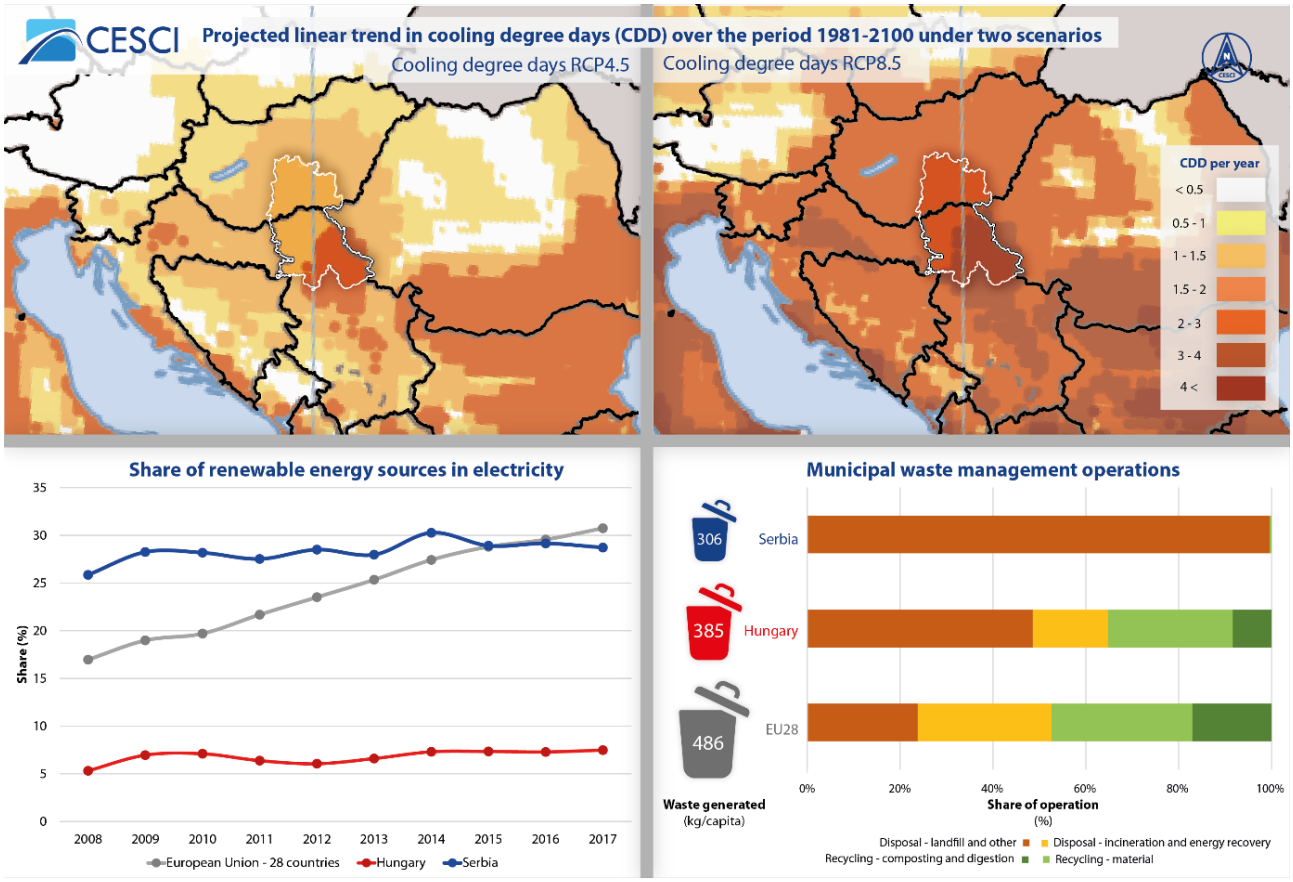
The aim of the project is to prevent the factors affecting the quality of waterbodies with the help of the joint water management development system to be established in Vojvodina AP and Csongrád megye. Specific objectives: improving their water balance with mud dredging, heritage establishment and the elimination of vegetation overgrown in the river bed; Establishment of a joint monitoring and analysing system in order to preserve the water quality and biological diversity of the joint border region; Defining long term solutions for the prevention of the water bodies' drop in quality. The project, according to the overall objectives of the programme, contributes to the coordinated development of the region, by the sustainable utilization of the natural and cultural resources, with preserving the biological diversity of the region and providing the sufficient water quality, based on the closer economic cooperation.

2.1.1.4 Waste management

The amount of municipal waste produced in Hungary is currently 3.8 million tons per year, the deposited waste of this is 2.2 million tons per year. 1.1 million tons of waste is recycled. The deposited, but recyclable waste represents a lost value: the added value that could be extracted from

it is estimated to be 10-50 billion Ft every year. Therefore, extracting the inherent value in waste is a public interest, which the European Union is trying to encourage by imposing stricter obligations regarding waste recycling. The aim is to increase the levels of preparing the fractions of paper, plastic, glass, and metal, which are part of municipal waste, for re-use and recycling them by 50%. Complying with the EU obligation, the initiatives for the isolated collection, pre-treatment and utilization of bio waste/green waste is necessary for further decreasing the amount of deposited waste, encouraging utilization with cleaner materials and raising awareness and establishing the right behaviour, in order to develop public services.

Figure 10: Challenges to sustainability



In Serbia, about 80% of domestic waste are collected in an organized manner, the rest goes to the more than 3500 illegal landfills of the country; only 5% of the collected waste is recycled. No progress has been made regarding packaging waste over the last ten years. The recycling ratio in this sector is estimated to be 35–40%[18]. The underdevelopment of waste management is one of the key problems, the number of illegal landfills is steadily increasing as a result.

[18] Balkan Green Energy News: Waste management in Serbia – problems, challenges, and possible solutions https://balkangreenenergynews.com/waste-management-in-serbia-problems-challenges-and-possible-solutions/

2.1.1.5 Renewable resources, energy potentials

Solar energy utilization: The natural conditions of the programme area are advantageous regarding solar energy utilization, the annual number of hours of sunshine is min. 1900-2200, the average amount of incident solar radiation is 1300 kWh/m^2. Only a limited amount of the Sun's thermal energy can be used for heating in the winter season, but there are the so-called seasonal (with a volume of 100,000 m^3 even) heat accumulators, which can play a significant role in meeting the demands of winter heating.

The photovoltaic systems, built on unallocated areas, are for use in power stations, they can be used for local energy supply (in an autonomous or connected mode) mounted on the roofs of buildings or installed on the front of buildings. The thermal solar energy systems are the most economical to use for hot water preparation, and they are utilizing solar energy on a 30-50% efficiency every year, if the power converting solar collectors are operating in a well-oriented location in a good angle, without shadows.

Besides the high potential, the solar energy powered installations have shown a much slower spreading tendency over the last few years in this region compared to international data, which was because of the low and uncertain financing sources and other administrative obstacles. However, the solar energy production more than tripled (increased by 317%) between 2017 and 2018 in Hungary (the solar power plants for household purposes, which are mainly solar panels built on rooftops, are not included in this increase, as there are no data of the accurate production of these power plants). In Serbia, the emphasis of exploitation of electricity production capacities for renewables and wastes are not placed on solar energy, but rather on hydro energy. While in 2018 in Hungary 726 megawatt solar energy was produced, in the same year in Serbia only 11 megawatts. However, in 2018 Serbia produced 3 043 000 megawatts of hydro energy, while Hungary only 57 megawatts.[19]

Table 2: Electricity production capacities for renewables and wastes in 2018 (in megawatt)

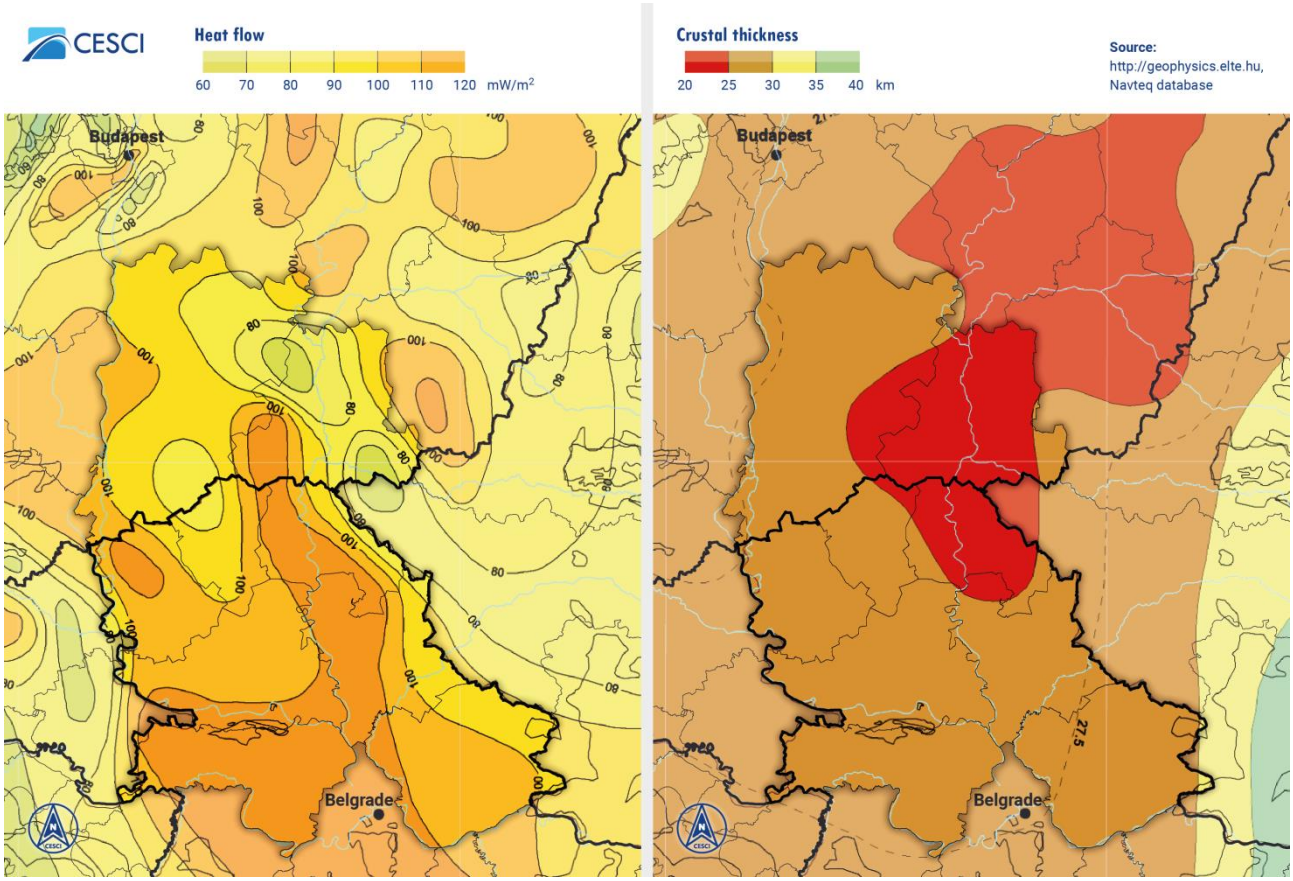
Energy product source	Hungary	Serbia
Hydro	57	3 043,000
Geothermal	3	0
Wind	329	227
Solar	726	11
Solid biofuels	385	0
Biogases	76	17
Waste	64	1
Industrial waste (non-renewable)	19	1
Municipal waste	45	0
Sum	1 704,000	3 300,000

[19] Source of data cited in this paragraph and in the table are from Eurostat: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrg_inf_epcrw&lang=en

The additional main areas where solar energy is directly exploited, and which are worth developing in the region: active solar thermal systems, agricultural solar thermal applications, passive solar thermal systems.

Thermal water: the programme area's rich thermal water capacities are a special feature of the Carpathian Basin's hydrography as a whole; it is both quantitatively and qualitatively outstanding even on a global scale. Favourable geological conditions resulted in the outstanding amount of thermal springs. The earth's crust below the Carpathian Basin thinned during the forming of the region's ground structure, therefore the high temperature earth's mantle was closer to the surface. Its thickness in the region is 23–27 km, and where the bedrock is closer to the surface, the ground thermal flow is typically higher as well. The temperature and amount of thermal water provides an outstanding basis for utilization in several regions. The temperature of extractable thermal water is 90–95°C in Szeged and its surroundings, and 60–80°C in Vojvodina AP and its surroundings. The amount of water extractable with modern well systems is 60–80m^3/h. This means a calorific value of 2.0–4.5MW per wells, which can be further increased with modern technology.

Figure 11: Heat-flow and crustal-thickness in the border region



Geothermal energy is only partially renewable, but the Carpathian Basin's huge supply will most probably last for thousands of years. There is a geothermal system where the heat source, the reservoir and the transport fluid coexist. The reservoir is a hot, permeable rock volume, which the fluid circulating in it gets the thermal energy from, and which is constantly heated by the ground thermal flow. Geothermal fluid is mostly thermal water, which can be in the form of liquid or vapor,

depending on the temperature and pressure of the reservoir. The methods and tools of production are developed in the oil industry, the depletion of oil stocks partly encourages the industry to produce geothermal energy. The average geothermal gradient in the Carpathian Basin is 45°C/km, or 60°C/km here and there. The region is at the forefront of the world regarding the agricultural utilization of geothermal energy. There are huge potentials in other utilizations, research has shown that the programme area has all the necessary elements for establishing a geothermal system. This is why it is considered an absolute must to detect the high temperature zones in the Great Pannonian Plain's basement, and to establish deep enhanced geothermal systems there, being the most suitable location in Europe. It would be advisable to support geothermal research, development, and investments more efficiently.

Biomass: a by-product, serving as a secondary raw material suitable for local thermal energy production, which is largely available as a result of agricultural activities. Biomass is the potential of one of the most significant renewable resources due to the agricultural nature of the programme area, considering the natural conditions, the structure of land conversion and the nature and standard of agricultural production. The energy use of biomass is varied, it can be used for thermal energy production, electricity production, and as a type of fuel.

In the research paper "Analysis of Plant-Production-Obtained Biomass in Function of Sustainable Energy"[20] the degree of utilization of the agricultural biomass for energy purposes in AP Vojvodina is analysed. The results of the research indicate that there is a huge potential in unused agricultural biomass for energy purposes in AP Vojvodina. Considering the surveyed 75 agricultural properties, the total technical potential of biomass was 152 318.49 t/year, while only 15 149.42 t/year was used for energy purposes. A significant part of biomass is burned in the fields instead of being used for energy purposes.

In Hungary the obligatory statistical data collection regarding biomass is the task of the NARIC Research Institute of Agricultural Economics, Agricultural Statistics Department.[21] However, data collection covers all the biomass power plants, heating plants and biogas plants, the data protection rules do not allow to analyse all of the data (the number of data providers in Bács-Kiskun county stays below 3). In Csongrád county there are 3 biogas plants and a biomass power plant. These use altogether 36 435.6 tons of biomass (more than 50% are from agricultural resources) for energy purposes.[22]

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20 Škrbić, Siniša; Ašonja, Aleksandar; Prodanović, Radivoj; Ristić, Vladica; Stevanović, Goran; Vulić, Miroslav; Janković, Zoran; Radosavac, Adriana; Igić, Saša (2020): "Analysis of Plant-Production-Obtained Biomass in Function of Sustainable Energy." Sustainability 12, no. 13: 5486. https://www.mdpi.com/2071-1050/12/13/5486/htm

21 Demeter Edit (2020): Statisztikai Jelentések, Biomassza-felhasználás energetikai célra, 2019. év. I. évfolyam 1. szám 2020. (Statistical Reports, Biomass use for purposes of energetics. 2019/1. Issues no. 1. (published in 2020). http://repo.aki.gov.hu/3581/1/Statisztikai%20Jelentes%20Biomassza%20felhaszn%C3%A1l%C3%A1s.pdf

22 Data providing of the NARIC Research Institute of Agricultural Economics, Agricultural Statistics Department.

A relevant previous project in this topic is the Interreg-Danube funded ENERGY BARGE[23] which was realised between 2017 and 2019 and aimed at exploiting the potential for green energy in the form of biomass along the Danube river in a sustainable way, thereby increasing energy security and efficiency in the Danube countries through building a platform for the exchange of experiences and best practices. An outstanding feature of the ENERGY BARGE project is its cross-sectoral approach as the project brings together key actors along the entire value chain, stakeholders from the bioenergy industry, Danube ports as well as relevant public authorities and policy stakeholders which shall support transnational know-how transfer and cooperation.

A similar current example is the project called DanuP-2-Gas: Innovative model to drive energy security and diversity in the Danube Region via combination of bioenergy with surplus renewable energy[24]. The project started in July 2020 in the framework of the Danube Transnational Programme and aims to diversify the energy sources, expand generation of renewable energy, create storage strategies for renewables and advance the electric power and gas sector coupling.

Furthermore, the EUSDR PA2 supported the DARLINGe transnational project[25] (lead by the Mining and Geological Survey of Hungary) mapping the untapped deep geothermal energy potential of the South Pannonian basin in Hungary (and also in SIovenia, Croatia, Serbian and Romania). This was coupled by heat market analyses, thus matching the available resources with existing heat demands (e.g. larger cities, district heating infrastructures, etc.) to outline the most prosperous regions for the future development of geothermal heating projects. The project also provided a market-replicable toolbox (methodology) consisting of 3 complementary modules. It was developed for sustainable geothermal reservoir management consisting of an independent indicator based benchmark evaluation of current uses, a decision tree to provide a step-by-step guide to project developers and a geological risk mitigation scheme to maximize the success rate of a first geothermal well reaching the expected yield and temperature. The project results largely contributed to the establishment of Serbia's first geothermal district heating system in Bogatic. Therefore, the DARLINGe project outcomes could support project development in the HU-SRB cross-border region.

23 See more information on the project here: http://www.interreg-danube.eu/approved-projects/energy-barge

24 See more information on the project here: https://energy.danube-region.eu/wp-content/uploads/sites/6/sites/6/2020/06/20200527_DanuP-2-Gas_EUSDR_PA2.pdf

25 See more information on the project here: http://www.interreg-danube.eu/approved-projects/darlinge

Based on the analysis of the topic 'Environmental protection and environmental sustainability', the following types of potentially functional areas can be defined within the region:

- Landscape units: mesoregions having similar and cross-border characteristics determined by their natural features and the social-economic impact of its population (namely Alföldi-Dunamente/Podunavlje, Bácskai síkvidék/Bačka ravnica, Alsó-Tisza-síkság/Potiska ravnica, Maros-hordalékkúp/Moriška aluvijalna ravnica, Homokhátság).
- Areas exposed and vulnerable to climate change: first, droughts can be defined with the standardized NDDI (Normalized Difference Drought Index) rates based on the WATER@RISK project, where regarding NDDI anomaly, the range above 1.0 indicates drought. Secondly, areas with flood risk can be considered, where riverine flood risk is high (6-10 thousand) or very high (above 10 thousand) meaning that the number of affected people per thousand inhabitants is outstanding.
- Water bodies: either surface or underground water resources can have cross-border character, including river catchment areas, reservoirs or actual rivers and their tributaries. The quantity and the quality measures such as the chemical status of water bodies can make a clear distinction (see the Figure 6 about 'Cross-border character of river basin management').
- Areas rich in renewable energy potentials: one of the most adequate spatial forms of cross-border renewable energy sources are the geothermal systems and reservoirs. The areas richest in geothermal energy can be found where the hear flow is above 100 kmW/m^2 and where crustal thickness is less than 25 metres. Furthermore, rich in solar radiation of bioenergy can also be considered as seen as functional areas.

2.1.2 Transport connections

2.1.2.1 The context of macroregional transport connections

The macroregional transport connections of the border region have a good base being influenced by the geographical relationships, historical development and the current social, economic and political processes as well.

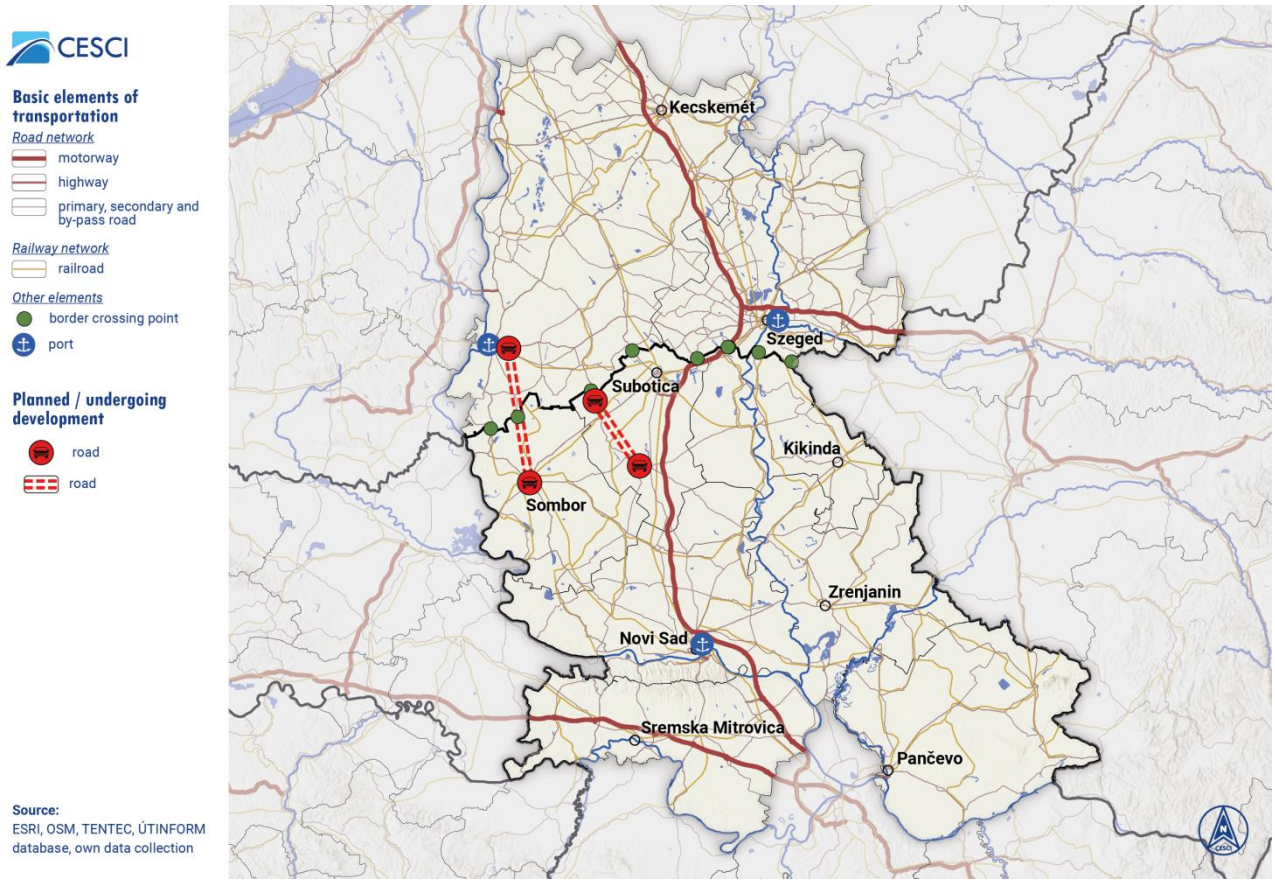
The geographical relationships do not pose insurmountable obstacles to transportation in the region, only the bigger rivers (Danube, Tisza/Tisa, Sava) encourage building expensive structures. However, these rivers are potential, but currently under-utilized paths of water transport. The favourable geographical situation, the lowland landscape does not increase investments too much. Considering the historical developments of the region – mostly the changing borders during the previous century – have left their mark on the peripheral transport network. However, the lines and connections that used to cross the previous borders have not disappeared completely; they can be reused as potential resources during investments (see Szeged-Subotica-Baja railway project).

The current social, economic, and political processes are changing quickly and getting more and more complex. Hungary, being a member of the European Union and Schengen, and Serbia's aspirations together create a commonality of interests. In this framework, the Pan-European (Helsinki) corridors in the area are important aspects of cooperation. Corridor VII (the Danube river) and Corridor X (Budapest-Beograd-Niš-Thessaloniki/Sofia) are reaching the border region. The former is a waterway and it is currently only an opportunity for the region (but it is a huge opportunity since the Danube-Main-Rhine canal renders the biggest international economic centres available in the European Union), but the latter is one of Southeast Europe's (and beyond) most important transit routes towards the economic hubs of the European Union. Both corridors have a macroregional importance with an impact larger than Hungarian-Serbian cooperation, and the border region can greatly utilize both, thus increasing the level of interconnectedness.

Macroregional connections can have negative effects on a local level, which is related to the transit flow significantly increasing, especially in prioritised periods. Regarding the present border region, this means crossing the trans-Balkan route towards the EU, the huge number of migrant workers seasonally travelling possibly overburdening border crossings, not only the motorway border crossing in Röszke.

The border-related events of the last few years also need to be taken into consideration. The "migration crisis", which began in 2015, and the responses to the crisis have not been advantageous for border permeability, border section development and cross-border connections. At the height of the migration crisis, the amount of irregular border crossings via the Western Balkans route was extremely high. However, the high number of arrivals on the route has decreased significantly in recent years due to several factors and measures. Among other things, the EU has coordinated its migration strategy, one of the main pillars of which is to address the incentives for irregular migration; Hungary has strengthened the protection of its borders, and Serbia has abolished visa-free travel for Iranian citizens. At the same time, due to global trends, larger migration waves similar to the past may occur in the future.

Figure 12: Transport connections of the border region



2.1.2.2 The internal and external transport connections of the region

The existence of transport connections and transport network (which are the transport channels for individuals, services and goods) are inevitable in every territorial cooperation. In case of all border regions, the elimination of congestion is the possibility of removing the most important obstacle (the border) for establishing more frequent connections. Fortunately, the geographical relations do not make establishing border intersection points more difficult (cf. Hungarian-Croatian border and the Drava bridges).

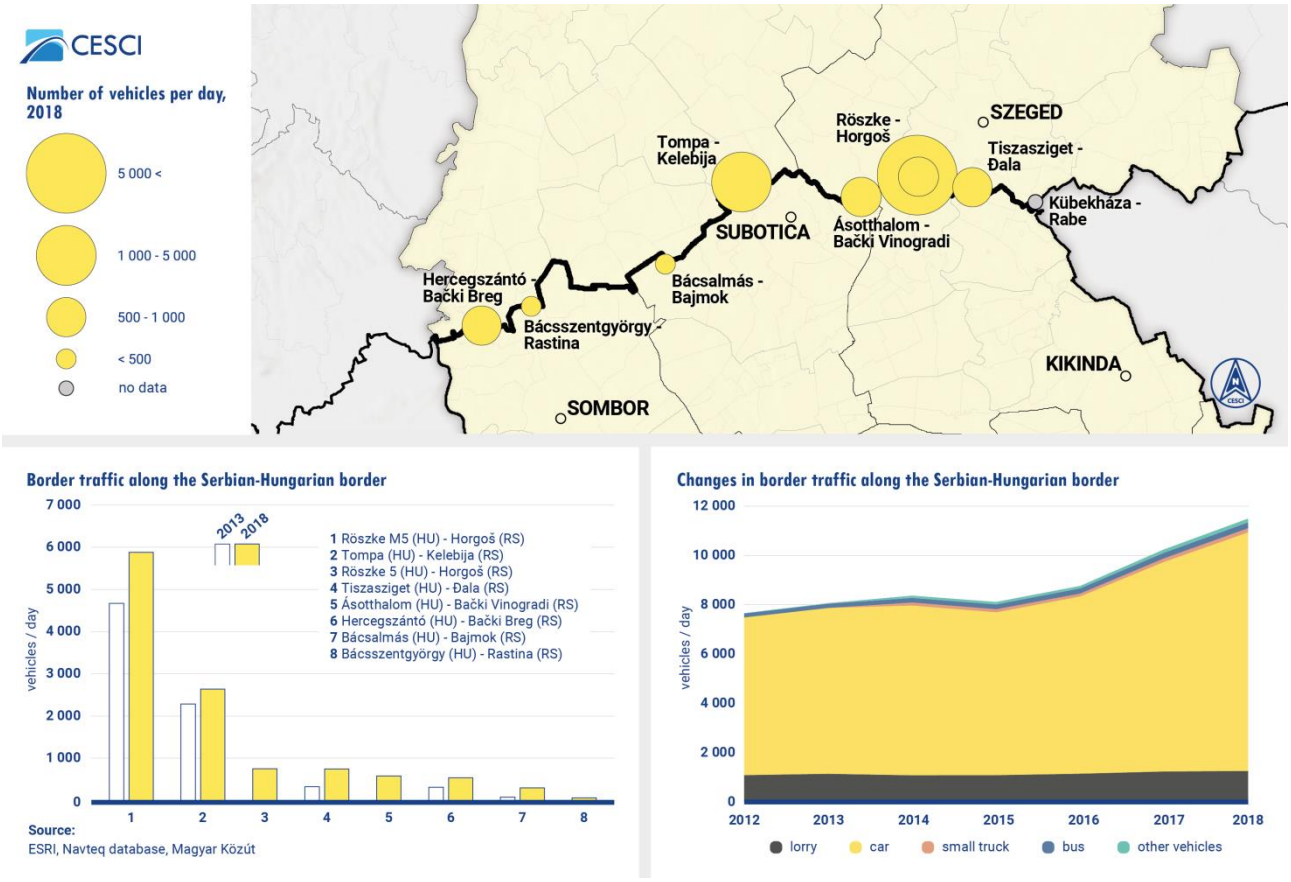
Border crossing

The state border is the significant geographical factor of the region. This is especially true, taken into consideration that border screening/control at the Hungarian-Serbian border is outstanding with Hungary being a member and Serbia currently not being a member of the EU and Schengen. Therefore, not only the entry to Hungary, but also to the entire Schengen Area is controlled at this border, so its administrative reduction is not a local competence; crossing the border can only be made smoother through other means.

Many border crossings were opened along the Hungarian-Serbian border not independently from the excellent inter-state relations (Ásotthalom-Bački Vinogradi in 2012, Bácsszentgyörgy-Rastina in 2018, Kübekháza-Rabe in 2019), so today nine road crossing points, two railway crossing points and one river crossing point (from 2015, between Szeged and Kanjiža) are available for travellers (the Röszke-Horgoš railway crossing point has been closed since 2015, due to the migration situation).

As a result, the road border crossings are less than 20 km from each other on average, which is a significant progress compared to previous conditions. However, traffic has been increasing over the last few years, both in transit and at a local level, which is increasing the utilization and periodic congestion of border crossings.

Figure 13: Border traffic along the Hungarian-Serbian border



However, all border crossings, except for Röszke-Horgoš (M5), Tompa-Kelebija and Hercegszántó-Bački Breg, are only open between 7.00-19.00 and only available for individual transport, they are closed for cross-border public transport (by bus). Accordingly, even though having a border crossing every 20 km is reasonably good (only the Slovenian border section is better with an average distance of 9.2 km, and the Austrian-Hungarian border is the same out of the Hungarian borders), the transferring capacity is weaker than required as a result of the limited opening hours and modes of transport and the longer border control because of the external Schengen border.[26] Therefore, a six-hour-long wait can easily happen in particular periods, but a two-hour-long border crossing is common anyway, which is obviously very disadvantageous for border region integrity. The border crossing at Kübekháza (also with limited opening hours), which was opened most recently, has become overcrowded very quickly after its opening and the waiting time quickly became the same as at other border crossings.

26 To compare: All border crossings are open 0-24 for all kinds of traffic on the Slovenian side, which stems from the nature of the internal Schengen border.

The reason for border crossing capacity reduction is in hard infrastructure. Opening lanes and expanding road surfaces to enable other kinds of traffic would be important development pathways regarding border crossings. These kinds of projects exist today, making the border crossing between Hercegszántó and Bački Breg suitable for heavy goods traffic which is currently on the agenda and partly taking place.

Limited human capacities also influence the limited transferring capacity of the border crossings. The transferring capacity, which is the biggest problem of the border region's interoperability, could be improved with more border staff and multilane border control. There have been plans for this, currently the priority is the border crossing at Ásotthalom. Crossing-time saving projects requiring software development are running nowadays as well, this will hopefully show positive results in the near future.

Increasing transferring capacity would not only improve people's comfort, it would also be economically beneficial, as the labour flow from Vojvodina towards Hungary is significant, where the flexibility of planning of the production shifts is limited in case of border crossings open 7.00-19.00, since employees need to head home on time, or go on a huge detour. Tourism would also get additional revenues as well, since a border crossing open 0-24 would mean more guests in thermal baths and in other service areas (restaurants, shops). Even a slight increase in opening hours would solve lot of challenges deriving from short and limited available time for crossing the state border regarding the flow of employees in particular. Extension of opening hours from 7.00-19.00 to 6.00-22.00 would not only secure an additional four hours to get to the neighbouring country, but it would greatly contribute to a stronger integration of the two labour markets. This would result in, among others, a smoother flow of workforce, and daily commuting would be a real option for many.

Table 3: Border crossing on the Hungarian-Serbian border

Name of the border crossing	**Type of traffic**	**The volume of traffic** (vehicle, 2018)	**Opening hours**	**Additional information**
vehicular				
Hercegszántó-Bački Breg	international goods (up to 3.5 t) and passenger transport	537	00.00-24.00	in the IPA programme (SO-BAJA 2) during development, later heavy vehicles as well
Bácsszentgyörgy-Rastina	only individual passenger transport for EU, EEA, Swiss and Serbian citizens	63 (open this year)	07.00-19.00	from 2018
Bácsalmás-Bajmok	only individual passenger transport for EU, EEA, Swiss and Serbian citizens	300	07.00-19.00	
Tompa-Kelebija	international trade in goods and passenger transport	2637	00.00-24.00	

Name of the border crossing	**Type of traffic**	**The volume of traffic** (vehicle, 2018)	**Opening hours**	**Additional information**
Ásotthalom-Bački Vinogradi	only individual passenger transport for EU, EEA, Swiss and Serbian citizens	579	07.00-19.00	development ideas from the stakeholder consultations are concentrated here
Röszke-Horgoš „1" (route 5)	only international individual passenger transport	749	07.00-19.00	
Röszke-Horgoš „2" (M5)	international trade in goods and passenger transport	5880	00.00-24.00	the biggest transit crossing
Tiszasziget-Đala	only individual passenger transport for EU, EEA, Swiss and Serbian citizens	747	07.00-19.00	
Kübekháza-Rabe	only individual passenger transport for EU, EEA, Swiss and Serbian citizens	n.a.	07.00-19.00	from 2019
railway				
Kelebia-Subotica	international trade in goods and passenger transport	16 trains/day (2015)	00.00-24.00	transit, in connection with the development of the Budapest-Belgrade high-speed railway line
Röszke-Horgoš (railway)	international trade in goods and passenger transport	closed	00.00-24.00	closed since 2015, currently under development, planning to re-open in 2022
water transport				
Szeged-Kanjiža	international trade in goods and passenger transport	n.a.	07.00-19.00	from 2015

Railway transport[27]

The railway links are currently made up of two railway lines. The Budapest-Beograd railway line shows the macroregional connections; its significance is subsidiary regarding both sides of the border region. The future and already stated development of the highspeed railway connection between the two capitals is relevant for strengthening the macroregional connections, however its direct effect on the integration of the border region is limited given that the main purpose of the line is to facilitate direct freight traffic across Serbia and Hungary to Western Europe from the port of Piraeus, Greece, as well as to have a long-distance type of passenger connection („InterCity") with very few stops within the programme area. The Budapest-Cegléd-Kecskemét-Szeged-Subotica line is part of the TEN-T system, therefore the macroregional connection is ensured (but it is not a pan-European corridor), and this line is also important because of border region integration. Unfortunately, cross-border transport has not been operating here since 2015. For the development of the passenger transport resumed in 1988, the necessary research and planning prior to the investment have been made with EU co-financing, and as things currently stand, the investment will begin in 2020. Establishing an efficient and environmentally sustainable public transport connection between the two big towns of the region (Szeged-Subotica) would boost border region integration (Figure 14). If border controls were executed on the train, getting from one town to the other (45 km) would only take 30 minutes on "intercity" trains, which are planned to run every two hours starting in May 2022, while it would take 70 minutes on passenger trains stopping at several stations. Passenger trains would run between two "intercity" trains. Passenger train lines can be suburban or agglomeration lines in both towns.

For now, there are only plans for expanding the line and re-opening the Subotica-Csikéria-Bácsalmás-Baja line (and towards Dombóvár), currently there are no resources available. With the expanse of the railway line, the integration of the western and eastern parts of the region (Baja-Subotica-Szeged) and the connections outside of the region (Pécs, and the Budapest-Zagreb railway axis) would significantly improve. This could be increased by the rehabilitation of one of the no longer operational railway branch lines between Baja and Sombor, which could also contribute to maintain the Subotica-Baja connection. It would also greatly increase the north-south integration of West Bačka. This is especially important given that there is no means of public transport in the region, connecting the two subregional towns (Baja-Sombor), which have had town-twinning arrangements since the '60s and territorial division of labour for centuries.

The construction of the Tisza Bridge by the railway of Szeged would be relevant as well for the relations outside of the region. The bridge would connect the railways on the left and right sides of the river, establishing a connection between the region and Timisoara, Romania. This is only possible with huge detours from both sides of the border now, though the tracks are still there on the Serbian side towards Kikinda, without passenger transportation. The postponed construction of the bridge and the increased demand for territorial transport integration could steer the railway links, from Szeged towards east, to this direction.

[27] This subchapter was elaborated based on a phone interview with Eszter Csókási, executive manager of the DKMT Euroregion, among other sources.

Figure 14: Szeged – Subotica - Baja railway line

Road transport

The motorway (E75, M5 in Hungary, A1 in Serbia) connecting Budapest with Belgrade (also the eastern part of the Balkans with Western Europe) is the most important element of the macroregional road links. Furthermore, this gathers the biggest demographic and economic centres on both sides of the border, therefore it is the real backbone of the region.

Even though the motorway of the V/C corridor is out of the territory of the programme area (E73, M6 in Hungary), it is on the periphery of the border region from the western part of the Danube, therefore it is easy to access (the bridges of Baja, Szekszárd and Dunaföldvár in Hungary, or that of Batina in Serbia). It is primarily important to West Bačka.

This connection could be even more accessible in the long run with the help of the "Southern Motorway". It is becoming a priority again now and it is present in the planning activities on different levels and patterns. The Southern Motorway could help increasing particularly the east-west integration of the region, which could be an option for not only Hungary, but also the northern part of Vojvodina, depending on the development of the feeder north-south routes and the simplification of border crossing.

The lower-level roads are in poor condition in many cases, so much so that at certain border intersections, the bottleneck is not necessarily the transferring capacity, but the quality of the roads leading to the border crossing. This also applies to the roads to the border crossings of Ásotthalom-

Bački Vinogradi, Kübekháza-Rabe and Bácsalmás-Bajmok. The development of the road between Sombor and Baja is specifically aimed at solving this capacity bottleneck.

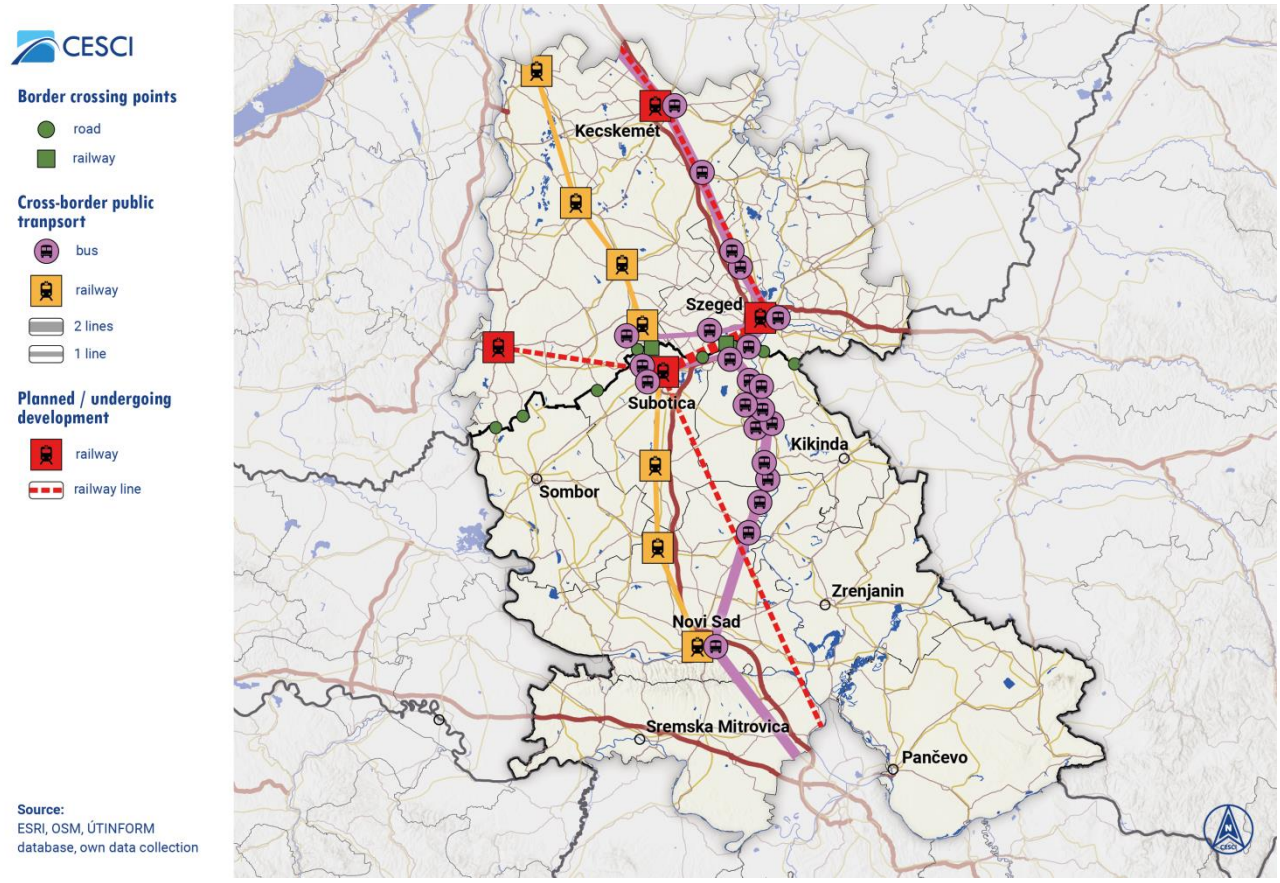
Public transport buses

Road public transport (bus) is currently more dominant in both countries than railway public transport because of the currently sparse railway network. This is also increased by the small number of border intersections. However, there are limited opportunities for crossing the border by bus. The Volánbusz (Hungarian) and the Severtrans (Serbian) bus transport companies are operating bus lines between Budapest-Szeged-Subotica (only a few per day) and between Szeged and Novi Sad (again, only a few per day, two departures on Friday and Sunday). Furthermore, two buses are running between Subotica and Szeged daily. These buses cross the border at Röszke (it is the quicker option) or at Tompa (reaching Mórahalom as well this way), but there is no direct public transport connection on the western side of the region (Baja-Sombor).

Limited public transportation does not help increasing the intensity of cross-border relations in the slightest, since the ability to develop relations depends to a great extent on the ability of individual transportation in many cases. This prevents the movement of mostly young adults, students, university students and retired people, who would be the most likely to build relationships in many cases.

One of the important reasons for the lack of bus transportation is the limited opportunities for crossing the border. Buses can only use the border crossings in Hercegszántó, Tompa and Röszke.

Figure 15: Cross-border public transport of the region



Water transport

The whole Danube and Sava section within the analysed area, furthermore the Tisza/Tisa from Szeged down the river are part of the (indicative, in Serbia) TEN-T network as core inland waterways (for further details especially about port infrastructure and the economic aspects of water transport in general, please check 2.2.1 Economic logistics: waterways and ports). The Danube, an international waterway, and the pan-European Corridor VII, flows on the western half of the border region, therefore it is a direct connection to the international waterways for a part of the region. However, the infrastructure, along with the Tisza/Tisa and the DTD canal, has a great waterway potential, but its utilization is still remarkably low, despite the fact that the basis of infrastructure conditions is given in case of both the Tisza/Tisa and the Danube. Due to low water levels the Tisza/Tisa is only navigable from Csongrád southward. The conditions are there for tourist passenger transport, the water level of the river Tisza/Tisa is the biggest limiting factor besides the regulatory environment of crossing the border. There is an official harbour crossing point in Szeged and Kanjiža since 2015.

Air transport

The region does not have an international airport, but there are many airports nearby (Budapest, Beograd, Timisoara), so even though some efforts are made to develop the airports of the region (Novi Sad, Szeged), their economic viability is questionable as many operating airports are close. Both the Timisoara and the Budapest Airports are within a range of less than two hours' drive from Szeged. The Beograd Airport is just over two hours. Baja, a bigger town in a region furthest from the international airports, is still within a bit more than two hours' drive from Liszt Ferenc Airport in Budapest. Therefore, the aviation development of the region is not likely to become a priority, the further development of the airports of Szeged and Novi Sad would require major infrastructure investments.

Cycle paths

The macroregional network of the cycling infrastructure of the border region is well-developed. Three EuroVelo routes (6, 11, 13) reach the region. Route 6 runs along the line of the Danube, route 11 runs along the line of the Tisza/Tisa and route 13 runs along the Hungarian-Serbian border, ensuring north-south, east-west and north-west-south-east macroregional connections for the whole border region.

The region is ideal for cycling and the related infrastructure development because of its natural conditions. In Hungary, most people use their bicycle in the southern lowland region anyway[28], but developing cross-border connections has even more potential. Cycle transport can help with tourism traffic as well as the professional traffic aspect (which is environmentally friendly as well). The opportunities and attractions for tourism traffic are present in the border region, but the fluidity of border crossing affects this sector, like all the other transport sectors.

Many cycle paths were built and are being built (e.g. Ásotthalom-Tompa-Subotica) as a result of previous tendering opportunities, but there is still a high demand for them. The cycling traffic of the

[28] https://www.bacskiskun.hu/uploads/files/hatarozatok/20190215/6-2019-ii-15-hat-melleklete/190207-Bacs-Kiskun-kerekparos-strategia.pdf

region needs new relations, and if these relations are connected with each other and the EuroVelo network, many services (not only tourism based, but cycling based as well) could generate significant economic development.

2.1.2.3 Conclusion

Based on research, expert interviews and forums, the most significant barriers to the transport connections of the regions are related to border crossing. The problem is not necessarily the limited number of border crossings or their locations (but this could be improved based on the experience of the Slovenian-Hungarian border section). It is rather the transferring capacity, limited opening hours and limited modes of transportation. Some of these require infrastructure investment (border crossings suitable for buses, pathways for buses to the crossings), but increasing border control with personal and infrastructure development would be beneficial as well.

The exploration of the possibilities of expanding the border crossings of Bácsalmás, Ásotthalom, and Tiszasziget is considered important, as besides intensifying relationships, it would help with regional balance and relieving the existing border crossings. Besides the capacity increase of border crossings and opening them to bus traffic, the renovation and strengthening of feeder roads are also important to be able to handle the possible increase of traffic safely.

The possibilities of extending the east-west relation (Szeged-Subotica-Baja), the feeder branch lines (Sombor-Baja) of the railway infrastructure and the expansion of the connection towards Timisoara and Dombóvár needs to be on the agenda of further planning activities and the developments already underway need to be continued as much as possible.

The widespread promotion of river transport would be timely, in respect of both passenger transportation for tourism and freight transport. It would be important to investigate which obstacles could be removed before transporting goods on rivers. An appropriate business and administrative environment needs to be created for one of the most environmentally friendly modes of transport.

The cycle paths are still increasing only in terms of quantity. It would be necessary to establish the missing connections to join the road sections of the region as an integrated network. At the same time, the construction of the related services needs to be supported as well.

Relevant projects previously carried out in the region

Kübekháza-Rabe - HUSRB/1601/21/0003 - Development of a Road Border Crossing at Kübekháza (HU) - Rabe (SRB) area (1 October 2016-30 October 2019)

This project aims to develop opportunities for opening of a new border crossing between Kübekháza and Rabé (Rábé) which would help the economic, social and cultural cooperation in the Hungary-Serbia border region.

The project consists of building of new connecting roads and renewing the existing ones. The new road section constructed in Hungary will be 2,309 m long and 5.5 m wide, while the length of rehabilitated roads will be 1,365 m in Serbia and 844 m in Hungary. The national road through Kübekháza will be extended to the Romanian border. The Interior Affairs Ministries of the two countries will be responsible for the implementation of further project elements (border crossing

facilities, buildings). On the Hungarian side, a new border crossing station will be built and it will be used jointly by the two countries.

Dream Railway - HUSRB/1601/22/0002 - Elaboration of Technical Documentation of Subotica-Baja Railway Line (1 June 2017-30 September 2020)

The objective of this project is to develop the design documentation necessary for the construction of the Subotica-Bácsalmás-Baja section of the Szeged-Subotica-Bácsalmás-Baja railway line, relying on the existing feasibility study.

The planning of the Szeged-Subotica-Bácsalmás-Baja railway route started several years ago. Financed by the Hungary-Serbia IPA Cross-border Co-operation Programme in 2011, a feasibility study had been prepared for the railway line by examining several alternative routes. In the past 5 years the Governments and the competent ministries of Serbia and Hungary held several meetings on the development of the railway line, and they have repeatedly expressed their support for this project.

Currently there is no traffic conducted on the Subotica-Bácsalmás section. The railway line was once in operation but by today only the traces of the former train tracks are visible. The lack of a direct connection for transportation is a significant obstacle to the development of cultural, touristic, and social relations in the Hungarian-Serbian border region. The main benefit of the project is to develop a railway connection to eliminate the anomalies of crossing the border and enable the reconstruction of the railway line to improve the mobility of persons and goods. As a result, the travelling time required to cover this physical distance shall be optimized, and the towns and villages in the region would become significantly more accessible.

SO-BAJA2 - HUSRB/1602/21/0061 - Improving cross border road between Baja and Sombor part II (1 September 2017-30 December 2019)

The city of Sombor, situated in the North-West part of the Republic of Serbia, and the city of Baja, situated approximately 30 km from the southern Hungarian border with Serbia, have been twin cities since 1960. In accordance with the high level of cooperation that exists between them there is a significant guideline for improvement of the cross-border development and improvement of traffic infrastructure, including the border crossing Bački Breg – Hercegszántó.

Prequalification and upgrading of this border crossing point in terms of both passenger and freight traffic and the improvement of its connection roads will make the border region better connected to the Port of Baja, a Danube cargo port, as well as to the Hungarian M6 motorway, which is further connected with a branch of the fifth Pan-European corridor and Pan-European corridor VII.

OPTI-BIKE - HUSRB/1602/21/0102 - Optimising traffic in the border zone, planning and construction of bicycle paths (1 October 2017-30 September 2019)

This project aims to simplify and accelerate the transport by vehicles and bicycles which will be achieved in the following ways:

- building bicycle paths in Serbia: Subotica, the settlements Bački Vinogradi and Kelebija, and in Hungary – in Tompa and Ásotthalom;
- planning bicycle paths in Subotica and Tompa;

- removing bottlenecks at border crossings by defining the model of regulating traffic management.

The main objective will be achieved by constructing the bicycle paths on the both sides of the Hungary-Serbia border. The project intends to optimize traffic in the border zone. Additionally, by planning and construction of bicycle paths, the project aims to give an opportunity to those who use bicycles as means of transport and as a recreational activity, to arrive to and quickly cross the border from both sides. Furthermore, the development of the new bicycle paths will ensure safe biking across the border and the environmental protection (reduction of CO2 emission).

KNESZECYC-4 - HUSRB/1602/21/0186 - Szeged (Szőreg) - Novi Kneževac Bicycle Road Construction (phase 4) (1 January 2018-30 April 2020)

The project focuses on the construction of a bicycle road section which would complete the bicycle road network which the Local Municipality of Újszentiván previously developed in three phases/projects.

The bicycle road between Szeged and Novi Kneževac was a common goal in partnership with Szeged, Tiszasziget and Novi Kneževac, since the closest town to Szeged in Serbia is Novi Kneževac. Thanks to the previous three successfully implemented projects entrusted to Újszentiván, most of the bicycle road section was complete. Considering that the bicycle road utilization surpassed the intended use, the project's priority is the construction of the missing path section in Serbia and its linking to tourism.

Based on the analysis of the topic 'Transport connections', the following types of functional areas can potentially be defined within the region:

- Transport axes: important transport infrastructure across the state border of the given countries. Lines and service routes which form a comprehensive network owing to their cross-border character (e.g. Subotica-Csikéria-Bácsalmás-Baja line, railway branch lines between Baja and Sombor).
- Cross-border public transport networks: potential networks of intercity and suburban type of transport connections e.g. around Szeged and Subotica.
- The borderline and the crossings: those border areas in the vicinity of the border (30 min travel time) where there are insufficient number of crossings, where the density of border infrastructure is below the average of the whole border section. Crossings, especially those which are faced with joint challenges such as e.g. high peaks of traffic, need for elimination of bottlenecks, long waiting times, need for capacity building and speed up of border control procedures.

2.1.3 Development of cross-border functions

2.1.3.1 Main characteristics of the settlement network's spatial structure

Regarding the **functional spatial structure and the main characteristics of the settlement network**, one of the major geographic features is that the space organising power of both Budapest and Belgrade tends to fade right around the borderline. This **position of being situated right between the two capitals** means that the border region can capitalise from the strengthening of the cooperation axis between the two national centres (see the high speed railway, etc.) with better infrastructural as well as functional and institutional cooperation serving also the better integration of the whole border region to the wider international settlement system. Furthermore, the mid-point location (positional energy) on the metropolis axis in the form of large distance supports the emergence of regional centres and the better interconnection of the settlement networks to serve the supply of the border inhabitants.

In a wider context, the large urban centres are part of a **transnational urban network** characterised by Szeged, Subotica as well as Arad and Timisoara. Szeged and Subotica (together with Arad and Timisoara in Romania) have the capacities to be the engines of cross-border functional development, based on their high population size and functional heterogeneity, overlapping hinterlands, closeness and multiple areas of already existing relations from culture and education through to economic, transport and logistics functions. Presently Szeged has the strongest cross-border influence zone attracting border people to commute and use urban functions in the Hungarian county seat. Another main characteristic of the border area is the **high density of cities** defining the settlement network. Considering the population size of the settlements, which is one of the major factors that defines the potentials in the provision and sharing of functions, the analysed region is rather urbanised. There are as many as 84 settlements with city rank[29], whose average population size is 21 594. It means there is a relatively high number of middle-sized cities (from the category of 20-100 thousand inhabitants). In these cities, more than 1.8 million people (62%) live, making the urban areas and their functions decisive in the settlement network. Also, it has to be highlighted that a large number of the aforementioned cities are situated within a road distance of 50 km from the border, namely as follows: Szeged (168 048), Subotica (97 910), Sombor (47 623), Hódmezővásárhely (46 047), Kikinda (38 065), Baja (36 267), Kiskunhalas (28 285), Bečej (23 895), Makó (23 683), Senta (18 704), Apatin (17 411), Bačka Topola (14 573), Novi Bečej (12 133), Kiskunmajsa (11 229), Kanjiža (9 871), Ada (9 564), Jánoshalma (9 008), Sándorfalva (7 871), Palić (7 771), Soltvadkert (7 309), Kistelek (7 103), Novi Kneževac (6 960), Bácsalmás (6 753), Mol (6 009), Mórahalom (5 804), Mélykút (5 200), Tompa (4 267), Čoka (4 028), Csanádpalota (2 903). This group of urban centres can act as an important basis for cross-border cooperation, if only proximity is taken into account, it still has significant potential.

[29] Based on the following datasets:
ШИФАРНИК ОПШТИНА/ГРАДСКИХ ОПШТИНА И ГРАДОВА ПО УПРАВНИМ ОКРУЗИМА У РЕПУБЛИЦИ СРБИЈИ (31.12.2019) http://publikacije.stat.gov.rs/G2020/xls/G202021002.xlsx;
ШИФАРНИК НАСЕЉЕНИХ МЕСТА РЕПУБЛИКЕ СРБИЈЕ ПО УПРАВНИМ ОКРУЗИМА И ОПШТИНАМА (31.12.2019) http://publikacije.stat.gov.rs/G2020/xls/G202021003.xlsx
Magyarország közigazgatási helynévkönyve (01.01.2019)
http://www.ksh.hu/docs/helysegnevtar/hnt_letoltes_2019.xls

However, the population size and legislative city rank do not necessarily mean high level of urbanity in terms of morphology, functional richness, and behaviour of the local society regarding these cities. Therefore, most of them still function more like an oversized large village or a "**semi-city**" also because the main factor of their existence heavily relies on agricultural production, food processing and trade.

With increased settlement boundaries the vast agricultural lands around the market towns were filled with individual **farmsteads** to cultivate the distant lands to the core settlement more efficiently. Thus, along with the high proportion of cities in the settlement stock, large areas are characterised by dispersed settlements, often as an outer part of the urbanised central and urban node. Traditionally this region of the (Pannonian) Great Plain is known for the high share of its population living in outlying areas in separate farmsteads scattered throughout the agricultural areas (known as tanya in Hungarian, salaš in Serbian). The border region concentrates a large number of people living in these remote areas around the nucleated settlements: the Homokhátság is the main home to them, a place of residence for 90 150 inhabitants according to the census of 2011. In that area 18% of the population is living in the scattered settlements, while the share is only 6.1% in other landscapes of the Great Plain, and 1.5% outside of the Great Plain. The proportion of population living in outlying areas is higher than 10% and can reach 34.5% in the districts of Mórahalom, Kistelek, Csongrád, Kecskemét, Tiszakécske, Kiskőrös, Kiskunfélegyháza, Kiskunhalas, and Kiskunmajsa. There are still settlements where more people live on the outskirts than in the heart of the settlement itself, namely in Fülöpjakab, Helvécia, Kéleshalom, Móricgát and Petőfiszállás from Bács-Kiskun, furthermore Balástya, Csengele and Szatymaz from Csongrád.[30] In the interwar period[31] tens of thousands of "salaš" existed across Vojvodina (e.g. the most well-known ones around Subotica, Senta, Ada, Temerin) and as many as 11 thousand solely in North Bačka, the degradation of the buildings has reached a limited level.

2.1.3.2 Areas of functional cooperation

Several characteristics of the borderland's settlement network support **functional cooperation**/integration: there are no major geographical barriers hindering the extension of urban influencing zones to the other side; the area is characterised by larger urban centres with high density of joint and complementary functions along the border and with long-term history of inter-municipal cooperation in certain thematic fields. However, due to the strict border control (external EU border) and the lack of advanced legislative harmonisation (legal barriers) functional cooperation is rather complicated and is limited to certain fields (to be described later, as well as in other chapters) more related to people-to-people relations, cultural exchange and education given the aforementioned global circumstances.

By analysing the map showing the **theoretical gravitational zones** as the spatial representation of the influencing zones of urban functions, one of the most relevant forms of functional cooperation in the border region is related to cross-border hinterlands. Considering Szeged and Subotica in

30 http://www.ksh.hu/docs/hun/xftp/idoszaki/nepsz2011/nepsz_20_2011.pdf

31 "Interwar period" refers to the period between the end of the First World War (1918) and the beginning of the Second World War (1939).

particular but in the case of some other cities from Sombor to Makó too, the potential in the creation, management and development of certain urban functions is a truly relevant field of cross-border cooperation. In many cases either the central town lacks a vast part of its theoretic hinterland or many settlements from the hinterland suffer from limited access to urban functions because of the cutting effect of the still hard border when it comes to cross-border functional integration. In the case of such centres, smooth access to the given cities' public services from all sides of the border is crucial, if necessary, by organizing the provision of explicitly cross-border services. Their development is highly dependent on the legal framework in both countries and exploring the legal possibilities for cross-border service provision is vital. This could effectively alleviate the peripheral situation of villages that lack certain functions, since instead of overcoming long distances, services could be used in one of the closer regional centres with lower hierarchy. For major urban centres, it is crucial to be able to organize, as a central city, an urban-rural partnership based on the territorial economy of their catchment area. This can be achieved by reinforcing the cross-border attractiveness of central functions in the border region. The better provision of functions could lead to functions with better overall utilisation, more efficient economies of scale, and less settlements and inhabitants served with low level and insufficient services. It is worth underlying that there are notable differences in the territorial governance and administration regarding the two countries' **functional relations**. In Serbia the vast majority of (central) urban functions are assigned to and carried out in the central settlement ('seat') of the municipality (opština), and the density of functions in the surrounding adjacent settlements is much lower than in Hungary in many cases. As a result, the functional heterogeneity and inequality within the settlement network, considering the distribution of functions, is much more apparent on the Serbian side than on the Hungarian counterpart. On the Hungarian side, the distribution is spatially more balanced. Still, it is crucial to both sides, especially to the Serbian one, to create well-functioning urban-rural partnerships covering the joint management of sometimes even cross-border functional relations of urban hinterlands.

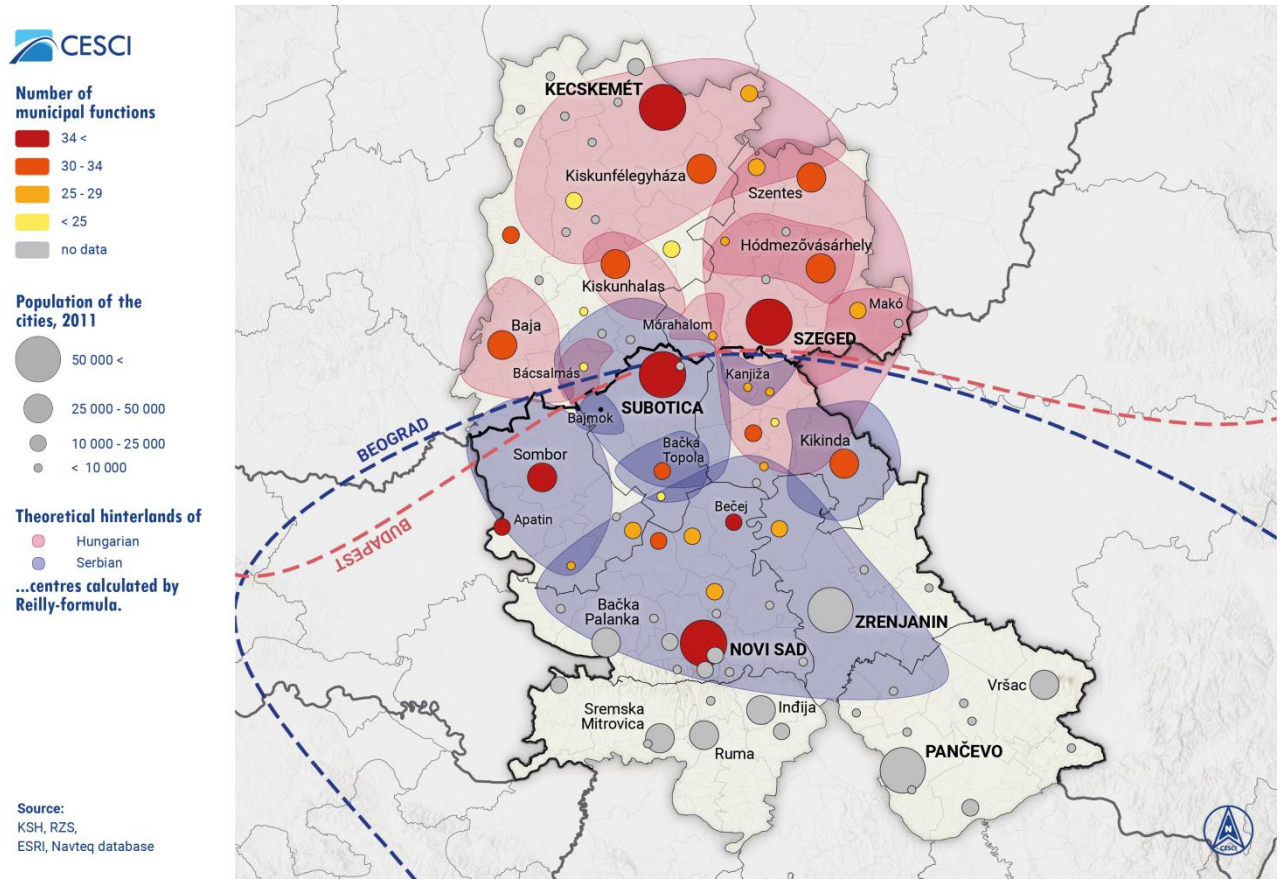
Based on the analysis of functional density of 46 distinct cities (marked by colours on the map)[32], the most common functions include pharmacy, general practitioner, police, document office, fitness

[32] To carry out a so-called functional analysis developed by CESCI a total number of 48 distinct urban functions were considered. In the frameworks of a desk research each and every city within the programme area was analysed whether the settlements have the given function. Those institutions, sites, i.e. infrastructure and services, were investigated which can be seen as the manifestation or representation of functions. Those functions were analysed which can make difference between settlements, thus the central, urban functions were in the heart of the analysis. The functions which give certain centrality and central roles to the settlements, were as follows: pharmacy, general practitioner, ambulance service, hospital, outpatient facility, special medical institution (e.g. sanatorium, rehabilitation centre, etc.), bus station, railway station, port, airport, international airport, police, fire brigade, court, document office / government window, theatre, cinema, museum, zoo, swimming pool, football stadium, athletics stadium, (dog / horse / car) racetrack, winter sports stadiums, halls (e.g. hockey, skating), fitness centre, fitness facility, internationally renowned tourist attraction (e.g. world heritage site), major medical tourist attraction, significant cultural tourist attraction, significant active tourist attraction (e.g. affected by the Blue Tour route), major wine and / or gastro-tourist attraction, accommodation, upper category accommodation (e.g. 4-5 star hotel), restaurant, upper category restaurant (e.g. Michelin starred or at least among 10 best restaurants in the country), bank, ATM, kindergarten, primary school, special primary school (art school, school for the disabled), high school, special high school (art school, school for the

centre, restaurant, bank, ATM, kindergarten, primary school (in all the related 46 settlements), followed by high/secondary school (45), special primary school (art school, school for the disabled, 40), accommodation (45), fire brigade (44), outpatient facility (43), ambulance service (40), marketplace (44), hyper/supermarket (43), bus station (42), railway station (42), swimming pool (39) and museum (38). Thus, these can be regarded as joint functional characteristics for further cooperation. Those functions which really make a difference in the functional relations owing to their relatively low diffusion in the spatial structure and urban stock are as follows: international airport (3), port (8), airport (15), special high school (art school, school for the disabled, 9), university/college (17), philharmonic, concert hall (7), athletics stadium (9), (dog/horse/car) racetrack (9), winter sports stadiums, halls (e.g. hockey, skating, 14), zoo (11), special medical institution (e.g. sanatorium, rehabilitation centre, etc., 19), hospital (22), theatre (17), cinema (20), internationally renowned tourist attraction (e.g. world heritage site, 2), significant active tourist attraction (e.g. affected by the Blue Tour route, 3), major medical tourist attraction (12), significant cultural tourist attraction (18), major wine and/or gastro-tourist attraction (21), upper category restaurant (e.g. those restaurants in the Programme territory that were awarded at least one Michelin star or were ranked among the 10 best restaurants in Hungary or in Serbia), 6) upper category accommodation (e.g. 4-5 star hotel, 20), thermal bath, beach (23).

disabled), university / college, shopping mall, hyper / supermarket, market, castle, thermal bath, beach bath, philharmonic, concert hall. The higher the number of such institutions, services are, the more central a settlement is. Thus the high number of functions (high density) makes a settlement (village, city) more important in its role in serving the surrounding population apart from its own inhabitants, and gives it a more urban character in the provision of urban services. With the help of a functional analysis the hierarchy of settlements and the dispersion of functions can be analysed to detect settlements maintaining high density of functions (urban centres, gravitational centres) as well as areas with insufficient number of functions, rural areas with limited number of central urban functions (hinterlands, areas lacking urban infrastructure and services).

Figure 16: Distribution of municipal functions in the border region



Consequently, these listed functions can be seen as the most complementary type of functions that give space to future cooperation. There are as many as 36 cities, which can be considered to have the highest potential in cross-border functional urban cooperation. These settlements are generally located up to 60 minutes from the border and have the rank of a district/county seat (járás/megye/okrug), or they are the central settlements of municipalities (in Serbia, called opština). The average number of functions of the related urban cores is 30, which is reached or surpassed by 17 municipalities. On the highest level of the hierarchy mostly current administrative centres such as Novi Sad (45), Szeged (44), Sombor (41), Subotica (41) and Kecskemét (39) can be found. These regional centres are followed by Apatin (38), Bečej (35), Kalocsa (34), Baja (33), Kikinda (33), Vrbas (32), Hódmezővásárhely (31), Kiskunfélegyháza (31), Bačka Topola (30), Kiskunhalas (30), Senta (30) and Szentes (30).[33] Based on the geographic location and number of existing functions, rivers and highways can represent special (potential) cooperation axes: on the eastern part along the Tisza/Tisa a group of riverside towns e.g. Szeged, Kanjiža, Senta and Bečej, on the central part the Kecskemét-Kiskunfélegyháza-Subotica-Novi Sad axis, while on the eastern part the axis along the Danube incorporating Baja, Sombor and Apatin could be mentioned as examples of potential functional development areas. However, different solutions might be relevant for the eastern and western border areas because of differences in the density of functions and cities. On the east of the Kecskemét-Novi Sad axis cooperation is based on a few mostly middle-sized cities (Kalocsa, Baja,

[33] The classification was based on CESCI's own source and methodology of functional analysis, i.e. the number (density) of central urban functions.

Sombor, Apatin), while east of the axis it can rely on some regional large cities (Kecskemét, Subotica, Szeged, Novi Sad) and multiple smaller urban hubs (e.g. Senta, Bečej, Vrbas).

In relation to cross-border functional cooperation, the main types incorporate inter-municipal cooperation (with municipalities being the stakeholders, for further details check twinning settlements in the chapter about P2P cooperation), development of cross-border public services (such as health care, social care, urban management and smart city solutions as well as bilingual tourist information, a business partner search platform or cross-border public transport services), development of social services (mainly connected to urban-rural cooperation and the farmstead areas, see below).

The most significant potential of urban cooperation lies in the **urban axis of Szeged and Subotica**, which is the true centrepiece of cross-border functional integration along the border. The city pair of Subotica and Szeged, especially together, with the help of their created and sustained functional interconnections and functional harmonisation could be the core of the wider region's cross-border urban networking. These two cities jointly concentrate such population size and central functions, which can position them as the centrepiece of the reintegrating, reuniting cross-border urban network. It is the interest of both centres to enhance the functional cooperation by utilising the joint and complementary institutions and services can be used by both sides' residents. Regarding the Szeged-Subotica axis, the functions having significant potentials as well as already existing cooperation areas include educational, healthcare, transport, industrial and logistics facilities, and institutions (for further details, see the upcoming paragraphs, furthermore the related chapters of logistics, employment and education, P2P cooperation). Szeged has special health institution (e.g. sanatorium, rehab centre, etc.), inland port, airport, significant health tourism attraction and spa, which functions are missing in Subotica, while athletics stadium and racetrack (dog/horse/car) are those which are located in Subotica but missing in Szeged.

Regarding **culture**, Subotica and Szeged have for a long time maintained outstanding connections. Cultural cooperation has an already established background and history; it focuses mostly on theatrical and arts institutions (museums). Cooperation in the case of cultural functions is primarily based on each other's theatrical events, but there is also cooperation between institutions dealing with the display of fine arts in Szeged and Subotica, as well as mutually organizing exhibitions in the two cities. The Hungarian troupe of the Subotica Theatre (Narodno pozorište) maintains a close relationship with Szeged, and guest appearances are frequent, including at the Szeged National Theatre and the Regional Chamber Theatre Festival of Szeged every year. The MASZK Association of Szeged has been cooperating with the Subotica-based Kosztolányi Dezső Theatre since 2003, and as a result of the joint work several performances have been created. The Subotica Children's Theatre and the Kövér Béla Puppet Theatre in Szeged complement the children's theatre offerings of the other settlement by exchanging performances. The Szeged-Subotica Children's Theatre Festival has been held several times since 2010, and the Subotica troupe regularly gives guest performances in Szeged as part of the puppet festival there. In addition, the Serbian city can act as a cultural centre for the Hungarian side around Bácsalmás by sharing its cultural functions with the Hungarian part of its influencing area which otherwise would not be able to establish or maintain cultural institutions on such high hierarchy level.

Szeged functions as the major **educational** centre in terms of cross-border student migration. It attracts a high number of university students with Serbian citizenship. University of Szeged has been accepting a growing number of students from Vojvodina. The number of enrolled students increased from 281 full-time students of the academic year 1998/1999 to more than a thousand by the year of 2016/2017 (1056 students). The students originating from Vojvodina represent a growing share among those of the Szeged University (regarding every work schedule). Between 2008/2009 and 2017/2018 their number increased by 2.7 times (from 415 to 1 125) in the case of University of Szeged, while on the national level the growth of Serbian citizens in the Hungarian higher education system was notably lower (by 1.5 times, from 1 320 to 1 931). The role of the Szeged-based institution in the cross-border student migration increased significantly: in the academic year 2008/2009 31% of all students born in Serbia studying in a tertiary education institution of Hungary attended the University of Szeged, while the same share jumped up to 58% by the academic year 2017/2018. Throughout these ten years 83 settlements (18% of all) from Vojvodina were affected by the catchment area of the Hungarian university. The catchment area of the university covers the northern part of Vojvodina, especially the Severnobački and the Severnobanatski okrug. Based on the average number of students from Serbia in the analysed ten years Subotica (an average number of 121 students), Senta (117), Kanjiža (58), Ada (44) and Bačka Topola (39) are the main sources of the student migration. These settlements give 53.5% of all students with Serbian citizenship based on their share in relation to all Serbians studying in the University of Szeged.[34] Behind the reasons the following can be mentioned: 1. there is a competitive advantage of the Szeged-based institution thanks to its much wider portfolio giving valuable diplomas and future career prospects compared to the university capacities established in Subotica; 2. geographic proximity goes with short travel times between the place of residence and the place of education; 3. Hungarian offered as the language of education for many ethnic Hungarians in Serbia, while the possibilities in studying in their mother tongue is limited to certain fields in their country of origin.

Furthermore, as it can be seen on the map showing the gravitational areas of Subotica, the Serbian city could strengthen its central urban functions in relation to the neighbouring small towns and villages of Hungary (settlements such as Mélykút, Bácsalmás, Tompa, Kelebia). Subotica can serve as a centre in service provision for the smaller settlements on the Hungarian side by providing them cultural, economic, and other types of functions that they would never be able to provide separately due to their sizes. And, last but not least, it has to be mentioned considering Subotica and its functional relations that in recent years a development axis has been developing between Subotica and Kiskunhalas, and both cities have taken steps to deepen this connection.

The **public transport function**, which currently barely serves cohesion purposes, could play a decisive role in the operation of the functional system to be established around Szeged and Subotica. The primary catchment area of Subotica in Hungary, based on travel times, distances and non-transfer connections, extends to the territory of Kiskunhalas in public transport. Due to the territorial structure of the railway network, Subotica is able to integrate the Hungarian villages along the Budapest-Kelebia railway line, primarily Tompa and Kelebia, into its catchment area. Prior to the migration crisis and the escalation of the epidemic situation, three direct connections a day provided connections to the city of Subotica in Kiskunhalas and Kelebia. However, the transport bases of the

[34] See: http://www.ksh.hu/docs/hun/xftp/terstat/2019/02/ts590205.pdf

existing attraction conditions in the direction of Szeged are much more unfavourable, despite their great potential. From March 2010, trains affecting both Szeged and Subotica could only run to Röszke, the border station. However, the development of the transport connections between the two large cities also had a serious antecedent, for example, between 2002 and 2003, two pairs of trains provided direct rail connections and free passage at the border. There were only two pairs of trains because the travel time was long and thus it was not competitive with road transport. The 2005/2006 timetable even brought a significant expansion of the offer; the two Kiskunhalas-Szeged transfer routes through Subotica meant a total of 5 pairs of train. Cooperation is underpinned by a number of capabilities and challenges; geographical proximity (the Szeged-Subotica distance is only 52 km), the sufficient population of the joint catchment area (about 360 thousand inhabitants), lack of direct rail services (the average speed of rail travel was 25 km/h and a transfer was needed) until recently, there were only 2 Szeged-Subotica bus services every Wednesday (which, in addition, ran 1 hour 30 minutes, with an average speed of only 35 km/h). A direct train connection of around 30 minutes of travel time would be a huge step in creating public transport integration. This would result in intensifying labour and student migration as well as tourism flows.

Cooperation in the field of public transport has been already initiated in joint projects. The project titled, Development of an integrated public transport system in the Subotica-Szeged region (DistranS), was supported by the CBC Programme 2007-2013.[35] In the frameworks of the project a situation analysis as well as a transport development strategy were conducted, which could still be useful for further joint actions. The project aimed to create an integrated public transport system step by step in the Szeged-Subotica region. The new integrated system would consist of harmonized public transport lines (rail and bus), an integrated electronic fare and ticketing system, real-time electronic information provision, and coordination of schedules of different transport operators. The new system would be based on joint planning activities as a result of closer cooperation of public transport operators and authorities responsible for transport provision on either side of the border. The new network will be supported by an electronic management, planning and information platform providing real-time information and coordinated planning. As a demonstration of the cross-border electronic platform, an integrated electronic ticketing solution has been introduced in Subotica.

Furthermore, the project named Cross-border transport route planning and scheduling platform (CBC Trans-Plan), financed by the CBC programme 2007-2013, was also an important initial step in strengthening the cooperation in the field of public services. This project aimed at addressing the need for reliable and accurate information regarding both public and commercial transportation and services routes and timetables in North Bačka and Csongrád megye. Activities, which were carried out covered data collecting for the route planning platform, conducting a regional research study on the current route planning management systems utilized by public communal and private companies, developing the bilingual route planning platform, organising a training for public and private company representatives, promoting the route planning platform and raising awareness on the advantages of efficient transportation planning. In case of the Serbian-Hungarian joint border zone, partly owing to the lack of major metropolitan areas, there is a great potential in the existence of a highly developed **group of large and middle-sized cities** supplemented by some small but functionally highly developed cities in the vicinity of the state border. These cities include Szeged,

[35] See: https://keep.eu/projects/6523/

Hódmezővásárhely, Baja, Makó, Kiskunhalas, Mórahalom and Bácsalmás in Hungary and Subotica, Sombor, Kikinda, Senta, Čoka, Bačka Topola, Apatin, Ada, Kanjiža and Novi Kneževac in Serbia.

Consequently, beside the cooperation area organised around Szeged and Subotica in particular along the central and eastern border sections, on the westernmost part the potentials in functional **cooperation along the Danube** can also be highlighted considering the aforementioned "border cities". Even dating back to historical times, the most apparent cooperation axes were along rivers, and in the 1970s and 1980s the settlement relations were at some level geographically determined by landscape and settlement network characteristics. Thus, the cooperation axis between Baja and Sombor has long been evolving across the border. On recent cooperation: with the participation of Baja and Sombor, as well as Apatin from Serbia, Mohács from Hungary, furthermore Osijek and Beli Manaštir from Croatia, a declaration of intent to cooperate was also issued. The cities, supplemented by the Bács-Kiskun County Government, signed a Memorandum of Understanding in May 2014 to establish cross-border institutional cooperation, in the framework of which the participating actors agreed on the joint development of the Danube area and the surrounding wider transnational functional region. Regional partnership workshops have been held on several topics in recent years (e.g. on 13 November 2015) and project development has started. Consultations with regional stakeholders outlined opportunities for cooperation on the following topics: 1. tourism and culture (joint website and calendar of events, gastronomy, health tourism, and ethno-tourism cooperation with museum exhibitions, events, cycling tourism, development of thematic routes such as wine, common European appearance, sports, water tourism, and fishing); 2. Transport and infrastructure (shared airport, development of complementary freight ports and related road infrastructure); 3. Water management and water supply (exchange of experience and knowledge in the field of drainage and water supply, revitalisation of surface waters reconstruction of living water canals); 4. Increasing the competitiveness of enterprises (networking, market entry and development, expo, trade development, branding, local and organic products, trainings).

In addition, it must be underlined that beside the functional forms of cooperation of the aforementioned cities and functions, there is also room for further thematic fields and geographic areas to cover. The stronger cooperation could rely more on the involvement of non-bordering but major cities (such as Novi Sad, Zrenjanin, Pančevo, Sremska Mitrovica, Kecskemét), where knowledge sharing in settlement management and development (e.g. **smart city solutions**) can be the basis. Szeged is the forerunner in innovative, sustainable urban development with initiatives like the provision of cash free (credit card based) public services, or the use of open data in mobility services. In the frameworks of the latter, the City of Szeged has won with its project proposal on an ERDF-funded Urban Innovative Actions call. Smart Alliance for Sustainable Mobility (SASMob) builds a data-driven and responsive IT-system through the partnership of public entities, private businesses, and transport providers in Szeged to progress towards environmentally friendly urban mobility. Such actions addressing joint urban challenges in the border region could be put forward in the future.

The **settlements in rural areas**, especially regarding isolated farmsteads with decreasing residence functions and limited public services, have significant potentials in agricultural and tourism functions to develop, which could, in turn, increase their population retention capabilities or can be attractive destinations for suburban population to live as well as for tourists. The farms have not only been a place of residence but an agro-economic unit, which used to be the major food supplier for the surrounding cities that acted as central marketplaces. From the point of view of sustainability,

according to the Sand Ridge Farm Survey[36], the farmstead areas as we know them from a historical geographical point of view are in the final phase of regression. The disappearance of homesteads would not only cause serious social problems to tackle (e.g. poverty, segregation, unwanted migration flows), but would also endanger environmental sustainability, as homesteads possess a basic role in maintaining the landscape in the cross-border Great Plain, including the Sand Ridge (Homokhátság) in Hungary or the Bačka region too. Strongly connected to this environmental function, the rural areas and the farmsteads can play renewed agricultural and economic functions in the frameworks of short supply chains in cooperation with the surrounding middle-sized and large cities. The support for market access for rural farmers and the processing and distribution of the local products are of great significance in an urban-rural partnership. With the help of functional changes, the outlying areas with farmsteads around nucleated settlements can gain recreational, leisure functions along with accommodation and catering functions in rural and gastronomic tourism. Last but not least, similarities in having tanya/salaš in the settlement system requires joint solutions in the field of provision of (social) functions since even nowadays this type of inhabited areas lacks certain public (and private) services. The creation of homestead, caretaker services in these scattered settlements and rural areas with insufficient central urban functions can be a direction for future cooperation.

2.1.3.3 Healthcare service cooperation

In relation to **healthcare**, the border region has already had innovative ideas ahead of its time. According to the Danube–Criș–Mureș–Tisa Euroregion (DKMT) founding document, the aims of cooperation include the development of relations between local communities and local governments in the field of health. An outstanding initiative by the DKMT Euroregion was the project that aimed at providing free access to healthcare services across the Serbian, Hungarian and Romanian border regions. The goal was to identify in which hospitals, what healing procedures could be performed in the related neighbouring countries, financed by the patient's own health insurance provider, free of charge. During the meetings experts discussed how it is possible to implement cross-border patient care as widely as possible in the Euroregion, both inpatient and inpatient care. Studies were prepared, which assessed the characteristics of the health institutions of the Euroregion and the possibilities of cooperation between health financiers. Based on the collected data, a model was set up, which could have been the basis for creating a Euroregional health insurance card. This means that cardholders would have been able to use health services in the border counties of neighbouring countries in a similar way to their own country. While the hospitals and clinics in the border region seemed to be rather open to the idea, health insurance companies in the countries concerned were more hesitant owing to their own accounting rules. Even though a useful investigation regarding the legal and financial frameworks have been carried out, and a proposal was made regarding a joint health insurance card for the Euroregion, the card system has not been introduced ever since 2008. In the last years, the possibilities for such cooperation have gained new impetus owing to the EU integration and the development of all the three national healthcare systems.

[36] See: Anita Takács (ed.). (2005). Tanyakutatás a homokhátsági tanyák társadalma és szociális problémái. http://www.alfoldinfo.hu/tanyakutatas/tanyakutatas3.pdf

Recent important steps towards intensified cooperation related to social and healthcare services include the bilateral agreement concluded by the ministries of the two states responsible for healthcare in September 2019. The agreement covers cooperation between medical universities, medical training, and public health. The agreement deals mostly with joint actions in disease prevention and organisation of training courses for the medical staff as well as share of expertise.[37] Another agreement related to the cooperation with the Autonomous Province of Vojvodina exclusively was signed by the State Secretary for Health of Hungary and the Provincial Secretary for Health of Vojvodina in early 2020. The agreements expressed the intention for a stronger cooperation between the border regions of the given countries in order to serve the needs of the population living in the given area. The latter document provides for the exchange of information and experience that can be used in the development of legal regulations, strategies, and programmes. The area of transplantation should be highlighted. As a member of Eurotransplant, Hungary has an experience that Serbia and Vojvodina can use. It is possible to offer surgery in a Hungarian health centre for a Serbian patient who needs a lung transplant. Exchanging experiences with lung cancer screening and rare diseases will also be useful on both sides of the border region. To sum up, these agreements are mostly about exchange and transfer, educational, organisational, and other soft activities, and less related to actual cross-border provision of healthcare services, emergency or inpatient care in the other country.

The University of Szeged, as an educational, scientific as well as healthcare institution, has gained considerable experience in cross-border cooperation with the hospitals and university clinics of Subotica, Novi Sad, Arad, and Timisoara. Based on the past fields of cooperation, activities can cover the improvement of the mobility of doctors and health professionals (professional meetings and training, etc.), to expand the telediagnostic system, to coordinate the use of existing laboratory infrastructure, to support coordinated health activities in the field of gastroenterology and cardiovascular and metabolic diseases and so on. The Public Hospital of Subotica and the University of Szeged have cooperated to improve diagnostic procedures for multiple sclerosis disease (see project MultScler under number HUSRB/1002/214/082).

In January 2020, the University of Szeged and Novi Sad University signed a strategic agreement to deepen their relationship. The two institutions have had a close professional relationship for several decades, focusing on health sciences, pharmaceutical research, and information technology. The aim is to make the healthcare system of the Southern Great Plain and the Autonomous Province of Vojvodina more effective. The content of the institutional cooperation is planned to include not only the development of joint training programmes, but also the development of student and researcher mobility, as well as the development of research programmes and the organisation of joint professional events. The drop-out rate, the migration of skilled workers is a regional problem to be tackled jointly. These issues will also be addressed by stronger scientific cooperation between the two institutions, coordination of health-related training and basic research as well.

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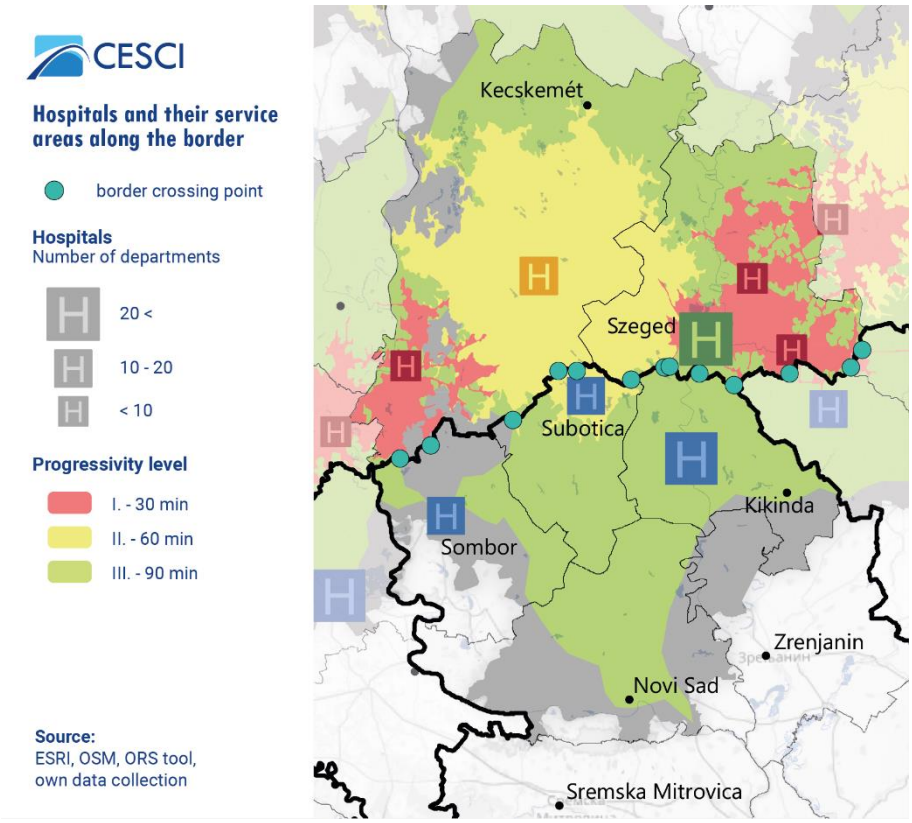
[37] See: The news in Serbian on the official webpage of the Government of the Republic of Serbia: https://www.srbija.gov.rs/vest/407544/sporazum-sa-madjarskom-o-ulaganju-u-bolnice-u-srbiji.php; the news in Hungarian on the official webpage of the Government of Hungary: https://www.kormany.hu/hu/emberi-eroforrasok-miniszteriuma/hirek/egeszsegugyi-egyuttmukodesi-megallapodast-irt-ala-magyarorszag-es-szerbia

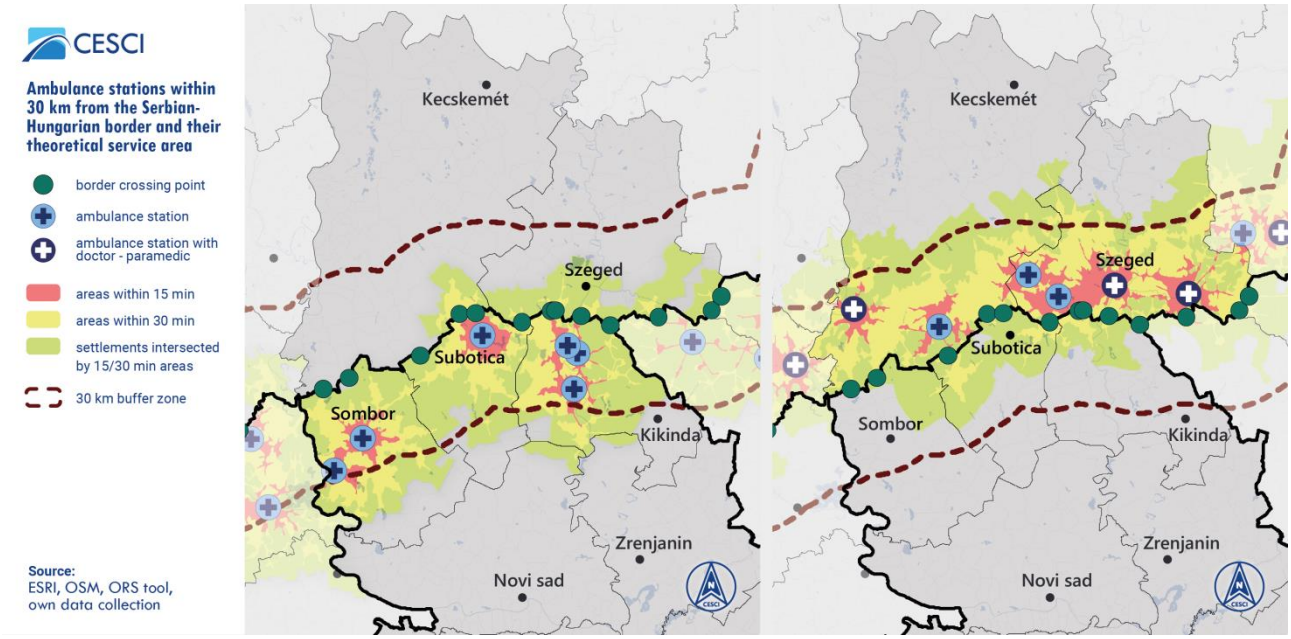
Regarding the **cross-border patient care and collaboration**, the analysed region can be described by strong one-way patient migration, towards the Hungarian inpatient facilities. The increasing demand will raise the question of harmonisation, which (in view of the extra revenues that can be provided through foreign patients) may even create tensions between Hungarian and foreign patients (already known in the case of obstetrics and gynaecology in Szeged). Apart from Szeged, another known healthcare facility with Serbian patients is the Specialty Hospital for Chest Diseases. The Deszk-based institution is a member of the partnership organised and sustained by a foundation called Segítő Jobb Alapítvány, a network since 1993 organised to support the cross-border provision of patients. In the frame of the cooperation, outpatient care of Serbian (and Romanian) citizens takes place in the institution, up to 10 people a year.

Figure 17: Hospitals along the border



As it can be seen on the map too, the **hospitals** of Subotica (General Hospital, 13 departments), Sombor (General Hospital "Dr Radivoje Simovic" Sombor, 20 departments), Senta (23 departments), Kikinda (General Hospital of Kikinda, 19 departments), Baja (Bajai Szent Rókus Kórház, progressivity level I of inpatient care), Kiskunhalas (Semmelweis Hospital of Kiskunhalas, level II), Szeged (Szent-Györgyi Albert Clinical Centre of the University of Szeged, level III), Deszk (Csongrád Megyei Mellkasi Betegségek Szakkórháza), Hódmezővásárhely (Csongrád Megyei Egészségügyi Ellátó Központ Hódmezővásárhely-Makó, level I), Makó (Csongrád Megyei Egészségügyi Ellátó Központ Hódmezővásárhely-Makó, level I) and Szentes (Csongrád Megyei Dr. Bugyi István Kórház, level I) are all located close to the border and each other giving space to a better organisation and provision of such functions across the border, too. Furthermore, the capacities of Novi Sad (17 departments) and Kecskemét (Bács-Kiskun Megyei Kórház, level III) should not be excluded from the list of significant facilities.

Figure 18: Ambulance stations within 30 km from the Serbian-Hungarian border and their theoretical service area



Healthcare cooperation could rely much more on **ambulance services** provided close to the state border. There are ambulance stations within 30 km distance from the Serbian-Hungarian border in case of Makó, Szeged, Mórahalom and Bácsalmás on the Hungarian, and in Sombor, Apatin, Subotica, Senta, Kanjiža and Novi Kneževac on the Serbian side. It is worth noting that the number of ambulance cars and doctors (paramedics), furthermore the shifts may vary from station to station making the harmonisation and cooperation more difficult. Further obstacles of cooperation in this field to respond are:

- crossing the Schengen border;
- condition of border crossing by ambulance car and patients[38];
- operating licenses: material and personal conditions;
- the conditions for using distinctive signs;
- administrative and technical issues: liability and vehicle insurance, fuelling, transport, etc.;
- communication: radio connection, language barriers;
- funding questions: financial aspects of rescue operations and hospital emergency care.

[38] In the case of cross-border rescues, the quality of the transport infrastructure, related to the border crossing, is also particularly important, because in the absence of it, the potential user of this possibility will not be in a position to utilize the offered service. Therefore, cross-border cooperation between healthcare providers and services can be supported only in areas, where the appropriate transport infrastructure is already available, or there is a need to support the development of transport infrastructure together with the cross-border healthcare providers and services.

Based on the analysis of the topic 'Development of cross-border functions', the following types of functional areas can potentially be defined within the region:

- Areas of isolated farmsteads and other rural areas with insufficient functions: areas where the proportion of population living in outlying areas is higher than 10%, and/or the number of (central) urban functions is low, i.e. the functional density is low. These areas generally suffer from weak provision and use of urban services.
- Hinterlands and FUAs: central urban cores and their cross-border hinterlands/influencing zones forming a functional urban area (FUAs, see the figure named Distribution of municipal functions in the border region with the hinterlands/gravitational zones and the relevant urban centres).There are as many as 36 cities, which can be considered to have the highest potential in cross-border functional urban cooperation. These settlements are located up to 60 minutes from the border and have the rank of a district/county seat (járás/megye/okrug), or they are the central settlements of municipalities (opština) including Novi Sad, Szeged, Sombor, Subotica, Kecskemét, Apatin, Bečej, Kalocsa, Baja, Kikinda, Vrbas, Hódmezővásárhely, Kiskunfélegyháza, Bačka Topola, Kiskunhalas, Senta and Szentes.
- Hospitals, ambulance stations and their service areas: those institutions which are situated a maximum of 90 min from the border and have service areas reaching the state border zone of 30 min travel time. The network of healthcare institutions can be considered as building blocks of such functional areas. Functional areas can be those areas too where similar health care characteristics of the bordering population.

2.2 Economic cohesion

In the course of the analysis of economic cohesion, we examine four main topics, namely: 1. economic logistics (economic infrastructure of industrial and logistics capacities, waterways and ports), 2. economic development (economic structure, added value, entrepreneurial structure, R&D&I, economic relations including trade and capital flows); 3. heritage related management (natural values, built heritage, historical heritage, cultural heritage), 4. tourism (the significance and performance of tourism in the region, the factors of the tourism subsectors including cultural tourism, pilgrim tourism, congress tourism, ethno- and gastro tourism, health, bath and wellness tourism, wine tourism, ecotourism, nautical tourism, rural tourism, equine tourism, hunting and fishing tourism, sports tourism, active leisure as well as tourism destination management, and the opportunities of the connection, joint utilization, management and product development of tourism factors). All economic sectors are analysed (primary, secondary, tertiary). Our examination is focused on the common and complementary economic characteristics (presence of parallel or complementary economic sectors; development potential of vertical integration; set of economic infrastructure, etc.) of the two sides of the border.

2.2.1 Economic logistics

2.2.1.1 Economic infrastructure of industrial and logistics capacities

In the programme area there are as many as 35 **industrial zones**[39], 19 in Hungary and 16 in Serbia. Considering the two Hungarian counties, Bács-Kiskun incorporates 9 (Baja, Kalocsa, Kecskemét, Kiskőrös, Kiskunfélegyháza, Kiskunhalas, Kiskunmajsa, Kunszentmiklós, Szabadszállás), while Csongrád megye possesses 10 (Algyő, Csongrád, Hódmezővásárhely, Kistelek, Klárafalva, Makó, Mórahalom, Szatymaz, Szeged, Szentes) such areas under the industrial zone denomination. In the districts of Vojvodina, 5 such industrial zones are located in Južnobački (Bačka Palanka, Bački

[39] Regarding Hungary the analysis takes into account the so-called industrial parks. In Hungary according to the related regulation, the industrial park is an area with corresponding infrastructure, where there are mainly companies engaged in production and processing activities, as well as companies striving for innovation. The title of industrial park can be obtained by tender based on a decision of the minister responsible for national economy. At the time of submitting the application, at least 5 companies must be operating in the area of the planned industrial park, and the total number of full-time employees of the companies is at least 100, in case of science and technology parks 75. By applying for the title of industrial park and obtaining the title of industrial park, the organization undertakes that as a result of its development work the number of settled companies will be at least 10 by the end of the 5th year and the number of full-time employees in existing and future jobs must be at least 350. Industrial park is a relatively new tool in Serbia, and up until 2019 only Belgrade had such infrastructure under the name of industrial park. Thus, for the Serbian infrastructure the analysis used the locations database of the Development Agency of Serbia (http://crm.siepa.gov.rs/locations-eng/index.php?). However, it contained 909 items as of 28th April 2020, and around 40 of them were so-called industrial zones. Thus, only those industrial zones were considered in our analysis which already had a significant number of employees and companies, or large size. Brownfield locations were excluded due to their limited current role and potential in economic life.

Petrovac, Bečej, Novi Sad, Vrbas), 3 in Severnobanatski (Ada, Horgoš, Kikinda) as well as Zapadnobački (Apatin, Kula, Sombor), but there are only two in both Severnobački (Bačka Topola, Subotica) and Južnobanatski Okrug (Bela Crkva, Vršac) and a single one in Srednjebanatski Okrug (Zrenjanin). According to the database, none of the zones are operating in Sremski Okrug. The spatial distribution of industrial and logistics zones is rather uneven, on the Serbian side in particular, where in the southernmost districts the related economic infrastructure is very sparsely developed.

A total number of 20 **logistics centres**[40] operate in the analysed area, 15 on the Hungarian side and much less, 5 on the Serbian side. There are more such centres already built in the western part of the Hungarian side since there are as many as 9 in Csongrád megye (in Domaszék, Algyő, Hódmezővásárhely, Kistelek, Makó, Nagylak, Röszke, Szeged, Szentes), while only 6 in the larger area of Bács-Kiskun megye (Baja, Bócsa, Kecskemét, Kiskunhalas, Pirtó, Tompa). On the Serbian side the border zone on the north stands out as it is home to 3 centres (Bačka Topola, Subotica, Senta), while in other parts of Vojvodina two centres are registered in the database (Novi Sad and Zrenjanin).

Taking a closer look area at the state border, it can be stated that the eastern and the western border sections differ greatly in terms of number and capacity of the given infrastructure. The cross-border area lacking sufficient infrastructure is situated between Baja, Kiskunhalas, Subotica, Kula and Sombor. Along the eastern border section, a distinctively more dynamic area can be found stretching from Subotica to Makó. This emerging **cross-border industrial-logistics zone** is a region of a densely network of industrial and logistics parks, zones incorporating Szeged, Hódmezővásárhely, Kistelek, Makó, Röszke, Tompa, Klárafalva, Nagylak from Hungary and Subotica, Ada, Bečej, Horgoš, Senta, Kanjiža, Bačka Topola from Serbia.

When it comes to analysing the actual infrastructure in relation to industry and logistics, the differences in terminology must be underlined. It makes the comparison with the Hungarian infrastructure more complicated, where there are industrial parks and logistics centres. In Serbia the

[40] The analysis of logistics centres is based on desk research. Those infrastructure facilities were taken into account which were dealing with significant logistics activities, i.e. transport, trade and storage of goods. On the Hungarian side logistics centres are often reflected in the name of the given element („logisztikai központ"). For the search for such centres the main information source was the web page http://www.logsped.hu/lszk.htm. On the Serbian side, this term is much less widely applied, and no official definition is in use.

term industrial zone, industrial park, business park, and free zone[41] are used and hereby considered for the sake of analysis. The most relevant infrastructure is as follows from the aforementioned cross-border zone: free zone Subotica (112 ha, 117 800 m^2 production space, 4 000 m^2 closed storage space, 4 000 m^2 open storage space, 3 300 m^2 office space), industrial zone and free zone Novi Žednik in the territory of Subotica municipality (145.1 ha), industrial zone in Bečej (60.37 ha, at least 1 000 employees), new industrial zone Rasadnik in Kikinda (22.6 ha). In Bečej, Sojaprotein (soybean processing, 378 employees), KNOTT Autoflex YUG (production of 300,000 torsion axles, 200 000 mudguards, and 25 000 car chassis annually, 300 employees), furthermore a newly established clothes factory of 270 workers (planned) can be identified as large companies.

Subotica and its surroundings are highly relevant in terms of cross-border logistics potential owing to its favourable position with their existing and constantly developing economic infrastructure and great development potential. In particular, the Mali Bajmok Industrial Zone and its free zone are also a major attraction for transnational companies at even European level. Thanks to its excellent accessibility to foreign markets, still relatively low labour costs, duty-free trade with many national economies including large markets such as Germany or Russia, the labour-intensive and export-oriented activities have been preferred activities. In the frames of green-field investments, transnational companies have set up their plants of regional significance: Siemens (manufacture of generators, wind turbines, 1 600 employees), Contitech Fluid and Norma Group are both interested in the automotive industry as major suppliers (development of fluid systems for the automotive industry, production of turbocharger tubes, production of coolants and fluids for lubrication of production lines, 800 and 300 employees), Calzedonia (manufacture of socks, swimwear and underwear, 1 000 employees), Swarovski (grinding crystal ornaments, 650 employees), Dunkermotoren (manufacture of micro-engines, 300 employees).

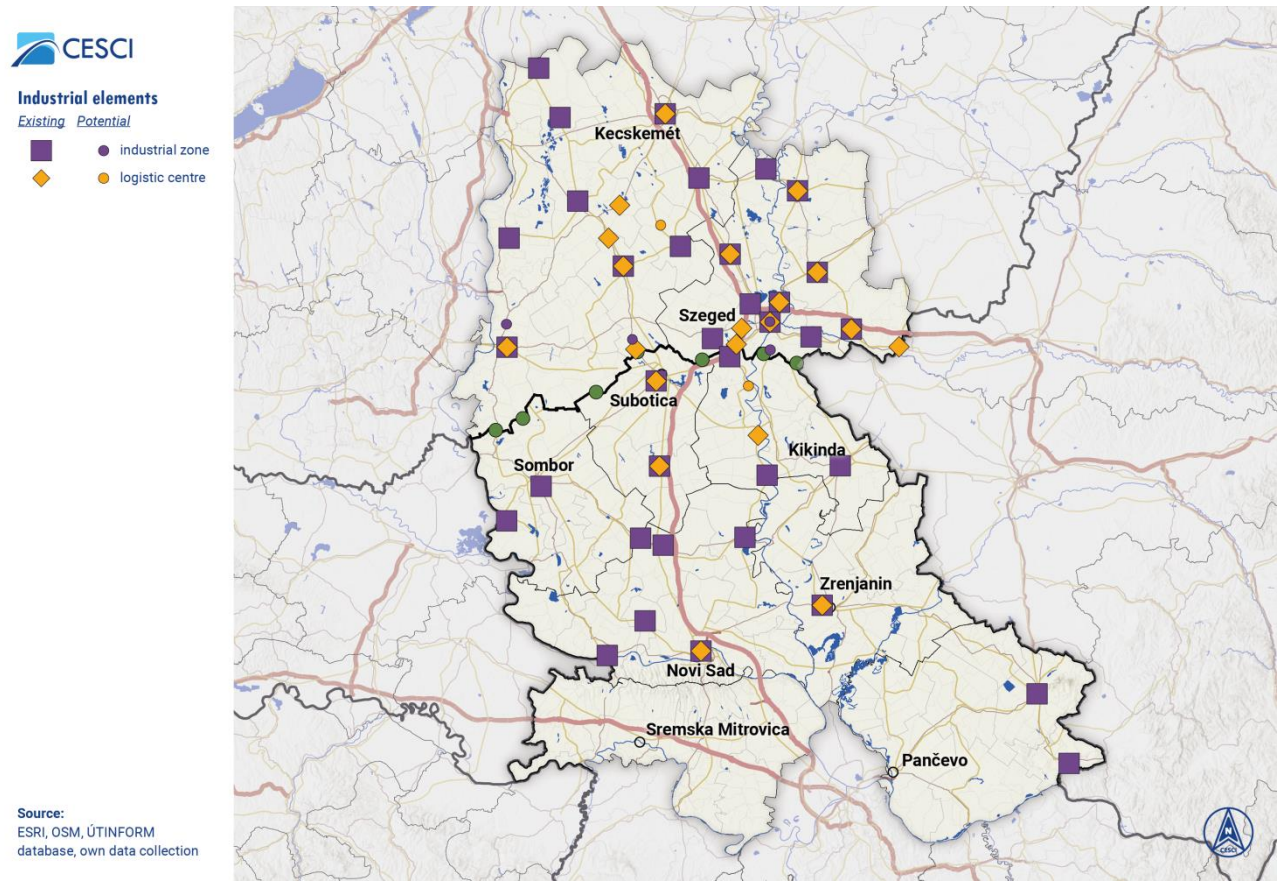
On the Hungarian side, the elements of great significance from the Hungarian part of this cross-border zone include Algyő Regional Jura Industrial Park and Technology Centre (Algyő és Térsége "Jura" Ipari Park és Technológiai Központ – 71.43 ha total area, 25 ha for green-field investment, 50 enterprises, approx. 1 870 employees), Makó Industrial Park (Makói Ipari Park – 107 ha total area, 42.8 ha for green-field investment, 33 enterprises, approx. 2 000 employees), Hód Industrial Park in

[41] Industrial zone in Serbia is a designated area, a fragmented construction land containing the necessary communal infrastructure, including internal road network, water supply, sewage system, electricity and telecommunication facilities, intended for sale or rent in order to achieve industrial development. Therefore, it can be similar to the Hungarian industrial park, except that the Hungarian one has to show up certain figures in relation to employment and size, and can be officially used only by applying for the title and if the minister of economy approves it and the ministry registers it. A special type of industrial zone in Serbia is the free zone. Currently, fourteen of industrial zones are also licensed free (customs) zones, meaning that importing into and exporting from these zones is free of VAT, customs and clearance costs. If goods are produced within the zone using a minimum of 50% of domestic components, they are considered to be of Serbian origin and are therefore eligible to be imported into Serbian territory or exported without customs, pursuant to free trade agreements. Business parks are not part of the official terminology and are usually state-of-the-art facilities and a diverse range of business services/amenities servicing its tenants' needs, usually private owned facilities offered to other companies, including buildings along with plots. Such customs free zones are not operating on the Hungarian side of the programme area, but in Serbia these are of outstanding importance, therefore they were included in the analysis.

Hódmezővásárhely (Hód Ipari Park – 60 ha and additional 97 ha under development, 117 enterprises, more than 3 500 employees), Homokhát Regional Agro-Industrial Park (Homokhát Térségi Agrár-Ipari Park – 100.75 ha with 74% already under usage, 105 enterprises, 676 employees), while Szeged is the centrepiece of it. Szeged concentrates as many as five different industrial and logistics parks, namely: the largest one called Industrial and Logistics Centre of Szeged (a.k.a. SZILK on 46 ha, almost 38 enterprises, at least 1 921 employees), DÉLÉP Industrial Park (DÉLÉP Ipari Park – 41.7 ha, almost 60 enterprises, industrial railway track already in place, several hundred employees), Kálvária Industrial Park (Kálvária Ipari Park – 25.1 ha, 68 enterprises, again, several hundred employees), SZEKO Industrial Park (12 ha, 60 enterprises), furthermore First Industrial Park of Szeged (Első Szegedi Ipari Park – 11.2 ha, at least two enterprises and 191 employees).

The largest companies on the Hungarian side include MOL (petrol chemistry, gas industry and storage with 600 employees), Rotary Fúrási Kft. (drilling and oil well repair activities, 326 employees) in Algyő, Hansa Kontakt Inv. Kft. (warehousing and storage, 359 employees) and Hansa Kontakt Kft. (Mixed wholesale of food, beverages, and tobacco, 583 employees) in Szeged, CONTITECH FLUID AUTOMOTIVE HUNGÁRIA KFT. (manufacture of tires and rubber hoses, 2 623 employees), Givaudan Hungary Kft. (manufacture of flavourings, 479 employees) and DUOCOR Bt. (office furniture, 395 employees) in Makó, Imerys Tűzállóanyaggyártó Kft. (firing auxiliaries for the manufacture of ceramics, 251 employees), MÄRZ FASHION Kft. (Manufacture of made-up textile articles, except apparel, 337 employees), Országos Dohányboltellátó Kft. (wholesale of tobacco products, 673 employees) and Villeroy&Boch Magyarország Kft. (sanitary wares, 782 employees) in Hódmezővásárhely.

Figure 19: Industrial zones and logistics centres of the border region



Other relevant major economic infrastructure on the Hungarian part of the border region is as follows: Szentes Industrial Park (Szentes Ipari Park – 140 ha, 27 enterprises, 2 372 employees), the industrial areas of Kecskemét such as Technik-Park Heliport (20 enterprises, with more than 1 600 employees).

While in the Hungarian counties the majority of the large capacities are concentrated in the south-eastern part of Hungary, on the Serbian side there are some dot-like main agglomerations of infrastructure with extensive surface areas and/or sites of large companies: Subotica, Novi Sad, Sombor, Apatin, Bečej, Zrenjanin, Vršac, Pančevo. Considering employment Novi Sad, Subotica and Zrenjanin have the most decisive infrastructural capacities in relation to industrial/logistics parks and zones. The free zones connected to large industrial zones have been the most prosperous fields of economic activities on the Serbian side, of which the one in Subotica is situated only a few kilometres from the border.

In Zapadnobački Okrug the industrial zone of Sombor (400 ha, with the large company of Fiorano: manufacture of wearing apparel, underwear, 1 700 employees) and the free zone of Apatin can be listed (122 ha, with medium-sized enterprises operating mostly in textile and furniture industry, and petrol chemistry). In Srednjobanatski Okrug the capacities are very much focused to Zrenjanin municipality, where the large free zone of Zrenjanin can be found (98 ha, production space of 31 790 m^2, closed storage space of 15 573 m^2, open storage space of 400 m^2, office space of 16 150 m^2) and only the industrial zone of Ečka (50 ha) is situated as a relevant economic infrastructural unit. In the free zone DRÄXLMAIER Group (automotive electrical systems, wiring systems, 5 800 employees) and Modital (Pompea group, production of socks, underwear, and textile, 800 employees) have found their industrial sites considering large enterprises.

In Južnobački Okrug, Novi Sad along with Bečej (discussed above) concentrate all the relevant capacities excluding Bački Petrovac (12.87 ha and 4.6 ha) Srbobran (8 ha) and Bačka Palanka. The free zone of Novi Sad is (surface area of 89 ha, production space of 211 943 m^2, closed storage space of 12 963 m^2, open storage space of 22 504 m^2, office space of 3 718 m^2), among others, home to companies interested in automotive industry, textile industry, and recycling with the largest company being Lear Corporation (auto parts manufacturing, 3 100 employees).

In Južnobanatski Okrug, North Industrial Zone of Pančevo (75 ha, with ZF Serbia: electric motors, electric machines and generators for hybrid and electric drives as well as switches for gearboxes and micro-switches, 300 employees), and Vršac can be highlighted with North Industrial Zone, South Industrial Zone, and Technology Park Vršac. In Vršac 800 ha of industrial zones can be found, and the local plants are specialised in pharmaceutical industry (Hemofarm: 2 000 employees, Fresenius Medical Care Srbija: 500-1 000 employees, Palladio East doo: 100-500 employees).

2.2.1.2 Waterways and ports

Along with the industrial areas of great significance in (potential) cross-border business relations, **water transport** also must be analysed in the frameworks of major logistics infrastructure. The border region is rich in ports for logistics purposes. Considering the Hungarian ports of the programme area the ports of Szeged, Baja and Mohács are parts of the comprehensive network, though the latter is situated outside the programme area on the other bank of the Danube but has a direct effect on the border region. Regarding Serbia, the port of Novi Sad is of great significance

owing to being a core element of the trans-European network. Furthermore, there are as many as 7 additional ports, namely, Bogojevo, Bačka Palanka, Beočin, Belgrade, Pančevo, Smedervo and Prahovo on the river Danube, Sremska Mitrovica and Šabac on the river Sava (similarly to Mohács the port is not situated within the programme area but has significant effect on it), and Senta on the river Tisza/Tisa.

After long decades of neglect of water transport mode and sometimes a huge decrease in traffic volumes, shipping has been experiencing a new era of positive changes. The **port developments** have intensified in recent years. Extensive developments took place in Baja with the aim of increasing the intermodal capacity of the port and the volume of water freight. Since 2012 four major projects supported by EU funds have been carried out. The developments have extensively upgraded and increased the capacity of the port making it one of the largest and most complex infrastructure facilities on the Hungarian Danube section in the analysed area. It stands out with its large area (208.795 m^2) and variety of cargo types handled (including container, high and heavy cargo, petroleum products and RoRo cargo along with dry bulk and break bulk) and handling facilities and devices (with having a gantry crane). The developments include e.g. the expansion of the track network, installation of loading equipment, reconstruction of the bank wall, design of truck parking lots, purchase of bridge scales, reconstruction and expansion of the road network, new parking places and lighting. The Baja Public Port management have organised open days, meetings, information events and conferences to draw the attention of European and domestic logistics stakeholders to the economic, social and environmental benefits of increased interconnection of intermodal freight transport modes; In Mohács, right next to the programme area, a completely new port is under construction with increased crane capacities, among others. Mohács now allows the turnover of about 500 000 tons of goods per year. In Szeged comprehensive developments took place with the help of the Hungary-Serbia IPA CBC Programme in the frames of the project called Establishment of Hungarian-Serbian fluvial border crossing stations at the river Tisza/Tisa. By late 2015 a Hungarian-Serbian water border crossing point of common interest was established. The aim of the project was to raise and expand the quality of the services of the Pool Port in Szeged, which required the reconstruction of the port auxiliary equipment, the control and management buildings, as well as the dredging of the muddy riverbed. Another development project reconstructed the bank wall, the pavement and road network and modernised the port building. This all supported the increase of the freight transport role of the port. Furthermore, also in Szeged a floating small boat harbour, the largest of its kind on the Tisza/Tisa, will be inaugurated soon with a capacity of 48 boats mainly for touristic purposes. The investments in the port of Szeged over the last few decades (dredging a harbour basin, industrial siding, border crossing) would enable increasing the share of river passenger and freight transport, but raising awareness and transmitting knowledge would be essential for that.

Regarding passenger transport the port of Kalocsa-Meszes also should be mentioned with a significant role in tourism. Year 2019 was not the end of the continuous developments given that the Hungarian National Port Development Master Plan adopted that year includes 20 case studies, such as the port development of Baja and Dunavecse, both in the analysed area. The designated port development areas include the port of Baja (cereals, gravel and sand, fertilizer, wood, coal, iron ore), Dunavecse (cereals, river gravel, fertilizer, overweight and oversized goods), furthermore Foktő (cereals, oilseeds), and Harta (cereals, oilseeds) from Bács-Kiskun County.

Developments that have not been seen for 30 years will start in the near future on the Serbian section of the Danube too and they will target port modernisation. The Dubai-based new operator plans to invest 30 million EUR in the development of the Port of Novi Sad, and thus the current 1.2 million tons of transhipment can reach the full capacity of 2.5 million in the upcoming period. Furthermore, the expansion of the capacities of ports in Sremska Mitrovica and Bogojevo are also planned. The Ministry of Construction, Transport and Infrastructure of Serbia plans the construction of new port capacities for the handling of agricultural products in Bogojevo. The government, in conjunction with the World Bank, is planning to secure loans through the Integrated Development Programme for the Drina-Sava Corridor in order to expand the capacity of Sremska Mitrovica with the construction of an oil and bulk cargo terminal, as well as expansion of the container terminal. The capacities of the Port of Prahovo shall also be expanded to enable the trans-shipment of cargo generated in the chemical and cooper industry.

Apart from infrastructural developments transnational water transport is also supported by the EU's Danube Region Strategy, which contributes to the removal of obstacles to freight transport in the Danube. In the last years, a joint Working Group of Priority Areas 1a (Inland Waterways) and 11 (Security) developed a set of so-called Danube Navigation Standard Forms (DAVID). The data fields of three often used forms (arrival and departure forms, crew lists and passenger lists) were harmonised in an international effort to decrease variations in control procedures along the Danube. In the first phase (February-March 2020) both Hungary and Serbia introduced the DAVID forms in control procedures thereby replacing the national forms applied until then. In parallel to these efforts, the Working Group concentrates on the digitalisation of the harmonised set of DAVID forms to diminish administrative barriers, making Danube shipping even more attractive.[42]

Serbia has recorded constant growth in the volume of goods transported along the Danube, Sava, and Tisza/Tisa rivers, including the goods imported from and exported to Hungary. The transported goods along the Serbian waterways amounted for a total of 5.6 million tonnes in 2014, which increased to 11.9 million tonnes by 2019. As a result of planned investments, Serbian transport policy expects that the volume of goods handling at Serbian ports will increase to more than 14 million tonnes by 2023.

Apart from notable potentials in growing figures considering cargo there are large differences in terms of all main characteristics of the given ports. In relation to location, total area (m2), cargo types handled, owner, port authority, handling facilities and devices, storage facilities, logistics service providers, maintenance and disposal facilities notable non-harmonised, parallel and joint features can be detected, often hampering cross-border cooperation. Based on the statistics of the Danube Commission of 2016 the port with the highest cargo turnover in the analysed region is Novi Sad (1 325 thousand tonnes) followed by Pančevo (1 040 thousand tonnes). These two ports are the busiest ones between Budapest (1 367 thousand tonnes) and Smederovo (2 466 thousand tonnes). Considering their size Pančevo (1 270 296 m2) and Bačka Palanka (640 000 m2) are the largest, while from the Hungarian section only Baja (208 795 m2) can be considered as a relatively large one. Last but not least beside the hard infrastructure of the related ports the differences in the human capacities including the number of personnel, skills and competences should also be noted that would require stronger cross-border cooperation in capacity development including the training and management of human resources.

42 https://navigation.danube-region.eu/working-groups/wg-6-administrative-processes/

Table 4: Main features of the Serbian and Hungarian Danube ports concerned

Location	Waterway	Total area (sqm)	Cargo types handled	Owner	Port authority	Handling facilities and devices				Storage facilities	Logistics service providers	Maintenance and disposal facilities
						Devices	Gantry crane	Mobile crane	Floating crane			
Apatin	river Danube, 1401 km, left bank	30.000	Dry bulk; Break bulk	Republic of Serbia	Port Governance Agency	Covered water trans-shipment; Conveyor belt; Pneumatic equipment	Quantity: 1 Max. lifting capacity: 6 to. (single use)	-	-	Open storage area (25.000 sqm)	Napredak a.d.	Waste disposal; Fresh water supply; Onshore power supply
Bačka Palanka	river Danube, 1295 km, left bank	640.000	Dry bulk; Break bulk	Republic of Serbia	Port Governance Agency	Covered water trans-shipment; Conveyor belt; Pneumatic equipment; Ro/Ro-ramp	Quantity: 1 Max. lifting capacity: 12 to. (single use)	Quantity: 1 Max. lifting capacity: 9 to. (single use)	Quantity:1 Max. lifting capacity:6 to. (single use)	Open storage area (8,260 sqm); Covered storage area (650 sqm)	Luka Backa Palanka d.o.o.	Fresh water supply; Onshore power supply
Baja	river Danube, 1479 km, left bank	208.795	Dry bulk; Container; Break bulk; High & heavy cargo; Petroleum products refined; RoRo cargo	Hungarian State	Budapest Főváros Kormányhivatala	Conveyor belt; Pneumatic equipment; Ro/Ro-ramp	Quantity: 1 Max. lifting capacity: 10 to. (single use)	Quantity: 1 Max. lifting capacity: 10 to. (single use)	-	Open storage area; Covered storage area; Silo (33.500 t); Customs warehouse	Port Almas Ltd, Gemenc Ltd, Hungaria Agro Ltd, ICGRAIN Ltd, Áti Depo Ltd, Green terminal and RORO terminal (operator: Baja Public Port Ltd)	Waste disposal; Bilgewater disposal; Bunkering facilities; Fresh water supply; Onshore power supply; Shipyard
Beočin	river Danube, 1268 km, right bank	n.a.	Dry bulk	Republic of Serbia	Port Governance Agency	Covered water trans-shipment	Quantity: 1 Max. lifting capacity:10 to. (single use)	-	-	Open storage area (28.000 sqm)	Lafarge BFC d.o.o.	n.a.
Bogojevo	river Danube, 1366 km, left bank	150.000	Dry bulk; Break bulk	Republic of Serbia	Port Governance Agency	Covered water trans-shipment; Conveyor belt	Quantity: 1 Max. lifting capacity: 20 to. (single use)	-	-	Silo (30.000 t), covered storage area (7.500 sqm)	Luka Dunav Bogojevo d.o.o.	Fresh water supply; Onshore power supply
Dunavecse	river Danube, 1527 km, left bank	42.300	Dry bulk; Break bulk; High & heavy cargo; Moisture sensible break bulk	Dunavecse Kikötő Szállítmányozási Kft.	BFKH Közlekedési Főosztály	Conveyor belt	-	Quantity: 2 Max. lifting capacity: 12 to. (single use)	-	Open storage area (24.500 sqm)	n.a.	Fresh water supply; Onshore power supply
Mohács*	*river Danube, 1450 km, right bank*	*32.000*	*Dry bulk; Break bulk*	*BÓLY Zrt*	*Budapest Főváros Kormányhivatala*	*Conveyor belt; Ro/Ro-ramp*	*Quantity:1 Max. lifting capacity:9 to. (single use)*	-	-	*2x10.000 t storage capacity; Open storage area; Covered storage*	-	*Onshore power supply*

Location	Waterway	Total area (sqm)	Cargo types handled	Owner	Port authority	Handling facilities and devices				Storage facilities	Logistics service providers	Maintenance and disposal facilities
						Devices	Gantry crane	Mobile crane	Floating crane			
										area; Customs warehouse		
Novi Sad	river Danube, 1254 km, left bank	24.000	Dry bulk Container; Break bulk; Petroleum products; refined Liquid bulk; Crude oil	Republic of Serbia	Port Governance Agency	Covered water trans-shipment; Conveyor belt; Pneumatic equipment; Ro/Ro-ramp	Quantity:6 Max. lifting capacity:27.5 to. (single use)	-	-	Open storage area; Covered storage area; Customs warehouse	DP WORLD a.d. Novi Sad; NIS a.d. Novi Sad	Waste disposal; Bunkering facilities; Fresh water supply; Onshore power supply
Pančevo	river Danube, 1153 km, left bank	1.270.296	Dry bulk; Container; Break bulk; High & heavy cargo; Petroleum products refined; Liquid bulk; Crude oil	Republic of Serbia	Port Governance Agency	Covered water trans-shipment; Conveyor belt; Pneumatic equipment; Ro/Ro-ramp	Quantity: 3	Quantity: 3	-	Open storage area (100.000 sqm); Covered storage area (40.000 sqm); Storage of dangerous cargo; Customs warehouse	Port Dunav Pancevo (DM Grain); GRANEXPORT d.o.o. Pancevo, NIS a.d. Novi Sad, Specijalna luka Pancevo	Bunkering facilities; Fresh water supply
Šabac*	*river Sava, 103 km, right bank*	*5.600*	*Dry bulk; Break bulk*	*Republic of Serbia*	*Port Governance Agency*	*Covered water trans-shipment*	*Quantity: 1 Max. lifting capacity: 6 to. (single use)*	*Quantity: 1 Max. lifting capacity: 10 to. (single use)*	-	*Open storage area; Covered storage area*	*ELIXIR ZORKA d.o.o.*	*Fresh water supply; Onshore power supply*
Senta	river Tisza/Tisa, 122 km, right bank	179.000	Dry bulk; Break bulk; Petroleum products refined	Republic of Serbia	Port Governance Agency	Covered water trans-shipment; Conveyor belt; Pneumatic equipment	Quantity: 1 Max. lifting capacity: 25 to. (single use)	-	-	Open storage area (20.000 sqm); Covered storage area (18.260 sqm); Storage of dangerous cargo; Customs warehouse	Luka Senta a.d.	Fresh water supply; Onshore power supply
Sremska Mitrovica	river Sava, 133 km, left bank	500.000	Dry bulk; Break bulk	Republic of Serbia	Port Governance Agency	Covered water trans-shipment; Conveyor belt; Pneumatic equipment	Quantity: 1 Max. lifting capacity: 12 to. (single use)	-	-	Open storage area (100.000 sqm); Covered storage area (20.000 sqm); Customs warehouse	Robno transportni centar luka "Leget" a.d.	Fresh water supply; Onshore power supply
Szeged	river Tisza/Tisa, 169 km, right bank	30.000	Bulk	Hungary	ATIVIZIG (Lower Tisza Region Water Directorate)	Slip-away	n.a.	n.a.	n.a.	Yes	n.a.	n.a.

** out of the programme area. Source: https://www.danube-logistics.info/danube-ports/; https://www.danubecommission.org/dc/en/danube-navigation/danube-ports-map/*

Water freight transport is a typical area where transnational and cross-border cooperation can be realized with high added value and return. For freight transport, in order to be organised in the most efficient way possible, it is advisable that the Hungarian and Serbian ports, interested in transnational transport within the Danube Region and the waterway systems of the Danube and its main tributaries (Sava, Tisza/Tisa), share and harmonise with each other their complementary and joint capacities, thus reducing the costly, parallel infrastructure developments and creating a synergic and cost-efficient networking infrastructure and service portfolio.

It must be stressed that in the case of transnational waterways and port infrastructure developments, the protected wetland habitats, and the unique aquatic ecosystem of the catchment area of the Danube should be taken into consideration. The aspects of water freight transport and nature conservation need to be coordinated (e.g. considering riverbed dredging or enlargement of port areas). The negative impacts of increasing capacities should be minimised, and irreversible artificial interventions are worth being excluded.

Despite of projects elaborated in the frame of the HUSRB and the Danube Transnational Programme connected to navigability and waterways, less emphasis has been placed on the coordination of infrastructural capacities and services to create a more sustainable (green) water freight transport having multimodal interconnections across the border. There is only a single project in the frames of the CBC Programme of 2014-2020, which targets better connectedness regarding ports, even though it is more of an indirect approach. The project named "Improvement of traffic infrastructure, including the border crossing Bački Breg – Hercegszántó" is about the prequalification and upgrading of the related border crossing point in terms of both passenger and freight traffic and improvement of its connection roads with the aim of making the border region better connected to the Danube cargo port of Baja.

Based on the analysis of the topic 'Economic logistics', the following types of potentially functional areas can be defined within the region:

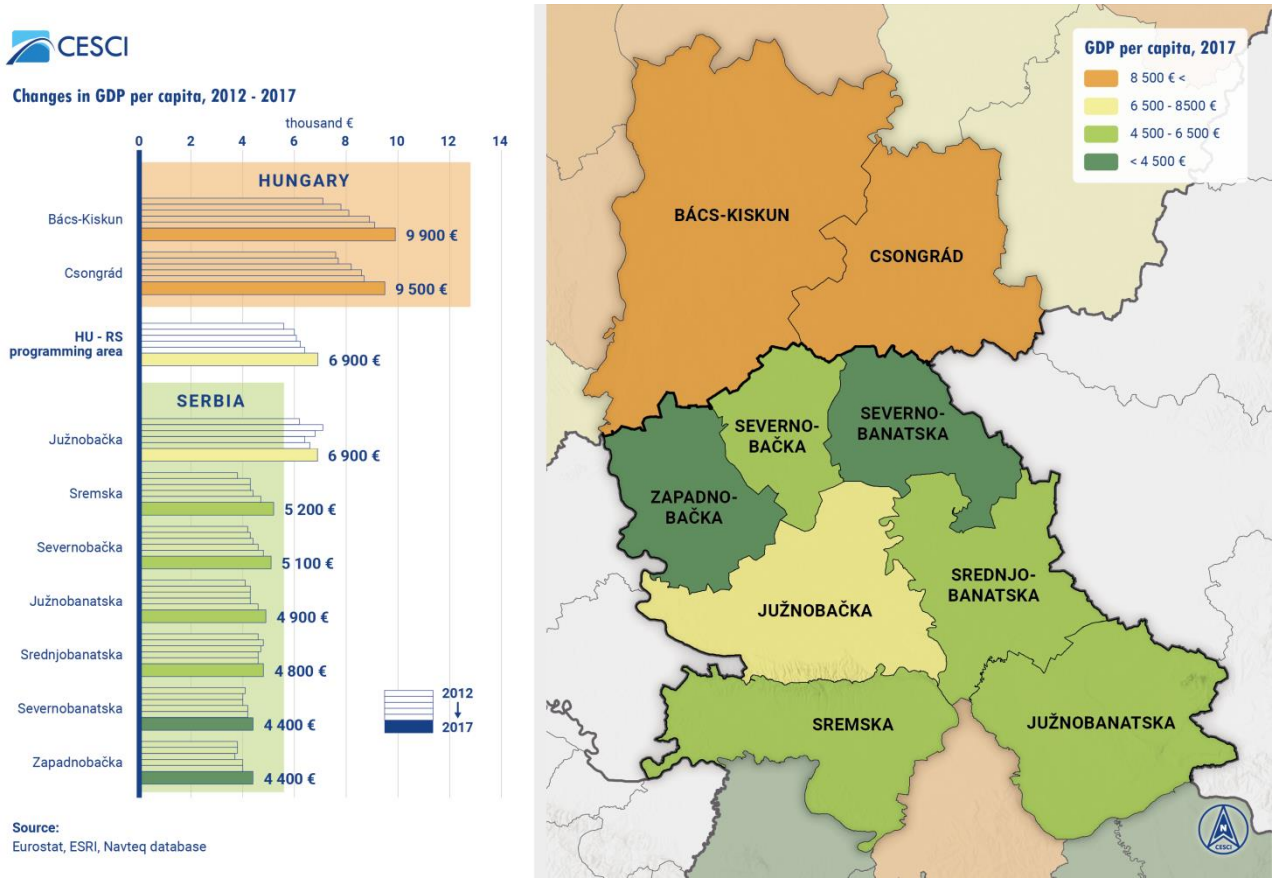
- Cross-border industrial-logistics zones: such zones are a dense network of industrial parks, logistics centres, industrial zones, business parks and free zones incorporating Szeged, Hódmezővásárhely, Kistelek, Makó, Röszke, Tompa, Klárafalva, Nagylak in Hungary and Subotica, Ada, Bečej, Horgoš, Senta, Kanjiža, Bačka Topola in Serbia in particular. Economic and business infrastructure can be mentioned here which can support business and trade development, investment promotion as well as the production, processing, storing and distributing of products, furthermore the networking of business partners related to the exploitation of the Balkan gateway position of the borderland.
- Ports and transnational waterways: the ports of cross-border relevance with joint and complementary capacities, especially the Danube ports of Baja, Dunavecse, Novi Sad, Apatin, Bogojevo, Bačka Palanka, Beočin, Pančevo, and the Tisza/Tisa ports of Szeged and Senta.

2.2.2 Economic development

2.2.2.1 Economic structure, added value

The analysed area consists of counties and districts having **GDP per capita** under the national averages of the given countries (HU: 12 800 EUR, RS 5 600 EUR) in the case of almost all territorial units. However, the two sides have distinctively different position in their respective national economies. While the two Hungarian counties significantly fall behind (76% of the figure for Hungary), the Province of Vojvodina has relatively good position owing to its development level identical to the national average. Only Zapadnobački Okrug and Severnobanatski Okrug (both 79% of the national average) performs notably worse than Serbia as a whole. Thanks to its location and excellent accessibility to both Belgrade and the Western European markets, and having Novi Sad as the economic centre of Vojvodina, Južnobanatski Okrug (123%) is the only district on the Serbian side, which exceeds the GDP per capita of Serbia and Vojvodina.

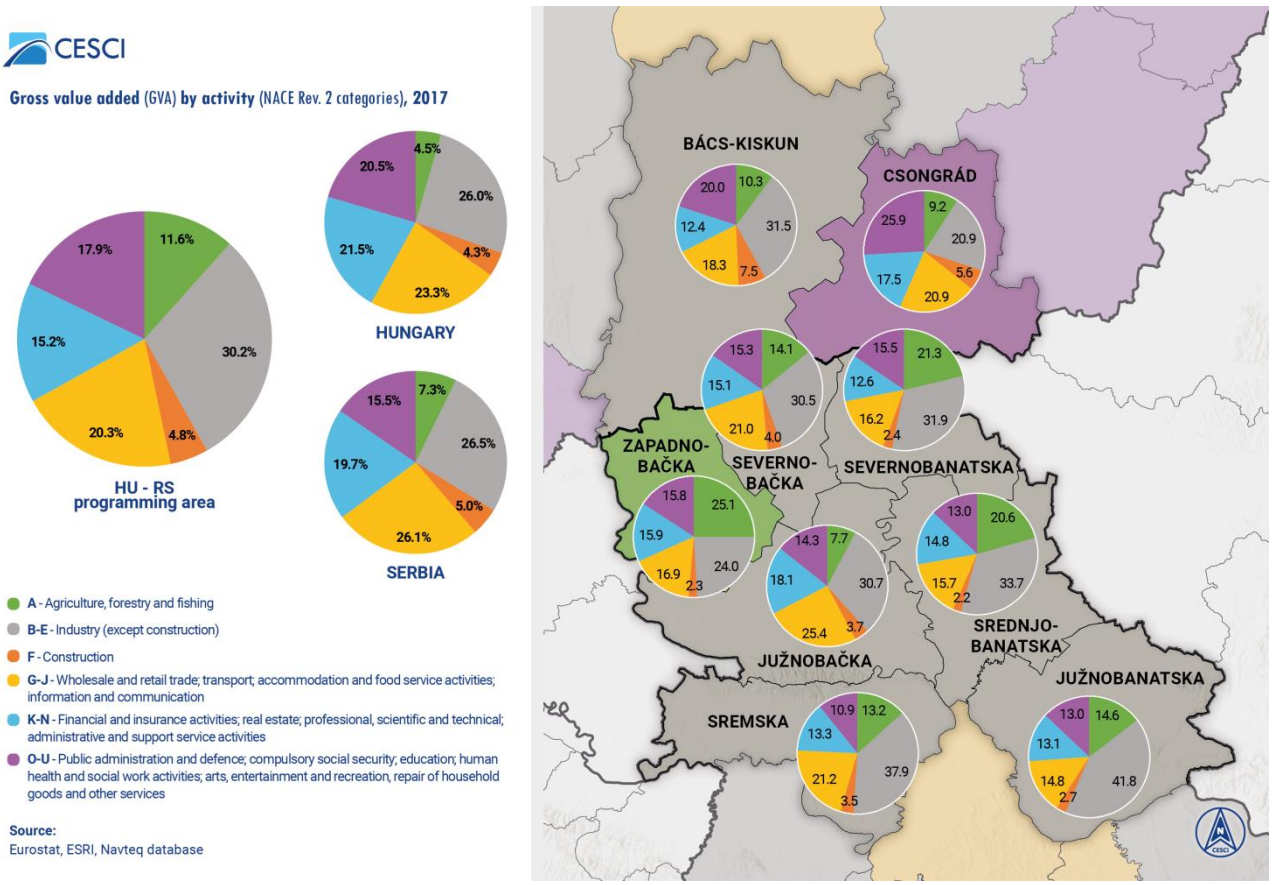
Figure 20: Distribution of GDP in the border region



The state border divides the region into two parts: in comparison with the analysed border region (6 900 EUR), both Bács-Kiskun (9 900 EUR, 143% of the whole region) and Csongrád (9 500 EUR, 138%) represent above average development, but excluding Južnobanatski Okrug (6 900 EUR), which has identical data with the whole analysed region; the Serbian side is less developed. Zapadnobački Okrug and Severnobanatski Okrug (4 400 EUR, 64% of the border region) are lagging behind other regions most. The Hungarian counties generate twice as much GDP per capita than Zapadnobački Okrug Severnobanatski Okrug, Srednjebanatski Okrug (4 800) and Južnobanatski Okrug (4 900).

As far as the **growth rates** between 2012 and 2017 are concerned, convergence on a cross-border level failed to be reached. Since the Hungarian side (29%) managed to develop at a higher pace than the national averages (HU: 26%, SR: 16%), it outperformed Vojvodina (14%) widening the development gap between the two sides. Except for Sremski Okrug (32% growth) the Serbian districts had lower growth rates than the average of the joint analysed region (+20%), while both Bács-Kiskun (+22%) and Csongrád (+35%) were on a more favourable development path. Districts with the weakest growth potential were the north-western and north-eastern periphery areas, namely Zapadnobački Okrug (+9%) and Severnobanatski Okrug (+3%), which experienced the lowest growth rates, excluding the stagnation in Srednjebanatski Okrug, from despite their originally already weakly developed economies. In general, the spatial inequalities increased: Bács-Kiskun megye with Kecskemét as an emerging automotive centre with a growing supplier network in particular, but Csongrád megye as well has an outstanding performance within the border economy, and both outpaced even the best-performing district of Vojvodina, Južnobanatski Okrug. The difference grew larger between 2012 and 2017; while the GDP per capita of Južnobanatski Okrug was 85% of the two Hungarian counties, it was only 71% by 2017. The biggest changes in terms of ranking based on GDP per capita can be detected in the case of Sremski Okrug (improvement by 3 places) and Srednjebanatski Okrug (3 places down). As a consequence of the economic processes that took place between 2012 and 2017, a central axis, or backbone of the regional economy appeared and gained strength along the major motorways of M5 and A1 incorporating engines of growth such as Kecskemét, Szeged, Subotica and Novi Sad incorporating many districts of northern Bács-Kiskun, southern Csongrád megye, Severnobački, Južnobački and Sremski Okrug.

Figure 21: Distribution of GVA by NACE Rev. 2 categories in the border region



Agriculture (category A) plays a significant role in the border region's economy. Agriculture has a long tradition in the region, and it had a historically decisive role not just in economic but social and urban development as well. The region supplied the cities situated within the area and even the wider European markets, and is still one of Europe's main agricultural producers. Most of its land is a cross-border plain with favourable conditions for agricultural activities (flatlands, chernozem and other fertile soils, number of hours of sunshine, etc.).

On both sides, agriculture has a larger share in the regional economy than the national average (HU: 4.5% of total GVA; RS: 7.3%). In almost all analysed counties and districts, the share of agriculture is two or even three times higher compared to their particular countries. The significance of agriculture is also underlined by the fact that Vojvodina, especially Zapadnobački Okrug (25.1%), Severnobanatski Okrug (21.3%) and Srednjebanatski Okrug (20.6%), is the "breadbasket" of Serbia. Vojvodina is responsible for 48% of the Serbian agricultural GVA, while making up only 28% of its territory.[43] Out of the 24 districts of Serbia[44] the aforementioned districts are leading the chart, and Južnobanatski Okrug (14.6%, 7th place) and Severnobački Okrug (14.1%, 8th place) are also among the TOP 10 agricultural administrative units. In Zapadnobački Okrug agriculture is the leading sector in GVA production ahead of every other activity. Even Bács-Kiskun (10.3%), Csongrád megye (9.2%) and Južnobački Okrug (7.7%), in which territories the shares are slightly under the average of the analysed region, exceed the national levels of both states in relation to agriculture. Taking into account the change in agricultural production in the period between 2012 and 2017 it can be said that in the Serbian districts which had been the most agriculture-oriented the share of such activities increased further (Zapadnobački Okrug: +4.4%-points, Severnobanatski Okrug: +4%-points , Srednjebanatski Okrug: +3.9%-points). The spatial differences in production increased. While the share stagnated (+0.4%-points) on the border region level, in Csongrád (-0.2%-points) and Bács-Kiskun megye (-0.4%-points), it decreased slightly in Južnobanatski Okrug (-1.4%-points) and Sremski Okrug (-1.7%-points).

The most decisive **land use** is agriculture considering that 79.6% of the total surface of Bács-Kiskun megye, 76.2% of the Province of Vojvodina, and 75.6% of Csongrád megye is agricultural land. The absolute majority of agriculturally cultivated areas (including arable land, gardens, orchards, vineyards, meadows and grasslands, fishponds, reeds, excluding forests) are made up of arable land and kitchen-garden; the highest share can be found in Csongrád (89.2%), followed by Vojvodina (88.6%), then Bács-Kiskun (71.4%). Csongrád is even more agricultural in terms of arable land proportion than whole Hungary (78.2%).

Apart from large-scale farming and crop production on arable lands covering grains, corn, sunflower, sugar beet, etc. The significance of intensive **fruit growing as well as horticulture** has been characterising especially the Aeolian sandy soils of the cross-border Danube-Tisza Sand Ridge. In terms of cultivated crops, stone fruits, especially peaches, apricots, cherries, sour cherries and plums,

[43] Excluding Kosovo and Metohija

[44] Excluding Kosovo and Metohija

account for a high proportion of fruit.[45] Apple production is much more significant on the Serbian side considering the large differences in yields (Vojvodina: 108 thousand t, 44% of Serbia, Bács-Kiskun: 31.5 thousand t, Csongrád: 8.5 thousand t). Regarding plum, 52 557 tonnes are produced in Vojvodina, 8% of the national level, and 10 013 t in Bács-Kiskun and 2 2126 t in Csongrád, 33% of the national level). In Vojvodina sour cherry makes up 23 thousand tonnes in production (23% of Serbia), while 10.8 thousand tonnes in Bács-Kiskun and 0.53 thousand tonnes in Csongrád (18% of Hungary). Peach is one of the most important fruits on both sides, on the Hungarian side in particular, where it was responsible for 5 848 t in Bács-Kiskun and 16 854 t in Csongrád, 54% of the total Hungarian yield (data of 2011).

Vegetables grown in horticulture, which often require intensive greenhouse production, are as follows: mainly tomatoes, peppers, turnips, carrots, lettuce, asparagus, kale, cauliflower and onions.[46] 65 561 tonnes of tomatoes were grown in Vojvodina, while 50 179 t in Csongrád and 8 482 t in Bács-Kiskun. This means 38-40% of all Serbian tomatoes are harvested in Vojvodina, and 36-38% of all Hungarian tomatoes are from farmers from Bács-Kiskun megye and Csongrád megye. The share of the two Hungarian counties accounts for 40% of the total Hungarian onion harvest, and for 59% of the total carrot harvest of Hungary. Cabbage and kale were grown with a total of 69 580 tonnes in Vojvodina making up 24-25% of the total production. Regarding cabbage the share of the two Hungarian counties are also almost identical in the national production. The proportion of lettuce and root vegetables is also remarkably high. Potatoes prefer sandy soils, so this plant is also grown by many. In 2011, 276 382 t of potatoes were harvested in the Serbian province (37% of Serbia), and 87 825 t in Bács-Kiskun and 126 015 t in Csongrád (36% of Hungary). In addition, there is a tradition of growing spices in the area, so peppers are also outstanding. Bács-Kiskun (56.5%) and Csongrád (20.5%) are responsible for 77% of all the spicy red paprika production in Hungary. 37 179 tonnes were harvested from paprika in Vojvodina, which is around 25% of the total Serbian production.

Another area where the border region stands out is **wine making**. Viniculture has a long tradition on both sides of the border. This is also reflected in extensive vineyards making up above average shares in agricultural lands in Bács-Kiskun megye (4.3%)[47] and in some parts of Vojvodina (0.54%, but 0.74% in Južnobanatski Okrug and 0.94% in Sremski Okrug). The share is especially high in Bács-

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45 In the paragraphs related to Hungarian fruit production the data table used as a source was as follows: http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_omn025b.html. For the Serbian data the following documents were used: Statistical Yearbook of the Republic of Serbia 2012 (https://pod2.stat.gov.rs/ObjavljenePublikacije/G2012/pdf/G20122007.pdf); COUNTRY REPORT ON THE STATE OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE. Republic of Serbia

46 In the paragraphs related to Hungarian vegetable production the data table used as a source was as follows: for potato (https://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_omn017b.html), other important vegetables (https://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_omn023b.html). For the Serbian data the following documents were used: Statistical Yearbook of the Republic of Serbia 2012 (https://pod2.stat.gov.rs/ObjavljenePublikacije/G2012/pdf/G20122007.pdf); COUNTRY REPORT ON THE STATE OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE. Republic of Serbia

47 For the Hungarian side data on vineyard areas and wine production are from the data table as follows: https://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_omn024b.html.
For Serbia the Statistical Yearbook of the Republic of Serbia was used:
https://pod2.stat.gov.rs/ObjavljenePublikacije/G2012/pdf/G20122007.pdf

Kiskun, which leads the Hungarian charts with the most extensive vineyards and the biggest production figures. In Bács-Kiskun the share of vineyards in agricultural lands is three times higher than in the whole of Hungary (1.4%). The biggest grape producer regarding the programming area is Bács-Kiskun megye with 111 034 tonnes, followed by Vojvodina (70 372 tonnes), while grape plays less relevant role in Csongrád megye (8 476 tonnes). On the Serbian side Sremski Okrug has the most significant production (20 013 t) followed by Južnobanatski Okrug (15 153 t). On the Hungarian side by far the largest wine region of the border region as well as Hungary is the Kiskunság wine region (27 903 hectares), followed by two almost identical ones in terms of size, the Hajós-Baja (14 874 ha) and the Csongrád (14 311 ha) wine regions.

On the Serbian side, the regions are situated mostly in three distinct geographical areas: at the Banat region around Vršac planina, in Srem (Syrmia) on the slopes of Fruška Gora, and in Northern Bačka around Subotica and Horgoš. There are altogether 7 wine growing regions in the unit of Vojvodina. The largest is the Srem region (2215 55 ha), followed by South Banat region (1567 07 ha) as second and Subotica region (312 18 ha) as third, but the other regions can be considered minor wine-growing areas in size, namely the regions of Potisje (227 37 ha), Banat (132 03 ha), Telečka (115 23 ha), furthermore Bačka (18 87 ha).[48]

The areas of the given bordering wine-growing regions are among the "number one" wine-growing regions not only in the Carpathian Basin but also in the whole Central European region. Cross-border agro-industrial cooperation historically has played, and still plays, a decisive role in the maintenance and development of these complex, native white and red wine production areas.

A good example of cross-border cooperation can be highlighted when, in the frameworks of the CBC project entitled „Establishment and positioning of the Danube wine route as a touristic and cultural brand in the cross-border region" (Danube Wine Route – HUSRB/1602/31/0209), the Local Government of Bács-Kiskun Country and the Autonomous Province of Vojvodina, along with three professional organisations, joined forces. The Danube Wine Route is created including marketing training for the winemakers as well as a professional conference and a field study for journalists and further wile-related events are organised (for example, a Wine Show to present the best wines of the region in highly elegant and exclusive surroundings).[49]

The problems on both sides are common in many cases: with climate change and increasing market competition, it is also necessary to channel research and development in viticulture and winemaking. The aim is to support environmental sustainability, market competitiveness, the preservation of traditional landscapes and the introduction of innovative technologies at the same time. With cooperation of the Viticulture Institute of Sremski Karlovci, University of Novi Sad, the main research areas could cover: breeding research to meet the challenges of ageing (e.g. climate change), technological development of environmentally friendly viticulture, development of new oenological

48 See: Dragoslav Ivanišević, Darko Jakšić (2014). Viticulture in Serbia according to statistics and viticulture zoning. URL (last accessed: 23/07/2020). http://media.popispoljoprivrede.stat.rs/2014/Dokumenta/Radovi/Viticulture%20in%20Serbia%20according%20to%20statistics%20and%20viticulture%20zoning.pdf

49 See: http://www.danubewineroute.com/terkep/

technologies to mitigate the effects of climate change on wine quality, and traditional and newly bred, innovative varieties of wine regions.

Industry (categories B-E - except construction, 30.2%) plays by far the leading role in the analysed region (30.2%). Thus, apart from being of a traditional agricultural character, the border region is heavily based on industrial production. However, it is worth keeping in mind that this is not because of the long tradition in industrial activities but rather the consequence of the slow tertiarization and the lack of emergence of activities with higher added value apart from industrial branches. Weak service sector, especially in relation to business, financial, scientific services, information, and communication, are among the major reasons of having a rather mono-structural economy. Excluding Csongrád megye (20.9%) and Zapadnobački Okrug (24%) in every unit of the border region industry represents the highest GVA production, and the share of industry is above the national averages (HU: 26%, RS: 26.5%). The most industrialised parts of the macro-region can be found in Bács-Kiskun (31.5%) on the Hungarian side, and in Južnobanatski Okrug (41.8%) as well as in Sremski Okrug (37.9%) on the Serbian side. Bács-Kiskun and Južnobački possess the industrial powerhouses of the whole region; these two administrative units generate half of the total GVA realised in industry. Considering recent changes between 2012 and 2017, it can be stated that industry has been the sector where the most significant shifts took place. Compared to the average of the border region (-1.6%-points) industrialisation was a notable process on the southern side of Vojvodina, i.e. in Južnobanatski Okrug (+8.4%-points) and Sremski Okrug (+6.2%-points), but, mainly thanks to Kecskemét and Subotica in particular, Bács-Kiskun (+2.6%-points) and Severnobački Okrug (1.4%-points) also experienced a notable increase in the share of industry in the total GVA. Significant deindustrialisation can be detected in Csongrád megye (-2.5%-points), Severnobanatski (-3.6%-points), Srednjobanatski (-5.3%-points), Južnobački (-8.3%-points) and Zapadnobački (-9.9%-points) Okrugs. However, while in Csongrád the decrease did not come along with the increase in the share of agriculture, not like in the case of the aforementioned Serbian districts, partly excluding Južnobački, where a significant shift in favour of the service sector should be mentioned.

On the Serbian side the most important manufacturing activities, according to GVA of unincorporated enterprises are, in descending order: manufacture of food products, beverages and tobacco products (36% of all manufacturing activities, 6 737 million RSD in 2018), manufacture of basic metals and fabricated metal products, except machinery and equipment (16%, 2 963 million RSD), manufacture of rubber and plastics products, and other non-metallic mineral products (12%, 2 262 million RSD), manufacture of textiles, apparel, leather and related products (12%; 2 249 million RSD). The food industry in particular is of outstanding importance since it is 5%-points higher than of Serbia (31%), but the share of metal industry and textile industry is notably more important in the regional economy than in the Hungarian regions.[50]

On the Hungarian side, in Csongrád megye the most significant activities (based on the GVA of enterprises with at least 50 employees seated in the county) are dominated by food industry (45.8%), rubber, plastic and construction material industry (35.8%), while metallurgy and metal processing industry as well as manufacture of electrical equipment (4.7% each) are much less decisive. Thus,

[50] Statistical Office of the Republic of Serbia. (2019). Working Paper: Unincorporated enterprises (sole-proprietorships and partnerships) in the Republic of Serbia). https://publikacije.stat.gov.rs/G2019/PdfE/G201910109.pdf

while food industry is similarly developed as the one in Vojvodina, rubber and related industries are the most significant in Csongrád megye. Regarding Bács-Kiskun megye the automotive industry (65.1%) is what separates the county in relation to economic structure the most from the other two analysed regions. Its food industry is the second with its share in GVA production but is having the smallest share (16.9%) compared to the other NUTS3 regions. To sum up, it can be concluded that apart from Bács-Kiskun megye, where automotive industry together with the manufacture of machinery and electrical equipment make up 72.3% of the GVA generated, the share of semi-finished (interim) products, low-processed products have a very high proportion, and the level of added value and processing could be increased in the border region.

Trade and wholesale, transport, accommodation and food services, information, and communication (categories G-J) is the second pillar in the border region (20.3%) and contributes with the second highest GVA in 5 regions out of the 9. Still, these categories fell short compared to the proportion of these activities in the respective national economies (HU: 23.3%, RS: 26.1%). The administrative units (megye, okrug) are not known for excelling in such activities as none of them reaches or surpasses the national average of its own country. The outstanding units worth mentioning are Južnobački Okrug (25.4%) and Csongrád megye (20.9%) given that these are both on the 4th position in their respective countries when it comes to the share of the categories G-J. The three districts from Banat (Severnobanatski: 16.2%, Srednjobanatski: 15.7%, Južnobanatski: 14.8%) are the least known for these economic activities because of their relatively underdeveloped transport and logistics infrastructure, being mostly excluded from the major tourist destinations and also because of the lack of hi-tech sectors. Taking into account the changes between 2012 and 2017, excluding the northern part of the Serbian side, which experienced a rate of increase (Zapadnobački: 4.5%-points, Južnobačka: 3.8%-points, Srednjobanatski: 3.3%-points, Severnobanatski: 3.2%-points) that exceeded the border region's figure (1.2% point), no major changes occurred.

Taking into account the **share of the ICT sector** in total added value by sub-sector, the IT and other information services led the production ranking with 2.4%, followed by computer, electronic and optical products (1.9%), telecommunications (1.6%), and software publishing represented only 0.1%. In total these subsectors represent 6% of the added value in Hungary, which is three times higher than that of Serbia (2%) considering data from 2016, where the software sub-sector is the strongest (63% of all ICT industry added value) and the second is IT services (by 27% in total ICT added value).[51] The growth potential of the ICT industry is underlined by the steadily growing figures of the value of exports of IT services in both countries. In Hungary the value of exports of ICT increased from 1 247 million EUR of 2010 to 1 955 million EUR of 2017, while Serbian ICT-exports were almost insignificant (127 million EUR in 2010), but greatly increased to 760 million EUR by 2017.

Financial and insurance activities; real estate activities; professional, scientific, and technical activities; administrative and support service activities (categories K-N) are only the fourth most important economic area in the analysed region (15.2%). Overall the border region has a rather poorly performing activity in these sectors considering that on both sides the border proportions of these services are below the national averages (HU: 21.5%, RS: 19.7%). Except for Južnobački (18.1%), Csongrád megye (17.5%) and Zapadnobačka (15.9%) in each region the share of these business and

[51] Milovan Matijević, Milan Šolaja (2018). ICT in Serbia – At a Glance. https://vojvodinaictcluster.org/wp-content/uploads/2018/05/ICT-in-Serbia-%E2%80%93-At-a-Glance-2018.pdf

innovation-related activities are below the average of the analysed area (15.2%). Csongrád megye and Južnobački Okrug make up 49% of the total GVA generated in financial, scientific, administrative, and other service activities in this field. Only Južnobački Okrug and Csongrád megye represent a region where financial, scientific, and administrative and the other related activities are of great importance considering that both regions are on the 3rd position when it comes to the regions with the highest share in their countries regarding categories K-N. These activities have the lowest shares in Sremski (13.3%), Južnobanatski (13.1%) and Severnobanatski Okrugs (12.6%), furthermore in Bács-Kiskun (12.4%). The figure for Bács-Kiskun is almost only the half of the Hungarian average. Taking into account the change in this field it can be stated solely Južnobanački Okrug (+4.8%-points) was able to increase the share of the activities substantially, while compared to the border regions (-0.4%-points) Južnobanatski (-2.8%-points), Bács-Kiskun (-2.9%-points) and Severnobanatski (-3.2%-points) performed worse in categories K-N.

Public administration and defence; compulsory social security; education; human health and social work activities; arts, entertainment and recreation, repair of household goods and other services (categories O-U) act as the second most significant field in the border economy by contributing 17.9% of the total GVA. However, their high share is due to the relative weakness in other sectors and branches.. The high share also refers to the fact that the public services and not the business-related, private services are those which are more decisive in the generation of GVA presently. Csongrád megye and Južnobački Okrug generates almost half of the total GVA created within the analysed region (47%) since they incorporate administrative seats and numerous institutions of public functions. The border acts as a strong dividing line between the two sides: the Hungarian side (Csongrád: 25.9%, Bács-Kiskun: 20%) has an above the average service sector of this type considering the border region and twice the share compared to many Serbian districts, which districts are the least public service-oriented and situated on the southern part of the analysed area (Sremski: 10.9%, Srednjobanatski: 13%, Južnobanatski: 13%). Considering the changes in shares in this field only Csongrád megye (+1.7% points) can be highlighted where significant positive change took place (border region: -0.3%-points). In the aforementioned Serbian districts, where these activities are weak in GVA production (except for Severnobački:-1.7%-points), namely Srednjobački (-1.4%), Sremski (-2.3%-points) and Južnobanatski (-2.9%-points) Okrugs, the rate of decrease was the biggest.

2.2.2.2 Entrepreneurial structure

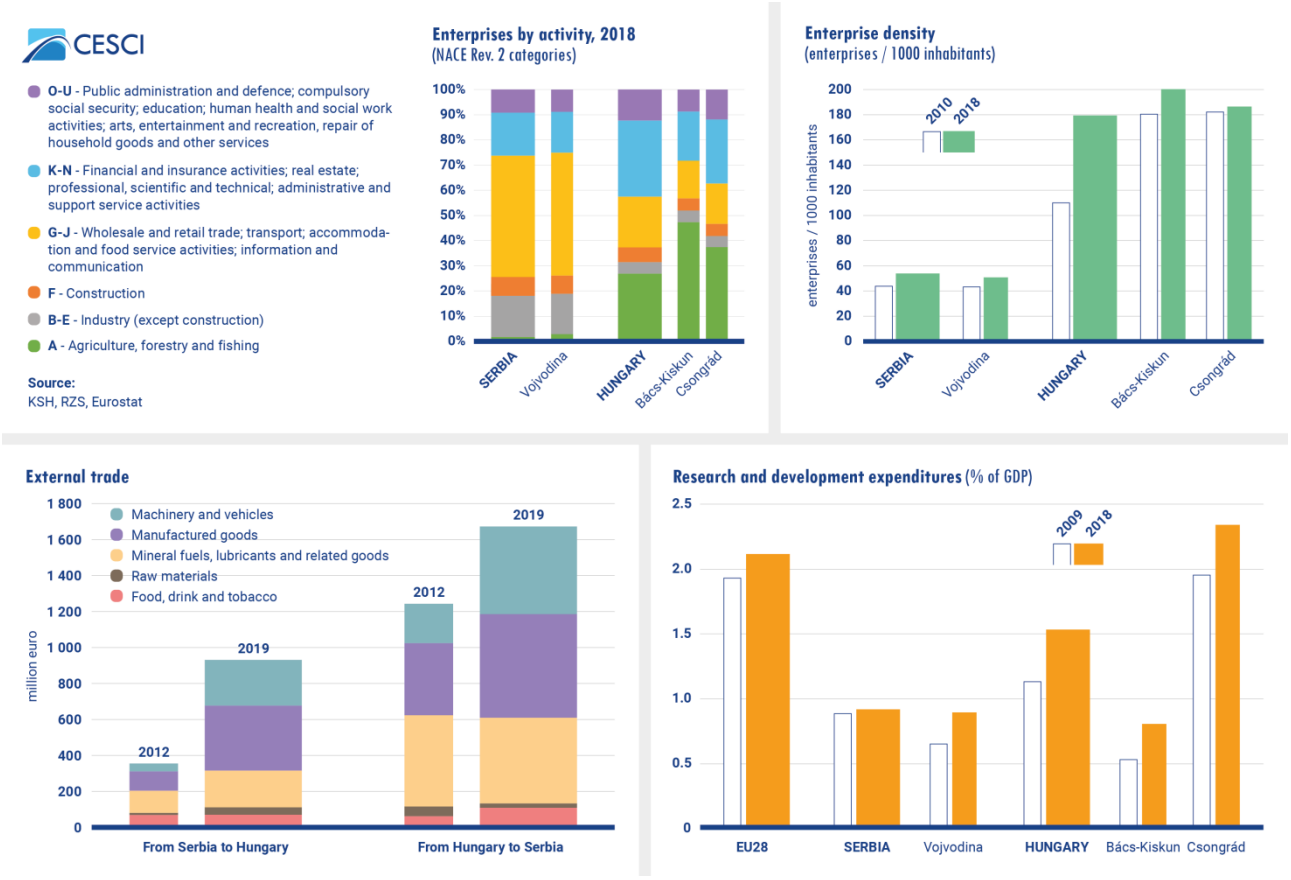
Apart from added value, the **proportion (number) of enterprises** between the aforementioned NACE categories can be analysed to get to know more about the structural differences within the border region. The significance of agriculture is reflected in that the shares of the agricultural companies within the border region are often twice as high as the national averages (HU: 26.9%, RS: 3.7% of total enterprises). On the Hungarian side, where almost every second enterprise in Bács-Kiskun (47.4%) and more than the one-third in Csongrád megye (37.4%) are dealing with agriculture, the share of agricultural enterprises is much higher compared to Vojvodina (7.4%). In industry also notable differences can be detected as on the Serbian side the share of such companies is more than four times higher than in Hungary (4.6%) and in the two counties (Bács-Kiskun: 4.6%, Csongrád 4.4%), however the share of Vojvodina is only slightly above Serbia in total (19%). Construction has a smaller role in the economic structure on both parts of the analysed region compared to the national

averages (RS: 8.1%, HU: 5.8%). Still, construction is more important in Vojvodina (7.5%) than in Bács-Kiskun (4.9%) and Csongrád (4.8%) counties.

In total, there are lower numbers of service sector enterprises on the Hungarian side. In relation to category G-J (wholesale and retail trade; transport; accommodation and food service activities; information and communication) these sectors in Vojvodina have a high importance given that nearly half of the enterprises are operating in this sector (47.8%), which is identical to the level of Serbia but more than two times higher than that on the Hungarian side (HU: 20.2%). The Hungarian counties are having very low shares in terms of these service activities (Bács-Kiskun: 14.9%, Csongrád 16.1%). There are 3 089 unincorporated enterprises operating in information and communication in Vojvodina, 4.5% of all such business entities. The most decisive activities are the IT and other information services (2 655 enterprises, 86% of all), while publishing, audio-visual and broadcasting activities (376, 12%) and telecommunications (58, 2%) are less relevant for many other related enterprises.[52] Regarding category K-N (financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities) the analysed regions are below the national averages of their respective countries (HU: 30.2%, RS: 18.3%). The two counties of Hungary concentrate a higher share of such services enterprises, and Csongrád megye (25.4%) stands out compared to the other regions in Hungary and the Autonomous Province of Vojvodina (Vojvodina: 15.4%, Bács-Kiskun: 19.5%). Considering category O-U (public administration and defence; compulsory social security; education; human health and social work activities; arts, entertainment and recreation, repair of household goods and other services) all parts of the programme area have lower shares of enterprises than the average of the two states (HU: 12.3%, RS: 3.1%). Still, in two Hungarian counties (Bács-Kiskun: 8.7%, Csongrád 11.8%) especially in Csongrád megye a four to five times higher share of enterprises are interested in these activities compared to Vojvodina (2.7%).

[52] Unincorporated enterprises (sole proprietorship and partnerships) in the Republic of Serbia, 2018: https://www.stat.gov.rs/en-US/publikacije/publication/?p=12013

Figure 22: Potentials to enhancing economic relations, R&D&I, and entrepreneurial cooperation



The economic structure is notably different in the **breakdown by size of the enterprise sector**. Based on data of 2018 the distribution is very uneven in size categories, and the largest of them can be found at the two ends of the scale. The Hungarian counties are giving seat to 88.6% of the microenterprises, while Vojvodina is home to 85.3% of the large enterprises operating in the whole joint border region. The share of enterprises with 9 employees or less even exceeds the national average (97.8%) in relation to the Hungarian side (98.1% in both counties), while the share of such microenterprises in Vojvodina (85.4%) is even lower than the Serbian national average (86.2%). In relation to the categories of small, medium and large enterprises it can be stated that on the Hungarian side the shares are lower than the national average, but higher than the national average on the Serbian side when comparing inland data with each other. The ratio of small (11.35%) and medium-sized (2.7%) enterprises is an order of magnitude higher in Vojvodina than on the Hungarian side (1.6% and 0.2% in both counties). The share of large (macro) enterprises is very low on the Hungarian side (close to zero %, 67 companies), while it is slightly above the national average (0.5%) of Serbia in Vojvodina (0.6%, 151 companies).

Owing to the outstanding number of microenterprises in the Hungarian counties (Bács-Kiskun: 98 966, Csongrád: 73 002) the **enterprise density,** expressed in the number of enterprises per 1000 inhabitants, is more than ten-fourteen times higher on the Hungarian side (Bács-Kiskun: 200.2, Csongrád: 186.4) than of Vojvodina (13.9). It also means that the regional data is lower on the Serbian side compared to the Serbian average (14.81), and the two Hungarian counties have even more enterprises per inhabitants than the average of Hungary (179.3). Taking into account the changes between 2010 and 2018 the density increased in all related regions (Vojvodina: +15%, Bács-Kiskun:

+11%, Csongrád: +2%) but stayed below the levels in their respective countries (HU: +63%, RS: +20%). However, the existing gaps in enterprise density within the border region have increased; from 168.25 to 186.3 comparing Vojvodina and Bács-Kiskun megye, and from 169.9 to 172.5 comparing Vojvodina and Csongrád megye.

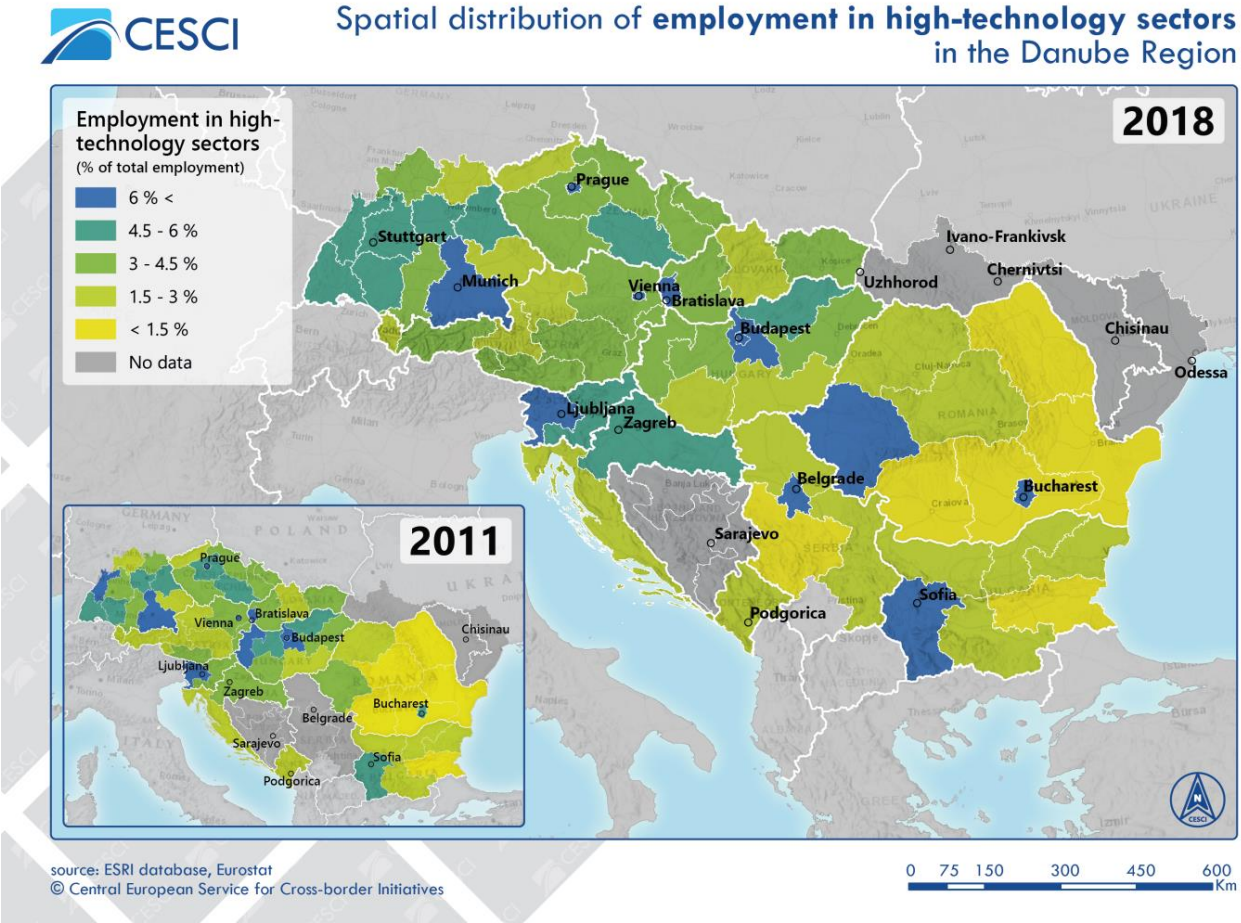
2.2.2.3 R & D & I

Most of the analysed region does not stand out as a knowledge and technology-driven region with its relatively low **share of GDP spent of research and development** (1.2%). Although having some important capacities and stakeholders especially in Szeged and Novi Sad, the region as a whole can be characterised as a technology follower with a low share in knowledge production. It is underlined by the fact that the analysed area spends slightly half the value of the European Union on R&D (54%) in terms of its share in GDP. Except for Csongrád megye (2.3%) no other parts of the analysed region stand out considering its higher share compared to the national averages (HU: 1.5%, RS: 0.9%). The expenditure in the percentage of total GDP in the case of Csongrád is two times higher than of whole border region. Csongrád can be regarded as the knowledge base for the analysed area since it concentrates 39% of the total R&D expenditures while covers only 12% of the total territory. Taking into account the changes between 2009 and 2018 Vojvodina (+0.2%-point), Bács-Kiskun (+0.3%-point) and Csongrád (+0.4%) were all able to increase the share of expenditures related to R&D. Except for Csongrád, which managed to improve its position among the rest of the units involved in the previous CBC programme, the others experienced higher growth is share compared to Serbia (no change) but lower compared to Hungary (+0.4%-point). The analysed region was not able to catch up with the EU levels since the gap remained identical due to similar pace of growth (+0.2%-point). Thus, even nowadays the region is still very much based on agriculture, production of raw materials, assembly of manufactured goods and provision of public and social services, and spends limited resources on R&D. Without increasing the cooperation of economic, scientific, public and civic actors in the frameworks of the quadruple helix model, knowledge transfer in industry in particular, the border economy will not be able to switch to a more knowledge intensive structure. Cross-border smart specialisation, the improvement of knowledge transfer and management would not only increase R&D but would help reaching higher added-value in certain fields of joint and complementary potentials.

The weight of innovative activities can also be analysed from the point of concentration of employees working in hi-tech sectors. Regarding the **share of employees in hi-tech sectors** similar conclusions to the R&D expenditures can be drawn. None of the related statistical regions (NUTS2) are concentrating a high share of highly skilled labour, which makes the formation of a prosperous innovation ecosystem more difficult. The insufficient share of qualified labour force in the regional economies is one of the major reasons of the backwardness of the reason. Southern Great Plain (2.4% employed in hi-tech activities out of total employment) and Vojvodina (2.5%) have almost identically unfavourable conditions compared to some other, more north-western and metropolis region in the wider Danube Region as well. The only major difference in their situation is that Vojvodina stands out from the other two non-capital city regions of Serbia (Šumadija and Western Serbia: 1.1%, Southern and Eastern Serbia: 1.6%, excluding Kosovo) with significantly higher share, while Southern Great Plain is among the regions struggling with deploying hi-tech industries and services. Economic restructuring to a more technology and knowledge-intensive development pattern has been a long

and slow process given that neither Southern Great Plain (Dél-Alföld, +0.1%-points change) nor Vojvodina (0%-points) managed to increase the labour force working in hi-technology sectors, while e.g. Belgrade (5.3% to 7.2%) or Western Transdanubia (from 3.5% to 3.9%) managed to increase the share of such labour force at a notable pace between 2013 and 2018.

Figure 23: Spatial distribution of employment in high-technology sectors in the Danube Region



The share of ICT specialists in total employment is below the EU28 average in both countries, given that the rate is 3.7% in Hungary and as low as 2.4% in Serbia based on EUROSTAT data of 2018. The share of businesses that employed ICT specialists in 2019 was 21% in Serbia, but reached 26% in Hungary, both exceeding the EU28 average. This is a decrease compared to the data of 2014, when the Serbian rate was 23% and the Hungarian was 27%. In Vojvodina, 22.2% of the enterprises employ such specialists, which is lower than of Belgrade Region (23.4%). For example, the gap is significantly larger in manufacturing (28.2% to 23%) just like in the case of transportation and trade (12.3% to 1.0%). 67% of the enterprises in Vojvodina had vacancies for ICT specialists that were difficult to fill during 2018 which exceeded the national level (55.7%) and the figure of Belgrade Region (45%).[53]

[53] Statistical Office of the Republic of Serbia (2019). Usage of Information and Communication Technologies in the Republic of Serbia. https://publikacije.stat.gov.rs/G2019/PdfE/G201916014.pdf

2.2.2.4 Economic relations

The **foreign trade relations** have gone through a profound improvement between 2012 and 2019. Indicators of import and export have significantly improved. The value of exports from Serbia to Hungary soared to more than 2.5 times from 356 to 932 million EUR, but the opposite direction of trade also increased by 35% from 1244 to 1674 million EUR between 2012 and 2019 taking into account trade volume calculated on a EUR basis. This notable and fast-paced growth helped Serbia to jump 10 places on the ranking of the largest importers to Hungary (to 21st from 31st place), and thus Hungary became the 7th most important external market for the Serbian economy. Nevertheless, the trade flows are still uneven in terms of their direction: the trade volumes in total are 80% higher from Hungary to Serbia than the value of the goods imported to Hungary from Serbia. From the point of view of Serbia Hungary is by far among the top trade partners (5th for importing and 7th for exporting), while at the same time Serbia to Hungary is less important in trade relations (21th in imports and 18th in exports).

There are some significant differences in the product composition of foreign trade that describes the two given countries based on the value of exports and imports (in EUR). Raw materials play a limited role, making up only 4% of imports to Hungary, while the export from Hungary is as low as 1%. The biggest differences can be detected with regard to energy sources (22% of all the export of Serbia to Hungary, 28% in the export of Hungary to Serbia) as well as processed products (39% of all the export of Serbia to Hungary, 34% in the export of Hungary to Serbia). On the other hand, it relation to food, beverages and tobacco (trade volume from Serbia to Hungary: 8%, trade volume from Hungary to Serbia: 7%) and machinery and transport equipment (trade volume from Serbia to Hungary: 27%, trade volume from Hungary to Serbia: 29%) there are no major differences in the product mix.

The general structure of trade was altered in favour of processed products, machinery and transport equipment in parallel with the falling share of products related to raw materials, agriculture and food industry and energy between 2012 and 2019. The biggest decrease can be found in relation to food, beverages and tobacco exported from Serbia to Hungary (a drop from 20% to 8%) and in the field of energy sources exported from Hungary to Serbia (drop from 41% to 28%). Replacing energy products processed ones are responsible for the largest share in the foreign trade between Serbia and Hungary. It all underlines that products with a higher degree of processing and added value became the centrepieces of mutual trade relations (from 42% to 66% regarding exports from Serbia, and from 50% to 63% regarding exports from Hungary).

It all shows that there is still a great potential in improving trade relations. The goods referred to above are all crossing through the joint border section situated in the analysed area creating further possibilities in the exploitation of the intensifying trade volumes. Further actions in trade development and promotion could result in higher role of the border region not just in export-import relations but in transport, storage and logistics, processing as well as sales of goods enter into, pass across and often leave the border zone. The border zone is a territory that can be considered as the **gateway to the Balkans** with transnational transport corridors connecting the economies and markets of Western Europe across Central Europe and the Western Balkans to the Mediterranean region and Middle East including the Greek ports and Turkey. The border zone functioning as a hub for international business relations not just in logistics but in other activities too can capitalise on

this location advantage, "positional energy". The regional economy can capitalise also on the process of the forthcoming EU integration of Serbia and the wider West Balkan area. Improving the business environment, encouraging investment promotion and business development can be given a strong emphasis to strengthen local SMEs as well as to initiate joint business relations. However, support is very much needed for local entrepreneurs to be able to prepare their production technologies, management, skills etc. to participate in the increasing transnational flows of goods and capital. Economies of scale can be reached on cross-border level in relation to the provision of business services and enterprise promotion. The versatile forms of collaboration can help in building the customer relations of the border companies, in the clustering, in the formation of supplier networks. For cross-border business cooperation, adequate business information and supportive administration should be guaranteed. Also, in the context of Serbia's Euro-Atlantic integration, a multitude of forms of cooperation is conceivable in breaking down barriers to the transfer of capital, but of knowledge and technology too.

Beside the aforementioned gateway type of functional area another economic zone is being formulated and developed, namely the **Central Danube Priority Area**. The area has been introduced by Hungary to manage territorially integrated socio-economic development along the Hungarian Danube section from Dunaújváros across Paks and Kalocsa to Baja (For further details about the structure of planned goals of the Priority Area, please check: 5.2.1 Strategic documents related to territorial cohesion). Developments and related effects of the largest investment project of Hungary, i.e. the construction of so-called Paks 2 nuclear blocks will result in new cross-border economic development impetus for both sides of the border area. The economic relations will expand as some aspects of the investment will be exploited jointly. The often peripheral and lagging border region can capitalise on 12-15 thousand incoming employees and their family members (including Serbs), 3000 companies involved in the power plant construction works and additional potential subcontractors (including Serbians). The Serbian side can also contribute to the growing need for food supply, housing, recreation and tourism, health care and public administration, among other economic relations. Instead of just handling the goods or focusing on industrial activities, the border region is capable of attracting investments to participate in international value chains and to deploy **Shared Service Centres** (SSC). These can further increase B2B cooperation and create higher added value. Szeged and Novi Sad have become important cities in developing business services (IT, financial, accounting, HR, procurement, sales, marketing services) in recent years at SSCs (BP with 500 employees in Szeged, NIS Gazprom in Novi Sad, for instance), but Subotica and even Villeroy&Boch in Hódmezővásárhely can be mentioned as examples. The position of Szeged in this field is strengthened by the fact that the employees of its wider cross-border catchment area also appear on the SSC-related labour market. Nothing characterises Szeged's knowledge-based economy more than the fact that the IT sector employs nearly three thousand highly skilled workers, while solely the business service sector employs roughly half of this workforce. Just like the trade movements, the **capital flows** are rather unbalanced between the two states but their growing role in cross-border economic relations as a more and more utilised potential must also be underlined. Hungarian business entities investing in local economies bringing in foreign capital to Serbia are on the 15th place among all investors from other countries. The Hungarian companies invested 623 million USD in 2018, more the double of the data of 2012 (281 million USD), in Serbia. The same

figure for investments from Serbian entities in Hungary is extremely low, only 9 million USD. Still, this low figure makes Hungary the 14th most important target country for Serbian investors.

Regarding outward investments Hungary is on 12th place among all countries with investments in Serbia, meaning that Hungarian business entities prefer Serbia to expand their operations. The outward direct investment of Hungarian origin increased by 38% from 334 to 539 million USD from 2012 to 2018, while the share of this outward investment accounted for 3.1%, compared to the previous 1.9%. This growth can be considered significant since the total outward investment decreased by 3%. Serbian companies are not major investors in Hungary. Considering outward FDI invested in Hungary, it is just the 28th on the list with 36 million USD which used to fluctuate quite hectically in recent years. There are still unutilised potentials in strengthening the capital flows across the border in order not simply to increase mutual investments but to channel the flows to the analysed border area. Thus, investment promotion can be a joint tool in strengthening cross-border economic cohesion which would support economic and employment growth as well as creating business networks and synergies based on joint and complementary structures. For instance, apart from the Balkan gateway and the Central Danube Priority Area, the Southern Great Plain Economic Development Zone[54] consisting of Bács-Kiskun, Békés and Csongrád-Csanád megye can be mentioned in relation to such capital flows and business cooperation. The zone can also attract investments on the neighbouring Vojvodina and have positive cross-border impacts on the investment and capital relations of the two sides of the analysed area.

2.2.2.5 Previous forms of cooperation in the field of the economic developments

Based on the projects contracted and published on the Programme's website, out of the total number of 72 projects, 20 projects have a certain level of relevance to economic development. This number can be considered high since almost every third project has a direct or indirect connection to economic development (however, it has to be noted the project numbers heavily depend on the whole structure of the programme, on the actual calls available for the applicants). The relevance of projects having economic aspects is rather high. In case of 12 projects (60% of all related ones) from the 20 identified, strong linkages to economic development can be detected.

The interconnection of economic development is the strongest with two topics, which really stand out: education, training (10 projects also support economic development) and social challenges (8 projects). These topics concentrate 13 projects (65% of projects with economic development relevance) meaning that these 13 projects are also in correlation with either education, training, or social challenges. The other topics have an extremely limited number of projects supporting economic development, usually zero to three in total. The average budget for projects supporting economic development has been 286 611 EUR, while the total budget ranges from 98 190 EUR to 464 375 EUR.

The projects with the highest level of relevance to economic development are all supported under Action 41 expect for two projects from Action 42. The projects elaborated in the frameworks of Action 41 are mainly aiming at either strengthening the cooperation in the field of agriculture and/or in

[54] Hungarian Gazette (2020): https://magyarkozlony.hu/dokumentumok/3fcf49f5603e3a415e010288e6f012ccf7f2b377/letoltes

research and development, and innovative sectors, namely: Cross-border Agrobusiness Development Program; AgroCraft2 - Common brand building with quality assurance background to promote local agro-products and farmers in the cross-border region; Competitive sustainability of agricultural enterprises through the development of new products with added value based on alternative plant species; Agriculture innovation towards growth and employment in cross-border region; Development of soil type adapted microbiological products promoting ecological pest management; Traditional and Standard Quality; furthermore Establishing innovation-technology platform "Checkpoint IT the Community" in cooperation of Szeged-Subotica-Novi Sad Cross-border Knowledge and Technology Transfer Platform to support young researchers and innovative SMEs and to catalyse their business-academia type cooperation; Innovation and Technology Centre for Metal Industry; Regional Innovation Laboratory for Industrial Automation and Mechatronics.

The agribusiness-oriented actions are focused on quality assurance of traditionally produced foods that will help standardize the food production and ensure its quality and safety, franchise brand building, introducing e-commerce, development of innovative microbial products for upgrading arable soil quality, development of new products, launch of an education and information management and sharing programme, e-learning, introduction of a new model of agricultural business, establishment of business incubators in agricultural schools for event organisation and exchange of experiences.

R&D and innovation play a decisive role in many projects of Action 41. The emphasis is often on strengthening knowledge management and transfer and the capacities to create a more cohesive innovation ecosystem across the border. The project titled CHECK-IT (acronym) aims to initiate cooperation and dialogue with regional Quadruple-helix actors. The objective of the project is to establish a Cooperation-Communication Centre for the "Checkpoint-IT Community". The centre will launch an innovation-technology platform to support cooperation between different actors (businesspeople, students, career changers, mentors, researchers, investors, founders, etc.). Project IkNNOw's objective is to improve the industrial cooperation of academic centres. It launches the Knowledge and Technology Transfer Platform for knowledge sharing and utilization. The project has created a joint online database needed for establishing the joint Knowledge and Technology Transfer Platform. The project PLANTSVITA establishes the Hungary-Serbia Border Region Centre for promoting sustainable agricultural measures and catalysing cooperation between R&D actors and SMEs in the agri-food field. It supports joint research and knowledge-transfer activities in domain of environment-friendly technology for enhancing cooperation and innovation activities. In the framework of project titled CORNUCOPIA organizations involved include research institutions, a university, innovation management associations, a CSO focusing on science promotion and education, and a public sector agency to distribute the scientific results and educational material. The goal of project called ITCMind will be achieved by creating an innovative framework that will accelerate the exchange of information, generate required knowledge, technology, equipment, and R&D infrastructure in metal industry. Within the RILIAM project, two innovation competence laboratories will be created, one for the food industrial robotics and automation and one for the assembly automation and robotics. The laboratories will serve as the help point for the SMEs for innovative solutions.

An emphasis is also put on the promotion of young entrepreneurs and the innovative small and medium sized enterprises (SMEs) as well as the establishment of start-up and spin-out companies.

E-learning, curricula development, mentoring, training, advisory is also part of the planned activities. SMEs dealing with traditional food production, involved in environment-friendly and sustainable agriculture production, metal industry as well as industrial automation and robotics are supported in particular.

The two projects in the frameworks of Action 42 support social enterprises, namely projects titled Local tastes - Local values, and HandyCraft2 - Social Enterprise to integrate the craftsmen in the cross border region. Both projects put emphasis on craftsmanship and handicraft. Among the aims the creation of network of social enterprises and local entrepreneurs is outstanding. Different forms of knowledge sharing (e.g. study tours, workshops) and the promotion of products (e.g. at fairs, tasting sessions) created in social enterprises plays also important role in the aforementioned projects. In the frames of the first one a study about old crafts has been created. By evaluating plans, mapping the possibilities of social economy in the region, and the operation of social networks, the project partners are expected to elaborate strategies and share them. The second project supports the creation of a strategy and market analysis, along with a legal system analysis and by developing the "Common Image Handbook".

Relevant projects previously carried out in the region

CHECK-IT - HUSRB/1602/41/0190 - Establishing innovation-technology platform "Checkpoint IT the Community" in cooperation of Szeged-Subotica-Novi Sad (1 May 2018-30 April 2020)

The objective of the project is to establish a Cooperation-Communication Centre for the "Checkpoint-IT Community". The centre will launch an innovation-technology platform for the Checkpoint IT to support high level cooperation between different actors of the community (business people, students, career changers, mentors, researchers, investors, founders, etc.), adapt the solutions in a broader circle and react to market demands.

The Community established aims to initiate cooperation and dialogue with regional Quadruple-helix actors, providing a complex portfolio of services, which, through project activities will lead to building capacities and competitiveness of the community, on both sides of the border.

TASQ - HUSRB/1602/41/0146 - Traditional and Standard Quality (1 July 2018-30 June 2020)

Increasing consumer demand for traditionally prepared food products emphasizes the need for a significant boost in use of innovative production technologies that guarantee high standards in food safety and quality, while keeping the original recipes and aromas. Moreover, traditional food producers (TFP), for the most part, have not been able to reach urban markets, while typical barriers included lack of capacity to produce quantities required to supply supermarket chains together with lack of standardization in production, packaging and labelling.

The project will establish a multichannel e-commerce platform, through which the knowledge and experience of research organizations will improve competitiveness of entrepreneurs in this segment and enable the citizens of Serbia and Hungary to purchase traditional food products with utmost confidence. Further, through this project, the researchers will develop TASQ system for quality assurance of traditionally produced foods that will help standardize the food production and ensure its quality and safety.

With the idea to consolidate a wide range of TFPs and their products within common online marketplace, the outputs of this project will provide customers with much needed tools to find the best fit to their desire of quality, price, taste or the location of the products. The end customers would be able to choose not only by product photos, description, and pricelists, but by recommendations from fellow customers and expert critics from relevant research institutions. The credibility of these organizations and their scientific method is what makes this e-commerce approach unique and what is expected to raise customer confidence and thus boost the sales of TFPs delicacies.

TASQ quality assurance system and e-commerce platform approach tackle all mentioned obstacles simultaneously, enforcing SME's growth capabilities and employment potential through the direct market access and adaptation of new technologies and processes.

IkNNOw - HUSRB/1602/41/0158 - Cross-border Knowledge and Technology Transfer Platform to support young researchers and innovative SMEs and to catalyse their business-academia type cooperation (1 June 2018-30 May 2020)

The main objective of the project is to improve the industrial cooperation of the two largest academic centres of the Hungary-Serbia border region developing the common methodology and service portfolio that enable the research institutions to develop new technologies, processes, prototypes and products directly applicable in the industry.

The project will achieve this by launching the Knowledge and Technology Transfer Platform for knowledge sharing and utilization/exploitation between the two countries and enabling young researchers from the Programme Area to become entrepreneurs by promoting the establishment of start-up and spin-out companies and supporting innovative small and medium enterprises (SMEs).

PLANTSVITA - HUSRB/1602/41/0031 - Development of Soil Type Adapted Microbiological Products Promoting Ecological Pest Management (1 May 2018-30 April 2020)

Farmlands are exposed to dangerous xenobiotics because of the regular use of distinct pesticides. Even if present in small concentrations, they are dangerous as all have the tendency of progressive accumulation in the food chain.

The project PLANTSVITA will develop two innovative microbial products for upgrading arable soil quality and establish the PLANTSVITA Hungary-Serbia Border Region Centre for promoting sustainable agricultural measures and catalysing cooperation between R&D actors and SMEs in the agri-food field, thus enhancing the regional competitiveness.

The project's main objectives contribute to the Programme-level Specific Objective in the following ways:

Joint research and knowledge-transfer activities in domain of environment-friendly technology for enhancing cooperation and innovation activities.

Creation of a new and innovative product and technology intended for restoration/protection of the soil quality, and for promoting ecological pest management.

Cooperation, knowledge-transfer, and dissemination activities contributing to the raising awareness and innovative capacities of the local end-users and economy actors, particularly of SMEs involved in agriculture, about the environment-friendly and sustainable agriculture production.

Enhanced visibility of the region's capacities, making them attractive for participation in larger RD programmes.

New green technologies which will increase the competitiveness of agri-food SMEs and create new job opportunities for qualified young people. This will be a significant contribution to the competitiveness of the regional R+D actors and economy actors in the enlarged EU.

CORNUCOPIA - HUSRB/1602/41/0214 - Competitive sustainability of agricultural enterprises through the development of new products with added value based on alternative plant species (1 April 2018-30 March 2020)

The common problem identified in the Hungary-Serbia border region, on both sides of the border, is high usage of industrial plants that generate more yields per hectare, but also reduce the product quality, contribute to soil degradation and reduce the need for additional employment.

The main objective of this project is to create positive conditions for economic activities in agriculture through research, and thus reduce the negative impact of this type of industry on the environment.

Organizations involved in the project include research institutions, a university, an innovation management associations, a CSO focusing on science promotion and education, and a public sector agency in order to distribute the scientific results and educational material among different target groups.

ITC Mind - HUSRB/1602/41/0172 - Innovation and Technology Centre for Metal Industry (1 March 2018-30 February 2020)

The metal sector is a part of value chains of all types of industries. The focus of this project on increasing innovation potential of the metal industry in the Hungary-Serbia border region, as a contribution to the overall competitiveness of small and medium sized enterprises (SMEs).

This goal will be achieved by creating an innovative framework within cross-border cooperation that will accelerate the exchange of information between economies from both sides of the border, generate required knowledge, technology, equipment and research & development infrastructure, and thus overcoming identified problems to a significant extent of the border region.

C-AGRO-Dev - HUSRB/1602/41/0167 - Cross-border Agrobusiness Development Program (1 July 2018-30 June 2020)

The region has a great potential in the agricultural production sector due to its favourable conditions, such as: the climate, soil characteristics and available water resources. However, this potential is currently underutilized. The region's agriculture is traditionally characterized by an unfavourable ownership structure, which typically includes family holdings, which in many cases are characterized by low labour productivity and inefficient use of resources.

The project partners are interested in launching an ultimate education and information management and sharing program ("Regional Agribusiness Development Program") which aims is to increase family farms' competences in entrepreneurship, modern agriculture technologies, ICT and sustainability.

The most important segment of the project is the "Modern Farmer Academy" which will provide classroom and practical training opportunities as well as mostly e-learning courses for the next generation of family farmers in the region to increase their entrepreneurial level and develop their competences in the field of modern agriculture technologies.

AGRINNO - HUSRB/1602/41/0042 - Agriculture innovation towards growth and employment in cross-border region (1 April 2018-30 November 2019)

The territory on both sides of the border is characterized by a large percentage of unemployed population, a significant number of which lives in rural areas. The low level of education and the high share of older population make the existing regional disparities even higher. However, the fact that the rural population possesses excellent quality land in their yards gives the opportunity to introduce a new model of agricultural business, which aims at raising productivity and achieving self-employment.

Therefore, during the project incubators will be established in three agricultural schools within each district in Vojvodina, which will be the centre for the organization of events, gathering of members and exchange of experiences. During the project, a workshop on experimental fields, round tables, two large seminars and an international conference will be organized, as well.

AgroCraft2. - HUSRB/1602/41/0121 - AgroCraft2 - Common brand building with quality assurance background to promote local agroproducts and farmers in the cross border region (1 March 2018-30 August 2020)

The project aims to strengthen the joint local agricultural production by creating a common franchise with a well-developed quality assurance system for products in the border region by the cooperation of the Hungarian and Serbian partners. This way, the project helps the local food producers to produce good-quality products and through brand usage to place them to the local and regional market and make profit.

The project consists of three elements: (1.) Franchise brand building, (2.) Quality Assurance System (QAS) and (3.) Involvement.

RILIAM - HUSRB/1602/41/0012 - Regional Innovation Laboratory for Industrial Automation and Mechatronics (1 July 2018-30 February 2020)

The project RILIAM aims to support those small and medium sized enterprises (SMEs) from the Hungary-Serbia border region, which deal with industrial automation and industrial robotics.

Within this project, two innovation competence laboratories will be created – one for the food industrial robotics and automation at the Faculty of Engineering in Szeged, and one for the assembly automation and robotics at Subotica Tech in Subotica. The laboratories will serve as the help point for the SMEs for innovative solutions.

LT-LV - HUSRB/1602/42/0112 - Local tastes - Local values (1 June 2018-30 May 2020)

The main objective of the project is to broaden the knowledge base of actors of the entrepreneurship operating in the border region. The project also aims to strengthen the cross-border cooperation between social enterprises by building a network that fosters the members' effective capacity

building and the establishment of solid market positions. By implementing workshops, a "knowledge transfer day" and study tours, the project partners strive to increase the motivation of the current and potential socio-economic stakeholders and teach them to assert their interests efficiently.

Another important part of the project is developing a study on both sides of the border regarding old crafts in the border region intended for learning more about these crafts. Its aim will be raising awareness of craftsmanship typical in the region and defining its potential in tourism and in the local labour market. By evaluating the studies, mapping the possibilities of social economy in the region, and the operation of social networks, the project partners will elaborate the strategies and share them with relevant governmental bodies and make recommendations for promotion the importance of social entrepreneurship actors in boosting the market of local foods and handicraft products.

To promote local products, the project partners will organize events, fairs and food tasting opportunities that enable participants to get to know one another's traditional foods, culinary tastes, and products. Besides the awareness-raising short films and brochures, the project partners will use social media present the social entrepreneurship actors, the local products and handicraft traditions from both countries.

HandyCraft2. - HUSRB/1602/42/0173 - HandyCraft2 - Social Enterprise to integrate Craftsmen in the cross border region (1 March 2018-30 February 2019)

Based on previous experiences of promoting entrepreneurship and local agricultural production, this project aims to promote social entrepreneurship locally, by empowering local marketable producers of handicraft items who have disadvantageous socio-economic background; and increase employment by involving local workforce with the appropriate skills.

These goals will be achieved through a complete plan strategy and market analysis, along with a legal system analysis and by developing the "Common Image Handbook". Through this project, the partnering organizations will involve local entrepreneurs in project workshops and networking workshops.

Based on the analysis of the topic 'Economic development', the following types of potentially functional areas can be defined within the region:

- Wine regions: designated wine-making regions where the share of vineyards in land use and wine production is above the respective national averages. The regions are Kiskunság wine region, Hajós-Baja wine region, Csongrád wine region in Hungary, Srem region, South Banat region, Subotica region, furthermore the regions of Potisje, Banat, Telečka, and Bačka in Serbia.
- Gateway to the Balkans: parts of the border zone can function as a hub for international business relations not just in logistics but in other activities. Cross-border business relations and networks outline such areas where business to business cooperation and related organisations such as cross-border clusters, supplier networks, economic chambers can capitalise from this location advantage, positional energy in light of the EU integration process too.

2.2.3 Heritage related management

In a certain region, natural and cultural elements are closely connected to the landscape and the local identity of the region's population. They express special features, the differences from the surrounding (macro)regions and they are strong components of local and regional identity. Several pieces of research and actual practice have shown that these elements contribute to the success of population retention and to the enhancement of the local economic/service image establishment, through identity. The Vojvodina, Bács-Kiskun and Csongrád regions are truly representing a natural and social region, a macroregion. Both their natural character and resources and their social/economic structure developed from the traditional, primary sector built on their natural endowments and resources share a common approach, therefore, while respecting public frameworks, the joint development of these elements is not only obvious, but also necessary.

Both sides of the entire study area have roots that can be interpreted as a coherent social space, therefore parts of the heritage elements can be divided into the same groups as well. This is positive from the point of view that developing the same content on both sides of the border is effective and it is a thematic advantage. On the other hand, it is also a disadvantage regarding modern tourism demands, which considers maximum diversity in a small region a value. However, this disadvantage could be greatly limited with appropriate and complementary national heritage development by defining joint objectives and strategies. For this, the unification of coherent, cross-border systems is necessary. For example, the wetlands along the Danube, galleries, the tradition of market town civic culture, certain elements of craftsmanship can be mentioned here. In addition, the other direction of development is to strengthen complementarities aligned to each other, like different calendar dates of religious celebrations and festivities, different architectural expressions of orthodoxy and Catholicism or the local differences of multi-ethnic communities.

2.2.3.1 Natural values

The protection of natural and cultural values, which are inseparable in many cases, is a difficult task in each country. Protection is even harder if the value to be protected belongs to more than one country, if it is divided by a political border, as value protection is mostly based on legal and administrative regulations, which are not harmonized in many cases, despite the multiplication of the forms of integration. However, natural and cultural values can be well utilized in one field, namely, they can attract a significant amount of tourism, and, theoretically, both countries can enjoy its economic advantages. It would be worth examining what kind of organizational and professional backgrounds these regions have and what problems arise regarding the protection, treatment, management, and tourism utilization of the cross-border natural values in order to preserve natural values together.

The political borders of the countries in the Carpathian Basin usually cross natural or landscape units, so the landscapes, geological formations, areas and distribution and habitats continue across state border lines. This fact has emphasized the significance of national cooperation in nature conservation as well. One's geographical location implies the continuity of a direct relationship with the surrounding biogeographical regions, which is important to the whole of Europe as well. Safeguarding the uninterrupted migration of lowland and highland animal species living in the Carpathian Mountains and Basin gives a special value to the region.

Natural values in the study area will be introduced in the following points.

Kiskunság Nemzeti Park, its elements are:

I. Felső-Kiskunsági puszta: Its surface is covered by meadows and pastures almost endlessly. In the north, the undisturbed heath is interrupted by plains covered by water and bigger stream gauges. **II. Felső-Kiskunsági tavak:** The biggest saline lake system of the Duna-Tisza köze is in this area that used to be coherent. **III. Kolon-tó:** the biggest freshwater marsh of the region, **IV. Fülöpházi buckavidék:** one of the most beautiful, protected parts of the almost untouched dunes, **V. Orgoványi rétek**: a landscape full of swamps, moorlands, wet meadows, salines and dunes, **VI. Bugac**: it is covered by wind ridges and sharp, steep dunes, **VII. Szikra, Alpári rét**: natural and artificial backwaters formed from the meanders of the Tisza/Tisa, floodplain forests and water mark meadows still preserve nature from centuries ago. **VIII. Peszéradacsi rétek**: it has diverse habitats, moors, moorlands, swamplands, wet meadows, and the sand areas and sand forests located here are worth mentioning. The parts of forests covered by swamp and sand birches represent an exceptional value. There are centuries-old oaks in its forest reserves. There are several examples here for the variants and transitions of sand, saline and moor succession. **IX. Miklapuszta:** The currently protected saline areas formed after the regulation of the Danube, as the groundwater movement changed. Higher surfaces, so called berms are located between the strongly saline, lowland hills that are blindingly white in the summer.

Kurgans and hillforts are its significant ex lege protected values and natural monuments, which occur in a considerable number on the region of the national park directorate. The archaeologists and nature lovers have been deliberately raising attention to the importance of their preservation since the end of the 19th century. The kurgans and hillforts are connected by their artificial, human built nature, their soil structures used to be determining elements of the landscape. The Nature Conservation Act 1996 established the legal conditions of their protection.

There are 143 registered kurgans and 8 registered hillforts on the operational area of the Kiskunsági Nemzeti Park Directorate. The kurgans got included in the so called "Cross-compliance" system of the EU as a landscape to be preserved. Very little is known about the kurgans and hillforts due to the lack of literature and complex research. The amount of archaeological discoveries that took place is negligible. Determining the duration of their existence based on examining the field is uncertain in many cases. A substantial part is currently under cropland and forest management, continuous field monitoring and further tests are necessary to prevent further destruction. The review and registration of knolls and hillforts in the Duna-Tisza köze is currently happening.

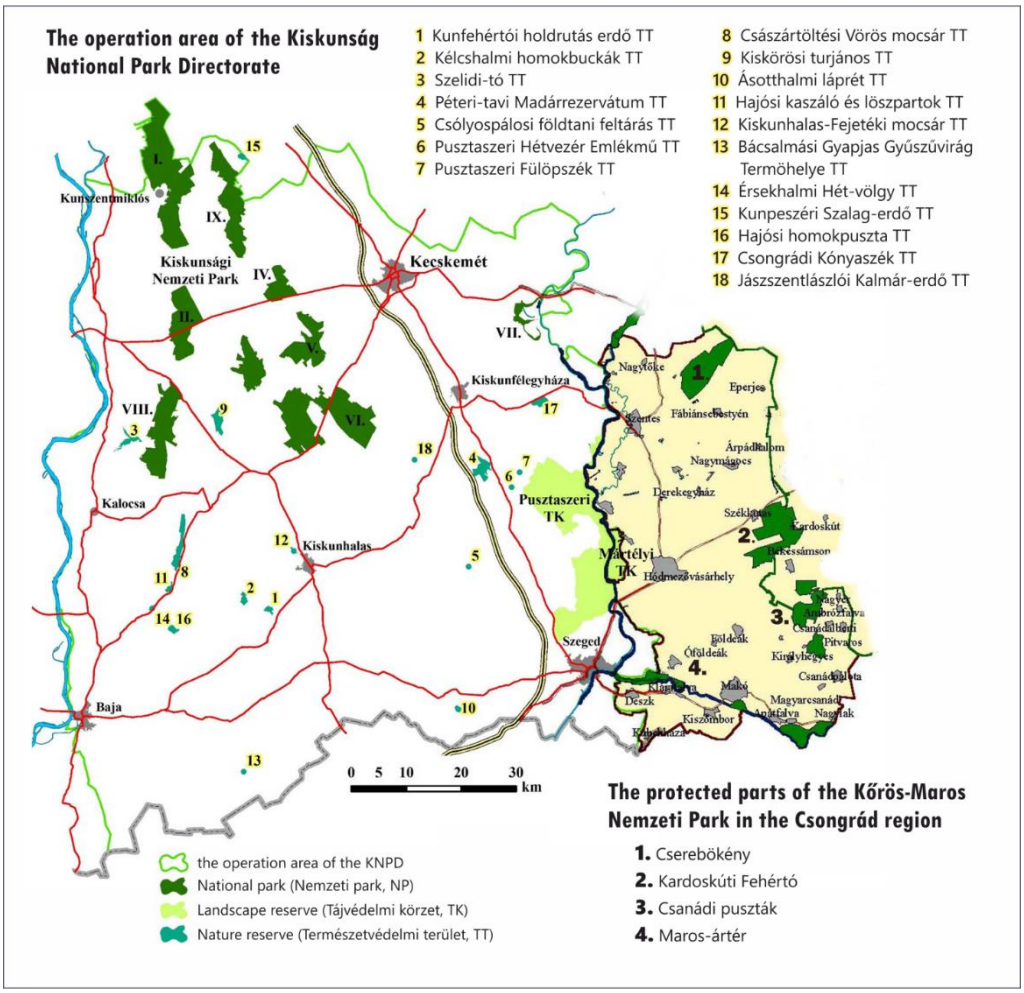
The size of Natura 2000 territories under conservation management by the Directorate is 180,345 ha. The extension of territories of national importance regarding environmental protection located on the operational area of the Directorate, in addition to the Natura 2000 territories is as follows: Wetlands of international importance: 31,827 ha, MAB biosphere reserves: 108,185 ha, Biogenetic reserve (Kolon-tó): 2,962 ha.

Parts of the Kőrös-Maros Nemzeti Park programme area:

Cserebökény: the image of the landscape, the diversity of its wildlife has the characteristics of both the former floodplains and the saline heaths. Its lakes, waterlogged meadows, extended swamps,

groups of willows and aspens preserve the traces of the former streams. The area is rich in salines, but the berm salines are underdeveloped, and the annual plants (vakszik) in the spots of artemisia saline heaths is sporadic and fractional as well. There are residues of loess-grasslands on the highest hills.

Figure 24: Natural values on the Hungarian side of the study area: On the relevant parts of the Kiskunság Nemzeti Park and the Kőrös-Maros Nemzeti Park (Source: http://knp.nemzetipark.gov.hu, http://kmnp.nemzetipark.gov.hu)



Kardoskúti Fehértó: it is subject to the Ramsar Convention[55], its wetlands have a significant role in international bird migration.

Csanádi puszták: it consists of three parts, the northernmost and also the driest and the most saline spot of the heath is the Kopáncsi-puszta with well-developed berm salines. Montág-puszta, the western side of which is covered by a wide, seasonal swamp, the Nagy-Zsombék.

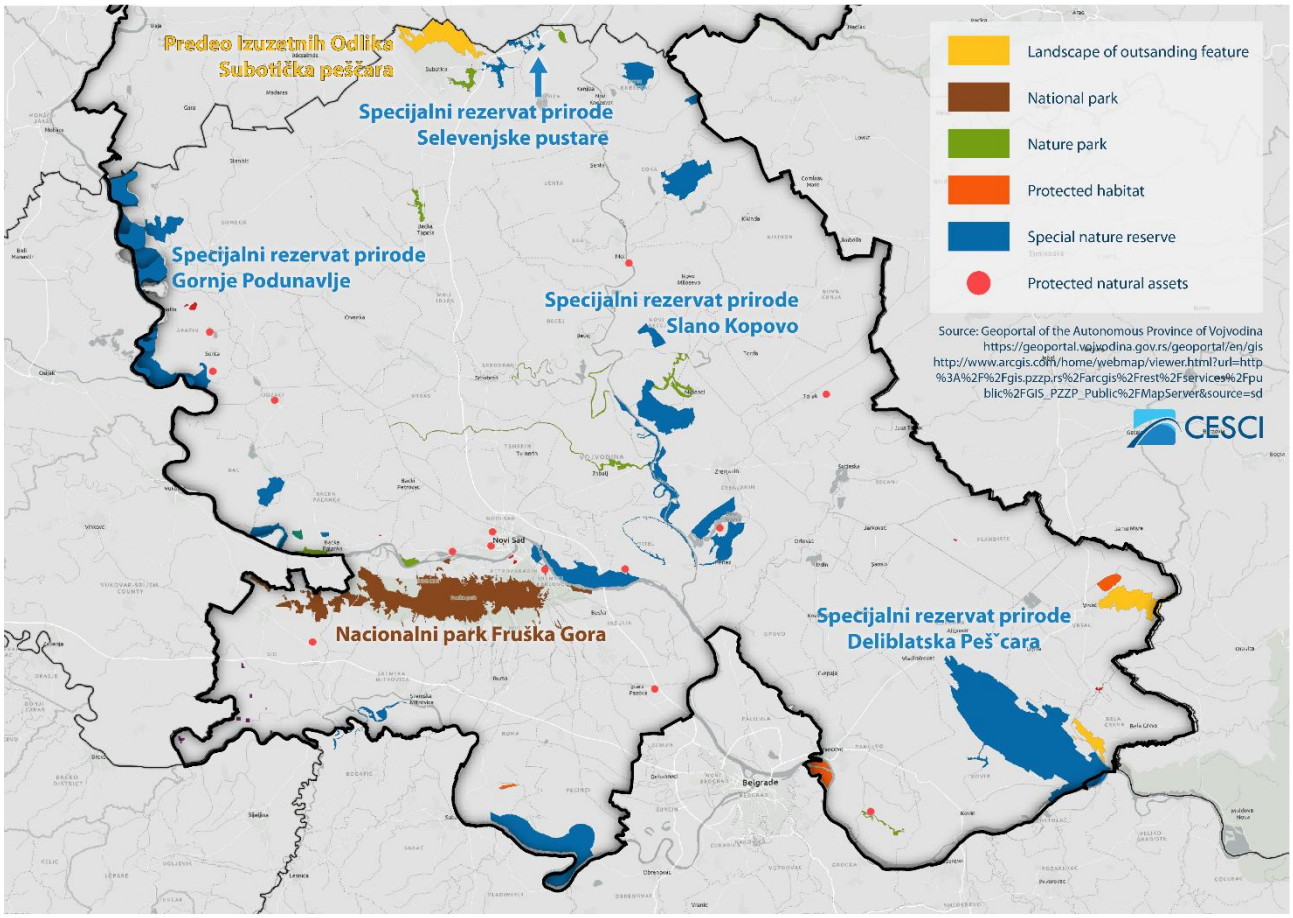
Maros ártér: the water marks are rugged, the extensive forests located by their wide sections establish special relationships regarding landscape and habitat. Most of the forests are hardwood-alluvial forests, a smaller part of them is naturally renewable softwood.

[55] See: The Ramsar Convention on Wetlands: https://www.environment.gov.au/water/wetlands/ramsar

Nature and wildlife protected areas of Vojvodina:

Nacionalni park Fruška Gora: It has been a national park since 1960, it is characterized by biodiversity, the richness of the vegetation, natural beauty, and rarities. 90% of its area consists of forests, providing a habitat for 1400 plant and 200 bird species. 16 orthodox monasteries raise its cultural value therefore it is also known as the "Serbian Athos".

Figure 25: Protected areas of Vojvodina



Specijalni rezervat prirode Gornje Podunavlje: it contains territories flooded by the Danube (floodplain forests, swamps, backwaters) and demonstrates a complex water and terrestrial ecosystem. The reservation is bordering on the Hungarian Duna–Dráva Nemzeti Park and the Croatian Kopački rit nature reserve, where bigger territorial projections of the habitat are located. It is one of the components of the floodplain habitat extended in the three countries. The 36-metr-long swamp complex creates a natural unit with the Gemenc and the Kopački rit landscapes in Hungary and Croatia. The Karapandža/Karapancsa forest, the Kozara forest and the Velika dunavska šuma forest cover the majority of it, which are located in the Zapadnobački okrug on the left side of the Danube, but the floodplain area extends until Croatia: the Baranja Kopački rit on the right side of the Danube. In Hungary, the Béda-Karapancsa landscape, an extensive floodplain woodland leading the middle course of the Danube, is a habitat that represents an outstanding value on the left side of the Danube. Preserved natural habitats like this are very rare in Europe.

Specijalni rezervat prirode Slano Kopovo: The Slano Kopovo is the best known and the biggest saline lake in the Banat. The saline lake, or rather swamp that seasonally dries out was formed in one

of the ancient branches of the Tisza/Tisa, and it has been a significant birds' rest and meeting point for centuries. The water quantity varies, often small separate ponds are visible. The lake is usually 20 cm deep, but it can reach 70 cm during the spring rains[56]. It completely dries out during drought and a white layer of salt covers its bed, which is a special sight. Since salt lakes are disappearing in Europe, the Slano Kopovo and its surroundings have a huge significance, and it is classified as a specialty today. There are also several kinds of rare and protected plants there. Slano Kopovo has been on the list of Ramsar regions since 2004.

Specijalni rezervat prirode „Selevenjske pustare": it received the title of Special Protection Area in the 1990s. It is characterised by plain, rich steppes spread in a mosaic way and the diversity of saline, sand, and swamp habitats. The region has a rich vegetation, several extremely rare and endangered species of the original Pannonian flora and fauna can be found there.

Predeo Izuzetnih Odlika „Subotička peščara": the size of the protected area is 4500 ha; – the region contains previously protected areas and areas recently declared as nature reserves.

Previous experiences and results of cooperation

The projects aiming at protecting the cross-border natural values were supported even at the beginning of the cooperation. About 5-6 projects (e.g. PANNONSTEPPES, Rehab NatCult Heritage, PROTECT, SWeM-PaL) affected this region. Firstly, a condition review was made, then concrete actions have been launched, partly as an extension of the programs, regarding the endangered species, the joint reconstruction, the tourism utilization and the restraint of the spread of invasive species. In particular, it should be noted that a project element was established, which prevents the anthropogenic habitat destruction with developments, in a joint river basin.

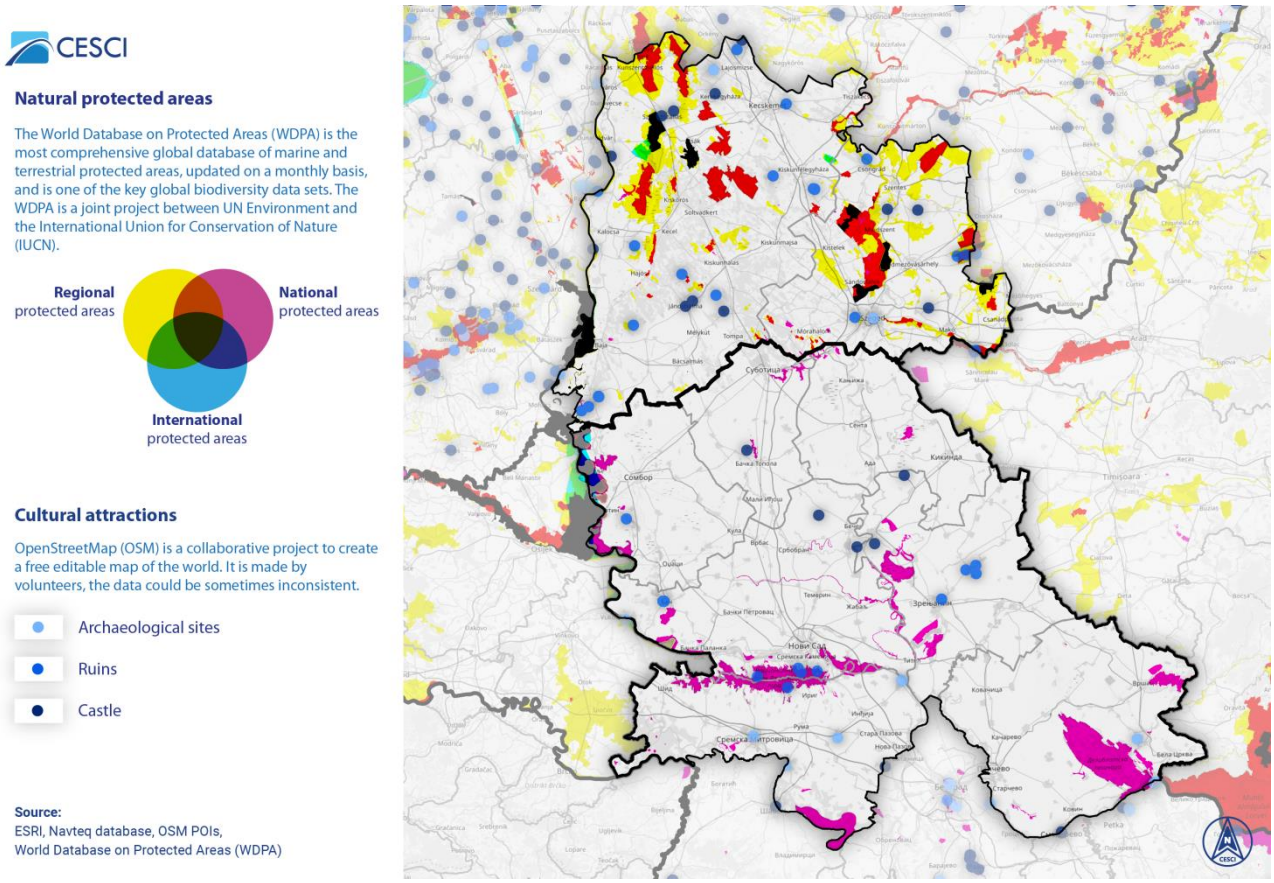
These examples clearly show that nature conservation is a common cause, and its effects not only result in a higher quality environment, but they can contribute to the better development curve of the whole region by several other economic factors or even health improvements in life quality.

2.2.3.2 Cultural heritage

The elements of cultural heritage can be classified in many ways. Certain elements of built and intellectual cultural heritage are usually highlighted. Furthermore, the cultural events, organizations, festivals and meetings are all very important because they establish and reinforce the professional and human interaction aspects of cooperation and demonstrate the physical proximity and humanity of the border regions for a larger audience. The latter leads us to the field of tourism. That is not a coincidence, as the priority focus of modern heritage management regarding the development of every mentioned element – from archaeological sites through local festivals to cultural values on the UNESCO representative list – is implemented in tourism practice. We can of course talk about a tourism element with different methods, depending on the extension, quality, and quantity of their catchment areas.

[56] See: http://www.slanokopovo.com/en/fizicke-karakteristike/

Figure 26: Natural and cultural heritage sites in the border region



Built heritage, historical heritage

The built heritage elements of the areas in Vojvodina are present in the Serbian system and the territorial division. The problem with this system is that it does not follow either the natural division or the administrative division, but, rather, it covers monument protection areas assigned to larger towns. Novi Sad represents a completely separate urban unit in this system, while further centres are located in Petrovaradin, Subotica, Pančevo, Zrenjanin and Sremska Mitrovica. E.g. the cultural heritage management centre of Sombor and Sjeverno-Bački okrug is in Petrovaradin. This does not necessarily interfere with cooperation, it only makes local decisions difficult in the decision-making mechanism of a potential international project.

The number of listed objects in certain districts is the following:

- Petrovaradin: 162 elements
- Novi Sad: 88 elements
- Subotica: 148 elements
- Pančevo: 120 elements
- Zrenjanin: 61 elements
- Sremska Mitrovica: 217 elements

Among the built heritage elements in Vojvodina, the orthodox churches, and monasteries, built in the baroque period, and the monasteries of Fruška Gora from the late Middle Ages are dominant. There are also several civil buildings there. In addition, a big number of Roman Catholic churches, monuments (a high number of World War II partisan monuments), archaeological sites and

complexes and granaries are located here. There is a limited number of castles, fortresses, ruins, parts of settlements or even entire settlements.

The Hungarian built heritage, cultural heritage management system is built on a regional level, therefore it is compatible with the administrative system considered when planning cross-border cooperation. In the Hungarian system, the above mentioned parallel with the Serbian system is primarily the cultural heritage management category and its certain elements. However, it needs to be mentioned that the legal backgrounds of the two countries do not determine and regulate these heritage elements the same way, but the two systems are not exactly the opposite either, which is proven by the forms of cooperation – professional and development – which were implemented several times. In Hungary, there are 642 monuments, surroundings of monuments and items of monumental value in Bács-Kiskun region, while this number is 644 in Csongrád region. This is almost the double of the above-mentioned Serbian data, which demonstrates the varying interpretations of this category.

There is a huge opportunity of cooperation in this system, as both the existing built elements that can be connected to historical periods – built heritage elements, elements of folk architecture, settlement images –, and the localities with an archaeological and reconstruction need show huge compatibility. A non-exhaustive list: archaeological discoveries (from the Neolithic period until the Roman times), the heritage elements of the Roman times, which are limited to mainly the area of Srem – the right side of the Danube, the architectural and historical heritage from the Middle Ages and the pre-Ottoman times, the significant building heritage from the baroque period and the local characteristics emerging in art nouveau towns and rural architectural forms.

Intellectual cultural heritage elements – national and UNESCO representative lists

The UNESCOaccepted a convention, as an extension of the 1972 UNESCO World Heritage Convention[57], about cultural heritage protection in 2003, which caused certain implementation steps, tasks and at the end, a similar institutional system for the accepting state parties.

The Hungarian intellectual cultural heritage has 40 elements in 2020, of which the elements connected to certain localities, settlements and traditional communities are dominant. In addition to these, there are even more elements on the list that cannot be connected to a single settlement or community. These elements are the bigger regions or the nationally characteristic Hungarian traditional intellectual heritage (hunting, falconry, fishing in the Danube, the Hungarian blueprint technique "kékfestés"), the territorial density of which can become an identity or economic elements of settlements or rural areas. There are four elements on the list with territorial relevance from Bács-Kiskun and Csongrád regions. These are:

- The living tradition of needlepoint in Kiskunhalas
- Living traditions in the cultural area around Kalocsa: embroidery, costumes, folk art ("pingálás") and dancing
- Mat weaving in Tápé
- The living tradition of making and wearing the traditional shoes of Szeged

[57] See: Convention Concerning the Protection of the World Cultural and Natural Heritage. https://whc.unesco.org/en/conventiontext/

There are some other elements covering wider areas, e.g. "Traditional fishing on the lower parts of the Danube in Hungary", "The tradition of the Hungarian blueprint technique", "The tradition of the Hungarian csárdás folk dance", "The living tradition of Hungarian folk string orchestras" and "The tradition of bagpipes in Hungary". Not only their significant locations can be connected to the Hungarian parts of the study area, but, in many cases, they also have a living tradition in Vojvodina. This could grant an opportunity for international – Hungarian-Serbian – cooperation that would develop the elements on a national list into local values on the UNESCO representative list. As a result, the cultural identity of certain communities and the entire border area could develop not only on one side, but also in cooperation with each other.

The number of intangible cultural heritage elements in Serbia is 49. This number contains more values linked to the whole territory of Serbia compared to the values listed for Hungary which are more of a local character. An example for this is the "Krsna Slava", which is the Serbian tradition of family patron saints, the "Kolo", which is the tradition of round dances, or the traditions of Saint George's Day in Serbia. At the same time there are elements especially highlighting local practices and setting them as examples. Five of the non-general elements affecting only the areas of Vojvodina can be mentioned:

- *Staparsko ćilimarstvo* – carpet weaving in Stapar
- *Naivno slikarstvo Slovaka* – the naive art of the Slovak national minority in Serbia
- *Cipovka* – znanje i umeće pripremanja tradicionalnog hleba u Vojvodini – Bread – the method of making traditional bread in Vojvodina
- *Bezdanski damast* – umeće ručnog tkanja ornamentisanog svilenog damasta žakar tehnikom – Damask weaving in Bezdan – the technique of manual damask weaving with patterns, using the Jacquard technique
- *Vertep* – Vertep, the tradition of nativity in Srem

We need to mention the parallel here, which can be viewed as a resource regarding cross-border cooperation, that Hungarians in Vojvodina adjusted to the Hungarian institutional system during the process of establishing their own intangible and material values. Therefore, they have a developed inventory of the elements of the themes discussed here, which could be further developed towards both the integration of the cross-border area and the Serbian institutional systems. 122 different Hungarian elements of intangible and material values in Vojvodina are collected in a digital repository. The site (http://ertektar.rs/ertektar/telepulesi?Oldal=1) contains detailed information, organised according to territorial and thematical logic (from built to intellectual heritage) strengthening the attachment to the homeland and the local identity of the Hungarians of Vojvodina. Thu further development of this would strengthen the role of the Hungarian community regarding both its relationship with Hungary and towards the Serbian institutional system.

Table 5: Elements of the national lists with territorial relevance

Elements specific to the region			
Country	**Name**	**Year of listing**	**Geographical location**
Hungary	Living traditions in the cultural area around Kalocsa: embroidery, costumes, folk art ("pingálás") and dancing	2009	Kalocsa

Elements specific to the region			
	The living tradition of needlepoint in Halas	2010	Kiskunhalas
	Mat weaving in Tápé	2013	Tápé
	The living tradition of making and wearing the traditional shoes of Szeged	2018	Szeged and its agglomeration
Serbia	Slovak naive art painting	2012	Kovačica and other surrounding villages
	Rug-making in Stapar	2016	Stapar
	Cipovka – the skill and craft of making traditional bread in Vojvodina	2016	Bačka
	Bezdan damask	2020	Bezdan
	Vertep	2020	Sremska Mitrovica, villages in Srem

Elements covering a wider area that are also characteristic of the study area				
Country	Name	Year of listing	Geographical location in the study area	Year of UNESCO listing
Hungary	**Táncház method: a Hungarian model for the transmission of intangible cultural heritage**	**2011**	**the whole study area**	**2011 (on the list of good practices)**
	Traditional fishing on the lower parts of the Danube in Hungary	2013	Settlements along the Danube	
	The tradition of the Hungarian blueprint technique	**2015**	**general, present in the area: Bácsalmás, Kalocsa, Tiszakécske**	**2018**
	The tradition of bagpipes in Hungary	2016	general, present in the area: Szeged, Kecskemét	
	The tradition of the Hungarian csárdás folk dance	2019	the whole study area	
	The living tradition of Hungarian folk string orchestras	2019	the whole study area	
Serbia	Prayer – St. George's Day ritual	2010	the whole study area	
	Saint Patron's Day	**2011**	**the whole study area**	**2014**
	Bagpipe playing	2012	general, present in the area: Kikinda, Sivac, Pančevo	
	Plum brandy	2015	the whole study area	
	Kolo dance, three-steps kolo, six-steps kolo	**2016**	**the whole study area**	**2017**
	Opanak-making craft	2018	general, present in the area: Novi Sad, Kikinda	

Folk art

This branch of art evolved from traditional forms and making tools and art objects, is a unique element of Hungarian art as well as Serbian, and of the minorities living in the programme area. This art and craft sector appears in Hungarian-populated parts of Vojvodina through Hungarians living in Vojvodina, affecting the entire population there, but there are workshops in Deszk as well, among the Serbs living in Hungary, which integrate Serbs in Hungary. Currently the artisan association of Csongrád region (Röszke) is keeping in touch with several artists or associations from Vojvodina (Subotica, Senta, Bajša, Bačka Topola). The Ministry of Culture and Information in Serbia – heritage questions fall under its competence as well – has a department dealing with a currently modern and creative industry, but only elements of the applied arts, including its branch, the folk applied arts, are covered by it.. However, the system itself would be suitable for managing the international projects of developments like these on both a national and a Vojvodina level.

At the same time it has to be underlined that folk art is not exclusively characteristic to Hungarians or Serbs, but also of several nationalities in the multi-ethnic Vojvodina and the Southern Great Pannonian Plain. Slovaks, Ruthenians, Romas, Romanians, Croats among others also greatly enrich the folk art values of the area with outstanding elements. This should definitely be regarded as an opportunity to be exploited in the field of heritage cooperation. In addition to these, folk art carries particularly important territorial attachment elements, as it is a locally developed art system that strengthens identity and attachment. The appearance and development of these elements in a modern robe (marketing, market research, product development) must be improved for all communities involved.

Experiences of previous projects in the region of cultural heritage

Among the INTERREG IPA CBC projects of the last period, regarding objectives and contents to be improved, 15 supported projects addressed heritage elements on any level. The efficiency of these projects can be measured from quite different perspectives, as the projects had different budgets and covered areas and groups of people of different sizes, with different or often incomparable objectives. We are glad that significant institutions and locations on a national and international level as well are taking advantage of the cooperation opportunities. The project entitled CRAMNTOUR - Masterpiece tourism: local values from a cross-border aspect is an example, which connected the unique craft communities of Kiskunhalas and Tavankut, or the cooperation of the Ópusztaszeri Nemzeti Történelmi Emlékpark and the Zentai Levéltár (Archives of Senta), which aimed at researching and publishing historical resources. There were many projects from the partnership of smaller settlements, where the aim was to establish and connect local cultural elements. In case of these, the cultural heritage interpreted by us needs to be interpreted in a broader perspective. Among the supported projects, there were some that tried to launch relevant cooperation territories, art nouveau, agro-industrial heritage, baroque religious building heritage, but the achieved goals were only the first stage of the joint development directions and ultimate goals to be achieved. This is certainly positive and worth pursuing. Another part of the project is the heritage cadasters, they tried to achieve results in questions of systemic evidences, but these projects are not finished yet, therefore the results are not valuable visible for the moment.

Every mentioned objective from the previous projects is important, for reasons of preserving the local heritage, introducing digitization, building an efficient system and at a thematic level as well. It is not an expectation, but accessing, acquiring and potentially applying the information and knowledge base of central professional organization would help with each project, as it would increase the added value on a professional level and it would take the goal achievement phase to the next level (not only regarding planning, but execution and strategy building as well).

Relevant projects carried out previously in the region

ColourCoop - HUSRB/1601/31/0005 - Colourful Cooperation (1 November 2017-30 September 2020)

The objective of the project is the following:

- developing a comprehensive cultural strategy for the entire Hungarian-Serbian border region;
- launching an online information and news centre in Hungarian and Serbian languages;
- setting up Serbian and Hungarian cultural centres in Mórahalom and in Palić, respectively;
- integrating Novi Sad, the future European Capital of Culture, and its surrounding region into the cultural and touristic life of the Hungarian-Serbian border region.

Art&Craft - HUSRB/1602/31/0050 - Tracing our common artistic heritage (25 June 2018-30 April 2020)

Hódmezővásárhely and Subotica have a vast unexploited potential in cultural heritage-related tourism. The project aims to unlock this potential, reinforce the connection of the two cities and through architectural, artistic, and cultural revival to make them more attractive and accessible for visitors.

The main project activities are:

- Renovation and preservation of the Hódmezővásárhely Calvinist New Church and equipping the visitor centre
- Installation of the elevator in the City Museum of Subotica
- Research of pottery in Hódmezővásárhely and presentation of findings
- Painting programmes linked to Hódmezővásárhely-born painter János Tornyai
- "Bible stories" drawing competition
- Folk art workshops organised around the festivities

Rehab NatCult Heritage - HUSRB/1602/31/0128 - Rehabilitation of common natural and cultural heritage for future development of the region. (1 April 2018-30 December 2020)

Novi Bečej in Serbia and Sándorfalva in Hungary are of similar economic development, their residents' living conditions are also similar, and both settlements' development was directly affected by their closeness to the environmental protection areas. Both settlements put great emphasis on development of tourism, especially eco-tourism.

Having recognized the similarity of problems and being interested in common development and cooperation opportunities, the municipal organizations started cooperating in 2013.

The main objective of the project is the ecotourism-related utilization of areas with protected natural values, as well as the revitalization of tourism, economy and community life and the strengthening of cross-border relationships.

MILLS' ROUTE - HUSRB/1602/31/0252 - GRINDING MILLS, BINDING ROADS - HU-SRB cross-border thematic route under the sign of mills and windmills (1 March 2018-30 February 2020)

Protection of and familiarization with our architectural heritage is an important task as preserved buildings represent the values of our past and the knowledge of our forefathers.

The main goal of this project is to preserve a specific area of the architectural heritage for the future generations – mills, windmills, and horse-powered grain mills that were once typically used for grinding of bread crops in Vojvodina, Serbia. Such crops still represent the basis of human nutrition, thus knowing their origin and processing is particularly important. A number of different types of mills have been preserved in the Hungary-Serbia border region, and the project MILLS' ROUTE will present them within a joint touristic programme. Presentation of their variety, technical differences and the resourcefulness of our ancestors is the basis of this project.

The project offers the opportunity to get acquainted with different types of mills, wind mills, pepper mills, as well as the reconstruction and renovation of the buildings which offer insight into their economic action, growing and producing crops, and different types of trade, nutrition-related habits and traditions.

The visitors will also be able to get acquainted with traditions related to the architectural heritage of different locations in Hungary – Kiskunfélegyháza, Ópusztaszer, Hódmezővásárhely and in Serbia – Kikinda and Orom. Additionally, they will be able to learn about the traditions related to these special architectural heritages at science conferences, family programs, thematic days, and festivals.

Besides these events, MILLS' ROUTE will also be available via online platforms, presenting many preserved buildings in the region.

Common Heritage - HUSRB/1602/32/0009 - Together for Common Future of Common Cultural Heritage (1 January 2018-30 June 2020)

History does not stop at borders. Common cultural heritage along neighbouring countries tells a story of shifting borders, and the impact which the ever-changing countries leave on people living in the border areas. At the same time, the potential of the common cultural heritage is often overlooked by the locals, professionals, and tourists.

The aim of this project is not only to preserve this common cultural heritage in the area of Bács-Kiskun county in Hungary and North Bačka county in Serbia, but also to develop their sustainable use via joint public events, tourist activities and joint professional work.

The project will be promoted in the local and national media outlets, on social media and in print materials – in both Hungarian and Serbian.

CULTSTREAM - HUSRB/1602/32/0039 - CULTSTREAM or the new culture of water (1 May 2018-30 October 2019)

Project 'CULTSTREAM – The new culture of water' focuses on the river Tisza, the biggest river in the Southern Great Plain, North Bačka, and Banat regions which has been a key trade route for centuries, connecting the various nationalities living in the regions, giving them the opportunities to make a living, and, at the same time, keeping them in constant battle against floods. Today, in the age of global warming, preserving drinking water, preventing desertification of the agricultural land and extreme weather conditions present challenges for today's societies, including the people who live in this region, too.

As a continuation of CULTRAIL, the project CULTSTREAM follows the same model and organizes cultural tours between cities located by the river Tisza/Tisa, in partnership between the cities Szeged, Senta and Kanjiza.

During the implementation, through the joint theme (The new culture of water), the project will connect the existing cultural programmes with long traditions (such as: Writers' Camp in Kanjiza, Fine Arts Workshop in Senta, Senta Festival of Poems Sung, zEtna Literature Festival, and Tiszavirág Festival) also adding new and innovative solutions and programmes (such as: Tolnai Laboratory, Film Day in Kanjiza, and Tiszavirág Festival in Szeged).

Additionally, two publications about arts will be published in the frameworks of this project.

Old habits in a new guise - HUSRB/1602/32/0115 - Using common cultural heritage as an economic development source (1 June 2018-30 September 2019)

Hungary and Serbia have shared common history and culture for centuries. Although so far there have been numerous common folklore and gastronomy festivals on both sides of the border, the great potential for economic development, which both countries have, is currently not fully exploited.

The project intends to highlight the possibilities of using culture as a service and as an economic development tool. Its main goal is to involve the local communities of the partner organizations to get acquainted with the cultural heritage and traditions of the region. The project will pay special attention to the young generations, and appeal to their interests, as they are the ones to preserve the cultural heritage of the region.

Through the knowledge transfer of cultural values and tourism potentials, the project can create attractive offers for young people, as well as create job opportunities, which could keep them residing in the region.

The main activities of the project include capacity-building workshops, a joint student camp, a canoe tour, cultural and gastronomy festivals, a media campaign, as well as the publication of a book.

LIVES - HUSRB/1602/32/0218 - LIVING ARCHIVES – Relics of Common Cultural Heritage (1 March 2018-30 February 2020)

The main objective of the project is to reveal and present those industrial and agricultural values of the Hungary-Serbia region which have not been documented sufficiently so far. Besides, the aim of the project is to collect those artefacts of cultural history that link the common geographic area of the Programme and Action. The results of the research will be identified by experts of cultural history

– archive workers, ethnographers, anthropologists - and will be promoted through different events, publicity events, PR materials, publications, and youth camps. The appropriate interpretation of old and unpublished written materials will give a complete picture of the region's agricultural life and social background – a field that has not been presented thoroughly enough.

The outcomes will be a broader, enriched scope of activity and content of the partner institutions, an updated map of common agricultural cultural heritage and a higher awareness of cultural heritage among citizens.

ArtNouveau - HUSRB/1602/31/0111 - Our Borderless Art Nouveau Culture (1 April 2018-30 September 2019)

The towns Szeged in Hungary and Subotica in Serbia are two tourist destinations close both geographically and by their tourist attractions. Art Nouveau buildings and the heritage of the two towns form a complementary local and regional attraction that can serve as the solid basis for a joint tourist destination in the Hungary-Serbia border region.

The main project activities are the following:

- Elaboration of a tourism Action Plan;
- Common design and common publications on the common tourism destination;
- Joint approach towards the visitors, and the stakeholders outside of the project area;
- Development of a mobile app based on iBeacon technology;
- Production of information boards, including the ones in Braille signs, at the most popular tourist sites for tourism attractions; and
- Organizing events related to the Art Nouveau heritage.

TRADinBORD2. - HUSRB/1602/32/0140 - TRADinBORD2 - promoting and preserving TRADItioN and identity jointly in the BORDer region (1 March 2018-30 February 2019)

The project is aimed at developing and organizing cultural cooperation activities in the Hungary-Serbia border region and it targets the whole population of the region, with special emphasis on young people. The planned activities include:

- development of a common cultural analysis for the border region;
- organization of two cultural festivals;
- production of 12 films about the common civil and cultural heritage of the border region;
- development of a website containing information about the common cultural heritage as well as outputs of the project.

NEWTRAD - HUSRB/1602/32/0086 - Traditional Architecture from a New Perspective (1 November 2018-30 October 2020)

The Ferenc Móra Museum in Szeged and the Vojvodina Hungarian Cultural Institute in Senta are participating in a joint project. The aim of the Interreg-IPA project "A New Perspective of Traditional Architecture" is to collect the architectural monuments of the Szeged region on both the Hungarian and Serbian sides. A total of six researchers will participate in the project, who will involve 127 multinational settlements in the study.

The ultimate goal of the year-long research is to complete the architectural handbook of the large Szeged region in Hungarian and Serbian, and to create online virtual tours. In addition, an art and monument protection event will be organized in Senta, and an ethnographic camp will be organized for students in Domaszék.

PALMCULTURE - HUSRB/1602/31/0026 - Culture on the Palm - Palm Culture (1 May 2018 – 30 April 2019)

The project aims at gathering the historic cultural heritage of Novi Sad and Szeged, via a thorough study (field work and research) in order to establish an integral, systematically categorized database (containing photographic documentation) on cultural heritage and amenities on the territory of the cities of Novi Sad and Szeged. Based on the database, an interactive Internet portal with the aforementioned cultural heritage will be developed.

The project also gathers actual, contemporary cultural programmes (festivals, concerts, theatre performances, exhibitions, other events) of the two cities, and share them in an appealing form. A list of local clubs and artistic groups will also be prepared and published, indicating whether they are open to accept citizens who would like to join them or see how they work.

The portal will be promoted in several ways: via brochures, leaflets, newspaper articles, and a social media campaign.

2.2.3.3 Conclusion

There are significant parallels and development opportunities in the study area on a natural, built, and cultural heritage level as well. Protecting natural values is a vital interest of both countries and regions, to give space to the natural habitats in this developed social environment. It is common knowledge that this region is especially endangered by climate change, therefore it is outstandingly important to protect the few remaining natural habitats. Furthermore, the observation of the complex reaction of these natural systems to climate change is also a compulsory task in this region and this issue goes above countries and nations.

The built and the intangible-cultural heritage contains elements that can be developed both in a compatible and a complementary way in the area. Even though there are small differences in certain national systems – cultural heritage management, intangible cultural heritage –, these are negligible besides development opportunities. The development of these structures also contributes to the development of the local identity, local economy, and local society. These projects can directly generate tourism investments and can encourage social groups across the border to get to know each other and define joint objectives.

Based on the analysis of the topic 'Heritage related management', the following types of potentially functional areas can be defined within the region:

- Network of natural heritage: network of sites rich in natural values such as different nature protection areas.
- Network of cultural heritage: network of joint and complementary built heritage, cultural heritage sites such as historical monuments, castles, palaces, art nouveau buildings or folk art/rural architectural forms.

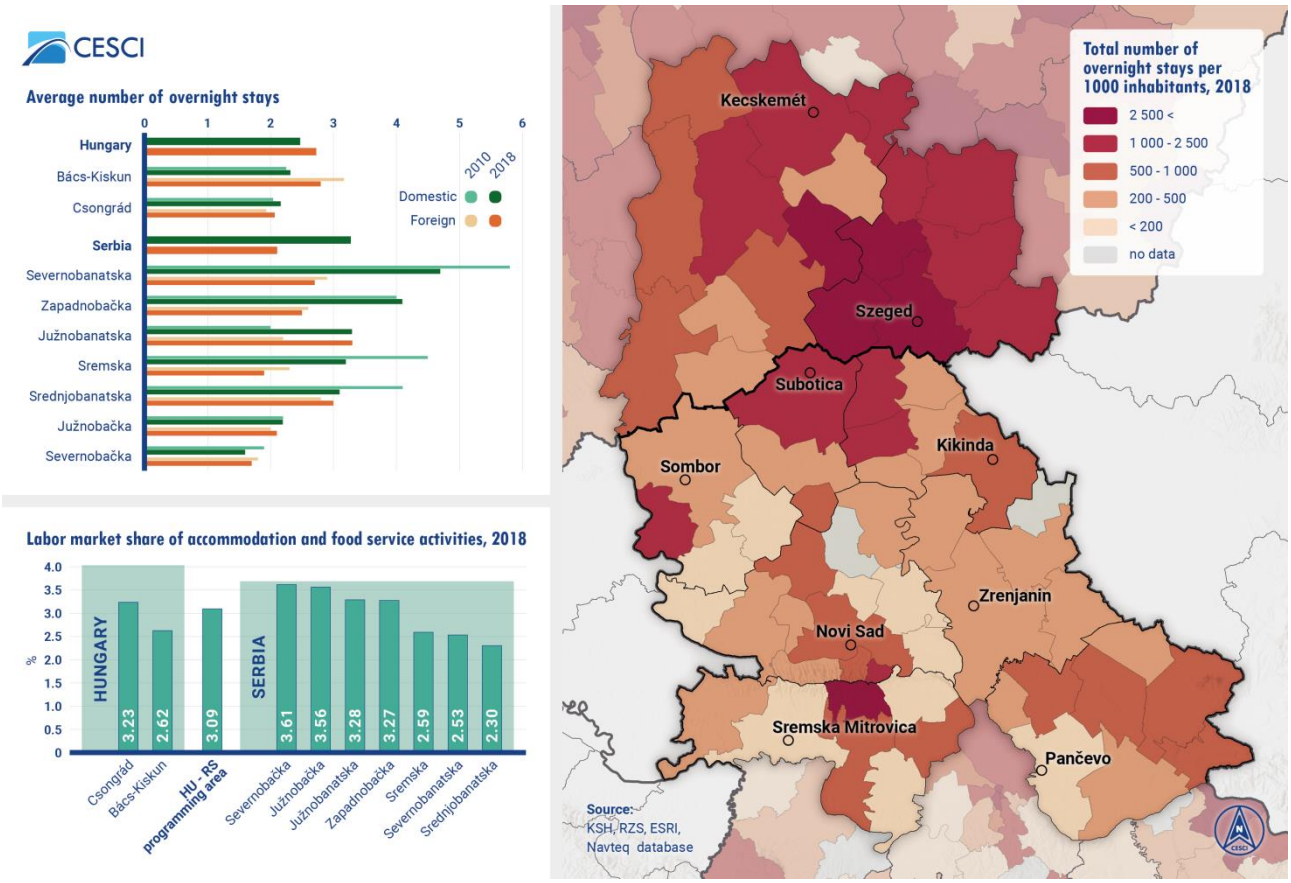
2.2.4 Tourism

A boost in the tourism sector of the Serbian-Hungarian border region could contribute to the enhancement of the region's population retention capacity, especially in the case of the rural sub regions that are the most threatened by the risk of depopulation, but are full of under-utilized natural and cultural values in terms of tourism. Regarding the border region, with the utilization of the under-utilized tourism potential, a unique image is created using the complementarities of the two sides of the border, which could boost the region's economy in the long run.

2.2.4.1 The significance and performance of tourism in the region

In 2018, the added value of accommodation services and hospitality increased by 9% in Hungary, exceeding the average growth rate of the national economy GDP. The sector's share of the GVA is 1.9% in Hungary and 1.7% in Serbia. Regarding labour market participation, commercial accommodation and in general the hospitality sector provided 4.0% of employees and 3.4% of staff members[58].

Figure 27: Main indicators of tourism in the border region



The labour market participation of accommodation services in Serbia was 3.7%, while Severnobačka region (3.61 %) and Južnobačka region (3.56%) had the highest rates out of the border region's

58 Hungarian Central Statistical Office (2018). Helyzetkép a turizmus, vendéglátás ágazatról (Analysis on the tourism and hospitality sector). https://www.ksh.hu/docs/hun/xftp/idoszaki/jeltur/jeltur18.pdf

NUTS3 areas, and the lowest was in Srednjobanatska region (2.3%). In the sectors of accommodation and the hospitality sector, the employment rate was 3.2% in Csongrád region and 2.6% in Bács-Kiskun region. (Figure 27)

Tourism **infrastructure** provides the basis of the regional operation of tourism. Tourism infrastructure entails those institutions, which ensure the services of visitors coming to the region, besides the existence and quality of routes, railways, airports, transport connections and border crossings that enable tourism activities (for details please see the chapter on transport infrastructure). Though not directly, but the standard of health care systems and public services belong here as well, but the overall state of commercial (and, for that matter, other) accommodations and service infrastructure (restaurants, experience providers, repair services, information centres, etc.) is the most important.

Accommodations (hotels, apartments, camping sites, etc.) and service providers (restaurants, buffets, etc.), which are important for tourists, all belong to this tourism **superstructure**.

Generally speaking, it can be said about the utilization of the accommodations in the region that the number of overnight stays related to the number of population in the Serbian-Hungarian border region is significantly higher in the Hungarian regions than in the Serbian regions. Five LAU1 areas had the most overnight stays per 1000 people in 2018, four of them are located on the Hungarian side (Mórahalom region 4.708, Kiskunmajsa region 4.230, Kistelek region 3.252, Szeged region 2.837), but Irig region in Vojvodina had the most overnight stays (11.115). Serbian regions with less than 200 overnight stays Inđija (194), Pećinci (179), Temerin (176), Bač (157), Žabalj (125), Titel (110), Pančevo (77), Kula (68), Sremska (63), Odžaci (0.44)[59]. It is clearly visible in Figure 27 that the most overnight stays are spent on the northern part of the border region (Bács-Kiskun and Csongrád regions and the northern parts of Severnobačka and Severnobanatska regions).

The map shows that the higher utilization of the destination of Szeged and it surroundings has an effect on the Serbian side of the border as well, but this effect does not exist the other way round, namely, from the direction of Subotica towards Bácsalmás and Jánoshalma regions (the former agglomeration area of Subotica). It is also important to point out in terms of cross-border cooperation opportunities that the area of the subregion along the Danube falling within the programme area is, despite its great conditions, under-utilized on both sides of the border, compared to the results of its surroundings from a tourism point of view (maybe Apatin is an exception in this trend). Another important difference between the two sides: tourism along the subregion of the Tisza/Tisa is relatively successful on the Hungarian side, while Tisza/Tisa as a destination base is practically unexploited on the Serbian side, except for a short section closest to the border.

The number of **average overnight stays** decreased both in Serbia and in Hungary between 2010 and 2018. In Serbia, the number of domestic overnight stays decreased by 0.5 days, while the number of foreign overnight stays stagnated in the study period. Generally speaking, it took a rather long time for tourism traffic in Vojvodina to go back to the way it was before the economic crisis. There was a slight decrease (0.1 days) in the number of domestic and foreign overnight stays in Hungary. Another reason for this is the general shift of the travelling habits characteristic of the region: with

[59] There is no available data regarding Srbobran and Nova Crnja regions.

the changes of general lifestyle, shorter trips in the region are getting more popular. The picture is more nuanced on the NUTS3 level. The number of overnight stays between 2010 and 2018 increased the most in the region of Južnobanatska in the border region, domestic (+ 1.3 days) and foreign (+ 1.1 days) overnight stays as well, and it decreased the most in the region of Sremska, the number of domestic overnight stays decreased by 1.3 days, while the number of foreign overnight stays decreased by 0.4 days, just like in Bács-Kiskun region. The most domestic overnight stays in the border region were spent in the region of Severnobanatska both in 2010 (5.5 days on average) and in 2018 (4.7 days on average). Bács-Kiskun region has the most foreign overnight stays: 3.2 days on average in 2010 and 2.8 days in 2018.

Table 6: Foreign tourism in commercial accommodations in the Hungarian section of the programme area in 2019

District of...	**Number of foreign overnight stays**			
	Altogether	From Europe	From Serbia	
Szeged	**148 471**	**133 543**	**26 037**	**17.5%**
Mórahalom	15 126	14 630	**7 649**	**50.6%**
Kecskemét	**97 593**	**88 022**	**3 013**	3.1%
Kiskunmajsa	14 136	14 119	**604**	**4.3%**
Kistelek	**35 066**	**34 951**	**593**	1.7%
Szentes	10 304	9 191	518	**5.0%**
Hódmezővásárhely	18 363	16 366	430	2.3%
Makó	9 465	9 261	397	4.2%
Kiskunhalas	10 277	10 175	281	2.7%
Baja	7 380	7 070	245	3.3%
Kiskőrös	11 429	11 208	133	1.2%
Kiskunfélegyháza	2 200	2 188	105	**4.8%**
Tiszakécske	4 876	4 847	58	1.2%
Csongrád	2 030	1 824	47	2.3%
Tiszakécske	1 826	1 709	28	1.5%
Kunszentmiklós	113	113	no data	no data
Bácsalmás	no data	no data	no data	no data
Jánoshalma	no data	no data	no data	no data
Csongrád megye	**238 825**	**219 766**	**35 671**	**14.9%**
Bács-Kiskun megye	**149 830**	**139 451**	**4 467**	**3.0%**

On the Hungarian side of the border region, the foreign visitors spend the most overnight stays at commercial accommodations in Csongrád region, more precisely Szeged and its surroundings. The number of all foreign overnight stays was 148 471 days in the Szeged region in 2019: visitors from Europe spent 133 543 days and almost 20% of those were from Serbia. Visitors from Serbia spend

the second highest number of overnight stays in the Mórahalom region in terms of commercial accommodations (7 649 overnight stays in 2019, which is 50% of all foreign overnight stays spent in the region), and the third highest number of overnight stays in Kecskemét, Bács-Kiskun region (3 013 overnight stays, 3% of all overnight stays spent in the region). If we examine overnight stays spent by visitors from Europe, the most overnight stays spent in commercial accommodations are in the region of Szeged, Kecskemét and Kistelek. The ranking of the regions was the same regarding all foreign overnight stays as well in 2019, because visitors coming from more distant areas only know and want to visit the most well-known destinations and national attractions, and they like to spend several days in these destinations. Only those who come directly from the other side of the border know about the smaller, local attractions, but they also prefer spending several days at more well-known tourism locations. Overall, tourists from Serbia take up almost 3% of the foreign tourist traffic in Bács-Kiskun region and 15% of the foreign tourist traffic in Csongrád region – there is still plenty of opportunities to increase this data. (Table 6)

Similar available data related to Serbia is the number of days Hungarians spend in Serbia, which took up 2.3% (1 990 000 days) of all days Hungarians spent abroad in 2018, and 3.4% (2 508 000 in 2019. However, we need to mention that this data also contains transit traffic and one-day visits, and these short visits do not appear in the statistics of commercial accommodations. Besides, only national data (which is comparable) is available regarding every foreign overnight stays. The trends of this indicator have been broadly the same for the last 5 years, Hungarian visitors took up 2.2% (88,933) of all the foreign overnight stays spent in Serbia in 2019 (4 010 378).

2.2.4.2 The factors of tourism subsectors in the region[60]

Cultural tourism: Vojvodina has many cultural values and locations that are linked to different minority's cultures, and these are tourism attractions to Serbian, Hungarian and foreign tourists as well. Key cultural events represent international significance in the cross-border region (Szeged Open-Air Performances, Exit Festival, International Film Festival, Kurultaj, etc.).Vojvodina is also full of historical sites and cultural heritage locations: there are 15 Orthodox monasteries in Fruška Gora and the ruins of Arača in Bač. IPA projects are encouraging the promotion of cultural tourism in the region as well, e.g. the ColourCoop project (HUSRB/1601/31/0005) aims to develop Mórahalom and Palić as cultural centres involving Novi Sad, and the Art&Craft project (HUSRB/1602/31/0050) aims to organize folk art workshops and programs for artists, in addition to the renovation of the Calvinist church in Hódmezővásárhely, through the cooperation of Hódmezővásárhely and Subotica. The MILLS' ROUTE project (HUSRB/1602/31/0252) aims to protect and promote the mills that are considered architectural heritage elements of Kiskunfélegyháza, Ópusztaszer, Hódmezővásárhely, Kikinda and Orom, by establishing mill roads. The VoBaNISTA project (HUSRB/1602/31/0197) aims to promote the night sky devoid of light pollution in Vojvodina and Bács-Kiskun region as a new tourism product. The aim of the CULHUSRBTOUR project (HUSRB/1602/31/0205) is to establish and promote a new product based on the existing cultural tourism potential of the region, and to

60 The following section was made using this study called "Tourism development strategy concerning the Hungarian community living in Vojvodina": https://www.prosperitati.rs/sites/default/files/a_vajdasagi_magyar_kozosseget_erinto_idegenforgalom_fejlesztesi_strategiaja_7.7.pdf

strengthen cross-border relations. The aim of the IDENTIS project (HUSRB/1602/31/0048) is to increase the number of people visiting cultural heritage locations along the Tisza/Tisa. The aim of the FOLKcoolTOUR project (HUSRB/1602/31/0154) is to transform folk culture and traditions into tourism products. The primary objective of the Modern Folking project (HUSRB/1602/32/0230) is the demonstration of the folk culture and cultural heritage of the region and its promotion among young people. The aim of the CULTOUR project (HUSRB/1602/31/0176) is to boost tourism in the regions of Bácsbokod in Hungary and Svetozar Miletić in Serbia. The aim of the ArtNouveau project (HUSRB/1602/31/0111) is the utilization of the art nouveau buildings of Szeged and Subotica and the additional local and regional attraction of the two towns' heritage, and the promotion of these as a joint tourism attraction. The aim of the Inter-Cult project (HUSRB/1602/32/0164), in case of national communities, is to raise awareness about the mutual benefits of the cooperation, especially among young people on the two sides of the border, in the areas of culture and tourism. The aim of the Interreg-IPA project called NEWTRAD – "Traditional architecture from a new perspective" (HUSRB/1602/32/0086) is to gather the architectural monuments in the macro region of Szeged on both the Hungarian and the Serbian sides.

Pilgrim tourism: The Serbian side of the border region has several religious sites, and their development is important because they could provide additional income to the region if accompanied by other tourism options.

Congress tourism: In the border region, the quality criteria of congress tourism are mostly present in Bács-Kiskun region and Csongrád region, while in Vojvodina, these criteria are present in Subotica and Palić in Severnobački region.

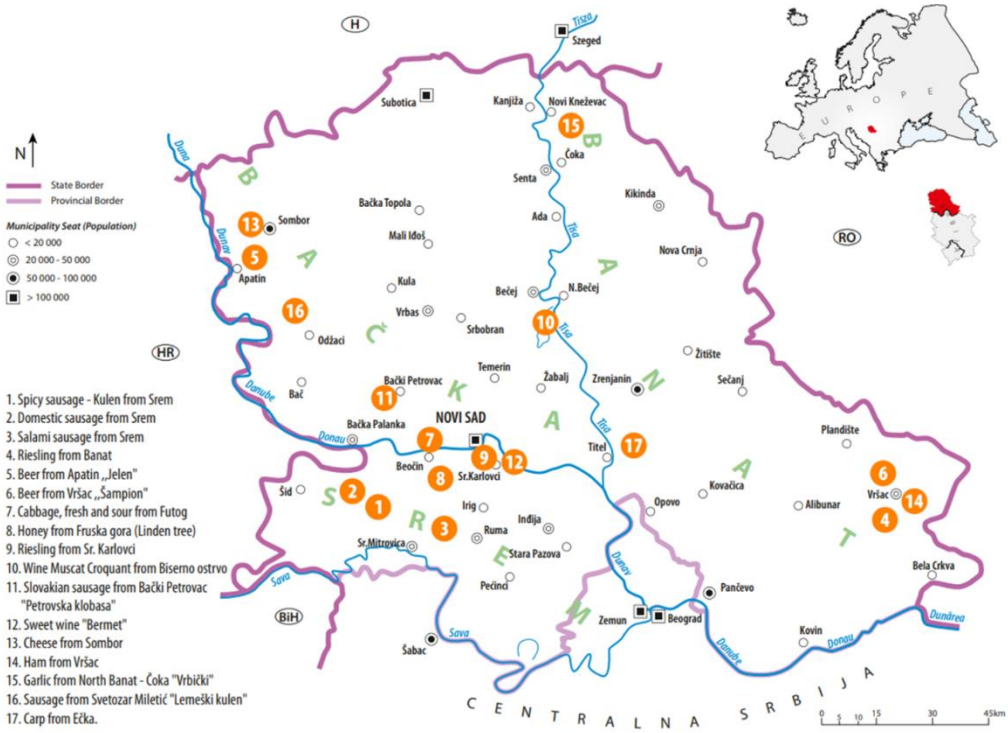
Ethno- and gastro tourism: Gastronomic diversity is characteristic of the border region, as a result of different cultures blending. Gastronomic specialties are present at every festival and cultural event (e.g. Kobasicijada sausage festival in Turija, fish soup making festivals, etc.) of the border region's rural destinations. Many regions have their own food specialties. Mórahalom and Kiskőrös are famous for their strudels, Baja and Szeged are famous for the fish soup.

Gastronomic specialties in Vojvodina are good quality bakery products, for example the burek, special meat products made from pork, production and sales of quality wine, beer, cheese, honey and certain vegetables: many protected, local products can be found in the region (Figure 28). This diversity is one of the important tourism attractions of the region, which, with the help of the outstanding agricultural conditions on a worldwide level as well, enables the establishment of a specific, joint and interconnectable image, coupled with the suitable marketing. The network of local products on the two sides of the border can be developed, interconnected and protected, which still has many possibilities regarding the higher efficiency tourism capacities, the success of these operations can enhance the general population retention power of the region and the security of supply.

Alcoholic beverage tourism: The Serbian-Hungarian border region is an outstanding location in terms of wine tourism, as there is a tradition of viticulture on both sides of the border. With the project called "The establishment and positioning of the Danube wine route as a tourism and cultural brand in the border region", a cross-border wine route was established by Bács-Kiskun region and Vojvodina. Besides wine, Vojvodina is also famous for its distilled alcohols (rakija-pálinka) and beer. The slopes of Fruška Gora, which are excellent in terms of viticulture and orchards, are currently

under-utilized. The know-how regarding wine tourism is rather up to date on the Hungarian side, but channelling it through to the other side of the programme area would offer benefits on the Serbian side as well. The Danube Wine Route IPA project was established through the cooperation of Vojvodina and Bács-Kiskun region, and its objective is to create a sustainable, thematic wine route along the Danube. Furthermore, beer tourism and brandy (pálinka) tourism are also significant in the region as there are already established tourism programmes and offers[61] based on the presentation and tasting of these beverages.

Figure 28: The protected, local products of Vojvodina[62]



Health, bath, and wellness tourism: Hungary overflows with good quality thermal baths and wellness services, there are bigger baths in Szeged, Mórahalom and Algyő in Csongrád region, and the Hagymatikum Gyógyfürdő in Makó. The thermal water's temperature reaches 90-95°C. In Bács-Kiskun region, there are thermal baths in Kiskunmajsa and Tiszakécske, and spa and wellness services ("Hírös Gyógyvíz") in Kecskemét. These services are currently unsatisfactory on the Serbian side, even though the natural conditions are given, but the existing objects need to be modernized. There is a famous thermal bath in Palić, Severnobačka region, in the town of Kanjiža, and there are thermal water wells and thermal baths in Bačka Topola, Mali Iđoš and Temerin as well. The thermal water's temperature in Vojvodina is 60-80°C. While tourists show a growing demand for Hungarian wellness and health tourism and the services offered by thermal baths, thermal baths only attract 10% of the

61 For example see the beer route, brandy route or kadarka route offered by DKMT Euroregion: http://www.tasty.dkmt.eu/lang/en/

62 Banjac, Maja & Kalenjuk, Bojana & Tešanović, Dragan & Gagić, Snježana & Cvetkovic, Biljana. (2016). Gastronomic tourism in rural areas of Vojvodina (Serbia). Turizam. 20. 180-191. 10.5937/Turizam1604180B.

foreign tourists in the Republic of Serbia. The HEALTH-TOUR project (HUSRB/1602/31/0084) was established to develop medical and health tourism together.

Ecotourism: The region does not lack nature reserves, there is high potential in their better utilization. The most valuable areas in Hungary in terms of nature conservation are in Bács-Kiskun region. The Felső-Bácska–Homokhát Natúrpark was established in the border region in 2018 with the cooperation of 12 settlements from Bácska and Homokhát. One of the objectives of the park is to develop a EuroVelo 13 cycle path, which includes the development of information boards, rest stops, bicycle repair services and ecotourism visitors' centres. However, Vojvodina has very few similar existing opportunities to offer. From a nature point of view, the subregion along the Danube is probably the most under-utilized. The primary objective of the Rehab NatCult Heritage IPA project, established through the cooperation of Novi Bečej and Sándorfalva, is to utilize areas with protected natural values in connection with ecotourism. The aim of the AREeCcDev project is the development of the tourism capacities of the lake Ludaš and the cooperation with Hungarian tourism centres. The aim of the NATESS project is to establish new tourism attractions by utilizing and connecting local, natural, and human resources. In the frameworks of the QUAD SE project, the project partners set up a social enterprise to provide innovative tourism services and hiking trails for individuals with limited mobility on special nature reserves. The primary objective of the TISATUR project is to provide environmental education for the younger generation, promote the section of the Tisza/Tisa belonging to the Algyő and Kanjiza agglomerations and support the visually impaired and help them get to know the tourism attractions of the region. The aim of the Youth-together project is to raise the awareness of young people in terms of protecting nature and cultural values and leading a healthy lifestyle, and to encourage them to promote tourism by exchanging cross-border cooperation experiences.

Nautical tourism: The Danube and the Tisza/Tisa as international routes could generate the development of nautical tourism in the region, which is quite undeveloped for now. Nautical tourism can be boosted by offering relevant content, promoting canal navigation, and organizing cross-border fairways, but support from the municipalities, the regions and the two countries is needed as well.

Rural tourism: Rural tourism is well developed in Bács-Kiskun and Csongrád counties, where a good proportion of accommodations, tourism attractions and services cater for tourists interested in experiencing and actively participating in the rural lifestyle. Consequently, several thematic festivals are organised around certain events typical for farm life such as pig slaughters (for example in Apostag or Kiskőrös in Bács-Kiskun county), grape harvest festival (for example Pusztamérges in Csongrád county or Bócsa in Bács-Kiskun county) or traditional carnival festivities (for example in Szeged, Csongrád county). Another rich offer is linked to certain produce, such as vegetables or fruits. The so-called Onion Ball and Onion festival in Makó for instance attracts visitors for 29 years now. The regular Scone Festival is organised in Szegvár, Cheese Festival in Kistelek, Pepper Festival in Mindszent and Carrot Festival in Domaszék, among others. More general festivals are also organised such as the Folklore Festival in Forráskút.

Despite the similar endogenous assets, rural tourism still needs to be improved on the Serbian side. The conditions of rural tourism are given in Vojvodina (idyllic rural life, local products, diverse gastronomy), varied tourism options can be based on them. For instance, the municipality of Kovačica

is known as a „Metropolis of naive art" cherishing the tradition of native art for seven decades, enriching and building up its tourist offer. Its success is indicated by the increasing number of Serbian and foreign tourists. Baranda is another famous touristic destination in Vojvodina, located in South Banat district, Opovo municipality. The absence of industrial pollutants, the richness and a specific flora and fauna provides solid ground for further development of tourism, primarily ecotourism. The nearby lake Šaran has a beautiful shore, crystal clear green and regularly controlled water. Baranda has a worldwide famous tradition in the movie industry, legendary films were made here for over 50 years. Fruška Gora is famous for its wine tourism. The surroundings of Novi Sad are characterized by numerous farms (salaši), also near all major settlements in Vojvodina there are various ethno tourism opportunities. Some of the most visited tourist destinations are: "Babin salaš" farm (Žabalj), Fruškogorska lugarnica (Mala Remeta), Village Tourist household „Jazačka bajka" (Jazak), Salaš Đorđević (Palić), Perkov salaš (Neradin), Majkin salaš (Palić), Wine farm „Čuvardić" (Kelebija), Countryside tourism in Totovo Village, Ethno house (Maradik), The ethno museum (Debeljača), Gallery „Ahoj" (Bački Petrovac).

Many active organizations support rural tourism in the region. One of these organizations is the Eco Rural Tourism Association Skorenovac next to Kovin. 5000 people visit the mostly ethnic Hungarian village on average annually. There is potential in presenting the know-how connected to rural tourism in this area as well, since the related service quality and experience on the Hungarian side is important.

Equine tourism: Equine tourism is extremely popular on the Hungarian side of the border region, and there have been equestrian events organized lately in Vojvodina as well. This activity could provide an even higher added value with a developed joint thematic equine route and other tourism options. However, the cross-border projection encounters legal impediments because of the Schengen external border regulations.

Hunting and fishing tourism: The border region has many hunting grounds, hunting tourism is the oldest sector of tourism in Vojvodina. The Subotica-Horgoš sand and the Selevenjska forest are outstanding hunting grounds of the Severnobački a region, just like the area of Bačka Topola and Mali Iđoš, while the lake Palićko and the lake Ludoško are significant regarding fishing tourism. There are hunting grounds in the region of Sombor in Zapadnobačka, while the lake Čonoplja attracts anglers to the region. Renovating outdated accommodations on the Serbian side would provide an opportunity to make this activity even more profitable by organizing cross-border hunting events lasting several days with accompanying activities (e.g. hiking, hunting blinds, etc.). Hunting tourism is flourishing in Bács-Kiskun region, 107 hunting organizations entitled to hunt and hunting grounds are operating in the region, most of which organize custom hunting opportunities as well.[63] Fishing tourism of the region has already been significant. Not only the fishing waters belonging to the natural water systems of the Danube and the Tisza/Tisa attract visitors, but also many fishponds attract tourists as well with improving services. Also, the rowing course by the Maty-ér, located next to Szeged, is one of the continent's most famous courses in fishing, which is also suitable for holding international competitions.

63 See: https://www.baon.hu/bacs-kiskun/kozelet-bacs-kiskun/nepszeru-a-bervadaszat-478795/

Active leisure: Active leisure can be an important brand of border region tourism, since the environmental factors are given to organize cycle trips, hikes, canoe trips. However, developing the suitable infrastructure is strictly necessary for its execution. 3 European cycle routes cross the border region: the EuroVelo 11 (along the Tisza/Tisa), the EuroVelo 6 (along the Danube) and the EuroVelo 13, also known as "Iron Curtain Trail", which favours cycle tourism. The aim of the IPA project called OPTI-BIKE is to establish new cycle paths, not only for recreational purposes, but to optimize the traffic of border crossings. The KNESZECYC-4 project was established to build the missing cycle path between Szeged and Novi Kneževac. The aim of the WATERTOUR project is to encourage water tourism, and to promote the Hungarian and Serbian joint traditions and cultural heritage present on the natural and artificial waters of the Tisza/Tisa and the Danube. The 539-meter-high Fruška Gora next to Novi Sad is an important hiking spot in the region and a significant ecotourism location.

Sports tourism: This sector of tourism has yet to be fully exploited in Vojvodina, but they are building sports grounds and sports centres to accompany the renovated commercial accommodations, which provide great opportunities to organize children's camps and training camps for athletes. The OASIS IPA project, established through the cooperation of Kistelek and Kanijza, aims to develop health tourism, promote the tourism attractions of the region, and build multifunctional sports fields.

2.2.4.3 Tourism destination management in the region[64]

When establishing a tourism destination, it is important to create an identifiable brand, which the population living there can identify with as well. It is also important to attract as many target audiences as possible with the wide range offered. Four types of target audience can be distinguished when examining border region tourism:

- The Hungarian national minority living in Serbia, visiting Hungary as tourists are the most operational group. The aim of the trips is usually to visit relatives and friends or participate in cultural events or programmes of historical themes. Since there is no language barrier, Hungary is the main travel destination for this segment of the population.
- Ethnic Serbs visiting Hungary are primarily looking for quality experiences. They are interested in modern baths, wellness services, opportunities for shopping, cultural events, and gastronomy.
- Citizens of Hungary mainly visit Serbia because of the historical past, relatives and friends living there and for gastronomic reasons.
- The fourth group of tourists interested in the border region is made up of international visitors, who are usually also interested in higher quality services and cultural/gastronomic specialties.

Organizational background: Tourism destination management (TDM) organizations are operating the tourism activities of the region, though their operations differ on the two sides of the border. Destinations have their own TDM organizations in Dél-Alföld, which could even be limited to one settlement. In most cases, the ownership of the organizations mostly belongs to the municipalities.

[64] Sources used: Hungarian-Serbian Strategy of Cultural and Tourism Development in the Cross-border Region, 2018. The strategy was elaborated within the framework of the project Colourful Cooperation (HUSRB/1601/31/0005). Lead Partner of the project: DKMT Danube-Kris-Mures-Tisa Euroregional Development Agency.

In Vojvodina, a separate organizational unit was appointed for that purpose inside the local authorities, which is quite unfortunate, because tourism investments largely depend on the amount of resources available from municipalities and the level municipalities consider developing the sector important. One of the most significant TDM organizations on the Hungarian side of the border region is the *Szeged és Térsége Turisztikai Nonprofit Kft.*, which is operating the Tourinform Office and the Tájház (Traditional House), fulfilling marketing and PR duties and organizing public events with the Szeged municipality. The *Móra-Tourist Nonprofit Kft.* is owned by the Mórahalom Municipality, the surrounding municipalities, and private investors. Its most important task is the promotion of the destination and the establishment of a unique brand for Mórahalom. The Bács-Kiskun Megyei Turizmusfejlesztési és Marketing Nonprofit Kft. was established in 2015 to support tourism development. It helps establishing local TDM organizations and partnerships between the destinations of the region (e.g. the thermal baths of Kiskunmajsa, Kiskunhalas, Tiszakécske), and it is also the organization's task to create a specific brand characteristic to the region. The *Kalocsa és Térsége Turisztikai Nonprofit Kft*. was established through the cooperation of Kalocsa, Hajós, Dunapataj and travel agencies. Its current tasks are renovating the city center of Kalocsa, organizing cultural events, developing a visitors' centre in the Archbishop's Palace. The members of the *Bajai Turisztikai Nonprofit Kft*. are the Baja Municipality, the marketing organization of the town and the Bács-Kiskun Vendégváró Egyesület. The organization, besides the management of rural tourism, has great relationships with the Serbian towns Bajša and Bezdan, which favour this form of cooperation, the establishment of a complementary tourism offer and the tourism of the border region.

The general assembly of the Autonomous Province of Vojvodina established the *Turistička organizacija Vojvodine* in 2003 to develop tourism in the region. Among other things, its aim is to demonstrate tourism options at national tourism exhibitions. For example, in Zagreb, at the PLACE2GO international tourism exhibition, the organization has a joint booth with the Novi Sad tourism organization, where they promote the rural tourism, active tourism and cultural programmes of the region together. The *Turistička organizacija grada Subotice* is owned by the municipality, and its task is the development of domestic and foreign tourism, as well as establishing a brand for Subotica and Palić as the heart of the Pannon Plain with the diverse gastronomy and varied cultural and natural values. The organization also helps travel agencies organize trips and promote the region in the media. The *Turistička organizacija grada Novog Sada* is responsible for increasing the popularity of the town, the organization won the title of the best Serbian tourism organization in 2014. The Novi Sad 2021 Foundation was established to help executing the Novi Sad 2021 project, as a non-profit, independent organization, which prepares the town for the tasks that come with being the cultural capital of Europe. The project aims to motivate and encourage residents and visitors to re-discover the current values, while encouraging the cultural development of the town as well.

A well-developed network is operating between the tourism offices of the border region's destinations - the offices of Subotica and Szeged cooperate actively, there is a connection between Novi Sad and Szeged, Baja is cooperating with Sombor in the framework of the Baja-Sombor joint tourism IPA project, the aim of which is to develop and promote the cultural and natural heritage-based tourism products, services and attractions. However, the harmonious tourism development of the border region is hindered by the Serbian labour shortage, which limits opportunities. The TDM

offices and tourism organizations of the border region have not established cross-border organizations to boost tourism, the main obstacle being the different organizational structure.

2.2.4.4 Opportunities of the connection, joint utilization, management, and product development of tourism factors

On the one hand, the discovery shows what kinds of existing attractions, infrastructural facilities and products are located in the region in the subsector of tourism, and on the other hand, the destination managements that are currently operating on both sides are present in the area. Based on all these, considering utilization and production value trend data, the destinations that could be connected and developed into a joint product (in terms of landscape, content, and profitability) are outlined. Three regional elements can be identified, the interconnection of which has mutually advantageous cross-border potential:

1) The utilization of the Danube (the subregion along the Danube) as a border intersecting element suitable for tourism utilization regarding interconnection
2) The utilization of the Tisza/Tisa (the subregion along the Tisza/Tisa) as a border intersecting element suitable for tourism utilization regarding interconnection
3) A better cross-border connection along the direct border line, of the tourism impacts of border towns with small catchment areas, but many built and cultural attractions (Szeged-Subotica-Baja axis)

Out of these three, potentially joint tourism development axes, the two rivers could strengthen the tourism cohesion of the region in a transverse direction, while an interconnection zone parallel to the border, a result of clustering towns close to the border, could also be used to gain mutual experience. For these relations to be successful, many conditions must be met, for example transport development, joint planning, management, marketing and overcoming legal impediments. The content elements of the interconnection can be based on joining the mutually rich cultural, gastronomic, and natural (e.g. surface and thermal waters) values into one package.

Relevant projects previously carried out in the region

TisaWaterTours - HUSRB/1602/31/0051 - Development of a cross-border water tourism destination along the Lower Tisa section (1 May 2018-30 July 2019)

The river Tisa has always been a symbol of cross-border cooperation and is one of the primary eco-tourism destinations in both Hungary and Serbia. Despite the rich and unique natural and cultural heritage along the river, nowadays the infrastructure is often considered outworn and insufficient to exploit the true potential of water tourism, especially in the Lower Tisa region.

As the first step, the project will elaborate a joint water tourism development strategy. Based on its findings and by creating a complex service and interconnected water tourism network, the project will develop new tourism products and services, such as: new port facilities and information boards in the three partner towns, joint thematic routes, mobile application, and more.

OASIS - HUSRB/1602/31/0068 - Kistelek – Magyarkanizsa complementary touristic development based on natural resources as interconnected diverse elements of the regional touristic system (1 May 2018-30 April 2020)

The project aims to enhance the tourism potentials of the Hungary-Serbia border region by improving and diversifying the tourist offer along the route of Kistelek and Kanjiza (Magyarkanizsa). The project includes four main project aspects each of which consists of several activities contributing to meeting the main project objective – developing tourism on the territory of Kanjiza and Kistelek Municipality.

The first aspect of the project includes the extension of the existing spa in Kistelek Municipality which would contribute to promotion of health tourism, which was the main priority of the project implemented within the former cross-border cooperation programme between Hungary and Serbia - „Integrated Spa Development Strategy" (HUSRB/1203/213/155). The goal of this activity is construction of a centre with different types of health-lifestyle counselling and supportive medical treatments.

The second aspect of the project is related to enabling utilisation of otherwise unused sport capacities by visitors through: infrastructural development and revitalisation of the existing sport capacities, construction of multifunctional sports field, along with the required sanitary infrastructure.

The third project aspect is aimed at the organisation of the youth summer camp, which, on the one hand, should contribute to promotion and enhancement of youth tourism in the target area, and on the other hand, to raising the awareness of healthy lifestyle among young people through specific recreational, competitive and educational activities.

The fourth aspect of the project aims to bring attention to the tourism opportunities of the region. It involves development of the website/mobile optimized software connecting regional tourist offers on the route between Kistelek and Kanjiza, offering the specific thematic content to potential visitors.

CET - HUSRB/1602/31/0081 - Common efforts for tourism (1 June 2018-30 January 2021)

The objectives of the project are to develop a tourism network of services, products, and goods, based on natural values, as well as to support local producers via inclusion in a database of local values and assets.

The project will include knowledge transfer, leisure programmes with natural trails and camps, training sessions, a story book, and a mobile application.

The partnership will provide some opportunities for the local producers to introduce their local values and the local handmade products. With these exhibitions and the tasting of the local products, the partnership will promote and support the local heritage and values.

Furthermore, the project will implement marketing activities supporting the project elements. With the visitor centres, the project will foster rural and eco-tourism, and, through awareness-raising programmes and trainings, it will implement knowledge transfer. These activities are aimed at encouraging the visitors to have a longer stay in the area.

The project will create a trilingual mobile application, intended for both adults and young people. Additionally, the project intends to reach children by creating a trilingual story book.

HEALTH-TOUR - HUSRB/1602/31/0084 - Health Tourism – Good Tourism: Joint Development of Medical and Health Tourism in the HU-SRB Cross-Border Region (1 July 2018-30 June 2020)

The main objective of the project HEALTH-TOUR is to improve the border region's economy by attracting a higher number of tourists from the neighbouring Central European countries for longer stays through joint development of tourism based on health, medical and therapeutic tourism potentials of the Hungary-Serbia border region, the Interreg-IPA CBC Hungary-Serbia Programme Area.

Health and medical tourism capacities of the border region are excellent. On the one hand, these capacities are based on the abundant thermal geological resources and, accordingly, the rich stock of mineral water and long tradition of utilizing it for therapeutic purposes. On the other hand, they are based on the high standard of medical training and availability of a certain type of high-quality medical services for significantly lower prices than in other countries – suitable for the development of medical tourism in the border region.

VoBaNISTA - HUSRB/1602/31/0197 - Vojvodina and Bács-Kiskun Night Sky as a Novel Touristic Attraction (1 March 2018-30 October 2020)

The project VoBaNISTA was developed based on several years of successful collaboration of project members and joint organization of international astronomy camps.

The project target groups are elementary school children, families, students, and young people visiting music festivals and various cultural events in Vojvodina in Serbia and Bács-Kiskun county in Hungary.

The project aims to use the untapped potential of Vojvodina and Bács-Kiskun regions in terms of dark sky quality, nature reserves and cultural heritage sites, and develop them into a new touristic attraction.

AREeCcDev - HUSRB/1602/31/0075 - A New Approach in Rural Ethno- and Ecotourism: Capacity and Competence Development (1 May 2018-30 April 2020)

The project aims to develop tourist capacities of the Ludaš Lake and incorporate the local community into tourist sector to make this location more attractive on the eco and ethno-tourism map and make it suitable for the cross-border cooperation with Hungarian tourist centres (in Mórahalom). Furthermore, the project intends to document the traditional use of plants among the local population and educate the locals on how to implement green technology in the production of plant-based souvenirs, as well as how to preserve the environment.

Danube Wine Route - HUSRB/1602/31/0209 - Creation and Positioning of Danube Wine Route as a Touristic and Cultural Brand in the Cross-Border Region (1 July 2018-30 June 2020)

The main goal of the Danube Wine Route project is to create a sustainable thematic wine route along the Danube river. The initiative comes from two regional governments – Bács-Kiskun county in Hungary and AP Vojvodina in Serbia, as well as two professional associations and one municipality in order to bring together and involve wine producers in the Hungary-Serbia border region. Both regions have a long tradition in wine production, however, wineries in the region are in a disadvantaged position compared to Western competitors.

The project partners will create a new brand for rebuilding the identity of the Danube Wine Region to raise awareness about high-quality wines in the region. The Danube Wine Region has a great potential on the international wine market as world wine consumption is shifting towards light and fruity wines, which this wine region is suitable for, due to its sandy and clayey soils.

CULTOUR - HUSRB/1602/31/0176 - Development of tourism based on local cultural and natural values (1 April 2018-30 September 2019)

The goal of this project is to boost tourism in the municipality Bácsbokod in Hungary and the municipality Svetozar Miletić in Serbia. Both settlements have numerous tourist sights and offer tourist attraction programs, however, they lack publicity and some of the tourist sights are for the moment not perfectly suited to accommodate tourists. With the common strategy and brand building of the municipalities, the project aims to resolve these problems.

TISATUR - HUSRB/1602/32/0020 - Ecotourism and Environmental Protection - We Are in the Same Boat (1 May 2018-30 June 2019)

The project will be implemented in partnership between the Municipality of Kanjiza, in Serbia and the Municipality of Algyő, in Hungary.

The main goals of the project are the environmentally conscious education of young people, the promotion of the section of the Tisa belonging to the Algyő and Kanjiza agglomeration, as well as the provision of support to the visually impaired to experience the tourist attractions of the region.

To achieve these project goals, the project will include the following elements:

- Two camps in Algyő and Kanjiza promoting river-based tourism and environmental protection. To provide good-quality camping experience, the project will provide tents, camping equipment, outdoor cooking utensils, kayak equipment, and alike.
- Two conferences about environment protection, as well as a one-day practical tour in Algyő. These events will focus on sustainable tourism from the point of view of environmental protection.
- Website which will be accessible to the visually impaired persons.
- Two information boards about tourist attractions in Braille which will be placed on the Tisa section near Algyő.

The project will include three publications: map with water routes in the region (on the section of the Tisa between Algyő and Kanjiza); informational brochure on the environmental values of the area and flyers.

WATERTOUR - HUSRB/1602/31/0204 - Development of water tourism on waterways connecting Hungary and Serbia (1 May 2018-30 December 2019)

The project aims to stimulate water tourism, as well as the popularization of the common traditions and cultural heritage of Hungary and Serbia present at the natural and artificial waterways of the rivers Tisa and Danube. Additionally, the project involves exploration of the natural resources and social values of the region by the River Tisa. It intends to achieve that by elaborating a joint tourism

marketing strategy and action plan for the cross-border region and formulating a recommendation for the implementation of marketing activities at the regional level.

The project will consist of a variety of connected attractions of sports, eco and cultural tourism. It will help the stakeholders elaborate packages of joint tourist programmes and identify tourism services, all of which are built on the River Tisa, connecting the two nations and cultures. Furthermore, the project will pay attention to connecting the attractions, sites, and venues on both sides of the border.

Starting a new tradition, the project will organize and implement water tours which also creates opportunities for the students of the participating Hungarian and Serbian universities to meet, to get acquainted and network within jointly organized programmes in the area of their specialization – culture, sport, recreation and environmental protection. The implemented water tourism programmes will serve as model programmes.

Based on the analysis of the topic 'Tourism', the following types of potentially functional areas can be defined within the region:

- Thematic routes: cross-border routes with a network approach which thematically connect and territorially integrate different points of interest, attractions, infrastructure, products, services and stakeholders from both sides of the border in relation to at least a single tourism branch/sector (e.g. cycling tourism).

2.3 Social cohesion

In the course of the analysis of social cohesion, four main topics are examined, namely: 1. social challenges (social stratification, demography, internal and external migration, ageing, social integration of Roma communities, social poverty and existential polarization), 2. education, training (educational systems and relations including primary, secondary and tertiary education, early school leavers, language and language compatibility), 3. employment market cooperation (characteristics of employment including activity, employment level, distribution of the employees on the basis of education and economic sectors, furthermore the characteristics of unemployment e.g. by educational attainment and by age, proportion of jobseekers, labour flows), and, last but not least 4. people to people (P2P) cooperation (covering themes related to the perception of each other, the advantageous effect of improving the Hungarian-Serbian interstate relationship, relatives, friends, religious holidays, partner settlement, cross-border structures including Euroregion and EGTC types of cooperation, the potential role of local festivals in cooperation, the local media).

2.3.1 Social challenges

2.3.1.1 Social stratification and "internal" migration

Several demographic and social research investigations revealed that the two sides of the Hungarian-Serbian border are faced with similar social issues. The macro-region divided by a border constituted a linked region, the similar social heritage, and the strategic position (the link between South East Europe and the Carpathian/Pannonian region) providing the common denominator.

The demographic situation is one of the crucial points regarding social problems. The population is ageing and declining in both sides with high levels of migration and regional centres (Kecskemét, Novi Sad) that are distancing themselves from the borderlands turning rather towards the capital not only in a physical way. In addition to these, we cannot forget about large towns in the narrow borderlands: Szeged and Subotica, whose agglomerations, cut off by the border, determines their situation and their commitment to weaken the border lines.

As it can be seen from the figure below, the ageing index is quite high in the programme area (average 1,37 in 2018). On county and okrug level there are no instances where this rate would be under 1, but sporadically (for instance around Novi Sad) the ageing index is more favourable than in the whole programme area in general. Csongrád county in Hungary and Zapadnobačka and Severnobanatska in Serbia are in the most disadvantageous situation from the point of view of ageing tendencies. It also has to be pointed out that the tendency is accelerating, meaning that comparing the data from 2012 and 2018 resulted in a higher rate for the later year in every instances.

Furthermore, the dependency ratio shows a similar picture. Old-age dependency ratio is higher than young-age dependency ratio in every case, regarding the programming area it is 29,5% for the older and 21,6% for the younger people. Comparing data from 2012 and 2018 it can be said that the dependency ratio grew in every analysed area of the programme area meaning that more and more people are depending on the working-age population on both sides of the border.

Figure 29: Territorial distribution of the ageing index in the border region

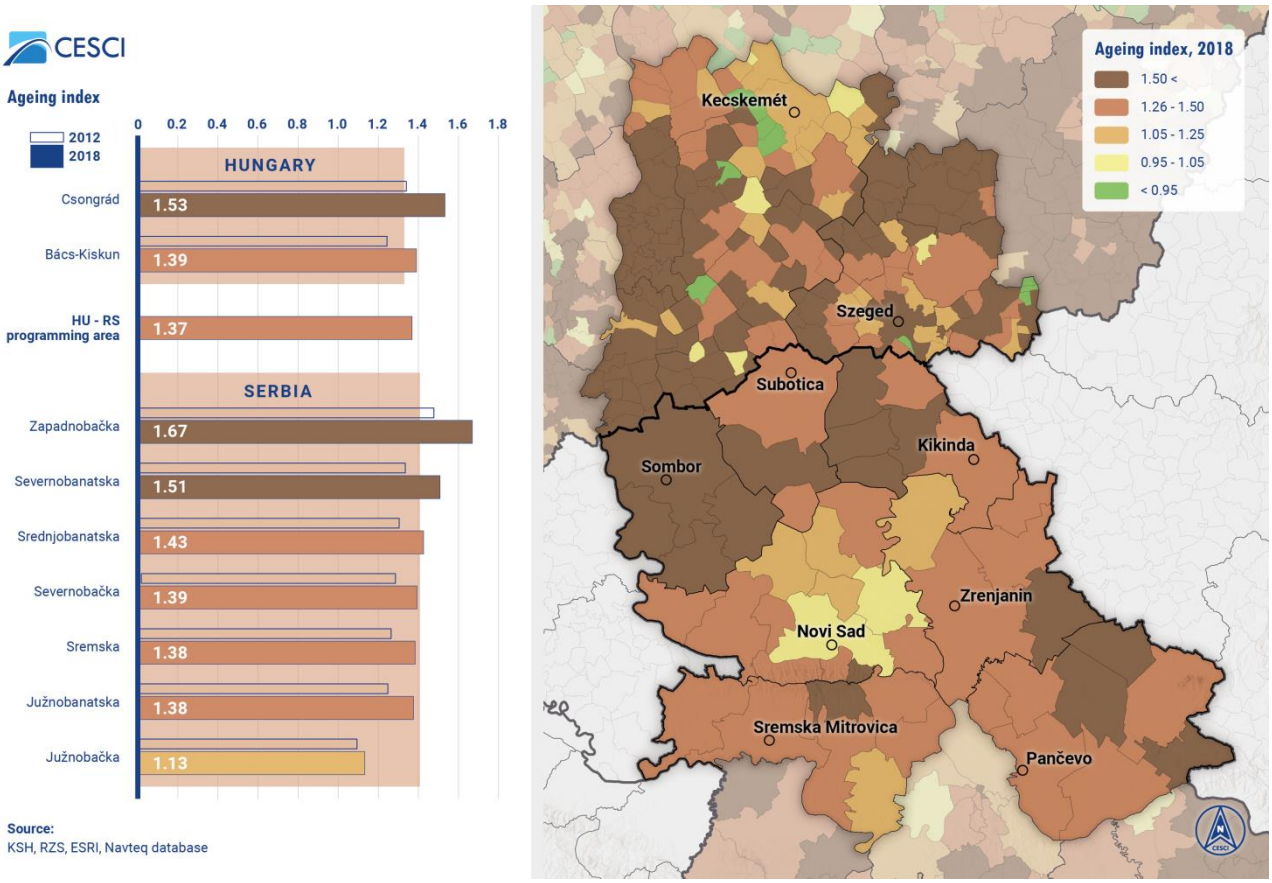
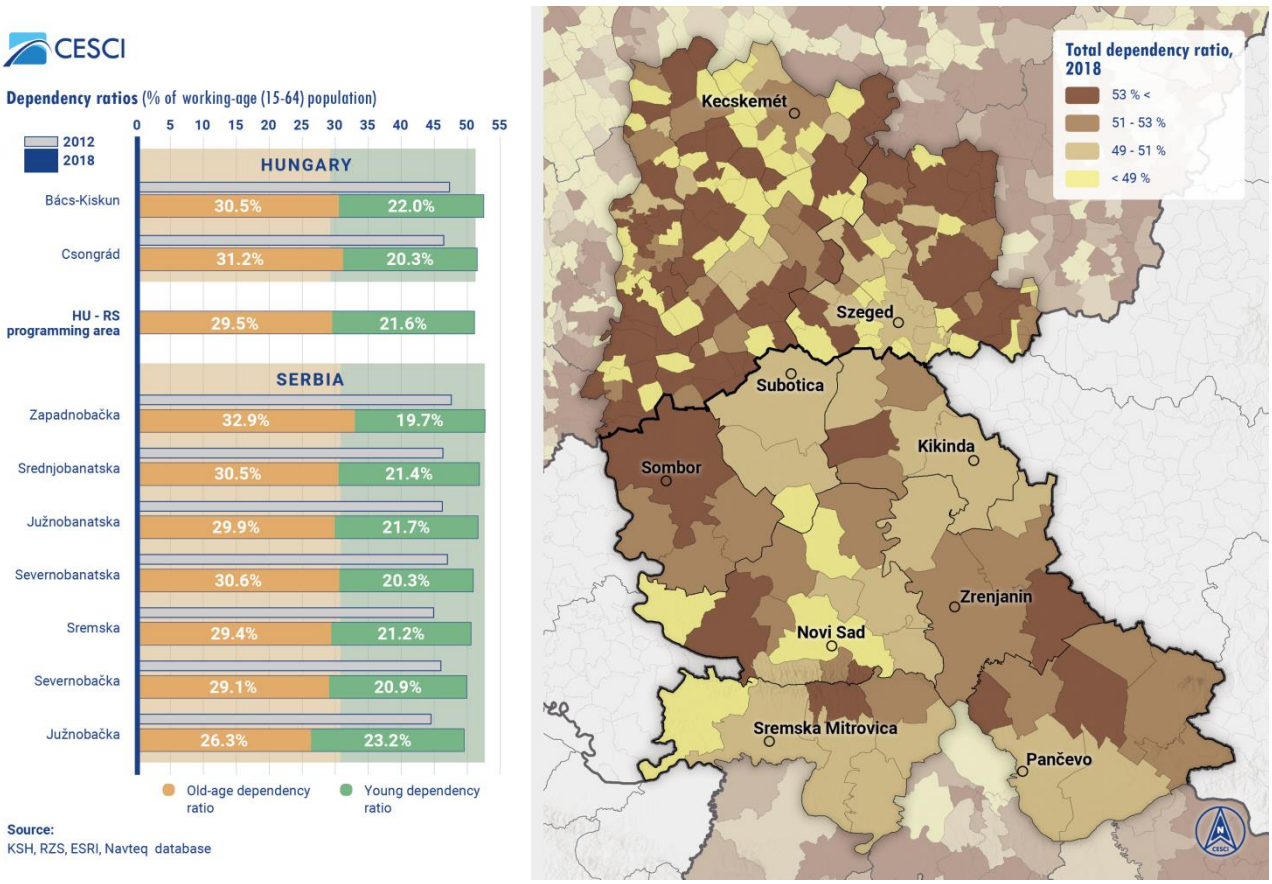


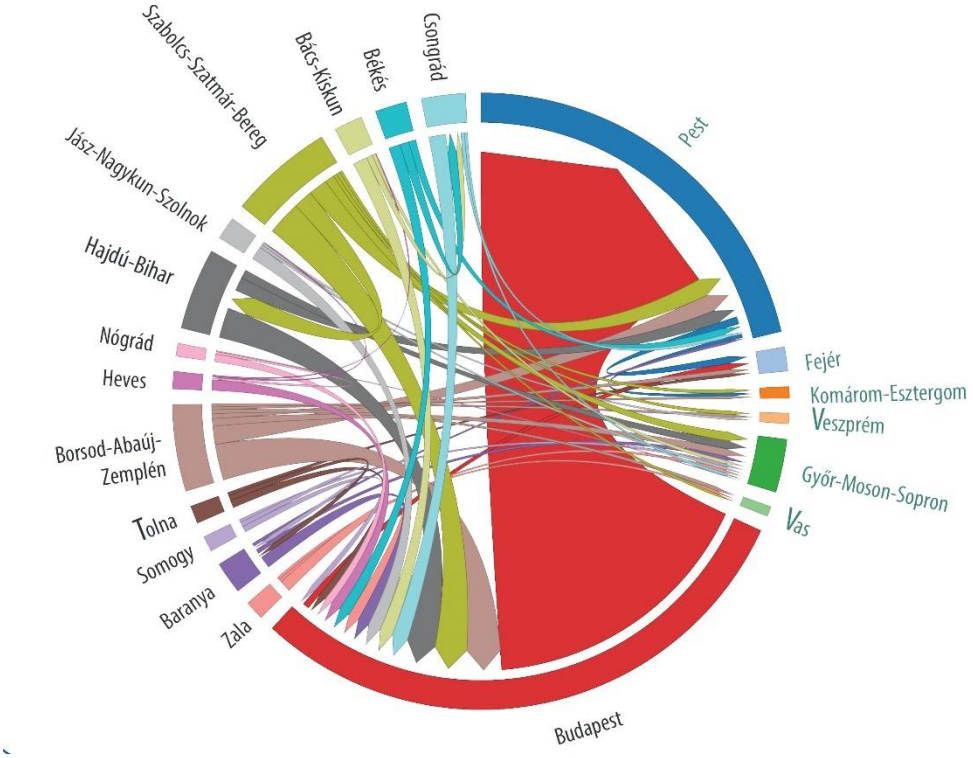
Figure 30: Territorial distribution of the dependency ratio in the border region



Regarding social analysis, it needs to be emphasized that quite diverse demographic and internal migration processes took place during the evolution of social structure over the years.

The most significant changes like these (significant immigration) in the Hungarian areas were the immigrations and emigrations during World War II. Not quite comparable in size, but the last internal migration process in Hungary was the social spatial mobility which meant that the displaced urban population moved, or were moved, to rural areas. This often went hand in hand with "buying" Roma communities out of the populated urban core areas, and it directly affected the Southern local administrative areas in the Hungarian parts of Bačka/Bácska directly along the border, which are typologically cut off. As a result, social dividing lines (e.g. Roma and non-Roma, extreme poverty, and the existence of peasant-citizens) developed in places where there had not been any before the 1990s or the 2000s. The figure below also illustrates the differences in domestic migration between the Hungarian counties showing that from the Hungarian counties of the programme area people mostly move to Budapest.

Figure 31: Differences in domestic migration between the Hungarian counties in 2017



According to the Statistical Yearbook of Serbia during the 20th century, there were intensive migratory movements of population. The first half of the century was marked by the First and the Second World War which inevitably caused significant movements of the population. The migrations continued also in peacetime, first, during the agrarian colonization (1946-1948), while intensive industrialization (1948-1961), concentrated in a smaller number of centres, caused intensive relocation. Since the 1960s a new channel of an economically based and determined spatial mobility of the population opened, when the countries in west Europe started to have the need to engage labour force from South and East Europe. Due to renewed war conflicts on the territory of the former Yugoslavia, the end of 20th century is characterized by new migrations which are reflected in the inflow of refugees from the territories of the former Yugoslav republics and internally displaced

persons from the territory of the AP Kosovo and Metohija. In addition, the period after the dissolution of the SFRY, until today was characterized by a new wave of emigration of the population abroad, as well as by the abandonment of undeveloped areas and the concentration of the population in several larger urban centres within the Republic of Serbia.

In practice, this means that social stratification can also be made along the migration layers of the ethnic majority, not only the ethnic categories. These issues are especially interesting in Serbia, where the people moving into the affected Serbian county (Vojvodina) came from rather different social and geographical backgrounds.

The difference between the areas in Bačka and Banat and Srem is especially interesting from this point of view. While we can only find a significant number of migrants from the area of the former Yugoslavia in the districts of Subotica, Sombor and Zrenjanin in the first two regions, there are many refugees in the area of Srem, from Šid to Zemun. Novi Sad, the centre of the territory and the biggest town of the examined area, is also considered one of the centres of the new settlers. If we examine the rate of these settlers in the whole population, the areas of Northern Bačka and Banat disappear (it is only 3-6% here, it exceeds 6% only in certain places) and a Novi Sad-oriented zone appears mainly in the area of Srem, which lasts to the northern suburban administrative areas of Beograd. This way the focus area in Vojvodina is a southern and a northern zone together with Banat.

Using this knowledge, it is important to raise some regional and identity questions, which all migration groups can relate to. The feeling of social affinity has devaluated in both border regions in the last 30 years, as significant, national social policy development issues became promoted.

For the most part, Vojvodina is no longer an exclusive home for those living in rural areas, as the significant urbanization processes of the last 50-70 years have led not only to the growth of cities and urban populations, but also to the emergence of a modernized way of life in the rural environment. In addition, emigration also has a significant impact on the rural environment, so the proportion of these areas continues to decline gradually. The role of women in urban and peri-urban areas is similar to the Serbian average. However, the situation of women living in rural areas in Vojvodina has changed significantly in recent times. On the one hand, the period of social transition exposed women to a greater extent to the burdens of unemployment and increased expectations (family, caring for the elderly, economic activity). This led to the current situation in which we can say that the younger generation of rural women in particular, with higher education, are primarily state or corporate employees, and two thirds of them are no longer engaged in agricultural activities, even as ancillary activities. For the older generation, this proportion is only 20%. Women living in the rural areas of Vojvodina articulate their social needs much better than before, but there is a need for entrepreneurial knowledge and further training in this area. Further significant changes are needed in the areas of healthy lifestyles and health care, as the disadvantages are more pronounced in these areas (due to high proportion of smokers, low level of screening, health preservation and prevention programmes).

2.3.1.2 Demography, internal and external migration, ageing

The regions on both sides of the border have experienced a loss of population over the last few decades, as a consequence of the ageing age structure and the domestic and cross-border migration. Serbia has been dealing with significant emigration and internal population moving processes

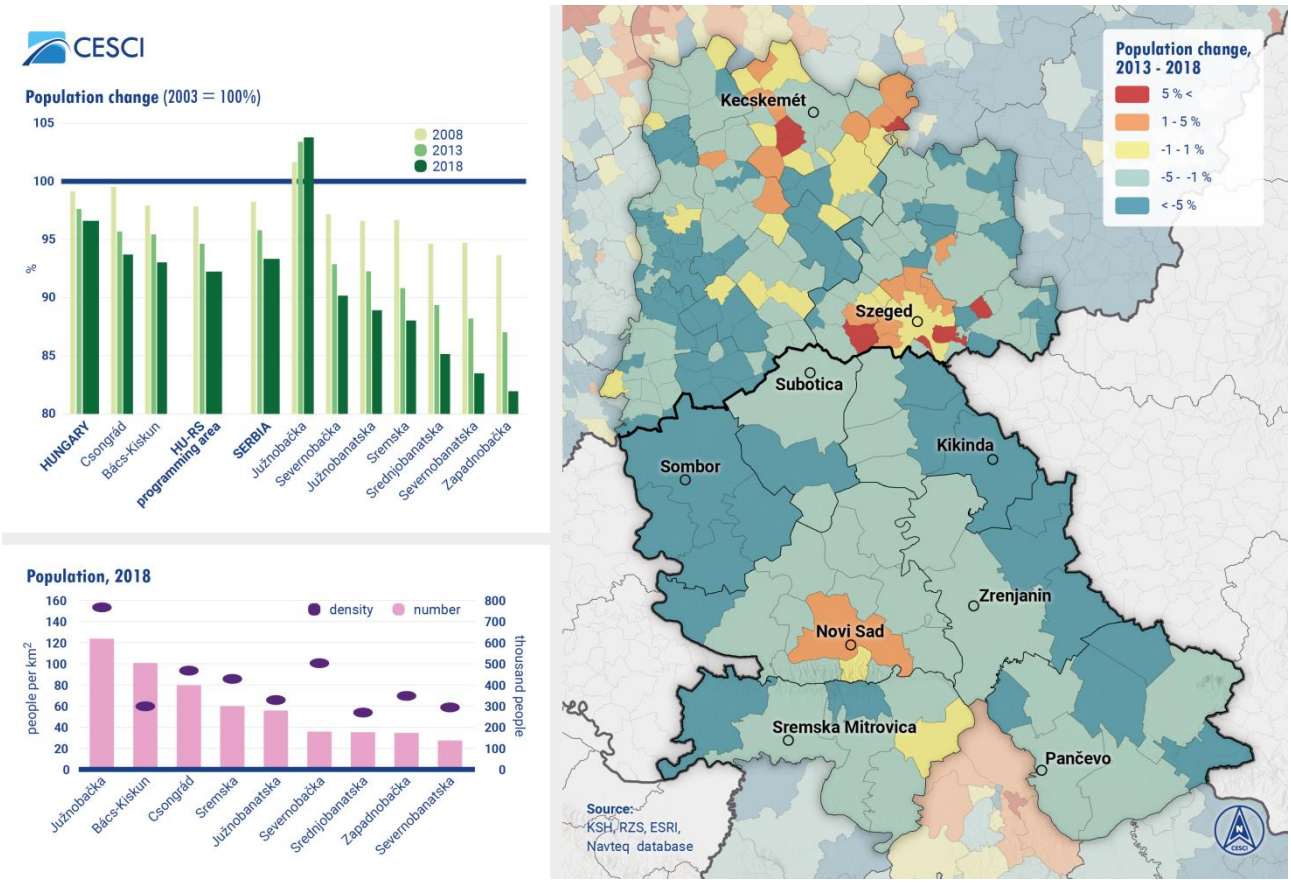
concerning the internal rural areas during the last two decades, and these processes have not slowed down ever since. Even though the core areas of Serbian emigration are not in Vojvodina, the areas in Central Bačka, the Banat and the areas of Srem remote from bigger towns (from the Novi Sad-Beograd axis) have experienced a population loss of more than 10 thousand over the last decade, as a result of natural decrease and migration. Those who gain from internal migration are the centres in the indirect border region of the examined area (Novi Sad and Kecskemét), as well as Szeged and its suburban catchment area. Neither Subotica nor Sombor nor Baja has the power of attraction like bigger towns, therefore these towns and their agglomerations keep losing population, their urban nature only mitigated their demographic loss compared to rural areas. The indicators of the Hungarian side of the border are similar to the demographic data of the Serbian border, but there is a significant difference: the Hungarian border town, Szeged, has a huge appeal, unlike Subotica, therefore only the area on the West, between Hercegszántó and Ásotthalom, shows a migration index higher than 10% in the Hungarian side of the examined border area. The population retention power of the eastern Hungarian border in the suburban zone of Szeged has higher migration and demographic numbers. The demographic impact of the Kecskemét-Budapest axis and the Novi Sad-Beograd axis is very similar, but these axes take most of the human capital pool of the extended borderland regarding internal migration.

The appearance and attracting power of "Gastarbeit", migrant work during the 1960-70-80's, were unique elements in the former Yugoslavia. This happened in several waves, and people who went away later, and the generations less attached to their country of origin, were much less likely to come back than those who went in the first wave. This created the ongoing and reappearing labour market and brain drain relationships with Germany, Austria, Switzerland, and Sweden. The last wave began after the 2008 crisis and still has a strong presence today. Even though the primary ecological core areas of the Serbian labour emigration are not in Vojvodina, many people emigrate from Vojvodina as well. There is one aspect of this quite negative demographic and human resources phenomenon that has a positive effect on cross-border cooperation (this data is from the 2011 census, it could have significantly increased since then as workforce is constantly outflowing from Serbia): the Hungarian, Croatian, Bunjevci and Yugoslavian[65] employees living in Vojvodina (and living sporadically in other parts of Serbia) are working way above the republic average (1.7%) in Hungary. 59.4% of the Hungarians, 2.9% of the Croatians, 11.7% of the Bunjevci and 3.7% of the Yugoslavians[66] working abroad from Serbia are working in Hungary (0.2% of the Serbs do). These migrant workers represent a strong potential in the labour sector and economic sector connections.

[65] Source: Владимир Станковић (2014): СРБИЈА У ПРОЦЕСУ СПОЉНИХ МИГРАЦИЈА; Табела 18. Лица на раду --- боравку у иностранству према националној припадности и земљи рада --- боравка, Попис 2011.; https://pod2.stat.gov.rs/ObjavljenePublikacije/Popis2011/Inostranstvo.pdf

[66] See: Владимир Станковић (2014): СРБИЈА У ПРОЦЕСУ СПОЉНИХ МИГРАЦИЈА; Табела 18. Лица на раду --- боравку у иностранству према националној припадности и земљи рада --- боравка, Попис 2011.; https://pod2.stat.gov.rs/ObjavljenePublikacije/Popis2011/Inostranstvo.pdf

Figure 32: Territorial distribution of the population change in the border region



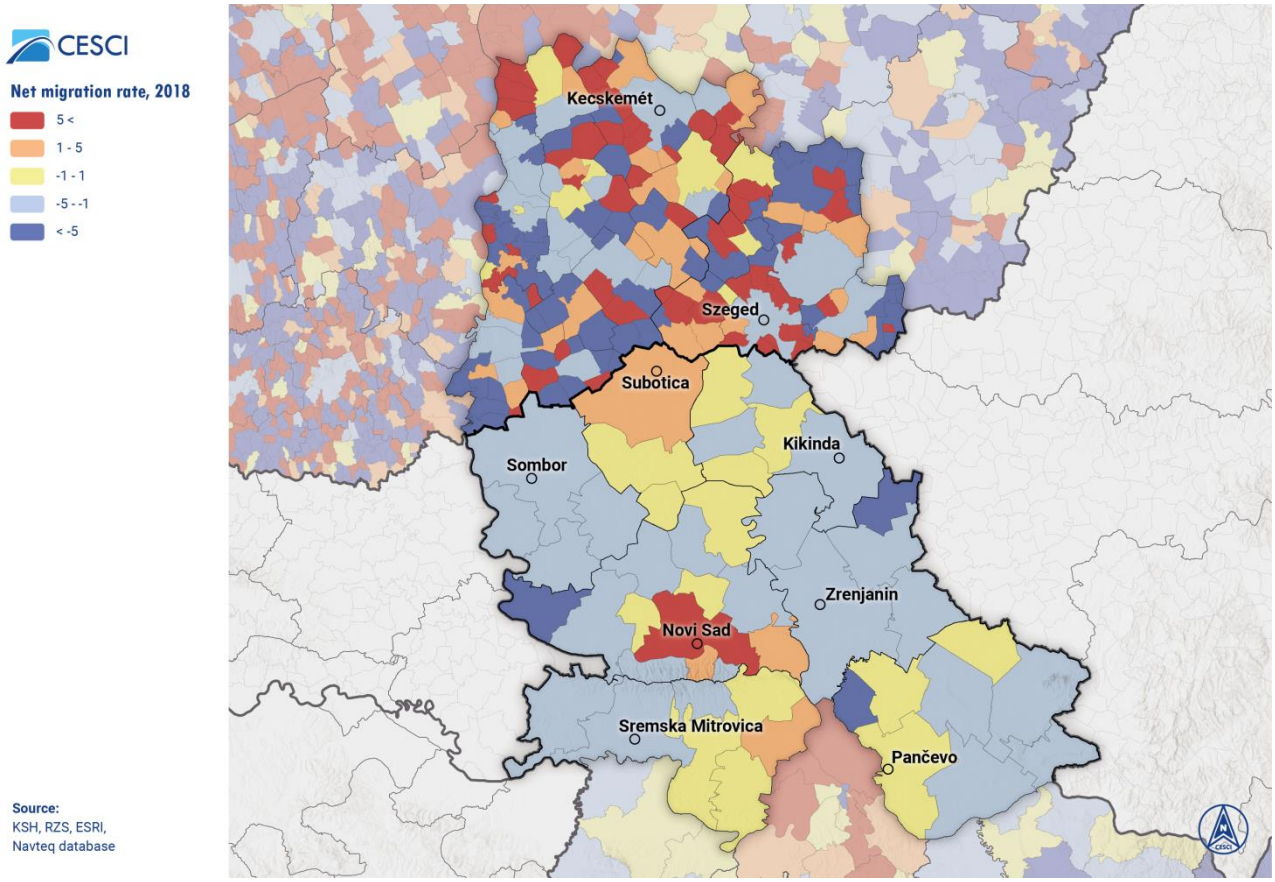
Hungarians from Vojvodina are not present in Hungary only to work, especially in the area of Szeged. Their migration and settlement in Hungary has been going on since the disintegration of the former Yugoslavia, though the intensity of their migration and settlement mainly depends on internal crises (war nodes and enforced military conscriptions in the 1990's, the 2008 economic crisis). It seems like there are no Hungarian communities in Vojvodina with a big population that is preparing to leave its homeland right now. This took shape because of the completed migrations and the population loss of some areas. There are many forms of emigration to Hungary.

- Some people left their homes in Vojvodina and settled down at the currently investigated border zone or in the region of Budapest.
- Others, who are living in two places and usually have a dual citizenship, are commuting weekly or monthly between their old and their new homes because of the schooling of their children, better quality public services, the benefits of Hungarian citizenship (the Family Housing Allowance Program (CSOK), aid, better job opportunities, etc. They can maintain this lifestyle if they live in areas close to the border or near cross-border highways.
- The third group could be those who became Hungarian citizens because of the benefits of a Hungarian passport (better working conditions in Germany and Austria as an EU citizen), but they do not have a place to live in Hungary, only on paper sometimes.

There are obviously other cases as well, not only the mentioned three groups, but those are not that common. It is also important to mention that being a Hungarian citizen was a reasonable and desired EU option for not only Hungarians, but for Serbs, Croatians, Bunjevci, Rusini and other nationalities as well, even though these figures cannot be compared to Germany, for example. Also, the same

trends can be observed in the case of Croatians and Slovaks from Vojvodina towards their EU member homeland.

Figure 33: Territorial distribution of the net migration rate in the border region:



However, one of the negative consequences of emigration is the permanent negative trends of the population in the area. Even though the most significant loss of population does not take place in either the Hungarian or the Serbian side of the border zone, but the indicators of population growth, natality, average age etc. showing negative results are present in both border regions. We can see the regional demographic dominance of Novi Sad and Szeged in this territorial structure. Moreover, Novi Sad is the only town in Vojvodina and Northern Serbia that has shown a positive natural rate of growth (between 0.1 and 10 thousandths) during the period between the last two censuses. The demographic indicators of Subotica show a negative trend and the positive effects of population moving in urban areas are only present in Eastern areas of the municipality/opštine, but this might be because of Szeged is near, not Subotica. However, the population census due next year will supposedly record the significant emigration of the 2010's, and the already negative demographic trends will be present in Vojvodina with even worse rates. The demographic and economic vitalisation of Subotica would probably be the most important thing to do in this region, where the next step could be creating a close relationship with Szeged and removing the cross-border barriers of the development from Szeged. In case of a border regime constantly shifting towards interoperability, it would even work in a western area of Banat, where the negative social impacts of the geographical peripheral position are the most noticeable. This step would reduce the population retention of the Mid-Danube-Tisza Plain as a domino effect with the help of the Szeged-Subotica

axis, but it would push connections in the areas of Eastern Bačka towards Szeged regarding territorial structure.

2.3.1.3 Demography and territorial structure. Does a demographic development model primarily applicable to rural areas exist?

Natural population decline and emigration are direct results of ageing and negative demographic trends. Vojvodina shows the Serbian average regarding the ageing index, and Vojvodina is part of the country that is not structured with Old Serbian small villages where ageing and population loss have serious social consequences. This is observable on the Hungarian side of the border as well, partly because of the settlement pattern, and partly because of the territorial structure of the towns. The most pressing demographic issues are concentrated on the Western part of the border area, which assumes a subregion with spatial deficiencies along the Danube. This can be explained using the current demographic structure: they can only achieve positive trends when influenced by a stronger urban centre. These processes are the result of the Danube being uncrossable (there are only two bridges below Dunaföldvár) and the peripheral centre locations on the Hungarian side. The Danube is the Croatian border from the Serbian side. Its depreciation in status was affected by the neighbourhood of the war-torn areas after the disintegration of the former Yugoslavia and the unsatisfactory Serbian-Croatian relationship. The coherent development of the Serbian-Hungarian border – thus a stronger Apatin-Sombor-Baja axis – would affect the region more than a Western Vukovar-Osijek-Mohács-Pécs/Szekszárd axis.

The question arises whether a complex, population retention, population increasing programme affecting rural areas exists on either the Hungarian or the Serbian side. There are some attempts of this (e.g. the Hungarian Family Housing Allowance Program (CSOK) in rural areas, the modernisation agenda of rural local administrative areas), but the programme built on the main resource of the rural territorial structure: soil, upon which this housing structure was built on, does not exist. Many aspects of the rural development affect the non-urban local administrative areas of the region, but they do not have a system-wide, unitary impact just yet, they only increase the number of local practices. This is why we need to take the effect generated by urban spaces into consideration when analysing the demographic situation, and it would be the best to take the current structure into consideration when planning the urban spaces.

2.3.1.4 The social integration of Roma communities

The official rate of the Roma population does not show characteristics of a core area on either side of the examined border region. On a district/municipality level, the rates only exceed 5% in some areas in Serbia, namely Banat and in the municipality of Bač. Now this indicator shows a rate of more than 5% on a local level in many places, especially in the areas of the subregion along the Danube and Kiskunság in Hungary, and in Banat and some areas in Bačka in Serbia. In the examined area, Roma communities are not present concentrated on a settlement or a district level like the other ethnic groups of the area (Hungarians, Slovaks, Croatians, Rusini etc.), but, rather, stemming from their ethnic and social uniqueness, they are present in parts of the local administrative area and settlements. These appear in the form of segregations affecting the local administrative area and parts of communes of different sizes.

An important element of the Roma integration issue in Serbia is the registration and citizenship aspects, as a significant part of the Roma community does not have (or did not have) official documents meaning that they do not appear at all in the official census data. So, after 2015 the Serbian government took active steps to register these groups and include them in health and education systems. Furthermore, it is important to note that the real number of Romas is more than likely to be higher than the statistical (census) indicator in Vojvodina and in the whole of Serbia, as the number of Roma is further increased by the phenomenon of ethnic mimicry, which is a centuries-old reaction to their ambiguous social status.

The idea of segregation is not exactly the same as the issue of the Romas, but there is significant overlap in both sides. It needs to be mentioned that the definition of segregation is of a national character even in international scientific literature, because it differs in the quantitative and qualitative characteristics of the housing-ethnographic-ethnic structures of the countries. This determines the criteria of establishing segregations: the size, the number of the population, the employment, education, and income situation. Therefore, a similar methodology would be useful to apply to this area with a similar housing structure and similar problems.

There are differences between the two sides of the border in the historical development of the Roma society, even though the housing structure and the problems regarding this ethnic group are basically the same.

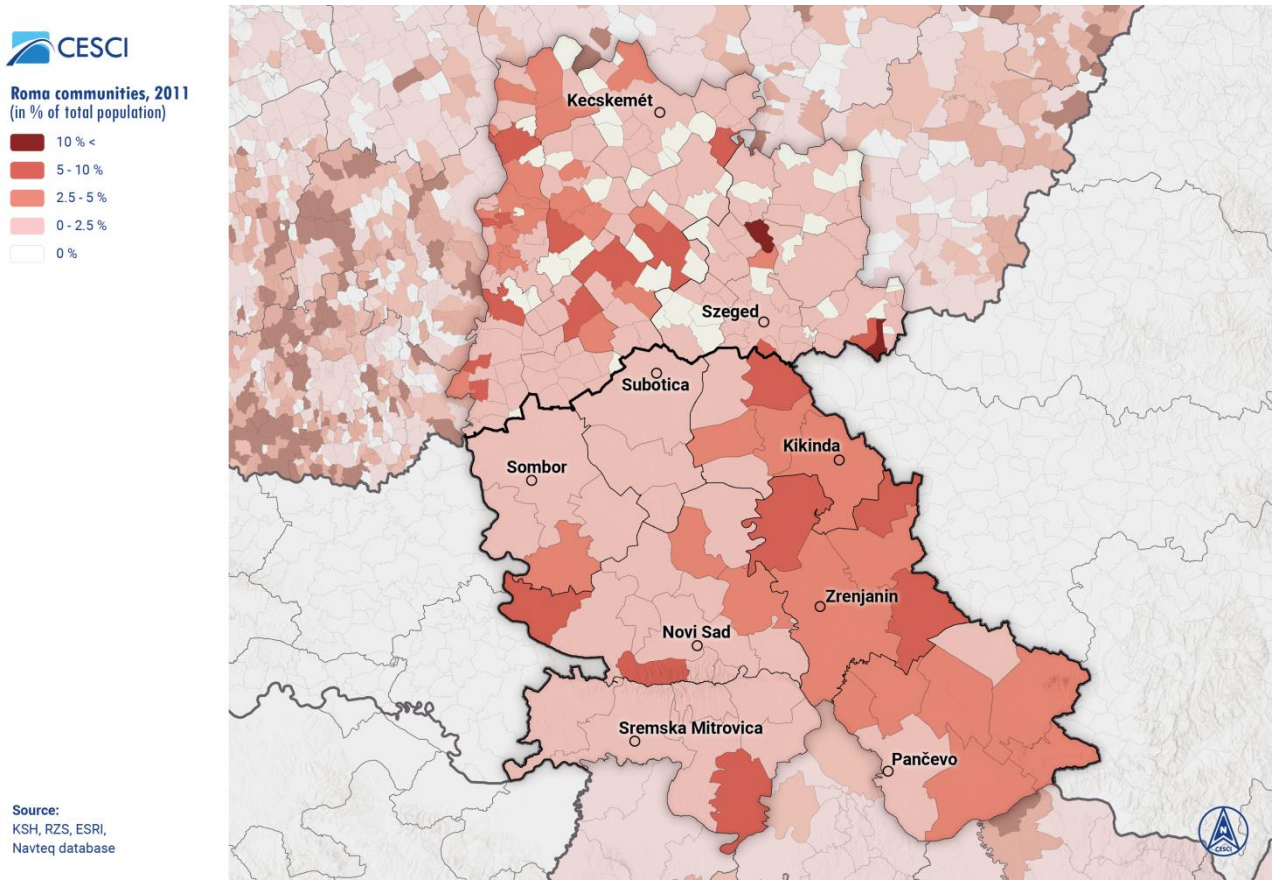
Roma ethnic groups started to appear on the Hungarian side towards the end of the 20th century, when Roma families' properties were "bought out" during the regime change from some areas of South Transdanubia in town centres and other smaller local administrative areas ad were moved to another surrounding local administrative area where the prices of bigger and more comfortable properties are lower. The villages in Hungarian Bačka/Bácska, which are constantly losing their population, attracted the impoverished class (in which the Roma were overrepresented) with the low property prices because of the imbalanced supply and demand.

In Vojvodina, Roma people have been present from 16th century. Their number varied due to the different historical processes that affected Vojvodina (different states governing Vojvodina, WWs prosecution, etc). Lately, the Roma communities were affected by the refugee crises and movements during wartime 1991 - 1998. Mainly Romas from Kosovo – who took up one third of the complete Serbian Roma population in 1991 – fled to the Northern regions of Serbia, around the capital and to the "grey areas" of some towns in Vojvodina (Novi Sad, Subotica, Kikinda). This is how the current structure took shape, in which the Romas in Vojvodina take up 28.7% of the Romas in the whole country. Although this percentage is questionable due to the fact that actual number of Roma people is higher than the official one, it is certain that Vojvodina is not the territorial centre of the Serbian Roma community.

In both countries, we are talking about Romas, but there are differences between Roma communities inside the countries on a regional, language and identity level. Despite these differences, Romas have similar social intervention needs on both sides of the border, and the Roma urban territorial structures are almost the same. In addition, we need to highlight the strongly positive, improving trends of the Roma demographic indicators on both sides of the border, despite the decreasing trends of the majority population. In order to make sure that this national minority – having its own set of values and characteristics – also equally benefit from education, training, anti-discrimination

programmes are very important steps in improving the living conditions of the Roma society: decreasing the number of early school leavers, increasing the number of participants in vocational training, therefore increasing the living standards.

Figure 34: Territorial distribution of the Roma communities in the border region



One of the crucial points of cross-border cooperation is the kind of representation of interest Roma minority communities have. The regional, local level is represented by the minority municipalities (the local authorities and the departmental council) in Hungary, while they are represented by the National Minority Councils (Nacionalni saveti nacionalnih manjina) on the national level in Serbia. In schools, Roma educational assistants were introduced with the help of international organisations and were institutionalized in 2011 as educational assistants whose salaries are financed from the budget of the Republic of Serbia. Similarly, there are Roma health mediators, but their number is significantly lower than that of the educational assistants. In AP Vojvodina two institutions are responsible for Roma issues: the Provincial Department for the improvement of Roma status and the Office for the Roma inclusion within the Government of AP Vojvodina. On the local level two mechanisms dealing with Roma issues are in place: local Roma councils and Roma coordinators. The Strategy for social inclusion of Roma men and women in the Republic of Serbia for the period 2016 – 2025[67] envisages further measures for the inclusion of the Roma minority and the Coordination Body for monitoring the implementation of the Strategy was established in 2017 by the

[67] Strategy for the Social Inclusion of Roma Men and Women in the Republic of Serbia for the Period 2016–2025. https://www.rcc.int/romaintegration2020/docs/5/strategy-of-social-inclusion-of-roma-for-the-period-from-2016-to-2025--serbia-rn

Governmental Decision 02-02-1617/2017. Consequently, projects affecting Romas in Vojvodina are difficult to gather, since the core areas of the Serbian Roma communities are not located in this area, albeit their number is significant. Since the problems are usually local – segregations, schooling, social institutions -they also need to be solved on the local level. However, the resources of the rural areas are quite limited, which makes the creation of projects difficult, they do not even reach the planning phase in many cases.

2.3.1.5 Social poverty and existential polarization

In Serbia, the spatial distribution of poverty is not concentrated in Vojvodina. Aside from the capital, this area had the best regional indicators in the country until 2013. This indicator changed in 2014, and the number of people at risk of poverty increased in Vojvodina, despite the generally improving Serbian trends. According to the statistics, there were 149.000 people at risk of poverty in Vojvodina in 2014, which took up 23.7% of the national average in the whole of Serbia. Poverty indicators show that the youngest age groups are the most endangered ones (under the age of 35). Older-age poverty is much lower in Serbia, therefore in Vojvodina as well. It needs to be emphasized that there is a strong connection between the indicators of emigration of younger generations, youth unemployment and social poverty, and that Roma people and people living in large households are much more in danger in this respect. When it comes to the risk of women's poverty in Serbia, it is almost equal to the rate among men up to the age of 65. However, among people over the age of 65, the gap between men and women is widening sharply and the risk of poverty is 50% higher among women than among men. This is a result of the position of financial dependence of a large number of women and economic inequality within families that the poverty monitoring methodology conceals - when women leave the family circle for some reason, their position often deteriorates drastically. The data show that the most vulnerable are single mothers, retired women, inactive women, women living in rural areas, Roma women and women with disabilities. Measured on an individual level, it is noticeable that women are deprived more than men based on every indicator, from clothes and shoes to the disposal of personal money. Statistical measurements, based on income and expenses, do not necessarily reflect the living standards of the households often taking part in self-sufficient agricultural production in Vojvodina with a unique economic structure, where agriculture is an important sector of activity.

The poverty indicators of the Hungarian border area display a significant spatial distribution. On the one hand, our focus area has the worst poverty indicators in the Mid-Danube-Tisza Plain. On the other hand, the lack of towns creates an internal core poverty between the Danube and Szeged. Thus, a mosaic-like poverty territorial structure takes shape, which is affected by the towns, the capital being close and the local settlement and economic structures. Districts in Bácsalmás, Jánoshalma, Kiskőrös (from Bács-Kiskun County), Kistelek and Csongrád (from Csongrád County) have the worst poverty indicators. This shows that proximity to the border does not necessarily increase poverty, poverty indicators are rather affected by the urban agglomerations, the better developed/developing (public) services associated with them and the labour market situation. Regarding the connections in settlement patterns, this indicator shows the territorial situation of the rural, isolated farmlands. The territory of the farmlands extends to the territory of Vojvodina, therefore every national practice that succeeded in improving the living standards of this housing structure might be viable in the frameworks of international, cross-border cooperation.

Relevant projects previously carried out in the region

SocioAgro - HUSRB/1602/42/0152 - Social entrepreneurship and community agriculture for combating long-term unemployment (2 January 2018-30 January 2020)

The project aims to help families struggling with financial problems (such as unemployed parents), as well as the children with unemployed parents who need some assistance in education. This project's goal is to improve social conditions of the target groups through a complex model of a social enterprise in Drljan in Serbia, job opportunities, trainings, and children's education.

The project activities have two main methodological pillars: education and the power of the community.

PROSOCENT - HUSRB/1602/42/0210 - Promoting Social Entrepreneurship in Serbia and Hungary (1 May 2018-30 January 2020)

Social enterprises can serve as an excellent opportunity for people with mental or physical disabilities to strengthen their self-esteem an enable them to do useful things; to earn money for themselves while doing useful work for the society.

This project aims to give social character to innovation, and thus create results that are beneficial both for individuals and the society. The goal of this project is to encourage social enterprises in ground-gaining in the border region, based on the practice from Hungary, as well as to call attention to the fact that disadvantaged people are equally important members of the society.

The project partners will create the model centre of innovative social enterprises in Senta. It will be a unit with necessary infrastructure for providing both hard and soft help to initiatives for setting up social enterprises. Besides the space, the Centre will provide legal and other type of advice to interested parties.

Additionally, a social enterprise will be developed within the project as a pilot project with the goal to cover the entire process from the idea to implementation. After the maintenance period of the project, this social enterprise will continue to serve as a good example.

WOMEN-TO-SAVE - HUSRB/1602/42/0073 - Social entrepreneurship for women in rural areas (15 March 2018-30 March 2020)

The goal of this project is the social and economic empowerment of women from rural areas and turn them into a great force for change in their community. This project will establish new opportunities and increase the capacity for the development of social entrepreneurship through new innovative models for the transfer of knowledge and skills for women in rural area in the Hungary-Serbia border region thus enhancing the social and business opportunities for unemployed women from those areas.

According to the data of Agriculture Expert Service Sombor (AESS) 96% of West Bačka territory is suitable for lavender growing. The project will establish a social enterprise for growing and producing lavender – the Serbian Lavender growing cluster (SLGC). Lavender is a long-lasting herb with a life span of 12-15 years. Farming lavender can be done even in a small backyard patch, requiring no investments in big plantations. The women in the rural areas may join the cluster and could work more productively since they can join efforts for promoting new products on the standard and on-line market.

TRANSDIA - HUSRB/1602/42/0248 - TRANSFORMING DISABILITIES TO WORK ABILITIES (1 February 2018-20 April 2019)

The main goal of the project is to increase the social acceptance related to the employment of people of reduced ability to work. The project focuses on improving the life circumstances of disabled people by creating job facilities. Through the cooperation of organization helping disabled people, the project will provide training for mentors, who will be a bridge between disabled people and companies and help them find an appropriate job. At the same time, the project will develop a protected work environment for people who are multiple reduced abilities and no real chance of being employed on the open job market.

Activities included in the project are as follows:

- Research
- Preparatory training for mentors
- Sensitization of employers
- Mentors' services provided to the participants of the labour market
- Development of a protected environment
- Study tour

Based on the analysis of the topic 'Social challenges', the following types of potentially functional areas can be defined within the region:

- Ageing areas: areas affected by severe ageing, i.e. settlements in Hungary and municipalities (opština) in Serbia where the ageing index exceeds 1.5 as of 2018.
- Dependent areas: areas affected by high level of dependency, i.e. settlements in Hungary and municipalities (opština) in Serbia where the dependency ratio exceeds 53% as of 2018.
- Depopulating areas: areas affected by severe population loss, i.e. settlements in Hungary and municipalities (opština) in Serbia where the population decrease was above 5% based on the years between 2013 and 2018.
- Areas of emigration: areas affected by severe population loss, i.e. settlements in Hungary and municipalities (opština) in Serbia where the population decrease was below -1 as of 2018.
- Disadvantaged areas: based on complex indexes incorporating the dimensions of education, unemployment, income, and poverty indicators where complex socio-economic challenges affect high proportion of the border population.

2.3.2 Education, training

Education has an important role in the development policy of both nation states and regions primarily because we need to solve the problems of the future today by developing the education sector. However, planning and carrying out strategies are harder in this sector, as feedback will only be available in 8-12-14 years' time, when there will not be an opportunity to refine or fine-tune structures, not to mention to modify them. Therefore, we need to predict the future in this sector, so that we can plan not only the current, but the future labour market, economic, technical-technological, communication or human resource management needs. Planning and thinking in terms of education or education system can only be done considering the most progressive economic, social, or technological problems. This means, regarding the Hungarian-Serbian border region and its support of cooperation, that we need to think in terms of an interconnected labour market, where educational and training consistency are necessary and desired.

2.3.2.1 Educational systems and relations

The Serbian and Hungarian educational systems are similar in many aspects, caused partly by the history of the second half of the 20th century – education development policy in the socialist system –, partly by the challenges in the first 15 years of the 21st century – unemployment, emigration, ageing. Moreover, the municipalities (market towns and a sparse, territorially expanded system) and economic structures (the presence of agriculture above national average and big towns that stand out of this) of the areas of Vojvodina and the municipalities of the Southern Great Plain along the Serbian border are similar. The Serbian educational system has three tiers – obligatory primary education with one year of pre-school education, secondary and higher education levels. Also, pre-school institutions and getting a postgraduate degree need to be added to these. The Serbian educational system matches the Hungarian system, except for the magisterium degree which is inserted between the PhD and the Master level in Serbia and has no exact counterpart in Hungary.

Cross-border cooperation can be carried out on every mentioned level, but it can obviously play different roles, depending on the level itself.

The cooperation goals of **primary education** are social and community activities to get to know each other. Developing language competency has special importance here, which was discussed in more detail in the "Language and language compatibility" chapter. The other opportunity is determined by sports and other team/group activities, and by municipality frameworks (e.g. partner municipalities).

There are differences between the two countries regarding the structures of primary educational establishments. There are two actors in maintaining school institutions in Hungary. One of the maintainers is the Klebelsberg Institution Maintenance Centre, which governs most schools, but there is a smaller number of municipally, ecclesiastically or minority supported autonomous institutions as well. According to the Education Act (2017/88)[68], in Serbia schools are partly maintained on the municipal level with self-governance, partly by the state. In Vojvodina, establishing new educational

[68] Law on the Fundamentals of the Education System: 88/2017-3 / Закон о основама система образовања и васпитања: 88/2017-3 https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/skupstina/zakon/2017/88/1/reg

institutions is the competency of the provincial authority. The latter determines that in the system of cross-border co-operation, the province itself can exercise its decentralization rights, which in this case is the entire examined area. According to the law, it is the state or the province of Vojvodina that decides on international cooperation, but the administrative unit can also decide on some projects, regarding national cooperation, for example.

Secondary schools in Hungary are maintained the same way as primary schools, and in Vojvodina the law that regulates the basis of the education system regulates the basics of pre-school, primary, secondary and adult education as well in line with the Strategy for Education Development in Serbia 2020[69]. Another similarity between the countries is that both have a public education system that takes care of students with different abilities and areas of interest; after completing the primary school, pupils can choose to attend high schools offering general education, vocational schools, art schools, combined schools (a certain mix of the previous ones) or schools for children with special needs. Also, both countries favour dual education; Serbia accepted laws about dual education[70], which aims to prioritise this form of education in vocational training that strengthens professional competence. There is a high demand for this in the mechanical, metalworking and tool constructing industries in Serbia, the centre of which is the Novi Sad-Beograd axis. Such mentor programmes are already taking place at several domestic and joint ventures. A similar number of educational programmes is present in the territories of Kecskemét and Szeged in Hungary. Besides the mentioned axis, Subotica and Zrenjanin show a significant concentration in technical secondary schools in Vojvodina in the Serbian education system. Sombor, as the only notable secondary educational centre in the territory of Zapadnobački okrug, is unable to have a significant impact on its agglomeration. Secondary schools are spread out evenly in the area of Vojvodina: there are 14 secondary schools in Novi Sad, 10 in Subotica, 8-8 in Zrenjanin and Pančevo, 7 in Sombor, 6-6 in Vršac and Sremska Mitrovica, and four other towns have 4 more secondary schools. Secondary schools in Vojvodina are mostly high schools (28), there are 23 technical secondary schools, and 7 and 20 vocational schools and basic secondary schools (with technical secondary and vocational programmes and mixed training). There are non-state maintained, private secondary schools in some parts of Serbia as well, but these are mainly in urban areas, where these schools with tuition fees can be attended by pupils whose parents are of higher economic status. On the Serbian side, there are not only high schools, but technical secondary schools and vocational schools as well, in which the language of education is Hungarian or other minority languages*.

Article 24 (1) of the Statute of the Autonomous Province of Vojvodina (Official Gazette of the Province of Vojvodina, No. 20/14) states that in the bodies and organizations of the Province of Vojvodina the

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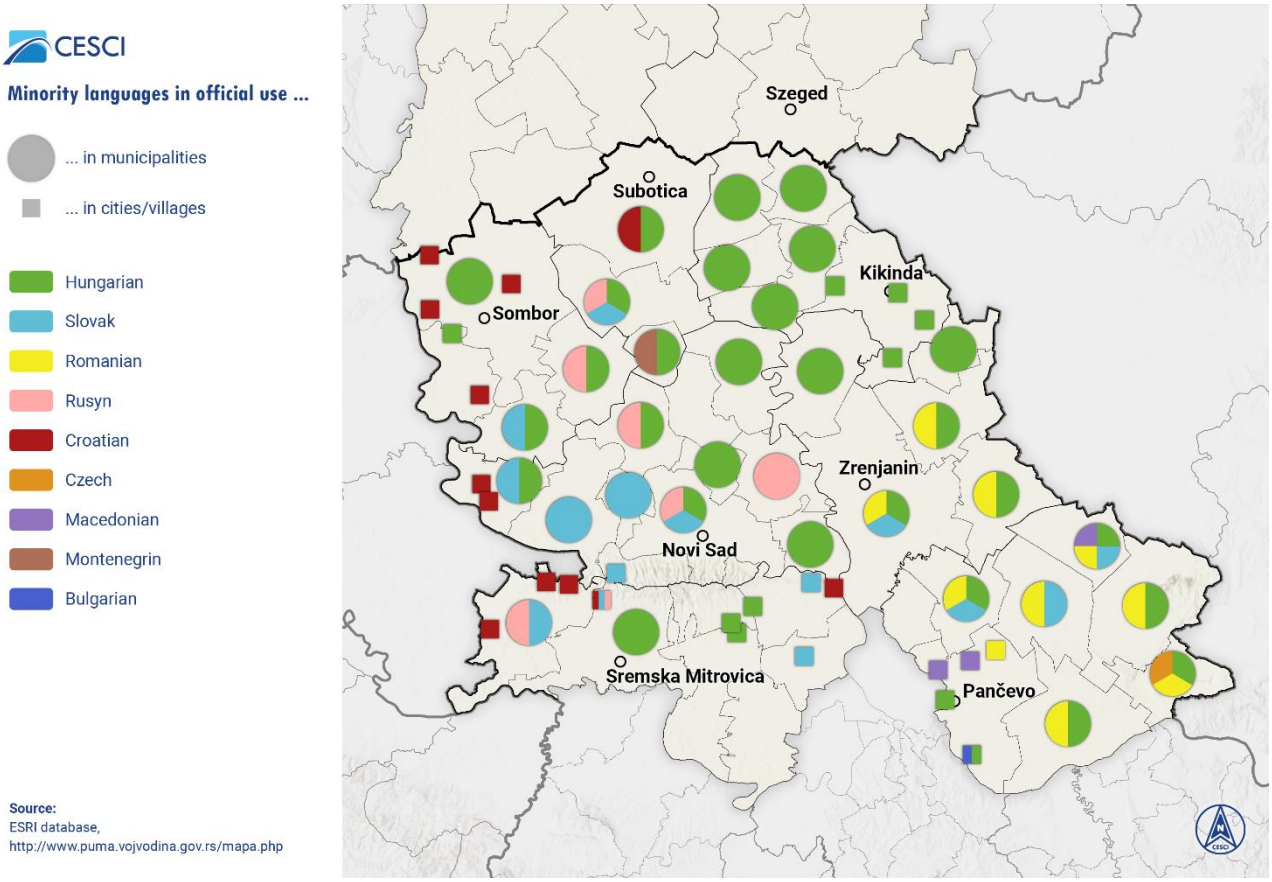
69 Government of the Republic of Serbia (2012), Strategy for Education Development in Serbia 2020. http://www.mpn.gov.rs/wp-content/uploads/2015/08/STRATEGIJA-OBRAZOVANJA.pdf

70 See the related legislation: ЗАКОН о дуалном моделу студија у високом образовању / „Службени гласник РС", број 66 од 18. септембра 2019. (LAW on the dual model of study in higher education / "Official Gazette of RS", No. 66 of September 18, 2019.) https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/skupstina/zakon/2019/66/1/reg and ЗАКОН о дуалном образовању / "Службени гласник РС", бр. 101 од 10. новембра 2017, 6 од 24. јануара 2020. (LAW on dual education / "Official Gazette of RS", no. 101 of 10 November 2017, 6 of 24 January 2020.) https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/skupstina/zakon/2017/101/1/reg

Serbian language and the Cyrillic spelling as well as the Hungarian, the Slovak, the Croatian, the Romanian and the Ruthenian language and spelling are in official use. The local self-government unit is obliged to introduce the language and script of the national minority into equal official use by its statute if the percentage of members of that national minority in the total population on its territory reaches 15% according to the results of the last census.

As it can be seen from the figure below in Vojvodina there are 28 municipalities (out of which in 12 exclusively, apart from Serbian) where the Hungarian language is in official use (plus 10 cities/villages), 11 municipalities (out of which in 2 exclusively, apart from Serbian) where the Slovak language is in official use (plus 4 cities/villages). Apart from these two languages, Ruthenian is the only other minority language that is not sharing its official use status in a municipality. Romanian is also officially recognized in 9 municipalities and 1 city. Other minority languages in official use in Vojvodina are Croatian, Czech, Macedonian, Montenegrin and Bulgarian.[71]

Figure 35: Minority languages in official use in Vojvodina



The secondary school situation of the Hungarian side is much more polarized. In both counties, county capitals distinctly have the most secondary educational institution out of all institutions. In Bács-Kiskun municipality, there are 14 such institutions in Kecskemét, 7 in Baja and 5 in Kalocsa. The other education centres have 3 institutions at most. The situation in Csongrád megye is even more centralized. Szeged itself has more secondary schools training locations (25) than all the other

[71] The source of data represented in the text and on the figure is from the Provincial Secretariat for Education, Regulations, Administration and National Minorities – National Communities, Autonomous Province of Vojvodina. See here: http://www.puma.vojvodina.gov.rs/mapa.php

education centres in Csongrád megye together (17). The Serbian language is not taught in secondary schools on the Hungarian side.

There is high quality secondary-level artistic training in both areas, the centres of this are Novi Sad, Kecskemét and Szeged.

The primary ground of secondary school cooperation is the interest group in similar fields and professional competences in the international competition. The developments of the Serbian educational structure over the last few years show well visible results, though they are mainly visible in the areas of Novi Sad and Beograd. Interestingly, the great vocational training profiles of Banat resulted in more direct investment than in Zapadno-bački okrug and Severnobački okrug, despite the similar demographic problems. The Hungarian component in Vojvodina is present in the modernization of the Serbian education structure on the part of both the Hungarian state level talent support and the Hungarian working capital. There is no such Serbian presence in the investigated area of the Southern Great Plain.

Besides the education of young people, there are other opportunities for vocational training: adult education, re-training or choosing a new career. This can contribute to the consistent development of the border region's human resource capacities in other ways than training young people, and as a result, cross-border labour flow would happen instead of emigration.

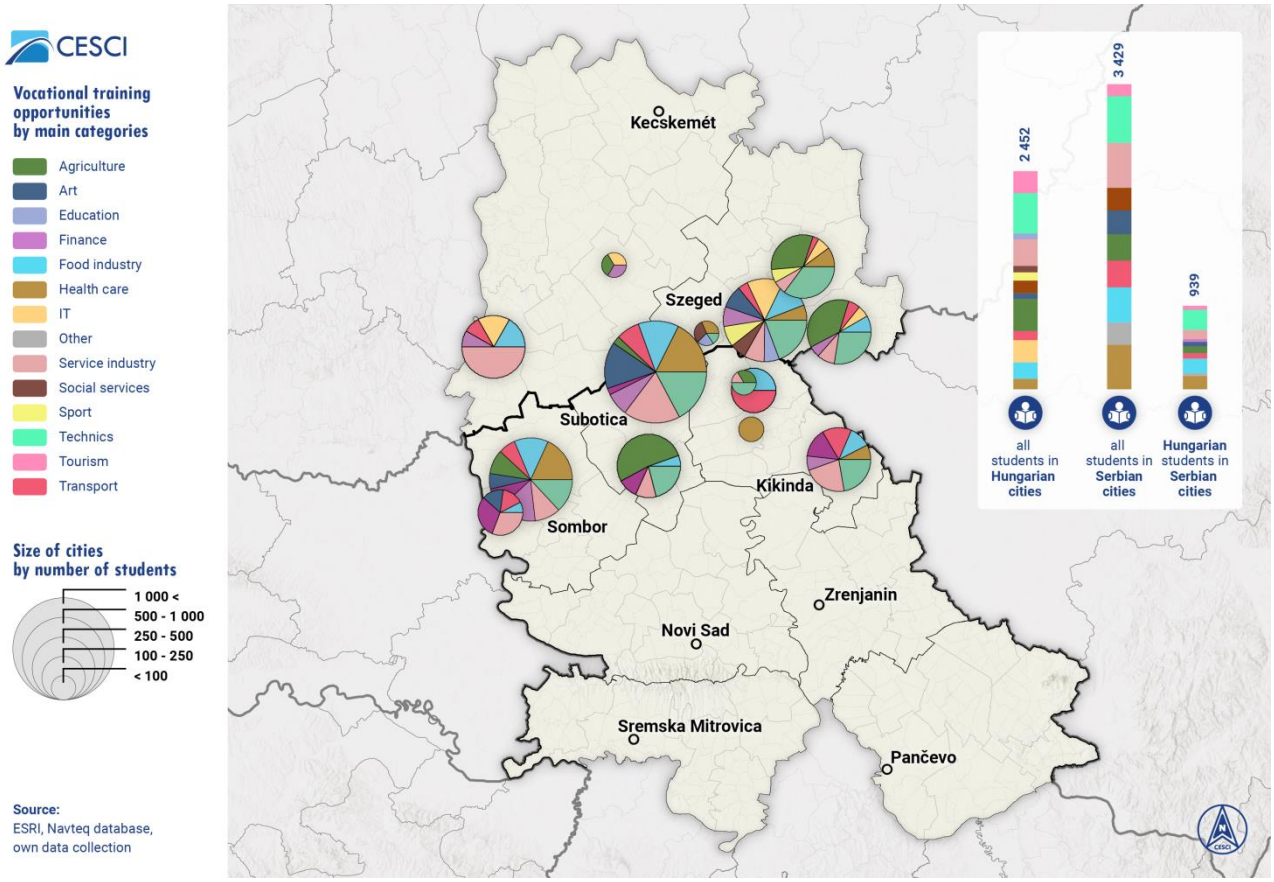
Many Serbian and Hungarian specialists have confirmed that vocational training can keep their graduates from leaving the country in many professions. This "convincing effect" is not simple in case of medical health workers – nurses, medical visitors, healthcare assistants or even doctors with a higher education – as they work mostly in national public institutions along the investigated border, where salaries are still not competing with the Western European and Scandinavian health care salaries, especially in Vojvodina. The indicators of keeping young people at home are much better in the engineering industry. Well-trained mechanics and young people starting their careers with a degree in electronics or mechanics, mainly in the area of Srem, do not tend to face unemployment. There have been similar processes recently in the region of Banat, where the rising agglomeration of Zrenjanin, concerning SMEs and multinational corporations, creates many jobs, therefore it has an effect on young people finishing secondary schools or universities outside of the agglomeration as well, in the fields of mechanics, mechatronics, CNC programming, bench fitting, electricity and other metalworking professions. The widespread local training/educational institutions, the favourable transport and strategic situation and the municipality's development policy contributed to such developments of the town. Unfortunately, this does not apply to Subotica. The investments in Subotica are not based on local education structure, but rather on cheap labour. Even though there are programming and other training courses needed in the IT sector in Subotica, the town cannot keep graduates there, many of them go to Hungary or Western European countries.

There is a labour market supply/perspective in Hungary, the agglomeration, of Szeged, for people who finished their studies there, and even for Hungarian speaking people who finished their studies on the northern parts of Vojvodina, but there is no significant labour shortage yet. However, local SMEs and multinational corporations around Kecskemét – north of Kalocsa – must deal with vital gaps in the workforce. This is especially common on the border of Pest and Bács-Kiskun counties, where there is a complete shortage of skilled workers in engineering and electricity, not to mention

the nationwide labour shortage, like CNC turners, CNC programmers or IT experts, the acute shortage of these is even more noticeable here.

Harmonising vocational training systems more efficiently could create opportunities to collectively manage the labour shortage in increasingly interconnected border region labour markets.

Figure 36: Vocational training opportunities in the border region



The proportion of children and adults in Serbia with **special needs** ranges between 1-2% of the total population. Among school-age children, this proportion was 1.7% in the 2015-2016 school year. In Serbia as a whole, about half of these school-age children continued their studies in special institutions and the other half in the framework of integrated public education. The Serbian government has taken several measures in recent years to introduce and strengthen inclusive development, so the legal and institutional framework is adequate in this area. The biggest problem is underfunding, as the percentage of Serbian GDP spent on this purpose is only half the EU average.

Similarly, in Hungary more and more attention is paid on the governmental level to help children and adults with special needs which is also justified by the continuous increase of the affected group. In Hungary, the proportion of students with special educational needs participating in primary and secondary education increased from 3,6 to 6,9% between 2001 and 2018. Geographical disparities are relatively modest and there is no clear spatial density, however, the proportion of students with special needs are the highest in Bács-Kiskun and Csongrád counties, the two Hungarian counties included in the programme territory.

Higher education institutions – universities and colleges – are the most important institutions of international cooperation in the educational system, because of their high levels of autonomy, the

cumulated theoretical and practical knowledge, the fully fledged interest articulation of international relations and the most mobile age group of students (aged between 18-24).

The Serbian and Hungarian higher education structures are similar in the investigated area. In both regions, the biggest towns – Szeged and Novi Sad – have the largest universities, in terms of both the faculties and the students. The two mentioned universities have been maintaining a relationship for several decades, partly because of them being close to each other. This was included in the previous cross-border cooperation programme as well. There are differences in size regarding the two universities. The University of Novi Sad has 50.000 students, while the University of Szeged has 11.000. The mentioned ten universities have ten university faculties and six further remote faculties in Subotica, Sombor and Zrenjanin. The University of Szeged has remote education centres in Hódmezővásárhely and Orosháza, and it has 13 faculties in Szeged. By and large, the Bologna dual education system is operating in both countries (bachelor and master degrees); this similarity contributes to the relatively smooth way of cooperation in the field of education as well.

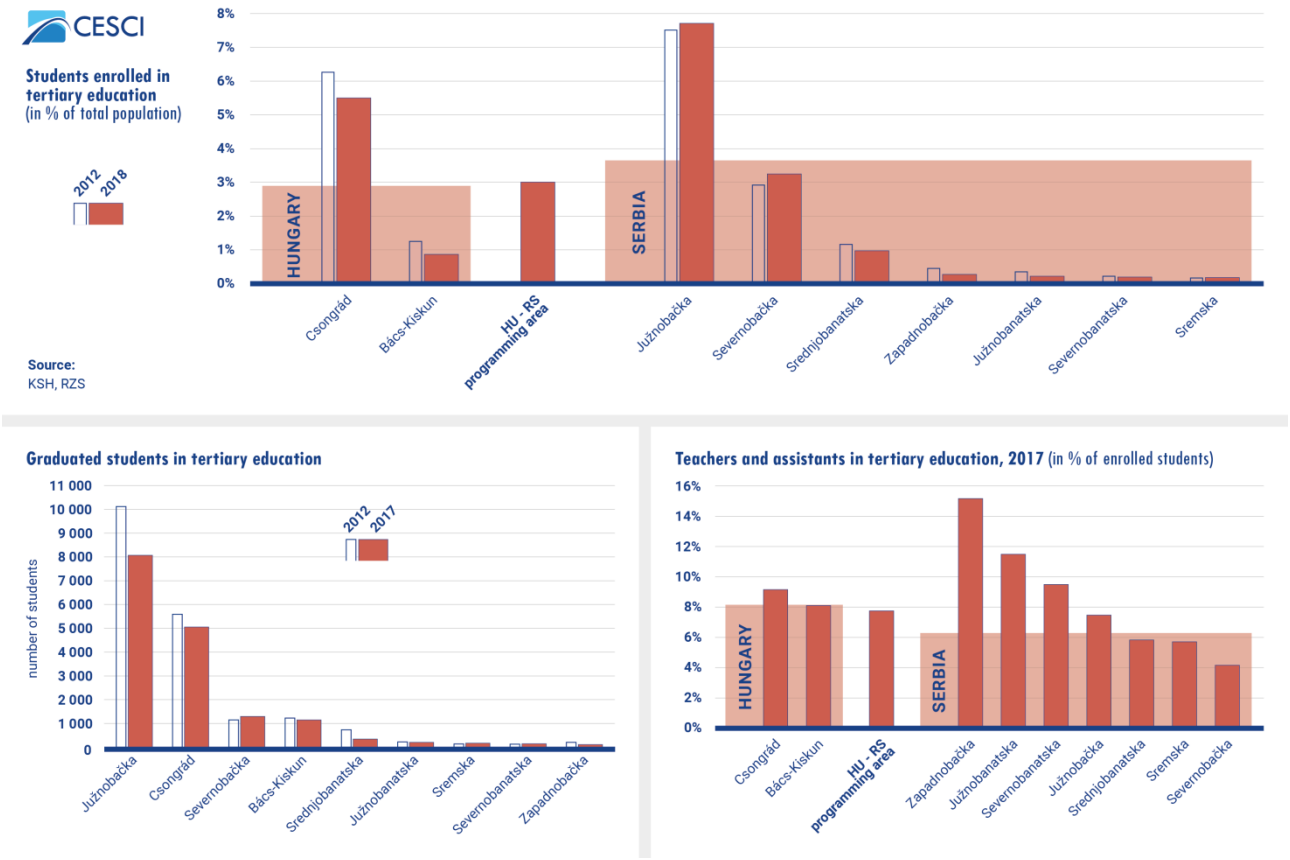
On the Hungarian side of the region, other significant higher education activities are present in Kecskemét, Baja and Kalocsa, and universities in Budapest and Szeged have remote departments in Hódmezővásárhely and Baja.

Education in Hungarian, as well as in other minority languages, operates in many departments at the University of Novi Sad, while the Faculty of Humanities at the University of Szeged offers education is Serbian. Also, Croatian teacher training[72] is operating in the Eötvös József College of Baja, and its significance and agglomeration affect the whole Croatian speaking community in Southern Hungary. Until 1990, Serbian teacher training was operating in this college as well. There is no Serbian teacher training in the region currently.

Private universities in Serbia have been taking part in higher education increasingly from the 1990s, but they are not present in the cross-border cooperation systems. The main reason for this is that these institutions tried to enter the market by launching popular or really necessary majors, being compatible with the domestic market and supplementing or providing alternatives to the state system. These private universities in Serbia often display illusory upswings and strong setbacks and it is regarded by some as a allegedly corruption motivated area – this obviously does not apply to the whole sector, but the cleansing process is currently taking place.

[72] This is worth mentioning for two reasons: The first: people who declare themselves ethnic Croatians, and could act as an interconnecting link between the two sides of the border, live in both sides of the border region. The second: because of the similarities between the Croatian and the Serbian languages, those who acquire some kind of Croatian language knowledge on the Hungarian side will be able to gain more knowledge and communicate better with the Serbian side, as if they were left in the inclusion of Hungarian language knowledge.

Figure 37: Main indicators of tertiary education in the border region



There is a significant difference in the university management in Hungary and Serbia: university faculties in Serbia are more autonomous and there are separate legal entities inside the university, therefore they can decide on their participation in the cooperation or the programme independently of the larger university structure. Only universities have this right in Hungary, faculties do not.

The attracting power of the capital is present in both border regions due to the capital's proximity and transport connections. This is a Hungarian territorial structure, which affects the higher education image of Kecskemét, for example. This occurs mainly in south Banat and Srem in Vojvodina, but it does not affect bigger towns.

The last decade has significantly changed the Hungarian higher education sector[73]. As a result, the number and rate of students significantly decreased, and the number of higher education participants reduced or concentrated institutionally. This process has not happened on the Serbian side, therefore overeducation is highly present in some faculties – mainly in the fields of economy and pedagogy, as the amount of students graduating in these fields are in proportion to the labour market needs.

[73] Mostly through factors such as introduced quotas, demographic changes, state scholarship limits, changing point system, language exam requirements. For a detailed analysis please see: OECD/European Union (2017), "Overview of the Hungarian higher education system", in Supporting Entrepreneurship and Innovation in Higher Education in Hungary, OECD Publishing, Paris/European Union, Brussels. DOI: https://doi.org/10.1787/9789264273344-6-en

2.3.2.2 Previous projects and experiences

In the field of education and training, we can mention several projects from the last two IPA programme periods. However, for this, we need to interpret the concepts of education or training broadly, as a summer camp can be a training location as well as creating e-learning material, or developing it: bringing content to a knowledge-sharing, educational platform. Keeping this in mind and considering the supported projects of the last two application periods, we can establish the following groups.

The first group are those projects where some components of the education structure are present, like schools, secondary schools/vocational centres or universities, but the projects did not/does not contain any training components.

The second group is when non-education organisations, but economic or other public service partners integrate education and training into their projects. There are many of these projects related to agriculture, environment protection or even people with disabilities.

The third group is when project partners deliver the transfer of knowledge, but not in a form of training courses.

Out of the education structure components, primary schools are only present on the target group level. Institutions of early education do not appear as a partner in any of the projects in the closed two rounds of the programme. Secondary schools or education centres (vocational centres) do appear in some projects, but mainly not for an educational purpose, but rather to get to know the territories (cities and the countryside) on the other side of the border, to build relationships with the partner institutions and to better understand the local identity. Universities are the most present and active level of education and they, as already mentioned, use their autonomy and their experiences as an opportunity for connecting in the field of international research-education innovations, It is interesting to mention that establishing or preparing a joint education component, e.g. accredited training or a joint educational programme, did not happen over the last programme period. There is a simple explanation: the previous international relations and schooling strategies of universities have already established the mental and real boundaries, in which the schooling and human resource fields are determined, and the projects have not been able to exceed this prolonged experience yet.

The willingness of cross-border cooperation is influenced by the social, scholarship and talent supporting funds between the two states, which mainly involve the large number of Hungarians, with a more structured political representation, living in Vojvodina. There are parts of these projects that affect municipalities, education, institutions (educational, cultural, etc.) and some social groups.

2.3.2.3 Early school leavers

Early school leaving is an important and strategic educational and social problem, mainly because of the ageing population pyramid and the constantly decreasing school-age generations. Decreasing early school leavers would increase employment and poverty indicators in both areas – therefore in this case, we can talk about a policy area including complex demographic, welfare, and educational problems.

The number/rate of early school leavers is quite different in the two countries in Hungary it being 12.5% and in Serbia 6,8% in 2018[74]. The EU average is 10.2% and the 2020-A EU goal is to bring this rate under 10%. When looking at data collected by the countries, divergencies can be observed as the methodology of producing these rates is not the same in the two investigated border regions, as those who could not start school in the first place are not counted in this rate in Serbia, the Serbian rate without these pupils was 8.3% in 2015. The aim was to push the early school leavers' rate under 5% in the 2020 goals of the Serbian education development strategy (Strategija razvoja obrazovanja u Srbiji do 2020), but this unfortunately failed. Specialised papers prove that a high share of early school leavers come from segregated Roma-majority communities in both areas. The Statistical Office in Serbia does not publish territorial data about the early school leavers, but based on the published research papers[75], this is not a specifically Vojvodina-centred social-educational question.

The indicators of the two border counties on the Hungarian side are far below the national average and are demonstrating much better rates than Nógrád megye or Borsod-AbaújZemplén megye, which are facing this problem the most. According to data from the first semester of the 2019/2020 school year, the rate of students at risk of leaving school early is 8.39% in Bács-Kiskun megye, while this rate is 5.15% in Csongrád megye, which is the second best data after Budapest. The territorial distribution of this rate on a district level mainly correlates with the poverty indicators, and it approaches or exceeds 10% in the districts of Bácsalmás and Jánoshalma, as well as Kalocsa and Kiskunmajsa[76]. Cooperation was already initiated regarding this strategic educational question. The project CROCOOS[77], also funded by the Tempus Public Foundation, has researched early school leaving data in Slovenia, Hungary, and Serbia. It also helped improving the indicators of early school leaving with training courses and mentorship programmes and exploring the underlying reasons of early school leavers in the three countries. The aim of the project CroCoos – Prevent dropout! is developing an institutional early warning and intervention system and testing its applicability in three partner countries, after collecting and analysing data. In the Hungarian Country report[78] it was stated, that the dropping out from school in general has been the end of a cumulative process resulting from personal, social, economic, education and family-related reasons. It usually happened at upper secondary level, in the first grade (9th), but problems usually start much earlier. The highest drop-out rates were registered in 9th and 10th grades of the vocational schools (szakiskola), where one third of pupils drops out yearly. The rate of those who start 9th year and could not obtain a final degree is about 1/3rd in Vocational Education, where Roma students were especially in danger: only

74 Source of data: Eurostat: Early leavers from education and training by sex and labour status.

75 For instance: Centar za socijalnu politiku (2018). Sprečavanje Ranog Napuštanja Obrazovanja. Prevention of early school leaving. http://csp.org.rs/sr/assets/publications/files/CSP-Sprecavanje_ranog_napustanja_obrazovanja.pdf

76 See: https://www.kir.hu/kir2esl/Kimutatas/VeszelyeztetettTanulokMegoszlasa

77 See: http://oktataskepzes.tka.hu/en/crocoos

78 Tempus Public Foundation (2014): Country Report on Early Warning System for the Prevention of Early School Leaving: Hungary. http://oktataskepzes.tka.hu/content/documents/CroCooS/Country_reports/Country_report_Hungary_final.pdf / p. 20-21.

22% of them attained an upper-secondary level degree. The Serbian Country Report[79] said, that children who has quit regular schooling most often originate from marginalized groups (the Roma). They either do not continue schooling at all or continue in schools dedicated for adult education. The highest dropout rate was recorded between the fifth and sixth grade. The rate of primary education completion among the children from rural areas was significantly lower. However, there were large disparities in dropout rates across municipalities. Data indicated a negative correlation between municipal development levels and dropout rate.

The Útravaló-MACIKA scholarship programme is a primarily secondary school programme for disadvantaged students in Hungary, which partly tries to solve the problem of early school leaving, partly supports students with disadvantaged social and existential backgrounds in reaching the next educational level. The "vocational bridge" programme (they are now called "dobbantó" programme) is operating in Hungary especially for early school leavers. It is trying to encourage early school leavers to finish primary school and to acquire a professional competence in any profession.

Preventing dropouts from the education system is recognized as one of the priority measures in providing quality education for all in the Strategy for the Development of Education in Serbia until 2020[80], the Strategy for Social Inclusion of Roma Men and Women in the Republic of Serbia for the period from 2016 to 2025 and the Programme employment and social policy reforms (ESRP1, 2016)[81].

One of the good examples is the project "Prevention of dropouts from the education system of the Republic of Serbia", implemented by UNICEF and the Centre for Educational Policies, in cooperation with the Ministry of Education, Science and Technological Development, developed a model for dropout prevention that was tested in ten basic and high schools in Serbia.

The model consists of three components. The first component is the System for early identification and response (Early warning intervention system - EWIS) which includes activities and interventions at the school level but also joint activities with partners within the local community. Within these components students with the highest risk of dropping out are identified and for them individualized support measures are created, i.e. an individual rash prevention plan (IPPO). The second component of this model consists of prevention and intervention measures school level, that is, measures and activities related to inclusion parents, measures, and activities aimed at providing peer support and developing and implementing reconceptualized supplementary teaching. The third component of this model relates to strengthening school capacity and activities that influence the change of school culture and include training for the team working with school dropout and training of all teachers.

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79 Ana Pešikan (2015): Country Report on Early Warning System for the Prevention of Early School Leaving: Republic of Serbia. http://oktataskepzes.tka.hu/content/documents/CroCooS/Country_reports/Country_Report_Serbia_final.pdf / p. 6-11.

80 The Ministry of Education, Science and Technological Development of the Republic of Serbia (2012). Strategy for Education Development in Serbia 2020. https://erasmusplus.rs/wp-content/uploads/2015/03/Strategy-for-Education-Development-in-Serbia-2020.pdf

81 Centar za socijalnu politiku (2018): Republic of Serbia: http://csp.org.rs/sr/assets/publications/files/CSP-Sprecavanje_ranog_napustanja_obrazovanja.pdf

2.3.2.4 Language and language compatibility

Establishing the basis of language communication is a crucial point of educational cooperation, or even cross-border cooperation as a whole. On both the Serbian and the Hungarian sides, the majority population of the country do not really know or use the language of the other country. Not many people speak the language of the neighbouring country or region, except for those who live on the other side of the border as a minority. However, there is an asymmetry towards the Serbian side regarding the two minority groups. Hungarians living in Vojvodina are the biggest minority in Serbia (excluding Kosovo and Metohija) with their population of a quarter million, which is 3.5% of the country's population. Despite, Serbians living in Hungary only take up 0.1% of the Hungarian population. The ecological core area of both minorities is along the Hungarian-Serbian border between Szeged and Subotica, and both can be considered bilingual. The Hungarian community on the Serbian side can serve as a great linguistic link. 98% of the 250.000 Hungarians in Serbia live in Vojvodina, therefore this community is the main driving force behind cross-border cooperation and an important link between the two nationalities. Their minority right to education in the minority language is fully exercised as the Hungarian language is present in the educational system of Serbia (including every level between kindergarten and university) in varying proportions, depending on the school types.

The situation is different on the Hungarian side because on the Hungarian side, the presence of minorities is marginal compared to the diversity of Vojvodina presented on the map above on the proportion of minorities. The historical settlements of Serbians in Hungary reach the investigated area around Szeged. The Bunjevci communities on the Hungarian side of Bačka/Bácska are speaking a dialect of Croatian, which is closely related to the Serbian language, and these communities are also settled on both sides, in the area of Baja-Sombor-Subotica, mainly in Vojvodina. Also, they are teaching the Croatian language in local primary schools in Hercegszántó (where Croatians, Šokci and Serbians also live), and in two municipalities of the Serbian-Croatians living in along the Danube (Dusnok and Bátya). Those institutions where Serbian or Croatian is taught in the primary schools of the region (they do not teach these languages in secondary schools at all) are related to these two historical minorities (Croatian and Serbian) in Hungary. Those are the following:

- Deszk – as a subregional association member institution of the Nikola Tesla Serbian Kindergarten, Primary School, High School and Students' Home in Budapest (where the education is Serbian-Hungarian bilingual) in the first 4 grades, in Deszk Serbian language is taught as an optional subject. The Serb National Council maintains the school.
- Magyarcsanád – they are teaching the Serbian language as an optional subject in the primary school of the village.
- In Szőreg, located within the municipality of Szeged, they are teaching the Serbian language as an optional subject in the Kossuth Lajos Primary School. Those who come to this village from Deszk after grade 4 can speak Serbian.
- In 2018, a Serbian primary school was opened in Szeged, the first students are in the second grade now. This primary school is a member institution of the Nikola Tesla Serbian Kindergarten, Primary School, High School and Students' Home.
- Szeged – the Béke Street Secondary School started teaching the Serbian language as an optional subject.

- Hercegszántó - Croatian-Hungarian Bilingual Kindergarten, Primary School and Dormitory – Croatian-Hungarian bilingual programme, maintained by the National Croatian Minority Council.
- Baja - Szentistván Primary School – Bajaszentistván (part of Baja) – the Croatian language is an optional subject.
- Sugovica Sports Primary School in Baja – the Croatian language is an optional subject.
- Gara National Primary School – the Croatian language is an optional subject.
- Dusnok-Fajsz Primary School – Dusnok – the Croatian language is an optional subject.
- Bátyai Primary School – the Croatian language is an optional subject.
- The member institution in Katymár of the Bácska Primary School – the Croatian language is an optional subject.
- Bácsalmás District Primary School and Elementary Art School – the Croatian language is an optional subject.
- The member institution in Csávoly of the Baja Szentistván Primary School – the Croatian language is an extracurricular activity.

2.3.2.5 Conclusion

Zooming in on the close proximity of the Serbian-Hungarian border a somewhat unified natural and social unit is observable in terms of settlement structure, cultural landscape and human resources which is not necessarily the case for the whole programme area. The educational and training systems are mainly compatible. The significant Hungarian minority in Serbia speaking Hungarian is a great bilingual link between the two sides of the border. Bilingualism only affects small regions and communities on the Hungarian side. It would be important to raise awareness about the social-economic advantages of knowing the Serbian language in the Hungarian, non-minority, communities all over the region, as cooperation of the two border regions has great potentials.

Professional knowledge in both sides of the border is historically deeply embedded in the peasant and market-civic tradition as well as the school system shaped by social modernization. The development of this system is going on to meet the accelerated economic/social/technical needs in both countries, in a framework that enables cooperation more and more. The economic operators themselves have a growing demand for people, who have actual knowledge and got out of the mentioned system successfully, to appear in the labour market. This process pushes the region from installing economic factor based on cheap labour towards the development of regions with higher competence. It already showed signs in many microregions. This process will enable those who dropped out of the labour market to represent an increasingly important factor in the domino of human resources, therefore the social groups at risk of early school leaving need and will receive more attention and educational/training "life belt programmes".

Relevant projects previously carried out in the region

ECO-SCHOOL - HUSRB/1602/32/0213 - ECO-SCHOOL – educational network for an eco-conscious, sustainable life (1 May 2018-30 April 2019)

Formal education plays a vital role in environmental education and awareness. Experience of the project partners showed that school curricula provide general environmental knowledge rather than

increase environmental awareness and develop sustainable practices. On the other hand, the environmental awareness of the population in the Hungary-Serbia border region is rather low and environmentally responsible behaviour is still missing in people's everyday life.

This project is based on project partners' strong belief that education and networking can contribute to environmental sustainability through developing a more eco-conscious and sustainable lifestyle. To achieve this goal, the project combines learning with hands-on experiences and applies an inclusive, participatory approach involving Hungarian and Serbian school children, experts, and tutors.

The main project activities include:

- developing ECO-SCHOOL virtual knowledge centre;
- developing experimental trainings and educational programmes;
- creating an interactive web page and smartphone applications;
- organizing study tours and environment- themed days in schools;
- making films on specific topics;
- campaigning using various communication channels such as Facebook and online PR articles.

Community footprint - HUSRB/1602/32/0247 - Volunteers and communities without borders (2 February 2018-30 January 2020)

The project is implemented by two organizations sharing the same values: youth education, responsibility for local groups and the promotion of volunteering. The two organizations have been organizing communities and involving volunteers for years. The project has two main aims: 1. forming communities from volunteers, 2. educating contributors from simple participants of programs.

The step-by-step approach (involving, mentoring, and delegating responsibility) and the combination of learning-by-doing method with experimental learning will help reaching project results.

Based on the analysis of the topic 'Education, training', the following types of potentially functional areas can be defined within the region:

- Educational networks: networks based on certain groups of institutions which have joint or complementary capacities (e.g. based on their level of education, language, or training offer) and other features.

2.3.3 Employment market cooperation

The economic crisis that emerged at the end of the first decade of the new millennia strongly affected the Serbian-Hungarian border region and it generated the loss of thousands of jobs. During the last years, the improving international environment and successful economic policy measures of the two countries resulted in significant changes within the realm of labour market trends of the region.

2.3.3.1 Characteristics of employment

From the point of view of **economic activity** of the programme area - as a summary of the chapter on demography - it is important to emphasize that the age composition of the population mirrors an aging society in general, but severely aging tendency is characteristic in some areas. The working age population (15-64[82] years old) and population below 14 (potential future labour power), although the latter to a lesser extent, declined since the last census, while the number of population over 65 significantly increased. Despite the unfavourable demographic trends, the economic activity of the population has been growing steadily throughout the decade in Hungary. The labour market has been expanding for the fifth year in a row in Serbia, too. The working age group (15-64 years old), as the most active age group from economic point of view, is still higher on the Hungarian side (both in terms of national and local data). Besides favourable economic developments, we can expect a slow equalization of the trend, because the proportion of people with working age is somewhat higher in Vojvodina and the number of potentially employed people will be higher in the future due to the more favourable age composition. At the same time, the average characteristic at the regional level shows serious internal inequalities in the region according to settlement or according to type of settlement. In many cases, the small settlements are in peripheral position in relation to urban networks and their aging character (due to the emigration of the youth) is catastrophic.

In the working age population the rate of males and females is almost balanced, in Vojvodina (985 females per 1 000 males) and in Bács-Kiskun (986 females per 1 000 males) there are a little less females in this age cohort than males, but in Csongrád this ratio is minimally reversed (1 011 females per 1 000 males). For younger than the working-age there are more males than females in all three counties (951 females per 1 000 males), but after the active years, the rate of the females is increasing intensively (1 567 females per 1 000 males). In the Hungarian counties, the ratio of females is higher than double after the age of 80, in Serbia after 85.[83]

Significant reorganization happened within the structure of economic activity: parallel with the gradual decline of unemployment, significant improvement was achieved within the **level of employment**. Examining the development of the level of employment, a dynamic double-digit expansion was observed on both the Hungarian and Serbian sides during the period 2013-2019. Besides of the growing labour market demand, employment policy instruments significantly contributed to the favourable development of employment data. At the beginning of the period –

[82] The 15-64 age group represents a statistical group. The retirement age in Serbia is 65 for men and 63 for women. In Hungary it is currently 64,5 for both sexes.

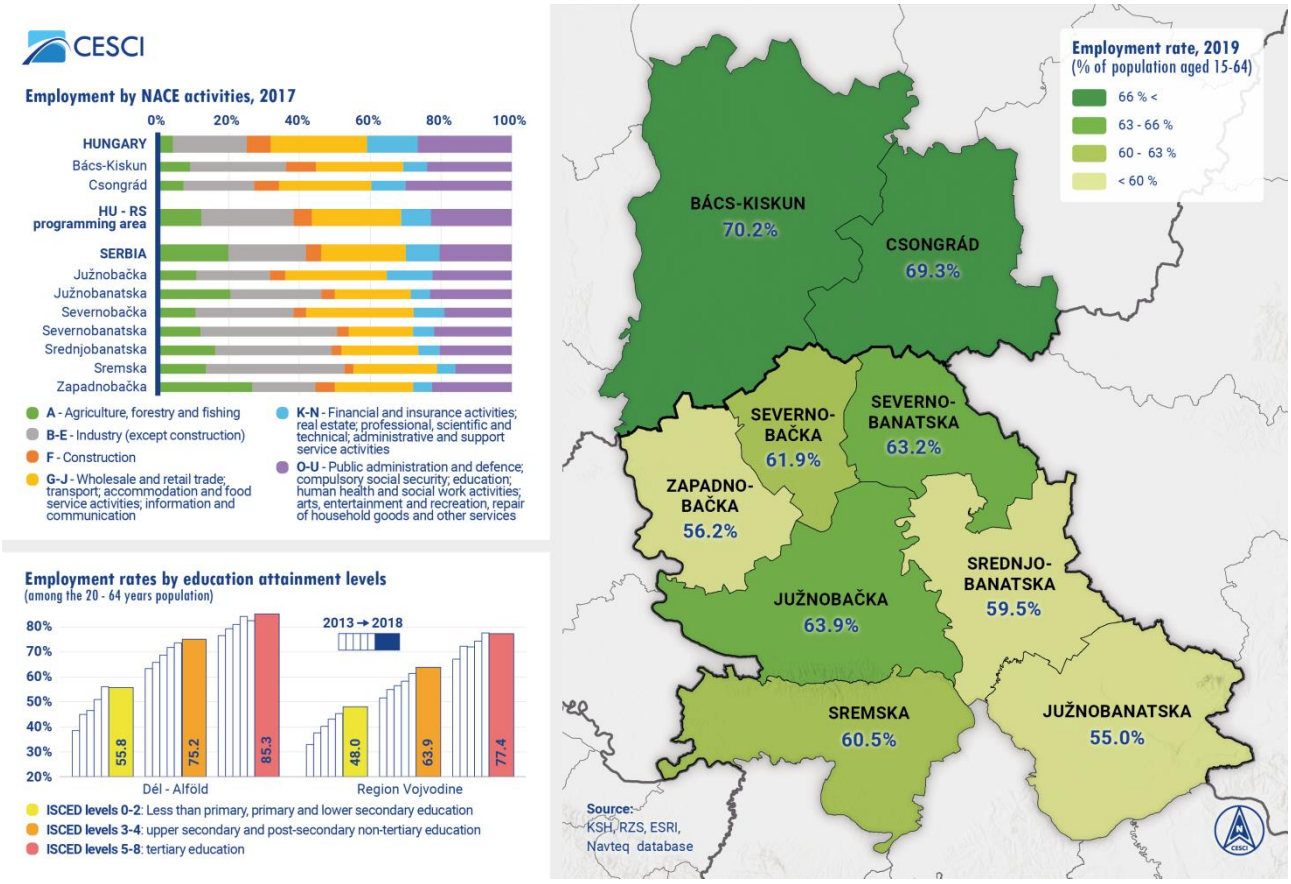
[83] Source of the data: http://www.ksh.hu/docs/hun/xftp/megy/201/01_nepesseg.xlsx; https://data.stat.gov.rs/Home/Result/18010602?languageCode=en-US&displayMode=table&guid=e94a6e55-3876-45fb-86ce-096196423b5d

especially on the Hungarian part of the studied area – an expansion of public works system received a priority, hence promoting the process of socialization of the inactive unskilled layer of labour force into the labour market; moreover, reform of the pension rights and tightening of the social aid system on the Serbian side resulted in an increase of employment of the previously inactive labour power (increase in employment of the 60-65 age group).

As a result of the process, the employment rate of the 15-64 age group exceeded the EU average (28 countries) by 2019 in the counties like Bács-Kiskun and Csongrád. Although, the districts of Vojvodina still lag behind, but the indicators of the Južnobački, Severnobanatski and Severnobačk also exceed the Serbian national average.

The Hungarian and the Serbian statistical offices collect data regarding the employment and unemployment for different age groups, so the direct comparison between the three counties is not possible. The employment rate of the females' age group 15-74 in Bács-Kiskun county more than 15.26% less than the males' employment, in Csongrád county where this value is 13.72%. In Vojvodina, 53.10% of the 15-64 years old females were employed, while the employment rate of the males' same age group was 68.10%. So, the gender-related difference in employment in this county was also around 15%. In the rate of the registered unemployed, such a high difference cannot be observed between the gender-related values, only decimal differences in the ratio. The reason for this can be that generally females spend more time as homemakers on both sides of the border.

Figure 38: Main features of employment in the border region



Since joining the EU, several EU-related employment programmes have been implemented on the Hungarian side. The ongoing local and county **co-operations** in the **field of employment** are

important tools of the regional employment policy, while some aim to build up the Hungarian-Serbian employment partnership, too. Based on the experience, two national employment services also seek to promote the European Union integration of Serbia, in particular by sharing experiences on applying the EU employment-related funding.

We also find a number of projects within the framework of dedicated programmes (INTERREG IIIA for the period 2004-2006; Hungary-Serbia IPA Cross-border Co-operation Programme between 2007-2013, as well as Interreg-IPA Cross-border Cooperation Programme Hungary-Serbia 2014-2020) aiming to strengthen the Hungarian-Serbian border relations, which indirectly have limited impact on addressing the challenges of the labour market. Nevertheless, the truly successful and explicitly common solutions were mostly missing. Mainly, the action for social entrepreneurship[84] and its results can be indirectly classified into the field of employment. Second Call for Proposals HUSRB/1602: PA 4: Enhancing SMEs' economic competitiveness through innovation-driven development: Action 4.2: Encouraging and development of social entrepreneurship.

Regarding the distribution of the **employees on the basis of sector** (see the figure above, Figure 38), the primary sector of the economy has more noticeable employment role in each of the districts of Vojvodina (10.7-26.7%) than within the economy of the areas of the Southern Great Plain (7.3-9.1%); however, all indicators are well above the EU average, which is a combined result of the region's excellent agro-geographical features and the slow progress of economic restructuring. In parallel with the industrialization and modernization of the sector, the number of people who are employed in the agricultural sector is in constant decrease, but at the same time, significant part of the population of the region is still notably connected to agriculture and it is especially true in the case of the adjacent areas of Bačka/Bácska.

In connection with agricultural areas, the food industry provides significant number of jobs and it is the largest sector of employment, together with other sectors of the manufacturing industry, in the programme area. If we look at it from the territorial perspective, significant difference can be seen between the districts of Srem (39.1%) and Severni Banat (38.6%) whose industry employs twice as many people as the industry of the least industrialized district, Zapadni Banat (17.8%). Regarding the Hungarian territories, the role of the automotive industry, which has become the leading industry of the country, should be emphasized. Development of the sectoral structure of employment, its increase in number and proportion, has been mainly affected by large automotive industry investments in the catchment area of Kecskemét.

In addition to industrial activities, the determining main settlements of the region, which influence the functional and spatial structure of the region, have significant employment potential in the field of trade, administration, public policy, education, and other services. The employment role of the tertiary sector is the most significant in the county of Csongrád and in the district of Južna Bačka, and this is principally influenced by the development of the regional centres, like Szeged and the provincial capital Novi Sad.

Current labour market supply and demand within the border region are influenced by several factors. **Distribution of the employees based on education** is a factor that has longer-term effects on

[84] Second Call for Proposals HUSRB/1602: PA 4: Enhancing SMEs' economic competitiveness through innovation-driven development: Action 4.2: Encouraging and development of social entrepreneurship.

employment. This means that the available skilled labour force significantly affects the economic development of the region, establishment of new jobs and the inflow of working capital into the area.

Demographic trends that continued from 2010 on also had major impact on the volumes of the labour power supply and on the level of skills. Demographic changes (namely, exit of older, lower-educated and entrance of young, higher-educated people) has further improved the level of education among the employed[85], while the proportion of low-educated[86] people is relatively stable among the employed (it is around 12% in the areas of the Southern Great Plain and it is around 15% in the area of Vojvodina). Public works system contributed to the process by assuring job to low-skilled people, but there is a need to focus on the early school-leavers in both regions, because the supply of low-skilled people will remain continuous.

The share of people with tertiary education[87] slightly increased among the employed and it represents around 23%. In the case of people with secondary education[88], rearrangement was mostly visible within its structure on the labour market in favour of vocational qualifications. In agreement with the European trends, the employment possibilities of people with higher education can be clearly seen in the two neighbouring regions. (See Figure 38).

The importance of cross-border employment cooperation is underlined by the fact that there is a large number of settlements in the region, which are affected by emigration. What is more, the phenomenon of emigration is quite common in peripheral districts of the border. Migration for work purposes, which has been characteristic of the decade, has played a major role within the changes and structural composition of the labour market and it deeply influenced the availability (and vice versa, its absence) of the skilled labour power. The areas of the Southern Great Plain were primarily affected by the absorption effect of the German and Austrian labour markets, which were opened towards the Hungarian workers from 2011. This provided an attractive opportunity for skilled labour, mainly facilitating the outflow of the young and the middle-aged people.

Emigration for employment is also typical in Serbia. This process seems to be the strongest in the Vojvodina region, especially among members of the Hungarian minority mostly for two reasons. The Hungarian side of the border area was partially targeted by these groups due to the obvious language connection, but many of them moved toward Western Europe (mainly Germany and Austria). Among this group proportionately probably more ethnic Hungarians were represented because these attractive labour markets have opened their doors since 2011 to citizens of the countries that joined the EU in 2004 (including Hungarians). This process was strengthened by the fact that under the Citizenship Act amended in 2010, Hungarians living across the border could acquire Hungarian citizenship through a simplified naturalization procedure.[89]

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85 15-64 years age group

86 ISCED levels 0-2: Less than primary, primary and lower secondary education

87 ISCED levels 5-8: tertiary education

88 ISCED levels 3-4: upper secondary and post-secondary non-tertiary education

89 See more on this in: Ördögh Tibor (2017): Vajdaság társadalmi és gazdasági jellemzői. (Social and economic characteristics of Vojvodina): http://real.mtak.hu/90943/1/Teljes-k%C3%B6tet-small.pdf

In the first half of the decade, the lasting recession and the narrowing of the purchasing markets led to a slowdown in industrial production in both regions. Subsequently, people with secondary education, and not the unskilled, represented a significant share of the unemployed. This process of rising unemployment typically affected the male labour power.

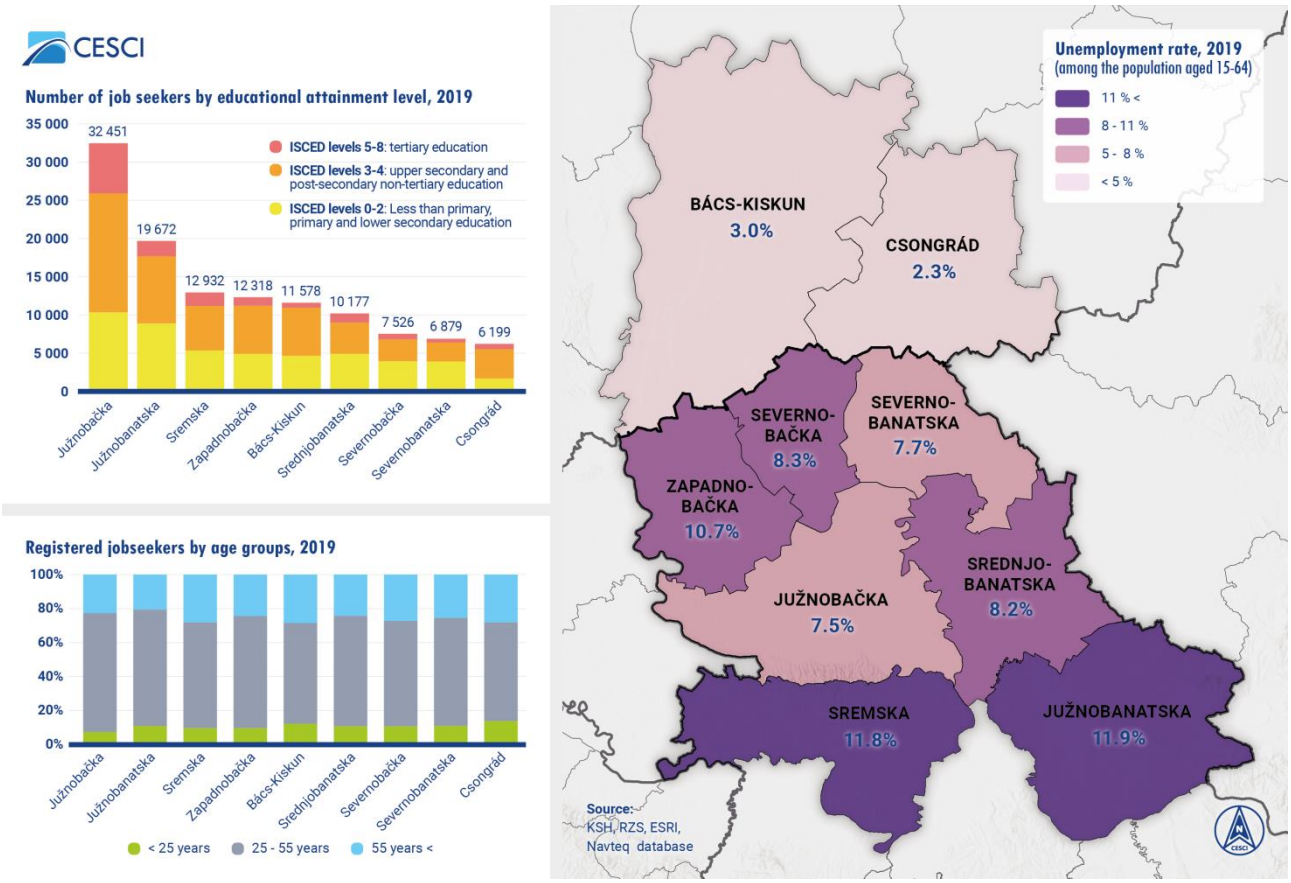
2.3.3.2 Characteristics of unemployment

During the last decade, **unemployment** and its change was influenced by the already mentioned processes of economic activity and employment: both sides of the border experienced double-digit unemployment rate in 2013, but the unemployment significantly decreased by the second half of the decade (the number of the unemployed fell by one third in the areas of the Southern Great Plain and it fell by half in the area of Vojvodina by 2019) and labour shortage emerged in certain branches of the Hungarian economy.[90]

Besides of the similar decreasing tendency of the unemployment, we should emphasize that unemployment in the border areas of the Southern Great Plain – in line with the national averages – indicated more favourable conditions either earlier (10.1% -12.2% in 2013) or in 2019 (2.3-3%) than the province of Vojvodina, where the average value of unemployment was 24.3% at the beginning of the examined period and it fell to 7.5-11.9% by 2019 in some areas. Significant masses of the young skilled unemployed have been leaving Serbia for decades. Emigration principally affected/affects the young, educated, and skilled people. Besides unemployment and war, important "motivating factor" for emigration was also the issue of insecurity, dissatisfaction with the social and financial situation and the slow progress of reforms. The emigration of highly qualified professionals generates further problems in the region, such as slowing economic development, declining labour productivity and loss of competitiveness.

[90] It should be underlined that the COVID-19 crisis, which has emerged in parallel during the preparation of the analysis, and its effect on the labour market are not yet visible. It will certainly cause a significant reappearance of unemployment in certain sectors and this means that the pressure of labour shortage on the economy may be temporarily eased.

Figure 39: Main features of unemployment in the border region



Due to the different levels of economic development and employment, the structural transformation of unemployment occurred somewhat differently on both sides of the border. As a result of the improving labour market environment, in parallel with shortening the time of job search, the labour power reserve shifted towards the low-skilled jobseekers (this was also influenced by termination of the public works system). Management of the youth unemployment and integration of the multiple disadvantaged groups into the labour market require increased efficiency of labour market services in both areas, namely counties of the Southern Great Plain and Vojvodina.

The relatively high Hungarian employment, which continued its improvement during 2019, was coupled with one of the lowest unemployment rates in the European Union: at the end of 2019, only 17 777 **jobseekers were registered** by the Hungarian employment service of the two affected counties, of which 9 476 persons (53.3% of the jobseekers) were women. There was a gender gap unfavourable for the two counties given that the share of women among jobseekers was higher than the national average (51.7%). Meanwhile the number of the economically active population reached 420 000. Considering Vojvodina, the economically active population encompassed about 820 000 people. A total number of 101 955 were registered as jobseekers in December of 2019 in the province, of which 53 824 were women (52.8%). The gender gap in this case is more favourable for Vojvodina compared to the national average of Serbia (54.8%), however this rate also exceeds 50%. Among jobseekers, people with the lowest qualifications had the worst prospects on the labour market, those ones who had primary education (48 696 people) represented 40.7%, unemployed with secondary education (55 997 people) represented 46.8%, while people with tertiary education (15 039) represented 12.6% of all the jobseekers in the programme area. The Severnobanatski

(57.1%) and Severnobački (52.7%) districts have the most low-educated people among the unemployed, while the district of Južna Bačka has the highest share of higher education people (20.2%) among the unemployed, while the jobseekers, registered in the county of Csongrád, have favourable level of education. In the case of the lowly educated group, improving the relationship between education and employment and elaboration of jointly formulated training programmes by the cross-border stakeholders have a prominent role. Moreover, support of investments and enterprises that provide jobs for the educated layers and reduction of the grey economy also have effects on the rate of employment and its expansion. In order to decrease unemployment of university and college graduates, it is necessary to encourage technology- and knowledge intensive sectors within cross-border programmes and implement more successful attraction of investments, for example by supporting cross-border research capacities.

In December 2019, the employment departments of Bács-Kiskun and Csongrád counties registered only 1 396 new entrant jobseekers. Their share, with an improving trend, is around the national average from all the jobseekers (7.4% and 8.6%). Within the steadily decline in the number of Serbian jobseekers in the last 5-6 years, the number of new entrant jobseekers decreased only to a lesser extent. Their already high proportion (34.6% in 2013) increased to 43.2% by 2019. This is especially the case among the female jobseekers, whose increase was even more intense, due to their higher participation rates.

Looking at the age group of the jobseekers, the programme area shows a relatively uniform picture. The proportion of the young people (under 25) and the older persons (over 55) is somewhat higher in Hungarian areas (Figure 39). However, the proportion of those jobseekers who are registered for more than a year is several times higher in the areas of Vojvodina (58.1% - 65.5%) than the average of the two Hungarian counties, 24.7% (the latter was influenced by the workfare-type restructuring of the support system that means reduction in the duration of unemployment benefits).

In addition to the supply side, employment services also provide detailed and up-to-date information about the labour market demand. The continuous inflow of labour-power demand from the employers on both sides of the border shows a cyclical character within a year (see the figure: 'Monthly inflow of unfilled vacancies to the register in 2019). During 2019, the average number of the announced new jobs in one month was around 5 300 in the cross-border region, while the two Hungarian counties contributed the most (68.9% in total). In addition to economic processes, the role of the current EU employment programmes in Hungary is emphasized, and employers are basically interested in announcing those jobs which are filled in a subsidized form, or they look for workers for those low-skilled jobs, where is a probability that the job-seeker will be registered.

As result of entry and exit traffic in 2019, the two Hungarian employment services were able to offer around 5 000 jobs to their job-seeking clients during a month by the end of the year, thus there were 13.8 job vacancies for 100 registered jobseekers at the end of the period. According to the latest international data (Q2 2019), this was significantly higher than the EU average (2.3). In 2019 the Serbian employment service registered monthly between 660 and 2 548 requests for job matching services in vacancy filling in Vojvodina.

The favourable economic outputs were also reflected in the development of incomes. The analysed period was characterized by low inflation and high wage growth and this was continued also in 2019.

The **average** annual **gross income**, compared to the same period of the previous year, increased by 11.4% (7.7% in real terms) in Hungary.

The dynamic growth was supported by increase of the minimum and the guaranteed wage by 8.0%, wage reform, a competitive environment in order to maintain the well-trained workforce, premium and bonus payments and reduction in the number of employees within the system of public works. On the Serbian side, the increase in wages, mainly of the public sector, which was observed during the second half of 2019, had a large impact on the volume of individual consumption in trade and segments of the service sector. At the same time, the Serbian minimum wage also steadily increased in the last years (increased by 8.6 percent in 2019) and gross average income also increased by a level that surpassed the EU average (10.5% increase in nominal terms and 8.4% increase in real income in 2019). According to statistics, there is a significant difference in wages of the programme area. The Hungarian area is in more favourable position.

Figure 40: Unfilled vacancies, average net salaries and labour cost index in the border region

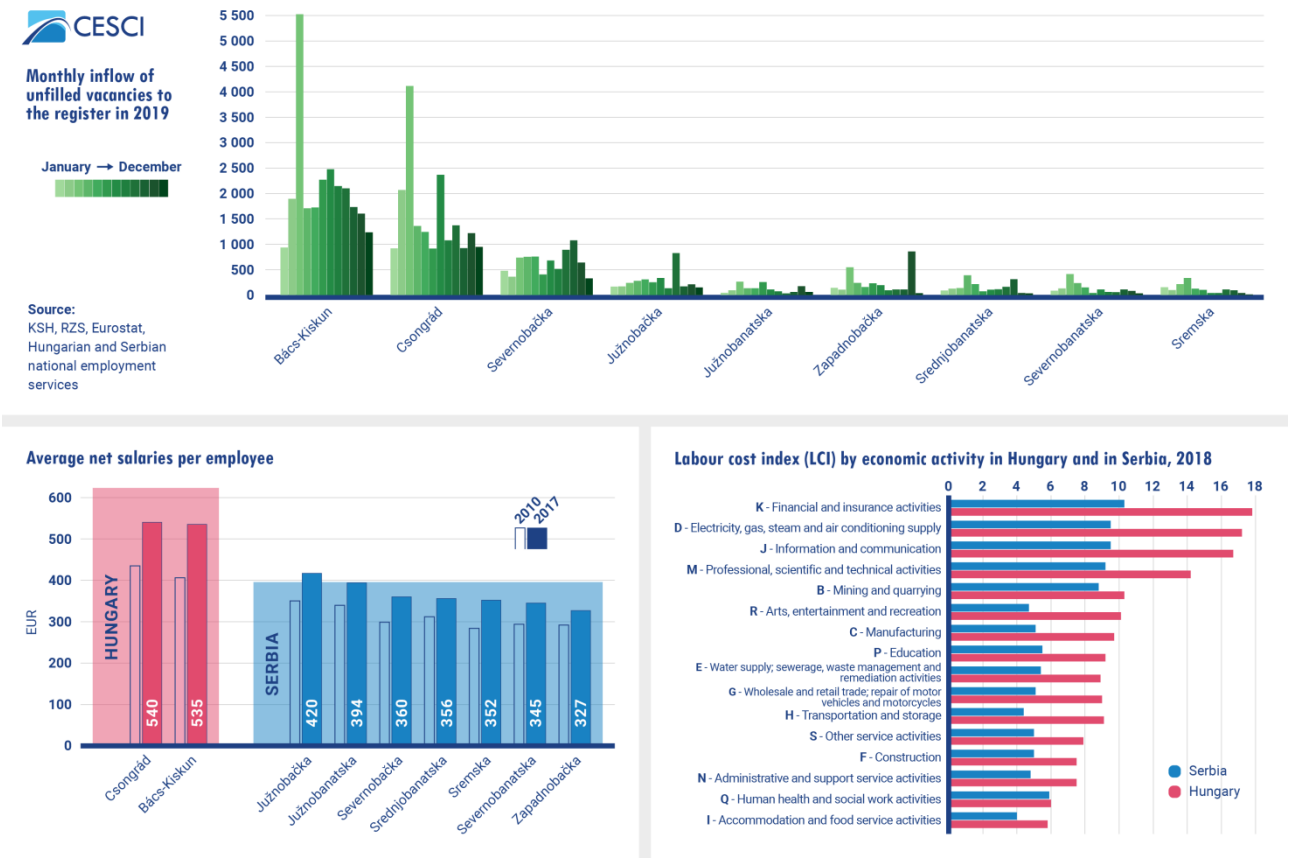


Figure 40 informs about the labour cost index. It indicates the total costs of the employers generated by employing labour power in the main branches of national economy.

2.3.3.3 Labour flow

The shortage of labour in some sectors of the Hungarian economy and the difference between the incomes may result in increased **labour inflows** and commuting from the Vojvodina region to the Hungarian counties. This could particularly affect those border areas, which have ageing population and show a tendency of emigration. The process is complicated by the fact that according to the EU

labour regulation, those workers who arrive outside of the EU - from a third country - can work in Hungary only with a prior permit. However, according to a legal exception which came into force in the mid-2017 the entry of people from Serbia into work for certain occupations for less than 90 days will no longer be subject to a work permit. This legal exception mainly applies to those working professions where shortage of labour power is significant in Hungary, like construction, catering, healthcare, commerce, computer skills, driving tasks, and skilled and unskilled physical jobs. It can be stated based on data on commuting that the Serbian labour market is not a potential destination country for the Hungarian workers. According to official data from the 2011 census, 183 men and 96 women commuted to Serbia, which represents only 1.0% of those who go abroad for work. Less than two-thirds of those who work in Serbia from Hungary are men and they often work in jobs that require high qualifications and most of them have Serbian language skills. Serbia's EU integration (e.g. joining to the Schengen area) and its labour market connection could influence the unskilled labour force of the border area who could find jobs in the neighbouring country, as well as investments of economic subjects could be more easily expanded to the other side of the border, too. Besides the direct economic development and infrastructure investments, the spread of cross-border labour market co-operations, training programmes and atypical forms of employment can influence the process of mitigating labour emigration from the currently peripheral settlements and areas.

Based on the analysis of the topic 'Employment market cooperation', the following potential types of functional areas can be defined within the region:

- Cross-border commuting zones: areas situated within 60 minutes travel distance from the border, where notable number of employees cross the border on a daily or weekly basis to work in the neighbouring country.
- Areas with employment-related challenges: areas where certain challenges such as high unemployment, high number of unfilled vacancies, low labour incomes.

2.3.4 People to People cooperation

2.3.4.1 The advantageous effect of improving the Hungarian-Serbian interstate relationship

The relationship of the two states has been improving significantly over the last decade. This applies to the political as well as the economic relations. This results in several Hungarian joint ventures and Hungarian supported corporations operating in Serbia. Hungary is the sixth most important trading partner of Serbia. This mutual potential is mainly concentrated in Vojvodina and Beograd, but there is a Hungarian business supporting system especially focusing on South Serbia. The constant relevance of the execution of strategically important infrastructure and transport joint objectives and investments still has a positive effect on the two countries' cooperation, which appears in the news as well. Currently there is a great supply dumping in the Serbian labour market, and unemployment is significant in some areas of the country. For a substantial part of the public, Hungary is in a favourable position because of its investments and economy developing steps. It is one of the most significant partners countries for Serbia, after Russia, Greece, and China.

This affects non-political and non-economic relations as well, for example the fields of culture or sports. Hungary is operating many sports academies in its area, and the PICK Szeged Handball Academy is the most significant of them on the study area, but there are some in the area of Vojvodina as well (Bačka Topola TSC Football Academy) as well. There are several talented Serbian citizens working, learning or training in these institutions – young people, coaches and other professionals, who are further deepening the relations between the two nations with human relationships. A good example is the headteacher of the Serbian school in Szeged, whose husband is a coach at the Szeged Academy, and his wife's knowledge as a tutor/teacher helped establishing and developing the Serbian educational institution here.

In the mentioned relationship systems, Hungary is more active regarding investments, while Serbia is providing more human resources. This complementarity proves to create win-win situations in terms of human relationships. The Serbian presence in the Hungarian economy mainly appears in connection with certain corporations and entrepreneurs, which are the suppliers of the Hungarian industry. The headquarters of these companies are located mainly in Vojvodina. Another type of presence is that of Serbian entrepreneurs, who have settled mainly in Budapest and Szeged in Hungary over the last 20-30 years. Many Serbian entrepreneurs with a non-Hungarian ethnic background had a significant career curve in Hungary in the 1990s and 2000s, who left their countries mainly for political reasons after the former Yugoslavia disintegrated. One of the most spectacular or the most widely experienced form of this the growing popularity of Balkan food in the Hungarian fast food and street food market (for example the pljeskavica, the čevap or the ajvar). Today, these are inevitable elements of the offer at almost every significant event, festival, or city festivity.

2.3.4.2 Relatives, friends, religious holidays

The first level of the people to people relations is family, family relationships, the network of blood and non-blood ties. This can be highly distinguished, especially in the traditional communities. A significant emigration is currently present in this community, mainly towards Hungary and Western Europe. The settlers in Hungary often go back for community/family celebrations, village fairs,

extended time off. Since neither the Hungarian, nor the Serbian law prohibits dual citizenship, the emigrated Hungarians often kept their citizenship and started business or economic activities with their family members and friends at home. People from Vojvodina living in Hungary have a Facebook group as well, with around 2900 members. Some research indicates that most of this group settled in Budapest and the Southern Great Plain.

Religious celebrations are the third national element of bigger group gatherings, and they still partly have a social function. Even though the division of jurisdiction of the religious areas later adjusted to the public law border established in the 20th century, the catchment areas of some places still cross the Serbian-Hungarian border. During mainly the 18th and 19th centuries, places of pilgrimage and village fairs were formed playing an important role in terms of local identity as well as connecting the population of the wider area. These catchment areas are attracting less people because of the borders established in the 20th century and the process of social secularisation, but some of them transformed into significant folk festivals, preserving their role of a meeting point. And some places have preserved their religious roots and are forming the network of modern pilgrimages. Such places are Baja – Vodica (Máriakönnye), the village fair in Kupusina in the region of Zapadno bački okrug, Petőfiszállás-Pálosszentkút in the Kiskunság, or the Serbian monasteries in Fruška Gora for the Orthodox people. Nowadays, these places are folk festivals of a tourism significance or may be places of worship keeping their pilgrimage nature, but they are definite meeting points that attract a large number of people from both sides of the border.

2.3.4.3 Partner settlements[91]

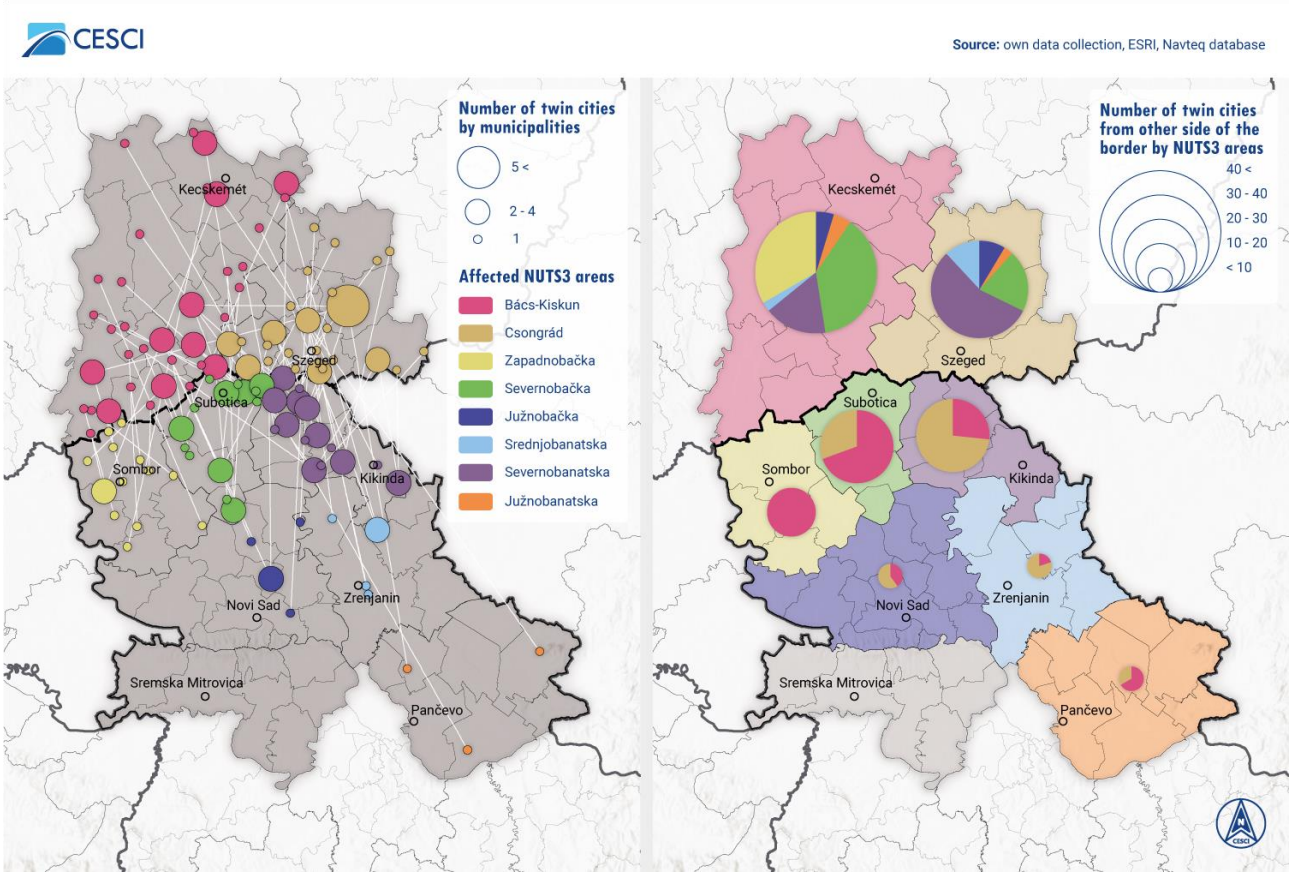
It is a special form of cooperation when the settlements lay down the foundations of their relationships in a cooperation contract, in order to deepen their friendly relationship and the connections based on other fields of cooperation (e.g. joint heritage sites or events). Regarding their depth, these are mainly used for formal meetings and attending each other's featured events, but joint projects or even various forms of economic development cooperation are present especially in bigger settlements.

The nationally also characteristic priorities are present in the twin settlement systems on both sides of the study area. In case of Hungary, the frequency of Romanian, Transylvanian partner settlements, and in case of Serbia, the frequency of relations with Bosnia-Herzegovina and Croatia. It is noticeable in the Hungarian partner settlement system that mainly the presence of the Hungarian minority defines the interest towards Vojvodina, and there are no Old Serbian or South Serbian settlements among the partners. This is the result of the differences between the Hungarian and Serbian languages and the macroregional structural boundaries of the river Sava (the border between the Carpathian Basin and the Balkan area). This can be assessed as positive when putting the current border situation in focus, as the relationship potential of the partner settlements are concentrated on these border regions and their narrow frontier zones. Nevertheless, regarding the cohesion of the border region, it would be beneficial if actual inter-ethnic threads represented a growing rate and share of these relations and the Hungarian-Hungarian relations mentioned above would not be so

[91] Note: This document does not differentiate between the two types of twin settlements in Serbia, one being organised on governmental level and other established by the local self-government units.

dominant in them. It would be worthwhile for municipalities to develop cross-border twinning relations, regardless of their minority nature.

Figure 41: Twin cities in the border region



It is prominent, but understandable, due to territorial structure reasons and the lack of relationships, that Kecskemét has not established any permanent relationships with any Serbian city in Vojvodina, it has only been in constant interaction and has had an emerging cooperation with Novi Sad: Alliance of Vojvodina Hungarians since 2005. It is also interesting that the Hungarian twin city of Novi Sad is not in the border region, it is Pécs, in Southern Transdanubia.

However, this form of municipal cooperation constitutes another advantage, especially for minority settlements in Vojvodina. The advantage lies in the fact that relationships and various forms of cooperation can be established also on the settlement level instead of the municipality level. The basic administrative unit in Serbia falls closer to the Hungarian district category; on this level there are differences between the settlements based on their political, ethnic, or even religious affiliations. Having the opportunity to connect on this level means that the specific needs of each settlement can prevail better as opposed to having to collaborate on a more aggregated level.

The relationship system of settlements along the border with Croatian minorities is a unique part of the area's twin settlement system. On the one hand, the settlements are open towards the Croatians settled on the other side of the border (Bunjevci, Šokci), but they are open towards Croatia as well because of national integration. This creates a system of Serbia-Hungary-Croatia, and a relationship network like this is present regarding Hercegszántó, Gara, Baja, Bácsalmás, Dusnok or Bátya as well, even though it is not a characteristic to have a multitude of settlements in the network.

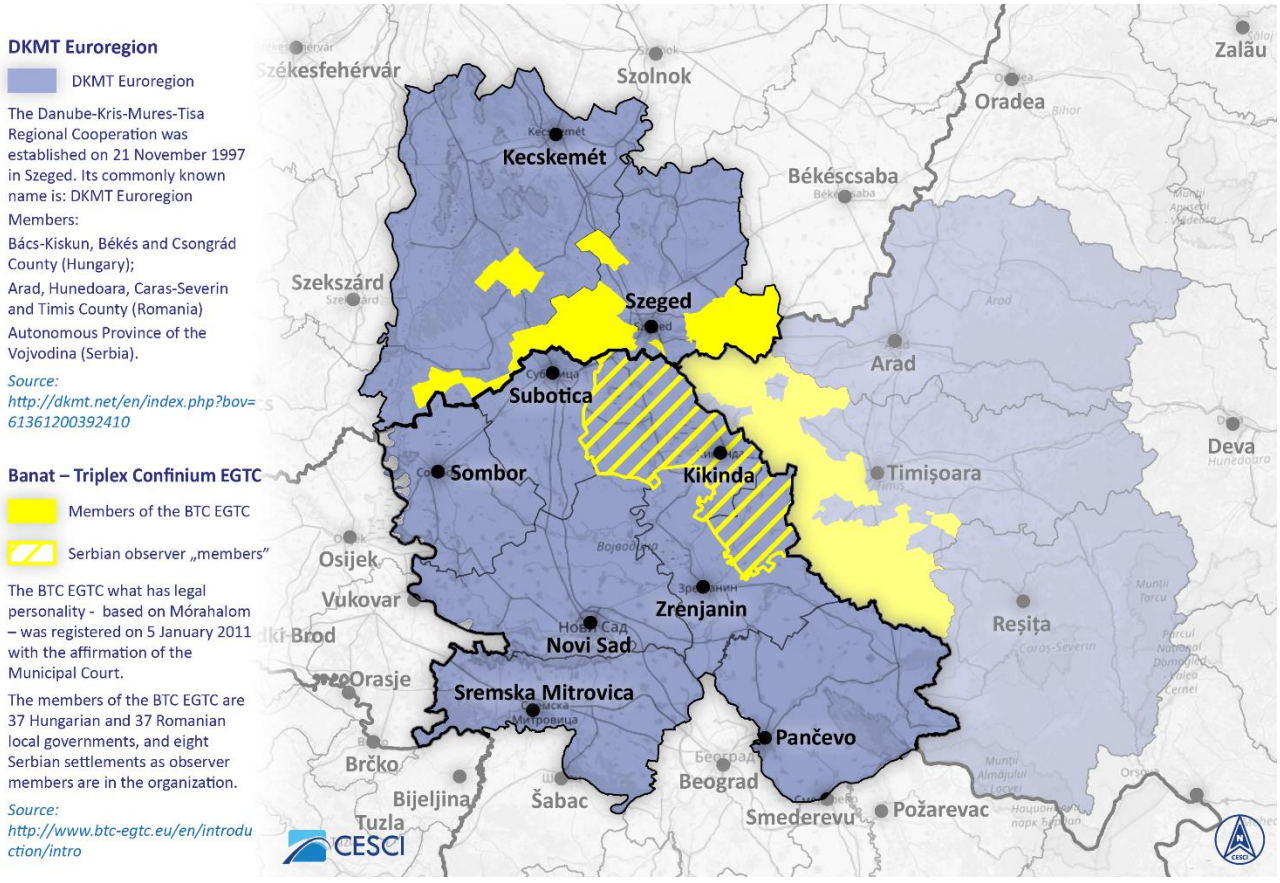
The relations between partner settlements can create further networks, relationship systems on the level of culture, sports (local culture groups, choirs, sports clubs) or even economy. A common example for this in wine production is the cooperation of wine communities and tradesmen, as these are usually established in a friendly way, not professionally, but later these relationships can easily convert themselves into joint professional projects.

2.3.4.4 Cross-border structures

In the Hungarian-Serbian region, the (external EU) border forms a significant barrier in terms of cross-border interactions and movements. However, the relatively high number of residents with dual citizenship intensifies the economic and social relations which are mainly focused on the area around Szeged, being the regional economic, cultural, and educational centre.

Besides the relatively closed border itself, everyday interactions and movements are also hindered by some administrative and legal obstacles. Several of them are strongly related to customs and police control. Obstacles include freight transportation because of strict customs regulations, the recognition of certain certificates and official documents which are relevant both in terms of labour mobility and tourism. Administrative interoperability between labour and education systems also manifests problems, which are sharpened by long waiting times at the border crossings - when it comes to daily commuting.

Figure 42: Cross-border structures in the border region



Despite the barriers, the region is home for several cross-border cooperation structures, despite the fact that the role of the Serbian actors is somewhat limited because of the physical and administrative

barriers. Still, several cross-border structures facilitate cooperation and the weakening of border obstacles. In sectorial terms, the Hungarian-Serbian Joint Chamber of Commerce and a joint water management committee are responsible for the professional cooperation in the fields of SMEs, trade, and water issues.

Regarding the more institutionalised forms of cross-border cooperation, currently one Euroregion, the DKMT Euroregion and one EGTC, the BTC EGTC are operating within the programme area. In case of the latter one, Serbian local authorities have observer status because of the missing national legal background.

DKMT Euroregion (Danube-Kris-Mures-Tisa Euroregion)[92]

The Danube-Kriş-Mureş-Tisa Euroregional cooperation links the borders between Hungary, Romania, and Serbia. The Euroregion covers around 60 thousand km^2 and gathers 4.5 million inhabitants.

Cooperation was officially established on 21st November 1997 when its founding document was signed in Szeged by the representatives of 4 Hungarian and Romanian counties each and, further, by the Autonomous Province of Vojvodina. The initial steps were taken by Csongrád (HU) and Timiş (RO) counties after communism collapsed in 1992 by undertaking bilateral cooperation based on the Regional Cooperation Protocol Danube–Mureş–Tisa. The Euroregion gathers six regional self-governments: Bács-Kiskun and Csongrád Counties from Hungary, the Autonomous Province of Vojvodina from Serbia, furthermore Arad, Caraș-Severin, and Timiș Counties from Romania.

The Strategic Plan of the DKMT highlights the capacity to generate better competitiveness through several objectives: improving financial absorption capacities, eliminating the peripheral status of the counties through coordinated and joint development; supporting the quality of life of its inhabitants promoting dynamic development to help stabilize democratic institutions, deepening interpersonal contacts, and, finally, removing the existing prejudices. DKMT is among the most successful cross-border cooperation structures in Central and Eastern Europe and has a unique perspective.

The order between Romania and Hungary represents an internal EU border outside the Schengen regime. On the contrary, the border with Serbia is an EU external border with much lower permeability. Thus, one of the biggest challenges of DKMT-cooperation is to manage different border regimes and different levels of permeability. Accordingly, several initiatives taken by the

[92] For further details please check the following literature:

- CRETAN, R., The evolution of cultural and economic activities in the DKMT Euroregion, 2005.
- GRIGORESCU, I., DUMITRAŞCU, M., SIMA, M., MICU, D., "Case Study: The Euroregion Danube-Kris-Mureş-Tisa", in: *Crossing the borders: Studies on cross-border cooperation within the Danube Region*, Budapest, CESCI, 2016.
- CODRUTA, D-D. D., ABRUDAN, D., "Cross-borders cooperation inside the Euroregions: Case of DKMT Romanian Euroregion". *Economics Series*, Vol. 22, Issue 1, p. 55-61, 2012.
- SÓOS, E., A szubnacionális szintek a többszintű kormányzás rendszerében az Európai Unióban és Magyarországon, Szegedi Tudományegyetem Állam- és Jogtudományi Kar, Szeged, 2014.
- http://dkmt.net/hu/index.php?bov=118831184048683
- http://dkmt.net/hu/index.php?bov=43321182165020
- http://ernainfo.eu/

management of the Euroregion target better cross-border transport connections. The project titled 'Across the Tisa' developed new border crossing points on the Tisza/Tisa river (both for passenger and freight traffic) and made preparatory activities to declare the Tisza/Tisa as an international waterway. The Euroregion is the protagonist of the Szeged-Röszke-Horgos-Subotica-Baja railway line. In the framework of the strategic project 'Dream Railway', the technical documentation of the railway line will be elaborated.

Another important field of interest is culture since the region is ethnically one of the most colourful areas in Europe. Currently the DKMT is implementing another strategic project, titled 'Colourful Cooperation', which aims at boosting the common cultural life of the Hungarian-Serbian border area. The Euroregion implemented several other projects including the development of cross-border tourism routes, the creation of a cross-border information website in three languages, the organization of regional conferences, etc.

BTC EGTC (Banat – Triplex Confinium EGTC)[93]

Fifty mayors from the Hungarian–Romanian–Serbian triple border region gathered on June 17th2009 to establish the Banat-Triplex Confinium EGTC. The EGTC was officially registered on January 5th 2011; at once connecting the border areas between Hungary, Romania and Serbia in a way, which reconvened this organic space previously separated by the borders.

The seat of the grouping is in the city of Mórahalom, Hungary, and the partner municipalities are situated in Bács-Kiskun and Csongrád Counties (Southern Hungary) and in Timiș County (South-West Romania). Moreover, besides the full members of 40 municipalities from Hungary and 37 from Romania, 8 Serbian ones from Vojvodina are granted with observer status. As of today,, Serbian settlements cannot join because of the missing legislative framework in Serbia.

The objective of the grouping is to increase competitiveness within the border areas, which were in a peripheral situation during the previous decades. The main prospective fields of activities include the resolution of the challenges of climate change by managing the tasks of environmental protection, promoting the use of renewable energy sources the development of local infrastructure, education and training, combating against poverty, increase of social inclusion and enhancing of the competitiveness of SMEs within the border region.

The EGTC implemented several successful projects. The project called 'Coop Banat (Strengthening co-operation and network resources in favour of achieving economic growth)' aimed at the

[93] For further details please check the following literature:

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elaboration of the development strategy of the grouping. The strategy includes four integrated territorial interventions: cross-border agglomeration intervention aiming to improve the conditions of cooperation and the sharing of functions within a polycentric cross-border urban area; the 'Gateway to the Balkans' intervention with an objective of using the economic benefits of the strategic position of the region; cross-border agro-innovation and energetic intervention (Agro-climate ITI) which targets the integrated development of the agrarian and energetic sector of the EGTC; and an integrated cross-border cultural innovation programme (Bartók ITI) based on the colourful multicultural heritage of the historic Banat region, home of more than 20 ethnic groups.

Further important projects of the EGTC were the 'Expo Train SME' of 2013 and 2014 that created the opportunity for local SMEs to introduce themselves and to build relationships; and the project with title 'Dance and music without borders' aiming to introduce historical, cultural, musical values and folk traditions throughout arts programmes. Spas located in the border region launched a joint programme by which the tourists can enjoy the services of different spa resorts with one entrance ticket.

From the perspective of the implementation of the planned integrated interventions, the joining of the Serbian members would be an important step and it could give a new impetus to the EGTC and to its activities.

According to the Action plan as opening benchmark for Chapter 22 within the Serbian accession to the EU, in order to establish clear, efficient and transparent rules for implementing EGTC Regulation Serbia will conduct few analyses (e.g. analysis of main requirements of EGTC Regulation, comparative analysis of national implementing rules of other countries, gap assessment of the existing Serbian legislation etc.). The specific legislative disparities between countries shall also be considered, particularly in the area of functioning of the legal bodies, limitation of their authorisation as well as control of the public funds management but also in the area of public procurement, the amount of VAT, customs regulations, the prescribed salaries in the public sector etc. Consequently, the necessary legal basis for implementation of EGTC Regulation shall be prepared by 2023 with the aim to establish necessary conditions for participation of Serbian legal entities in this cooperation approach.

In the meanwhile, institutions from Serbia shall consider the various forms of cooperation that domestic legislation and international agreements both allow.

2.3.4.5 The potential role of local festivals in the cooperation

The most common scenes of settlement-related and partner settlements relationships are the local festivals and village fairs mainly for the residents of the (small) settlements, which are built around a thematic unit. These events are mainly gastronomic and cultural, besides the already mentioned religious celebrations (e.g. village fairs). Organizing these festivals and creating an image for them has become a habit especially in the last few decades, which is mainly due to the local search for identity, identity revival. Gastronomy and some intellectual cultural content (revival of a local tradition, practice) usually have a great dominance in this. These events highlight the diversity of the settlements, therefore they do not have a single register, and trying to create a register would lead to several problems. Despite these problems, organizations, which could join the wider tourism offer and which are of a more local nature, would be worth establishing and selecting, as even the circle

of partner settlements could be extended built on certain similarities, improving the internal and cross-border relationship systems on these foundations.

2.3.4.6 Media – local media

Media has an especially significant role in informing and information flow, let them be of a national, international or a regional, local nature. Regarding the media in the study area, there are different features and directions of development that have created similar paths.

The two countries have inherited most of their public service media and the late development of commercial media, especially radio stations and television channels in the 1990s, from their socialist past.

The most significant difference can be detected between the rate of centralized infrastructure. The area of Vojvodina had the same rights in the former Yugoslavia as the republics. One of the institutions for this is the Novi Sad centred Radio-Televizija Novi Sad - RTNS, which has been as it is since 1972 (it has been broadcasting TV programmes since November 1975). It used to operate as a radio (Radio Novi Sad - RNS) from 1949. From 1992, after the disintegration of Yugoslavia and the centralization of the Serbian parts of the Yugoslavian radio-television channels and headquarters, in accordance with the political centralization at the time, the Radio-televizija Srbije - RTS was established from the RTNS in Vojvodina, the Radio-televizija Beograd - RTB and the Radio-televizija Priština - RTP. This situation ended in 2006, when the RTS divided into two again: the RTS centred in Beograd, and the Radio-televizija Vojvodine – RTV centred in Novi Sad. Since then, the RTV has been operating two TV channels and four radio stations. Among the TV channels, channel 1 (RTV1) is in Serbian, while channel 2 (RTV2) broadcasts programmes in Serbian and in other minority languages of Vojvodina. Among the radio stations, the Radio Novi Sad prvi station is in Serbian, the Radio Novi Sad drugi station is in Hungarian, and the Radio Novi Sad treći station is broadcasted in the languages of the other minorities in Vojvodina (Croatian, Romanian, Slovak, Rusyn and Roma). The fourth radio station, the Radio Stotka has music and entertainment.

The Novi Sad radio station, and later the Novi Sad TV channel has been an important alignment point in the areas of Hungary where it was available. It was its primary role in the 1950s to criticize the order of the Comintern to exclude Yugoslavia and the Stalinist unit and to bombard the listeners, especially in Hungarian and Romanian regions, with alternative information, but sometimes people listened to this station even in Prague. Therefore, sometimes there were Czech broadcasts on this radio station besides the Hungarian, Romanian and Slovak broadcasts. This period is still a shared memory in the Hungarian regions, where this radio station was broadcasted, as several people thought it was the voice of political opposition and freedom, regardless of the fact that Titoism was not more likely to respect political alternatives.

The only centre of radio and TV in Hungary is Budapest, and this is still one of the cornerstones of the system, which has not changed much. District studios operated before the regime change as well, which partly broadcasted minority programmes for the former South Slavic minority in Serbo-Croatian language. Even though there was a district studio in Szeged as well, the Serbo-Croatian editorial office was in Pécs, Szeged was the centre of the Romanian and Slovak programs. The Serbian television editorial office was moved to the MTV's district studio in Szeged after the regime change, the disintegration of Yugoslavia, and the division of the Serbian and Croatian editorial offices. The

radio station remained in Pécs. These district studios have been centralized and operating in the frameworks of MTVA since 2015, but there are district studios still in Pécs, Szeged and Miskolc.

According to Hungarian law, the larger minorities, who used to have editorial offices (the German, Serbian, Croatian, Slovak, Romanian and Roma minorities), are provided with appearances in national radio and television programmes. This means a two-hour-long radio appearance on the medium waveband daily, and a 25-minute-long television appearance in the national public television weekly. All other distinguished minorities in Hungary have a 30-minute-long programme daily in a rotation system. From 2007, every minority programme is broadcasted by a minority radio station, operating as the 4. channel of The Hungarian Radio Corporation.

In Serbia there is a long tradition of broadcasting in minority languages. According to a research[94] published in 2018, only in Vojvodina there are about 114 different media that at least partially produced content in 11 minority languages. The rights of national minorities in the field of information are guaranteed by the Constitution, media laws and ratified international documents. However, informing minorities is still taking place today without a consistent media policy.

Not public, but commercial and local, and sometimes regional TV channels and radio stations appeared in both study areas along the border from the 1990s. Mainly the local-municipal, the urban district and the smaller regional radio and TV stations have focused on producing programmes highlighting local identity and the life of the local society. The following coverage and spatial distribution are present in the study area:

Table 7: Television channels operating in the study area

Country	Permanent name	Location
Hungary	Egyetem TV	Szeged
	TiszapART TV	Szeged
	SZAKÉ - leisure, culture, lifestyle -	Algyő
	Helyi TV	Akasztó
	Dél+ TV	Baja
	Baja TV	Baja
	Infó TV	Baja
	CSKTV	Császártöltés
	Kistérségi TV	Felgyő
	Hajós TV	Hajós
	HTV	Harta
	Vásárhely TV	Hódmezővásárhely
	Izsáki Televízó	Izsák
	Kecel Városi Televízió	Kecel

94 Bojan Djercan, Tamara Lukic (2018). Media of national minorities in Vojvodina. DOI: http://dx.doi.org/10.18509/GBP.2018.29. https://www.researchgate.net/publication/327851144_MEDIA_OF_NATIONAL_MINORITIES_IN_VOJVODINA

Country	Permanent name	Location
	Kerekegyháza Televízió	Kerekegyháza
	Kistelek Városi Televízió	Kistelek
	7TV	Kunszentmiklós
	MÓRA-NET TV	Mórahalom
	Rémi Televízió és Képújság	Rém
	Soltvadkerti TV	Soltvadkert
	Térségi Televízió Szabadszállás	Szabadszállás
	KISKUNMAJSA VÁROS ÉS TÉRSÉGE MÉDIA	Szank
	Kurca TV	Szegvár
	Szentes TV	Szentes
	Önkormányzati Csatorna	Tompa
	Csongrád TV	Csongrád
	Halas TV	Kiskunhalas
	Makó Városi TV	Makó
	Városi Televízió Szeged	Szeged
	KalocsaTV	Kalocsa
	Kecskeméti Televízió	Kecskemét
	Lovas Diadal Live TV	Kiskunfélegyháza
	kre@tv	Szeged
Serbia	VK TELEVIZIJA	Kikinda
	TV YU ECO	Subotica
	TV PANON	Subotica
	SREMSKA TELEVIZIJA	Šid
	TELEVIZIJA MOST NOVI SAD	Novi Sad
	TV PANČEVO	Pančevo
	OK TV	Kovačica
	RTV RUBIN	Kikinda
	RTV SANTOS	Zrenjanin
	RTV INĐIJA	Inđija
	TV KANAL 25	Odžaci
	TV BANAT	Vršac
	NOVOSADSKA TV	Novi Sad
	KANAL 9	Novi Sad
	RADIO-TELEVIZIJA VOJVODINE	Novi Sad
	RADIO-TELEVIZIJA SRBIJE	Beograd

Table 8: Radio stations operating in the study area

Country	Permanent name	Location
Hungary	Gong FM	Kecskemét
	Bajai Rádió	Baja
	Rádió 7	Hódmezővásárhely
	Korona FM 100	Dunapataj
	Kunság Rádió	Kiskőrös
	HALAS RÁDIÓ	Kiskunhalas
	Rádió 88	Szeged
	RÁDIÓ SMILE	Kiskunfélegyháza
	Borút Rádió	Szeged
	kre@rádió	Szeged
Serbia	RADIO ADA	Ada
	RADIO KOVAČICA	Kovačica
	RADIO BAČKA	Bač
	RADIO ACTIVE	Bečej
	RADIO JUGOVIĆ	Kać
	RADIO SRBOBRAN	Srbobran
	RADIO AS	Novi Sad
	DELTA RADIO	Novi Sad
	RADIO PRVI	Novi Sad
	RADIO 021	Novi Sad
	RADIO SIGNAL	Novi Sad
	NAXI PLANETA RADIO	Novi Sad
	RTI FM	Novi Sad
	TDI RADIO	Novi Sad
	RADIO SREM	Ruma
	RADIO FRUŠKA GORA	Ruma
	BB RADIO 89.7	Sombor
	RADIO BELA CRKVA	Bela Crkva
	RADIO NAXI MAX	Novi Kneževac
	RADIO BUS	Kovin
	RADIO RITAM	Pančevo
	MUZIČKI RADIO MAX	Vršac
	RADIO DUNAV	Apatin
	RADIO REGIJE	Bačka Topola
	Q RADIO	Kula
	NO LIMIT RADIO	Senta
	RADIO OZON	Sremska Mitrovica

Country	Permanent name	Location
	RADIO STARA PAZOVA	Stara Pazova
	RADIO YU ECO	Subotica
	PRVI RADIO	Subotica
	RADIO SUBOTICA	Subotica
	AMI NAKSI RADIO	Kikinda
	NAŠ RADIO	Žabalj
	RADIO FANTASI NAXI	Vrbas
	RADIO KLIK	Zrenjanin
	RADIO TITEL	Titel
	RADIO MEGA IN	Inđija
	NAXI RADIO APATIN	Apatin
	RADIO M55	Knjaževac

The media group operating in the most "cross-border way" in the programme's area is the Subotica-centred Pannon RTV, which includes TV and radio broadcasts in Hungarian, the Hungarian Radio in Subotica and news outlets in both Hungarian and Serbian. This is operated by a civil organization called Pannonia Foundation, founded in 2005. The Hungarian National Council became a co-founder of the Pannonia Foundation on 30 July 2010. The operation of the whole structure is implemented and maintained by the Hungarian Government, through the most significant Hungarian political party and representative association in Serbia (National Council). They are reporting about the whole province of Vojvodina and bring news on Europe and the world. Besides public media, many rural TV channels and radio stations are partners of Pannon RTV. One of the important missions of Pannon RTV is to promote the Hungarian-Serbian dialogue and to present the European Union to the communities of Vojvodina. They are broadcasting the major news in Serbian online, some of their broadcasts are subtitled in Serbian, and the Serbian broadcasts are subtitled in Hungarian.

There is no such local or regional media or media group on the Hungarian side that would base their operations specifically on news of life along the border area. Creating a medium covering both areas at the media level, informing about the border region frequently in both languages should be considered, as it could fill the mentioned hiatus as well.

2.3.4.7 Analysis of previous efforts for cooperation from the point of view of P2P relations

Due to the significant amount of indirect, nearly immeasurable effects, it is hard to say which previously supported projects have been the ones connecting people separated by the border in the best way. Even research or higher education relationships stem from previous acquaintances, not to mention economic relationships, where trust is a particularly important and risk mitigating factor. Therefore, projects in which smaller communities or civil society organizations participated, or projects with objectives like community-building or networking between communities (through any channel) are primarily examined.

Examining the projects supported so far in the previous programming period, we can see that more than half of them contain elements that concern the improvement of the local communities' internal and external relationship systems. There are basically three main areas.

The first one is the classic municipal cooperation – the partners are prioritizing local resources and they are realising their development goals with them. The joint platform is often reached by programmes for the younger generation (sports, education, camping, mutual travelling, etc.), but local values appear as tools of active cooperation as well, like festivals and pilgrimages.

Another specific type of these projects is when the similar, often identical objectives of professional groups – hunters, environmentalists, social workers, artisans – affect the process of getting to each other better and the deepening of the cooperation's human side. The presence of younger generations is common here as well, especially in those projects where cooperation happens through modern industries, like creative industries, film, theatre, arts. etc.

The third group is the projects where the relationship capital is created from a result of a project or a product of the project. The project activities are rather of an intellectual nature, they are rarely of a material nature (training courses are, however, not rare), but the aim is not only the result, but, instead, its utilization in the target area, or at least the initiation of this process. Even though the interconnecting potential is often not visible in these project partner groups, its presence is always visible in the intended outcome (it would be useful to thoroughly monitor every project and to measure their results with an evaluation system established in terms of P2P relationships). We consider it important to have a joint training with the groups from both countries in case of these projects, or if there are significant language barriers, we think it is important to connect the targeted people from both regions in the practical, feedback stage after the training courses (if they take place, which would be the best), in the framework of a joint evaluation or even at the practical closing phase to express everyone's opinions and make proposals.

There is a fourth, but not really typical or popular type of projects, where the sophistication and infrastructure of P2P relationships only becomes profoundly important in the application and maintaining stage, after the investment. These are the projects containing the most significant investments, where the goal is the establishment of infrastructure, the utilization of which needs to be promoted socially later. This factor often gets neglected in these projects as they primarily concentrate on the item to be established, but it turns out at the end that the most important resource and maintainer is the human being, the participant, the interested person.

Relevant projects previously carried out in the region

ActiveGirls - HUSRB/1602/32/0032 - Support sports and physical activity of girls (1 June 2018-30 May 2020)

The gender gap between boys and girls playing sport begins around the age of 8 and continues to grow as girls move into the secondary school. Bearing this in mind, the main objective of the project is to support co-operation in the field of sports to develop joint approaches that would tackle the issue of low level of physical activity among girls at primary schools (aged 7-15) in the border region, and thus ensure their positive relationship with sports as a key factor for leading a healthy lifestyle.

The project aims for the following results:

- Increased skills and competences of PE teachers, coaches, and sport experts for coaching primary school girls;
- Improved material conditions of sport facilities in project area for implementation of PE classes and sport activities;
- Increased awareness on the availability of sports programmes for young girls in the project area;
- Two regional junior camps for girls organized in the cross-border region.

CB BASKET - HUSRB/1602/32/0004 - Cross-border basketball games (1 June 2018-30 July 2019)

The partners in this project are two basketball organizations from Hungary and from Serbia whose mission is fostering the healthy engagement of young people. Promotion of basketball, team spirit and healthy living in the society are the primary principles of the leadership of the two basketball clubs.

The project's main objective is establishing a cross-border framework which facilitates the social inclusion and provides opportunities for cooperation through active engagement of young people from the border area in sports activities.

Inter-Cult - HUSRB/1602/32/0164 - Intercultural youth cooperation mosaics in the cross-border region (1 July 2018-30 March 2020)

The project aims to raise awareness about the necessity for a better inter-ethnic understanding and cooperation among national communities, especially among young people living on both sides of the border, primarily in the fields of culture and tourism. This will be achieved through creative and artistic activities based on youth voluntarism and activism.

The project is designed to provide an in-depth media promotion of the tourist and cultural diversity of the Hungary-Serbia border region through production, distribution, and broadcasting of a joint television series in which young volunteers, high-school students, students and future activists in culture, tourism and media will participate.

FILMY - HUSRB/1602/32/0098 - Film art connects young people (1 January 2018-30 August 2020)

The Hungary-Serbia border region is missing strategic, sustainable, and developing cooperation between cultural organizations in the field of film art. Besides the lack of cooperation between cultural organizations and cinemas, which results in the lack of information about film programmes, film events and cinematography from abroad, an important problem is a lack of creative, networking and innovative activities in the field of film art which would connect the region and its population. The lack of adequate offer of informal education in the field of the film art in the border region leaves the target groups with modest opportunities for the development of artistic spirit and skills, regardless of their talent and interest. Young people, middle-aged and older fans of the film art are lacking the centres for education and fostering the culture of film screening, exchange of opinions and critical observations of the life and its elements from the perspective of the film art.

Recognizing these problems, two cultural organizations from the neighbouring cities Subotica and Szeged, as managers of two important cinemas and organizers of two international film festivals,

prepared a set of interconnected activities which will animate and connect a wide target group, especially young persons and create new cultural events which will result in concrete development of the border region in the field of the film art. The Open University Subotica and the Event and Media Centre Szeged Non-profit LTD. plan to establish a close and continual cooperation based on the three cooperation pillars – film festivals cooperation, establishment of Film clubs, and establishment of Film schools in border region. Through the cooperation of the festivals and the cinemas from the two cities, and especially through establishment of film schools and film clubs in these cities and other local communities, the target groups will receive opportunities to consume and enjoy in the film art as well as to develop their talents through education, practical work, experience exchange and cooperation with experts in this field from abroad.

CBS-CD - HUSRB/1602/32/0022 - Cross-Border Sound for Children with Disabilities (1 September 2018-30 December 2019)

The project will enable young people with disabilities with a chance to actively participate in cultural and public events in their communities, improve their visibility by showing their music playing skills and contribute to creation of positive attitudes towards people with disabilities and removing the related psychological and social barriers.

The objectives of the project will be achieved through the procurement of a "Soundbeam" musical system based on using sensor technologies which detects the smallest body movements through ultrasound waves and transposes them to music and sound. With the help of special software, it is used as a classic piano keyboard. It enables persons with limited movements and learning disabilities to actively participate in musical creations and thus foster their social inclusion. The use of such an instrument will be one-of-a-kind in the region and it will be of a great use for both institutions in their work with children with disabilities.

CETTVYP - HUSRB/1602/32/0001 - Balástya and Torontáltorda Government hold range of cultural events to transmit traditions and traditional values to young people (1 August 2018-30 September 2019)

Even though globalisation can be beneficial it could be stated that it can supress traditional values and unique customs resulting in decline of cultural values.

The two partners of this project – the Municipality of Balástya in Hungary and the Local Community of Torda in Serbia are both settlements with less than 5,000 inhabitants. Through this project, they plan to stimulate the exchange of knowledge, the dissemination of unique local customs and culture among the habitants of the border region, as well as to integrate nature protection into their recreational events.

The project activities will include various events strengthening connections between people from both countries, especially among young people. The events will be organised in a way that enables the youth in the settlements from both sides of the border to visit the other side of the border, participate in the events in order to gain useful knowledge about its culture, nature protection and traditions.

The project will include 12 events Balástya, and five events in Torda.

THEATRO - HUSRB/1602/32/0106 - Theatre art as a regional hub for children's socialization (1 January 2018-30 June 2019)

Despite the existing cultural cooperation in the Hungary-Serbia border region, there is an evident lack of knowledge and information about the cultural heritage and cultural offer in the border region related to puppetry/children's theatre, especially among children and young people. The project aims to develop children's theatre art in the border region, increase cooperation between stakeholders, increase general theatre and festivals audience and create innovative online tool for the purpose of education, information, promotion and experience exchange in the field of theatre art for children. Project partners are two cultural institutions, organizers of two international theatre festivals for children, which have excellent cooperation and successful experience with cross-border cooperation.

2.3.4.8 Conclusion

The relationships between people or smaller social groups, primarily based on trust and mutual respect, have a huge social value. However, in hard and alienating times, these suffer the most significant regression. CESCI considers supporting projects representing these soft elements as very important. Mostly because they often seem incomparable in results with the forms of cooperation resulting in big and spectacular products and institutions, but the basis of the biggest investments and objectives would disappear without trust-based cooperation. As mentioned at the beginning, these relations need to be revitalized with the same energies that were used to reduce them beforehand, but in the other direction.

Based on the analysis of the topic 'People to People cooperation', the following types of potentially functional areas can be defined within the region:

- Networks of civic relations: the spatial organisational network of various stakeholders and the attached places, venues (e.g. festivals) which support mutual understanding, shape a common identity and create intercultural and interethnic bridges by cross-border movement of border people in the frameworks of community building activities.
- Partner settlements: twinning settlements having strong interconnections and mutual, joint activities at each other's place, often supported by a formal agreement and/or an annual event. The spatial networks of municipal territorial cooperation activities.
- Cross-border structures: the institutional and partnership network and the most active areas of intervention (project locations, event locations etc.) regarding EGTCs and Euroregions which contribute to the stronger cohesion of the Hungarian-Serbian border region (see figure named Cross-border structures in the border regions).

3 Results of the online surveys

According to the original inception report, an online survey was planned to carry out with the primary aim to gather information from the local stakeholders on a number of issues such as their preferences regarding the new programme, existing potential project ideas and their opinion on the tools and solutions which can be applied by the programme. In line with this, during the summer of 2019 an online survey was conducted the result of which was incorporated in the first version of the territorial analysis.

In compliance with the Programming Committee's decision made in November 2019, the online survey has been repeated during the first quarter of 2020. Since the results of the two surveys cannot be aggregated - while both offer a deep insight into the questions - both results are presented below in parallel while pointing out the similarities and differences.

3.1 The methodology of the online surveys

From a technical point of view the methodology of the online survey was identical in the two rounds. A link to a Google Form was sent out in Hungarian and in Serbian to the territorial actors who had about a month to submit their response.

The questionnaire was created in a way to maximize the collected data and the different standpoints of the stakeholders so that a wealth of quantifiable data illustrated with detailed qualitative information has been registered on the following questions:

- What are the stakeholders' previous experiences with the cross-border programmes?
- What challenges and potential supporting initiatives do they identify?
- What topics do they consider the most important for a cross-border programme?
- What kind of project ideas do they have to implement during the next programming period?
- What are their perceptions on the different innovative tools?

Although technically the questionnaire of the two rounds had been identical, to improve the outcome, some minor content wise changes were deliberately made – in compliance with the requests of the NAs. These were the following:

Table 9: Changes in the online survey of 2019 and 2020

Topic	1st round	2nd round
System of invitation	Pre-defined list by CESCI containing county councils and the Autonomous Province of Vojvodina; the DKMT Euroregion and the BTC EGTC; tertiary educational and vocational training institutions; hospitals; national parks; water management institutions; SME development institutions; tourist destination organisations and tourist agencies;	The JS sent out the questionnaire to the applicants of the previous calls, the relevant networks of the PC and JMC members. Furthermore, the questionnaires were published on the Programme website. On the Serbian side the NA published the links on the website of the Ministry of European Integration, whereas the Standing Conference

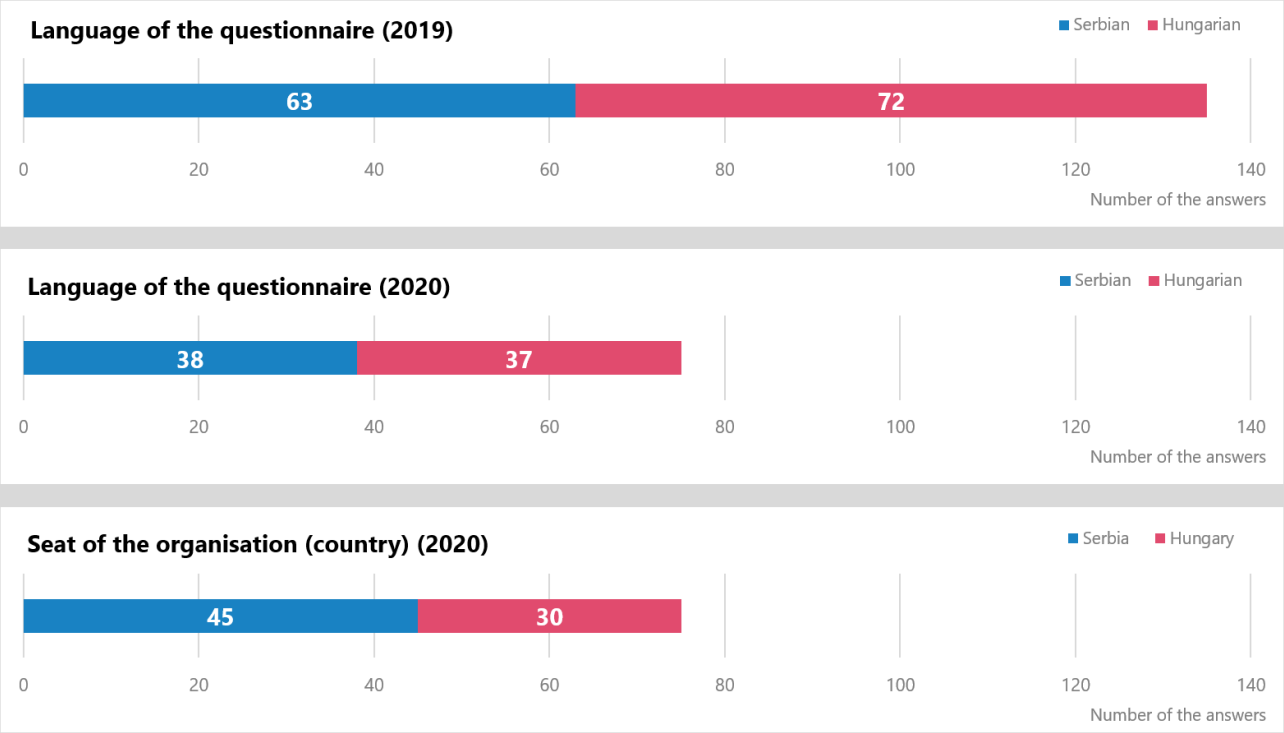
Topic	1st round	2nd round
	environment protection and transport institutions; employment institutions; risk management institutions; economic chambers; and all the applicants of the current programme)	of Towns and Municipalities, the Office for Cooperation with Civil Society and regional agencies also disseminated it. CESCI Balkans sent it to local municipalities, the Autonomous Province of Vojvodina, and the development agencies. On the Hungarian side CESCI sent it to local and regional municipalities, as well as to the two cross-border organisations (DKMT Euroregion and BTC EGTC).
Self-identification of the respondent	It was optional, at the end of the questionnaire, consequently only the type of the institution could be analysed	It was compulsory at the beginning of the questionnaire
Listing of difficulties in terms of programme participation	7 options	10 options (additional responses: 'I see no difficulties', 'Difficulties in realisation' and 'Other)
Topics to be incorporated in the next programme	45 options (subtopics)	38 options (subtopics)
Project idea's thematic classification	45 options (subtopics)	aggregated 11 options (main topics)
Status of the project idea	4 options, one of them is an open 'Other'	4 options, where the 'Other' was replaced by 'A developed project proposal has been prepared'
Tools and solutions applied by the next programme	6 options The 'TAPEs' and the 'Direct support of SMEs' are represented only here	5 options The 'Project integration' is represented only here

Due to the large pool of the addressed relevant respondents and the relatively long period of time (approximately a month in each case) to answer, the sample to be analysed is significantly large. In 2019 all in all, 135 valid answers were registered out of which 72 were filled out in Hungarian and 63 in Serbian language. In principle, the questionnaire was anonymous, however, there was a possibility for the respondents to enclose some details on their organisation. In total, 97 respondents exploited this opportunity, out of which 44 respondents were from Hungary and 53 from partly bilingual regions of Serbia.

In 2020 a smaller number, 75 respondents filled out the questionnaire, 38 in Serbian and 37 in Hungarian, despite the widespread joint effort of popularizing the questionnaire through several forums. This time, the self-identification of the respondents was compulsory and thus the share of

respondents between the two countries can be better monitored: 45 respondent's organisations are in Serbia and 30 in Hungary. Consequently, on the diagrams and figures the seat country is taken into account in the case of the 2020 survey, while for the 2019 survey the language of the responses. In the charts, in every case it is clarified whether the data refer to the language or the country of residence.

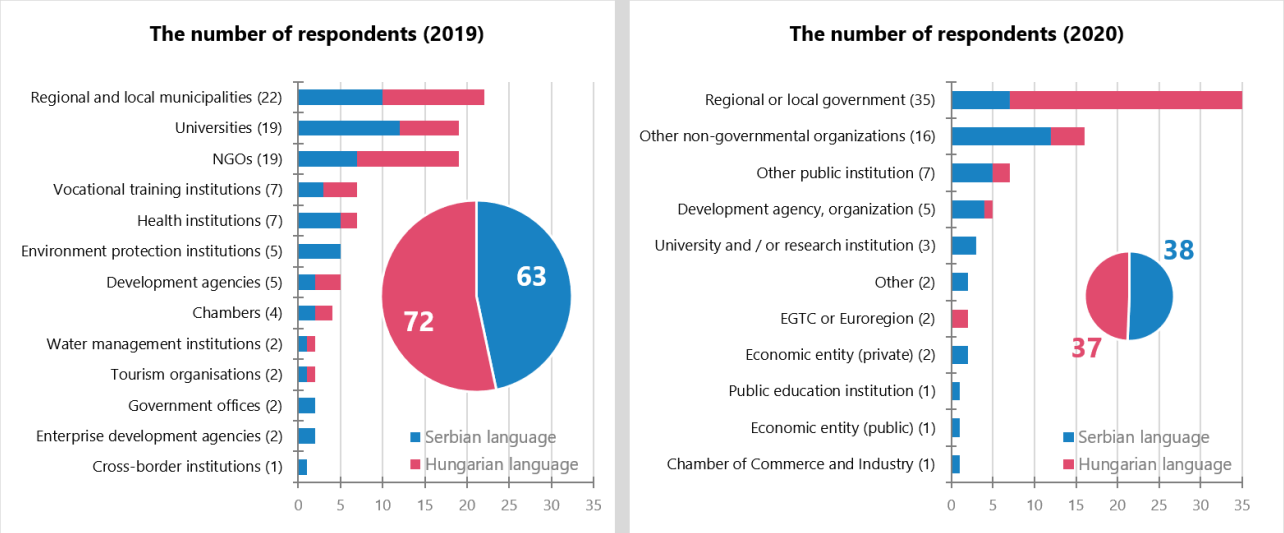
Figure 43: Total number and share of the respondents (2019, 2020)



Considering the types of organisations, a somewhat different distribution can be noticed between the two questionnaires. In 2019 regional and local municipalities were represented the most (23%), but universities (20%) and NGOs (20%) also filled out the questionnaire in a relatively large number. Vocational training institutions (7%), health institutions (7%), environment protection institutions (5%) and development agencies (5%) were also represented. It can also be observed that while in total more respondents filled out the questionnaire in Hungarian than in Serbian there are types of organisations which are only represented by the Serbian side (such as environment protection institutions, different government offices, enterprise development agencies, cross-border institutions).

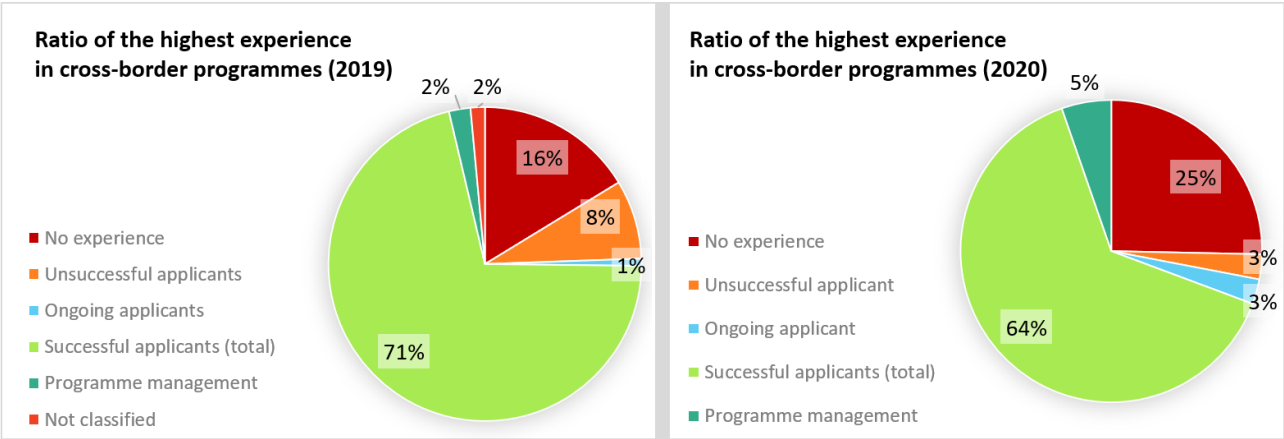
As opposed to this, the 2020 sample seems to be more unbalanced as almost half (47%) of the respondents were representing a regional or local government, only 21% other non-governmental organisations and 9% other public institutions. Similarly to the 2019 sample, a slight overrepresentation of the Serbian responses can be noticed when broken down to the different types of organisations as out of the 11 categories, in 6 cases responses came back only in Serbian language.

Figure 44:Distribution of the number of respondents according to the type of the organisation (2019, 2020)



When it comes to the ratio of the highest experience in cross-border programmes only non-significant differences can be observed between the two set of samples.

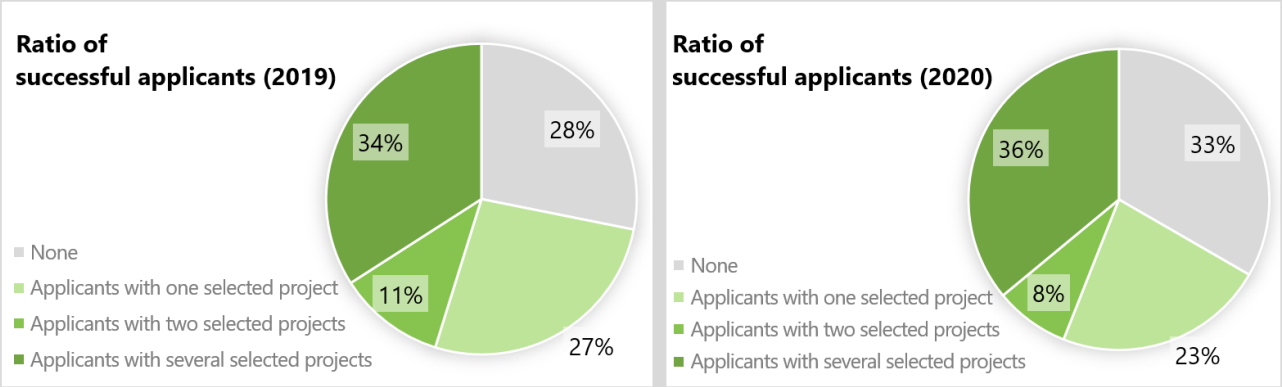
Figure 45: Ratio of the highest experience of the respondents with cross-border programmes (2019, 2020)



According to the survey of 2019 96 respondents have already been applicants with selected project(s) (35 once, 15 twice and 46 more times) which is the vast majority of the respondents. Possibly 11 respondents could share insight on the difficulties of the programme as they were previously applicants with projects that were not selected. The insights of current applicants (1) and the representatives of programme management bodies (3) were analysed, while 2 respondents were not classified. 22 respondents claimed to have no direct experience with cross-border programmes.

In 2020, again most of the respondents were applicants with one or more selected projects (17 once, 6 twice and 25 more times). The ratio of the respondents with no previous experience was a bit higher (19 respondents claimed to have no direct experience), but other categories were more or less similarly represented (programme management: 4, current applicant: 2 and unsuccessful applicant: 2).

Figure 46: Ratio of successful applicants (2019, 2020)



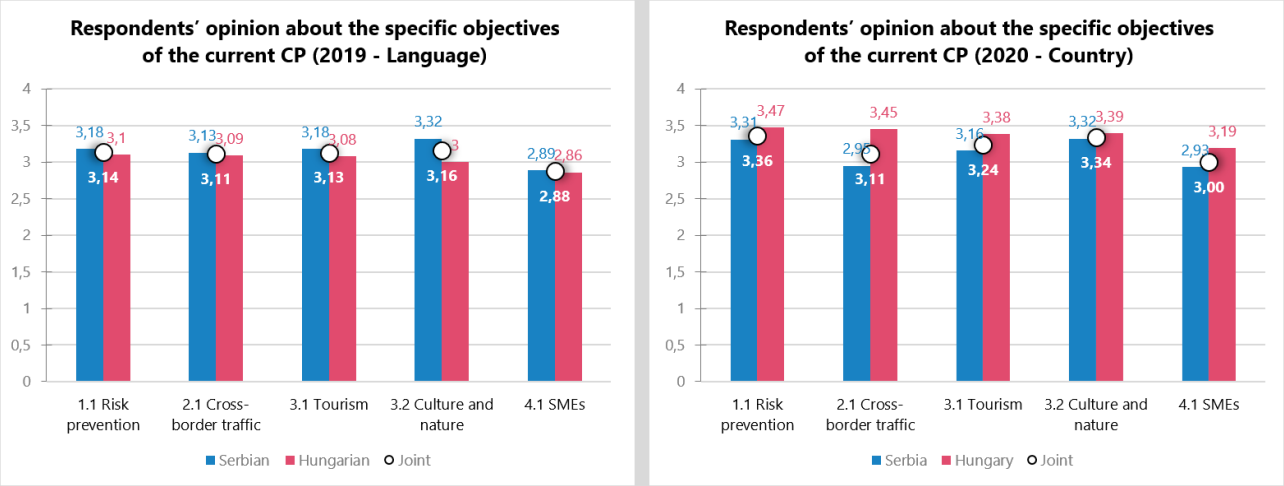
After the closure of the survey, one of the respondents sent an additional list of 9 project ideas. The ideas altogether are worth a 4,7 million €, the one requiring the least financial support costing 20 thousand €, the most expensive one 1,2 million €. These projects are mostly focusing on water related issues such as reinforcement of the crown of the defensive embankment, procurement of mobile pumping units or floating pipeline for dredger and associated fittings.

3.2 Results of the surveys

3.2.1 Opinion about the current Programme

The respondents were invited to rate on a 1-4 scale to what extent in their opinion did the priorities of the INTERREG-IPA Cross-border Cooperation Programme Hungary-Serbia (2014-2020) meet the territorial needs of the border region. According to the consolidated results, the same ranking list resulted from the two surveys. Risk prevention was awarded the highest, then cross-border traffic closely followed by culture and nature, then tourism, while SMEs got the lowest ranking both in 2019 and 2020. It might be interesting to point out that, in general, the ratings are higher, thus more positive, among the respondents filling out the questionnaire in 2020 than back in 2019.

Figure 47: Respondents' opinion about the specific objectives of the current CP (2019, 2020)



The respondents were also asked to justify their answers. Here the majority of the responses were positive claiming that the specific objectives reflected suitably the region's needs and problems (*'The Programme provides an opportunity for the joint development of the Hungarian-Serbian border region by creating a harmonious, cooperative, sustainable and safe environment region. Successful applications have certainly made / will make progress in these areas mentioned above.'*) or *'All the listed activities can only bring successful solutions with sufficient Serbian-Hungarian cooperation.'*

At the same time, some more critical opinions were also formulated which shed light on the reasons behind the lower ratings. Most respondents criticized the specific objective supporting the SMEs stating that this did not fit well the general frameworks of the programme (*'The last priority related to SMEs is not adequate, as the rules of business in different countries are different, as are the problems, and probably the lack of communication'*). Others claimed that this specific objective should pay more attention to cooperation between SMEs and science and industry to develop common products and branding.

Another important group of comments targeted nature protection and risk prevention criticizing that the focus was put on water related interventions which is too restrictive as it blocked otherwise essential projects focusing on air pollution, waste management, soil quality, etc. (One example: *'We believe that environmental protection should be a separate priority with all areas it covers (waste and*

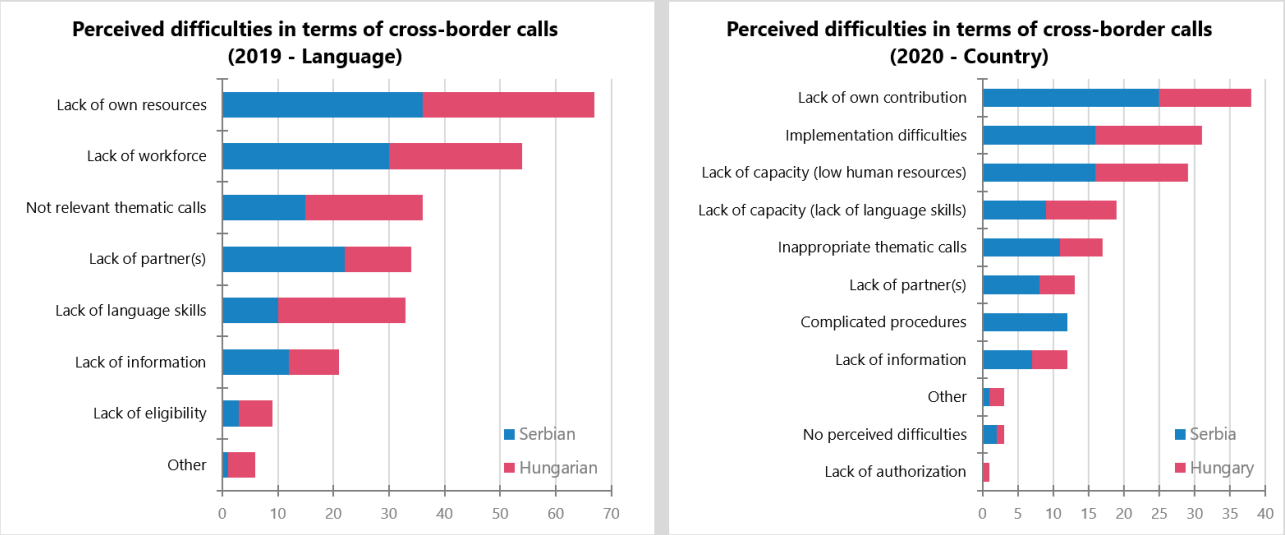
wastewater management, environmental monitoring, sustainable development, environmental education and more').

3.2.2 Difficulties and solutions

The respondents were asked to identify those difficulties that they perceived as obstacles when participating in the cross-border programme. Each participant could choose any number of the pre-given answers (7 in 2019 and 10 in 2020) and had the possibility to name additional factors.

According to the answers in 2019 the biggest difficulties have been posed by the lack of required own contribution especially among the respondents filling out the survey in Serbian (26% in total), which is in line with the 2020 results (21%). While in the 2019 survey the second biggest challenge (21%) was the lack of workforce, in the second round implementation difficulties (17%) were deemed slightly more problematic than lack of human resources (16%). Inappropriate thematic calls and language difficulties were ranked as mid-range problems, whereas lack of information and lack of eligibility was perceived as a smaller problem. However, in the 2020 survey, complicated procedures were signposted as problematic by respondents from Serbia (receiving 12 votes) while none from Hungary.

Figure 48: Perceived difficulties in terms of cross-border calls



When asked about the support which would help the respondents successfully submit project proposals a handful of valuable answers were offered that could be categorized into 5 main groups:

- Help with funding issues: a pre-financing system available on both sides of the border would enlarge the pool of potential applicants.
- Help in finding the suitable partners: Several respondents said they need better networking to that end they seek after meetings / introductions and presentations of the work of interested organizations from both countries.
- Simplifying the administration: A quicker and easier administrative and accounting system would be welcomed.

- Information and training, including help in writing the project proposal: Specific info workshops with a practical example of AF filling as well as interpreting and answering questions regarding eligibility rules for specific calls were asked by many.
- Changing the thematic calls: Expansion of the topics would make it possible for more organisations to get involved.

Furthermore, during the consultation process, it was also mentioned that the financial supporting mechanisms, the proportion of own funding as well as the bank's approach are different on the two sides of the border. This makes the participation of the organisations on the Serbian side harder as even though they have profound professional knowledge, they have shortages in financial terms.

3.2.3 Importance of the topics

The core issue of the questionnaire was the question on how important the respondents thought the following topics were for the next cross-border programme. The respondents of the survey were asked to evaluate a set of cross-border topics (45 in 2019 and 38 in 2020[95]) through a scaling (from 1 to 4) to get to know how important they find the listed topics in the border area. It is worth noting that there was an option to select "0 (I do not know") from the list of potential answers. Then, the answers were averaged and sorted. The results are represented in the ranking table below. The higher the score is, the higher is the importance of the given subtopic to the respondents.

The results are arranged into three double-columns: joint average of the whole border area in the 2019 survey and 2020 survey, Serbian average and Hungarian average in both turns and the ratio of those answers who wished to not rank the given topic.

The results of the two surveys are considerably harmonious. For instance, the first four topics are considered highly important (especially environmental cooperation) equally along the border and between the two rounds. Similarly, the ratios of those who did not want to rank a specific topic did not change significantly between the two surveys, the topic 'industry 4.0' being the most difficult to understand or relate to the border region.

It is much more difficult to perceive significant differences between the results of the two surveys. One such diverging case is the topic of cross-border public transportation, railway connections whose assigned importance significantly grew (from 2,98 to 3,22) largely due to the different results on the Hungarian side (2019: 2,98, 2020: 3,04). Another similar example is the topic of joint exploitation of tourism potentials, joint product development whose importance increased from 3,15 to 3,42.

To properly compare the joint averages of 2019 and 2020, the differences for each topic's point in the two rounds were calculated. Then the modus of the group was identified, which is 0, showing that in the most cases exactly the same points were given to the topic in both rounds. Also, in 18 cases (47%) the increase or decrease was smaller than 0,1 point and in no case was larger than 0,3 on a 1 to 4 scale.

[95] Out of the 45 subtopics included in the 2019 survey, only those are analysed here that are also included in the 2020 survey.

Table 10: Comparison of the average ratings of the subtopics in the 2019 and 2020 surveys

Subtopics	Joint average		Serbian average		Hungarian average		„I don't know %"	
	2019	2020	2019	2020	2019	2020	2019	2020
Average	**3,06**	**3,14**	**3,17**	**3,15**	**2,96**	**3,12**	**8%**	**8%**
1. Joint preparation for climate change	3,33	3,33	3,42	3,34	3,25	3,31	6%	7%
2. Joint use of renewable energy sources	3,37	3,36	3,57	3,34	3,18	3,39	6%	4%
3. Environmental cooperation	3,49	3,55	3,58	3,64	3,40	3,41	4%	3%
4. Joint water management	3,20	3,40	3,31	3,33	3,11	3,50	9%	7%
5. Disaster prevention and relief	3,18	3,03	3,37	3,10	3,02	2,93	7%	5%
6. Cross-border inter-municipal cooperation	3,06	3,11	3,15	3,05	2,97	3,21	6%	5%
7. Development of cross-border public services	2,67	2,79	2,86	2,83	2,49	2,74	13%	11%
8. Cross-border development of social services	2,68	2,61	2,91	2,78	2,46	2,37	11%	11%
9. Healthcare cooperation	3,16	3,00	3,38	3,10	2,95	2,85	6%	9%
10. Increasing the border crossing opportunities	3,14	2,94	3,31	2,88	2,98	3,04	9%	9%
11. Cross-border public transportation, railway connections	2,98	3,22	3,09	3,17	2,88	3,29	8%	8%
12. Environmentally friendly cross-border multimodal transport development	2,95	3,05	3,10	3,03	2,81	3,07	10%	15%
13. Co-ordinated industrial-logistics developments	2,82	3,12	2,88	3,03	2,76	3,25	9%	13%
14. Water logistics, ports	2,68	2,91	2,81	2,76	2,56	3,11	13%	12%
15. Coordinated development of economic areas and rust areas	2,77	2,91	2,81	2,95	2,72	2,86	15%	12%
16. Economic restructuring, diversification - in the framework of a joint program	2,85	2,85	2,84	2,72	2,87	3,04	14%	11%
17. Enhancing economic relations	3,26	3,17	3,15	3,00	3,37	3,40	7%	5%
18. Creation of products with high added value	3,07	3,10	3,07	3,00	3,06	3,24	10%	8%
19. Industry 4.0 collaborations	3,00	2,94	3,05	2,92	2,95	2,96	16%	16%
20. Digital industry, creative industry collaboration, joint development	3,10	3,26	3,18	3,29	3,02	3,22	10%	8%
21. R &D & I cooperation	3,23	3,23	3,35	3,33	3,11	3,07	7%	8%
22. Cooperation of entrepreneurs	3,11	3,15	3,11	3,15	3,11	3,14	7%	9%
23. Joint management of natural heritage	3,26	3,36	3,43	3,41	3,10	3,28	4%	7%
24. Joint management of cultural heritage	3,08	3,36	3,21	3,38	2,95	3,33	11%	4%
25. Cross-border tourism destination management	3,05	3,27	3,12	3,16	2,99	3,41	5%	11%
26. Joint exploitation of tourism potentials, joint product development	3,15	3,42	3,30	3,36	3,01	3,52	5%	5%
27. Educational cooperation	3,21	3,19	3,30	3,38	3,13	2,89	5%	7%
28. Cooperation in training and vocational training	3,20	3,13	3,33	3,23	3,07	2,96	5%	5%
29. Reducing labour shortages	3,07	3,15	3,15	3,29	3,00	2,97	6%	5%
30. Reducing the outmigration of the trained workforce	3,35	3,41	3,41	3,46	3,28	3,32	4%	8%
31. Reducing the unemployment of the low-skilled workforce	3,09	3,20	3,16	3,29	3,02	3,07	7%	5%
32. Reducing the graduate unemployment	3,13	3,13	3,40	3,32	2,86	2,86	5%	7%

Subtopics	Joint average		Serbian average		Hungarian average		„I don't know %"	
	2019	2020	2019	2020	2019	2020	2019	2020
Average	**3,06**	**3,14**	**3,17**	**3,15**	**2,96**	**3,12**	**8%**	**8%**
33. Increasing population retention	3,36	3,54	3,43	3,50	3,29	3,59	3%	5%
34. Managing the ageing of the population	3,22	3,37	3,42	3,36	3,03	3,38	8%	5%
35. Roma integration - in cross-border cooperation	2,38	2,54	2,57	2,62	2,21	2,42	13%	13%
36. Regional, cross-border media	2,48	2,58	2,62	2,58	2,35	2,59	10%	11%
37. Cultural cooperation	3,08	3,18	3,14	3,14	3,03	3,23	7%	4%
38. People-to-people cooperation	3,22	3,36	3,27	3,43	3,18	3,27	6%	4%

It has to be noted that when identifying the subtopics of the 2020 survey, the opinion of the respondents of the 2019 survey on the adequacy of the pre-defined list has already been taken into consideration and the necessary changes have been completed. Furthermore, the respondents of the 2020 survey were also asked if they have other suggestions for topics to be included in this list. All in all, 14 respondents suggested new topics, the majority of which form part of one already identified topic. For example 'cooperation between civil society organisations' can be classified in a number of topics based on the type of the activity of the cooperating organisations but if the project is more general, it can fit into the people-to-people cooperation similarly to the suggestions mentioning volunteerism, activism or social entrepreneurship.

Table 11: Average ratings of the main topics in both years

Main topics	Joint average		Serbian average		Hungarian average	
	2019	2020	2019	2020	2019	2020
Average	**3,06**	**3,14**	**3,17**	**3,15**	**2,96**	**3,12**
1. Environmental sustainability	3,32	3,33	3,45	3,35	3,19	3,31
2. Development of CB services	2,89	2,88	3,07	2,94	2,72	2,79
3. Transport connections	3,02	3,07	3,17	3,03	2,89	3,13
4. Economic logistics	2,75	2,98	2,83	2,91	2,68	3,07
5. Economic development	3,09	3,10	3,11	3,06	3,07	3,15
6. Cultural and natural heritage management	3,17	3,36	3,32	3,40	3,03	3,3
7. Tourism	3,10	3,35	3,21	3,26	3,00	3,47
8. Education, training	3,2	3,16	3,31	3,3	3,1	2,93
9. Labour market cooperation	3,16	3,22	3,28	3,34	3,04	3,05
10. Societal challenges	2,99	3,15	3,14	3,16	2,85	3,13
11. People to People cooperation	2,93	3,04	3,01	3,05	2,85	3,03

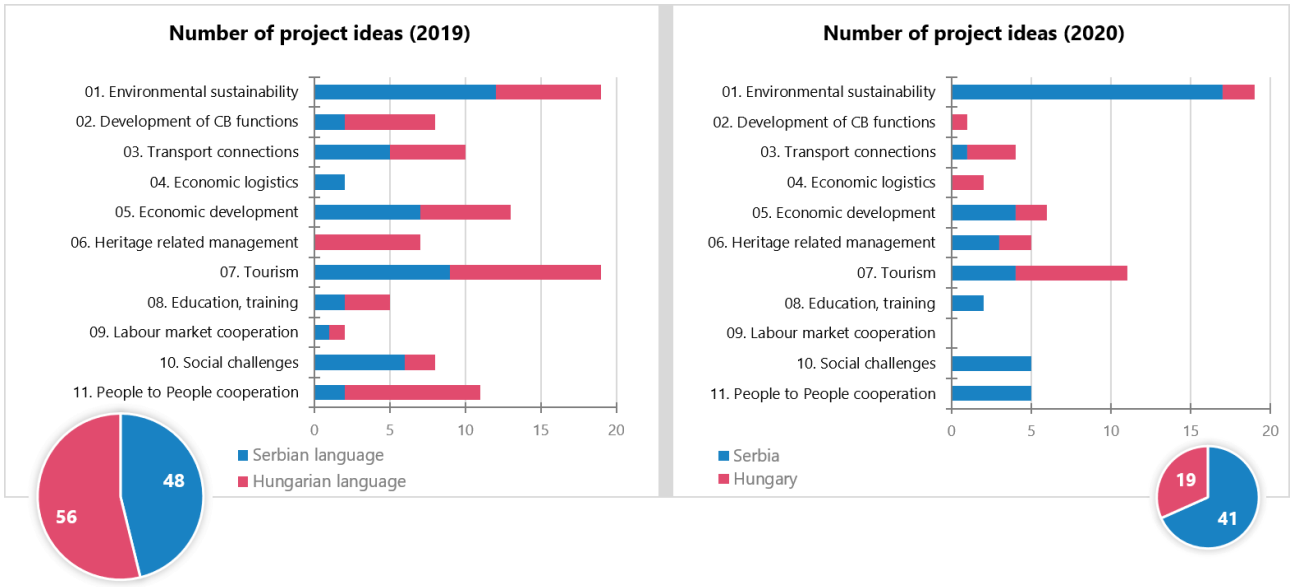
The table of main topics (Table 11) again shows no significant changes between the two rounds of surveys. Environmental sustainability and cultural and natural heritage management were ranked the most important in both countries and both turns, the later even increasing the value among the Hungarian responses between 2019 and 2020. Tourism experiences the biggest fluctuation in joint averages, its perceived importance increased by 0,25 points from 2019 to 2020.

3.2.4 Characteristics of the project ideas

The number and thematic distribution of the already existing project ideas are also a good indication on the popularity of the analysed cross-border topics. Therefore, the questionnaire invited each respondent to briefly present maximum three project ideas. Thanks to this an overall picture can be assembled on the number of already existing project ideas, their status, the existence of the partnership, as well as the indicative budget of the project.

In 2019 in total 104 project ideas were submitted; 56 in Hungarian and 48 in Serbian, which is considerably more than the 60 submitted project ideas in 2020 (19 from Hungary and 41 from Serbia). The thematic distribution of these project ideas is quite similar. Environmental sustainability inspired the largest number of respondents (18% in 2019 and 32% in 2020), followed by tourism in the second (18% both years) and economic development in the third place (13% in 2019 and 10% in 2020). The bottom of the list, however, shows differences: in the first survey development of CB functions and education, training inspired the least number of project ideas, in the second survey labour market cooperation and economic logistics were the least popular topics.

Figure 49: The number of project ideas according to the different topics (2019, 2020)



The status of a given project idea is also informative, the more prepared it is, the more likely it can become an application in the next programme. However, the majority of the submitted project ideas are only at the idea formation stage, 70% of the responses in 2019 and 48% of 2020 did not make any other active steps regarding the preparation of the idea. Furthermore, it is interesting to observe that while in the first round of the survey only 8% of the submitted ideas had a developed project proposal, in the second round the ratio of the projects with the same level of preparedness rose to 30%.

In the 2020 survey the topic with the highest ratio of prepared projects at a certain level was 'societal challenges' where 3 developed project proposals have already been made and, in a further case, technical plans and permits were also available. Environmental sustainability and people to people cooperation also have several more developed project ideas.

Figure 50: Preparedness of the project ideas according to the different topics (2019, 2020)

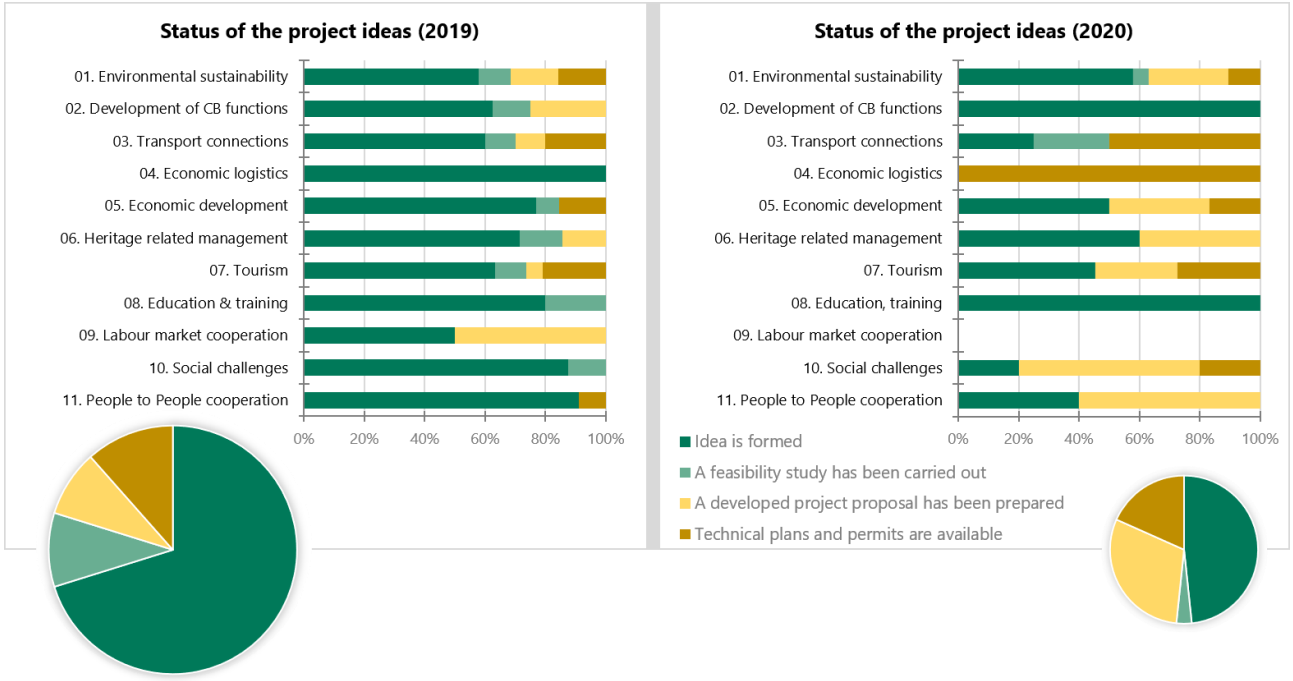
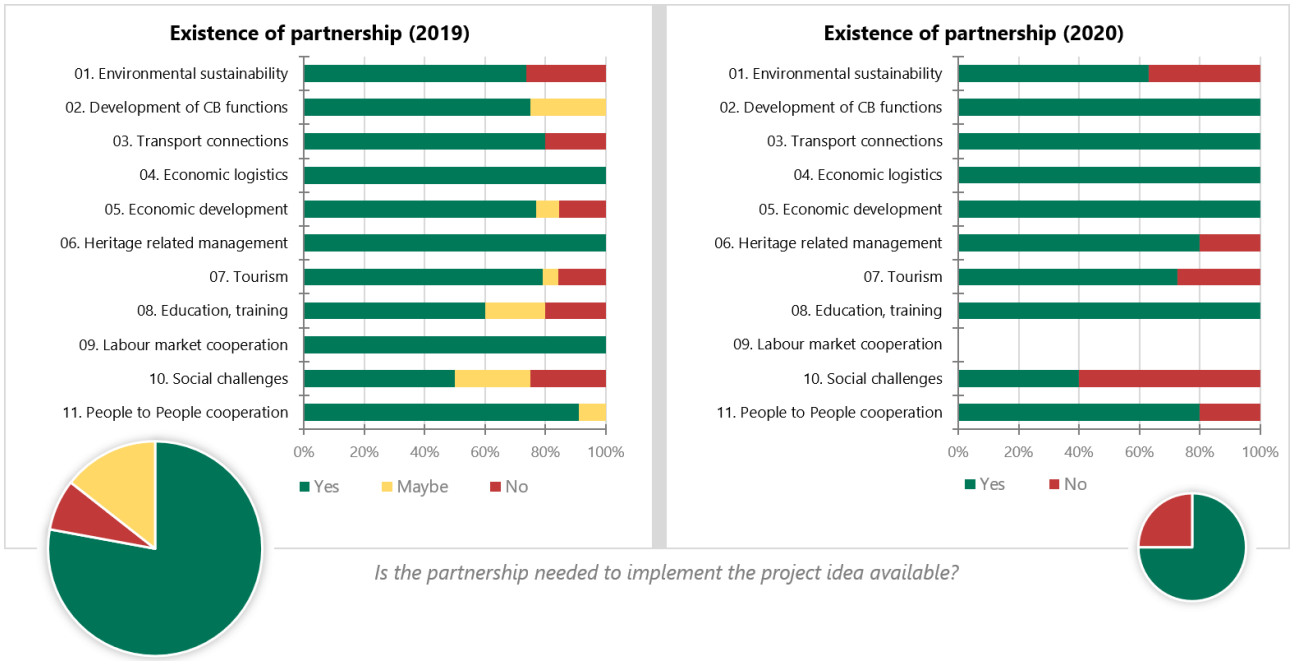


Figure 51: Existence of partnership according to the different topics (2019, 2020)

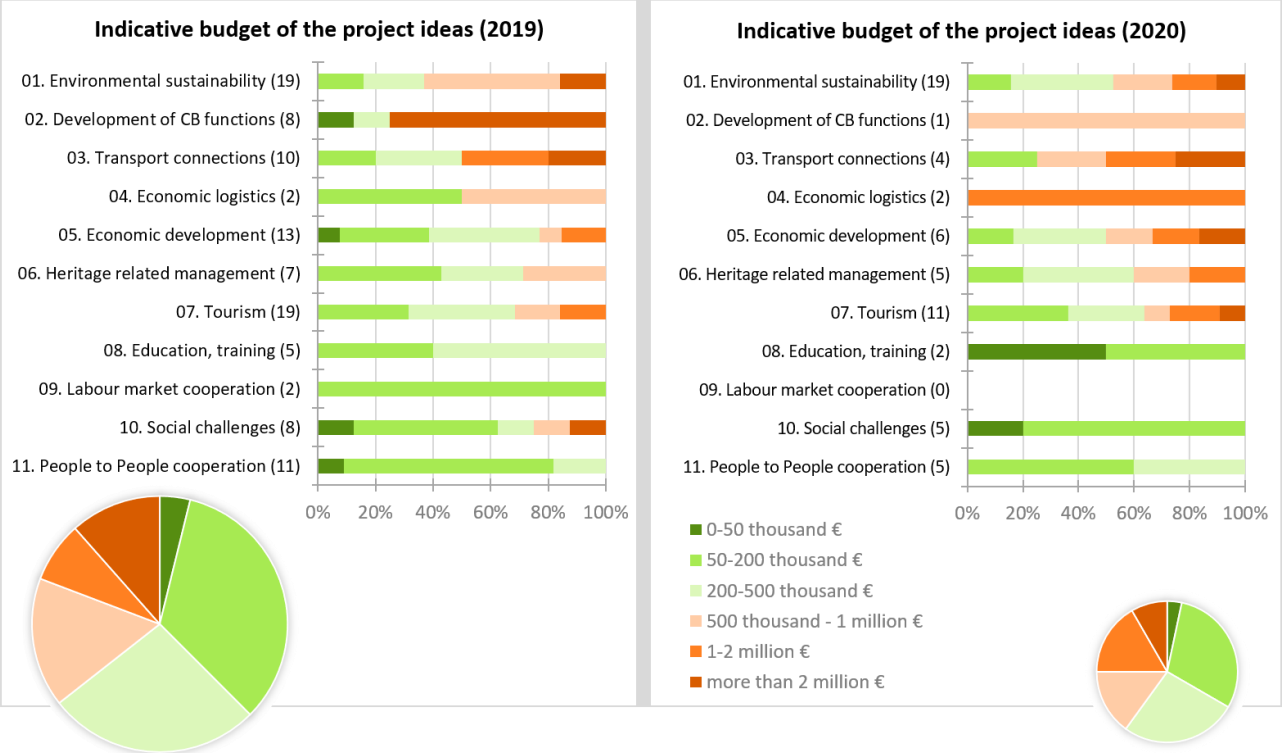


Is the partnership needed to implement the project idea available?

As it was indicated above, the respondents also considered the existence of the right partnership for a given project as a decisive element in the application process. Inquiring whether this partnership is already available for the given project idea thus shed light on the chances of its realisation. In the first survey 78% claimed that they have the necessary partnership, with an additional 8% not being certain about it. In the second round of the survey 75% of the respondents stated that they had the partnership suitable for the project idea. Differences can be observed among the topics: in the field of societal challenges, environmental sustainability, and tourism it seems to be somewhat more difficult to find the partners than in the case of other topics.

When submitting their project ideas, the respondents were asked to share information on the project's indicative budget by assigning the idea into the most appropriate amount range: 0-50 thousand €, 50-200 thousand €, 200-500 thousand €, 500 thousand - 1 million €, 1-2 million €, above 2 million €.

Figure 52: Indicative budget of the project ideas according to the different topics (2019, 2020)



The different topics required significantly different budgets. In the first round of the survey for more than 60% of the topics the lowest amount range was not even mentioned and in the second round the ratio and number of projects that would be realised from less than 50 thousand € even further decreased to a total number of 2 project ideas. However, the second smallest price range, the 50-200 thousand €, was the most popular choice in both rounds receiving 35 and 18 project ideas in 2019 and 2020, respectively.

The other end of the scale was targeted by a considerable number of topics; the two highest brackets were mentioned by 20 and 15 project owners in 2019 and 2020. Surprisingly, in the 2019 survey the highest number of projects with the biggest budgets and the highest number of low financial needs came from the same topic, i.e. cross-border functional development, showing that according to the respondents different aspects can be tackled on a small or on a large scale in parallel.

3.2.5 Innovative tools

The respondents were also asked about how satisfied they were with the strategic projects. They could express their opinion on a 1 to 4 scale. The joint results are again remarkably similar, in 2019 the level of satisfaction was 3,00 which is a good result, while in 2020 it was 3,03. Fluctuation is perceivable between the surveys filled out in different languages, but these changes more or less

balanced each other. Regarding the implementation risk of strategic projects, it must be mentioned, that for the new period the risks can be mitigated by regular monitoring and follow-up, as is the case in the current period as well.

Figure 53: Level of satisfaction with the strategic projects (2019, 2020)

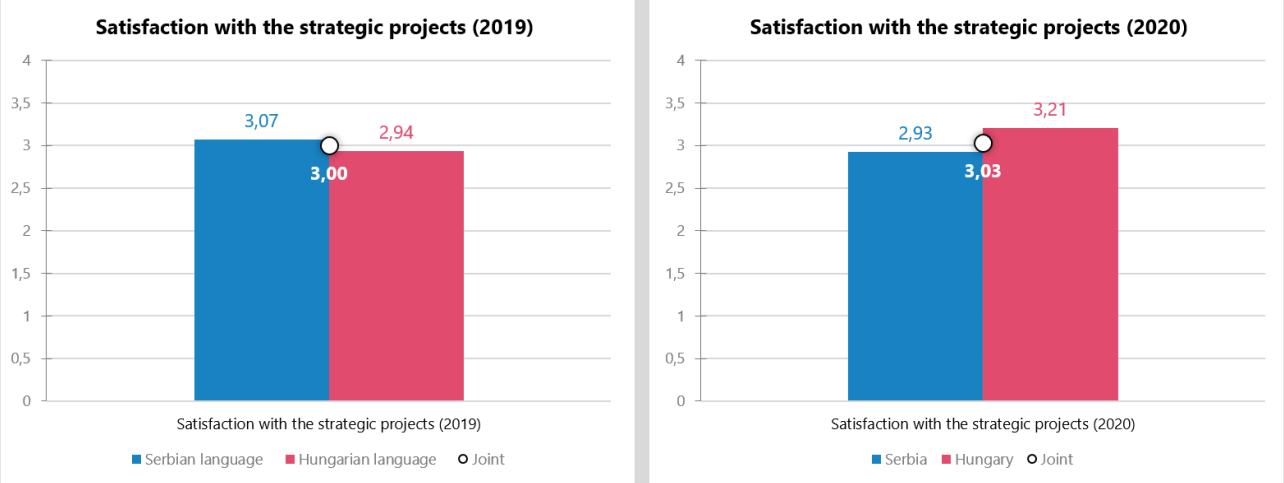
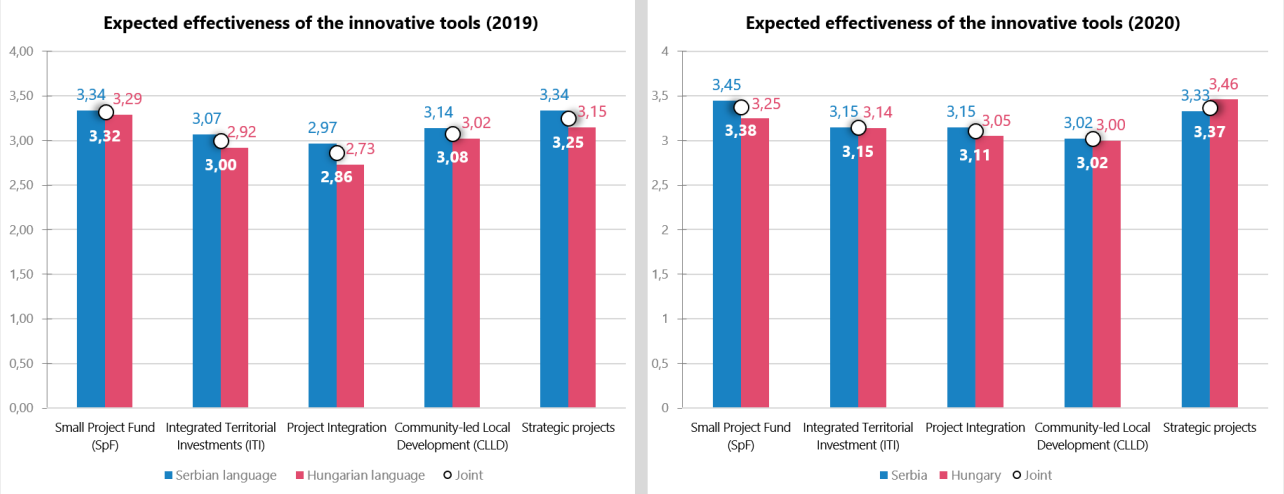


Figure 54: Expected effectiveness of the innovative tools (2019, 2020)



When all the potentially innovative tools are assessed it can be seen that in the joint border region the most popular tool would be the Small Project Fund (receiving 3,32 in 2019 and almost the same, 3,38, in 2020) which seems to be slightly more popular among the Serbian respondents compared to the Hungarians. On both rounds the second most popular tool was the strategic project (receiving 3,25 in 2019 and 3,37 in 2020), however, on the Hungarian side its popularity significantly increased between the two rounds, staying at 3,15 in 2019 and growing to 3,46 in 2020. In the ranking of the other tools, a small level of scattering can be perceived; while the least popular tool was the project integration (2,86) in 2019, CLLD finished at the bottom of the list (3,02) in 2020.

4 Results of the stakeholder workshops

In line with the first version of the Inception Report (2019) two territorial stakeholder workshops were held in September 2019; one in Novi Sad, Serbia and one in Mórahalom, Hungary, in order to gather information on the preferences and development plans of the territorial actors based on the first results of the territorial analysis. The work should have been continued in 2020 with a series of sectorial workshops to further investigate the selected topics.

However, following the Programming Committee's decision in November 2019, the stakeholder workshops had to be repeated, this time two of them were organised in each country. In Novi Sad and Subotica, the Serbian workshops were co-organised in cooperation with the Serbian National Authority, while in Szeged and Kecskemét the Hungarian workshops were co-organised in cooperation with the two regional authorities (Csongrád and Bács-Kiskun counties).

4.1 Methodology of the workshops

When designing the methodology of the workshops the main objectives were to collect as much relevant information and insight of the local stakeholders on the next programme as possible and to produce a clear image on the importance of the different topics to which the programme should focus on.

The results of the two rounds of workshops are not entirely comparable as different methods were applied in order to diversify and deepen the results as well as to avoid that the stakeholders perceive the second round as a redundant repetition of the exercise. The main differences and similarities in the methodology of the workshops are summarised in the following table:

Table 12: Differences between the workshops held in 2019 and 2020

Aspects	1st round of workshops	2nd round of workshops
System of invitation	CESCI compiled a list of invited relevant territorial stakeholders.	The National Authority (on behalf of Serbia) and the two regional authorities (from Hungary) were invited to identify the list of the invitees of the workshops – in compliance with the partnership principle of the CP Regulations.
Invitees	Invitations were sent to the representatives of county councils concerned (MC members), the territorially relevant EGTC and the Euroregion, as well as, the cities functioning as district centres ("territorial actors").	On the Serbian side the Ministry of European Integration, the Standing Conference of Towns and Municipalities, the Office for Cooperation with Civil Society and regional agencies, and the MC members invited all the interested parties.

Aspects	1st round of workshops	2nd round of workshops
		On the Hungarian side the counties invited the CBC institutions (EGTC, Euroregion), MC members, territorially relevant Members of Parliament, Members of General Assembly, mayors, the counties' main institutions. The workshops were popularised on the programme management bodies' web sites.
Number of workshops and locations	2: Novi Sad and Mórahalom	4: Novi Sad, Subotica, Szeged and Kecskemét
Discussed topics	• 13 topics were discussed • the logic of the implementation of the workshops followed the 13 topics	• 11 topics were discussed (the two topics related to the environment were merged and institutional cooperation was deleted) • the logic of the workshop followed the 38 subtopics linked to the 11 main topics
Methods for discussing the topics	The main findings of the territorial analysis were presented by the main topics after which an open conversation was encouraged among the participants.	The main findings of the territorial analysis were presented by the main topics; after that, the first voting the remaining topics were further discussed in detail with the active involvement of the stakeholders.
Voting system	The participants evaluated the importance of each of the 13 topics in two rounds by distributing among them altogether 100 points in each round giving the most to the topics the stakeholders considered the most important for the cross-border region.	Two-step voting: out of the 38 subtopics 19 were pre-selected as more important ones, then following the detailed discussion the remaining topics were ranked by the stakeholders according to their assigned importance.

4.2 Main findings of the workshops

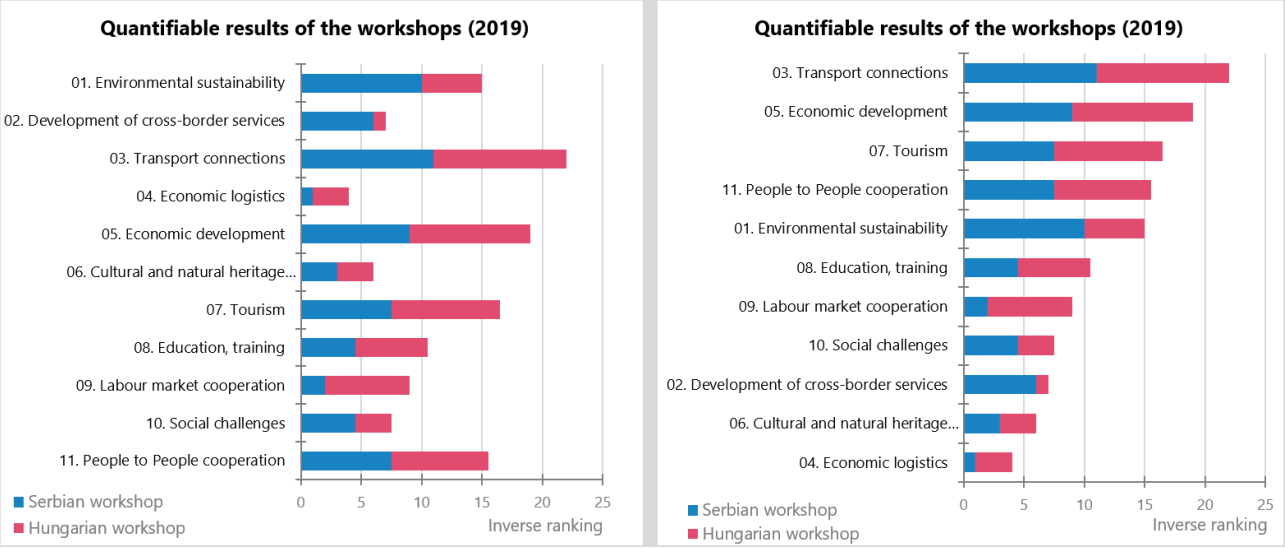
4.2.1 Quantifiable results

To render the stakeholders' opinion into a quantifiable and analysable format, the results of the stakeholders' votes were converted into points based on which an inverse ranking order was applied. In practice, this meant that the least frequented topic was awarded by 1 point, the second last one with 2 and so on. At the end, the topics reaching the most points are listed at the top of the list showing the topics that were rated as the most important by the stakeholders.

4.2.1.1 1st round of the workshops (2019)

The most important and tangible output of the two territorial workshops is the set of topics that the participants awarded with the highest scores. When comparing the two sides of the border, it was found that nearly the same topics were selected (even if with different weight assigned to them): transport connections, economic development, tourism and p2p cooperation. Environmental sustainability as well as education and training was also considered as important topics.

Figure 55: Ranking of the topics at the 2019 workshops



4.2.1.2 2nd round of the workshops (2020)

In the aggregated version of the four workshops' results (2020) the most popular topics were tourism, cultural and natural heritage, people to people cooperation, environmental sustainability as well as education and training. Economic logistics, employment market cooperation and social challenges finished on the bottom of the list indicating that the programme should not focus on these areas.

Figure 56: Ranking of the topics at the 2020 workshops

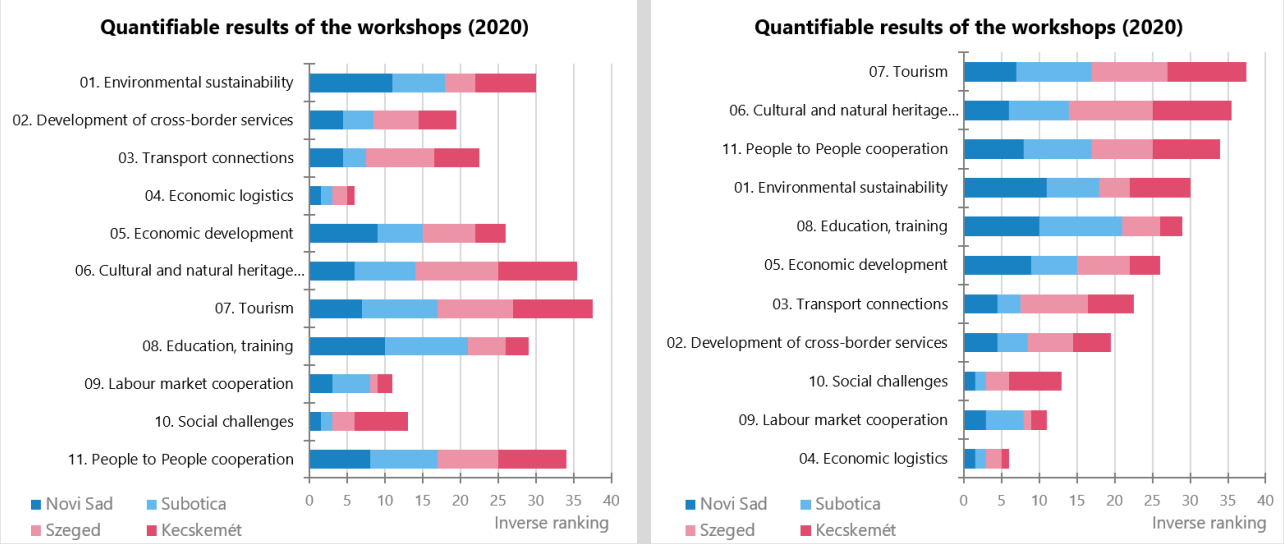
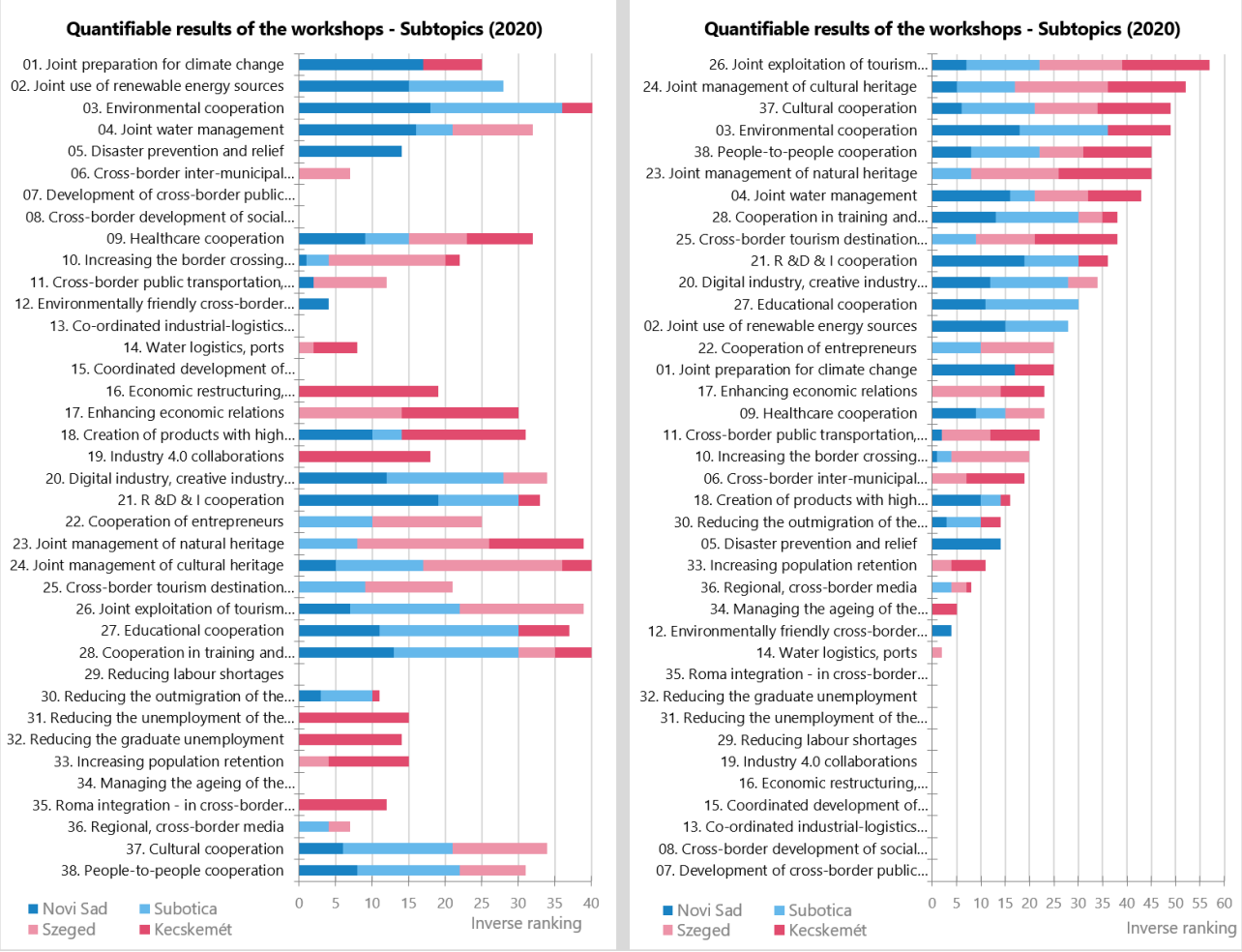


Figure 57: Ranking of the subtopics of the 2020 workshops



Looking deeper into the data (see Figure 57) the detailed results also show that on the top of the list, discrepancies between the workshops from the same country are more prevalent than harmony, showing that the dividing line in the stakeholders' interest is not necessarily lying along national cleavages. For instance, the subtopic ranked on average first (joint exploitation of tourism potentials

and joint product development) is ranked 5th at the workshop of Subotica, but only 13th on the one held in Novi Sad. Similarly, the second subtopic (joint management of cultural heritage) barely made into the chosen ones in the Novi Sad workshop.

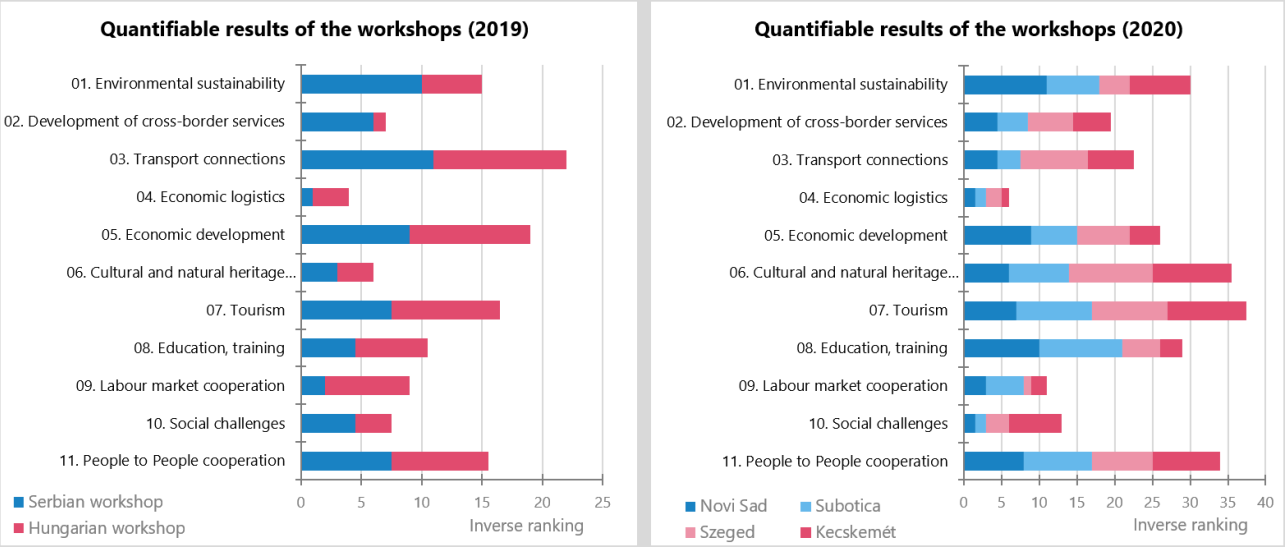
At the same time, there are also topics that seem to bear different importance according to the representatives of the different countries. Educational cooperation and the joint use of renewable energy are two topics that were not supported by the Hungarian side but deemed considerably important on the Serbian side (Novi Sad: 9, Subotica: 1 and Novi Sad: 5, Subotica: 7, respectively). Stimulating economic relations and cross-border inter-municipal and network cooperation are examples for the inverse: they were not supported by the Serbian workshop participants, but deemed important by the Hungarian ones (Kecskemét: 11, Szeged: 6; Kecskemét: 8, Szeged: 13, respectively).

4.2.1.3 Comparison

Regardless of that, due to the methodological differences presented above, the results of the two rounds of workshops cannot be aggregated, it is obvious that there is a high level of correspondence between the final results. Out of the top six topics assigned the highest importance by the stakeholders, five are identical between the two sets of workshops, even if they finished at different positions. Tourism was voted 1st in 2020 and 3rd in 2019, similarly people to people cooperation reached the 3rd position in 2020 and the 4th in 2019. Environmental sustainability was awarded as the 4th in 2020 and 5th in 2019, while education and training came in 5th in 2020 and 6th in 2019. A somewhat larger difference between the results is that economic development was ranked 2nd in 2019, but it slipped back to the 6th position by 2020.

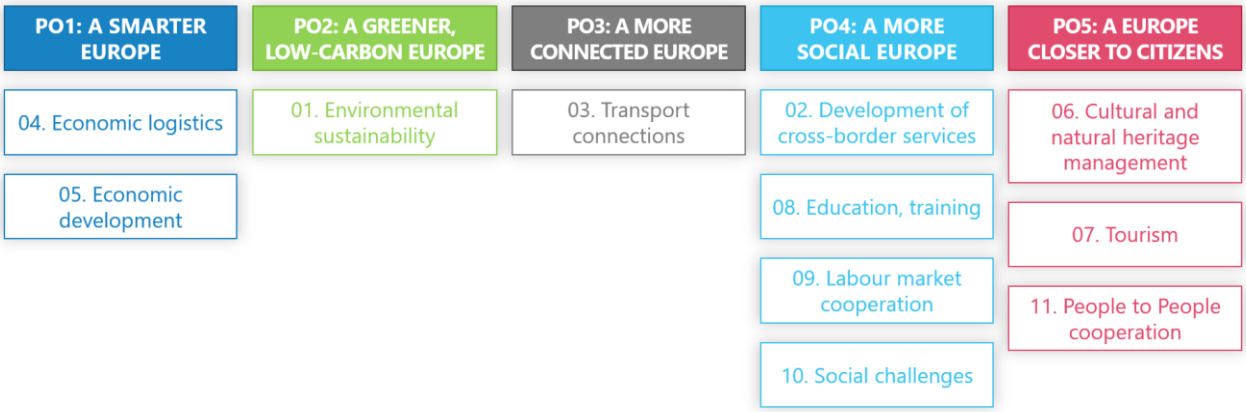
While looking at the five first elements of the two lists, 80% are identical, there is one element whose results diverge. In 2019 the topic of transport connections hit the top of the list, while in the workshops in 2020 it was not qualified among the most popular topics. Also, in 2020 the topic of cultural and natural heritage management was ranked as the 2nd most important topic, in 2019 much less importance was assigned to the issue.

Figure 58: Comparison of the rankings of the topics in the 2019 and 2020 workshops



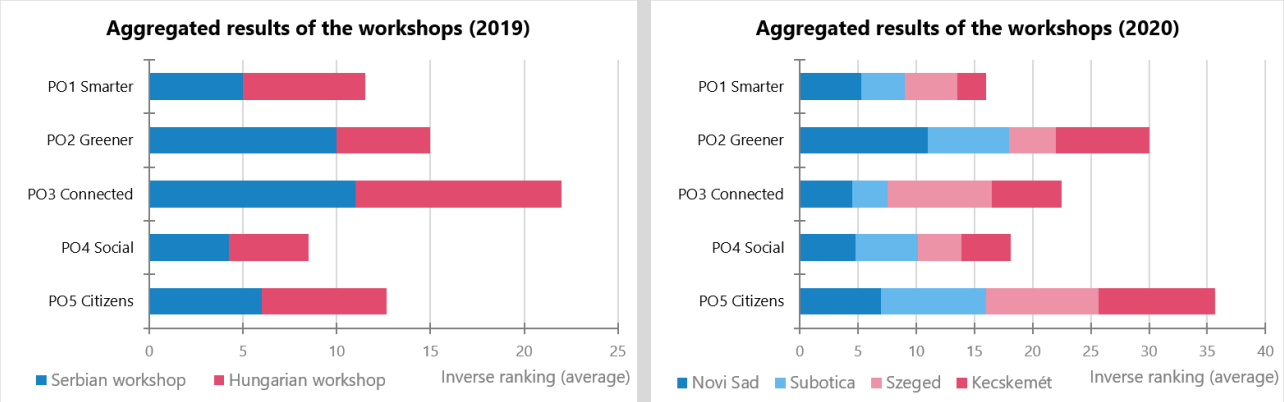
The topics also have been classified into the different POs to make the connection more evident between the topics and the priority objectives. The result of the classification is shown in the figure below.

59. Figure: The topics classified into the different POs



Then the topics classified into the different POs were aggregated for the 2019 and 2020 results.

60. Figure: Aggregated rankings of the topics in the 2019 and 2020 workshops



4.2.2 Recorded insights on the different topics

Environmental sustainability

Environmental sustainability was voted as a highly important topic about which the stakeholders had a lot to share. Several participants stated that the region (especially the Homokhátság subregion) was known for its sandy soils heavily affected by desertification. It was mentioned that there is a wealth of literature readily available on this phenomenon and potential solutions, but these need yet to be implemented and the best practices shared. An efficient cross-border water retention system would directly be beneficial the local agricultural sector, but further initiatives could also be carried out to help the farmers. One such example was that the plantation of drought-tolerant crops along with the necessary experiments, research and knowledge sharing activities are an issue deserving the support of the programme.

Development of CB functions

The development of cross-border functions was mostly discussed as the essential framework for population retention and economic development. It was highlighted that in order to maintain the population in the border region the different functions need to be strengthened in a complementary manner, the interventions need to be distributed among the two countries in a territorially sound way since these subject areas are closely inter-linked. Healthcare was one that received special attention from the stakeholders as they saw a lot of possibilities for the programme from the establishment of joint diagnostic systems to shared patient provision. However, in connection with this, the participants raised concerns that the legal-administrative context is causing serious difficulties in the implementation of the interventions.

Transport connections

Transport connections was a widely discussed topic at almost all the workshops since everyone agreed that the permeability of the border is a prerequisite for any type of cross-border cooperation. Furthermore, long waiting times at the border crossings due to heavy traffic is an increasing problem year by year, especially in summer and on holidays. Consequently, the extension of smaller crossings would be a priority either through establishing separate bus lanes or the expansion of the human capacities. At the same time, it was also emphasized that stemming from the INTERREG programme's characteristics, the soft interventions should mostly be supported such as planning, software development, trainings etc. It was also suggested that the programme should take the Budapest-Belgrade high-speed railway and the Szeged-Subotica-Bácsalmás-Baja railway sections as basic developments. It is worth finding connections to these large infrastructures.

Economic logistics

Economic logistics was one of the topics that was somewhat neglected by the participants of the workshops, which was reflected by both the low-ranking results and the brief discussion it has generated. As a problem point it was identified that the Tisza/Tisa is not exploited for freight transport which is a situation that needs to be developed and the programme could provide the framework for this by promoting water transport capacities.

Economic development

The stakeholders considered economic development as a rather important subject and provided a quite colourful spectrum of different aspects that the programme could take into consideration. First of all, a higher level of SME involvement was sought after, stating that there is an interest from small and medium enterprises to get involved in the programme implementation. Secondly, it was mentioned that there was a need for municipalities to generate businesses, to plant the seed, which then could get into motion. The pronounced need for incubation and mentoring for start-ups is a topic closely linked to the former ones.

Heritage related management

Heritage related management was considered as the second most important topic based on the aggregated results of the workshops in 2020. Nonetheless, during the open discussion only two

insights were shared by the participants, these being two concrete project ideas. One would be focusing on the natural heritage management by improving the living conditions of a Hungarian type of rodent (namely, the lesser mole-rat) to stop them from going extinct. The second concerned the cultural heritage management by focusing on Art Nouveau heritage by offering a unique tour from Kecskemét through Timisoara to Subotica exhibiting all the buildings and related monuments of this style of art.

Tourism

Tourism was a topic that ranked high at every stakeholder workshop and the participants also expressed during the discussion that this is an area where they see the highest interest. Most of their opinions were general remarks underlying that the development of tourism should be based on cooperation, using strategic projects focusing on an extended and integrated region to avoid fragmentation. It was also pointed out that it is not so much the large investments that are needed but rather the establishment of services around different active tourism types such as hiking, cycling, kayaking, and canoeing etc.

Education, training

The topic of education and training was mostly deemed as a medium priority area. One of the reasons for this moderate standpoint could be that the participants expressed their previous negative experiences with the universities. The reason of their reluctance is the insignificant importance of these projects to the local community, that is, the projects applied by tertiary education institutions are relevant for only a small number of beneficiaries within the institutions themselves. Instead of participating in the INTERREG IPA calls, universities should rather focus on calls that are more appropriate to them, such as HORIZON 2020, ERASMUS, etc. According to the stakeholders, priority should be given to teaching Serbian language on the Hungarian side as this would make both employment and tourism easier.

Social challenges

Social challenges were ranked rather low in the workshops, not because they are not prevalent or important in the border region, but because according to the stakeholders these are issues that are difficult to handle within a cross-border programme. However, it was pointed out that the programme could try to put more emphasis on creating equal opportunities for instance through inclusive education or supporting employment of persons living with disabilities. Although these achievements were incorporated in the current programme too in the form of horizontal principles, according to some of the stakeholders, this could be turned into a more hands-on form of support.

Labour market cooperation

Labour market cooperation was not among the topics considered as the most important ones for the next programme by the stakeholders. This is despite of the fact that it was mentioned several times that labour migration was a very powerful topic along the border as especially young people left the region in great numbers causing labour shortage, depopulation and a series of other economic and social problems. It was suggested that the programme should consider supporting a

more complex approach in integrating mainly recruitment and cross-border labour information and support services in order to strengthen cross-border labour market cooperation.

People-to-People cooperation

The importance and relevance of people-to-people cooperation is shown by the high ranks it has achieved at every workshop. During the discussion phase, the stakeholders underlined first that in connection with this topic bilingualism was the key component that needed to be strengthened. Secondly, the flow of information across the border is not as seamless as the demand for it would require. Therefore, the launching of joint television channels, websites, radio stations and newspapers within the programme would be very welcomed.

5 Policy frameworks

In this chapter we examine the documents of two distinct territorial levels defining the frameworks of planning. First, policy-related frameworks at the European level are analysed, since the financial resource of the programme, the Interreg IPA III itself, is also one of the financial instruments to support the objectives of European Territorial Cooperation. Secondly, we also take into account the sector-based strategic documents at the national level that are valid at least until 2022, in terms of what findings and suggestions are given in relation to the programme area.

5.1 European level

As part of investigating the relevant policy frameworks at a European level, the relevant legislative and Cohesion Policy-related strategic documents are taken into consideration in order to show the given unchangeable space for manoeuvre for drawing up the final intervention logic of the programme. Also, it is worth structuring and shortly introducing those suggestions and proposals which can be useful in harmonising the goals of the future programme with the overall European goals and to find synergies to support the realisation of the final Hungary-Serbia CBC programme of 2021-2027. Consequently, the EU Regulation for the next INTERREG IPA programmes, the main European strategic documents, the macroregional EU Strategy for the Danube Region (EUSDR), furthermore the Border Orientation Paper and the Zagreb Declaration are summarised accordingly, divided into five subchapters.

5.1.1 EU Regulation for the next INTERREG IPA programmes

Although the legal framework for the **New Cohesion Policy** at EU level is not finalized yet as the negotiations are still going on, a brief overview of the frameworks set by the current regulatory proposals is essential for the thematic preparation of the next programme. The Commission published the draft Cohesion Policy regulatory package for the period of 2021-2027 on 29 May 2018[96], including the following documents:

- COM(2018) 375 final REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument (referred to as: CP regulation);
- COM(2018) 372 final REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the European Regional Development Fund and on the Cohesion Fund (referred to as: ERDF regulation);

[96] After this date, the amendments proposed in the framework of the legislative process at European level can also be followed publicly on the following pages:

- CP regulation: https://eur-lex.europa.eu/procedure/en/2018_196
- ERDF regulation: https://eur-lex.europa.eu/procedure/en/2018_197
- Interreg regulation: https://eur-lex.europa.eu/procedure/en/2018_199

- COM(2018) 374 final REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on specific provisions for the European territorial cooperation goal (Interreg) supported by the European Regional Development Fund and external financing instruments (referred to as: Interreg regulation).

All three regulations are relevant from the point of view of the next Interreg-IPA Cross-border Cooperation programme between Hungary and Serbia. According to the classification of the draft Interreg regulation, the programme will belong to the 'Interreg A'[97] strand implementing external cross-border cooperation through the support of IPA (Instrument for Pre-Accession) beneficiaries.

The CP regulation simplified the 11 thematic objectives used in the period 2014-2020 into **five clear policy objectives**, which are:

- PO1: a smarter Europe by promoting innovative and smart economic transformation;
- PO2: a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management;
- PO3: a more connected Europe by enhancing mobility and regional ICT connectivity;
- PO4: a more social Europe implementing the European Pillar of Social Rights;
- PO5: a Europe closer to citizens by fostering the sustainable and integrated development of urban, rural, and coastal areas and local initiatives.

The table below illustrates the connections between the main topics of the territorial analysis and the above POs. in the case of some topics, more than one PO can be identified as relevant, consequently the most relevant PO can be selected at a later stage once the specific activities are identified.

Table 13: Compliance of the main topics of the territorial analysis to the POs

Main topics	PO1 Smarter	PO2 Greener	PO3 Connected	PO4 Social	PO5 Citizens
1. Environmental sustainability		+			
2. Development of cross-border functions				+	
3. Transport connections			+		
4. Economic logistics	+				
5. Economic development	+				
6. Heritage related management		+			+
7. Tourism					+
8. Education, training	+			+	
9. Labour market cooperation	+			+	
10. Social challenges				+	
11. People to People cooperation					+

97 See: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_14960_2019_INIT&from=en

The ERDF regulation defines **specific objectives** related to the above presented POs, which in the Interreg regulation are completed with additional, so-called Interreg-specific objectives (ISOs). On the one hand, the Interreg regulation defines four Interreg-specific objectives for PO4 (more social Europe)[98]. On the other hand, it introduces the objective of 'better Interreg governance' (including, for example, to enhance the institutional capacity of public authorities and promoting legal and administrative cooperation and cooperation between citizens and institutions, in particular, with a view to resolving legal and other obstacles in border regions) as well as the ISO2 Interreg-specific objective: 'a safer and more secure Europe'.

A full list of specific objectives can be found in the Annex (8.2 Table of the policy objectives and specific objectives). The table itself is important not only because of the list of specific objectives, but it will also be included later in the summary chapter of this document, once the related specific objectives fit into the territorial challenges and development needs identified in the territorial analysis are named. For this reason, the 'PO-SO Code' and 'Frequency' columns of the table in the Annex are significant.

However, the regulations not only define the topics to be chosen, but also the rules for **thematic concentration**. The Interreg regulation Article 15 stipulates that at least 60% of the ERDF and, where applicable, of the external financing instruments of the Union allocated under priorities other than for technical assistance to each Interreg strand A programme shall be allocated on a maximum of three of the above mentioned policy objectives. Under the 2018 proposal for the regulation, an additional 15% of the ERDF and, where applicable, of the external financing instruments of the Union allocations under priorities other than for technical assistance to each Interreg A strand, shall be allocated on the Interreg-specific objective of 'a better Interreg governance' or on the external Interreg-specific objective of 'a safer and more secure Europe'. However, according to the Council Position, this requirement is also expected to change: At least 10% of the ERDF and, where applicable, of the external financing instruments of the Union allocations to each Interreg strand A programme may be allocated on the Interreg-specific objective of 'a better cooperation governance' or on the external Interreg-specific objective of 'a safer and more secure Europe[99]'.

The draft regulations also determine, inter alia, **instruments** to apply such as integrated territorial investment (see Interreg regulation Article 20) and the small project funds (see Interreg regulation Article 24).

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98 The Council Position deletes the Interreg specific objectives for PO4 and proposes the following wording instead: In addition to the specific objectives for the ERDF [...], the ERDF and, where applicable, the external financing instruments of the Union may also contribute to the specific (i) to (x) of Article 4 (1) of [...] ESF + Regulation through joint actions under Interreg programs. Since the proposed amendment does not have any compromise proposal or comments, the present territorial analysis continues to take into account the Interreg-specific objectives for PO4.

99 See: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_14960_2019_INIT&from=en

5.1.2 Main European strategic documents

In this subchapter, the main currently relevant European strategic documents from the EU Biodiversity Strategy through the European Green Deal to the New European Agenda for Culture are reviewed in accordance with the triple breakdown (i.e. territorial, economic and social aspects) of cohesion applied in the previous territorial analysis of the programme area.

Territorial cohesion

Owing to the Lisbon Treaty (2007) the support for territorial cohesion along with economic and social cohesion was introduced as a goal of the European Union. Since the Treaty made the support for territorial cohesion a shared responsibility of the Union and the Member States, first it is worth discussing the updated Territorial Agenda (2011) named *Territorial Agenda 2020 - Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions*[100] (TA2020). TA2020 as a policy framework to support territorial cohesion defines six territorial priorities for the EU:

- Promote polycentric and balanced territorial development;
- Encouraging integrated development in cities, rural and specific regions;
- Territorial integration in cross-border and transnational functional regions[101];
- Ensuring global competitiveness of the regions based on strong local economies;
- Improving territorial connectivity for individuals, communities and enterprises;
- Managing and connecting ecological, landscape and cultural values of regions.

The draft version of *Territorial Agenda 2030 A future for all places*[102] encourages all players involved in spatial planning and territorial development at any administrative level in the EU and its neighbouring countries to join in on putting the Territorial Agenda into practice at cross-border level. It defines two overarching objectives, broken down into six priorities for the development of the European territory:

- A JUST EUROPE that offers future perspectives for all places and people
    - 1a. BALANCED EUROPE: Better balanced territorial development utilising Europe's diversity
    - 1b. FUNCTIONAL REGIONS: Local and regional development and less inequalities between places
    - 1c. INTEGRATION BEYOND BORDERS: Living and working across national borders

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100 See: https://ec.europa.eu/regional_policy/sources/policy/what/territorial-cohesion/territorial_agenda_2020.pdf

101 „ *… potentials such as valuable natural, landscape and cultural heritage, city networks and labour markets divided by borders can be better utilized. Attention shall be paid to areas along external borders of the EU in this regard. Territorial integration and cooperation can create a critical mass for development, diminishing economic, social and ecological fragmentation, building mutual trust and social capital. Cross border and transnational functional regions may require proper policy coordination between different countries. (32) We support transnational and cross border integration of regions going beyond cooperation projects and focusing on developments and results of real cross-border or transnational relevance.*" – TA2020, page 7

102 See: https://territorialagenda.eu/files/agenda_theme/agenda_data/Revisions%20-%20Draft%20documents/Revision_191211-public.pdf

- 2. A GREEN EUROPE that protects our common livelihoods and shapes societal transition processes
    - 2a. HEALTHY ENVIRONMENT: Better ecological livelihoods and climate-neutral towns, cities, and regions
    - 2b. CIRCULAR ECONOMY: Strong and sustainable local economies in a globalised world
    - 2c. SUSTAINABLE CONNECTIONS: Sustainable digital and physical connectivity of places.

Regarding urban policy *Urban Agenda for the EU Pact of Amsterdam*[103] is worth introducing. It expresses that the success of European sustainable urban development is highly important for the economic, social as well as territorial cohesion of the European Union. The Urban Agenda for the EU strives to establish a more effective integrated and coordinated approach to EU policies and legislation with a potential impact on Urban Areas and also to contribute to territorial cohesion by reducing the socioeconomic gaps observed in urban areas and regions. The Urban Agenda integrates policy aspects on various priority themes and cross-cutting issues from environmental issues through migration challenges to Smart City solutions.[104]

The *Leipzig Charter* dedicated to promoting the principle of integrated urban development is under revision at the time of compilation of the present analysis, however, upon acceptance it will be a prominent strategic document intricately linked to the Urban Agenda. The *Handbook for sustainable urban development strategies* aimed at developing a methodological support to augment the knowledge on how to best implement integrated and place-based urban strategies under the Cohesion Policy. Furthermore, the *Long-Term Vision for Rural Areas*[105] currently open to public

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103 See: https://ec.europa.eu/futurium/en/system/files/ged/pact-of-amsterdam_en.pdf

104 Inclusion of migrants and refugees; Air quality; Urban poverty; Housing; Circular economy; Jobs and skills in the local economy; Climate adaptation (including green infrastructure solutions); Energy transition; Sustainable use of land and Nature-Based solutions; Urban mobility; Digital transition; Innovative and responsible public procurement; Effective urban governance, including citizens participation and new models of governance; Governance across administrative boundaries and inter-municipal cooperation: urban-rural, urban-urban and cross-border cooperation; link with territorial development and the Territorial Agenda 2020 (well-balanced territorial development); Sound and strategic urban planning (link with regional planning, including 'research and innovation smart specialisation strategies' (RIS3), and balanced territorial development), with a place-based and people-based approach; Integrated and participatory approach; Innovative approaches, including Smart Cities; Impact on societal change, including behavioural change, promoting, among other things, equal access to information, gender equality and women empowerment; Challenges and opportunities of small- and medium-sized Urban Areas and polycentric development; Urban regeneration, including social, economic, environmental, spatial and cultural aspects, also linked to the brownfield redevelopment with the objective of limiting greenfield consumption; Adaptation to demographic change and in- and out migration; Provision of adequate public services of general interest; International dimension: link with the New Urban Agenda (Habitat III) of the UN, the Sustainable Development Goals (SDGs, 2030 Agenda on Sustainable Development) of the UN and the Paris Agreement on climate change of December 2015.

105 See: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12525-Long-term-vision-for-rural-areas/public-consultation

consultation also strives to collect views on current opportunities and challenges in rural areas, aspirations for rural areas in 2040 and the actions needed to achieve these aspirations. The Vision will be coordinated with the work under the Commissioners' Project Group on Demography (Q2/2020) and the Green paper on Ageing (Q4/2020) which is developed under the umbrella of Democracy and Demography.

According to the document titled '*Our life insurance, our natural capital: an EU biodiversity strategy to 2020*'[106] the EU will reinforce its dialogue and cooperation on biodiversity with key partners, in particular candidate countries and potential candidates, to develop or adjust their policies to meet the 2020 biodiversity targets, and those countries are invited to contribute to the implementation of the strategy and start developing or adjusting their policies towards the goal of achieving the EU and global 2020 biodiversity targets. The '*EU Biodiversity Strategy to 2030*'[107] in which the EU wants to lead by example in global negotiations, will outline the EU ambition for the post-2020 global biodiversity framework, and it commits the EU to curtailing biodiversity loss and preserving and restoring the ecosystems.

The Trans-European Transport Network (TEN-T) policy addresses the implementation and development of a Europe-wide network of railway lines, roads, inland waterways, maritime shipping routes, ports, airports and railroad terminals with the ultimate objective to close gaps, remove bottlenecks and technical barriers. The '*Union guidelines for the development of the trans-European transport network*'[108] contains the maps as well as the list of nodes of the core and comprehensive networks in the Member States, furthermore their planned extension to neighbouring countries, e.g. to Serbia as part of the Western Balkans in the frames of the document's Annex.

Considering the '*Strategy on Shaping Europe's Digital Future*'[109] the European Commission aims at investing in an open, democratic, and sustainable society to create a European health data space to foster targeted research, diagnosis and treatment.

Economic cohesion

'*The European Green Deal*'[110] is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where in 2050, there will be no net emissions of greenhouse gases and where economic growth is decoupled from resource use. In designing a set of deeply transformative policies, the strategy outlines initiatives and measures connected to the improvement of the EU's climate ambition for 2030 and 2050, supply of clean, affordable and secure energy, mobilisation of industry for a clean and circular economy, acceleration of the shift to sustainable and smart mobility, design of a fair, healthy and

106 See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52011DC0244&from=EN

107 See: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380

108 See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R1315&from=EN

109 See: https://ec.europa.eu/info/sites/info/files/communication-shaping-europes-digital-future-feb2020_en_4.pdf

110 See: https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

environmental-friendly food system (from farm to fork), preservation and restore of ecosystems and biodiversity, among others.

The '*Reflection Paper Towards a Sustainable Europe by 2030*',[111] (2019) envisaged that the EU has an enormous task to modernize the European economic model and to address the social issues and challenges. This economic modernization should follow the development path, which was identified within the Europe 2020 Strategy, hence, to achieve smart, sustainable, and inclusive economic growth. This means that steps have to be taken in order to ensure that the EU achieves world-class scientific and technological benefits that substantially, and positively, affect the economy, society and the environment, and which have the capacity to dismantle the barriers to innovation and facilitates cooperation between the public and private sectors.

In the spirit of the *European Digital Strategy*[112] the Commission is determined to make this Europe's "Digital Decade". '*Strategy on Shaping Europe's Digital Future*'[113] foresees that the Commission will be working on three key objectives to pursue digital transformation, which include goals to enable a vibrant community of innovative and fast-growing start-ups and SMEs to access finance and to expand, to use technology to help Europe become climate-neutral by 2050; to reduce the digital sector's carbon emissions. The document titled '*Europe, the world's No 1 tourist destination*'[114] is a strategy to transform European tourism into a competitive, modern, sustainable and responsible industry with the purpose of encouraging the prosperity of tourism, responding to concerns relating to social challenges, territorial cohesion, and the protection of and capitalisation on natural and cultural heritage. It expresses that the application of a cross-border method could guarantee a transnational character to tourism which could generate significant dynamic for local development too.

Regardless of that culture has a moderate significance at European level, the EU has contributed to the development of a strategic approach to the preservation and valorisation of European heritage. Adopted by the Council of the European Union, '*Conclusions on cultural heritage as a strategic resource for a sustainable Europe*'[115] recognises that sustainable management of cultural heritage resources is a strategic choice for the 21st century, and calls on Member States to enhance cross-border cooperation on cultural heritage with relevant stakeholders.

The Council of Europe promotes an integrated approach to cultural heritage; subsequently, in the strategy called '*European Cultural Heritage Strategy for the 21st century*'[116] and in the adopted '*Recommendation CM/Rec (2017) to member States on the "European Cultural Heritage Strategy for the 21st century*'[117] , the CoE underlines a closer unity between the members through joint actions in

111 See: https://ec.europa.eu/commission/sites/beta-political/files/rp_sustainable_europe_30-01_en_web.pdf

112 See: https://ec.europa.eu/digital-single-market/en/content/european-digital-strategy

113 See: https://ec.europa.eu/info/sites/info/files/communication-shaping-europes-digital-future-feb2020_en_4.pdf

114 See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52010DC0352&from=EN

115 See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52014XG0614(08)&from=EN

116 See: https://rm.coe.int/16806f6a03

117 See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52010DC0352&from=EN

the field of culture and cultural heritage considering its importance, its influence on living environment, quality of life, economic advancement, and social fabric.

'A New European Agenda for Culture'[118] set up a strategic objective connected to the economic dimension, i.e. supporting culture-based creativity in education and innovation, and for jobs and growth, and is about to promote the arts, culture and creative thinking in formal and non-formal education and training at all levels and in lifelong learning, to foster favourable ecosystems for cultural and creative industries, promoting access to finance, innovation capacity, fair remuneration of authors and creators and cross-sectoral cooperation, and to promote the skills needed by cultural and creative sectors, including digital, entrepreneurial, traditional and specialised skills.

Social cohesion

'A New European Agenda for Culture' in the frameworks of the strategic objective named social dimension work for the harnessing of the power of culture and cultural diversity for social cohesion and well-being. In order to do that, it fosters the cultural capability of all Europeans by making available a wide range of cultural activities and providing opportunities to participate actively therein, encourages the mobility of professionals in the cultural and creative sectors, furthermore raises awareness of the common history and values and reinforces a sense of common European identity. Also, its objective is to strengthen international cultural relations by supporting culture as an engine for sustainable social development, and by promoting culture and intercultural dialogue for peaceful inter-community relations.

Taking the policy area called employment, social affairs & inclusion of the European Commission into consideration, it can be concluded that several key points can be identified which play a major role of social challenges, with the aim of their alleviation. Social protection and social inclusion are probably the most relevant among the policies and activities of the Commission in relation to social challenges, where smart, sustainable and inclusive growth is designed to lift people out of extreme poverty, out of social exclusion and to increase employment. Further policies and activities of the Commission can be pinpointed that may support the fight against poverty and social exclusion. According to the *European employment package*[119] with the aim to support labour market and to establish a work-based society, skills and qualifications resonate as highly important qualities of society since people need to be equipped with a variety of skills which ensure well-being for the person, but at the same time contribute to society, productivity and economic growth. An important step in the implementation of the European employment strategy is the *'Guidelines for the employment policies of the Member States'*[120] containing the following goals: boosting the demand for labour, enhancing labour supply and improving access to employment, skills and competences, enhancing the functioning of labour markets and the effectiveness of social dialogue, as well as promoting equal opportunities for all, fostering social inclusion and combating poverty.

118 See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018DC0267&from=EN

119 See: https://ec.europa.eu/social/main.jsp?catId=1039&langId=en

120 See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32018D1215&from=EN

What is more, other policies can also be mentioned which affect social challenges, but their impact is rather indirect, as equal opportunities and access to the labour market, fair working conditions, protection against discrimination.

In line with the '*Strategy on Shaping Europe's Digital Future*'[121] the Commission plans to invest in digital competences for a technology that works for people, an open, democratic and sustainable society to fight disinformation online and foster diverse and reliable media content.

5.1.3 The EU Strategy for the Danube Region (EUSDR)

The EU Strategy for the Danube Region (EUSDR) is one of the four macro-regional strategies targeting the European Territorial Cooperation objective, adopted by the European Commission, and endorsed by the European Council. It provides an integrated framework for strengthening cooperation between nations of 14 countries including both Member States (e.g. Hungary) and non-EU countries (e.g. Serbia) covering 112 million people. By bringing together different stakeholders from different levels, the EUSDR has contributed to an improved culture of cooperation and helped to develop a multicultural dialogue. It has also helped to strengthen coordination and develop synergies between policies and institutions at national level, and supported intensified thematic cooperation with non-EU countries, and between existing international organisations in the region.[122] Furthermore, the EUSDR has a crucial role in the deepening of EU integration, collaborating with candidate countries, and enhancing cooperation with non-EU neighbours like Serbia. In the upcoming period the latest document, i.e. the revised EUSDR Action Plan[123] will be discussed which is an integrated response to the common set of challenges and opportunities within the Danube Region. In order to detect synergies between the EUSDR and the preparation document of the HUSRB INTERREG IPA CBC Programme, the Priority Areas (PA) of the four Pillars are compared to the main topics of the three cohesion aspects of the present programme. The main aim is to identify which topics are supported and how by the EUSDR, and where the strongest synergies can encourage the implementation of potential future actions in the frames of the CBC Programme. The strength of connection is marked with no sign (left blank), or a plus sign (+), or in the case of strong connection with two plus signs (++).

Considering **Environmental protection and environmental sustainability**, the main topic is in synergic relation with PA 2 Sustainable Energy owing to the actions connected to the subtopic of joint use of renewable energy sources, especially Action 1 (To further explore the sustainable use of clean biomass, solar energy, geothermal, hydropower and wind power to increase the energy independency and to promote and support multipurpose cross border RES utilisation projects) and

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121 European Commission (2020). Shaping Europe's Digital Future. https://ec.europa.eu/info/sites/info/files/communication-shaping-europes-digital-future-feb2020_en_4.pdf

122 See: https://danube-region.eu/about/

123 COMMISSION STAFF WORKING DOCUMENT ACTION PLAN replacing Staff Working Document SEC(2010) 1489 final accompanying the COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS European Union Strategy for Danube Region (https://danube-region.eu/wp-content/uploads/2020/04/EUSDR-ACTION-PLAN-SWD202059-final.pdf)

Action 2 (To promote energy efficiency and use of renewable energy in buildings and heating systems including district heating and cooling and combined heat and power facilities). The topic has the strongest connection with Pillar 2, because PA 4 Water quality (Action 1: Hazardous & emerging substances: Promote monitoring, prevention and reduction of water pollution deriving from hazardous and emerging substances; Action 3: Water & agriculture; Action 6: Climate change: Promote measures to adapt to climate change impacts in relation to water quality and quantity), PA 5 Environmental risks (Action 3: Strengthen disaster prevention and preparedness among governmental and non-governmental organizations) and PA 6 Biodiversity and landscapes, quality of air and soils (Action 2: Build capacities of national and local authorities, non-governmental organisations, expert and scientific community in the environment related matters; Action 3: Develop and/or implement conservation action plans and/or management plans for endangered umbrella species of the Danube Region; Action 4: Promote research to develop and apply the most appropriate methods for prevention and control of IAS and for management of the priority pathways; Action 5: Anchoring the concept of EU green infrastructure in the Danube Region, Action 7: Enhance and/or maintain soil-related ecosystem services, Action 10: Stimulate the management and the ecological restoration of wetlands, particularly in the Danube delta) are all connected to the subtopics of Environmental cooperation, Joint water management and Disaster prevention and relief.

Table 14: Strength of connection between the EUSDR's PAs and the main topics of the current territorial analysis

		Territorial cohesion			Economic cohesion				Social cohesion			
		1. Environmental protection and environmental sustainability	2. Development of cross-border functions	3. Transport connections	4. Economic logistics	5. Economic development	6. Heritage related management	7. Tourism	8. Education, training	9. Labour market cooperation	10. Social challenges	11. People to People cooperation
PILLAR 1: CONNECTING THE REGION	PA 1a Waterway mobility	+		++	++	+			+	+		
	PA 1b Rail-Road-Air Mobility	+		++	+							
	PA 2 Sustainable Energy	++				+						
	PA 3 Culture and Tourism, People to People					+	++	++	+	+		++
PILLAR 2: PROTECTING THE ENVIRONMENT	PA 4 Water quality	++										
	PA 5 Environmental risks	++										
	PA 6 Biodiversity and landscapes, quality of air and soils	++					++					
PILLAR 3: BUILDING PROSPERITY	PA 7 Knowledge Society					++			+			
	PA 8 Competitiveness of enterprises					++						
	PA 9 People and skills					+			++	++	++	

		Territorial cohesion			Economic cohesion				Social cohesion			
		1. Environmental protection and environmental sustainability	2. Development of cross-border functions	3. Transport connections	4. Economic logistics	5. Economic development	6. Heritage related management	7. Tourism	8. Education, training	9. Labour market cooperation	10. Social challenges	11. People to People cooperation
PILLAR 4: STRENGHTENING THE REGION	PA 10 Institutional Capacity and Cooperation	+	++	+		+	+	+	+	+	+	++
	PA 11 Security			+								

Development of cross-border functions is supported the most by PA 10 Institutional Capacity and Cooperation, especially by Action 1 (To improve institutional capacities in order to provide high-quality public services), Action 2 (To facilitate the administrative cooperation of communities living in border regions) and Action 8 (To enhance capacities of cities and municipalities to facilitate local and regional development).

Transport connections are in strong connection with PA 1a Waterway mobility (Action 1: Contribute to improve waterway and port infrastructure & management; Action 2: Foster business development; Action 5: Contribute to the enhanced quality of education and jobs) as well as PA 1b Rail-Road-Air Mobility, especially Action 5 (To improve the regional/local cross-border infrastructure and the access to rural areas by facilitating secondary and tertiary transport infrastructure), Action 6 (To develop further nodal planning for multimodality) and Action 7 (To develop further Intelligent Traffic Systems by using environmental-friendly technologies, especially in urban regions).

Economic logistics is strongly connected to PA 1a Waterway mobility especially to Action 1 (Contribute to improve waterway and port infrastructure & management) and Action 2 (Foster business development). Weaker but relevant connection can be detected in relation to PA 8 Competitiveness of enterprises.

Economic development is thoroughly in correlation with PA 7 Knowledge Society (Action 1: To promote coordination of national, regional and EU funds to stimulate excellence in R&I, in research areas specific for Danube Region; Action 3: To strengthen cooperation among universities, research organisations and SMEs in the Danube Region; Action 5: To support exchange of information and experience sharing for the purpose of preparation of future strategic R&I documents applicable in the new programming period, Action 6: To promote horizontal cooperation in science and technology across all PAs and other MRS) and PA 8 Competitiveness of enterprises (Action 1: To foster cooperation and exchange of knowledge between SMEs, creative industry, academia, the public sector and civil society in areas of competence in the Danube Region, Action 3: Improvement of framework conditions, support programs and capacity building of stakeholders, to enhance the collaboration between cluster initiatives and regional innovation strategies, with an accent on the rural areas). The former supports R & D & I cooperation in particular, while the latter focuses on the

cooperation of entrepreneurs. Furthermore, PA 1a Waterway mobility (Action 2: Foster business development), PA 2 Sustainable Energy that contains actions supporting energy market integration and innovative technologies, as well as, PA 3 Culture and Tourism, People to People can be highlighted (Action 5: Promote and encourage the development of the cultural activities and creative sectors).

Heritage related management addresses PA 3 Culture and Tourism, People to People especially related to Action 1 (Promote sustainable tourism in the Danube Region and capitalise on EUSDR projects in the areas of culture, nature and tourism) and Action 6 (Promote cultural heritage in the Danube Region), furthermore PA 6 Biodiversity and landscapes, quality of air and soils (e.g. Action 10: Stimulate the management and the ecological restoration of wetlands, particularly in the Danube delta).

Tourism is supported by the similarly named priority axis, namely PA 3 Culture and Tourism, People to People, Action 1 (Promote sustainable tourism in the Danube Region and capitalise on EUSDR projects in the areas of culture, nature and tourism), Action 2 (Support and promote cultural tourism in the Danube Region), Action 3 (Invest in sustainable quality products, services, innovative forms and infrastructure in the fields of tourism and culture, promote skills, education and creating jobs in the related areas) and Action 4: (Develop a "Smart Destination Danube").

Education, training has strong ties with PA 9 People and skills as all the related 8 Actions defined in the shortlist are relevant. Apart from that, relevant synergies can be found at PA 1a Waterway mobility (Action 5: Contribute to the enhanced quality of education and jobs), PA 3 Culture and Tourism, People to People (Action 3: Invest in sustainable quality products, services, innovative forms and infrastructure in the fields of tourism and culture, promote skills, education and creating jobs in the related areas), PA 7 Knowledge Society (Action 3: To strengthen cooperation among universities, research organisations and SMEs in the Danube Region) and PA 10 Institutional Capacity and Cooperation (Action 1: To improve institutional capacities in order to provide high-quality public services).

Labour market cooperation is in line with PA 9 People and skills the most as all actions greatly support employment. Other relevant PAs include PA 1a Waterway mobility (Action 5: Contribute to the enhanced quality of education and jobs), PA 3 Culture and Tourism, People to People (Action 3: Invest in sustainable quality products, services, innovative forms and infrastructure in the fields of tourism and culture, promote skills, education and creating jobs in the related areas), PA 7 Knowledge Society (Action 6: To promote horizontal cooperation in science and technology across all PAs and other MRS) and PA 8 Competitiveness of enterprises (Action 1: To foster cooperation and exchange of knowledge between SMEs, creative industry, academia, the public sector and civil society in areas of competence in the Danube Region).

Social challenges are supported by PA 9 People and skills, especially in the frames of Action 3 (Integration of Vulnerable Groups into the Labour Market) and Action 4 (Fighting Poverty and Promoting Social Inclusion for All).

People-to-People cooperation has a strong connection with PA 10 Institutional Capacity and Cooperation, with Action 2 (To facilitate the administrative cooperation of communities living in border regions), Action 5 (To test and support innovative funding solutions for local actors and civil society), Action 6 (To foster cooperation built on mutual trust between state and non-state actors to

enhance well-being for the inhabitants of the Danube Region), Action 7 (To strengthen the involvement of civil society and local actors in the Danube Region) and Action 8 (To enhance capacities of cities and municipalities to facilitate local and regional development) in particular, furthermore with PA 3 Culture and Tourism, People to People, especially regarding Action 1 (Promote sustainable tourism in the Danube Region and capitalise on EUSDR projects in the areas of culture, nature and tourism), Action 3: (Invest in sustainable quality products, services, innovative forms and infrastructure in the fields of tourism and culture, promote skills, education and creating jobs in the related areas), Action 5 (Promote and encourage the development of the cultural activities and creative sectors) as well as Action 6 (Promote cultural heritage in the Danube Region).

Apart from showing the interconnection of the subtopics of this given Territorial Analysis and the Priority Areas of the EUSDR (check Table 14), it is necessary to detect synergies between the thematical fields (subtopics) of the Territorial Analysis and the shortlist of strategic topics per Priority Area (Table 15). This analysis on the connection between the IPA CBC Programme and the EUSDR, is based on the document named *"Embedding EUSDR into EU funds. A comprehensive tool."* This tool was developed in the context of the embedding of the EUSDR into EU funds. The table attached below is based on the overview of all 85 actions as submitted by Priority Area Coordinators (PACs), which have been selected for the IPA programmes. The PACs were asked to propose a shortlist of up to three strategic topics (per PA), but this given analysis uses the long list of actions in their non-merged form. As a result, three types of synergy between the EUSDR actions for IPA programmes and the chosen subtopics of the HURS Territorial Analysis can be identified: 1. the given action is in strong connection exclusively with the Territorial Analysis (indicated by blue colour); 2. the given action is in strong connection exclusively with the shortlist of EUSDR strategic topics (indicated by yellow colour); 3. the given action is in strong connection with both the shortlist of EUSDR strategic topics and the chosen subtopics of the HURS.

Figure 61: Guide for reading the next table

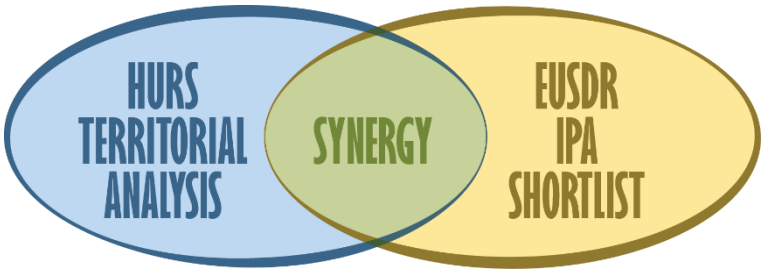

Table 15: Relation between the selected actions of the HURS territorial analysis and the PACs' shortlist

Priority areas	Actions	HURS	SHORTLIST
PA 1a Waterways Mobility	ACTION 1: Contribute to improve waterway and port infrastructure & management	**1**	**1**
	ACTION 2: Foster business development	**1**	
	ACTION 3: Facilitate fleet modernization		**1**
	ACTION 4: Support the further roll-out and enhancement of River Information Services		
	ACTION 5: Contribute to the enhanced quality of education and jobs	**1**	**1**
	ACTION 6: Contribute to the simplification, harmonisation, and digitalisation of administrative processes	**1**	

Priority areas	Actions	HURS	SHORTLIST
PA 1b Rail-Road-Air Mobility	ACTION 1: To bring to completion the TEN-T (rail and road) core network crossing the Danube Region, overcoming the difficulties and the bottlenecks, and taking into account environmental, economic and political challenges, particularly in the cross-border sections	**1**	
	ACTION 2: To support the implementation of the Rail Freight Corridors (RFC) forming part of the European rail network for competitive freight (Reg. 913/2010) with extension to candidate and neighbouring countries		
	ACTION 3: To enhance cooperation between air traffic stakeholders in order to improve regional connectivity and prepare a plan to implement shorter plane routes		**1**
	ACTION 4: To ensure sustainable metropolitan transport systems and mobility		
	ACTION 5: To improve the regional/ local cross-border infrastructure and the access to rural areas by facilitating secondary and tertiary transport infrastructure	**1**	**1**
	ACTION 6: To develop further nodal planning for multimodality	**1**	**1**
	ACTION 7: To develop further Intelligent Traffic Systems by using environmental-friendly technologies, especially in urban regions	**1**	
	ACTION 8: To raise awareness for road safety and encourage exchange of best practices		
PA 2 Sustainable Energy	ACTION 1: To further explore the sustainable use of clean biomass, solar energy, geothermal, hydropower and wind power to increase the energy independency and to promote and support multipurpose cross border RES utilization projects	**1**	**1**
	ACTION 2: To promote energy efficiency and use of renewable energy in buildings and heating systems including district heating and cooling and combined heat and power facilities	**1**	**1**
	ACTION 3: To promote decarbonisation of and reduction of air pollutants in the transport sector, regarding both public and freight transportation by developing the infrastructure for alternative fuels		
	ACTION 4: To improve energy efficient, cost efficient and innovative low-carbon technologies, including smart solutions while respecting the principle of technological neutrality		
	ACTION 5: To enforce regional cooperation with the aim of supporting the implementation of projects connecting energy markets with a focus on the projects of the Central and South Eastern European Energy Connectivity (CESEC) initiative		
	ACTION 6: To exchange best practices and to develop activities to decrease energy poverty, to increase the protection of vulnerable consumers and to empower consumers to engage in the energy market		
	ACTION 7: To explore new and innovative solutions of (subsurface) energy storage		**1**
	ACTION 8: To encourage exchange of information and best practices to improve cooperation, create synergies and to initiate joint projects with other macro-regional initiatives and relevant stakeholders at European and global level		
	ACTION 9: To encourage project generation related to the energy field		
PA 3 Culture and Tourism	ACTION 1: Promote sustainable tourism in the Danube Region and capitalise on EUSDR projects in the areas of culture, nature, and tourism	**1**	**1**
	ACTION 2: Support and promote cultural tourism in the Danube region	**1**	**1**

Priority areas	Actions	HURS	SHORTLIST
	ACTION 3: Invest in sustainable quality products, services, innovative forms, and infrastructure in the fields of tourism and culture, promote skills, education and creating jobs in the related areas	**1**	**1**
	ACTION 4: Develop a "Smart Destination Danube"	**1**	**1**
	ACTION 5: Promote and encourage the development of the cultural activities and creative sectors	**1**	**1**
	ACTION 6: Promote cultural heritage in the Danube Region	**1**	**1**
PA 4 Water quality	ACTION 1: HAZARDOUS & EMERGING SUBSTANCES: Promote monitoring, prevention and reduction of water pollution deriving from hazardous and emerging substances (EU priority substances and watch list candidates as well as Danube basin specific pollutants candidates and others e.g. micro plastics-plastics, pharmaceuticals, PFOS)	**1**	**1**
	ACTION 2: WASTE WATER: Continue boosting major investments in building, upgrading, maintaining and rehabilitating urban wastewater treatment facilities and promote alternative collection and treatment of wastewater in small rural settlements, including measures to build capacity at the regional and local level across the Danube basin		**1**
	ACTION 3: WATER & AGRICULTURE: Promote prevention and reduction of diffuse pollution, promote nutrient retention, smart irrigation and water reuse, foster and develop an active process of dialogue and cooperation between authorities responsible for agriculture and environment to ensure that measures are taken to address diffuse pollution and ensure smart water use	**1**	**1**
	ACTION 4: DRINKING WATER: Promote measures aimed at reducing knowledge deficits related to protecting water resources and safeguarding drinking water supply		
	ACTION 5: MIGRATORY FISH: Promote measures to enable fish migration in the Danube River basin		
	ACTION 6: CLIMATE CHANGE: Promote measures to adapt to climate change impacts in relation to water quality and quantity	**1**	**1**
	ACTION 7: TOOLS: Enhance cooperation, increase, and exchange knowledge and secure financing to water quality measures in the Danube Region		
PA 5 Environmental Risks	ACTION 1: Provide sufficient support for development and execution of risk management plans for different hazards	**1**	**1**
	ACTION 2: enhance the capacities, extend the coverage of basin-wide or regional forecasting and warning systems, and develop rapid response procedures		
	ACTION 3: Strengthen disaster prevention and preparedness among governmental and non-governmental organizations	**1**	**1**
	ACTION 4: Decrease human impacts that evolves natural risk factors resulting in environmental damages	**1**	
	ACTION 5: Anticipate regional and local impacts of climate change	**1**	**1**
PA 6 Biodiversity and Landscapes, Quality of Air and Soils	ACTION 1: Establish transnational cooperation and harmonisation of the strategic management documents between protected areas on river systems in the Danube basin		
	ACTION 2: Build capacities of national and local authorities, non-governmental organisations, expert, and scientific community in the environment related matters	**1**	
	ACTION 3: Develop and/or implement conservation action plans and/or management plans for endangered umbrella species of the Danube Region	**1**	**1**

Priority areas	Actions	HURS	SHORTLIST
	ACTION 4: Promote research to develop and apply the most appropriate methods for prevention and control of IAS and for management of the priority pathways in line with the DIAS Strategy and IAS Regulation (EU) 1143/2014	**1**	
	ACTION 5: Anchoring the concept of EU green infrastructure in the Danube Region	**1**	**1**
	ACTION 6: Promote ecological connectivity through cooperation between macro-regional strategies (MRS)		
	ACTION 7: Enhance and/or maintain soil-related ecosystem services (ES)	**1**	**1**
	ACTION 8: Identify locations with obsolete pesticide and similar chemical remains and prepare a remediation plan and a risk management plan in the case of environmental accidents		
	ACTION 9: Take measures to gradually reduce air pollution, with as a minimum step to respect the limit values for pollutants according to the Air Quality Directive		
	ACTION 10: Stimulate the management and the ecological restoration of wetlands, particularly in the Danube delta	**1**	
PA 7 Knowledge Society	ACTION 1: To promote coordination of national, regional and EU funds to stimulate excellence in R&I, in research areas specific for Danube Region	**1**	**1**
	ACTION 2: To promote participation of Danube countries in EU R&I Programmes, in particular in Horizon Europe		**1**
	ACTION 3: To strengthen cooperation among universities, research organisations and SMEs in the Danube Region	**1**	**1**
	ACTION 4: To increase awareness and visibility of science and innovation in the Danube Region		**1**
	ACTION 5: To support exchange of information and experience sharing for the purpose of preparation of future strategic R&I documents applicable in the new programming period	**1**	**1**
	ACTION 6: To promote horizontal cooperation in science and technology across all PAs and other MRS	**1**	
PA 8 Competitiveness of Enterprises	ACTION 1: To foster cooperation and exchange of knowledge between SMEs, creative industry, academia, the public sector, and civil society in areas of competence in the Danube Region	**1**	
	ACTION 2: Establishment of an Innovative Digital Ecosystem in the Danube Region to support SMEs when tackling the challenges of a digitalised world		
	ACTION 3: Improvement of framework conditions, support programs and capacity building of stakeholders, to enhance the collaboration between cluster initiatives and regional innovation strategies, with an accent on the rural areas	**1**	**1**
	ACTION 4: To improve business support to strengthen the innovative and digital capacities of female-led-SMEs		**1**
	ACTION 5: Enhance the application of Artificial Intelligence (AI) technologies in the Danube Region SMEs		**1**
PA 9 People and Skills	ACTION 1: Intensify Cooperation in Labour Market Policies	**1**	**1**
	ACTION 2: Digitalisation and Innovation in the World of Work	**1**	**1**
	ACTION 3: Integration of Vulnerable Groups into the Labour Market	**1**	**1**
	ACTION 4: Fighting Poverty and Promoting Social Inclusion for All	**1**	**1**
	ACTION 5: Quality and Efficiency of Education and Training Systems	**1**	**1**
	ACTION 6: Relevant and High-Quality Knowledge, Skills and Competences	**1**	**1**
	ACTION 7: Lifelong Learning and Learning Mobility	**1**	

Priority areas	Actions	HURS	SHORTLIST
	ACTION 8: Inclusive Education, Equity, Common Values and Sustainable Development	**1**	**1**
PA 10 Institutional Capacity and Cooperation	ACTION 1: To improve institutional capacities in order to provide high-quality public services	**1**	**1**
	ACTION 2: To facilitate the administrative cooperation of communities living in border regions	**1**	
	ACTION 3: To review bottlenecks relating to the low absorption rate of EU funds and Invest EU		
	ACTION 4: To support better coordination of funding		
	ACTION 5: To test and support innovative funding solutions (for local actors and civil society)	**1**	
	ACTION 6: To foster cooperation built on mutual trust between state and non-state actors to enhance well-being for the inhabitants of the Danube Region	**1**	**1**
	ACTION 7: To strengthen the involvement of civil society and local actors in the Danube Region	**1**	**1**
	ACTION 8: To enhance capacities of cities and municipalities to facilitate local and regional development	**1**	**1**
PA 11 Security	ACTION 1: Security offensive - Enhancing police cooperation with the aim of improving security and tackling serious and organised crime in the EUSDR countries and strengthening the efforts against terrorism threats		**1**
	ACTION 2: Promoting strategic long-term cooperation between law enforcement actors along the Danube river by enhanced networking		
	ACTION 3: Improving the systems of border control, document inspection management and cooperation on consular related issues in the Danube Region	**1**	**1**
	ACTION 4: Promoting the rule of law and the fight corruption		**1**
	ACTION 5: Setting up a structure of Danube River Forum		
	ACTION 6: Joint work with Priority Area 1a "Mobility: Waterways"		
	ACTION 7: Implementation of a Ministerial Conference every 3 years		

Furthermore, there are additional Actions which are not in synergy with subtopics chosen for the border area but are connected to the cohesion aspects discussed in the territorial analysis. Regarding PA 1a this includes Action 6: Contribute to the simplification, harmonisation, and digitalisation of administrative processes. Considering PA 1b Action 1: To bring to completion the TEN-T (rail and road) core network crossing the Danube Region, overcoming the difficulties and the bottlenecks, and taking into account environmental, economic and political challenges, particularly in the cross-border sections can be mentioned. In relation to PA 5 Action 1: Provide sufficient support for development and execution of risk management plans for different hazards, Action 4: Decrease human impacts that evolves natural risk factors resulting in environmental damages and Action 5: Anticipate regional and local impacts of climate change are touched upon in the analysis and are relevant to the border area. Based on the analysis, PA 11 Action 3: Improving the systems of border control, document inspection management and cooperation on consular related issues in the Danube Region covers an important cohesion aspect for the whole border area.

As it can be seen on the table there is a strong correlation between the HURS and the shortlist in relation to the support for the given EUSDR actions. Out of the total number of 59 actions which are relevant for either the HURS or the shortlist, 10 actions are connected to the shortlist only, and 12 are to the HURS only, while 37 actions are supported by both the Territorial Analysis and the shortlist.

The strongest interconnections of the two can be found in relation to PA 3 Culture and Tourism, PA 4 Water quality, and PA 9 People and Skills, while weaker ones can be seen concerning PA 1a Waterways Mobility, PA 7 Knowledge Society, PA 8 Competitiveness of Enterprises or PA 11 Security.

5.1.4 The Border Orientation Paper

The **Border Orientation Paper** is a document of the European Commission aimed at launching a discussion on the 2021-2027 INTERREG IPA CBC programme with the participation of regions of Hungary and Serbia. Like other orientation papers, it is also designed to provide ideas, options, and orientations on the thematic focus of the future programme. The orientations listed under the five future Policy Objectives (POs, of the renewed Cohesion Policy) in Chapter D are summarised and structured according to the 11 thematic fields chosen as the basis for the preparation of the upcoming programme. With the help of the division of orientations it can be seen what kind of suggestions are given by the Commission to support the elaboration of the upcoming programme's thematic areas.

Cooperation in the field of environmental protection and environmental sustainability

- Energy transition: cross border energy efficiency actions;
- Climate change and risk prevention: joint climate change adaptation and mitigation that affect natural ecosystems (e.g. floods, wildfires, landslides) and biodiversity (e.g. impacts on species and wildlife habitats), development of joint policies, protocols, procedures and approaches on risk prevention and rapid response management;
- Circular economy: awareness raising and support of sustainable consumption practices and behaviour (reuse and recycling of waste), sharing of best practices, joint measures to increase resource efficiency and to promote the circular economy in SMEs;
- Biodiversity and pollution: supporting actions to jointly protect nature and biodiversity with more strategic approach and awareness raising;
- Air pollution: measures to improve air quality such as green infrastructure, joint awareness campaigns as well as monitoring, decontamination and rehabilitation of industrial sites and contaminated land.

Development of cross-border functions

- Development of cross border partnerships in the field of social protection and health through jointly developed and/or implemented tools and services that enable better quality of health and/or social care services;
- Integrated specialisation system for health care centres;
- Invest in small infrastructure in health/social fields;
- Consideration of town twinnings, urban-rural linkages, and cooperation within cross-border functional urban areas, which could provide an opportunity for facilitating local authorities' involvement in the EU acquis alignment process.

Transport connections

- New/improved border crossing points, coach lines, public bicycle and car sharing schemes etc.
- Strategic projects that are key to improving cross-border mobility at regional and local levels (e.g. bridges, cycling infrastructure, new or improved border-crossing points);
- Open calls, in particular for projects promoting low-carbon transport systems.

Economic logistics

- *The BOP does not touch upon this topic.*

Economic development

- Improving the framework conditions for innovation by promoting linkages between research institutions and innovative businesses;
- Promoting the synergies and the exploitation of opportunities for smart specialisation, based on relevant strategies applicable to the border area;
- Research and innovation activities in public research centres, universities, and centres of competence, including international networking;
- Enhancement of links, networks, and clusters between businesses;
- The establishment of knowledge flows and links among scientists in the area with associations of local entrepreneurs through clustering and networking actions;
- Support to local SMEs to face challenges related to their size, limited resources (such as skills and finance) or industry and market conditions, including within supply chains and with larger enterprises, e.g. by voucher schemes to purchase cross-border business advice;
- Digital connectivity: improve the conditions for the digital economy;
- Development of the potential to improve connectivity and consequently competitiveness of regions in supporting the ICT infrastructure (WIFI spots on municipal buildings) mainly in rural areas (white spots / no interest of private providers), complementary to national programmes funding and EU initiatives (WIFI 4 EU).

Heritage related management

- Joint capacity-building measures for environmental authorities and the non-governmental sector;
- Identification of barriers to wildlife migration and solutions to overcome these barriers can contribute to an improved network.

Tourism

- Further investment in shared historical, natural, and cultural heritage products and services;
- Improvement of the attractiveness of the region as a destination for green tourism and cultural heritage, furthermore sustainable tourism trails or the development of quality labels for excellence in services;
- Destination marketing of the regions;

- Support for the development, equipping and maintenance of a safe network of hiking paths and bicycle lanes, including cycling-related services;
- The preparation of ecotourism strategies and action plans for National Parks and Protected Areas as eco-tourism destinations;
- The development of sustainable and nature-based tourism in the area through ecotourism product development and services provision;
- The establishment of networks with local partners and tourism industry to prepare and certify the quality of travel products.

Education, training

- Training on business-to-business circular procurement or 'circular' hubs;
- Improving the conditions for the digital economy through education and trainings of human capital, secondary schools should consider tackling this issue from an early stage;
- Investment in small infrastructure in the training and capacity building of the staff (of the social sector).

Labour market cooperation

- Investment in mechanisms for active inclusion and improve of employability of vulnerable groups and areas with socially excluded inhabitants;
- Promotion of training in vocational and educational skills tackling the regional qualified and skilled labour needs with a focus on the most deprived communities.

Social challenges

- Provide territorially targeted support for regeneration of neglected and deprived areas;
- Explore the possibility of establishing joint territorial instruments adapted to the characteristics of the border region, especially with a view to tackling specific situations such as a rural region (CLLD) facing similar challenges on both sides of the border.

People to People cooperation

- Small project funds or micro-project schemes across the border area, focused on people-to-people activities;
- Town twinnings can set a framework for creating people-to-people exchanges and thereby involve citizens, universities, and civil society.

5.1.5 The Zagreb Declaration

In the frameworks of the **Zagreb Declaration**, accepted on 6 May 2020, the leaders of the European Union and its Member States, in consultation with Western Balkans leaders, and in the presence of regional and international stakeholders, reiterated their strong solidarity with partners from the Western Balkans in the context of the coronavirus crisis. The document was born in the times during the fight against the pandemic, however at the same time it is also a document for strengthening cohesion and European integration across borders, and deals with many existing and potential topics

of transnational and cross-border cooperation. In the document the EU and the Members States have concluded the following 20 points touching upon the fields of cooperation among EU members and the Western Balkan partners including Serbia and Hungary as well:

1. support for the European perspective of the Western Balkans;
2. efforts to combat the virus;
3. the EU mobilises funds for support for the health sector and for social and economic recovery;
4. joint procurement and the unrestricted trade-flow of protective personal equipment;
5. this cooperation goes far beyond what any other partner has provided, and the cooperation and coordination should continue in the future;
6. the EU determined to further intensify its engagement at all levels to support the region's political, economic, and social transformation and welcomes the pledge of the Western Balkans partners to uphold European values and principles;
7. the primacy of democracy and rule of law, especially the fight against corruption and organised crime, good governance, as well as respect for human rights, gender equality and for rights of persons belonging to minorities;
8. cooperation on addressing disinformation, closer cooperation is needed in resilience-building and cyber security;
9. inclusive regional cooperation and strengthening good neighbourly relations, including with EU Member States. Further and decisive efforts to be devoted to reconciliation and regional stability;
10. inclusive regional cooperation and the document urges the Western Balkans leaders to fully exploit the potential of regional cooperation, and this requires strong commitment by the entire region to continue deepening regional economic integration, making the region more attractive with the help of the Regional Economic Area (REA);
11. close cooperation covering functioning market economy to be able to fully link to the EU's single market; prominent role should be given to the association of the region to the EU's climate-related ambitions; strengthening connectivity in all its dimensions including transport, energy, digital and people-to-people, tourism and culture; focus on social development including health, education, social policy; youth.
12. security challenges that demand coordinated action;
13. preventing and countering terrorism and extremism;
14. fight against corruption and organised crime;
15. resolute actions against human trafficking, drug cultivation, money laundering and smuggling of human beings and drugs. The fight against the illicit trafficking of weapons;
16. migration challenges;
17. energy security to be prioritised, including the diversification of sources and routes;
18. deepening cooperation in Common Foreign and Security Policy;
19. political dialogue, including regularly high-level meetings;
20. last but not least, the EU and the Member States welcome that their Western Balkan partners align themselves with the above points.

5.2 National level

When analysing the national policy frameworks, a total number of 32 plans were identified on each side, of which 13 from Hungary and 12 from Serbia remaining valid after 2022 became subject to further investigations. The other documents will expire or will be renewed later. The full list of analysed strategic documents is available in the Annex (8.1 List of the examined strategic documents) for further reading where all the 67 documents are listed with their title in English and Serbian/Hungarian, along with their online availability, timeframe, main goals/objectives, development directions, furthermore their **suggestions for the Hungarian-Serbian border area concerned** and **suggestions for the Hungarian-Serbian cross-border relations and cooperation**. Out of this information the last two (indicated by bold letters) are explained in the chapter below, broken down by the main cohesion topics of cooperation examined in the present analysis.

5.2.1 Strategic documents related to territorial cohesion

National Development and Territorial Development Concept[124] [Hungarian strategic document]

- The concept contains many important information, **development ideas** concerning the two relevant Hungarian regions, among others:
    - Hungary is interested in the application of a "green" approach, preserving the existing landscape and natural and built heritage values, using it as a resource, which implements the transport policy and economic development goals of the EU Strategy for the Danube Region
    - Development of the areas along the Danube, especially related to tourism, water management, nature conservation and transport, has a clear relevance
    - Development of fixed track and public transport in particular regarding areas along the Danube, e.g. Baja
    - Increasing the role of river transportation on the Danube, development of Danube ports (e.g. Baja)
    - Sustainable water management, ecological rehabilitation of the Danube and its tributaries
    - Csongrád county, considered to be the country's "southeastern" gateway, leading to the Balkans and the Middle East
    - Szeged is a city of international importance, playing the role of a central gateway whose attraction zone basically covers all of Csongrád county. Moreover, it plays a role in international territorial cooperation in the joint region encompassing Arad, Timișoara, Novi Sad, Subotica and Senta
    - The rivers (e.g. Tisza/Tisa) are an obstacle to the interoperability of Csongrád county as well as to the connection with border regions and their economic importance is no longer significant

[124] Hungarian Gazette (2014): https://regionalispolitika.kormany.hu/download/a/c9/e0000/MK14001.pdf

  - It is of great importance to develop the interoperability of the border region of Hungary-Serbia-Romania, to ensure infrastructure links with the neighbouring cities (Szeged, Subotica, Arad, Timișoara) as well as to rebuild Szeged's role as a gateway
  - The economic use of Szeged's intermodal logistics potential, the creation of a free economic zone along the borders
  - It is important to ensure the interconnectivity of cities and towns in the county by smoothening the interoperability of rivers and by further developing pre-existing contacts as well as to cooperate with neighbouring (cross-border) counties in order to develop the Great Plain into a multipolar rural area
  - Developing the international competitiveness of Csongrád county's biotech-agriculture-food industry cluster
  - Further developing tourism's potential regarding the county's rivers in a coordinated, integrated manner and providing its infrastructural conditions by cooperating with cross-border counties.
  - To ensure cohesion in the area, Bács-Kiskun county intends to be integrated more closely to the EU's economic and social space and to develop cross-border transport connections
  - In the case of Bács-Kiskun county, a common purpose is the reinforcement of social and economic cross-border cooperation with its southern neighbours, including Serbia
  - Integrated regional development plans are of utmost importance in the case of the Homokhátság (the sand dunes region) in both counties (environmental management, mitigation of negative climate effects, etc.)
- The document contains the following elements with **cross-border relevance**:
  - There are untapped opportunities in the development of river transportation on the Danube.
  - The area of Subotica, Szeged, Hódmezővásárhely and Makó is considered as a cross-border agglomeration.
  - It identifies Sombor and Subotica, for reasons of their spatial structure, as "external" cities of great importance.
  - Baja is considered as part of the outer urban ring of Hungary, which has significant spatial (development) functions.
  - The economic indicators and the unemployment rates of the Hungarian–Serbian border region are substantially below the EU average.
  - The border section is part of the Schengen Border, the flow of goods is not considerable.
  - Economic recovery may be achieved through intensified dialogue, business partner search opportunities and close cooperation of the economic and research-education sectors (notably research and development, innovation) between the economic actors.
  - The region has a huge potential in common cultural heritage, but it is left unexploited because of the lack of tourism trips and their marketing.
  - Communities, on both sides, call for contact and cooperation in the form of direct, people-to-people activities as well.

In addition to county specific information it is also relevant to include information on the **Central Danube Priority Region** that was designated as a cross-county regional development area covering 99 settlements from Bács-Kiskun, Tolna and Fejér Counties. The modification of the respective development plan came into force on 1st July 2020 introducing the newest priority area of Hungary stretching to Kalocsa, Baja and Kiskőrös Districts of Bács-Kiskun County. The key role of the designated area, that involves inner peripheries of the country along the Danube, is also justified by the regional development interventions accompanying the planned expansion of the Paks Nuclear Power Plant and its long-term effects on the development of the wider region. However, the activities foreseen in the priority area are more than just the planned construction of two new reactor blocks. Various cross-sectoral development goals have been identified that would certainly have cross-border effects on neighbouring Serbia and would require stronger cohesion with Serbian stakeholders, companies and labour force:

- Planning and implementation of its spatial development concept and programme;
- Energy with integrated regional and settlement development, with intelligent solutions: energy modernization, including the use of energy based on renewable energy sources and the development of intelligent solutions based on them, combined with this mobility, the application of energy innovations. Development of energy transmission and storage technologies, regional utilization of waste heat. Using smart grid devices and the services that build on them.
- Economic development, industry, agriculture tourism: economic and business development, innovation.
- Infrastructure, water management, environmental protection, action against climate change: developments directly affecting the Danube, such as navigability, transport infrastructure, regional water management, tourism-related Danube developments, nature protection, and climate change management.
- Human resource development, training, innovation: the establishment of an education system that creates special qualifications, according to which the training structure of the institutions present in the region should be adjusted primarily to the developments of the energy, IT and environmental industries. Ensuring, to a lesser extent, permanent and largely temporary accommodation of the labour force required for the investment, creating housing conditions and related infrastructure, utility, and public service developments.

Spatial plan of the Republic of Serbia from 2010 to 2020[125] [Serbian strategic document]

- The plan contains much relevant information, **development ideas** concerning Vojvodina, among others:

[125] See the document in Serbian (complete version) and in English (abridged version) as part of the Law: https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/skupstina/zakon/2010/88/2/reg. New version of the plan is being elaborated for the period 2021-2035, the Decision of the government is available on-line, as well as the material for early public hearing organized in March 2020, see: https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/odluka/2019/48/2/reg and https://www.mgsi.gov.rs/lat/dokumenti/rani-javni-uvid-povodom-izrade-prostornog-plana-republike-srbije-od-2021-do-2035-godine

- The uneven level of development of certain parts of Vojvodina will be solved by applying the principles of decentralization and polycentrism, where larger cities and urban settlements such as Subotica, Sombor, Sremska Mitrovica, Pančevo, Vršac, Zrenjanin and Kikinda, will have the role of "engines of development". Around these centres smaller municipalities will be grouped forming development regions throughout the province.
- The City of Novi Sad will have the role of a development centre at the intersection of Corridors X and VII. Its position will make this area one of the "gates" of Europe, which is especially important for the overall development of Serbia.
- Vojvodina has the greatest heat potential of geothermal sources in the country. There is an extremely large number of mineral and thermal water localities - as many as 241, which are located on the territory of Vojvodina, Posavina, Macva, Podunavlje and the wider area of the central part of the Republic of Serbia.
- The Autonomous Province of Vojvodina has significant potentials for the development of intensive, modern agriculture, viticulture as well as export-oriented processing industry, transport economy, and tourism.

- The document contains the following elements with **cross-border relevance**:
  - Regarding the cross-border programme support by the Autonomous Province can be provided in the following fields: improving the institutional framework for SME development; development of producer associations and clusters; improving quality, safety, marketing and innovation; strengthening rural-urban relations; flood protection and reduction of cross-border pollution.
  - Logistics centres of international/regional character would provide service to the Balkan market including Hungary (furthermore Romania, Bulgaria, Greece, Slovenia, Croatia, Bosnia and Herzegovina, North Macedonia) and some other EU countries (Italy, Austria, Germany, the Netherlands).
  - In particular, the connection of gas pipeline systems is mentioned (a Memorandum was signed, which would provide an alternative route of gas supply to the Republic of Serbia with, in addition to the gas pipeline from Hungary).
  - The document mentions the South East Europe (SEE) Cooperation Programme, which aimed "to improve the process of spatial, economic and social integration and promote cohesion, stability and competitiveness". The programme covered 16 countries, including Serbia and Hungary as well.

Climate Change Strategy of Hungary [Hungarian strategic document][126]

- The document identifies **four specific objectives**: decarbonisation; the research of climatic vulnerability; adaptation and preparation; climate partnership;
- **Concerning the two relevant Hungarian regions**, the document states that the vulnerability of crop production based on spring crops is outstanding on the southern part of the country, in Baranya, Tolna, Bács-Kiskun and Csongrád regions, which means that the expected annual

[126] National Climate Strategy 2008- 2025. https://www.preventionweb.net/files/61768_nationalclimatechangestrategyofhung.pdf

average yield could significantly decrease even by two thirds by the end of the century compared to the end of the 20th century, with unmodified cultivation practice and without adaptation investments.

- There are no statements with **cross-border relevance.**

National Water Strategy (Kvassay Jenő Plan) [Hungarian strategic document][127]

- **Concerning the two relevant Hungarian regions**, it is emphasized that restoring the water balance of the Homokhátság is a priority task. Another problem concerning the region is that because of a decreasing amount of infiltration or recharge, a regional subsidence of the shallow groundwater level is expected in the Duna-Tisza közi Homokhátság. The decrease of the supply of formation water, and changes in the dynamics and directions of leakage beneath the ground can be expected in the short term in the region of Dél-Alföld (South Great Plain).
- The document contains the following elements with **cross-border relevance**:
    - Cooperation needs to be strengthened in terms of sustainable river basin management and flood, drought, and water pollution risk management.
    - The extension of a river assessment model to the river basin has already started with the participation of the two countries.
    - Hungary has a boundary waters treaty with every neighbouring country.
    - Difficulties cause problems on behalf of the partners (Ukraine, Serbia).
    - The main general problems in cross-border relations are:
        - The water basin management and flood risk management plans concerning drainage basins divided by borders do not have a fully-fledged coordination mechanism.
        - The EU legislations do not prevail in every current boundary waters' treaty.
        - International data exchange is not enough for the required quality performance of flood forecasts.
        - Damage control plans, which would enable joint interventions, are missing in case of the watercourses forming a border.

National Framework Strategy on Sustainable Development[128] [Hungarian strategic document]

- The document **does not contain references regarding the two Hungarian regions** or Vojvodina.
- Statements made regarding **cross-border relations:**
    - Due to the geographical and historical conditions of Hungary, the establishment of sustainability conditions is not only a transboundary task, it requires cooperation with Hungarians living across border and in mainland Hungary, and cooperation with neighbouring countries has a special significance.

[127] See: https://www4.vizugy.hu/kvassay_jeno_nemzeti_vizstrategia

[128] See: https://eionet.kormany.hu/akadalymentes/download/1/26/71000/NFFT-HUN-web.pdf

National Landscape Strategy[129] [Hungarian strategic document]

- **Regarding the two concerned regions** it is emphasized that the population retention capacity in South Great Plain is low.
- The following factors of **cross-border relevance are mentioned:**
    - The European Council has stated in the European Landscape Convention that the parties should encourage cross-border cooperation at both local and regional levels and should compile and realise a joint programme concerning the landscape, if necessary.
    - The opportunities of international cooperation:
        - the extension of existing bilateral cooperation with neighbouring countries in terms of planning, protecting, managing, and developing cross-border landscapes;
        - encouraging the cooperation between local governments and regional actors in case of border landscapes (e.g. extending the cooperation of national park directorates, local action committees, non-governmental organizations).

National Energy Strategy 2030[130] [Hungarian strategic document]

- The **directions of development** (pillars) identified in the document, which concern international affairs as well, are the following:
    - Security of energy supply;
    - Increasing competitiveness;
    - Sustainability;
    - Energy efficiency and energy conservation;
    - Renewable energy sources;
    - Nuclear energy
    - Regional infrastructure platform
        - Cooperation with neighbouring countries
    - New governmental institutional and instrumentation systems in the field of energetics
        - Institutional system ensuring the predictability of investment environment.
- The **strategy does not deal with the Hungarian regions specifically.**
- The strategy states the following regarding **Serbian-Hungarian cross-border relations:** Close cooperation with Visegrad Group countries (V4) and Balkan countries, especially former Yugoslavian republics is strongly recommended, considering the fact that these countries' (i.e. Serbia, Bosnia and Herzegovina) gas supply can currently only be provided through Hungary. Hungarian storage facilities and their developments contribute to the whole region's security of supply.

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129 See: https://www.kormany.hu/download/8/ff/f0000/Nemzeti%20T%C3%A1jstrat%C3%A9gia_2017-2026.pdf

130 See: https://2010-2014.kormany.hu/download/4/f8/70000/Nemzeti%20Energiastrat%C3%A9gia%202030%20teljes%20v%C3%A1ltozat.pdf

National Transport Infrastructure Development Strategy[131] [Hungarian strategic document]

- Considering the concerned **two Hungarian counties** of the programme area, the following can be highlighted:
  - Development of suburban transport in large cities' agglomeration and catchment areas, and where possible, the creation of a fixed track system, using the existing rail network – development of tram-train and suburban lines. This type of suburban transport can be the basis for the connection between Szeged and Hódmezővásárhely.
  - There is a need to start building additional lines, municipal services in Szeged.
  - There is high rail traffic in the direction of Szeged.
  - In the case of the regional airports situated in 50-100-150 km from each other, there are obviously large overlaps, for example around Szeged and Arad.
  - Bus lines are very well used in the direction of Kecskemét.
  - The Cegléd-Kecskemét railway line has been renewed.
  - Bács-Kiskun megye possesses one of the highest rates of dirt roads built in the country.
  - The construction of missing road TEN-T comprehensive network elements, of which the planned speedway of M9 (Szombathely-Szeged) would affect the border area.
- Concerning **cross-border relations** between Hungary and Serbia, the following can be summarised:
  - Hungary has helped the Western Balkans (Albania, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro, and Serbia) to be involved in the European and the Visegrad cooperation.
  - The economic relationship between the regions and thus the development of the transport infrastructure is very significantly affected by the cooperation of the agro-food sectors of Hungary, Serbia and Romania in relation to Csongrád and Békés counties from Hungary, North Banat and North Bačka in Serbia, furthermore Arad and Timiș counties in Romania.
  - A priority is given to the full completion of the Hungarian sections of the motorways up to the borders.
  - The task is to expand currently sporadic cross-border links, to create network structural links.

Water management strategy in the territory of the Republic of Serbia until 2034[132] [Serbian strategic document]

- **Considerations about the territory of the Programme area**:
  - More than 90% of Serbia's territory falls within the Danube River Basin.

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131 See: https://www.kormany.hu/download/b/84/10000/Nemzeti%20K%C3%B6zleked%C3%A9si%20Infrastrukt%C3%BAra-fejleszt%C3%A9si%20Strat%C3%A9gia.pdf

132 See: http://www.rdvode.gov.rs/doc/Strategija_FINAL.pdf and http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/strategija/2017/3/1/reg

- The largest left side tributary is the Tisza/Tisa (the catchment area is approximately 157,186 km2, from which approximately 10,856 km2 is found in Serbia), which is at the same time the largest tributary of the Danube. It enters Serbia from Hungary, at Banat village Đale, and enters the Danube at Slankamen/Zalánkemén. Larger tributaries are the Tamiš, DTD Canal and the Nera. The largest Tisza/Tisa tributary in Vojvodina is the Bega/Begej.
- In general, the water area (WA) of Bačka and Banat have the highest water potential, taking into consideration the international waterways of the Danube and Tisza/Tisa rivers. However, the use of water from the Tisza/Tisa River is subject to restrictions in terms of quantity, while restrictions on the use of water from the HS DTD canal, refer to the quantity and quality of water.
- Rather extensive water infrastructure.
- The '*Strategy of Water Supply and Water Protection in AP Vojvodina*' (2010) defines important potential sources of drinking water. The Danube alluvion from the area of Bezdan-Bogojevo (Regional Water Supply System - RWSS Western Bačka) and the Sava alluvion from the Jarak-Klenak area (RWSS Eastern Srem, with possible merging with Bačka water supply system, BWC) will most likely be used as sources for the long-term solution of water supply faced by Central Bačka (WA Bačka and Banat) and Eastern Srem (WA Srem). It is not possible to define a long-term method of water supply for other areas in the AP, because in some areas inadequate water quality must be addressed urgently. Regarding Central and Northern Banat (WA Bačka and Banat), previous research and prepared project documentation indicate that the water supply issue can be solved by building a RWSS Banat (with source Kovin-Dubovac), which requires substantial resources.
- Since the biggest problems in Vojvodina, in terms of quantity and quality of water, are related to the areas of Central and Northern Banat, Eastern Srem, as well as Central and North-East Bačka, regional water supply systems (RWSS) should be oriented from west to east and from south to north.

- An **outline of the document's recommendations with any reference to cross-border relations**:
  - Many water management companies/subjects, institutions which, with improved human and material resources, are prepared to continue to carry out water sector activities.
  - High number of major projects drafted in the strategy are related to the territory of Vojvodina.
  - Settlements in Vojvodina that are supplied with water from the main water-bearing complex have significant challenges to the quality of water supplied to the population, due to naturally high volume of certain harmful substances (organic substances, arsenic, etc.). Therefore, in several towns water is not safe for human consumption but is used only as technical water. Finding solutions for the largest settlements of Zrenjanin and Kikinda are a priority, to be followed by other smaller settlements where the use of water for human consumption is prohibited. Along with these urgent measures, a study and planning documentation must be developed, within which a long-term, sustainable solution to water issues in a large part of Banat and

Bačka/Bácska should be resolved. Research should first focus on potential water sources, designated as the eastern edge of Telečka and Southeast Banat.
    - Numerous projects regarding water protection (e.g. wastewater treatment plan (WWTP) Vrbas, Kula, Crvenka, WWTP Zrenjanin), irrigation systems, development of the sewage systems, prevention and management, flood protection are planned in Vojvodina.
    - Regarding groundwater, special attention should be paid to addressing the quantitative status of the bodies of groundwater that are affected by overexploitation, primarily in Vojvodina.
    - More than 40% of arable lands in Serbia (about 2 million hectares) is covered by drainage. Around 390 drainage systems have been built, with over 24,000 km of canal network, 210 major and several dozen smaller pumping stations (of the total capacity of 543 m3/s) and 252 gravity drains. Horizontal pipe drainage has been built on approximately 66,000 ha (mostly in Banat, somewhat less in Bačka). The largest irrigated areas are in Vojvodina, amounting to 38,000 ha (data from 2012).

Nature protection strategy of the Republic of Serbia for the period 2019 to 2025[133] [Serbian strategic document]

- The document **refers to the territory of the programme** in a twofold way:
    - Institutions and subjects relevant for the topic based in Vojvodina:
        - Managing institutions of protected areas/nature protection (e.g. Vojvodina vode, Vojvodinašume, Provincial Secretariat for Urban Planning and Environment, Provincial Institute for Nature Protection).
        - A large number of entities relevant for the Strategy and its measures (e.g. 228 civil society organizations active in the field of the environmental protection in Vojvodina).
        - Institutions from Vojvodina are foreseen to participate in the implementation of the measures and activities drafted in the action plan.
    - Natural habitats, protected areas in Vojvodina:
        - sand and steppe habitats (Deliblat and Subotica-Horgoš sandstones and salty lands, lakes in Banat and Bačka);
        - national park Fruška Gora;
        - special nature reserves of Gornje Podunavlje, Obedska bara, Koviljsko - Petrovaradinski rit.
- **There are no direct references, measures related to cross-border cooperation** specifically between Hungary and Serbia, but more cross-border projects/initiatives are mentioned (e.g. BioREGIO Carpathians, UNESCO Cross-border Biosphere Reserve "Mura-Drava-Danube" etc.) and some measures foreseen in the action plan are directly related to cross-border cooperation:

[133] See: https://www.ekologija.gov.rs/wp-content/uploads/razno/Predlog_strategije_zastite_prirode_19.09.2018.-1.pdf

- 1.5.3 Developing risk analysis procedures for transboundary movements of wild species;
- 1.5.5. Development of materials for operational activities of control of transboundary movements of wild species;
- Measure 4.2 Improvement of international cooperation (with a set of sub-measures relevant for CBC in general).

Energy Sector Development Strategy of the Republic of Serbia for the period by 2025 with projections by 2030[134] [Serbian strategic document]

- Outline of the document's **recommendations for the area concerned:**
  - The level of exploration at the territory of the Republic of Serbia is uneven and generation of crude oil and natural gas is realized only in the Pannonian Basin, and finding reserves in non-structural traps and collectors of untraditional type in Vojvodina.
  - Modernization of refineries in Pančevo and Novi Sad in a manner that would provide that all fuels in the country shall meet relevant EU standards is a strategic priority.
  - Biomass potential is available at the whole territory of the Republic of Serbia. Wood biomass is mostly located in Central Serbia and agricultural biomass in the area of Vojvodina.
  - In the Republic of Serbia, it is possible to produce both bioethanol and biodiesel. Raw materials necessary to produce bioethanol are cereals, millet, Jerusalem artichoke (topinambour) and potato. For the biodiesel production the following oilseeds can be used: sunflower, soya, and rapeseed, as well as waste cooking oils.
  - Wind energy in the Republic of Serbia can be used in the area of Košava, e.g. south Banat.
  - The Republic of Serbia is within the zone of favourable geothermal potential and resources, which involves petrothermal and hydro geothermal energy sources. Significant but not considered geo-thermal potential is in the use of watered oil and gas boreholes in Vojvodina where the exploitation is completed.
- **Chapters referring to the cross-border relations and region** are:
  - There appears only one chapter. Chapter 5.1.2. (Transmission and distribution), which directly refers to cross-border cooperation between HU-SRB by foreseeing a new 400 kV interconnection line between the Republic of Serbia and Hungary.
  - In other segments of the document statements, measures can be found that are more general for international, regional cooperation.
  - Implementation of interconnection with countries from the region and construction of a new natural gas supply route shall enable larger use of natural gas for combined production of heat energy and electricity. Beside primary use in industry, the

[134] See: https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/skupstina/ostalo/2015/101/1/reg

construction of gas-fired power plants with combined cycle should be considered in larger industrial centres as well (e.g. Novi Sad, Pančevo).

- The Republic of Serbia accepted, signed, and ratified Energy Community Treaty, and, accordingly, sets regional energy market establishment as a priority and the integration into EU's energy market.
- Beside provision of an open and connected domestic market with the regional and European energy market and with efficient energy, transit and cross-border cooperation should provide balanced development of the energy sector and long-term energy security in the country.

Sustainable Urban Development Strategy of the Republic of Serbia until 2030[135] [Serbian strategic document]

- **The document incorporates recommendations such as:**
  - within the chapter Vision, strategic directions are as follows: In the Strategy's implementation, an integrated and coordinated territorial approach to resolving key and urgent problems in urban development shall be applied to improve the quality of life in urban areas by way of tapping fully into the territorial/urban capital (potential) and creative resources, fostering development of (innovative) urban economy and efficient governance in the urban dimension of national development policies and public policies.
- **The document refers to the Serbian territory of the programme in the following way:**
  - Numerous entities, subjects the Strategy relates to, are located in Vojvodina, funding sources, or relevant institutions for the topic (e.g. Provincial Secretariat for Urban Planning and Environmental Protection and Directorate for Capital Investments of Vojvodina, Development agencies, Secretariat for Urban Planning and Environmental Protection etc.)
  - Priority areas of intervention in urban settlements are:
    - Brownfield sites and industrial zones – Protracted development of Industrial Zones and slow pace of SMEs' inflow in IZs/Industrial Parks due to a strong de-industrialisation trend in urban settlements in the post-Socialist period, insufficiently developed institutional framework for IZs' development, business operations and management, insufficient alignment of IZ national development policy (with initiatives for formation of IZs occurring for the most part at the level of LSGUs) where industries are concentrated in Belgrade and Novi Sad.
    - Most of the Priority areas of interventions are extremely relevant and applicable in the Vojvodina region.
  - Transport by bicycle is almost exclusively used in the Autonomous Province of Vojvodina whereas in the rest of the country bicycles are used mostly for recreation.

[135] See: http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/strategija/2019/47/1/reg

- There is a noticeable trend of reduction in total amount of waste generated (except on the territory of the Autonomous Province of Vojvodina), which is directly related to the declining purchasing power of the population and the economic crisis, but also an improvement in the system for collection of certain types of communal waste in local communities (through recycling).

- **References, measures related to cross-border cooperation between Hungary and Serbia:**
  - CBC is in most cases recognized as a resource for funding (IPA 2007-2013 and IPA 2014-2020 CBC programmes)
  - 'Cross-border and transnational cooperation' is a single expression used to refer to territorial cooperation programmes (INTERREG). These programmes provide financial support for cooperation among border areas of neighbouring countries (cross-border cooperation) or cooperation among parts of or entire countries (transnational cooperation) intended to resolve common issues such as waste management, provision of services in various sectors – cultural and economic cooperation, tourism, transport, etc.
  - Under Strategic direction V - Urban governance measure 5.2.4 foresee the application of EU cohesion policy instruments, etc. – integrated territorial investment (ITI) and community-led local development (CLLD).

5.2.2 Strategic documents related to economic cohesion

The Hungarian SME Strategy[136] [Hungarian strategic document]

- The **measures of the Strategy:**
  - 1. Establishing entrepreneur-friendly regulatory and tax environment;
  - 2. The development of the business environments of SMEs and the tools of e-government;
  - 3. Strengthening the developmental ability and the innovation and digital capacities of SMEs;
  - 4. Encouraging fund allocations for SMEs;
  - 5. Encouraging the internationalization of SMEs;
  - 6. Acquisition of necessary knowledge.
- Establishments **concerning the target area**:
  - Based on the changes in enterprises' incomes between 2013 and 2017, Bács-Kiskun is fifth, while Csongrád megye is sixth in the ranking list of the 19 Hungarian regions.
  - Based on the changes in added value produced by enterprises, Bács-Kiskun is in the sixth, Csongrád is in thirteenth place.
  - Based on the changes in the number of people employed by enterprises, Bács-Kiskun is the fourth, Csongrád is in twelfth place.

[136] See: https://www.kormany.hu/download/5/f7/b1000/KKV_Strategia.pdf

- Reflections regarding **Serbian-Hungarian cross-border economic relations** are not included in the document.

Industrial Policy Strategy of the Republic of Serbia from 2021 to 2030[137] [Serbian strategic document]

Objectives of the Strategy include:

  - Overall objective: To increase the competitiveness of the industry of the Republic of Serbia.
  - Industrial development based on innovation and the development of higher standards of technological production;
  - Increased total volume of investments in the industry while increasing the quality of investments;
  - Improve the technological structure of exports;
  - Transforming the industry from linear to circular model.
- The document **does not mention directly the programme region**, nor have specific measures related to the target territory, although all measures foreseen thereby are relevant for the Vojvodina region since big percentage of stakeholders, legal entities targeted by the measures are located there.
- **No references, measures related to cross-border cooperation** between Hungary and Serbia are mentioned.

Smart Specialisation Strategy in the Republic of Serbia for the Period from 2020 to 2027[138] [Serbian strategic document]

- **Information related to the AP of Vojvodina include:**
  - According to the strategy, the region of Vojvodina can be characterized as partly industrial, partly agricultural. The comparative advantage of the region in comparison with other regions in the Republic of Serbia lies in the production of automobile parts, the petrochemical industry, the plastics industry, and agriculture.
  - Scientific and research potential is particularly pronounced in the field of information technology.
  - In the Republic of Serbia, there is a big difference between the regions in terms of human capacity, capital and availability of IT resources - the largest and most significant companies are located in the three largest centres: Belgrade, Novi Sad and Niš. In Novi Sad, companies are headquartered for as much as a quarter of all developers in the Republic of Serbia.
  - Data on the human capital of the region in the Republic of Serbia show that although a significant proportion of the population has secondary education throughout the

[137] See: http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/strategija/2020/35/1/reg

[138] See: http://www.mpn.gov.rs/wp-content/uploads/2019/12/1-Nacrt-strategije-pametne-specijalizacije-u-Republici-Srbiji-za-period-od-2020.-do-2027.pdf

country, most with a university degree are concentrated in Belgrade and the Autonomous Province of Vojvodina.
    - The strategy lists the most active and important clusters of Serbia, among which many are from Vojvodina, such as: Vojvodina ICT Cluster (Novi Sad), Vojvodina Organic Agriculture Cluster (Novi Sad), Vojvodina Metal Cluster (Temerin), Tourism Microregion Cluster of the City of Sremska Mitrovica.
- **No direct references, measures related to cross-border cooperation** between Hungary and Serbia were made in the document. However, cross-border cooperation and IPA programmes are mentioned in the context of environmental protection and water treatment in the Danube region.

National Tourism Development Strategy 2030[139] [Hungarian strategic document]

- **Pillars of the Strategy:**
    - A. The Kisfaludy Tourism Development Programme: improving the quality and decreasing the spatial and temporal concentration of the tourism offer;
    - B. Strategic brand communication, targeted brand communication, campaign activity and marketing: the renewal of the country's tourist brand, the construction of the destination brand system, the reassessment of the external marketing activities, and the efficient marketing communication activities;
    - C. Committed professionals, hospitality: strengthening the preparedness and motivation of people employed in the sector of tourism;
    - D. Reliable information, measurable performance: efficient implementation of research-analysis-evaluation tasks, constructing a tourism-related knowledge base;
    - E. Transparent, predictable regulation and promotion: reforming the regulatory and financing environment of the sector (reducing black market, ensuring efficient resource allocation);
    - F. Guidelines and cooperation: the promotion of cooperation between the actors of tourism industry;
    - G. Identity and attachment: supporting national strategy objectives with the set of instruments of tourism;
    - horizontal intervention areas (H):
        - H1. Living-together tourism: the performance of tourism existing together in harmony with local communities and the natural environment;
        - H2. Family friendly tourism: exercising family friendly aspects;
        - H3. Accessible tourism: physical and info-communication accessibility, the development of the direct approach of attractions;
        - H4. Comprehensible tourism: consequent dissemination of information, multilingualism;
        - H5. Digital tourism: the application of digital technologies.
- **The main statements regarding the two Hungarian IPA regions:**

[139] See: https://www.kormany.hu/download/8/19/31000/mtu_kiadvany_EPUB_297x210mm%20-%20preview.pdf

  - None of the tourism development areas of interest affect the regions. In these regions of the country, the aim is always to make the region comprehensible in the destination logic. This can be executed by the cooperation and networking of certain tourism service providers, and by establishing new restaurants, accommodations and attractions, and the development of the existing ones' service offer. These developments are financed by the Modern Cities programme, the resources of the TSDOP and through individual government decisions.
  - In the chapter describing the country's tourism assets, Szeged is mentioned as a significant medical tourism destination of the region.
- **The document does not deal with cross-border relationships.** Serbia is only Hungary's 16th sending market in the field of tourism.

Tourism Development Strategy of the Republic of Serbia for the Period from 2016 to 2025[140] [Serbian strategic document]

- The Strategy barely distinguishes **separate measures for the AP of Vojvodina**, except in these few cases:
  - The list of tourist destinations and their key products (please see a separate table below)
  - The following measures of the Action Plan:
    - A. 1 Update and adoption of revised, development and adoption of new strategic master plans (at the levels of the Autonomous province and local self-governments);
    - A. 4 Tourism development programmes (Preparation and adoption of local and provincial tourism development programmes);
    - In some further measures AP Vojvodina is mentioned as one of the activity leading institutions (e.g. ctions, procedures and the establishment of institutions of importance for the implementation of the Strategy, Measures of direct/indirect support).
- There are very few **proposals, remarks or measures that relate to cross-border cooperation** between Hungary and Serbia. The only two measures where Hungary is directly mentioned are:
  - C. 1 Measures of indirect support;
  - D. 2 Importance of amendments to laws and legislation at lower levels for the implementation of the Strategy measures within the jurisdiction of other ministries;
  - For both items above with the same description: Development of an incentive system for employers through the introduction of payment cards for expenditures on domestic accommodations and food and beverages in order to encourage domestic tourism based on examples of good practice in Hungary.

[140] See: https://mtt.gov.rs/download/3/TOURISM%20DEVELOPMENT%20STRATEGY%20OF%20RS%202016-2025.pdf

Table 16: List of tourism destinations

No.	Tourism destinations	Regional coverage area	Key values (attractions)	Points of development	Key products
1.	Belgrade	- City of Belgrade and the metropolitan area	- Cultural and historical heritage - Entertainment - Gastronomy - Festivals - Danube and Sava rivers - Shopping - Selters Banja - Natural Resources	- Belgrade - urban city centre of the old town - Novi Beograd - business and commercial zone, - Zemun - urban city centre and the embankment of the Danube	- City break - MICE tourism - River tours - Round trips - Events (Beer Fest, BITEF, BELEF, FEST, Belgrade Manifest, Fish Fest ...) - Special Interests - Health tourism - Cultural themed route
2.	Novi Sad, Fruška Gora and Sremski Karlovci	- City of Novi Sad, Sremski Karlovci and Fruška Gora National Park with the surrounding villages and farms	- Novi Sad - Regional Centre (education, economy, etc.) - Danube - Cultural heritage (castles, monasteries) - Natural resources - Farms - NP Fruška Gora - Spa Vrdnik	- Petrovaradin - Sremski Karlovci - Sremska Mitrovica - Šid - Irig - Ruma - Beočin - Inđija	- Events (EXIT, Zmajeve dečije igre, the International Fireworks Festival, Štrand Fest, Tamburica Fest ...) - City break - MICE tourism - River tours - Cultural themed route - Special Interests - Round trips - Health and spa - Golf
3.	Subotica, Palić and Potisje	- Subotica - NP Palić - Bačka Topola - Ludoš - Kanjiža - Bečej - Novi Bečej - Senta - Ada - Titel	- Cultural heritage - Natural resources - Tisza/Tisa, Palić nature park, Ludoš, Topolački Lake - Zobnatica Horse Farm - Small towns and farms	- Subotica - Bačka Topola - Mali Iđoš - Senta - Novi Bečej - Titel - Kanjiža	- Cultural themed route - City break - River tours - Ecotourism - Ethno-tourism - Health, wellness, and spa - Special Interests - Events
9.	Danube region (with four destinations)				
	Upper Danube with Bačka canals	- Sombor - Apatin - Odžaci - Bač - Bački Petrovac - Bačka Palanka	- Cultural heritage - Natural resources (wetlands, flora, and fauna) - Upper Danube Special Nature Reserve - Danube and Bačka canals - Small towns and farms	- Sombor - Apatin - Odžaci - Bač - Bački Petrovac - Bačka Palanka	- River tours - Ecotourism - Ethno-tourism - Rural Tourism - Cultural themed route (cycling, gastronomy etc.) - Special Interests - Events
	Central Danube Region City of Belgrade Novi Sad, Fruška Gora and Sremski Karlovci	- Listed under 1 and 2	- Listed under 1 and 2	- Listed under 1 and 2	- Listed under 1 and 2

No.	Tourism destinations	Regional coverage area	Key values (attractions)	Points of development	Key products
16.	(South) Banat and Vršac;	- South Banat	- Natural resources - Deliblato Sands - Belocrkvanska Lake - Danube - Small towns	- Vršac - Bela Crkva - Pančevo - Kovačica - Zrenjanin - Mokrin	- Rural Tourism - Events - River tours - Wine route - Ecotourism - Ethno-tourism - Special Interests

5.2.3 Strategic documents related to social cohesion

National Disability Program[141] [Hungarian strategic document]

- **There is no statement concerning the two relevant Hungarian regions.**
- There are no statements with **cross-border relevance.**
- The programme determines the following **intervention areas** for the period between 2015 and 2025:
    - Data collection and research supporting the social inclusion of disabled people;
    - Health;
    - Early development, education, training;
    - Employment;
    - Social services and supplies;
    - Complex rehabilitation;
    - Self-determination, independent living;
    - Disabled people and their families;
    - Transportation;
    - Sport, culture, tourism;
    - Groups facing multiple vulnerabilities;
    - Accessibility.

Strategy for the Inclusion of Roma in the Republic of Serbia for the period 2016-2025[142] [Serbian strategic document]

- **Concerning Vojvodina, the following information and recommendations** are included in the document:
    - Related to Education in Roma language a total of 978 students in 39 schools in the 2014-15 academic year at the territory of the AP Vojvodina attended the elective course entitled "Romani language with elements of the Roma culture".
    - A survey from 2015 mapped 583 "substandard" Roma settlements, of which a substantial part was created more than 45 years ago. In the Vojvodina region 65% of the settlements are over 45 years old.

141 See: https://www.parlament.hu/irom40/03586/03586.pdf

142 See: http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/strategija/2016/26/1/reg

  - These settlements are characterised by poor quality of existing housing units, their physical lack of safety and low comfort. In Serbia, about 40% of the buildings in Roma settlements are made of cheap materials, unsuitable for construction. In the region of Vojvodina, this percentage is much higher (63%).
  - The document has few direct references related to the territory of the programme, although institutions from Vojvodina are expected to participate in the implementation, monitoring of the implementation of the measures and data received from the provincial institutions as result indicators; also autonomous provinces and local self-government units shall, in line with their constitutional position and legal competencies, allocate funds from their budgets for the implementation of the Strategy and the accompanying action plan.
- **No references, measures related to cross-border cooperation** between Hungary and Serbia are mentioned.

Strategy for improving the position of persons with disabilities in the Republic of Serbia for the period from 2020 to 2024[143] [Serbian strategic document]

- **The objectives of the document are as follows:**
  - The overall objective of the Strategy is to equalize the opportunity of persons with disabilities to enjoy all civil, political, economic, social and cultural rights, with full respect of their dignity and individual autonomy, to ensure independence, freedom of choice and a full and effective participation in all areas of social life, including community life.
  - Increased social inclusion of disabled persons;
  - Ensure the rights of disabled persons to work and family life on an equal basis and effective protection against discrimination, violence and abuse;
  - Systematic introduction of a disability perspective into policy making, implementation and monitoring.
- **The document has few direct references to the programme region**, although institutions from Vojvodina are expected to participate in the implementation of the measures and data received from the provincial institutions as result indicators.
- **No references, measures related to cross-border cooperation between Hungary and Serbia are mentioned.**

National Youth Strategy for the period from 2015 to 2025[144] [Serbian strategic document]

- **The strategy calls for the improvement of**:
  - Employability and employment of young women and men;
  - Quality and opportunities for acquiring qualifications and development of competencies and innovation of young people;

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143 See: http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/strategija/2020/44/1/reg

144 See: https://www.mos.gov.rs/wp-content/uploads/download-manager-files/nacionalna_strategija_za_mlade0101_cyr.pdf

  - Active participation of young women and men in society;
  - Health and well-being of young women and men;
  - Conditions for the development of youth safety culture;
  - Support to social inclusion of young people at risk of social exclusion;
  - Mobility, scope of international youth cooperation and support for young migrants;
  - System of informing young people and knowledge about young people;
  - Consumption of culture and participation of youth in the creation of cultural programmes.
- The document **has no direct references to the programme region**, although Vojvodina administrative body in charge of youth issues is presented as a participating mechanism of implementation monitoring and evaluation.
- **No references, measures related to cross-border cooperation** between Hungary and Serbia are mentioned.

Strategy for the Development of Culture in the Republic of Serbia from 2020 to 2029[145] [Serbian strategic document]

- **Development directions identified in the document:**
  - improvement of the regulatory framework, institutional capacities, and funding system of culture;
  - development of a system of investment in cultural institutions and protection of cultural heritage;
  - development of production, cultural needs, and equal participation of citizens in cultural life;
  - promotion of international cooperation and the European integration process in the field of culture;
  - digitization in culture.
- **References related to the programme region**:
  - Vojvodina has a high number of cultural institutions. 40% of the "Cultural centres" (mostly founded by local governments during the 1960s and 1970s) of Serbia are in Vojvodina.
  - Through the Provincial Secretariat for Culture AP Vojvodina takes care of the implementation of cultural policy in the province and provides conditions for work of 17 provincial cultural institutions.
  - The city of Novi Sad was selected as the European Capital of Culture for the year 2021 and the Republic of Serbia is actively supporting the project "Novi Sad 2021 - European Capital of Culture".
- **References, measures related to cross-border cooperation** between Hungary and Serbia:
  - Specific objective 4. Promotion of international cooperation and the European integration process in the field of culture targets activities and measures promoting involvement in EU programmes and initiatives (e.g. Creative Europe, European Capital

[145] See: http://www.parlament.gov.rs/upload/archive/files/lat/pdf/283-20%20-%20Lat.pdf

of Culture, IPA funds, EUSDR) and participation in regional cooperation programmes, initiatives and networks.

- A measure under specific objective 1 relates to connecting a Serbian cultural space, promoting networking and initiatives targeting the Serbs living abroad (including Hungary).

5.3 Regional level

At the regional level, two types of strategic documents are relevant: the development plans of the regional authorities and those documents that were elaborated about the cross-border region. Several factors hamper the comprehensive analysis of the regional strategies:

- several regional strategies are not publicly available;
- most of the documents are out of date (mainly due to the end of the current planning period (2014-2020);
- there are different administrative and planning systems on the two sides of the border;
- low level representation of the cross-border issues.

Due to these facts, this brief overview of the regional development plans cannot be complete; however, it highlights the relevance of this topic. Last but not least, it is important because the project proposals for the future CBC Programme should consider existing spatial and urban plans. In this sense, the establishment of a joint online library would be useful for all the current and potential project participants, where they can find the previously elaborated strategies and plans concerning the cross-border region. Not only the development documents but also the regulatory plans (e.g. local level 'urban plans[146]) can be collected and made accessible on such a site.

5.3.1 Regional development plans

One of the most important strategic documents of the affected regions is the spatial plans. On the Hungarian side, spatial planning can be divided into two main stages: regulatory spatial planning (the result of which is the spatial planning plan) and spatial development (the documents of which are the spatial development programme, the spatial development concept and the integrated spatial programme). In the case of both Hungarian counties, those in the former stage were renewed in 2020, while the latter were prepared at the beginning of the currently finishing cycle (typically in 2014). In the case of Vojvodina in Serbia, the same document contains regulatory and development goals, however, the Regional Spatial Plan of the Autonomous Province of Vojvodina was originally valid also until 2020.

Table 17: References for the spatial plans

County	Spatial development	Spatial regulatory
Autonomous Province of Vojvodina	http://www.ekourbapv.vojvodina.gov.rs/документа/просторни-планови/регионални-просторни-план-апв/	
Bács-Kiskun county	https://www.bacskiskun.hu/oldalak/fejlesztesi-dokumentumok	https://www.bacskiskun.hu/oldalak/bacs-kiskun-megye-teruletrendezesi-terve-bkmtrt

146 The local level spatial and urban plans are also essential at the project preparation, but these are out of the scope of this analysis.

County	Spatial development	Spatial regulatory
Csongrád county	http://csongrad-megye.hu/site/index.php/onkormanyzat/teruletfejlesztes	http://csongrad-megye.hu/site/index.php/onkormanyzat/teruletfejlesztes/teruletrendezes/megyei-teruletrendezesi-terv-2020-hatalyos-2020-majus-30-tol

In the case of the Hungarian counties, further sectoral strategies promote well-founded regional developments, which are typically compiled on the basis of national regulations, with a similar structure, but also on the basis of individual regional characteristics typically through the methods of participatory planning. These strategy documents cover cross-border relations only to a limited extent, depending on their thematic scope:

Table 18: Main sectoral strategies of the affected Hungarian counties

	Bács-Kiskun county	Csongrád county
Climate strategy	http://adattar.bacskiskun.hu/klima_strategia/klima_strategia.pdf	http://www.csongrad-megye.hu/site/index.php/mindennapklimanap#platform_strategia
Integration and equal opportunities strategy / programme	https://www.bacskiskun.hu/uploads/files/megyeionkormanyzat/eloterjesztesek/20190215/6-melleklet.pdf	http://www.csongrad-megye.hu/site/index.php/onkormanyzat/palyazatok/csongrad-megyei-felzarkozasi-es-eselyegyenlosegi-program
Employment Pact	http://www.bacskiskunfoglalkoztatas.hu/egyeb/letoltesek	http://www.csongrad-megye.hu/site/index.php/onkormanyzat/palyazatok/csongrad-megyei-gazdasag-es-foglalkoztatasfejlesztesi-egyuttmukodesi-program
Cycling strategy	https://www.bacskiskun.hu/uploads/files/hatarozatok/20190215/6-2019-ii-15-hat-melleklete/190207-Bacs-Kiskun-kerekparos-strategia.pdf https://mobilissimus.hu/projektek/eurovelo-13-bacs-kiskun-megyei-szakaszanak-fejlesztesi-strategiaja	Under preparation
Marketing strategy	https://www.bacskiskun.hu/uploads/files/megyeionkormanyzat/eloterjesztesek/20180928/5-eloterjesztes_melleklet.pdf	No information available

In Vojvodina, similar strategies[147] are available for only a few thematic areas, but the Spatial Purpose Area Spatial Plans (SPASP) is an important document. All the following plans[148] are adopted by the Government of the Autonomous Province of Vojvodina (or by the Government of the Republic of Serbia if part of the territorial scope of a plan falls outside the territory of Vojvodina) and are published in the Official Gazette. The year of their adoption and publication is featured next to each plan. The procedure of elaboration was made based on the conditions gathered from diverse public enterprises and other institutions, and also involving the general public in the process of participatory planning at some stages of the planning process.

Table 19: Spatial Purpose Area Spatial Plans (SPASP) in Vojvodina

Topic	Title of the plan
Protected sites – nature	Spatial Reserve of Nature Stari Begej - Carska Bara (2009) Spatial Reserve of Nature in the Upper Course of Danube (2012) biosphere reserve Fruška Gora National Park (2004, amended in 2019) Spatial Reserve of Nature Obedska bara (2006) Spatial Reserve of Nature Deliblato sands (2006) Spatial Reserve of Nature Kovilj-Petrovaradin Waterlands (2012) Spatial Reserve of Nature Zasavica (2011) Spatial Reserve of Nature Slano Kopovo (2019) Protected natural sites Okanj bara and Rusanda (2018) Spatial Reserve of Nature Titel highlands (2016) Subotica sands and lakes (2016)
Protected sites – culture	Cultural landscape of Sremski Karlovci (2017) Cultural landscape of Bač (2015)
Infrastructure	Infrastructure Corridor E-70 from Belgrade to the border with Croatia (2003, 2014) Infrastructure Corridor E-75 from Belgrade to the border with Hungary (2003, 2014) Road Novi Sad-Ruma-Šabac-Loznica (2011 amended in 2019) Road Subotica-Zrenjanin-Kovin (2011, amended in 2017) Railway Beograd-border of Hungary (2017) Gas pipeline Hungary Bulgaria (2012, amended in 2013 and 2019) Gas pipeline Sremska Mitrovica Šid (2017) Gas pipeline Rivica Jazak (2019) Gas pipeline Tilva Bela Crkva (2017) Crude oil pipeline Sombor Niš (2011)

147 E. g. Tourism Development Programme in the Autonomous Province of Vojvodina (ПОКРАЈИНСКУ СКУПШТИНСКУ ОДЛУКУ О ПРОГРАМУ РАЗВОЈА ТУРИЗМА У АУТОНОМНОЈ ПОКРАЈИНИ ВОЈВОДИНИ ЗА ПЕРИОД 2018-2022. ГОДИНЕ) http://www.spriv.vojvodina.gov.rs/images/dokumenti/opsti/PS Odluka Program razvoja turizma Vojvodine 2018 - 2022.pdf

148 The list was identified by the Ministry of Construction, Transport, and Infrastructure of the Republic of Serbia.

Topic	Title of the plan
	Crude oil storage and pipeline Turija Novi Sad (2015) Electricity line Pančevo-Vršac (2012) Water supply East Srem (2017) Water drainage and supply for agriculture for Srem (2017)
Rivers/waterways	Multifunctional corridor of the Tisza River (2015) Waterway Danube Pan-European Corridor VII (2015)

5.3.2 Cross-border strategies

Strategy papers prepared under the current programme could also serve as guidelines for the next programme. In the relevant parts of the territorial analysis, the major projects implemented with the support of the current programme have been briefly presented, which also included the preparation of strategies and plans. The table below summarizes these documents.

Table 20: Major cross-border sectoral strategies developed under the current programme

Topic	Acronym	Code	Short description / Title
Environment	BABECA	HUSRB / 1601/11/0001	The complex water management development of the area of the Baja-Bezdan Canal / Final study
	WASIDCA	HUSRB/1601/11/0004	Water supply and water-infrastructure development in the boundary catchment areas
	WATER@RISK	HUSRB/1602/11/0057	Improvement of drought and excess water monitoring for supporting water management and mitigation of risks related to extreme weather conditions
Transport	Dream Railway	HUSRB/1601/22/0002	Elaboration of Technical Documentation of Subotica-Baja Railway Line
Heritage and tourism	ColourCoop	HUSRB/1601/31/0005	Hungarian-Serbian Strategy of Cultural and Tourism Development in the Cross-border Region
	Danube Wine Route	HUSRB/1602/31/0209	Creation and Positioning of Danube Wine Route as a Touristic and Cultural Brand in the Cross-Border Region / Joint development and marketing strategy

Topic	Acronym	Code	Short description / Title
	HEALTH TOUR	HUSRB/1602/31/0084	Health Tourism – Good Tourism: Joint Development of Medical and Health Tourism in the HU-SRB Cross-Border Region / Integrated marketing strategy and action plan for health and medical tourism
	IDENTIS	HUSRB/1602/31/0048	Integrated Development of Natural and Cultural Tourism in the Tisa River Region / Joint tourism strategy development document

6 Cross-border obstacles

The importance of taking into consideration those obstacles hindering cross-border interactions is also underlined by the Border Orientation Paper (BOP). As illustrated in the Commission Communication "Boosting Growth and Cohesion in EU Border Regions"[149], there are various types of obstacles to cross-border cooperation. Among the obstacles, legal, administrative, and institutional differences are a major source of bottlenecks. According to the BOP, the programme should seek to address particular obstacles and tap the common potential to facilitate cooperation and an effective programme. Therefore, in this chapter the main obstacles to cross-border cooperation in the context of Hungary and Serbia will be briefly discussed. The obstacles are grouped along by the cohesion topics, thematic fields of (potential) cooperation in the frames of the upcoming CBC programme.

6.1 Obstacles to territorial cohesion

Shortages in water protection[150]: The cross-border area is characterized mostly by agricultural/rural regions with missing/not fully developed environment/water protection facilities which is crucial when tackling environmental and climate change risks.

Climate change and risk prevention: There is a need for consolidating current cooperation through the development of joint policies, protocols, procedures and approaches on risk prevention and rapid response management. Obstacles need to be overcome to achieve a higher degree of protection for the entire border population and to promptly respond many potential emergency cases (such as wildfires, flooding, natural disasters, severe weather anomalies, health emergencies).

Renewable energy[151]: There is a high potential for producing energy from renewable sources, this kind of energy-related investments require important financial means as well as overcoming several regulatory obstacles and are therefore mostly dealt with at national level. What is more, energy transport falls under the competence of the national governments, this challenge cannot be responded regionally.

The cross-border **public transport** infrastructure is in poor condition, which leads to limited cross-border mobility: Cross-border bus lines are considered international services. This is a problem at many border sections, as it complicates cross-border commuting and causes problems when determining fees. The quality and quantity of the interaction between border regions is highly influenced by the fact that the so-called cabotage (picking up and transporting passengers on regular, international services in the same member state) is not permitted in case of cross-border, regular services and urban (local) and suburban destinations, on the basis of the relevant EU regulations (regulation 1073/2009/EC). This provision makes the operation of these cross-border lines loss-making. Hungary's bilateral agreements with the neighbouring countries usually mutually

149 See: https://ec.europa.eu/regional_policy/en/information/publications/communications/2017/boosting-growth-and-cohesion-in-eu-border-regions

150 See: https://mail.google.com/mail/u/0/#inbox/FMfcgxwHMZGczSRVHCnDJLbFfdFdRjWM?projector=1&messagePartId=0.2

151 According to the Border Orientation Paper, page 18

do not allow cabotage, however, some agreements provide an opportunity for the competent authorities to issue a special permit in this case, especially in the case of suburban public transport systems[152].

Establishment of an EGTC:[153]: The BTC EGTC still has difficulties, as it is not possible to establish an EGTC with Serbian members yet. The Law on Local-Self Government , Article 88(2) allows to the local self-governments in Serbia to cooperate with local self-governments of other countries, in the framework of the foreign policy of Republic of Serbia, with respect of territorial unity and legal system of the Republic of Serbia, in compliance with the Constitution and the law. The decision of setting up the cooperation, namely the conclusion of Agreement on Cooperation with local governments of another country shall be passed by the assembly of a local self-government, with the Government consent. The Law on Establishment of Competences of the Autonomous Province of Vojvodina Article 3 allows to the Autonomous Province of Vojvodina to cooperate with relevant territorial communities of other countries in the framework of the foreign policy of Republic of Serbia, with respect of territorial unity and legal system of the Republic of Serbia. The local self-government units as well as the Autonomous Province of Vojvodina can cooperate jointly in the areas of common interest. This cooperation can be established with appropriate territorial communities and/or units of local self-government in other countries. In this regard, local self-governments may participate without limitations in projects of cross-border and transnational cooperation programmes Serbia participates in. Transfer of funds to Serbian applicant as well as transfer to project partners (local authorities and all other types of applicants) is running without any obstacle.

Currently, there is no legal base, national rules, or procedures for participation of the legal entities from the Republic of Serbia in the EGTC. The situation can be handled either by bilateral or multilateral agreement or by internal Serbian law. CESCI put forward a textual proposal for the latter option in 'LEGAL ACCESSIBILITY along the Hungarian borders – Third milestone Legal obstacles of EGTCs'. Conclusions formulated on the basis of the experiences of the EGTCs, in relation with the findings in 2017, but they have not been applied until today. According to the Action plan for Chapter 22 Serbia shall prepare the necessary provisions (e.g. designation of the authorities, the relevant procedures, register and publications) putting in place all requirements mentioned in EU legal framework by 2023.

6.2 Obstacles to economic cohesion

Unpredictable waiting time at border crossing makes daily commuting rather difficult, similarly to the requirements of having work and residence permits.[154] The requirements regarding minimum control set by Regulation 2016/399/EU are in effect when crossing a border. Practising certain

[152] Agreement between the Government of Hungary and the Government the Republic of Serbia on road passenger and goods transport (Act LVIII of 2014 in Hungary): "Article 13 Cabotage is prohibited, except for special authorization of the competent authority of the Contracting Party of the State on whose territory the cabotage is carried out." http://njt.hu/cgi_bin/njt_doc.cgi?docid=172458.317728. More information about the obstacle (in Hungarian):
See more information: https://cescijogi.files.wordpress.com/2016/11/ja_04_jogszabalyileltar.pdf

[153] See: http://legalaccess.cesci-net.eu/wp-content/uploads/2019/03/JOGa3_EGTC_EN_4.5.pdf

[154] See: http://legalaccess.cesci-net.eu/wp-content/uploads/2016/12/ja_06b_finalreport.pdf

alleviations for cross-border commuters is allowed at member state level. For example, point 5.2 of Annex VII of the Schengen Code enables cross-border commuters personally known by border guards to only be checked at random. Though Regulation 1931/2006/EC, determining the rules of local border traffic would provide an opportunity to facilitate border crossings in relation of the neighbouring third countries. The timeframe and predictability of border crossing strongly influence the quality and quantity of cross-border interactions. To develop social and economic relationships, it is particularly important to ensure predictable and possibly smooth border crossing for people residing in the border region.

Low utilisation rate of research results: Weak application of research findings in economic sphere results in low regional competitiveness and employment.

Bringing animals across border is limited to certain border crossings, which is problematic in terms of cross-border equestrian tourism, for example[155].

- Rather strict animal health rules are applied to the cross-border movement of horses both within EU territories and in case of third countries. The *Council Directive 2009/156/EC* is the standard in this regard. A "horse passport" suitable for unique identification is needed for movement across member states, and the importation and exportation of live animals can only be executed on the basis of the *regulation 91/496 EC*, solely through authorised and adequately equipped animal health border posts. In the context of the Hungarian-Serbian border, the vehicles transporting horses are not allowed to cross the border but at Röszke[156].
- Since there is a growing demand for the development of cross-border equestrian tourism programmes[157], a reassessment of the border crossings that are increasingly used for that purpose is recommended, and new animal health border posts should be initiated, or the capacity of old posts should be extended.

6.3 Obstacles to social cohesion

In principle, it is not possible to pay **social security contribution** in more than one country, however, many commuting workers still do it (mainly because of a lack of information), which causes problems, as the Hungarian and the Serbian social security data bases are not coordinated.[158] Regulation 883/2004/EC controls the coordination of social benefits in the European Union. The regulation also prohibits double insurance and the overlapping of benefits and regulates the acceptance of foreign insurance obligation and the export of benefits principle. According to the Hungarian-Serbian social security convention, declared by Act CCXXXIV of 2013, the social security policy between the two

155 See: http://legalaccess.cesci-net.eu/en/final-report/

156 See: https://ec.europa.eu/food/sites/food/files/animals/docs/bcps_contact_hungary.pdf

157 For further information see the Legal Accessibility project, in which a primer research was carried out to identify the obstacles in the Serbian-Hungarian border region, where the issue was mentioned by a stakeholder from the Serbian Hungarian border region. Even though the official state documents do not state explicitly the importance of equestrian tourism for CBC, but it can be highlighted, that the Interreg-IPA CBC Hungary-Serbia 2007-2013 also supported a project in this topic (HUSRB/1203/212/136; Horse-trails - Horses in the Hungarian-Serbian cultural heritage; http://www.horse-trails.hu/index.php/yu/).

158 See: http://legalaccess.cesci-net.eu/wp-content/uploads/2016/12/ja_06b_finalreport.pdf

countries is almost the same as in the EU regulation. Thus, the region can be considered regulated, but in order to ensure services, the development of inter-institutional communication between health service providers and bodies responsible for social security, and accordingly, the assurance of appropriate information for workers concerned are recommended.

Unilateral workforce inflow: Still a considerable gap is noted in salaries between the two sides of the border in favour of Hungary, which generates a substantial but unilateral workforce inflow from AP Vojvodina to the Hungarian counties. Better labour market chances and higher incomes might be driving forces for increased commuting, contributing to the territorial leverage of the border region. This could be further enhanced by the fact that Hungarians are the biggest ethnic group of AP Vojvodina. At the same time, this flow of people results in dramatic labour shortages on the Serbian side which should be balanced.

High school certificates acquired across borders are hard to get accepted.[159]

- When Serbian students apply to a university in Hungary, they need to take their exams again and receive a new high school certificate in Hungary. At the same time, the Serbian language knowledge of cross-border students is acknowledged as an advanced language exam by the Hungarian system, which is a drawback for students in Hungary who are obliged to pass an exam in a foreign language. Foreign citizens study in the Republic of Serbia under the same conditions as the citizens of the Republic of Serbia. When applying for the competition, candidates submit a nostrificated diploma of graduation from high school where they had studied a period of minimum four years. Upon enrolment, candidates are required to submit proof to the higher education institution: that they have health insurance for the school year they are enrolling and that they master the language of study, which is proven by the conviction of the authorized commission. For students coming from Hungary and would like to study in Hungarian in Serbia (it is possible only in few higher educational institutions in Serbia), the knowledge of Hungarian language is automatically acknowledged as their mother tongue. Admissions for undergraduate studies are in Serbian, unless otherwise regulated by the acts of the higher education institution (for example University of Novi Sad Hungarian Language Teacher Training Faculty, Subotica). For master's and doctoral studies, it is possible to take exams in English at most faculties.
- Cross-border students applying to higher educational institutions in Hungary as well as in Serbia is rather extensively regulated, the point calculation and necessary documents of students graduated in foreign educational institutions are described on the relevant websites and in the different higher education admission brochures. It is a common experience that the necessary administrative procedures require a huge amount of time and energy based on the experiences of participants of such recruitment procedures, and the lack of information causes problems in many cases too. *

[159] See: http://legalaccess.cesci-net.eu/en/final-report/

7 Summary of the results

In this chapter the summary of the results of the thematic preparation activities is presented. To reach a final decision on the next programme, it is advisable that the Programming Committee simultaneously takes into consideration both subchapters (7.1 and 7.2). The first subchapter describes the quantifiable results of the stakeholder consultations taking place in 2019 and in 2020 and comprising an online survey and a set of workshops. The second subchapter lists those territorial challenges that are derived from the territorial analysis. This section also links the challenges to the different specific objectives. The two subchapters together form a coherent unit that can be used as the basis for deciding on the next programmes' thematic orientation.

Chapter "7.2 Conclusion of the territorial analysis" gives a structured summary of the results of the analysis. Based on the MA's request, the table "Summarizing table on the identified challenges and their relevant PO-SOs" has been completed with two more columns: "Reference to the territorial analysis" (exact number and title of the given sub-chapter of Chapter 2) and "Potential CBC-response". Before the summarizing table, there is also a short overview of the major conclusions of the different cohesion chapters and a preliminary outline of the potential SOs.

7.1 Conclusion of the stakeholder consultation process

In this subchapter, the different stakeholder activities of the thematic preparation process are summarized. The final results are achieved through a complex set of steps in order to offer a well-rounded image about the stakeholders' view on the regional needs. For easier processing, the collected insights and opinions had been quantified. Based on the results of the online survey and the workshops, a ranking list of the main topics were calculated by applying inverse ranking (where the less frequented topic is awarded by 1 point, the second one with 2 and so on) by each of the four factors:

- assessing the importance of the topics – based on the online survey;
- number of the project ideas related to the topics by each – based on the online survey;
- the results of the Serbian stakeholder workshops;
- the results of the Hungarian stakeholder workshops.

Although, according to the decision of the PC in the autumn of 2019, the activities that took place in the summer and autumn of that year had to be repeated in the beginning of 2020, the amount of information gathered indicates that the results of 2019 should not be entirely ignored (for details see the chapters detailing the online survey and the stakeholder workshops). At the same time, completely merging the results of 2019 and 2020 would have been a mistake either (not least because of the much higher number of survey respondents); consequently a separate brief analysis will follow for the 2019 results, then the 2020 results. At the end of the chapter the aggregated results of 2019 and 2020 are also presented. This way the PC has the opportunity and full authority to decide which results, and to what extent, it takes into consideration when it chooses the thematic scope of the programme. Notwithstanding, weighing all the qualitative information of the stakeholder activities as well as the results of the territorial analysis, we recommend the summarized results of the two rounds for further consideration.

7.1.1 Results of the stakeholder activities in 2019

Before presenting the results, it is necessary to point out that for methodological reasons, it has become necessary to re-rank the data reported in 2019. Below are the changes that explain the current discrepancies with the data provided in the document "Preparation of the next Hungary-Serbia Interreg IPA CBC Programme (2021-2027) / 1st October 2019". The changes were generally caused by a rearrangement of the examined sub-topics and main topics, as a result of which, in agreement with the MA, NA and JS, instead of the 45 subtopics in 2019, only 38 were kept in 2020 and instead of the 13 main topics, 11 main topics were analysed in 2020:

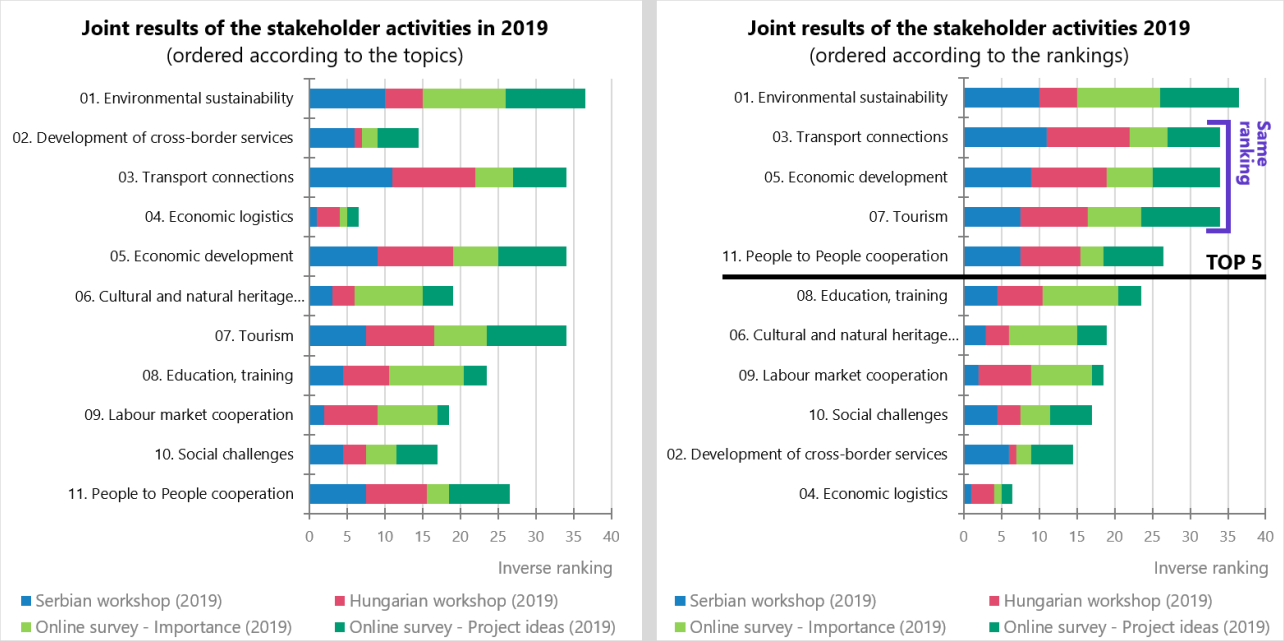
- Changes concerning the main topics:
  - Two topics, namely 01. Environmental sustainability and 02. Environmental cooperation were merged into one.
  - The 13. Institutional cooperation topic was deleted.
- Six sub-topics, originally belonging under the main topic Institutional cooperation, were deleted, namely:
  - Elimination / reduction of significant regulatory differences between countries
  - Institutionalization of socio-economic cooperation
  - Institutionalization of cross-border cooperation
  - Extending the role of EGTCs
  - Interinstitutional cooperation
  - Extending the role of Euroregions
- Due to the merging of the two main environmental topics, the sub-topics belonging to these have been incorporated into the 01. Environmental sustainability main topic.
- In connection with the main topic of 11. People to People cooperation, the evaluation of the regional, cross-border media subtopic was also considered.

As a result of these steps, the values of the four factors may have changed compared to those reported in 2019, in the following way:

- Serbian workshop (2019 – re-ranking): The order was changed according to the order in which the deleted topic (13. Institutional cooperation) and the two merged topics (01. Environmental sustainability, 02. Environmental cooperation) were related to the given topic.
- Hungarian workshop (2019 – re-ranking): The order was changed according to the order in which the deleted topic (13. Institutional cooperation) and the two merged topics (01. Environmental sustainability, 02. Environmental cooperation) were related to the given topic.
- Online survey - Importance (2019 – re-ranking): The original 2019 values were calculated by aggregating the 45 topics into 13 main topics. In the present study, only the values of those topics from the 2019 survey were included that also appeared in the 2020 questionnaire (38 subtopics in 11 main topics).
- Online survey - Project ideas (2019 – re-ranking): The thematic classification of project ideas collected in 2019 was re-performed based on the list of 11 items appearing in the 2020 questionnaire. On the other hand, in 2019 the project ideas were classified into 13 themes, and there was an opportunity for a project idea to overlap several main themes.

According to the aggregated results of the stakeholder activities in 2019 (Serbian and Hungarian workshops, ranking of the assigned importance and the collected project ideas in the online survey), the most important topic in the eyes of the local stakeholders is environmental sustainability, even if on the Hungarian workshop its support was comparably lower. The next three topics had been awarded with exactly the same level of importance: transport connections, economic development and tourism were equally supported by the stakeholders. In the case of these three topics, an inverse relationship can be noticed between the results of the stakeholder workshops and the online surveys: the more popular a topic was in the workshops, the least importance was given to it in the survey and also the least amount of project ideas had been submitted. Consequently, it can be said that, while numerically these three topics were ranked as having the same importance, tourism received the most project ideas (19), while economic development (13) and transport connections (10) inspired comparably fewer project ideas.

Figure 62: Aggregated ranking of the topics in 2019



People to people cooperation is the fifth most important topic, being equally supported at the Serbian and Hungarian workshops and also receiving an above average number of project ideas (11). The topic of education and training did not make it into the top-5 most important topic, however, it is much closer to these than to the next group of three topics which were ranked with medium importance. Economic logistics finished at the bottom of the list; compared to the other topics, the stakeholders clearly expressed that they do no consider this topic as relevant and timely in the cross-border region.

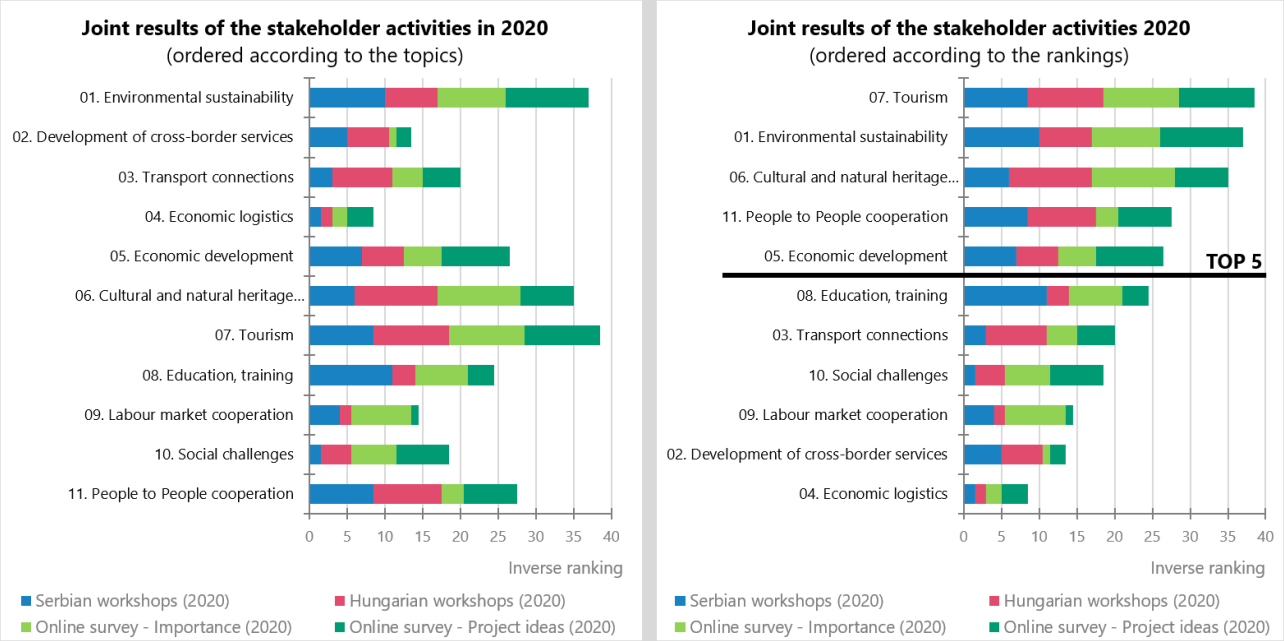
7.1.2 Results of the stakeholder activities in 2020

As presented above, the same exercise with minor changes was repeated in 2020 the result of which is presented below. Since in 2020 two stakeholder workshops were organised in both countries, the results of these were summarized and presented as a single value for the Serbian workshops and another for the Hungarian workshops.

According to the results, in 2020 tourism was assessed as the most important and relevant topic for the cross-border region, which was supported in an equal manner by all four factors. Similarly, environmental sustainability received an across-the-board support. These two topics had been voted in the top 5 in the 2019 assessment too, albeit tourism back than finished at a lower position (4th instead of 1st) and environmental sustainability at a higher one (1st instead of 2nd).

The third most important topic was cultural and natural heritage management, which was especially considered important in both the online survey and the Hungarian workshops. People to people cooperation finished 4th, performing slightly better than in 2019 when it was the 5th most important topic. Albeit in the online survey this topic did not receive much attention, in the workshops and in the project idea section it fared considerably better.

Figure 63: Aggregated ranking of the topics in 2020



Economic development was ranked as the 5th most important topic in 2020, losing some of its importance from 2019 when it was on the 3rd position. However, apart from environmental sustainability and tourism, this is the topic that received the highest number of project ideas indicating that the local actors are thinking in interventions targeting economic development.

Economic logistics again finished at the bottom of the list by far, while development of cross-border services proved to be a topic, which was supported by the stakeholder workshops, but not as much in the online survey, including the amount of project ideas.

7.1.3 Aggregated results of the stakeholder activities' two rounds (2019+2020)

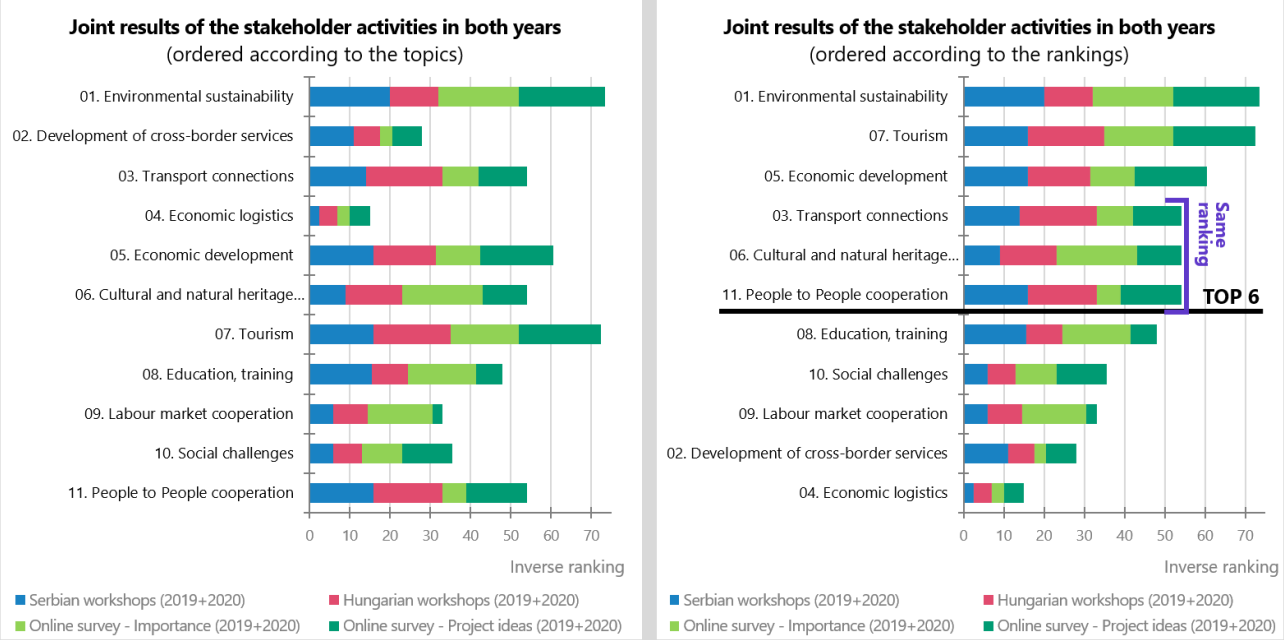
The two rounds of assessment did not result in massive differences; however, it might be advisable to rely on the simultaneous analysis of the results in 2019 and 2020 since this offers the most comprehensive picture on the stakeholders' opinion. The figure below represents the summarized results and ranking of the importance the stakeholders assigned to the different topics in 2019 and 2020.

According to this aggregated ranking, environmental sustainability, tourism, and economic development are the three most important topics with the greatest number of submitted project ideas. It is not too farfetched to expect that if the programme targets these issues that will yield the highest possible efficiency during the implementation as these projects have the highest chance to reflect on the most acute problems of the cross-border region.

Transport connections, cultural and natural heritage management and people-to-people cooperation have the same ranking; thus, these are all incorporated in the top 6. It is important to underline that in the online survey the topic of people-to-people cooperation did not rank too high, while in the workshops it was mentioned by several participants and also reflected on during the voting, that it is indeed a very important topic, which is also shown by the relatively large number of project ideas submitted to this category.

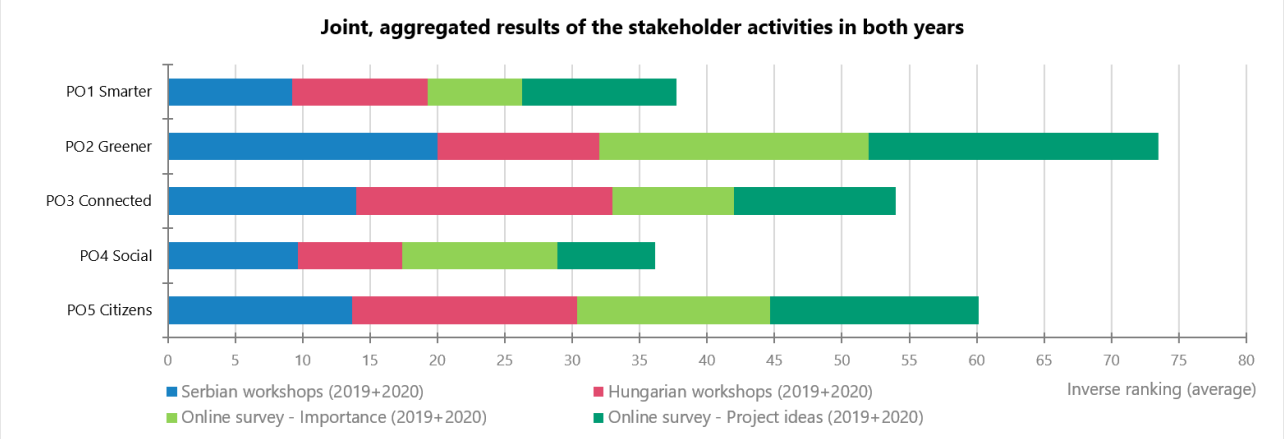
Education and training, social challenges and labour market cooperation are deemed to have medium importance at the moment in the border region from the point of view of the cross-border programme and the tools they can apply for facilitating change. Development of cross-border services and economic logistics were ranked the lowest by the involved stakeholders.

Figure 64: Aggregated ranking of the topics based on the 2019 and 2020 results



According to the methodology described above all the stakeholder activities in both years have been aggregated. The result shows that the PO2 was supported by large the most by the stakeholders, followed by the PO5 and PO3. PO4 gathered the least momentum from the stakeholders.

65. Figure: The joint, aggregated results of the stakeholder activities in both years



7.2 Conclusion of the territorial analysis

The **conclusion of the territorial analysis** is provided regarding the elaboration of the future programme. For the sake of better understanding and clarity a table is attached below (Table 21). It briefly summarises the main challenges and needs to stronger cohesion of the Hungarian-Serbian programme area linked to cohesion types and related topics. Thus, each statement is categorised into one of the eleven main topics (from environmental sustainability to people-to-people cooperation) of cooperation and the given chapter's title is indicated (see 'Reference to the territorial analysis' column). The short descriptions of challenges and needs help the decision making about areas and future logic of intervention by listing the main characteristics of the status and the on-going processes which describe the border region.

Regarding **territorial cohesion** the challenges are connected to the joint characteristics as well as deriving challenges of cross-border landscapes, functional urban areas, and the weak permeability of the border, the latter which makes sustainability and functional integration harder to reach at a cross-border level. The shared cross-border landscapes experience challenges in relation to climate change, agriculture, and environmental issues, which require joint solutions in protection, prevention, mitigation of negative impacts and landscape management measures. Despite huge potentials in intensifying cross-border transport, the flows of goods and people are limited due insufficient hard and soft infrastructure including the number and the capacities of border crossings, and the lack of multimodal public transport links. Territorial cohesion is supported by a potential of functionally interconnected urban network with cross-border catchment areas where joint urban management and development can be carried out.

Due to **economic cohesion** the challenges and needs are concentrated mainly on the still weak utilisation of the positional energy deriving from the Balkan gate function and the location along the Budapest-Belgrade axis in the light of the EU integration of Serbia as well. Based on these energies, the synergies among joint and complementary features considering economic infrastructure, ports, main economic activities, multi-ethnic characteristics, as well as the members of the quadruple helix should be reached. The unfavourable economic structure, the low added-value and the weak management of heritage can be tackled by support for comprehensive development in business relations in the form of e.g. industrial-logistics zones, supplier networks and value chains, tourism destinations emerging within the border region.

Regarding **social cohesion** the biggest challenges are formulated mostly around the weak population retention force of the border region, and the still dot-like, non-institutionalised forms of people to people cooperation and the underutilised existing structures. The similar reasons behind the challenges of aging, outmigration, unemployment, poverty, and in general in easing the border effect in living, income and labour market conditions are of great magnitude to take into account at drafting the future programme. Last but not least, trust-building and the creation of a common sense of belonging in civic society and media are worth not to be underrated when it comes to P2P initiatives in such a diverse part of Europe.

The table's second column contains the reference to the territorial analysis' relevant chapter where the detailed assessment of the given challenge/needs can be found. Also, a potential CBC response column was inserted in the table to briefly indicate the directions of a development. **The identified**

challenges/needs are supplemented by a column of Policy Objectives (POs) and Specific Objectives (SOs). This column assigns potential objectives as an answer to the emerging challenges weakening the cohesion of the cross-border region. These objectives summarized in the table below are referenced with a code system that is described and explained in the table attached in the Annex (8.2 Table of the policy objectives and specific objectives). In some cases, multiple objectives can be linked to a given territorial challenge. In these cases, we sought to list the related objectives in the order of their relevance. Two territorial challenges were identified in the territorial analysis in connection with which a direct relationship with a specific objective cannot be identified, however, the most related objective was also included in these cases in parentheses.

The previously mentioned table in the appendix also shows how many related territorial challenges were identified for each specific objective. The values indicate that several challenges in the region require fundamentally complex solutions (a significant number of *PO5-SOii* connections). Due to its comprehensive nature, in addition to *PO5*, *ISO1: The topic of better cooperation governance* is also a recurring element. At the same time, in line with the above presented brief summary at the cohesion level, it is also possible to outline which SOs came to the forefront according to the more sectoral POs:

- PO1: Regarding *smarter Europe*, the need to select the objectives that would promote the development of the region's economic skills and innovation (primarily *PO1-SOiv, PO1-SOi*) is outlined;
- PO2: For *greener, low-carbon Europe*, the selection of SOs related primarily to climate change, water management and nature conservation would be needed (mainly *PO2-SOiv, PO2-SOvii, PO2-SOv*);
- PO3: Regarding *more connected Europe*, the need for the development of sustainable cross-border transport solutions (bicycles, railways) is clear (*PO3-SOiii*). At the same time, regarding border crossings, the *ISO2-SOi* objective is also absolutely relevant in the region;
- PO4: In the context of *more social Europe*, the specific objectives that respond to the complex challenges of the region in terms of both training and the employment situation *(PO4-ISOb, PO4-ISOa*) came to the fore. To a more moderate extent health cooperation also proved relevant (*PO4-ISOd*).

Table 21: Summarizing table on the identified challenges and their relevant PO-SOs

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
01. Environmental sustainability	2.1.1.1 Landscape structure, soil conditions	Most of the mesoregions in terms of landscape structure are having a cross-border character and are cut by administrative borders hardening their management for environmental sustainability.	Integrated landscape management	PO2-SOvii
01. Environmental sustainability	2.1.1.1 Landscape structure, soil conditions 2.1.1.2 Climate characteristics, the impacts of climate change [...]	Low share of natural areas, unfavourable processes observed on the remaining natural areas (e.g. drying out wetlands). Degradation and transformation of vegetation, spreading of invasive alien species due to the climate change and human activities of the past few decades.	Integrated landscape management Joint preparation to the climate change	PO2-SOiv PO2-SOvii
01. Environmental sustainability	2.1.1.2 Climate characteristics, the impacts of climate change on the atmospheric and hydrological processes	Aridification (e.g. droughts, forest fires, decreasing groundwater level and deteriorating quality) affecting the cross-border natural environment, natural resources, and agricultural, horticultural and forestry production bases. Growing production costs and risks to economic activities heavily relying on climate conditions turning increasingly unfavourable because of above average vulnerability to climate change.	Joint preparation to the climate change Joint disaster management	PO2-SOiv

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
01. Environmental sustainability	2.1.1.3 Hydrographic characteristics	Increasing frequency and intensity of hydrological (e.g. flooding, inland water) and extreme meteorological phenomena (e.g. sudden downpours, storms, hails). Need for better harmonised water management and water protection, further development of implemented projects and results, (inter-)institutional cooperation involving various stakeholders, management bodies. Need for additional support for comprehensive actions covering water management infrastructure, land use (built-up areas, railways, highways), irresponsible cultivation and appropriate agro-technics.	Joint water management and protection Joint preparation to the climate change Joint disaster management	PO2-SOv PO2-SOiv
01. Environmental sustainability	2.1.1.5 Renewable resources, energy potentials	Still low level of utilisation of renewables despite high potentials in solar energy, geothermal energy, and biomass.	Joint preparation for the sustainable and efficient utilisation of renewable energy sources	PO2-SOii
02. Development of cross-border functions	2.1.3.2 Areas of functional cooperation	Large number of urban hinterlands cut by the border. Many settlements, including isolated farmsteads suffer from limited access to urban functions due to the hard border, administrative and legal obstacles. Need for breaking down obstacles to cross-border provision of urban and social services.	Joint development and provision of cross-border urban services within cross-border hinterland and functional urban areas	PO5-SOii
02. Development of cross-border functions	2.1.3.2 Areas of functional cooperation	Need for joint territorially integrated (smart) solutions for a more comprehensive, institutionalised, and strategic urban management and development cooperation based on the small and medium-sized cities as well as on the joint functional urban area of the Szeged-Subotica axis.	Joint smart city initiatives and solutions	PO5-SOii PO5-SOi

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
			Joint development and provision of cross-border urban services within cross-border hinterlands and functional urban areas	
02. Development of cross-border functions	2.1.3.3 Healthcare service cooperation	Despite recent bilateral agreements and innovative ideas in healthcare provision, the implementation and management of cross-border patient migration has not been solved, rather uncontrolled one-sided patient migration to Hungarian inpatient facilities.	Joint actions in reducing legal and technical obstacles to the use of cross-border healthcare services. Knowledge exchange and joint trainings.	PO4-ISOc PO4-ISOd
03. Transport connections	2.1.2.2 The internal and external transport connections of the region	Overburdened border crossings due to increasing and mass flows of transit traffic and migrant workers of transnational relevance. Need for decreasing waiting times at border crossings, for elimination of periodic congestions. At many crossings, the transferring capacity is weaker than required because of the limited opening hours and modes of transport and the long border control.	Joint capacity building and technology development at eliminating infrastructural and technical bottlenecks at border crossings	ISO2-SOi
03. Transport connections	2.1.2.2 The internal and external transport connections of the region	Direct cross-border rail public transport out of operation, lack of cross-border traffic within the border region between the cities of Baja, Sombor, Subotica and Szeged despite potentials and existing railway tracks.	Joint preparation of plans and studies to support new transport infrastructure	PO3-SOiii

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
03. Transport connections	2.1.2.2 The internal and external transport connections of the region	Limited road public transport, no bus connections regarding the eastern border area around Baja and Sombor. Need for a multimodal cross-border public transport integration considering bordering suburban areas and agglomerations of Szeged and Subotica in particular.	Joint cross-border multimodal public transport services	PO3-SOiii
03. Transport connections	2.1.2.2 The internal and external transport connections of the region	There is still high demand for cycle paths especially in relation to connecting the existing ones to form a widespread network of main/backbone (e.g. EuroVelo) as well as comprehensive elements across the border. Need for investments in bicycle services and additional supporting facilities apart from paths and lanes.	Joint creation of new cycle paths as part of networks of cross-border relevance	PO3-SOiii PO2-SOviii
04. Economic logistics	2.2.1.1 Economic infrastructure of industrial and logistics capacities	Potential to creation of a cross-border industrial-logistics zone on the central and eastern part of the programme area. Insufficient capacities on the eastern side of the programme area.	Joint investment promotion, business development services	No direct connection (PO1-SOi)
04. Economic logistics	2.2.1.2 Waterways and ports	Apart from notable potential in growing figures considering cargo there are large differences in terms of all main characteristics of the given ports. In relation of location, total area, cargo types handled, owner, port authority, handling facilities and devices, storage facilities, logistics service providers, maintenance and disposal facilities notable non-harmonised and/or parallel features can be detected, often hardening cross-border cooperation.	Joint coordination of infrastructural capacities and services to create a more sustainable water freight transport having multimodal interconnections across the border	No direct connection (PO3-SOiii)

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
05. Economic development	2.2.2.1 Economic structure, added value	Still untapped potentials despite outstanding agricultural production in the field of crop cultivation, horticulture, and viticulture. Similar challenges on both sides in many cases: climate change and increasing market competition. Room for knowledge-sharing.	Joint creation of short value chains based on regional products Joint measures for sustainable agricultural production	PO1-SOiv PO2-SOiv PO5-SOii
05. Economic development	2.2.2.1 Economic structure, added value	High share of industrial branches in GVA production but lack of emergence of activities with higher added value. Joint (food industry) and complementary (HU: automotive, rubber, plastic and construction material industries, manufacture of machinery and electrical equipment; RS: textile, leather, clothing and metal industries) features in industries.	Smart specialisation across the border Joint Industry 4.0 initiatives	PO1-SOi PO1-SOiv
05. Economic development	2.2.2.1 Economic structure, added value	High share of semi-finished (interim), low-processed products, low level of added value and processing within the border region.	Joint actions in product development Smart specialisation across the border	PO1-SOiii
05. Economic development	2.2.2.1 Economic structure, added value	Extremely low share of non-industrial and non-agricultural activities in the economic structure despite growth potentials lying in digitisation, ICT sector and creative industries. Weak service sector, especially in relation to business, financial, scientific services, information, and communication as one of the major reasons of having a rather mono-structural economy.	Joint RDI activities and technology development	PO1-SOiv

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
05. Economic development	2.2.2.3 R & D & I	Technology-follower region with low share of hi-tech industries and weak positions in knowledge production and transfer. Without increasing the cooperation of economic, scientific, public and civic actors in the frames of the quadruple helix model, knowledge transfer in industry in particular, the border economy is hard to be able to switch to a more knowledge intensive structure.	Smart specialisation across the border Support for cross-border innovation ecosystem	PO1-SOi PO1-SOiv
05. Economic development	2.2.2.4 Economic relations	Moderate gain from the Balkan gateway position in business cooperation. Further untapped possibilities in the exploitation of the intensifying cross-border economic relations. Need for capacity building, skills, and technology development to be integral part of international value chains.	Joint trade development and promotion Joint investment promotion, business development services	PO1-SOiv
06. Heritage related management	2.2.3.2 Cultural heritage	Joint and complementary features of built (tangible) and intellectual (intangible) heritage elements to be managed jointly (e.g. folk art, art nouveau). Further potentials in building on cultural diversity and multi-ethnic background. Still weak level of cooperation and obstacles to harmonised and institutionalised joint management.	Development of joint cross-border cultural tourism routes and products Creation of cross-border destination management	PO5-SOii
06. Heritage related management	2.2.3.1 Natural values	Significant parallels and development opportunities in the study area regarding natural heritage. Need for intensified cooperation in relation to natural values, habitats (mostly wetlands), various natural protection areas to carry out nature protection and management measures to safeguard the diversity of nature on this coherent but divided landscape.	Development of cross-border sustainable tourism, ecotourism routes and products	PO2-SOvii PO5-SOii

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
07. Tourism	2.2.4.1 The significance and performance of tourism in the region	Low intensity of mutual tourist flows and migration.	Development of joint tourism information services Creation of cross-border destination management	PO5-SOii
07. Tourism	2.2.4.1 The significance and performance of tourism in the region	Cross-border tourism is very much concentrated on few locations and attractions.	Creation of cross-border destination management	PO5-SOii
07. Tourism	2.2.4.3 Tourism destinations in the region	Little focus was given to the comprehensive management on destination level across the border. The TDM offices and tourism organizations of the border region have not established cross-border organizations to boost tourism, its obstacle is the different organizational structure.	Creation of cross-border destination management organisations and service	PO5-SOii
08. Education and training	2.3.2.1 Educational systems and relations	Uncoordinated portfolios of universities despite joint and complementary capacities and intensified student migration towards Szeged in particular. Missing major initiatives on tertiary level in establishing or preparing a joint education component, e.g. accredited training, or a joint programme.	Development of joint learning materials and study programmes Support for student and professional migration, exchange programmes	PO4-ISOb
08. Education and training	2.3.2.3 Early school leavers	Similarly high level of early school leaving on both sides.	Joint improvements by trainings and mentorship programmes	PO4-ISOb

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
09. Labour market cooperation	2.3.3.3 Labour flow	Negative effects of border situation (border syndrome) in employment and living conditions. Obstacles to mutually beneficial cross-border commuting within the programme area.	Joint cross-border labour market services Joint actions in eliminating legal obstacles by supporting new mechanisms	PO4-ISOa
09. Labour market cooperation	2.3.3.1 Characteristics of employment 2.3.3.2 Characteristics of unemployment 2.3.3.3 Labour flow	Outmigration of skilled and required workforce to external labour markets. Growing labour shortages, high demand for skilled and qualified professionals.	Joint cross-border labour market services Joint action plans for employment Joint training programmes Smart specialisation	PO4-ISOa PO4-ISOb PO5-SOii
09. Labour market cooperation	2.3.3.2 Characteristics of unemployment	High unemployment among the least qualified jobseekers (with only primary education or less), or unskilled labour.	Joint cross-border labour market services Joint action plans for employment	PO4-ISOa PO5-SOii
10. Social challenges	2.3.1.2 Demography, internal and external migration, ageing	Compared to the European averages ageing of population is significant, especially in some rural areas. Low population retention force. Depopulating rural areas, growing agglomerations of large cities (Szeged, Kecskemét, Novi Sad). No comprehensive, system-wide measures to tackle the complex social challenges of the rural areas, no unitary and joint rural development policies, dot-like local practices.	Development of joint social services in cross-border rural areas Joint activities in silver economy and active ageing	PO5-SOii PO4-ISOd

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
10. Social challenges	2.3.1.1 Social stratification and "internal" migration 2.3.1.2 Demography, internal and external migration, ageing	Weakening social cohesion, regional identity, and sense of belonging due to intense migration from and to the border region.	Joint measures in cross-border community building, strengthening of regional identity	PO5-SOii
10. Social challenges	2.3.1.4 The social integration of Roma communities	Complex and joint challenges in relation to Roma integration and segregation, poverty in rural areas, in farmsteads in particular.	Joint antipoverty programmes including educational, employment and social services	PO4-ISOe
11. People to People cooperation	2.3.2.4 Language and language compatibility	Limited language knowledge and limited reciprocal language use by border people, still underdeveloped implementation of bilingualism e.g. in teaching on secondary level.	Support for mutual bilingualism	PO4-ISOb
11. People to People cooperation	2.3.4.2 Relatives, friends, religious holidays 2.3.4.5 The potential role of local festivals in the cooperation	Need for trust-based relations to be revitalized as basis for any future cooperation including hard infrastructure and major projects. Potentials lying in capitalising from improving interstate relations especially in sports, festivals, and entrepreneurial life.	Joint event organisation, sports, religious and cultural programmes	ISO1-SOii PO5-SOii
11. People to People cooperation	2.3.4.2 Relatives, friends, religious holidays	Untapped potentials in cross-border family ties, meeting points, and migrant communities which could act as a link among border people.	Joint event organisation, sports, religious and cultural programmes	ISO1-SOii
11. People to People cooperation	2.3.4.3 Partner settlements 2.3.4.4 Cross-border structures	P2P cooperation and project implemented with sole focus on physical outputs. No emphasis on the long-term management, maintenance and/or institutionalisation of social relations (e.g. mutual trust, new links). Underutilized existing structures and institutions of cooperation (town twinnig, BTC EGTC, DKMT Euroregion etc.)	Support for the institutionalisation of regional partners Capacity building for already existing cooperation forms	ISO1-SOi ISO1-SOii

Topics	Reference to the territorial analysis	Challenges/Needs	Potential CBC-response	PO-SO codes
	2.3.4.7 Analysis of the previous forms of cooperation from the point of view of P2P relations		including EGTCs, Euroregions and twinning settlements	
11. People to People cooperation	2.3.4.6 Media – local media 2.3.4.7 Analysis of the previous forms of cooperation from the point of view of P2P relations	Need for reinforcing, capacity building for civic society as well as cross-border media. Despite large number of such applicants, still a weak sector.	Joint cross-border media contents, support for content production related to the programme area Support for joint actions of non-governmental, civic organisations	ISO1-SOii
Policy frameworks	5.3 Regional level	It is difficult to find the relevant and valid regional plans and strategies. The establishment of a joint online library of the development and regulatory plans would be useful for the potential project participants, where they can find the previously elaborated strategies and plans concerning the cross-border region.	Establishment of a joint online library of the development and regulatory plans Joint preparation of plans and studies	ISO1-SOi ISO1-SOii

8 Annex

8.1 List of the examined strategic documents

Main topic	Hungarian strategic documents	Relevance	Serbian strategic documents	Relevance
01. Environmental sustainability			06. Strategija održivog urbanog razvoja Republike Srbije do 2030. godine	Yes
01. Environmental sustainability	Nemzeti Vízstratégia (Kvassay Jenő Terv) Vízgyűjtő-gazdálkodási Terv (VGT2)	Yes	09. Strategija upravljanja vodama na teritoriji Republike Srbije do 2034. godine	Yes
01. Environmental sustainability	Nemzeti Fenntartható Fejlődési Keretstratégia	Yes	25. Nacionalna strategija održivog korišćenja prirodnih resursa i dobara	Yes
01. Environmental sustainability	Nemzeti Természetvédelmi Alapterv	Out of date	28. Strategija zaštite prirode Republike Srbije za period od 2019. do 2025. godine	Yes
01. Environmental sustainability	Országos Hulladékgazdálkodási Terv	Out of date	29. Nacionalna strategija za uključivanje Republike Srbije u mehanizam čistog razvoja (upravljanje otpadom, poljoprivreda, šumartsvo)	Out of date
01. Environmental sustainability	Nemzeti Éghajlatváltozási Stratégia	Yes	30. Prvi dvogodišnji ažurirani izveštaj Republike Srbije prema konvenciji UN o promeni klime	Out of date
01. Environmental sustainability			31. Strategija upravljenja otpadom za period 2010. do 2019. godine (nova strategija za period do 2024. je u pripremi	Out of date
01. Environmental sustainability	Nemzeti Tájstratégia	Yes		
01. Environmental sustainability	Nemzeti Környezetvédelmi Program 2015-2020	Out of date		
01. Environmental sustainability	Nemzeti Környezettechnológiai Innovációs Stratégia	Out of date		
03. Transport connections	Magyarország Nemzeti Integrált Határigazgatási Stratégiája	Out of date	08. Strategija integrisanog upravljanja granicom 2017 – 2020	Out of date
03. Transport connections	Nemzeti Közlekedési Infrastruktúra-fejlesztési Stratégia	Yes	18. Strategija razvoja vodnog saobraćaja Republike Srbije od 2015. do 2025. godine	Yes
03. Transport connections	Magyarország Nemzeti Integrált Határigazgatási Stratégiája	Out of date	23. Strategija integrisanog upravljanja granicom	Yes

Main topic	Hungarian strategic documents	Relevance	Serbian strategic documents	Relevance
04. Economic logistics			14. Strategija unapređenja sistema infrastrukture kvaliteta u Republici Srbiji za period 2015 – 2020	Out of date
04. Economic logistics	Nemzeti Energiastratégia 2030	Yes	15. Strategija razvoja energetike Republike Srbije do 2025. godine sa projekcijama do 2030. god.	Yes
04. Economic logistics	Nemzeti Energiastratégia 2030	Yes	21. Strategija razvoja energetike Republike Srbije do 2025. godine sa projekcijama do 2030. godine	Yes
04. Economic logistics	Nemzeti Infokommunikációs Stratégia	Out of date	27. Strategija razvoja informacionog društva u Republici Srbiji do 2020. godine	Out of date
04. Economic logistics			33. Strategija razvoja industrije informacionih tehnologija za period od 2017. do 2020. godine	Out of date
05. Economic development	Irinyi Terv Az innovatív iparfejlesztés irányainak meghatározásáról	Out of date	01. Strategija industrijske politike Republike Srbije od 2021. do 2030. godine	Yes
05. Economic development	Nemzeti Intelligens Szakosodási Stratégia	Out of date	03. Strategija pametne specijalizacije u Republici Srbiji za period od 2020. do 2027. godine	Yes
05. Economic development	Mesterséges Intelligencia Stratégia	Yes	05. Strategija razvoja veštačke inteligencije u Republici Srbiji za period od 2020. do 2025. godine	Not yet approved
05. Economic development			07. Strategija razvoja slobodnih zona u Republici Srbiji za period od 2018. do 2022. godine (sa AP)	Out of date
05. Economic development	Nemzeti KFI Stratégia	Out of date	12. Strategija naučnog i tehnološkog razvoja Republike Srbije za period od 2016. do 2020. godine - istraživanja za inovacije	Yes
05. Economic development	A Magyar Mikro, Kis- és Középvállalkozások Megerősítésének Stratégiája	Yes	16. Strategija za razvoja malih i srednjih preduzeća, preduzetništva i konkurentnosti za period od 2015. do 2020. godine	Out of date
05. Economic development	Nemzeti Vidékstratégia	Out of date	20. Strategija poljoprivrede i ruralnog razvoja Republike Srbije za period 2014 - 2024. godine	Out of date
05. Economic development	Irinyi Terv Az innovatív iparfejlesztés irányainak meghatározásáról	Out of date	26. Strategija i politika razvoja industrije za period od 2011. godine do 2020. godine	Out of date
05. Economic development	Digitális Exportfejlesztési Stratégia	Out of date		

Main topic	Hungarian strategic documents	Relevance	Serbian strategic documents	Relevance
06. Cultural and natural heritage management	A szabadság kultúrája - Magyar kulturális stratégia 2006-2020	Out of date	04. Strategija razvoja kulture u Republici Srbiji od 2020. do 2029. godine	Yes
07. Tourism	Nemzeti Turizmusfejlesztési Stratégia 2030	Yes	10. Strategija razvoja turizma Republike Srbije za period od 2016. do 2025. godine	Yes
08. Education, training	Köznevelés-fejlesztési stratégia	Out of date	24. Strategija razvoja obrazovanja u Srbiji do 2020. godine	Out of date
08. Education, training	Magyarország Digitális Oktatási Stratégiája	Out of date	32. Strategija razvoja digitalnih veština u Republici Srbiji za period od 2020. do 2024. godine	Out of date
10. Social challenges	Országos Fogyatékosságügyi Program	Yes	02. Strategija unapređenje položaja osoba sa invaliditetom u Republici Srbiji od 2020. do 2024. godine	Yes
10. Social challenges	Nemzeti Társadalmi Felzárkózási Stratégia	Out of date	11. Nacionalna strategija za uključivanje Roma i Romkinja u Republici Srbiji za period od 2016. do 2025. godinu	Yes
10. Social challenges			13. Nacionalna strategija za rodnu ravnopravnost za period od 2016. do 2020. godine sa AP za period od 2016. do 2018. godine	Out of date
10. Social challenges	Nemzeti Ifjúsági Stratégia	Yes	17. Nacionalna strategija za mlade za period od 2015. do 2025. godine	Yes
10. Social challenges	Nemzeti Társadalmi Felzárkózási Stratégia[160]	Out of date	22. Strategija prevencije i zaštite od diskriminacije	Out of date
11. People to People cooperation	Sport XXI. Nemzeti Sportstratégia	Out of date	19. Strategija razvoja sporta u Republici Srbiji za period 2014 - 2018. godine (nema novije)	Out of date
Territorial cohesion	Országos Fejlesztési és Területfejlesztési Koncepció	Yes	The Spatial Plan of Republic of Serbia	Yes

[160] The next version of Nemzeti Társadalmi Felzárkózási Stratégia (MNTFS 2030) is currently under preparation.

8.2 Table of the policy objectives and specific objectives

The table below was compiled on the basis of the following regulation proposals and their given articles:

- COM(2018) 375 final REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument: **Article 4 Policy objectives**;
- COM(2018) 372 final REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the European Regional Development Fund and on the Cohesion Fund: **Article 2 Specific objectives for the ERDF and the Cohesion Fund**;
- COM(2018) 374 final REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on specific provisions for the European territorial cooperation goal (Interreg) supported by the European Regional Development Fund and external financing instruments: **Article 14 Interreg-specific objectives.**

Policy objectives	Specific objectives	PO-SO Code	Frequency
PO1: A smarter Europe	i. enhancing research and innovation capacities and the uptake of advanced technologies	PO1-SOi	3
	ii. reaping the benefits of digitisation for citizens, companies, and governments	PO1-SOii	
	iii. enhancing growth and competitiveness of SMEs	PO1-SOiii	1
	iv. developing skills for smart specialisation, industrial transition, and entrepreneurship	PO1-SOiv	5
PO2: A greener, low-carbon Europe	i. promoting energy efficiency measures	PO2-SOi	
	ii. promoting renewable energy	PO2-SOii	1
	iii. developing smart energy systems, grids, and storage at local level	PO2-SOiii	
	iv. promoting climate change adaptation, risk prevention and disaster resilience	PO2-SOiv	4
	v. promoting sustainable water management	PO2-SOv	2
	vi. promoting the transition to a circular economy	PO2-SOvi	
	vii. enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution	PO2-SOvii	3
	viii. promoting sustainable multimodal urban mobility[161]	PO2-SOviii	1
	i. enhancing digital connectivity	PO3-SOi	

[161] In line with the latest version of the draft regulation (December 2019): https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_14958_2019_INIT&from=en

Policy objectives	Specific objectives	PO-SO Code	Frequency
PO3: A more connected Europe	ii. developing a sustainable, climate resilient, intelligent, secure, and intermodal TEN-T	PO3-SOii	
	iii. developing sustainable, climate resilient, intelligent, and intermodal national, regional, and local mobility, including improved access to TEN-T and cross-border mobility	PO3-SOiii	4
PO4: A more social Europe	i. enhancing the effectiveness of labour markets and access to quality employment through developing social innovation and infrastructure	PO4-SOi	
	ii. improving access to inclusive and quality services in education, training, and life-long learning through developing infrastructure	PO4-SOii	
	iii. increasing the socioeconomic integration of marginalised communities, migrants, and disadvantaged groups, through integrated measures including housing and social services	PO4-SOiii	
	iv. ensuring equal access to health care through developing infrastructure, including primary care	PO4-SOiv	
	(a) enhancing the effectiveness of labour markets and improving access to quality employment across borders	*PO4-ISOa*	*3*
	(b) improving access to and the quality of education, training, and lifelong learning across borders with a view to increasing the educational attainment and skills levels thereof as to be recognised across borders	*PO4-ISOb*	*4*
	(c) enhancing the equal and timely access to quality, sustainable and affordable healthcare services across borders	*PO4-ISOc*	*1*
	(d) improving accessibility, effectiveness and resilience of healthcare systems and long-term care services across borders	*PO4-ISOd*	*2*
	(e) promoting social inclusion and tackling poverty, including by enhancing equal opportunities and combating discrimination across borders	*PO4-ISOe*	*1*
PO5: A Europe closer to citizens	i. fostering the integrated social, economic, and environmental development, cultural heritage, and security in urban areas	PO5-SOi	1
	ii. fostering the integrated social, economic, and environmental local development, cultural heritage, and security, including for rural and coastal areas also through community-led local development	PO5-SOii	11

Policy objectives	Specific objectives	PO-SO Code	Frequency
ISO1: A better cooperation governance	i. enhancing the institutional capacity of public authorities, in particular those mandated to manage a specific territory, and of stakeholders	ISO1-SOi	1
	ii. enhancing efficient public administration by promoting legal and administrative cooperation and cooperation between citizens and institutions, in particular, with a view to resolving legal and other obstacles in border regions	ISO1-SOii	4
	c. building up mutual trust, in particular by encouraging people-to-people actions, by enhancing sustainable democracy and by supporting civil society actors and their role in reforming processes and democratic transitions	ISO1-SOc	4
ISO2: A safer and more secure Europe	i. actions in the fields of border crossing management and mobility and migration management, including the protection of migrants	ISO2-SOi	1