



TERRITORIAL ANALYSIS

of the
BULGARIA – SERBIA
CROSS BORDER AREA



INTERREG - IPA
BULGARIA - SERBIA PROGRAMME
2021-2027

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GLOSSARY OF ACRONIMS

BCCP	Border-crossing Check Points
BG	Republic of Bulgaria
BGN	Bulgarian Lev
CBC	Cross-border Cooperation
CPR	Common Provision Regulation
EC	European Commission
ERDF	European Regional Development Fund
EU	European Union
EUR	Euro
EUSDR	EU Strategy for the Danube Region
EUSAIR	EU Strategy for the Adriatic-Ionian Region
FDI	Foreign direct investments
GCI	Global Competitiveness Index
GDP	Gross domestic product
GVA	Gross value added
ICTs	Information and Communication Technologies
INTERREG	European territorial cooperation
IPA	Instrument for Pre-Accession Assistance
ISO	Interreg specific objectives
MA	Managing Authority
MEUR	Million Euro
MRDPW	Ministry of Regional Development and Public Works, Bulgaria
NBS	National Bank of Serbia
NCRD	National Centre for Regional Development, Bulgaria
NEN	National Ecological Network
NSI	National Statistical Institute, Bulgaria
NUTS	European Nomenclature of Territorial Units for Statistics
PM	Fine particulate matter
PO	Policy Objective
RES	Renewable energy sources
RS	Republic of Serbia
SEPA	Serbian Environmental Protection Agency
SWOT	Strengths, Weaknesses, Opportunities and Threats
SMEs	Small and medium-sized enterprises
SO	Specific Objective
SORS	Statistical Office of the Republic of Serbia
TEN-T	Trans-European Transport Network
UNESCO	United Nations Educational, Scientific and Cultural Organization
WI-FI	Wireless Fidelity
WTTC	World Travel & Tourism Council

1. INTRODUCTION

The present Territorial Analysis is jointly developed by the Managing Authority (Ministry of Regional Development and Public Works of the Republic of Bulgaria, Territorial Cooperation Management Directorate) and the National Authority (Ministry of European Integration of the Republic of Serbia, Department for cross-border and transnational cooperation programmes and cooperation with local and regional authorities and organizations for more efficient use of funds).

It represents the first step in elaborating the Interreg-IPA Bulgaria - Serbia Programme 2021-2027, which will be done in accordance with the regulatory framework for the programming process that is set out in the EC legislative package for the programming period 2021-2027.

The information included in the analysis is taken from the respective National statistics institutions of both partnering countries, relevant strategic documents on EU, national and regional level as well as from the existing territorial and situation analyses¹.

Following the experience from the 2007-2013 and 2014-2020 programming periods, the main goal of the method used in the current analysis is to investigate the possibilities for strengthening and tightening the internal and cross-border relationships, as well as enhancing the territorial, economic and social cohesion in the programme area. For this purpose, the conclusions and recommendations should pave the way for a development equally beneficial for the people living on both sides of the border. The analysis of the situation is based on the available information in the analysis of the respective partnering country, covering the following main aspects: territorial (infrastructure, density, capacity of border crossings, settlements, environment and landscapes, energies, etc.), economic (gross domestic product, economic sectors, tourism, etc.) and social (demographic conditions, healthcare and education systems, etc.). In order to get access to the necessary information statistics available at European and national level are used.

The territorial analysis of the Bulgaria-Serbia Cross-border area focuses on the challenges, needs, potentials and common priorities (including economic, social and territorial disparities, investment complementarity, cultural and natural heritage, etc.) of the border regions. It

¹ *Socio-economic analysis of the regions in the Republic of Bulgaria, 2019* - <https://www.eufunds.bg/en/node/2816>
Updated National Concept for Spatial Development of the Republic of Bulgaria – draft version - <http://www.strategy.bg/PublicConsultations/View.aspx?lang=bg-BG&Id=4894>
Spatial development schemes of Bulgarian NUTS II regions – draft versions <https://www.mrrb.bg/bg/proekt-na-regionalni-shemi-za-prostranstveno-razvitiie-na-rajonite-ot-nivo-2/>
Situation Analysis & SWOT of the Bulgaria - Serbia cross-border area (Serbian CBC regions), January 2020

highlights the strengths, weaknesses, opportunities and threats of the programme area, looking at the internal and external factors that influence its development and identifying trends and potentials, thus supporting the choice of an appropriate cooperation strategy. The current document analyses the cross-border development, in the following aspects:

- What are the common challenges, needs, potentials and priorities that would benefit from joint actions?
- Which European objectives are relevant for the programme area and would benefit from joint actions?
- What are the areas for development where Interreg would add value?

Given the importance and relevance of the analysis for the programming process, as well as EU, national, regional and local policy processes, a more strategic approach was adopted, that helped identifying the exact needs, challenges and potentials for the 2021-2027 programming period.

1.1. STRUCTURE OF THE DOCUMENT

The analysis is structured on 5 chapters, including the current introductory chapter. Each chapter is developed on the basis of the available data and information, ensuring, on the one hand, comparability with the previous analysis, allowing to assess the progress of the territory, and, on the other hand, updating the analysis according to the current trends and priorities (e.g. in terms of economic development, smart specialisation, sustainability etc.). In order to ensure alignment with the policy objectives of the post-2020 Cohesion Policy, the different chapters of the analysis follow to some extent the structure of the proposed Policy Objectives².

The main fields analysed, each distributed to a dedicated chapter, include:

- Geographical description of the programme area
- Demographic change
- Economic development
- Social development and Labour market
- Environment and Climate change
- Physical infrastructure and digital connectivity
- Cultural and natural heritage

² *Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down common provisions for seven shared management funds*

The methodological approach allowed to investigate, for each of the chapters the main issues and challenges for the border regions (considering also link with challenges tackled in relevant European strategic documents), the needs related to the identified challenges, as well as the potentials for future development.

The concluding section includes a chapter dedicated to the territorial diagnosis, including an integrated SWOT analysis (summarizing the strengths, weaknesses, opportunities and threats regarding the development in the Programme area) for the Interreg IPA Bulgaria-Serbia programme 2021-2027.

1.2. EU LEVEL VISION AND STRATEGIC FRAMEWORK

The future Interreg-IPA Bulgaria-Serbia programme is being developed in accordance with the regulatory framework for the programming process, set out in the EC legislative package for the programming period 2021-2027, and taking into account all relevant documents expressing the EU vision on territorial cooperation and the development of the Bulgaria-Serbia programme area.

1.2.1. European Legislative Framework

The proposal for a 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 (Common Provision Regulation - CPR), May 2019, is the general regulation guiding the operation of funds in the 2021-2017 period and sets the strategic approach and policy objectives in this sense. The thematic objectives used in 2014–2020 have been simplified to five clear policy objectives (POs) for the post-2020 programming period:

- 1. A smarter Europe - innovative and smart economic transformation;**
- 2. A greener, low-carbon Europe;**
- 3. A more connected Europe - mobility and regional ICT connectivity;**
- 4. A more social Europe - implementing the European Pillar of Social Rights;**
- 5. Europe closer to citizens - sustainable and integrated development of urban, rural and coastal areas through local initiatives.**

Each policy objective is detailed by several specific objectives (SOs), as follows:

1) A smarter Europe - innovative and smart economic transformation

- *SO1.1. Enhancing research and innovation capacities and the uptake of advanced technologies*
- *SO1.2. Reaping the benefits of digitisation for citizens, companies and governments*
- *SO1.3. Enhancing growth and competitiveness of SMEs*
- *SO1.4. Developing skills for smart specialisation, industrial transition and entrepreneurship*

2) A greener, low-carbon Europe

- *SO2.1. Promoting energy efficiency measures*
- *SO2.2. Promoting renewable energy*
- *SO2.3. Developing smart energy systems, grids and storage at local level*
- *SO2.4. Promoting climate change adaptation, risk prevention and disaster resilience*
- *SO2.5. Promoting sustainable water management*
- *SO2.6. Promoting the transition to a circular economy*
- *SO2.7. Enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution*

3) A more connected Europe - mobility and regional ICT connectivity

- *SO3.1. Enhancing digital connectivity*
- *SO3.2. Developing a sustainable, climate resilient, intelligent, secure and intermodal TEN-T*
- *SO3.3. Developing sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility*
- *SO3.4. Promoting sustainable multimodal urban mobility*

4) A more social Europe - implementing the European Pillar of Social Rights

- *SO4.1. Enhancing the effectiveness of labour markets and access to quality employment through developing social innovation and infrastructure*
- *SO4.2. Improving access to inclusive and quality services in education, training and lifelong learning through developing infrastructure*
- *SO4.3. Increasing the socio-economic integration of marginalised communities, migrants and disadvantaged groups, through integrated measures including housing and social services*

- *SO4.4. Ensuring equal access to health care through developing infrastructure, including primary care*

5) *Europe closer to citizens – sustainable and integrated development of urban, rural and coastal areas through local initiatives*

- *Fostering the integrated social, economic and environmental development, cultural heritage and security in urban areas*

Interreg Programmes, including the future Interreg-IPA Bulgaria- Serbia programme, have to contribute to the abovementioned policy objectives, in a mix according to the territorial specificities of their eligible areas.

According to the CPR, due to the specificities of each Fund, specific rules applicable to each Fund and to the European territorial cooperation goal (Interreg) should be laid down in separate Regulations ('Fund-specific Regulations') to complement the provisions of this Regulation. The 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 sets the framework for the programming of the future Interreg-IPA Bulgaria-Serbia. According to the Regulation, the 2021-2027 period will seek to further strengthen cooperation by adapting the architecture of Interreg programmes to take better account of functional areas. Cross-border programmes will be better streamlined in order to concentrate resources on land borders where there is a high degree of cross-border interaction. Maritime cooperation will be reinforced by combining the cross-border and transnational dimension of working across sea basins in new maritime programmes.

Considering the specific features of Interreg programmes, two “Interreg specific objectives” (ISO) are set out:

ISO 1: A better Interreg governance - aiming at strengthening institutional capacity, enhancing legal and administrative cooperation, in particular where linked to implementation of the Border Regions Communication, intensify cooperation between citizens and institutions and the development and coordination of macro-regional and sea-basin strategies. This objective can be supported by the following actions:

- enhancing the institutional capacity of public authorities, in particular those mandated to manage a specific territory, and of stakeholders;
- 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;

- enhancing institutional capacity of public authorities and stakeholders to implement macro-regional strategies and sea-basin strategies.

ISO 2: A safer and more secure Europe - addressing specific external cooperation issues such as safety, security, border crossing management and migration.

In addition to the specific objectives for the ERDF presented above, the ERDF and, where applicable, the external financing instruments of the Union may also contribute to several Interreg - specific objectives under PO 4:

- enhancing the effectiveness of labour markets and improving access to quality employment across borders;
- 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;
- enhancing the equal and timely access to quality, sustainable and affordable healthcare services across borders;
- improving accessibility, effectiveness and resilience of healthcare systems and long-term care services across borders;
- promoting social inclusion and tackling poverty, including by enhancing equal opportunities and combating discrimination across borders.

The Regulation also sets the rules for thematic concentration that should be considered in the design of the programme³:

- 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 programme under components 1, 2 and 3, shall be allocated on a maximum of three of the policy objectives set out in Article [4(1)] of Regulation (EU) [new CPR].
- 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 programme under components 1, 2 and 3, 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'.

³ The 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

1.2.2. EU Strategy for the Danube Region

The European Union Strategy for the Danube Region (EUSDR, 2011) is the second macro-regional strategy of the European Union, taking over the cooperation model developed in the EU Strategy for the Baltic Sea in 2009. The purpose of this strategy is to boost the development of the Danube Region, by creating synergies and supporting coordination between the existing policies and initiatives in the region and approaching common challenges in partnership. The territorial scope of EUSDR covers the water basin of the Danube (parts of 9 EU countries: Germany, Austria, Hungary, Czechia, Slovak Republic, Slovenia, Bulgaria, Romania and Croatia and 5 non-EU countries: Serbia, Bosnia and Herzegovina, Montenegro, Ukraine and Moldova), including the entire Bulgaria-Serbia cross-border territory.

The Danube region is facing several challenges, including environmental threats, untapped shipping potential and lack of road and rail transport connections, insufficient energy connections, uneven socio-economic development, uncoordinated education, research and innovation systems, shortcomings in safety and security. Better coordination and cooperation between the countries and regions is needed to address these challenges.

Through their integrated approach, EU Macro-regional strategies, such as the EUSDR, encourage targeted solutions to challenges within functional areas, which cannot be solved by a single country, region or municipality. Hence, EUSDR is an important tool on the strategic side for identifying the main objectives of the future Interreg-IPA Bulgaria-Serbia programme.

Thus, the proposed programme strategy will seek to exploit the numerous potential synergies under the Danube Strategy Action Plan in its current and revised forms. This is currently defined as a “rolling document“, as revisions are foreseen. After eight years of implementation of the EUSDR, new challenges emerged or became more crucial at European level (e.g. digitalisation, ecology, education, transport, climate change, migration), hence the need to revise the Action Plan.

According to the Consolidated Input Document for the Revision of the EUSDR Action Plan, the major challenges for the next decade, or strategic objectives, for the region, are:

COUNTERACTING CLIMATE CHANGE | Measures to slow down warming and for a better adaptation and increased resilience, securing water supply for people and agriculture, coping with increasing and more frequent natural hazards, preserving and restoring biodiversity etc. need transnational and interregional answers and cooperation across the borders in the whole macro region.

STIMULATING SUSTAINABLE DEVELOPMENT | In line with the manifold challenges associated with climate change, all new development in the macro-region should stimulate Sustainable Development. This is a horizontal issue and the ecological footprint of all activities should be considered.

ESTABLISHING AND ENFORCING KNOWLEDGE SOCIETY, STIMULATING THE ECONOMY AND FIGHT POVERTY | It covers a wide range of issues, embracing education (schools, universities, vocational training, smart specialisation, etc.), R&D, lifelong learning, clustering, innovation, incubator and accelerator centres for start-ups and creative industry. Stimulating the Economy also means reduction of administrative burdens, a quick and efficient implementation of funding tools and an appropriate support for cross-border/transnational networks. Strengthening employment markets, for instance by skilling unemployed persons or by implementing labour market re-integration measures, are equally important. Improving the living conditions in the Danube Region of course also includes fighting Poverty.

IMPROVING MOBILITY AND CONNECTIVITY | In the Danube Region infrastructure often is inefficient, desolate and fragmentary. Efficient cross-border connections for environmentally friendly transport are missing and the present degree of multimodality and interoperability is mainly at substandard levels. This also applies for ICT connectivity, which is, among others, a precondition for advancing digitalization.

ENHANCING DEMOCRACY, SOUND ADMINISTRATION AND STRONG INVOLVEMENT OF CIVIL SOCIETY AND YOUTH | Multi-level governance, strengthening regional and local authorities, participation on planning and decision making, social inclusion and non-discrimination of minorities as well as equal rights and income for men and women, and respect for civil society organisations build the pillars of stable democracies. This also includes a sound and efficient administration and cooperation on the fields of migration, security, prevention of and combat against crime and corruption.

These five strategic objectives of the EUSDR match the principles of the five policy objectives of ERDF and the Interreg-specific objectives mentioned in the previous chapter. Moreover, the revised Action Plan of the EUSDR acknowledges the five policy objectives as equally important for the Danube Region. The four Pillars proposed in the EUSDR to tackle the current challenges of the region also fit to the above-mentioned policy objectives. They express the core fields of action of the Strategy and comprise of 12 thematic areas. These four Pillars are:

- 1) Connecting the Danube Region – smart and sustainable
- 2) Protecting the Environment – clean and green
- 3) Building Prosperity – smart, social and innovative
- 4) Strengthening the Danube Region – effective, sound and safe

The revised EUSDR Action Plan includes 85 actions for the development of the Danube region, ranging from mobility to security, focusing on 12 priority areas:

PILLAR 1 - Connecting the Danube 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

PILLAR 4 - Strengthening the Danube Region:

PA 10 - Institutional Capacity and Cooperation

PA 11 - Security

The Action Plan is based on the contribution of the participant countries via the National Coordinators and includes operational objectives, projects and actions for each priority area (with concrete targets for each priority area). Each priority area is managed by 2 Priority Area Coordinators.

The Action Plan aims to maximize the potential of the Danube region, and to develop coordinated policies and actions in the area of the river basin, reinforcing the commitments of the Europe 2020 strategy towards the smart, sustainable and inclusive growth. The joint actions include building networks, mutual learning, striving for harmonization, aligning policies, building capacities, strengthening civil society and voluntary service, and more. Such actions can be realized with little resources, but with great impact on the Danube region.

In line with the goals of the territorial cooperation objective of the EU, the EU Strategy for the Danube Region and its Action Plan focus on enhancing closer cooperation, by encouraging the increase in the level and quality of network activities, strengthening the existing regional and interregional cooperation but also fostering new cooperation.

The Programme will consider those actions from the Danube Strategy that also contribute to the specific objectives of the cross-border region. The proposed list of strategic actions will be considered when elaborating the Programme strategy.

1.2.3. The European Green Deal

Supported by investments in green technologies, sustainable solutions and new businesses, the Green Deal is the new EU growth strategy. It supports the transition to a fair and prosperous society that responds to the challenges posed by climate change and environmental degradation, improving the quality of life of current and future generations. Nevertheless, the involvement and commitment of the public and of all stakeholders is crucial to its success.

In order for Europe to become the first climate-neutral continent by 2050, the European Green Deal includes a package of measures that should enable European citizens and businesses to benefit from sustainable green transition. Measures accompanied with an initial roadmap of key policies range from reducing emissions to investing in cutting-edge research and innovation and to preserving Europe's natural environment.

According to the European Green Deal, the major challenges for the next decade, translated into policy areas⁴, consist of:

CLEAN ENERGY | Further decarbonising the energy system is critical to reach climate objectives in 2030 and 2050. The production and use of energy across economic sectors account for more than 75% of the EU's greenhouse gas emissions. Energy efficiency must be prioritised. A power sector must be developed that is based largely on renewable sources, complemented by the rapid phasing out of coal and decarbonising gas. At the same time, the EU's energy supply needs to be secure and affordable for consumers and businesses. For this to happen, it is essential to ensure that the European energy market is fully integrated, interconnected and digitalised, while respecting technological neutrality.

⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en#policy-areas

SUSTAINABLE INDUSTRY | Achieving the EU's climate and environmental goals requires a new industrial policy based on the circular economy. Thus, the industries must be helped to modernise and exploit opportunities domestically and globally and the decarbonisation and modernisation of energy-intensive industries such as steel and cement is essential. In this case, the Commission presents a “sustainable products policy”, which will prioritise reducing and reusing materials before recycling them. Minimum requirements will be set to prevent environmentally harmful products from being placed on the EU market.

BUILDING AND RENOVATING | To address the twin challenge of energy efficiency and affordability, the EU and the Member States should engage in a ‘renovation wave’ of public and private buildings. While increasing renovation rates is a challenge, renovation lowers energy bills, and can reduce energy poverty. It can also boost the construction sector and is an opportunity to support SMEs and local jobs. The Commission will launch an open platform bringing together the buildings and construction sector, architects and engineers and local authorities to develop innovative financing possibilities, promote energy efficiency investments in buildings and pool renovation efforts into large blocks to benefit from economies of scale.

SUSTAINABLE MOBILITY | Promoting more sustainable means of transport and improving public transport with stricter standards on pollution by cars. To achieve climate neutrality, a 90% reduction in transport emissions is needed by 2050. Achieving sustainable transport means putting users first and providing them with more affordable, accessible, healthier and cleaner alternatives to their current mobility habits. The Commission will adopt a strategy for sustainable and smart mobility in 2020 that will address this challenge and tackle all emission sources.

BIODIVERSITY | The Commission will present a Biodiversity Strategy by March 2020 and will work towards an ambitious new global framework to protect biodiversity at the UN Biodiversity Conference in October 2020. With the farm to fork strategy, the Commission will work to reduce the use of pesticides and fertilisers in agriculture and will prepare a new EU Forest Strategy for planting new trees and restoring damaged or depleted forests. 96% of Europeans think that we have a responsibility to protect nature and 95% of Europeans consider that looking after nature is essential for tackling climate change.

FROM FARM TO FORK | European farmers and fishermen are key to managing the transition. The Farm to Fork Strategy will strengthen their efforts to tackle climate change, protect the environment and preserve biodiversity. The common agricultural and common fisheries

policies will remain key tools to support these efforts while ensuring a decent living for farmers, fishermen and their families.

ELIMINATING POLLUTION | To protect Europe's citizens and ecosystems, the EU needs to better monitor, report, prevent and remedy pollution from air, water, soil, and consumer products. To ensure a toxic-free environment, the Commission will present a chemicals strategy for sustainability. This will both help to protect citizens and the environment better against hazardous chemicals and encourage innovation for the development of safe and sustainable alternatives. All parties including industry should work together to combine better health and environmental protection and increased global competitiveness.

In order to implement the Green Deal, a substantial contribution of the EU's budget through all programmes directly relevant to the transition will be ensured, as well as other EU funds. In this context, the Interreg-IPA Bulgaria-Serbia 2021-2027 programme could seek contribution to addressing the abovementioned challenges.

1.2.4. The Revised Territorial Agenda

The Territorial Agenda⁵ is a strategic policy document for Europe, its regions and communities, providing a framework for action towards territorial cohesion and a future for all places in Europe, as well as strategic orientations for territorial development and for strengthening the territorial dimension of policies at all governance levels.

The aim of the Territorial Agenda is to contribute to the sustainable and inclusive development of Europe and to the achievement of the Sustainable Development Goals.

The renewed Territorial Agenda is currently being elaborated and it starts from the premise that Europe consists of different types of places (e.g. capital regions, metropolitan areas, small and medium sized towns, rural areas, inner peripheries, peripheral areas, northernmost areas, sparsely populated areas, islands, coastal areas, mountainous areas or areas in economic transition), that show a great variety of development potential and challenges. From the sub-local to the pan-European level, disparities between places and between people as well as environmental risks and pressures increase.

Key challenges and potential for local and regional development in Europe are linked to increasing imbalances and to the need for a transition to sustainable development, including the

⁵ <https://www.territorialagenda.eu/home.html>

reaction to the challenges of climate change. A common feature is the importance of good government and governance. Hence, the renewed Territorial Agenda clustered the main challenges of the European continent in two main categories:

1. The need to act as people and places drift apart – increasing imbalances and inequalities, for example in the fields of:

- Quality of life
- Services of general interest
- Demographic and societal imbalances
- Digitalisation and the 4th industrial revolution
- Employment and economy
- Interdependencies between places
- Global embeddedness

2. The need to respond to the increasing pressure concerning sustainable development and climate change, for example in the fields of:

- Climate change
- Loss of biodiversity and land consumption
- Healthy quality of air, soil and water
- Secure, affordable and sustainable energy
- Just transition
- Circular regional value chains
- Natural, landscape and cultural heritage

1.2.5. National and Subnational Documents of Territorial Development in Bulgaria

National documents of territorial cohesion in Bulgaria are: the Regional Development Act, the National Regional Development strategy of the Republic of Bulgaria 2021-2022, the Regional Spatial Development Schemes 2014-2020 and the National Concept for Spatial Development.

The Regional Development Act regulates the planning, programming, management, resource provision, supervision, control and assessment of the implementation of the strategies, plans and programmes for conducting the state regional development policy. The main goals are: reduction of the differences between the regions as well as the interregional differences in the economic, social and territorial development level; providing conditions for accelerated economic growth and high level of employment and development of territorial cooperation.

The National Regional Development Strategy (NRDS) for the period 2012 – 2022 was developed in accordance with the legislative regulations of the Regional Development Act. The NRDS is the main document that defines the strategic framework of the government policy for achieving balanced and sustainable development of the regions in the country and for overcoming the intra-regional and inter-regional differences/ disparities in the context of pan-European cohesion policy, and achieving smart, sustainable and inclusive growth. It plays an important role for achieving the compliance and mutual complementarity between the objectives and the priorities of the regional development policy and the sectoral policies and strategies that promote balanced development of the regions.

The National Concept for Spatial Development (NCSD) for the period 2013 - 2025 is a medium-term strategic document that provides guidelines for the organization, management and protection of the national territory and water area and creates preconditions for spatial orientation and coordination of sectoral policies. NCSD contain six strategy directions which are:

1. Integration into the European space;
2. Polycentric territorial development;
3. Spatial connectivity and access to services;
4. Preserved natural and cultural heritage;
5. Stimulated development of specific territories;
6. Competitiveness through growth and innovation zones.

Together with the NRDS 2012-2022, NCSD is a key document for integrated planning and sustainable spatial, economic and social development.

The Regional Spatial Development Schemes 2014-2020 form the strategic framework NUTS II level in regional planning under the National Strategy for Regional Development of the Republic of Bulgaria 2012-2022. The Regional Spatial Development Schemes also take over the functions of a strategic framework for the downward levels in the hierarchy of the regional planning - district strategies and Municipal Development Plans. For the period 2021-2027 the schemes shall combine within one document the elements of the Municipal Development Plans and the Integrated Plans for Urban reconstruction and development, which operated for the period 2014-2020 namely Plans for Integrated Development of the cities from the NUTS 4 levels municipalities.

The priorities of the NCS D and the Regional Spatial Development Schemes were identified through wide participatory procedure including roundtables within the Regional Development Councils on NUTS level 2, public consultations through the national public consultations platform, etc.

1.2.6. National and Subnational Documents of Territorial Development in Serbia

Documents which ensure territorial cohesion in Serbia are present at different levels of governance – national, regional and local, as well as for special and urban areas.

The national documents of territorial cohesion in Serbia are the Spatial Plan of the Republic of Serbia adopted by the National Assembly and the Sustainable Urban development Strategy adopted by the Government of Serbia. The national spatial plan which is expiring in 2020 is going to be replaced by the new version for the period from 2021 to 2035. National Sustainable Urban Development Strategy was adopted for the first time in 2019 for the period until 2030.

The National spatial plan is the framework document and other subnational spatial and urban plans should be in line with it: 9 regional spatial plans, more than 80 special purpose area spatial plans, 151 local spatial plans, 30 general urban plans and lots of urban regulation plans. Those documents give the basis for legal construction in order to obtain building permit. Topics of cross-border cooperation and functional urban areas are present in this document.

National urban development strategy contains twenty packages of measures within five strategic directions which are:

1. Urban economy;
2. Urban structures, public spaces and urban culture;
3. Social inclusion and public services;
4. Environment and climate change in urban development;
5. Urban governance.

Priorities identified in the documents of spatial and urban planning and development were discussed in a participatory way in the form of public hearings, workshops and round tables. These documents tend towards integrated approach and the priorities identified in those documents are more easily realised due to the policy support that they represent to implementation of projects and procedures to realize development, protection and construction activities.

1.2.7. Border Orientations

The Border Orientation Paper for the Interreg-IPA CBC cooperation programmes between Bulgaria and respectively: Republic of North Macedonia, Serbia and Turkey sets out the key characteristics of the cross-border territories and outlines suggestions for the programming of the next Interreg-IPA programmes. It does not represent the negotiating position of the EC, but is destined to provide ideas, options and orientations on the thematic focus of the future programmes.

According to the paper, the main orientations for the cross-border area between Bulgaria and the Republic of Serbia that should be considered in the next programming period by the two countries are:

1) Territorial dimension

The proposed geography for the three Interreg-IPA CBC programmes is identical to the set-up of the two previous generations of programmes (2007-2013 and 2014-2020).

2) Orientations linked to challenges

Orientations (for all three IPA CBC programmes managed by Bulgaria) are structured in view of the proposed objectives for Cohesion Policy (PO 1 to 5, cf. Art. 4 (1) of the proposed CPR:

PO1: A smarter Europe by promoting innovative and smart economic transformation

The current framework conditions for innovation and competitiveness of SMEs in the programme areas are challenging and the impact of earlier actions funded by the IPA Cooperation programmes on socio-economic development has been limited. However, there is potential to help the development of Balkan value chains through cross-border partnerships between territories with similar specialisations.

Such projects would complement:

- Projects financed under the respective national/regional programmes supporting innovation and competitiveness in Bulgaria, the Republic of North Macedonia, Serbia and Turkey. Full complementarity between those programmes and the cross-border cooperation programmes need to be ensured;*
- Activities organised by the Joint Research Centre in the framework of macro-regional strategies through targeted scientific support to the Danube Strategy (applicable for Bulgaria-Serbia programme).*

Possible areas of investments may include:

- *The provision of **support to local SMEs** taking into account also the activities under the Enterprise Europe Network to face challenges related to their size, limited resources (such as skills and finance) or industry and market conditions. This could take the form of voucher schemes to purchase cross-border business advice. The use of financial instruments (FIs) may be considered to facilitate the access of SMEs to finance, with generic support in the form of grants only used if justified and avoiding competition with the repayable forms of support / ensuring that it does not crowd out FI support;*
- *The **enhancement of links, networks and clusters** taking into account also the activities funded under the European Cluster Collaboration Platform and the Danube Strategy between businesses active in similar fields;*
- *The promotion of **entrepreneurship education** taking into account also the activities under the European Institute of Innovation and Technology to build the competencies needed for successful start-up and growth of enterprises.*

PO2: A greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaption and risk prevention and management

Energy transition: *Possible areas of investment may include:*

- *Consider investing in **cross border small-scale energy generation from renewable sources and smart energy systems** if investment and distribution conditions are favourable. This could for instance take the shape of simple FIs with a grant component to make them sufficiently attractive and manageable. In that case, complementarity with other sources of funding (national funding, ERDF funding for Bulgarian national/regional operational programmes, IPA national programmes, Regional Efficiency Programme for the Western Balkans etc) should be ensured. For further details on the orientations in relation to the use of FIs please refer to section E – governance);*
- *Where possible, exchange of best practices across borders for developing **energy efficiency** including in SMEs or public buildings.*

Climate change and risk prevention: *Possible areas of investments may include:*

- ***Joint climate change measures** with a strong focus on sustainable and eco-friendly measures (such as green infrastructure (e.g flood plains and reforestation));*
- *Consolidate existing cooperation through the development of joint policies, protocols, procedures and approaches **on risk prevention and rapid response** management to many*

potential emergencies (such as wildfires, flooding, natural disasters, severe weather evacuations, health emergencies).

Circular economy:

Ensure that resources are used in a more sustainable and efficient way, possible areas of investments may include:

- *Joint actions and campaigns to raise awareness and support sustainable consumption practices and behaviour (reuse and recycling of waste) in border regions;*
- *Sharing of best practices to build the capacity of stakeholders involved in the transition to circular economy;*
- *Joint measures to increase resource efficiency and to promote the circular economy in SMEs (if this is their primary objective, otherwise support should be focused under PO 1) such as advisory services, training on business-to-business circular procurement or 'circular' hubs.*

Bio-diversity and pollution:

- *Support actions to **jointly protect nature and biodiversity**. Ensure that actions are more strategic in their approach and that awareness of the local population and visitors is raised on some of the specific challenges of the cross border region when it comes to biodiversity, ecological connectivity, ecological quality of water bodies, invasive plants, and ground and lake water pollution. Maximise the positive contributions that can be made to protecting and developing natural resources (large number of Natura 2000 and Ramsar sites, large mammal habitats, landscape connectivity and green infrastructure networks). In this context, invest also in:*
- *The protection of wetlands (for example the Dragoman Marsh at the border between Bulgaria and Serbia) so that they also function as a natural filter, to remove pollution from the watershed, to reduce flooding and improve the habitat quality for birds and other wildlife (for example in the Sakar hills at the border between Bulgaria and Turkey);*
- *Develop the capacity of environmental authorities and the non-governmental sector to exploit the **common natural heritage** of the region while respecting environmental standards and securing sustainability. Joint capacity-building measures for environmental authorities should be considered.*

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 on both sides of the border (for example in the case of mining waste).*

PO 3: A more connected Europe by enhancing mobility and regional ICT connectivity

IPA CBC programmes can play an important role for coordinated actions aimed at improving cross-border mobility and connectivity, in line with the Connectivity Agenda for the Western Balkan countries and in complement to other funding (ERDF, national IPA, Western Balkans Investment Framework etc). Depending on the funding available and on the basis of a commonly agreed strategic framework, possible investments could include:

Mobility:

- *Targeted support for projects that tackle complex issues and aim at improving cross-border mobility in the programme area. Depending on the financial allocation available this could include: new/improved border crossing points, coach lines, public bicycle and car sharing schemes etc.;*
- *Strategic projects (list of priority connections and planned operations) can be submitted already at the adoption phase of the programme;*
- *Open calls for proposals can be used to select operations that would complement the above pre-identified operations.*

Digital connectivity:

- *Supporting 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);*
- *Improving general conditions for joint e-solutions for instance in education (digital literacy), health care, business support and cultural cooperation.*

PO4: A more social Europe implementing the European Pillar of Social rights

Under PO 4 the programmes should establish a more pro-active interaction and convergence with employment programmes operating in their cooperation areas (Impact Evaluation Report 2007-2013).

Other possible areas of investments include:

- *Support more extensive and structured **learning activities** as a vector for building an employment-boosting factor;*
- *Mechanisms for active inclusion and improving the employability of vulnerable groups.*

PO5: A Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives

*Under PO5 interventions shall be based on an **integrated, place-based strategy**, i.e. strategies targeting a specific geographical area, identify common challenges and objectives based on the local needs, developed with appropriate citizen involvement, and endorsed by the relevant urban, local or other territorial authorities or bodies.*

Possible areas of investments can also refer to policy objectives (1-4) and could concern:

- Investments in **common historical, natural and cultural heritage products and services**. Shared resources can also create new opportunities linked to the exploitation of complementary assets across the borders with a positive impact on employment;*
- Improvement of the attractiveness of the region as a destination for green tourism and cultural heritage;*
- The promotion of local products and quality labels through the establishment of a network of local partners;*
- The preparation of plans and strategies to develop sustainable tourism;*
- Targeted support for environmentally friendly agricultural and forestry practices on both sides of the border;*
- Integrated actions targeting the economic, social, cultural and environmental local development needs of the area;*
- Promote training in vocational and entrepreneurial skills tackling the regional qualified and skilled labour;*
- Enhance interaction and networking between different actors to stimulate economic activities (development strategies).*

Explore the possibility of establishing joint territorial instruments adapted to the characteristics of the border regions, especially with a view to tackling specific situations such as rural areas facing similar challenges on both sides of the border.

Town twinnings, urban-rural linkages, and cooperation within cross-border functional urban areas could provide an opportunity for facilitating local authorities' involvement in the EU acquis alignment process while learning from good practices in EU Member States. On the other hand, town twinning can set a framework for creating people-to-people exchanges and thereby involve citizens, universities and civil society.

It will be important to identify projects of a strategic nature, which will enhance the impact of the programmes on the cross-border regions. In this context, some inspiration could be drawn

from the EUSDR and EUSAIR Strategies in cooperation with all neighbouring CBC programmes and with national and regional programmes.

ISO 2: A safer and more secure Europe

Address capability gaps relating to EU external borders identified by the European Border and Coast Guard Agency and by EU customs.

- *ISO 2 to support EU policies on integrated border management so as to strengthen security of EU external borders and to protect supply chains. In close coordination with IPA special national envelopes, cooperation programmes can support the upscaling and replication of border crossing point's infrastructures that can help the setting-up the Integrated Border Management (IBM) on EU's external borders.*

Integrate people with a migrant background / foster cohesive and inclusive societies regardless of ethnicity, nationality, legal status, gender, sexual orientation, religion and disability.

- *ISO 2 to support small-scale reception, health, education and housing infrastructure in cross-border areas while long-term integration measures to be primarily financed by the cohesion mainstream programmes.*

Manage disaster risk better, by improving assessment, prevention, preparedness and response.

- *For the Cohesion policies, these needs are essentially covered by PO2 at the exception of pandemics and emerging infectious diseases. ISO2 to support EU policies on cross-border health threats.*

Improve protection of all public spaces from terrorist attacks and make cities secure and resilient.

- *For the Cohesion policies, these needs are essentially covered by mainstream programmes. Protect critical infrastructures, the Digital Single Market and the digital life of citizens against malicious cyber activities.*

- *For the Cohesion policies, the needs are essentially covered by mainstream programmes at the exception of ensuring disaster-proofing of infrastructure to support resilience of basic societal functions located in cross-border areas.*

In addition, orientations are made in the context of Cross Border Governance, as follows:

In order to facilitate cooperation and reduce cross-border obstacles in the cross-border, the programmes could:

- Identify key obstacles and unused potential and facilitate the process of finding ways to reduce these obstacles or exploit the potential (e.g. by **funding meetings, experts, pilot projects**, etc.);*
- Reinforce the participation of civil society as much as possible, inviting selected representatives at MC meetings;*
- Continue organising joint information seminars for potential beneficiaries;*
- Establish cooperation at the level of projects;*
- The future programmes are encouraged to explore the possibility of using FIs.*

*Given the limited budget of the concerned programmes and the local constraints, consider **simple FIs with a possible grant component** to make them sufficiently attractive and manageable, e.g. providing a “capital rebate” (forgiving a part of the loan) of X% (or more – e.g. linking the amount with income) of the project costs. Such a combination would be greatly simplified in post-2020 period.*

- **Investments in energy efficiency and support to SMEs** appear to have a high potential for using FIs: the eligible costs are easy to define, the instrument could be relatively simple and implementation could be fast;*
- Support more extensive and structured ways to develop a common vision for the cross-border region, possibly using public participation tools and practices (citizens’ consultations, townhall meetings, competitions, etc);*
- Better coordination with existing macro-regional, national, regional or sectoral strategies (e.g. with an analysis on how to translate these in a cross-border context). Therefore set out a coherent overview of all existing strategies (i.e. have a mapping of the strategies affecting the border area);*
- Establish (or participate to) a strong coordination mechanism with the authorities managing mainstream programmes in the concerned countries, in particular the national and IPA programmes dealing with transport, environment, regional development, ICT and labour issues. Any future regional programme located along the borders should also be closely associated to the CBC programmes. This coordination implies exchange of information and cooperation and should happen at all stages: planning (e.g. designing complementarities), implementation (e.g. building on synergies) and communication (showing the benefits for the citizens and the region). Synergies with the transnational*

programmes (Adriatic and Ionian, Danube and Balkan Mediterranean for 2021-2027) and the CBC Black Sea Basin programme should be sought, avoiding overlapping to the maximum possible extent. These programmes cover a wider area and are therefore more strategic by nature;

- Design the actions based on functional areas - which will depend on the issue at stake - rather than on the administrative scale defining the programme area. Authorities are encouraged to use the different available tools to support functional areas such as the European Grouping of Territorial Cooperation - EGTC -, Euroregions, Integrated Territorial Investments, Community Led Local Development, metropolitan areas, natural parks, and to cooperate with the relevant macro-regional key stakeholders, where appropriate;*
- Put in place mechanisms to **finance small projects** or **people-to-people projects** that make a strong contribution to the social and civil cohesion of the cross-border region. Programmes could focus on measures that will increase citizen's knowledge of each other and build trust. This can be done using the new tool proposed by the Commission (the Small Projects Fund) or via specific calls managed by the Managing Authority itself, focused on people-to-people activities.*

1.3. LATEST CHALLENGES

The COVID-19 outbreak was declared a global pandemic by the World Health Organization on 11 March 2020. The crisis is assessed to be the greatest global challenge since World War Two, as there has not been a nation-wide emergency situation declared since then. The spread of the COVID-19 across countries has prompted many governments to introduce unprecedented measures to contain the pandemic such as businesses being shut down temporarily or widespread restrictions on travel and mobility, and led to increased uncertainty on the financial markets.

By causing a several months of lockdown the COVID-19 health crisis has had significant unfavourable economic and social effects. The economy is contracting and unemployment is rising worldwide as the uncertainty of the situation to follow may lead to slower recovery. The lockdown will severely impact regions where culture and tourism sectors contribute significantly to regional economies. Available data on EU level indicates that economic and social impact resulting from imposed travel restrictions as well as drop in confidence of customers is likely to be the greatest in territories more reliant on tourism and hospitality.

The initial responses to the crisis largely depended on national and regional capacities, which differ to a large extent across states and regions, due to the diverse economic structures and fiscal space.

The state of emergency, declared by the National Assembly of the Republic of Bulgaria on 13 March 2020 was replaced by emergency epidemic situation on 14 May 2020.

The amended Health Act in Bulgaria provides powers for application of further anti-epidemic measures grouped into administrative orders of the Minister of Health, as follows: anti-epidemic measures; introducing checkpoints and relevant restriction measures (where appropriate); quarantine and isolation of people in case of infected people or those in close contact; order concerning work activities and relevant conditions. Restrictions for travel and obligatory quarantine when entering the territory of Bulgaria from abroad are still in force and education and childcare institutions as well as day-centres for elderly and disabled people remain closed (by the end of May 2020). Employers are encouraged to arrange for their staff to work remotely to the greatest possible extent.

The Republic of Serbia⁶ has been lockdown since 15 March due to the COVID-19 outbreak. On 27 March over 67 000 employees were worked from home and 168 manufacturing companies have stopped productions. According to updated in April International Monetary Fund, due to the outbreak, GDP growth is expected to fall to 3% in 2020 and reach up to 7,5% growth in 2021, subject to the post-pandemic global economic recovery. Unemployment is also affected by the negative economic impact of the pandemic. On 7 May, the state of emergency and curfew were lifted.

The European Commission is proposing to harness the full power of the EU budget to mobilise investment and frontload financial support in the crucial first years of recovery. These proposals are based on two pillars. On the one hand, an emergency European Recovery Instrument which will temporarily boost the EU budget to raise additional financing to the EU markets and on the other hand, a reinforced multiannual financial framework for 2021-2027.

The EU's response to COVID-19 focuses on four priorities:

- limiting the spread of the virus
- ensuring the provision of medical equipment
- promoting research for treatments and vaccines

⁶ <https://www.oecd.org/south-east-europe/COVID-19-Crisis-in-Serbia.pdf>

- supporting jobs, businesses and the economy

These priorities were agreed on by EU leaders who regularly meet by video conference to discuss and assess the EU's response to the COVID-19 outbreak.

As part of its emergency support package to tackle the economic impact of the COVID-19 crisis, the EU has put in place a temporary instrument to help workers keep their jobs during the crisis. Member states will be able to request up to €100 billion in loans under favourable terms to help finance sudden and severe increases of national public expenditure in response to the crisis in specific areas.

SURE (Support to mitigate Unemployment Risks in an Emergency) is one of the three safety nets, worth €540 billion, for jobs and workers, businesses and member states, agreed by the Eurogroup and endorsed by EU leaders.

The EU is also helping EU citizens stranded in third countries. EU delegations are working with member states' embassies to coordinate the repatriation of EU citizens.

At the EU-Western Balkans Zagreb summit on 6 May 2020, the EU leaders reaffirmed the EU's commitment to the collaboration in the fight against COVID-19 with the Western Balkans partners (including the Republic of North Macedonia). The EU is mobilising a package of over €3.3 billion to the benefit of the Western Balkans partners to support the health sector, social and economic recovery, and provide macro- as well as micro-financial assistance through the European Investment Bank.

2. TERRITORIAL ANALYSIS

2.1. DESCRIPTION OF THE BORDER AREA

The programme area (Bulgaria – Serbia programme) covers a territory of 43 963 km² and borders Romania (to the North) and the Republic of North Macedonia (to the South). The length of the border between Bulgaria and Serbia is 341 km, 315 of which land border and respectively 26 km along the Timok River. The eligible area of the Programme covers 13 NUTS III regions or equivalents, situated on the border between both partnering countries, including: Bulgarian districts of Vidin, Montana, Vratsa (part of BG31 - Северозападен (Severozapaden) NUTS II region), as well as districts Sofiyska oblast, Pernik and Kyustendil (part of BG41 - Югозападен (Yugozapaden) NUTS II region). The Serbian districts are: Bor, Zaječar, Nišava, Toplica, Pirot, Jablanica and Pčinja.

The eligible programme area in Bulgaria (51,91% of the programme area and 20,56% of the total territory of the country), comprises of 69 municipalities (distributed in 6 NUTS III regions), as follows:

- **District of Vidin:** Belogradchik, Boynitsa, Bregovo, Vidin, Gramada, Dimovo, Kula, Makresh, Novo Selo, Ruzhintsi, Chuprene
- **District of Montana:** Berkovitsa, Boychinovtsi, Brusartsi, Valchedram, Varshets, Georgi Damyanovo, Lom, Medkovets, Montana, Chiprovtsi, Yakimovo
- **District of Vratsa:** Borovan, Byala Slatina, Vratsa, Kozloduy, Krivodol, Mezdra, Mizia, Oryahovo, Roman, Hayredin
- **District of Sofia:** Anton, Bojurishte, Botevgrad, Chavdar, Chelopech, Dolna banya, Dragoman, Elin Pelin, Etropole, Godech, Gorna Malina, Ihtiman, Koprivshitsa, Kostenets, Kostinbrod, Mirkovo, Pirdop, Pravets, Samokov, Slivnitsa, Svoje, Zlatitsa
- **District of Pernik:** Breznik, Zemen, Kovachevtsi, Pernik, Radomir, Tran
- **District of Kyustendil:** Bobovdol, Boboshevo, Dupnitsa, Kocherinovo, Kyustendil, Nevestino, Rila, Sapareva Banya and Trekliano.

The territory on side of the Republic of Serbia comprises of **7 equivalent to NUTS III level districts** (48,09% of the programme area, 12,09% of the country area), consisting of 40 municipalities, as follows:

- **District of Bor:** Bor, Kladovo, Majdanpek, Negotin
- **District of Zaječar:** Boljevac, Zaječar, Knjaževac, Sokobanja

- **District of Nišava:** City of Niš (Municipalities: Pantelej, Medijana, Crveni Krst, Palilula and Niška Banja), Aleksinac, Gadžin Han, Doljevac, Merošina, Ražani, Svrlijig
- **District of Toplica:** Prokuplje, Blace, Žitorađa, Kuršumlija
- **District of Pirot:** Babusnica, Bela Palanka, Dimitrovgrad, Pirot
- **District of Jablanica:** Bojnik, Vlasotince, Lebane, Leskovac, Medveđa, Crna Trava
- **District of Pčinja:** Bosilegrad, Bujanovac, Vladicin Han, Vranje, Preševo, Surdulica, Trgoviste

Map 1: Map of Cross-border region

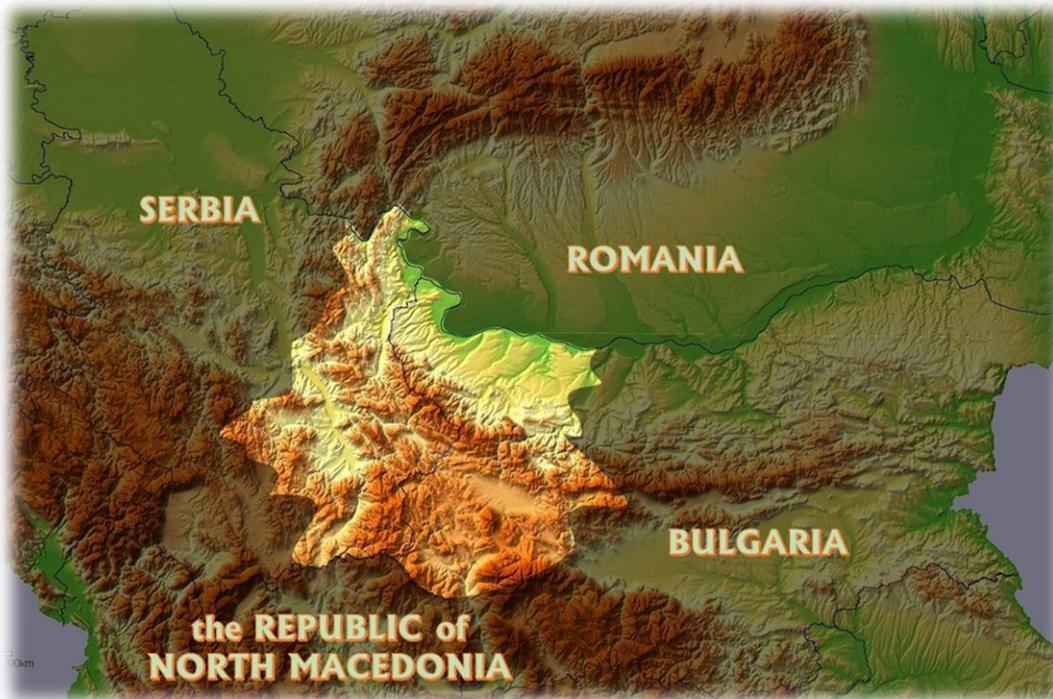


The Programme area settlement structure is characterized by sparse population, small size of settlements and limited number of bigger cities such as Vidin, Montana and Vratsa (on the Bulgarian side) and Pirot, Niš and Dimitrovgrad (on the Serbian side). The total number of settlements is 2 754, distributed in 105 municipalities.

2.2. GEOGRAPHICAL CHARACTERISTICS

The programme area is characterized by diverse landscape (hills and mountains but also wide plains). More than half of the territory is mountainous, as the biggest mountain crossing it is Stara Planina (Balkan mountain range). The border Mountains of Osogovo and Vlahina are also located there, as well as parts of several other mountains: Rila, Verila, Konyavska and Zemenska, (on the Bulgarian side) and Deli Jovan, Rtanj, and Ozren (on Serbian side). Numerous plains and valleys, the most important ones being the Danube plain as well as the Kyustendil, Dupnitsa and Preševo valleys, form a strong natural potential for the development of agriculture, forestry and tourism.

Map 2: Geogrphical characteristics of the Cross-border region



The Danube River which borders the region to the North is a natural resource with strong potential for the region. Other significant rivers that cross the border area are Nišava, Timok, Erma, Struma, Iskar, Ogosta and Lom. The Ogosta and Vlasina artificial lakes as well as numerous smaller ponds complement the rich water resources of the region. Groundwater (both

springs and thermal waters) resources are available across the whole cooperation area. The most significant thermal springs with potential for development of spa tourism are the ones in the towns of Kyustendil, Sapareva Banja, Vurhez, and Rudarzi (on Bulgarian side) as well as Niška Banja, Vranjska Banja, Zvonačka Banja, Gamzigradska banja, Sokobanja, Brestovačka banja, Prolom banja, Lukovska banja, Kuršumlijska banja, Sijarinska banja and Bujanovačka banja (on the Serbian side).

The climate is diverse, from moderate-continental, transitional-continental to mountainous. The soil profile varies as well: from forest soil in the mountain areas to alluvial soils in the river valleys which provides favourable conditions for agriculture (both fruit and vegetable crops). The mountains are generously forested with deciduous and evergreen trees that provide excellent opportunities for tourism, recreational activities and for the wood-processing industries.

Different types of mineral resources are presented in the border region, but those which have some input for the economic development of the region are the deposits of copper and gold near Pirdop and Chelopech (on the Bulgarian side) and Bor and Majdanpek (on the Serbian side). The deposits of brown coal in the region of Pernik, implied the development of heavy industries in the past.

2.3. DEMOGRAPHIC FEATURES

The total population of the co-operation area is 2 007 796 inhabitants. The population structure among the participating units differs.

The population of the Bulgarian part of the co-operation area is 846 013 people, accounting for 12,09% of the country's total population and 42,14% of the total CBC region. The population of the Bulgarian CBC region is decreasing at a much higher rate than the average for the country. The most significant decrease is recorded in Vidin, Vratsa, Kyustendil and Pernik districts. Vidin District is the smallest in population and 84 865 people live in it.

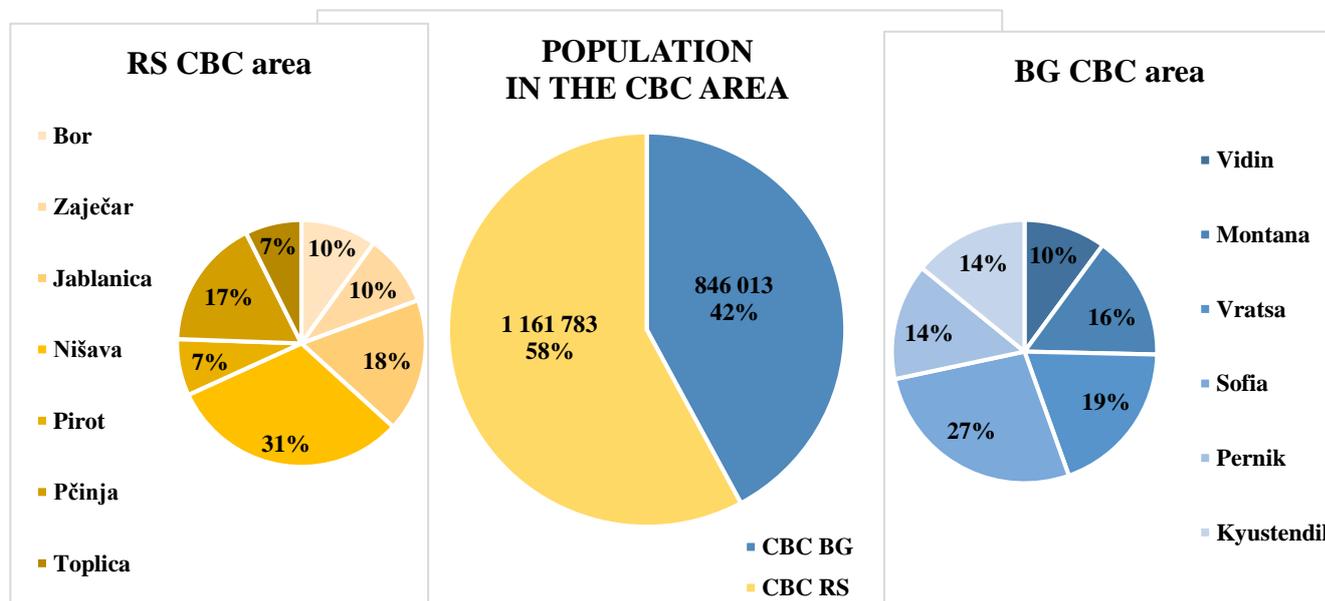
The total population of the Serbian programme area (as of 2017) is 1 161 783 inhabitants accounting for 16,17% of the country's total population and 57,86% of the total CBC region. In Serbia, the region's population decreased between 2011 and 2017 by 4,38% from 1 214 965 to 1 161 783 inhabitants. Pirot District (85 964 people) is the smallest in population on Serbian side and second one (after Vidin) in the CBC region.

Table 1: Population by districts

Administrative unit	Population	Share	
Vidin	84 865	10,03%	
Montana	129 637	15,32%	
Vratsa	162 549	19,21%	
Sofia	229 041	27,07%	
Pernik	120 880	14,29%	
Kyustendil	119 041	14,07%	
BG CBC area	846 013	100,00%	12,09%
Total Bulgaria	7 000 039		100,00%
Bor	114 816	9,88%	
Zaječar	109 634	9,44%	
Jablanica	203 254	17,50%	
Nišava	364 157	31,34%	
Pirot	85 964	7,40%	
Pčinja	198 671	17,10%	
Toplica	85 287	7,34%	
RS CBC area	1 161 783	100,00%	16,17%
Total Serbia	7 186 862		100,00%

Source: National Statistic Institute (NSI) and Statistical Office of the Republic of Serbia (SORS)

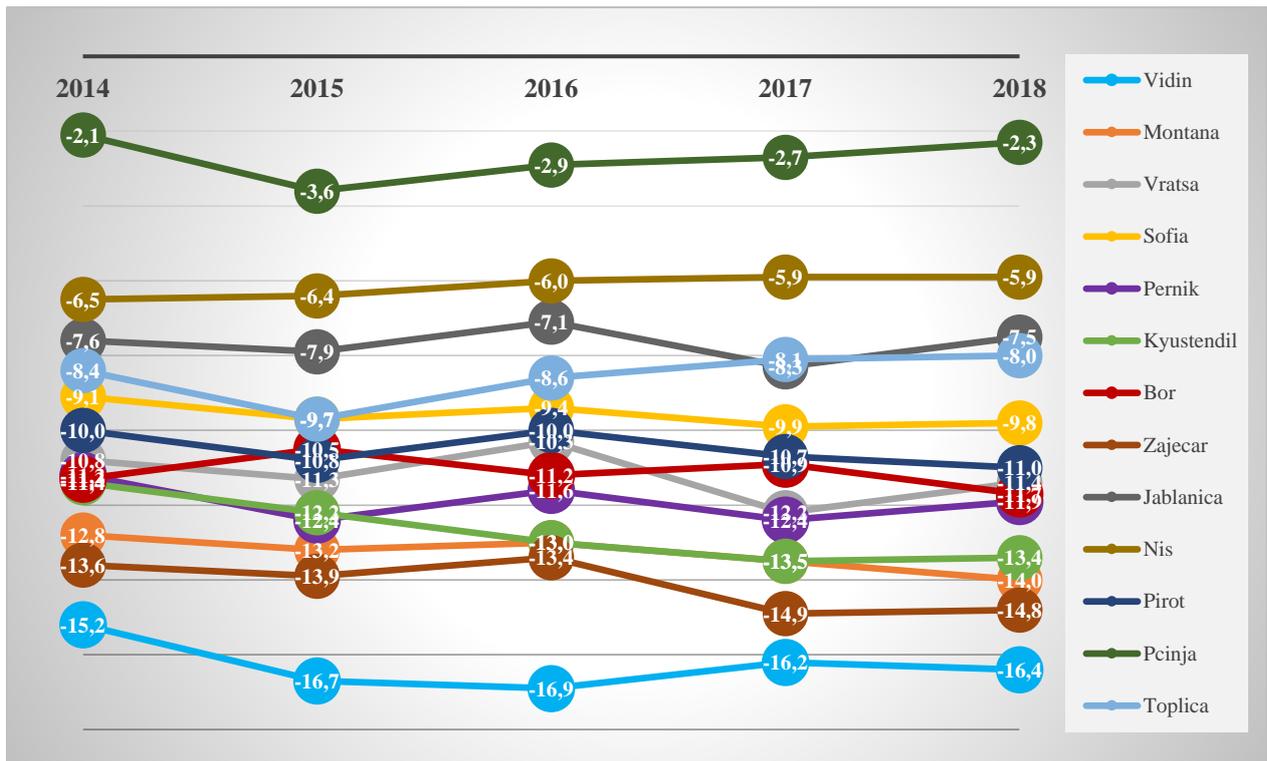
Figure 1: Population in the CBC area



The demographic potential and tendencies of the co-operation area is similar for both sides. The region is characterized by a negative *natural growth rate*.

The population natural growth rate in all Bulgarian districts is negative and the most significant decrease of population is recorded in Vidin (-13,8‰) and Kyustendil (-13.4 ‰).

Figure 2: Natural Growth Rate (%)



The demographic situation and development of the Serbian border area is characterized by a continuous tendency of decreasing birth rates and aging population, which coupled with significant outer migration, leads to a general trend of depopulation.

The population of the Bulgarian side of the co-operation area is *ageing* over the last years following the national trend. As a result, human potential for the economic development especially in rural areas of the Bulgarian side is decreasing since the working-age population accounts for less than two thirds. The share of persons aged 65 and over is highest in the district of Vidin (29,6%) and in a municipal aspect – in the municipalities of Boinitsa (54,1%), Makresh (46,9%), Georgi Damyanovo (45,0%) and Gramada (43,6%). Only in the municipality of Kozloduy this share is below the national average (16,3%).

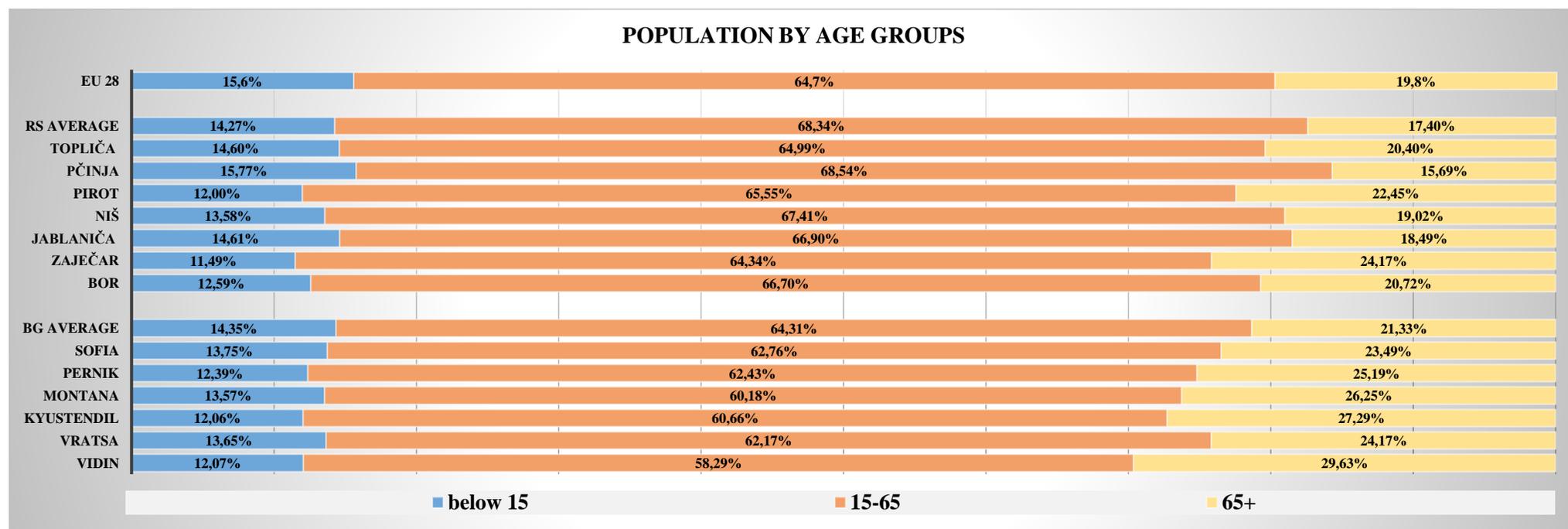
The Serbian side of the co-operation area also faces ageing of the population in the last years. The population within the 0-14 age range is below the country's average while the share of 65+ is above country's average. The only exception is accounted for Pčinja district where the working-age population share is also the highest in comparison to the rest of the districts.

Table 2: Population by districts

Age	Vidin	Vratsa	Kyustendil	Montana	Pernik	Sofia	BG average	Bor	Zaječar	Jablaniča	Nišava	Pirot	Pčinja	Topliča	RS average
below 15	10 246	22 195	14 351	17 586	14 975	31 495	1 004 845	15 731	13 785	31 601	51 090	11 097	25 086	13 400	1 025 278
15-65	49 471	10 1061	72 208	78 018	75 461	143 749	4 502 075	83 367	77 189	144 703	253 666	60 619	109 039	59 632	4 911 268
65+	25 148	39 293	32 482	34 033	30 444	53 797	1 493 119	25 894	28 993	40 000	71 563	20 763	24 956	18 722	1 250 316
Total	84 865	162 549	119 041	129 637	120 880	229 041	7 000 039	124 992	119 967	216 304	376 319	92 479	159 081	91 754	7 186 862

Source: NSI and SORS

Figure 3: Population by age groups



The average *population density* of the Bulgarian side of the co-operation area (37,07 inhabitants per km²) is lower than the national one (63,9 inhabitants per km²) and varies significantly at municipal level. In 10 municipalities (located in the districts Pernik – 2, Kyustendil – 3, Vidin – 4 and Montana – 1) the population density is even below 20,0 inhabitants per km² and there is a risk of depopulation of the settlements in these municipalities.

The population density in the Serbian border area is 54,95 inhabitants per km² which is lower than the national average (81,34 inhabitants/km²), with highest values in the eastern district of Nišava (133,49 inhabitants per km²).

The average population density of the total BG-RS CBC region is 45,67 inhabitants per km² being far below the EU-28 average, which is 117,7 inhabitants per km².

Table 3: Administrative units by (km²)

Administrative unit	Area (km ²)	Population density (per km ²)
Vidin	3 033	27,98
Montana	3 636	35,66
Vratsa	3 620	44,91
Sofia	7 059	32,45
Pernik	2 390	50,57
Kyustendil	3 084	38,60
BG CBC area	22 822	37,07
Total / average Bulgaria	110 994	63,07
Bor	3 507	32,74
Zaječar	3 624	30,25
Jablanica	2 770	73,38
Nišava	2 728	133,49
Pirot	2 761	31,14
Pčinja	3 520	56,44
Toplica	2 231	38,23
RS CBC area	21 141	54,95
Total / average Serbia	88 361	81,34

Source: NSI and SORS

On national level the Bulgarian ethnic group comprises 6 655 210, or 83,94% of the persons who voluntarily declared their ethnic self-determination during the 2001 census. The distribution of persons from different ethnic groups by districts shows that the whole CBC region the Bulgarian ethnic group prevails strongly (Pernik - 97,2%; Kyustendil - 93,9%; Sofia - 92,8%; Vratsa - 92,0% and Vidin - 91,1%). In general the share of the Bulgarian population is higher than the national average. The Turkish ethnic community (which traditionally is the second largest in the country) has a very low relative share (only 0,29%) in the CBC region.

Regarding the Roma ethnic group (third largest one at national level) - its share in the co-operation area takes the second place.

Table 4: Population by national identity of citizens in Bulgaria

Administrative unit	Total	Bulgarians	Turks	Roma	Russians	Vlahs	Other	Total minorities	Share of minorities
Bulgaria	7 928 901	6 655 210	746 664	370 908	15 595	10 566	129 958	1 273 691	16,06%
Vidin	130 074	118 543	139	9 786	189	155	1 262	11 531	8,86%
Montana	182 258	157 507	235	22 784	272	19	1 441	24 751	13,58%
Vratsa	243 036	223 692	2 000	14 899	333	34	2 078	19 344	7,96%
Sofia	273 240	253 536	654	16 748	301	26	1 975	19 704	7,21%
Pernik	149 832	145 642	108	3 035	224	5	818	4 190	2,80%
Kyustendil	162 534	152 644	146	8 294	160	5	1 285	9 890	6,08%
BG CBC region	1 140 974	1 051 564	3 282	75 546	1 479	244	8 859	89 410	7,84%
Share from CBC total	100,00%	92,16%	0,29%	6,62%	0,13%	0,02%	0,78%		

Source: NSI

Table 5: Population by national identity of citizens in Serbia

Administrative unit	Total	Serbian	Albanians	Bulgarians	Vlahs	Roma	Total minorities	share of minorities
Serbia	7 186 862	6 979 576	5809	18 543	35 330	147 604	207 286	2,88%
Bor	114 816	98 958	152	149	13 313	2 244	15 858	13,81%
Zaječar	109 634	101 039	76	223	6 254	2 042	8 595	7,84%
Jablanica	203 254	191 159	548	107	4	11 436	12 095	5,95%
Nišava	364 157	351 510	118	991	39	11 499	12 647	3,47%
Pirot	85 964	75 034	21	6 602	1	4 306	10 930	12,71%
Pčinja	198 671	176 873	680	7 287	5	13 826	21 798	10,97%
Toplica	85 287	81 308	18	14	2	3945	3 979	4,67%
RS CBC region	1 161 783	1 075 881	1 613	15 373	19 618	49 298	85 902	7,39%
Share from CBC total	100,00%	92,61%	0,14%	1,32%	1,69%	4,24%		

Source: SORS

The border area is characterised by ethnical and cultural diversity. Ethnic Serbs form the core part of the population. There is a Bulgarian minority of 15 373 in the Serbian part of the border

area, accounting for 1,32% of the eligible border area population, mostly concentrated in the municipalities of Bosilegrad (71,82% of the population) and Dimitrovgrad (53%). There is also a significant Albanian minority of 58 thousand people (this information is from the census from 2002, it seems, according to census from 2011, that Albanian minority was boycotting the census), mostly located in Preševo, Bujanovac and Medvedja municipalities. There is a Vlah ethnic group 19 618 mostly living in the area of Bor, Boljevac, Negotin and Zaječar municipalities. Despite the different minority groups with a permanent residence in the region/city, so far no significant ethnic conflicts are observed in the region.

2.4. ECONOMIC DEVELOPMENT

Economic development is a multi-layered process influencing the economic growth, the output of the innovation and business sectors, the labour productivity growth, the improving of the standard of living of the population of countries with sustainable growth from a low-income economy to a modern, highly profitable economy. Economic development and the discrepancies between and within regions are assessed with the help of several main indicators.

The current analysis of territorial differences in terms of gross domestic product (GDP) was made on the basis of comparisons of the following indicators:

- Gross domestic product by territorial units for statistical purposes;
- Gross domestic product per capita;
- Gross value added (GVA).

A common characteristic of the cross-border regions is their relatively low economic development, mainly represented by the trade and service sector, being clearly underdeveloped, compared to the rest of the partnering countries' regions. According to the official statistical data, the Bulgarian economy is continuously growing in the last 7 years (since 2013). The increasing individual consumption has major contribution to the growing GDP in the country which is closely related to the growing economic activity of the population, a higher employment and relatively higher remuneration levels.

2.4.1. Gross Domestic Product (GDP)

Despite its relatively good overall economic performance, Bulgaria has been slow to catch up with the rest of the EU countries. Real GDP (adjusted for inflation) grew by an estimated 3,2% in 2018 and is expected to increase by 3,6% in 2020, driven by domestic demand. Potential GDP growth has strengthened over recent years. This has been driven mainly by improvements

in total factor productivity, while the contributions of capital and labour have been modest. Regional disparities are growing and hampering the competitiveness of the country. Output and incomes across Bulgaria are very uneven, as shown by a coefficient of variation of 49% in the 2016 GDP per capita. Although it accounts for just 18,8% of the population, the Sofia-city region generates nearly half of the country's GDP. The GDP situation is no different in the constituent districts of NUTS II regions. In most cases, the figure in one or two districts of a region is several times higher than in the remaining constituent districts.

The GDP in both countries is low as compared to the rest of the European countries. In Serbia in 2018 it is MEUR 42 855 (EUROSTAT - GDP), while in Bulgaria it is MEUR 58 771 (EUROSTAT - GDP).

Serbian statistics does not record the GDP per districts but at the level of the region (NUTS II equivalent). Pursuant to the estimation principle of workplace, in 2018 the regions had the following shares in the Serbian GDP: Belgrade region holds the leading position (41,3%), Vojvodina region (25,9%) follows and then come the region of Šumadija and West Serbia (18,6%) and the region of South and East Serbia (14,1%).

Sectoral analysis of GDP at the level of Serbian CBC area shows that Nišava region is the leader in all analyzed parts of the economy. Along with the Nišava area, a higher GDP is recorded in the Pčinja area (*trade, construction, transport, food and furniture, state administration, administration, professional and scientific activities, real estate, education, health, social security, arts and entertainment*).

The third area that stands out in terms of GDP is the Jablanica area. Unlike Pčinja area, it has higher GDP in the area of financial transactions. In addition to these three areas, the data show that GDP in the Bor region is higher than in the rest, in the processing industry, that is, electricity, gas, steam and air conditioning, as well as water supply and waste disposal.

2.4.2. Gross domestic product (GDP) per capita

The gross domestic product per capita in Bulgaria during the period from 2013 to 2017 is increasing slightly faster than the EU average. With the exception of the Sofia city, the overall level of economic development of the border area is relatively low, as compared to both the respective national levels and the EU-28 average.

The Serbian economy⁷ has a significant manufacturing sector (26% of GDP), and other important sectors include trade and services (18% of GDP), agriculture (8% of GDP), and information, communication and technology (5% of GDP). The economy has grown albeit variably, over the last eight years. Serbia's GDP per capita in purchasing power standards stood at 37% of the EU-28 2016 average. The levels of GDP⁸ growth were 0,8% in 2015, 2,8% in 2016 and 1,9% in 2017. Growth in 2018 is primarily driven by investment, which increased 16,4% in real term.

In the border region, the average GDP per capita is EUR 3 543,65, with EUR 5 158,32 at the Bulgarian side of the border, and EUR 3 070,63 on the Serbian side. The significant income disparity is evident. However its impact may be controlled through active targeted economic and social cohesion activities.

Table 6: GDP per capita, 2018

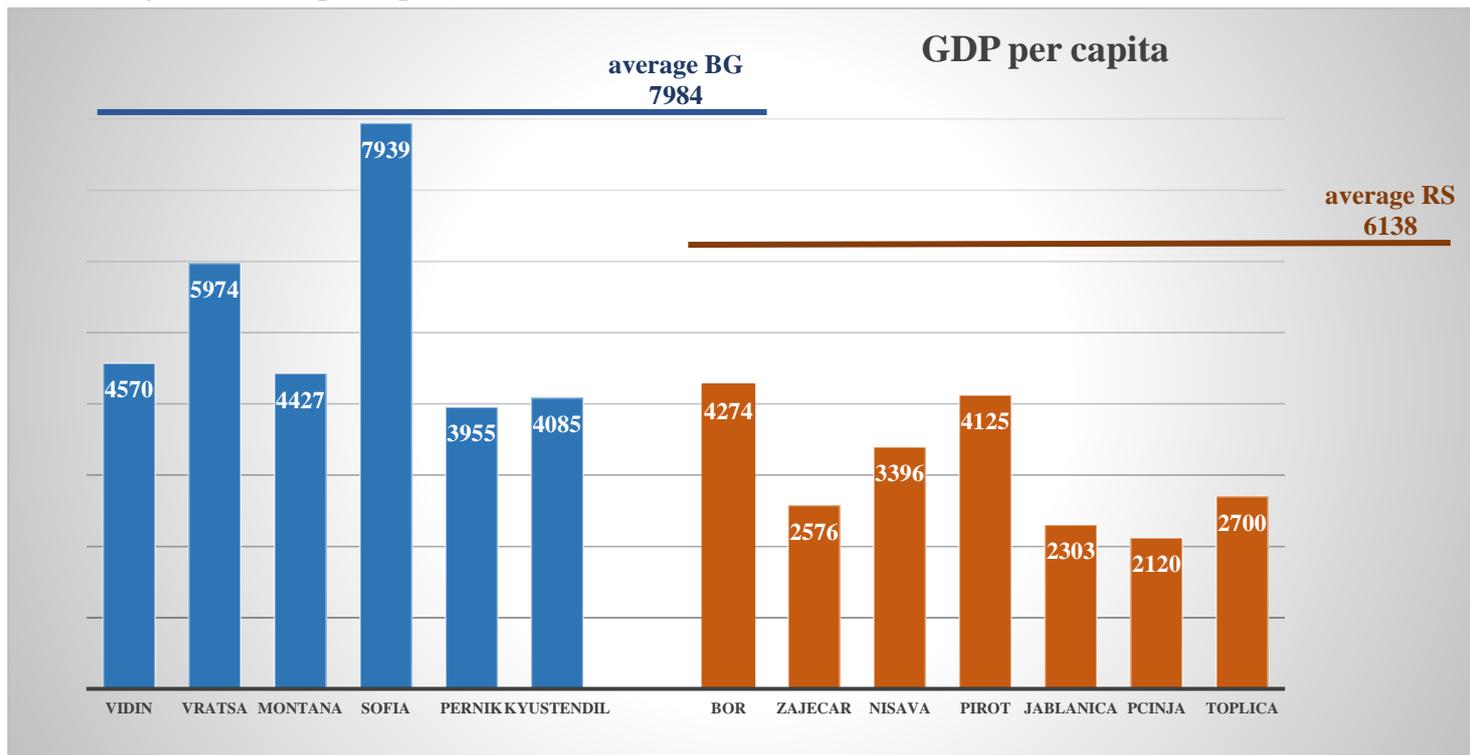
Administrative unit	EUR
BULGARIA	7 984,00
Vidin	4 570,00
Vratsa	5 973,93
Montana	4 427,00
Sofia	7 939,00
Pernik	3 955,00
Kyustendil	4 085,00
SERBIA	6 137,00
Bor	4 274,03
Zaječar	2 576,01
Nišava	3 396,03
Pirot	4 124,93
Jablanica	2 302,67
Pčinja	2 120,45
Toplica	2 700,26

Source: NSI and SORS, data processed by MA

⁷ Source: *STUDY OF THE CHALLENGES THAT HINDER MSME DEVELOPMENT IN THE REPUBLIC OF SERBIA* Country Report for the British Council and Swedish Institute
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwido-jL_9HqAhV98eAKHafXAaQQFjAOegQIBxAB&url=https%3A%2F%2Fwww.britishcouncil.rs%2Fsites%2Fdefault%2Ffiles%2Fstudy_of_the_challenges_that_hinder_msme_development_in_serbia_e-book_eng.pdf&usq=AOvVaw0me33k4U7uvHgUNfOsl8vz

⁸ Source: Same.

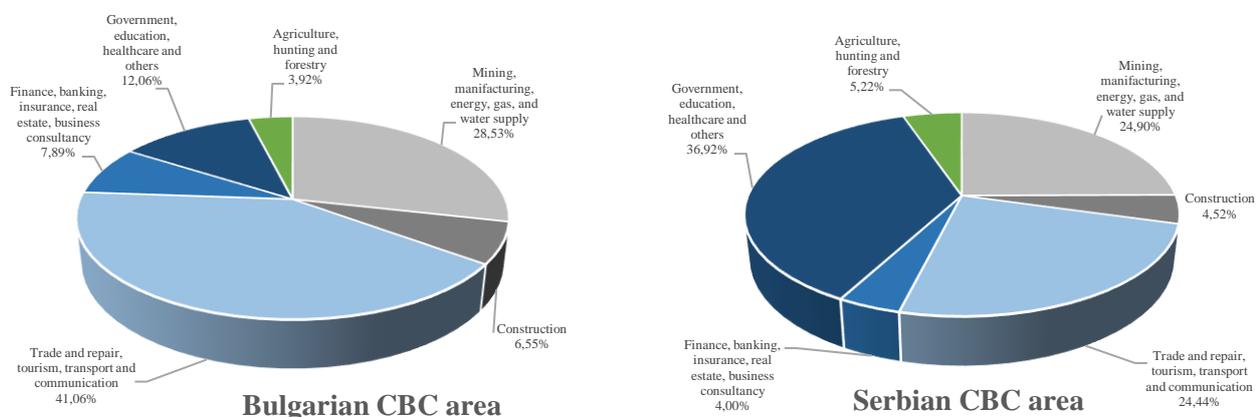
Figure 4: GDP per capita, 2018



2.4.3. Gross value added (GVA)

In the period between 2010 and 2017, the tertiary (services) sector in Bulgaria is in the lead by a share that is more than twice higher, followed by the secondary sector (industry sector) and the primary sector (agriculture, forestry and fishing). Following a negative and slow growth during the period of and after the economic crisis (2012-2014), during the period between 2015 and 2017 Bulgaria accelerated GVA growth.

Figure 5: Economic structure of the region, by main sectors, 2018



Source: NSI and SORS⁹, data processed by MA

⁹ Municipalities and regions of the Republic of Serbia, 2019 - <https://publikacije.stat.gov.rs/G2019/PdfE/G201913046.pdf>

Between 2013 and 2017, the secondary sector registered a slight relative growth from 27,27% to 28,44%, while the primary sector registered a decline from 5,36% to 4,69% and the tertiary sector also declined from 67,37% to 66,87%.

The economic structure in the cross-border region is in general characterized by a relatively large service sector, followed by industry and agriculture.

The region's geographical location and rich natural resources form an excellent base for the development of the service sector, specifically international trade, transport and related services, tourism, thus becoming an important engine for boosting the socio-economic development of the border region. However, the underdeveloped transport links in the bordering region has predetermined the relative isolation of the area. The proximity to the Pan-European corridors and the major infrastructure projects to be completed in the coming years (the most important for the region being the highway Sofia-Niš) should become the driving force for the development of various trade and transport-related services – wholesale markets and showrooms, logistic parks, warehouse facilities, hotels and catering, repair services, etc.

Table 7: GVA by Service Sectors and Share in Bulgaria (million BGN)

District	2014			2015			2016			2017		
	Services share %	GVA in services	Total	Services share %	GVA in services	Total	Services share %	GVA in services	Total	Services share %	GVA in services	Total
Vidin	67,20%	336	500	68,00%	340	500	68,00%	340	500	68,00%	337	561
Montana	57,74%	470	814	55,39%	483	872	51,95%	479	922	51,95%	518	1011
Vratsa	41,16%	601	1460	43,72%	602	1377	43,17%	616	1427	43,17%	664	1708
Sofia	38,58%	936	2426	36,04%	980	2719	37,30%	1016	2724	37,30%	1094	3183
Pernik	63,14%	418	662	65,81%	435	661	61,63%	461	748	61,63%	508	833
Kyustendil	55,81%	432	774	52,78%	437	828	53,89%	450	835	53,89%	489	877

Source: NSI

The industry on both sides of the border is mainly represented by mining, being a leading sector in the past and still keeping its most important part in the regional industrial production. The most famous mining centres are Bor (Serbia¹⁰) with the extraction of copper, Zaječar (Serbia) with the extraction of coal and quartz and Svoge and Pernik (Bulgaria), with the extraction of coal. Other important industries are energy generation, metallurgy and machine engineering, chemicals, textiles, tobacco industry, etc. In Bulgaria and partly in Serbia industrial production

¹⁰ Municipalities and regions of the Republic of Serbia, 2019 - <https://publikacije.stat.gov.rs/G2019/PdfE/G201913046.pdf>

had a substantial drop during the time of the transition to market economy with restructuring and the privatization of major enterprises, and it has not yet recovered.

Table 8: GVA by Industry Sectors and Share in Bulgaria (million BGN)

District	2014			2015			2016			2017		
	Industry share %	GVA in industry	Total	Industry share %	GVA in industry	Total	Industry share %	GVA in industry	Total	Industry share %	GVA in industry	Total
Vidin	15,20%	76	500	15,40%	77	500	14,80%	74	500	14,97%	84	561
Montana	25,06%	204	814	28,33%	247	872	32,97%	304	922	33,14%	335	1011
Vratsa	48,42%	707	1460	45,68%	629	1377	46,88%	669	1427	51,99%	888	1708
Sofia	55,81%	1354	2426	58,81%	1599	2719	57,49%	1566	2724	60,60%	1929	3183
Pernik	29,91%	198	662	27,23%	180	661	32,22%	241	748	32,77%	273	833
Kyustendil	36,56%	283	774	36,96%	306	828	35,09%	293	835	32,73%	287	877

Source: NSI

Agriculture does not hold a substantial share in GDP for all border districts/regions (average for the border area 4,57%¹¹). In Vidin, Montana and Vratsa districts (part of Northwestern NUTS II region), the structure of agriculture is represented mainly by crop and livestock production. With regard to crop production, it is noted that the area is the main producer of maize for grain, sunflower and wheat. Livestock production is less developed, as 11,7% of cattle, 11% of sheep, 18,7% of goats and 17,6% of bee families in the country are raised in the Northwestern NUTS II region. For 2017, the acquisition of Tangible fixed assets (TFA) in the sector was BGN 293 642. The number of persons employed in the sector in 2016 was 47 501 people. The development of the agrarian sector bears the mark of the development of the industry on a national scale - predominantly monoculture crop production, lack of links to a circular economy, which is a carrier and of greater added value.

In Sofia, Pernik and Kyustendil districts (part of the Southwestern NUTS II region) the structure of agriculture is represented by herding and stockbreeding. In terms of crop production, the Southwestern region ranks first in potato growing areas, second in the country in rye and oat growing areas. The region is also a leader in permanent grassland and natural meadows. The area is the first in terms of number of goats raised and third in number of sheep raised nationally. Expenses for the acquisition of tangible fixed assets in the sector for 2017 were BGN 199 220q as the number of persons employed in the sector in 2017 was 76 760 people.

¹¹ NSI and SORS

Table 9: GVA by Agriculture Sectors and Share in Bulgaria (million BGN)

District	2014			2015			2016			2017		
	Industry share %	GVA in industry	Total	Industry share %	GVA in industry	Total	Industry share %	GVA in industry	Total	Industry share %	GVA in industry	Total
Vidin	15,20%	76	500	15,40%	77	500	14,80%	74	500	14,97%	84	561
Montana	25,06%	204	814	28,33%	247	872	32,97%	304	922	33,14%	335	1011
Vratsa	48,42%	707	1460	45,68%	629	1377	46,88%	669	1427	51,99%	888	1708
Sofia	55,81%	1354	2426	58,81%	1599	2719	57,49%	1566	2724	60,60%	1929	3183
Pernik	29,91%	198	662	27,23%	180	661	32,22%	241	748	32,77%	273	833
Kyustendil	36,56%	283	774	36,96%	306	828	35,09%	293	835	32,73%	287	877

Source: NSI

The tables above show the tendencies in the share of GVA in the different economic sectors of the Bulgarian districts in the cross-border area during the period 2014-2017. As it could be seen, the share of the service sector has been and still has a leading position as a whole. Only in Montana district there is a slight decrease in the share of the service sector (from 57,74% to 51,95%) while the industry sector has increased its share for the same period.

2.4.4. Foreign Direct Investments (FDI)

FDI are continuously rising too, especially in the sectors real estate, financial brokerage, as well as production and trade of electricity. All these trends are showing a rapid developing economic situation in Bulgaria with a positive outlook for the upcoming years. Looking closer at the relevant labour market indicators, the picture shows similar positive trends. FDI played an important role in restructuring the Bulgarian and Serbian economic and for boosting economic growth. There are significant intraregional differences in the interest of foreign investors in the region. The volume of FDI at national level in Bulgaria with cumulation, albeit slowly, shows a clear upward trend in the periods between 2007 and 2010 and after 2014. Small fluctuations occurred in the years of the economic crisis. In 2018, FDI reached EUR 24.9 billion and exceeded the higher level of EUR 23.5 billion achieved in 2016.

Economic development policies in Serbia mainly focus on the attraction of FDIs. According to the National Bank of Serbia (NBS), in the period from 2010 to 2016 net FDI amounted to EUR 11.4 billion, with the maximum of EUR 3.3 billion in 2011. In the past two years the investments recorded averages not exceeding EUR 2 billion per year. The limited interest of investors is not characteristic only for Serbia but for the entire Western Balkan region.

In the border region, only the Sofia district has higher FDI growth because of its proximity to the capital of Bulgaria (Sofia-city) and the relatively good business opportunities. In districts close to the border, foreign direct investments are almost negligible. Most of the FDIs are in the industry and services sector. A very small part of them are designated for agriculture and the peripheral areas.

2.4.5. Global competitiveness of the national economies

Competitiveness represents a complex indicator reflecting the quality of certain dimensions that have an impact on the productivity of a national economy and on its ability to compete on the global scale. The Global Competitiveness Report¹² issued yearly by the World Economic Forum compares all national economies in terms of competitiveness.

For the 2018-2019 edition¹³, Bulgaria ranks 49th out of 141 countries analysed, advancing from 51st place in the previous edition, while Serbia is at 72nd globally, a slight decrease (- 7 points) over last year. Compared to 2012-2013 period, Bulgaria improved its performance (advanced 13 positions¹⁴). Improvement has been recorded for Serbia as well - the figures show a significant increase (with 23 positions) on the global ranking scale (95th position out of 144 countries analysed in 2012-2013 period).

The report illustrates that on average, world economies still struggle to find the optimal balance between technology integration and human capital as to ensure competitiveness, equality and sustainability, and are still rebounding after the productivity losses incurred after the economic crisis. Enhancing competitiveness remains key for improving living standards.

The Global Competitiveness Index (GCI) 4.0 is built based on four major components (enabling environment, human capital, markets, innovation ecosystem), defining the institutions, policies and factors that determine the level of productivity. The framework for computing the GCI 4.0 includes the four key components and the twelve pillars they reunite, as follows:

Enabling environment: (1) Institutions, (2) Infrastructure, (3) ICT adoption and (4) Macroeconomic stability

Human capital: (5) Health and (6) Skills

Markets: (7) Product market, (8) Labour market, (9) Financial system and (10) Market size

¹²World Economic Forum, *Global Competitiveness Report 4.0, 2019*
http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport2019.pdf

¹³ *Idem* 19, pages 118-119, pages 478-479

¹⁴ World Economic Forum, *Global Competitiveness Report, 2013*,
http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf

Innovation Ecosystem: (11) Business dynamism and (12) Innovation capability

The figures from 2019 edition show that Bulgaria performs better in Macroeconomic stability, Labour market conditions, Financial system and the Innovation ecosystem indicators. At the same time the figures for the following pillars show a need for improvement: Infrastructure, Health, Product market and Business dynamism. Serbia's performance is mixed, with significant progress in some dimensions while losing some ground in others. Among the most improved elements, Serbia advances on Innovation ecosystem, Infrastructure and Labour market pillars.

The cross-border area follows the same path as the national economies, so there are still numerous issues to be solved in the coming period. Despite the differences, both economies need to tackle certain dimensions, where they rank poorer than the overall score, such as health, skills, product market, financial system as well as innovation ecosystem maturity. Among others ICT adoption remains one of the variables on which both countries position relatively well.

Figure 6: GCI 4.0 for Bulgaria

Source: World Economic Forum, Global Competitiveness Report 4.0, 2019
http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

Bulgaria

49th /141

Global Competitiveness Index 4.0 2019 edition

Rank in 2018 edition: 51st/140

Performance Overview 2019

Key ◊ Previous edition ▲ Upper-middle-income group average □ Europe and North America average

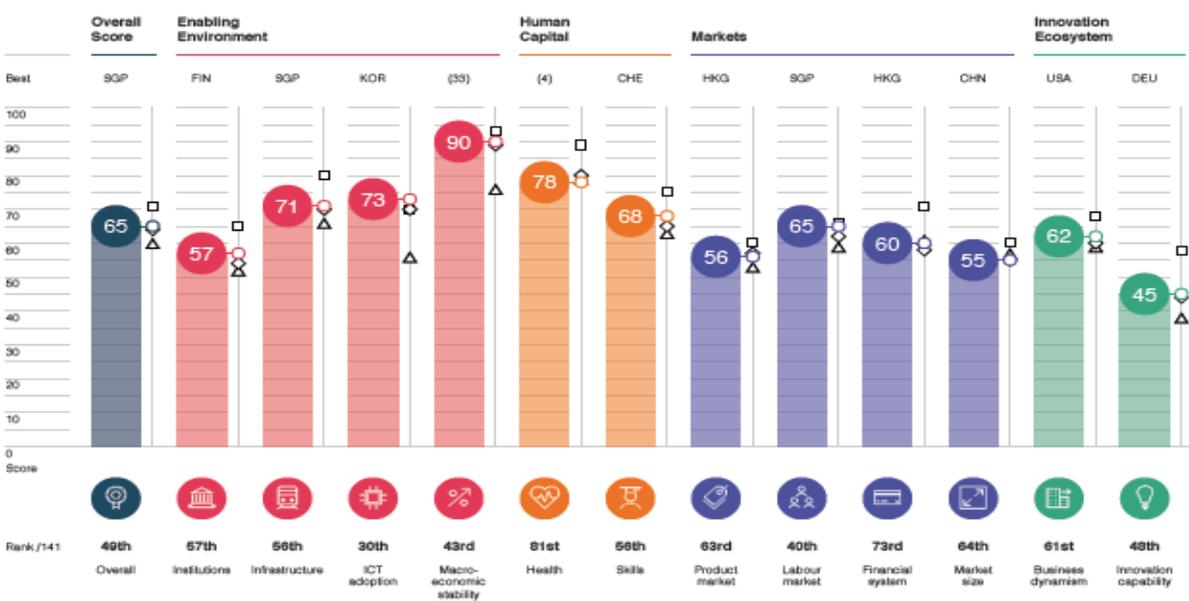


Figure 7: GCI 4.0 for Serbia

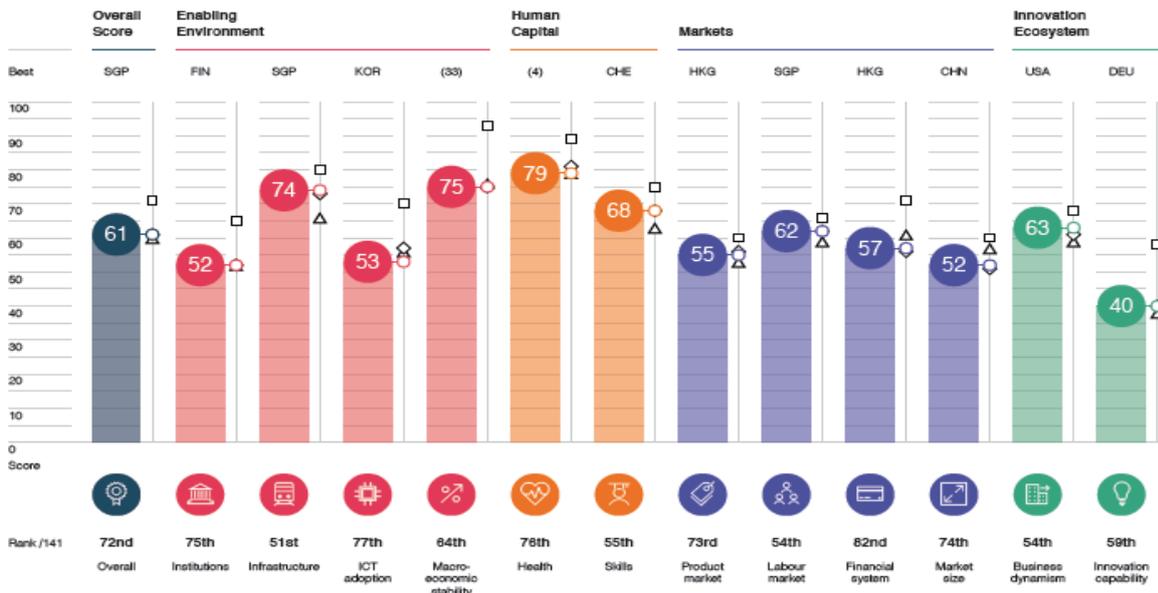
Serbia

72nd / 141

Global Competitiveness Index 4.0 2019 edition

Rank in 2018 edition: 65th/140

Performance Overview 2019 Key ◇ Previous edition ▲ Upper-middle-income group average □ Europe and North America average



Source: World Economic Forum, Global Competitiveness Report 4.0, 2019
http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

2.4.6. Small and medium-sized enterprises (SMEs)

Small and medium-sized enterprises (SMEs) are the backbone of the national economy and generate more than 60% of the GDP of Bulgaria. The number of SME sector on the Bulgarian side of the border has a share of 98% in industry and 99% in services. The number of micro-companies with staff between 0 and 9 people prevails – reaching 383 134 in 2018 (93,60% of the total number of enterprises). The group of enterprises with 10 to 49 employees counts in 2018 a number of 24 982 enterprises (with a share of 5,10%). In Bulgaria from 2018, according to Eurostat data for the previous year, shows that the value added of SMEs has increased from 59,2% in 2012 (according to 2008-2009 data) to 65,2% and is above the EU average, which fell from 58.4% to 56.8% in the same period.

Table 10: SMEs per number of employees

Administrative unit	Total	SMEs per number of employees									
				up to 9		10 - 49		50 - 249		250+	
Bulgaria	413535		100,00%	383 134	93,60%	24 982	5,10%	4 666	1,20%	753	0,10%
BG CBC region	34 651	100,00%	8,38%	32 178		2 007		396		46	
Vidin	3 059	8,83%		2 863	93,60%	156	5,10%	37	1,20%	3	0,10%
Montana	4 564	13,17%		4 208	92,20%	292	6,40%	55	1,20%	9	0,20%
Vratsa	6 017	17,36%		5 573	92,62%	359	5,97%	83	1,38%	6	0,10%
Sofia	9 664	27,89%		8 930	92,40%	582	6,02%	116	1,20%	10	0,10%
Pernik	5 412	15,62%		5 049	93,29%	298	5,51%	53	0,98%	12	0,22%
Kyustendil	5 935	17,13%		5 555	93,60%	320	5,40%	53	0,90%	6	0,10%

Source: NSI

Based on data of the NSI for 2018, the number of operational non-financial enterprises in the Bulgarian CBC region was 34 651 - out of which micro - 32 178, small and medium - 2 403 and 46 - large enterprises. Sofia and Vratsa have the highest number of micro- and SMEs. In 2018, the net sales revenues in Pernik district reached BGN 2 773 million, which is an increase of 11,4% compared to 2017. Sofia and Pernik have the highest number of large enterprises – respectively 10 and 12. Despite the fact that in Sofia the largest enterprises have a share of 0,2% they realise 78,3% of the whole production, as well as ensure 30,1% of the employment in the district.

On the Serbian side according to the statistical information for the region South and East of Serbia, as of the end of 2018 there were registered 465 976 businesses out of which 16,4% SMEs (57 072) and 12,5% large enterprises.

Nišava and Jablanica have the highest number of micro, small and medium enterprises while the highest concentration of enterprises employing more than 1 000 persons is recorded in Pirot, Pčinja, Zaječar and Bor.

According to Bobić (2017)¹⁵, there are still a number of obstacles in starting a business. The business environment is outdated, which hampers growth, and there are severe issues with online payments, and outdated laws and procedures. Unfortunately, instead of being supported

¹⁵ Bobić, D. (2017). *Youth entrepreneurship in Serbia - mapping barriers to youth entrepreneurship*. Centre for Advanced Economic Studies, Belgrade. Retrieved from: <http://odskoledoposla.org/wpcontent/uploads/2017/05/Mapping-barriers-to-youth-entrepreneurship.pdf>

and promoted, the most proactive young people sometimes feel forced to move to other countries with more favourable business environments (Moder and Bonifai, 2017)¹⁶.

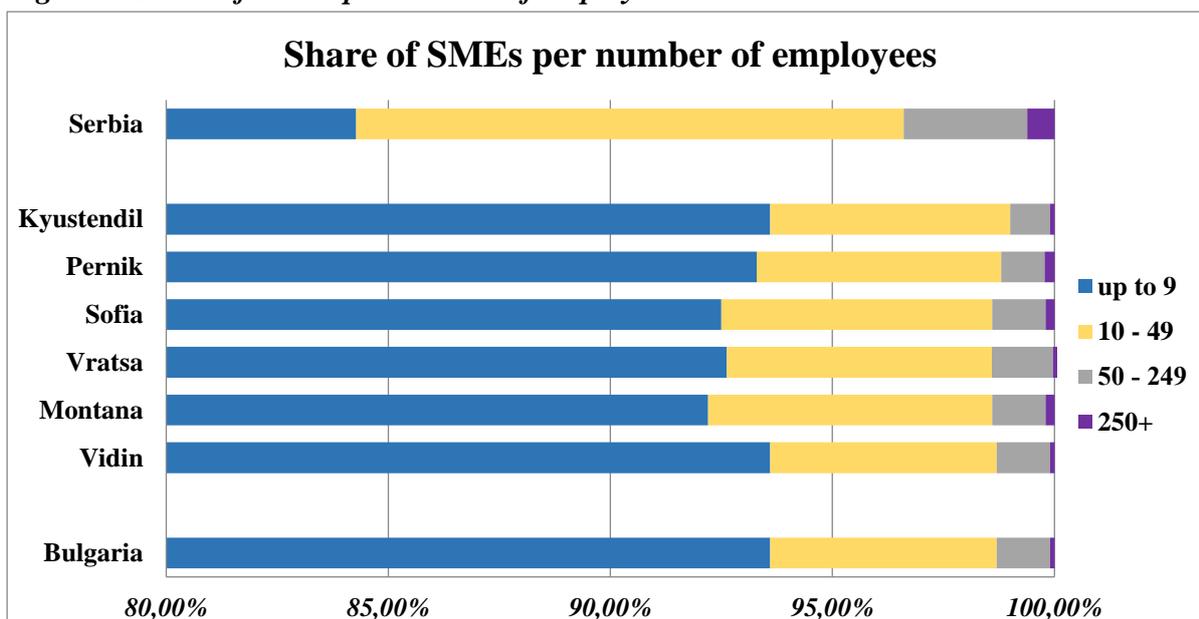
Table 11: Business activities of enterprises in Serbia, by persons employed, 2018

	Total	up to 9	10-49	50-249	250+
Number of enterprises	87 407	73 663	10 778	2 430	536
share %		84,28%	12,33%	2,78%	0,61%
Number of persons employed	1 161 577	217 305	216 456	252 191	475 625
share %		18,71%	18,63%	21,71%	40,95%
Turnover (million RSD)	10 379 074	1 459 870	2 231 481	2 451 297	4 236 425
share %		14,07%	21,50%	23,62%	40,82%

Source: SORS

The statistical data of SORS for 2018 show that the number of business enterprises on the territory of Serbia 87 407 - out of which 73 663 micro, 13 208 SMEs and 536 large enterprises. In comparison to Bulgaria the share of small enterprises in Serbia is almost twice higher (12,33%). In addition the medium enterprises have a share less than 3% but they realized almost ¼ of the total turnover. It should be noted that though the share of the large enterprises is below 1% of the total number of enterprises they realized more than 40% of the turnover and employment in Serbia.

Figure 8: Share of SMEs per number of employees



Source: NSI and SORS

¹⁶ Moder I. and Bonifai N. (2017). "Access to finance in the Western Balkans", Occasional Paper #197 Sept 2017 European Central Bank: Frankfurt. Retrieved from: https://www.britishcouncil.rs/sites/default/files/study_of_the_challenges_that_hinder_msme_development_in_serbia_e-book_eng.pdf

2.4.7. Tourism sector

The attractiveness of tourism in the Bulgaria-Serbia CBC region comes from the rich cultural and natural heritage, diverse landscapes and relatively good connectivity/accessibility.

At the national level, the direct contribution of Bulgarian tourism in 2017 was BGN 3.1 billion - 3,1% of national GDP. The total contribution of tourism accounted for 11,5% of GDP (BGN 11.4 billion). In 2017, the sector maintained 90 000 jobs - 2,9% of national employment. The total contribution of the sector accounted for 10,7% of employment, or 335 500 jobs. Investments in the sector amounted to BGN 1.45 billion - 7,4% of the total investments in 2017.

An upward development of national tourism is lasting in the last couple of years, but in parallel there are serious negative factors that are threats to the sustainable development of the established and the new destinations. These include among others: the population ageing, the high unemployment in peripheral border areas, relatively high poverty and crime rates, climate change factors, increased pressure on natural resources in the CBC region, etc.

Based on the National Concept for tourist zoning, Bulgaria is conceptually divided into nine tourism regions. The justification for these regions is a consolidated result from synthesised expertise in the field of Bulgarian tourism, spatial affiliation and specificity of tourism resources, the objective division of tourism markets and products concerned, the views of stakeholders. The division into tourism regions helps forming regional tourism products and implement regional marketing and promotion.

The six districts part of the Bulgarian programme area fall within the following five tourism regions:

Danube – cultural-historical, river (cruise), adventure, wine, culinary and religious and ecotourism;

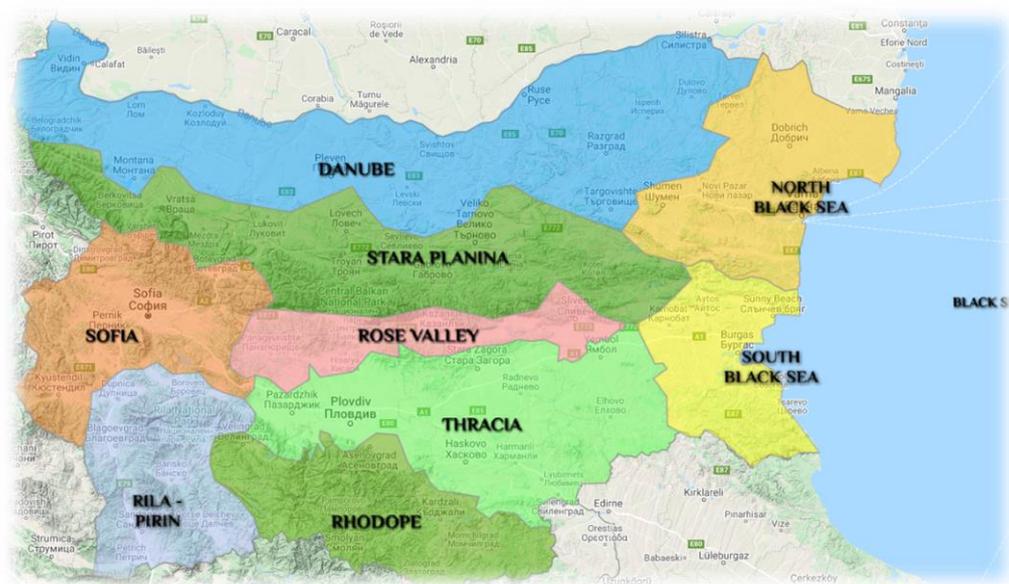
Stara planina – mountain, recreation, cultural, historical, festival, creative, adventure, rural religious, mountain skiing and ecotourism;

Rose Valley – balneology, SPA and wellness, cultural, historical, festival, adventure, mountain skiing, recreational, wine and ecotourism;

Rila-Pirin – mountain (all types – skiing, hiking, recreational), religious, adventure, balneo, SPA and wellness, cultural, historical, festival, wine and ecotourism;

Sofia Region – business, cultural (all types), hiking (all types), health (all types), religious, adventure and ecotourism.

Map 3: Region of Bulgaria



Source: National Tourism Zoning Concept of Bulgaria, 2015

The spatial distribution of the country’s tourism resources is characterised by a high degree of overlap and territorial proximity of natural and cultural sites. This geographical specificity is an important competitive advantage in the creation of tourism products. This allows to combine different recreational activities, provides an opportunity to overcome seasonality and increase the usability of the tourist superstructure. Bulgaria has a relatively good tourism infrastructure, active generating markets with increasing demand and considerable untapped potential.

In order to ensure the sustainable development of the tourism zoning, Bulgaria needs to face the challenges of the modern environment and competition, marketing, existing management deficits and shortcomings in the legal framework. The shortage of qualified staff is a threat both for the economy as a whole and for tourism. Coordination between private and public institutions in the development of tourist, technical and information infrastructure is needed.

Tourism plays an important role in the economic structure of the Bulgarian cross-border region. The main factors for its development are the attractiveness of natural sites /mountains, forests, lakes, etc. /, anthropogenic resources / churches and monasteries, archaeological sites, etc. /, the availability of various food and beverage industries, etc. Both international and domestic recreational tourism have been developed.

According to the Concept for tourist zoning of Bulgaria (2015), the districts of Vidin, Montana and Vratsa Districts fall within the score of the two regions:

- The “Danube” tourism area has a major specialization mostly cultural and cruise tourism.

Its expanded specialization is cultural-historical, river (cruise), adventure, wine, culinary and religious and ecotourism.

- The “*Stara planina*” tourism area has a major specialization mostly mountain and culture tourism. Its expanded specialization is mountain, recreation, cultural, historical, festival, creative, adventure, rural religious, mountain skiing and ecotourism.

The district of Kyustendil and Pernik fall within the scope of Sofia region as well as Kyustendil district falls within the scope of Rila-Pirin region. Sofia district falls within the scope of three regions:

- The “*Sofia*” tourism area has a major specialization mostly business and cultural tourism. Its expanded specialization is business, cultural (all types), hiking (all types), health (all types), religious, adventure and ecotourism.
- The “*Rose Valley*” tourism area has a major specialization mostly health and culture tourism. Its expanded specialization is balneology, SPA and wellness, cultural, historical, festival, adventure, mountain skiing, recreational, wine and ecotourism.
- The “*Rila-Pirin*” tourism area has a major specialization mostly mountain and religious tourism. Its expanded specialization mountain (all types – skiing, hiking, recreational), religious, adventure, balneo, SPA and wellness, cultural, historical, festival, wine and ecotourism.

Tourism development is a strong potential for the region which now is lagging behind compared to other areas in Bulgaria and Serbia. According to the World Travel & Tourism Council (WTTC) estimates, the direct contribution of Travel and Tourism accounted for 10% of the global GDP in 2015.

Tourism centres in the Programme area include Belogradchik (cultural and eco-tourism), Chiprovtsi (cultural tourism), Varshets and Berkovitsa (spa), Tran (eco-tourism and cultural tourism), Zemen (cultural), Kyustendil (spa), Sapareva Banja (spa), Vitosha (skiing) and Panichiste (mountain resort with skiing) and Rila monastery in Bulgaria; Gamzigrad (cultural tourism), Niš and Negotin (cultural tourism), Pirot (cultural tourism), Zvonačka banja (spa, district of Pirot), Vranjska banja (district of Pčinja), and Niška banja (spa, district of Nišava), Stara Planina (mountain tourism) in Serbia.

The Tourism Development Strategy of the Republic of Serbia for the Period from 2016 to 2025 was prepared in accordance with Article 7 of the Law on Tourism. The objectives of the Strategy are:

- 1) Sustainable economic, environmental and social development of tourism in the Republic of Serbia;
- 2) Improving the competitiveness of the tourism industry and related activities in the domestic and international markets;
- 3) An increase in the direct and total contribution of the tourism sector to the gross domestic product (hereinafter: GDP) of the Republic of Serbia, as well as an increase in direct and total employment in the tourism sector and its share in total employment in the Republic of Serbia;
- 4) Improvement of the overall image of the Republic of Serbia in the region, Europe and worldwide.

Tourism in the Republic of Serbia has gone through a vigorous restructuring of sources of demand. It is worth noting that the influx of domestic tourists decreased after 2008, mainly due to the economic crisis which affected the standard of living in the Republic of Serbia. On the other hand, the influx of foreign tourists from European countries registered continuous growth, including what is becoming a traditionally high number of visitors from the countries in the region. 2015 saw the first signs of recovery of domestic demand.

According to the mentioned Strategy the total contribution of tourism to GDP of the Republic of Serbia was 6.4% in 2015, while tourism directly contributed to 2.2% of national GDP. Tourism and hospitality industry accounted for about 30,000 (directly) created new jobs, while about 157,000 new jobs in total were created in tourism and related activities involving numerous newly founded micro and small-sized enterprises in the tourism and hospitality industry and related activities. "Invisible export" accounted for 7.3% of the total national export, i.e. almost 29% of the export of services. Investments in tourism accounted for 4.1% of total national investment. In 2015, the total foreign exchange inflow generated from tourism amounted to 1,048 million USD. Between 2007 and 2015, the foreign exchange inflow from tourism grew by 97.4%, with an average annual growth rate of 10.8%.

According to the Tourism Development Strategy of the Republic of Serbia there are 18 touristic destinations identified in Serbia. Destinations are roughly defined according to currently

developed infrastructure and superstructure, the availability of existing tourism influx and their development is important for the completion of tourism products. Actual priorities will depend on the interest and capacity of investors, regardless of whether it is in the form of direct investment or PPP models, as well as the ability of each of the destinations to promote themselves on the market and implement the necessary investments.

The seven districts part of the Serbian programme area fall within the following five tourism regions:

Sokobanja - cultural heritage, natural resources, rehabilitation centres. Key touristic products of this destination are health, wellness and spa, events, MICE tourism, special Interests, round trips.

Lower Danube - cultural heritage, natural resources, Danube, NP Đerdap. Key touristic products of this destination are river tours, ecotourism, ethno-tourism, rural tourism, cultural themed route (cycling, gastronomy etc.), special Interests Events.

Niš and Niška Banja - cultural heritage, natural resources, Niška Banja. Key touristic products of this destination are health, wellness and spa, cultural themed route, events, rural tourism.

Vlasina, Vranje and Vranjska Banja - cultural heritage, natural resources, Vlasina Lake, Vranjska Banja, small towns. Key touristic products of this destination are health, wellness and spa, ethno-tourism, skiing, cultural themed route, events, rural tourism, special interests.

Stara planina - cultural heritage, natural resources, Stara Planina, small towns. Key touristic products of this destination are alpine tourism, rural tourism, events, ethno-tourism, special interests.

The Strategy identify following activities of special importance for tourism development: marketing/promotion; the improvement of tourism infrastructure and superstructure (construction and renovation of bicycle paths and other thematic cultural routes, tourist signalisation, visitor centres, construction of camps, arranging beaches, etc.); support for travel agencies in the field of inbound tourism; development of online booking systems; construction and landscaping of attractions (e.g. theme parks, adrenaline-rush activities, etc.); organisation of conferences and events - strengthening the Republic of Serbia as a MICE tourism destination; development of DMO and strengthening of management structures; the development and implementation of international quality standards (products, services provided and destination management); research activities, education and training in tourism; development of

international and regional cooperation and the creation of regional tourism products; development of innovation and entrepreneurship in tourism.

The number of accommodation establishments in all six districts in Bulgarian CBC area has decreased during the period of 2016 and 2018, with the exception only of Kyustendil District where in 2018 is registered an increase of 7,35 % compared to the previous years. In term of tourism capacities in the Serbian CBC area, the Niš district has the highest number of accommodation establishments, 48 of the total.

Table 12: Accommodation establishments in the CBC area, (number)

District		2016	2017	2018
BG	Vidin	23	27	25
	Montana	23	23	24
	Vratsa	25	24	24
	Sofia	101	103	92
	Pernik	12	11	10
	Kyustendil	68	68	73
RS	Bor	16	15	14
	Zaječar	27	21	21
	Jablanica	18	20	20
	Nišava	46	50	48
	Pirot	10	10	10
	Pčinja	30	32	30
	Toplica	3	3	4

Source: NSI and SORS

In accordance with the National Statistical Institute of Bulgaria, the number of beds in three districts (Vidin, Montana and Kyustendil) in Bulgarian CBC area has decreased during the period of 2016 and 2018, while in the rest three districts (Vratsa, Sofia and Pernik) an increase of the number of beds is registered without an increase of the accommodation establishments as table shows.

Table 13: Number of beds in the Bulgarian CBC area, (number)

District	2016	2017	2018
Vidin	782	820	822
Montana	1 112	1 104	1 214
Vratsa	860	857	857
Sofia	594	467	451
Pernik	594	467	451
Kyustendil	2 813	2 786	2 964

Source: NSI

In accordance with the Statistical Office of the Republic of Serbia of the data on the number of beds, Zaječar district has the highest number of beds, out of all the tourist visits to the

Programme area in the three observed years. The largest increase in the number of beds was recorded in the Jablanica and Niš districts, while the decrease was observed in the number of beds in Bor and Pčinja districts.

Table 14: Number of beds in the Serbian CBC area

District	2016	2017	2018	Average value per district	Growth index 2016 - 2018 (2016=100%)
Bor	3 210	3 081	3 028	3 106	94.33
Zaječar	9 223	8 636	9 770	9 210	105.93
Jablanica	1 609	1 843	1 843	1 765	114.54
Nišava	2 812	3 278	3 038	3 043	108.04
Pirot	705	707	752	721	106.67
Pčinja	2 762	2 292	2 209	2 421	79.98
Toplica	867	1 118	994	993	114.65

Source: SORS

During the period 2016-2018, the number of domestic and foreign tourists in the Bulgarian CBC area is increased to 1 224 841 in 2018, which is an increase with 9.87 percentage point of 2016. The highest growth has been recorded in Kyustendil district where the number of domestic and foreign tourist increased from 158 764 (2016) to 181 480 (2018), the second place is for Sofia district - from 712 582 (2016) to 806 898 (2018). In Vratsa district in 2016 the number of tourists was 95 703, while in 2018 it was recorded a decrease to 79 790, which is 19,94% less than the figures for 2016.

Table 15: Total number of domestic and foreign tourists in the Bulgarian CBC area

Administrative unit	2016	2017	2018
Vidin	51 090	57 283	55 168
Montana	63 772	62 747	70 557
Vratsa	95 703	92 402	79 790
Sofia	712 582	742 508	806 898
Pernik	32 892	29 465	30 948
Kyustendil	158 764	165 123	181 480
CBC area	1 114 803	1 149 528	1 224 841

Source: NSI

The number of guests (domestic and foreign) in all seven districts in Serbian CBC area has increased during the period of 2016 and 2018. The highest growth was recorded in Zaječar

(184,8%) and Pirot region (157,4%). Regarding the share of foreign tourists, their number in 2018 compared to 2016 increased in Nišava District followed by Pirot, Pčinja and Toplica.

Table 16: Total number of domestic and foreign tourists in the Serbian CBC area

District	2016		2017		2018		Average value per district
	All	Foreign	All	Foreign	All	Foreign	All
Bor	70 258	12 866	82 847	14 977	78 946	14 590	77 350
Zaječar	80 792	14 534	92 093	13 551	149 269	25 985	107 385
Jablanica	22 649	10 081	27 053	11 467	30 173	13 554	26 625
Nišava	98 361	55 647	117 141	68 692	130 485	78 639	115 329
Pirot	15 908	8 222	23 195	12 842	25 038	13 959	21 380
Pčinja	25 047	6 841	25 848	8 151	26 207	7 994	25 701
Toplica	27 856	3 704	29 950	5 002	31 620	5 341	29 809
CBC area	340 871	111 895	398 127	134 682	471 738	160 062	403 579

Source: SORS

As of 2018, in the Bulgarian part of the CBC area there were accommodation establishments and bed capacity as follows:

- In Vidin district there were a total of 25 accommodation establishments with the total bedding capacity of these establishments was 822.
- In Montana and Vratsa districts there were a total of 24 accommodation establishments for each district with the total bedding capacity of these establishment as follows: in Montana districts – 1 214 and in Vratsa district – 857.
- Sofia district take the first place of total number of accommodation establishment on Bulgarian CBC area with 92 and Pernik district there were the 10 accommodation facilities which was the lowest total number of all district in eligible area. But the total number of bedding capacity of these establishments in Sofia and Pernik districts were the same – 451.
- In Kyustendil district there were 73 accommodation establishments with total number and was a district with the most bedding capacity – 2 964.

In 2018, in the Serbian part of the CBC area there were accommodation and establishments and bed capacity as follows:

- In Bor district there were a total of 14 accommodation establishments with the total bedding capacity of these establishments was 3 028.
- In Zaječar and Jablanica districts there were respectively with 21 and 20 accommodation establishments with the total bedding capacity of these establishments as follows: in Zaječar

districts was the most bedding capacity – 9 770 and in Jablanica district – 1 843.

- The Nišava district takes the first place of the total number of accommodation establishment on Serbian CBC area with 48 and Toplica district there were the 4 accommodation facilities which was the lowest total number of all district in the eligible area. The total bedding capacity of these establishments as follows: in Nišava district – 3038 and in Toplica district – 994.
- In Pirot district there were 10 accommodation establishments with the total bedding capacity of these establishments was 752.
- And in Pčinja district there were 30 accommodation establishment with total bedding capacity of these establishments was 994.

Table 17: Tourism indicators for the CBC region, 2018

District	Accommodation establishments		Beds		Tourists	
	Number	Share	Number	Share	Number	Share
Vidin	25	0,72%	822	0,24%	55 168	0,71%
Montana	24	0,69%	1 214	0,36%	70 557	0,90%
Vratsa	24	0,69%	857	0,26%	79 790	1,02%
Sofia	92	2,66%	451	0,13%	806 898	10,35%
Pernik	10	0,29%	451	0,13%	30 948	0,40%
Kyustendil	73	2,11%	2964	0,88%	181 480	2,33%
CBC BG	248	7,16%	6759	2,00%	1 224 841	15,71%
BG total	3 458	100%	335 597	100%	7 799 680	100%
Bor	14	1,37%	3028	2,64%	78 946	2,30%
Zaječar	21	2,06%	9770	8,51%	149 269	4,35%
Jablanica	20	1,96%	1843	1,61%	30 173	0,88%
Nišava	48	4,70%	3038	2,65%	130 485	3,80%
Pirot	10	0,98%	752	0,66%	25 038	0,73%
Pčinja	30	2,94%	2 209	1,92%	26 207	0,76%
Toplica	4	0,39%	994	0,87%	31 620	0,92%
CBC RS	147	14,40%	21 634	18,86%	471 738	13,74%
RS total	1 012	100%	114 771	100%	3 430 522	100%

Source: NSI and SORS

In 2018 the share of tourists (domestic and foreign) in the Bulgarian CBC area (compared to the number of national tourists) is 15,71% which is more than twice times higher than the share of the accommodation establishments (7,16%) and more than seven times higher that the share

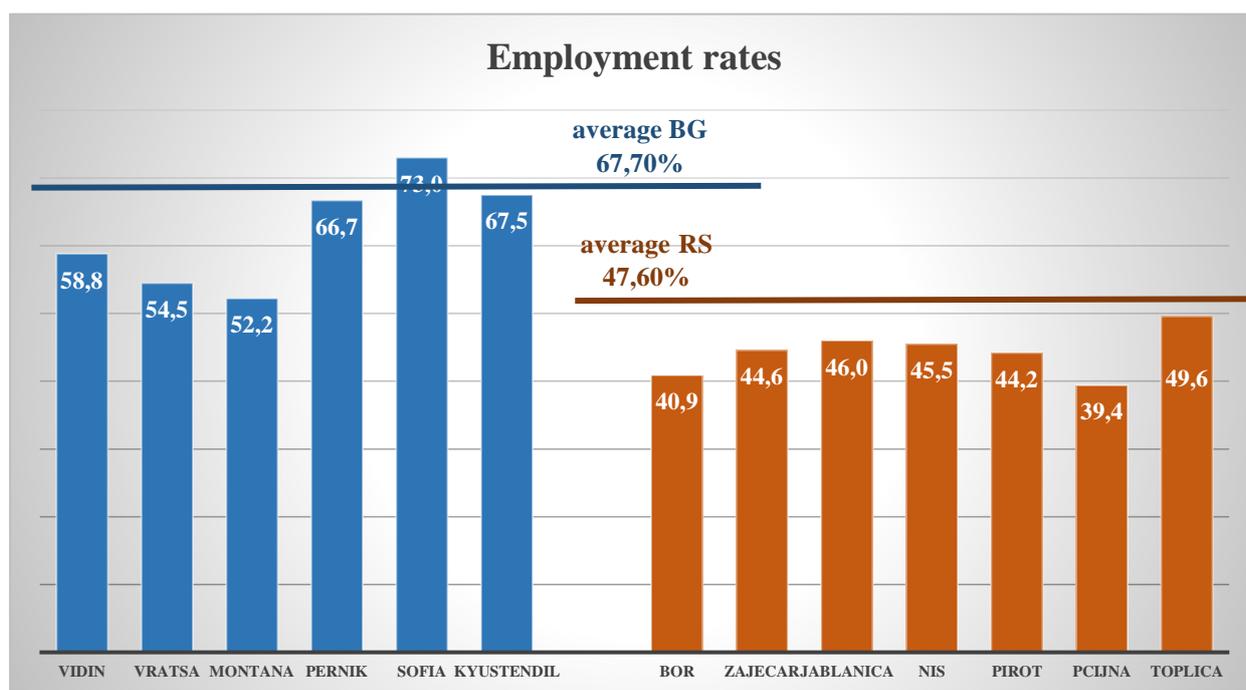
of the existing beds (2,00%). This is due to the large number of tourists in Sofia district which together with Kystendil form more than 80% of the tourist flow in the region.

The number of guests (domestic and foreign) in all seven districts in Serbian CBC area in 2018 were 471 738 which is 13,75% of all tourists in the Republic of Serbia. The figures for all districts do not show a clear higher share of tourists in comparison to the share of the respective accommodation establishments and beds.

2.5. LABOUR MARKET

The employment and unemployment rates of the population at the regional level show fluctuations in relation to the total rates at the country level. In general, the labour market in the border area is characterized by low level of *employment* of the population, low wages, and low mobility of labour force.

Figure 9: Employment rates per districts in CBC region, 2018



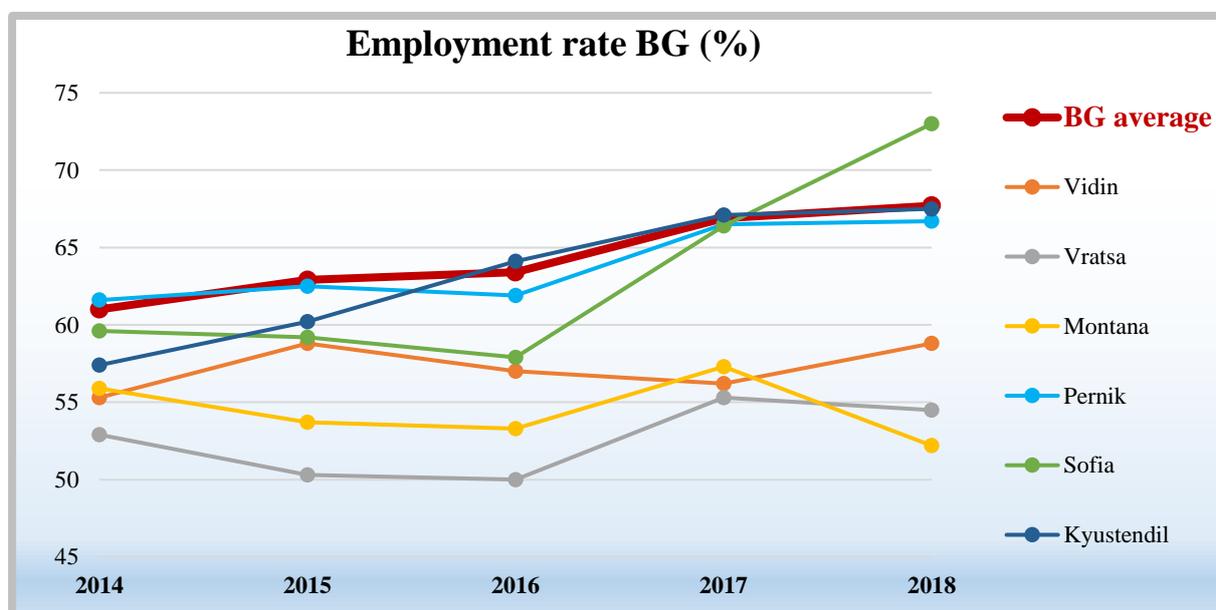
Source: NSI and SORS

In general the average employment rate in *Bulgarian* is much higher (with around 20%) than in Serbia. The Bulgarian districts in the border region (with the exception of Sofia district) show an employment rate for 2018 below the average 67,7% of the country. The activity rate in the border region is 45%, which is close to the 49,2% average for the country. In general there is a tendency of increase of the employment rate in all CBC districts with the exception of Sofia in 2018. The situation is similar on the *Serbian side* of the CBC area – the employment rate for

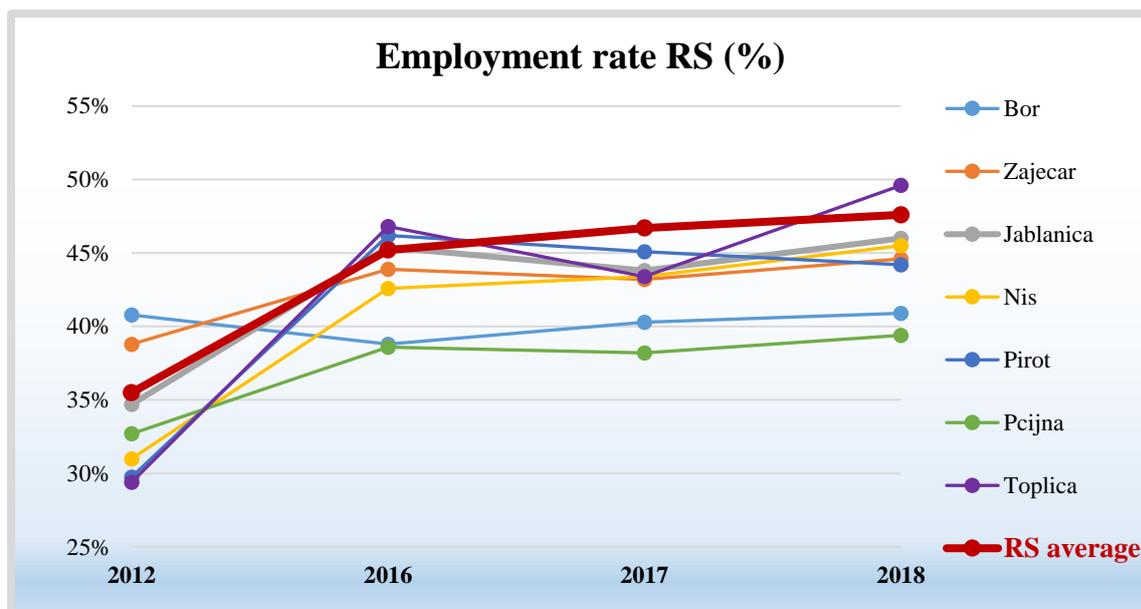
2018 of all NUTS III level equivalent regions (with the exception of Toplica) is below the average for the country 47,6% in general a tendency of increase of the employment rate is registered in all Serbian districts.

Figure 10: Employment rates trends per districts in CBC region

	2014	2015	2016	2017	2018
BG average	61	62,9	63,4	66,9	67,7
Vidin	55,3	58,8	57	56,2	58,8
Vratsa	52,9	50,3	50	55,3	54,5
Montana	55,9	53,7	53,3	57,3	52,2
Pernik	61,6	62,5	61,9	66,5	66,7
Sofia	59,6	59,2	57,9	66,4	73,0
Kyustendil	57,4	60,2	64,1	67,1	67,5



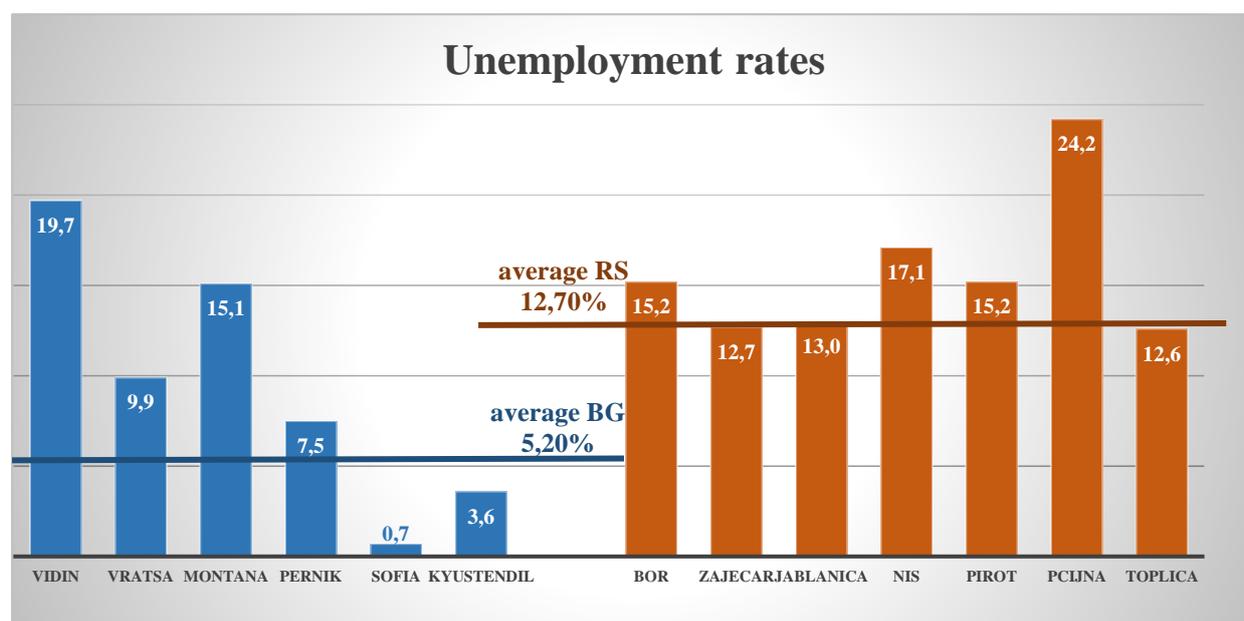
	2012	2016	2017	2018
RS average	35,5%	45,2%	46,7%	47,6%
Bor	40,8%	38,8%	40,3%	40,9%
Zajecar	38,8%	43,9%	43,2%	44,6%
Jablanica	34,7%	45,4%	43,8%	46,0%
Nis	31,0%	42,6%	43,4%	45,5%
Pirot	29,8%	46,2%	45,1%	44,2%
Pcijna	32,7%	38,6%	38,2%	39,4%
Toplica	29,4%	46,8%	43,4%	49,6%



Source: NSI and SORS

There is a clear gap of around 7% in the average *unemployment rate* of the two countries and the situation on both sides of the border is different.

Figure 11: Unemployment rates per districts in CBC region, 2018



Source: NSI and SORS

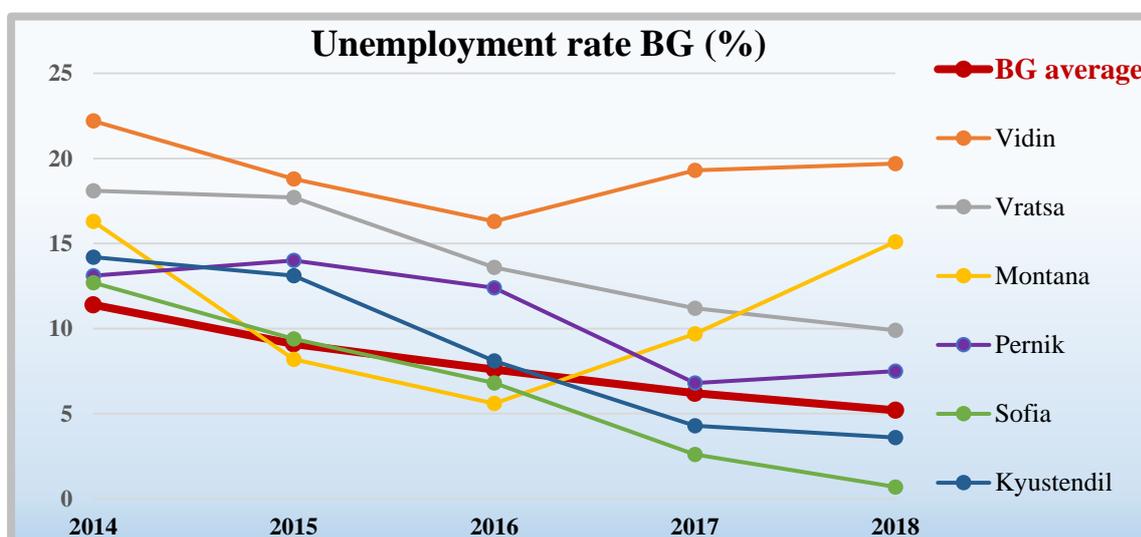
While the Serbian NUTS III level equivalent regions show an unemployment rate above and most of them close to the national average, the figures of the Bulgarian district are quite diverse – for example the rate in Vidin district is almost 4 times above the national average, while for Sofia is almost 5 times below the average.

Unemployment affected mostly the people in the age group between 15 and 24. In Bulgaria,

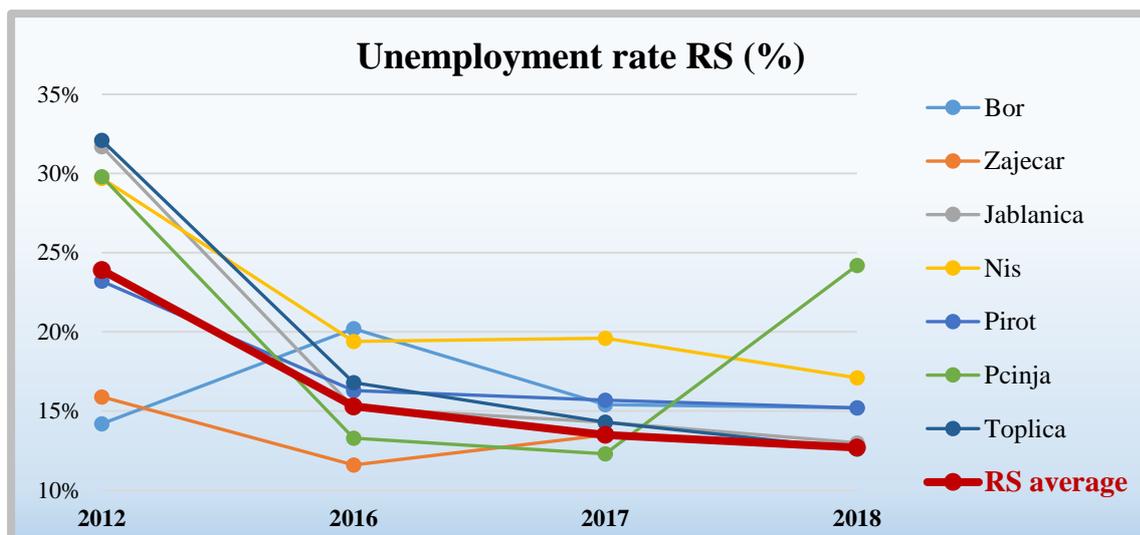
unemployment rate for this group is 12.717%, which is more than twice above the average of 5.2 % for the country.

Figure 12: Unemployment rate trends per districts in CBC region (%)

	2014	2015	2016	2017	2018
BG average	11,4	9,1	7,6	6,2	5,2
Vidin	22,2	18,8	16,3	19,3	19,7
Vratsa	18,1	17,7	13,6	11,2	9,9
Montana	16,3	8,2	5,6	9,7	15,1
Pernik	13,1	14	12,4	6,8	7,5
Sofia	12,7	9,4	6,8	2,6	0,7
Kyustendil	14,2	13,1	8,1	4,3	3,6



	2012	2016	2017	2018
RS average	23,9%	15,3%	13,5%	12,7%
Bor	14,2%	20,2%	15,4%	15,2%
Zajecar	15,9%	11,6%	13,5%	12,7%
Jablanica	31,7%	15,2%	14,3%	13,0%
Nis	29,7%	19,4%	19,6%	17,1%
Pirot	23,2%	16,3%	15,7%	15,2%
Pcinja	29,8%	13,3%	12,3%	24,2%
Toplica	32,1%	16,8%	14,3%	12,6%



Source: NSI and SORS

During the period 2014-2018 a tendency of decrease in the unemployment rate was observed in all *Bulgarian* border districts with exception of Montana district where unemployment rate increases in 2017 and 2018 in comparison to 2016. At the beginning of the period in 2014, the highest unemployment rate was registered in Vidin district (22,2%) and the lowest rate was in Sofia district (12,7%) followed by Pernik district (13,1%), while in the ending of the period in 2018 the highest unemployment rate was again in Vidin district (19,7%) and the lowest rate was in Sofia district (0,7%) followed by Kyustendil district (3,6%).

In the period 2012-2018 in the *Serbian CBC area* was observed tendency of decrease in the unemployment rate in all districts with the exception of Pčinja district. At the beginning of the period in 2012, the highest unemployment rate was registered in Jablanica district (50,95%) and the lowest rate was in Bor district (32,01%) followed by Zaječar district (39,04%). At the end of the period in 2018 the highest unemployment rate was in Pčinja district (24,20%) and the lowest rate was in Toplica district (12,60%) followed by Zaječar district (12,70%).

Youth unemployment rate in Serbia between 15 and 24 for 2018 was 29,7%. In comparison with the general population, youth are still at a disadvantaged position, with an employment rate more than twice below this of the rest age groups population and an unemployment rate more than twice above.

The problem of long-term unemployment is particularly difficult to be tackled given the fact that the bulk of long-term unemployed are people without professional qualification and with a low level of education thus in a particularly vulnerable position on the labour market. There is also a lack of employment opportunities, especially in rural areas and a considerable shadow

economy. The similar, but very high unemployment on both sides does not enhance the permeability across the border and the young people from both sides are more willing to choose other survival strategies instead of looking for a job in the neighbouring country.

Long-term unemployment, coupled with low economic activity rates in the region, lead to an increased risk of poverty. Around 25% of Serbian citizens are exposed to the risk of becoming poor – those aged up to 18 being most at risk. Households comprising two adults with three or more dependent children had the highest at-risk-of-poverty rate in 2012 (44,4%), as well as single parents with one or more dependent children (36,2%). At the same time, Bulgaria has recorder the highest shares of persons being at risk of poverty or social exclusion in EU - almost 38,9% of the population (the EU average for 2012 was 24,8%). The figures at national level for both Bulgaria and Serbia are proportionally. The most important sector in employment creation in both countries, as well as in the CBC region, is services, followed by industry. The distribution of active population per sector shows a strong specialization in manufacture in the Sofia, Pernik, Jablanica, Pirot and Toplica, while in Vidin, Montana, Sofia and Zaječar, emerges a strong concentration in agriculture.

Table 18: Active population per sectors in CBC region (per %)

District	Agriculture	Industry	Services
Vidin	33,86	16,32	49,81
Montana	32,99	26,23	40,78
Vratsa	19,66	33,88	46,47
Sofia	21,09	35,74	43,17
Pernik	17,38	32,16	50,46
Kyustendil	19,66	33,88	46,47
BULGARIA	4,30	35,24	60,76
Bor	5,94	37,87	56,79
Zaječar	10,41	25,92	64,33
Jablanica	7,00	38,67	55,27
Nišava	1,93	33,47	65,11
Pirot	1,99	44,68	53,36
Pčinja	2,07	40,32	58,57
Toplica	6,36	38,52	55,15
SERBIA	5,22	29,41	65,37

Source: NSI and SORS

2.6. SOCIAL DEVELOPMENT

2.6.1. Education

Education and continuing education are among the main drivers of economic growth. The successful implementation of education policies affects the development of human capital, economic growth and smart specialisation, the labour market, social inclusion and quality of life. Therefore, education and continuing education are among the main drivers of economic growth.

In April-June 2018, 8 442 fifteen-year-olds from 190 schools in Serbia and 6 900 fifteen-year-olds from 197 schools in Bulgaria participated in PISA 2018 test. Reading, mathematics and science were the main subject assessed. The PISA test results show that in Bulgaria, mean performance in reading remained stable, around a flat trend line. In mathematics, performance improved between 2006 and 2018, but the improvement was concentrated in the early years (2006-2012). In science, performance in 2018 fell below the level observed in 2012 and 2015. In Serbia, mean performance in reading and mathematics improved since the country first participated in PISA in 2006; performance in science remained stable, on average. Across all three subjects, improvements were more marked amongst the highest-achieving students, and a widening of performance gaps was observed. In Serbia on the literacy scale, 38% failed to reach the basic literacy level, 40% in mathematics and 38% in science.

As of 2018 there were 1 955 general education schools in Bulgaria. Out of them 131 were primary schools, 1 173 basic schools, 68 combined schools, 115 upper secondary and 468 secondary schools. In comparison with the previous school year, because of closure or modification, the total number of general education schools decreased by 14. According to Eurostat, the share of early school leavers in the EU-28 in 2018 was 10,6% and in the Republic of Bulgaria it was 12,7%, with a positive trend compared to the previous two years - 2015 (13,4%) and 2016 (13,8%). The general conclusion is that Bulgaria is still not achieving the Europe 2020 target of 10% early education and training drop outs despite the positive change in 2017.

Taking into consideration the almost equal cooperation areas in both countries the data provided show also an almost equal share of pre-school facilities, children and educators. In addition with the exception of Pirot district the number of children per teacher are very close to the national average of the respective country.

Table 19: Number of kindergartens, children and pedagogical staff

Administrative unit	Facilities	Children	Educators	Children / educator
Vidin	25	2 193	221	9,92
Vratsa	44	5 164	505	10,23
Montana	48	3 955	345	11,46
Kyustendil	19	3 092	272	11,37
Pernik	22	3 515	307	11,45
Sofia	74	7 546	661	11,42
Total BG CBC	232	25 465	2 311	11,02
<i>Share %</i>	<i>12.65%</i>	<i>11.64%</i>	<i>11.67%</i>	
Total for Bulgaria	1834	21 8767	19799	11,05
Bor	39	2 175	221	9,84
Zaječar	46	2 352	205	11,47
Jablanica	102	3 805	331	11,50
Nišava	143	8 662	695	12,46
Pirot	20	1 850	124	14,92
Pčinja	111	4 355	395	11,03
Toplica	25	1 666	129	12,91
Total RS CBC	486	24 865	2 100	11,84
<i>Share %</i>	<i>17.93%</i>	<i>12.06%</i>	<i>11.82%</i>	
Total for Serbia	2 711	206 170	17 765	11,61

Source: NSI and SORS

In the case of number of students/pupils, we have a decrease in the number of students after 2016. For 2018 on Serbian territory number of student remains almost the same. There is a decrease of the number of pupils on Bulgarian territory due to high percentage of “early school leavers” – 12,7% of population aged 18-24 for year 2018, according to the statistics for early leavers from education and training. In comparison with 2013, percentage of “early school leavers” on Serbia territory decreased from 8,9% to 6,8%. The closure of educational institutions, especially in small settlements, together with other social and family factors, negative attitudes to the learning process and lack of motivation, difficulties in learning the educational material, etc., also reflects in a significant share of early school leavers.

In both countries/regions, the number of students enrolled in universities continues to decrease, mainly due to demographic trends. In addition, most of the young people prefer to continue their education abroad. Therefore, the Strategic Framework for European Political Cooperation in Education and Training (ET 2020)¹⁸ sets additional general objectives for lifelong learning

¹⁸ https://ec.europa.eu/education/policies/european-policy-cooperation/et2020-framework_bg

and mobility, equality and social cohesion, fostering creativity, innovation and entrepreneurship at all levels of education and training, in order to overcome the deficits in the education system.

Table 20: Primary and secondary education

Administrative unit	Schools	Pupils	Teachers	Pupils per teacher
Vidin	28	6 583	572	11,5
Vratsa	57	13 904	1 262	11,0
Montana	49	10 219	878	11,6
Kyustendil	30	8 792	735	12,0
Pernik	32	8 744	828	10,6
Sofia	80	18 650	1 648	11,3
BG CBC	276	66 892	5923	11,3
<i>Share %</i>	<i>14.05%</i>	<i>11.49%</i>	<i>12.02%</i>	
Total BG	1 964	581 957	49 294	11,8
Bor	97	7 411	972	7,6
Zaječar	88	6 926	883	7,8
Jablanica	178	16 020	2 134	7,5
Nišava	219	26 514	2 963	8,9
Pirot	65	5 477	680	8,1
Pčinja	195	17 121	2 464	6,9
Toplica	86	6 680	849	7,9
RS CBC	928	86 149	10 945	7,9
<i>Share %</i>	<i>27,70%</i>	<i>16.05%</i>		
Total RS	3 350	536 528		

Source: NSI and SORS

Comparing data for the years 2017 and 2018 indicate a decrease of teaching staff in primary and high schools for some districts. For Serbian territory the availability of teaching staff presents a problem in rural and remote areas. In comparison, on Bulgarian territory is observed increasing of teaching staff.

Table 21: Higher education

Administrative unit	Higher schools	Teaching staff	Students	Graduates
Vidin	-	10	326	-
Vratsa	-	194	946	189
Montana	-			
Pernik	1	48	88	5
Sofia	1	48	2,050	946
Kyustendil	1			
BG CBC	3	300	3 410	1 140
<i>Share %</i>	<i>5,56%</i>	<i>1,38%</i>	<i>1,53%</i>	<i>2,15%</i>
Total BG	54	21 756	222 997	53 115
Bor	1	87	1 080	156

Zaječar	1	41	579	172
Jablanica	1	117	1 686	384
Nišava	12	1 486	21 873	782
Pirot	0	23	163	195
Pčinja	1	68	854	609
Toplica	0	96	1 766	199
RS CBC	16	1 918	28 001	2 497
<i>Share %</i>	<i>8,56%</i>		<i>11,22%</i>	<i>5,51%</i>
Total RS	187		249 656	45 280

Source: NSI and SORS

The share of higher schools / universities to the total number in the respective country is much better on Serbian territory but the proximity of Sofia city has to be taken into consideration (almost 25% of all universities are located there). Due to lack of some statistic for Montana and Kyustendil the share of teaching staff, students and graduates cannot be analysed.

Table 22: Pupils/students covered by educational activities on different levels

Administrative unit	Primary and lower secondary education		Secondary and vocational schools		Universities		Total
	<i>number</i>	<i>share</i>	<i>number</i>	<i>share</i>	<i>number</i>	<i>share</i>	
Vidin	4 720	68,32%	1 863	26,96%	326	4,72%	6 909
Vratsa	10 542	70,99%	3 362	22,64%	946	6,37%	14 850
Montana	7 814	76,47%	2 405	23,53%	no data	-	10 219
Kyustendil	6 897	78,45%	1 895	21,55%	no data	-	8 793
Pernik	7 129	80,72%	1 615	18,29%	88	1,00%	8 832
Sofia	15 075	72,83%	3 575	17,27%	2 050	9,90%	20 700
Total BG	44 7107	55,54%	134 850	16,75%	222 997	27,70%	804 954
Bor	7 800	62,57%	3 342	26,80%	1 080	8,66%	12 467
Zajecar	7 085	61,31%	3 592	31,08%	579	5,01%	11 556
Jablanica	16 477	61,83%	7 638	28,65%	1 686	6,33%	26 651
Nišava	26 888	42,93%	12 910	20,61%	21 873	34,93%	62 628
Pirot	5 611	66,07%	2 543	29,94%	163	1,92%	8 493
Pčinja	17 912	64,14%	8 589	30,75%	854	3,06%	27 925
Toplica	6 770	56,53%	3 198	26,70%	1 766	14,75%	11 975
Total RS	543 028	52,27%	246 287	23,70%	249 656	24,03%	1 038 971

Source: NSI and SORS

The level of primary and secondary education in the CBC region is above the national average of the respective partnering country, while with the exception of Nišava district all other districts/NUTS III equivalents have a level far below the average figures of the two states in higher education. Education and training can help increase employment opportunities and make

it easier to adapt to emerging sectors in the context of globalisation. Targeted measures are needed for social integration of disadvantaged groups. In this respect, initiatives for partnerships between school and economic units have to be further supported in order to achieve a better integration of the youths on the labour market.

2.6.2. Youth entrepreneurship

A factor that shows a significant correlation with the labour market dynamics and equilibrium is entrepreneurship. The size of investments and their structure determines the speed and nature of economic growth. Poor investment reduces economic growth and employment, while the reverse process stimulates economic activity in terms of output and employment.

In general, youth entrepreneurship should be a cross-cutting issue in educational systems, and should not be a part of just students that took interest in economics.

According to 2016/17 GEM National Report on entrepreneurship, Bulgaria has a number of significant weaknesses of the sphere of entrepreneurship. The most critical ones have to do with the entrepreneurship education at the primary and secondary levels and the lack of targeted government support and initiatives that turn entrepreneurship into a government priority. Young people with innovative and internationally oriented businesses are also faced with several obstacles as: access to finance, government policies, lack of active search for solutions and business acceleration programmes, culture and social norms, etc.

The share of necessity-motivated female entrepreneurship is very similar to the male equivalent. The most entrepreneurially active individuals are the 25-44-year-olds. The group of 18-24-year-olds shows a participation rate almost as high as the subgroup of 35-44-year-olds.

Another stable trend in the region is the youth migration from smaller towns (villages) to bigger cities due to lack of opportunities for prosperity in smaller settlements.

On Serbian territory there is no adequate entrepreneurship education – neither in elementary and secondary school, nor in university. Young people with innovative and internationally oriented businesses are faced with outdated business environment which hampers their growth. They face severe issues with access to finance and on-line payments, complicated tax procedures - outdated laws and procedures, institutional persistence on the use of stamp, VAT refund delays, etc. This leads to a contradiction: instead of being supported and promoted, the most proactive youth sometimes feel forced to move to some other country with a more

favourable business environment. Youth in vocational education and training would have more favourable starting point if there was an adequate legal framework regulating craft business.

In addition, the Serbian Governance has shown its intention to tackle the above issues through various strategies implemented during the previous period. However, these strategies are not being implemented fully. However, compared to 2017, there is a decrease in the share if absolute numbers in the projects area in the proportion of active, unemployed and non-active share if the population aged 15-24 in the CBC area.

2.6.3. Healthcare services

Quality and quantity of health care services in the area can be described through some quantitative indicators, available in all counties and districts of the programme area, shown in the table below. The health care services play a critical role in the creation of the conditions for an inclusive growth, and the fight against social exclusion and poverty. Investments in the right health solutions can lead to a sustainable future with measurable impact.

Table 23: Staff statistics in healthcare institutions for 2018 in CBC area (number)

District	Doctors / physicians	Dentists	Pharmacists	Population per doctor
Vidin	292	100	65	291
Vratsa	595	142	114	273
Montana	425	94	77	287
Sofia	901	169	181	254
Kyustendil	422	146	93	282
Pernik	346	153	87	349
Total BG CBC	2 981	804	617	
<i>Share%</i>	<i>9,91%</i>	<i>9,62%</i>	<i>1,32%</i>	
Total BG	30 078	8 355	46702	236
Bor	385	25	4	298
Zaječar	366	22	48	300
Jablanica	526	52	8	386
Nišava	1393	117	104	261
Pirot	242	17	26	355
Pčinja	511	64	22	389
Toplica	230	26	20	371
Total RS CBC	3 673	327	248	
<i>Share%</i>	<i>18,38%</i>	<i>20,35%</i>	<i>15,00%</i>	
Total RS	19 984	1 607	1 653	349

Source: NSI and the Institute of Public Health of Serbia

The data show that the share of doctors/physicians, dentists and pharmacists on Serbian CBC territory is more than twice above figures on Bulgarian territory but the proximity of Sofia city has to be taken into consideration.

With the exception of Nišava followed by Bor and Zaječar districts the number of the population per doctor is close to the national average for the respective country.

Compared with previous years, the data show that there is a downward trend in number of physicians, dentists and especially pharmacists after 2016 in the Serbian programme area. For Bulgarian area is observed also decrease of doctors and pharmacists. In the last two years on Bulgarian territory there is upward trend in number of dentists. Compared with previous years from the same research is observed trend of fewer young professionals joining the healthcare system due to a lower number of students and the migration of skilled medical professionals (physicians and nurses). The combination of these processes could jeopardise the capacity of the systems to provide high-quality and timely health services to the population in the mid-to-long term.

Table 24: Hospitals and hospital beds in CBC area (number)

District	Hospitals	Hospital beds
Vidin	2	335
Vratsa	13	1 283
Montana	5	984
Sofia	5	1 717
Kyustendil	4	1 011
Pernik	14	477
Bor	6	685
Zaječar	9	1 090
Jablanica	8	845
Nišava	20	3 055
Pirot	6	352
Pčinja	11	878
Toplica	5	373

Source: NSI and the Institute of Public Health of Serbia

As of 2018, the existing healthcare centres of the border area include 108 hospitals, clinics, and institutes for public health universities/faculties. The uneven distribution of hospitals and hospital beds fails to ensure equitable access to healthcare for all, particularly the residents of small remote agglomerations situated at a distance from large urban agglomerations. Population decline, ageing and the depopulation of some peripheral regions, compounded by poorly maintained transport infrastructure along the periphery and in remote agglomerations, present

difficult challenges to the healthcare system and regional policy alike. Health care services offered by private centres has grown significantly in the recent years.

Table 25: Staff number in healthcare institutions in CBC area, 2018

District	Number of doctors - general practice	Population	Population per doctor - general practice	Number of specialist doctors
Vidin	75	84 865	1 132	200
Vratsa	110	162 549	1 478	388
Montana	109	129 637	1 189	291
Sofia	133	229 041	1 722	483
Kyustendil	90	119 041	1 323	254
Pernik	87	120 880	1 389	210
Total BG CBC	604	846 013	1 401	1 826
Bor	73	114 816	1 573	264
Zaječar	58	109 634	1 890	260
Jablanica	115	203 254	1 767	356
Nišava	63	364 157	5 780	1 218
Pirot	43	85 964	1 999	170
Pčinja	105	198 671	1 892	370
Toplica	22	85 287	3 877	176
Total RS CBC	672	1 161 783	1 729	2 841

Source: NSI and SORS

The average life expectancy in Bulgaria is slightly rising, but remains the lowest in the EU - 74.8 years for the period 2015-2017. Compared to the previous period (2014-2016), the average life expectancy is increased by 0.1 years. The average life expectancy in Bulgaria for men is 71.3 years, while for women it is 7.1 years more - 78.4 years. For the period between 2007 and 2017, the increase in males is 2.0 years and in females by 2.1 years. In Serbia life expectancy in 2017 reached 75.4 years. That year, the life expectancy for women was 77.9 years and for men 73.0 years.

The remoteness of some small municipalities from urban agglomerations from the point of view of medical assistance delivery (primary, specialist, hospital, urgent and emergency) remains a serious challenge in healthcare. The most important tasks in healthcare will be linked to demographic projections and the changing needs of the population in all age groups in order to better prepare it for the specific challenges arising from longer life expectancy through appropriate prophylactic care and educational efforts. There should be more emphasis on this matter in the future years, in order for the numbers to grow so that the population in the programme area would benefit from accessibility to health care services and effective and timely care.

2.6.4. Sport

Young people are the present and the future of our society, a resource of innovations and a driving force of the development of society. Therefore, it is required to continuously and systematically invest in youth development and to establish a partnership between the youth and the state in order to increase the active participation of young people in society, encourage their social integration and ensure their inclusion in the development of youth policy. Participating in a sport or any kind of physical exercise contributes to a great extent to a healthier physical and psychological development of children. Benefits of sport and physical exercising as factors of prevention of various negative influences in the period of maturing of the youth, such as delinquency and different kinds of addiction, are treated in a great number of studies.

Three aspects of sport have been analysed within the general framework of government policy on physical training - sport as part of recreational activities; organised sport activities and high performance sport activities. Due to the partial and fragmented nature of available information the analysis is focused on the major sport facilities of national and local importance that can be used for both elite sport training and major sporting events and in order to satisfy certain sport and cultural needs of a wider range of users.

Modern lifestyle in combination with longterm school and home sitting, requests additional intervention considering prevention against bad influences - bad feeding, low movements, stress, etc. It is a fact, that sports activities are very strong counter - weight.

The data shows that shows that very small number of children attend afterschool sports activities. For wider aspects of children sports engagements, it is essential to make more complex conception of afterschool children activities, considering their age, abilities and, of course, children affinities for different sports. That conception demands forming of school sports association, extra engagement of professors, exact organisation and defined system of sports competitions.

Sport and sport infrastructure in global urbanist practice are drivers for urban renewal and economic growth, attracting investment to cities in long-standing traditions in sport, strong teams or top athletes. In the past few years the national profiles of sport infrastructure show an increase in investment in the construction of sport arenas, primarily in district centres. New sport sites for different age groups, pedestrian areas and bicycle lanes are being constructed, existing sport facilities are being upgraded and renovated and new sport complexes are being

built in agglomerations of different sizes and types. Public-private partnerships have been established for the implementation of some of these activities via novel FIs.

Despite this, serious problems persist in the management, efficient use and maintenance of constructed facilities, in equipping and furnishing existing and new facilities, and the recruitment of sufficiently competent and skilled staff to ensure a high quality of service delivery. The goal of ensuring equitable access to sport and sport facilities to vulnerable groups, people with disabilities and restricted mobility has not yet been achieved. There are many agglomerations without any sport facilities and infrastructure that is well adapted to use by pedestrians or cyclists. A significant part of these challenges can be addressed through more adequate and timely solutions, if a concept model for the development of the complex system of physical culture and sport is developed with the involvement of all stakeholders.

2.7. ENVIRONMENT

The diversity of terrain, climate, ecological, hydrological and pedological (soils in their natural environment) characteristics of the targeted area showcase significant geo diversity and biodiversity. As a result of the climatic, relief and soil exuberance the border area is characterized by highly varied flora and fauna. However, it can be easily affected by economic activities like industry, construction, etc. Air, water and soils are the most important environmental components, as not only human health, but also the quality of life and the protection of biodiversity depend on them. Limiting the harmful impact of climate change and mitigating the risk of natural disasters are dependent on their quality and their integrated management. The preservation and careful management of the natural environment is one the key factors for the further sustainable development of the region and the improvement of its attractiveness as a tourist destination. It has wide-reaching social and economic implications in terms of added value to the quality of life in the region.

The factors which are expected to have an impact on human health, environment and economic growth include extreme temperatures, air quality, higher precipitation frequency and intensity, heavy rain and the related processes and disasters.

2.7.1. Air

The air we breathe and live in is a critical natural resource for humans, plants and animals. Good air quality is essential to protect not only human health and natural capital but also the built environment and therefore part of the cultural heritage. Natural sources such as volcanic

eruptions, sea salt or dust from wind erosion can contribute to air pollution. However, most pollutants are released as a result of human activities in economic sectors such as transport, agriculture, generation and use of energy, industry or waste management.

Emitted pollutants, once released, undergo various physical and chemical processes (such as transport, reactions, absorption, and deposition on vegetation or with rain water), impacting ambient air quality, which can be analysed by measuring pollutant concentrations. Air pollution affects human health, vegetation and ecosystems, with particulate matter (PM), nitrogen dioxide (NO₂) and ground-level ozone (O₃) being the pollutants of greatest concern.

Assessments of air quality are based on data from monitoring stations managed by national authorities in Serbia and Bulgaria. Those stations indicate that the concentrations of air pollutants, especially PM, regularly exceed the levels that protect human health. Therefore, ambient air quality in the CBC area, namely pollution with fine PM remains a major problem.

Table 26. Air quality statistics

Monitoring point	NO ₂ µg/m ³	CO µg/m ³	SO ₂ µg/m ³	PM ₁₀ µg/m ³
Vidin			8,23	41,26
Vratsa	19,26	0,32	-	29,29
Montana				35,96
Pernik - Center	16,36	0,48	20,96	36,69
Pernik - Tsarkva				35,90
Pirdop			15,09	24,35
Niš - Osnovna skola Sveti Sava	26,37		6,40	18,2
MAXIMUM LIMIT	40	10	125	40

Source: MOEW, 2019 and EEA <https://www.eea.europa.eu/data-and-maps/dashboards/air-quality-statistics> 2018

The biggest environmental polluters at the CBC area are: the mining and smelting basin Bor, the industrial complexes in Kladovo and Negotin, the coal mining and heavy industry in Pernik. Those industrial enterprises impose seriously damage on the environment. In Bor, the air pollution is present, more specifically sulphur dioxide. PM₁₀ concentrations, according to data from the Serbian Environmental Protection Agency (SEPA), have in the past few days reached 100 micrograms per cubic meter in Niš, 250 in Bor.¹⁹

¹⁹ <https://balkangreenenergynews.com/pm10-concentration-in-serbia-10-times-above-limit-as-region-fills-most-polluted-cities-lists/>

According to Regional inspection of environment and water in Bulgaria, in 2018 the average annual concentration of PM₁₀ in Montana in 2017 is 44.1 µg / m³ - 1.1 times above daily average maximum permissible concentration. For 2018 there is a positive tendency for reduction of air pollution with fine PM. Due to use of solid fuels for domestic heating in the winter season, the level of fine PM in Pernik is also close to the permissible concentration.

Therefore, in the large cities this issue is being addressed through measures related to energy cost allowances, replacing heating appliances with more efficient and less polluting ones, accelerating the deployment of gas-supply networks, putting in place early warning systems and common measures to increase control. Unfavourable meteorological conditions also affect the PM₁₀ concentrations – low wind speed, fog and temperature inversion.

2.7.2. Water and soils

Water is an essential resource for human health, agriculture, energy production, transport and nature. Water resources refer to water available for use in a territory and include surface water and groundwater. Surface water ecosystems are defined as rivers, lakes, and transitional and coastal waters. In addition, many wetlands such as floodplains, bogs and mires depend on the availability of water for their existence. They are often found in the proximity of surface waters or depend on groundwater.

Groundwater and surface water represent two main sources of water supply in Bulgaria and Serbia. Between 1997 and 2016 gradual improvement of the majority of indicators for monitoring groundwater quality was observed. Nitrates are a major groundwater pollutant – in approximately 21% of the monitored groundwater points the average annual values were found to be above the limit values. During the 20-year period concerned there have been individual exceedances of heavy metal content in groundwater, in most cases unstable in time.

Transboundary surface water resources constitute a major asset for Bulgaria and Serbia. Due to its diverse relief, the Danube River Basin, has a varied precipitation levels that strongly affect run off and discharge levels in streams. Apart from their commitment to comply with EU water and environmental legislation, Bulgaria and Serbia are effectively involved in trans-boundary cooperation within the frame of international conventions, particularly within the Danube river basin.

As signatories to the Danube River Protection Convention, both countries have agreed to cooperate on fundamental water management issues by taking "all appropriate legal,

administrative and technical measures to at least maintain and where possible improve the current water quality and environmental conditions of the Danube river and of the waters in its catchments area, and to prevent and reduce as far as possible adverse impacts and changes occurring or likely to be caused."

Main rivers that cross the border area are Nišava (218 km), Timok (202 km), Erma (74 km), Struma (275.1 km), Iskar (352.3 km), Ogosta (141,1 km) and Lom (92,5 km). The Danube River which borders the region to the North is a natural resource with strong potential for the region.

The Ogosta and Vlasina artificial lakes as well as numerous smaller ponds complement the rich water resources of the region. Groundwater (both springs and thermal waters) resources are available across the whole cooperation area. The most significant thermal springs with potential for development of spa tourism are the ones in the towns of Kyustendil, Sapareva Banja, Varshets, and Rudarci (on Bulgarian side) as well as Niška Banja, Vranjska Banja, Zvonačka Banja, Soko, Lukovska Banja (on the Serbian side).

Larger part of geothermal energy is used for swimming pools, bathing and balneology. Other small capacity is used for building heating systems, including heat pumps, and a part of the sources are used for direct use greenhouse heating systems having very low load factors. Even though there are still persistent technical and financial difficulties in using geothermal heating systems, a number of projects for geothermal heating station, district heating and geothermal water network in Sapareva Banja and Kyustendil have already been initiated and prepared. The results of those projects is expected to form the basis for promotion of systematic use of geothermal energy both in Bulgaria and internationally, while allowing the region to benefit from the transfer of knowledge of best applicable technology and most appropriate financing mechanisms.

The soil cover in the programme area is also characterized by significant variety: from forest soil in the mountain areas to alluvial soils in the river valleys which provides favourable conditions for agriculture (cereals, fruit and vegetable crops). Soil erosion is a natural process, occurring over geological time. Most concerns about erosion are related to accelerated erosion, where the natural rate has been significantly increased by human action.

Soil erosion is recognized as one of the major soil degradation processes on the territory of Bulgaria. Water erosion affects approximately 40% of the country territory while wind erosion (in plains and deforested areas) affects approximately 15% of the country territory. The highest relative risk for water erosion of agricultural soils exists for the cropland in the areas of Sofia

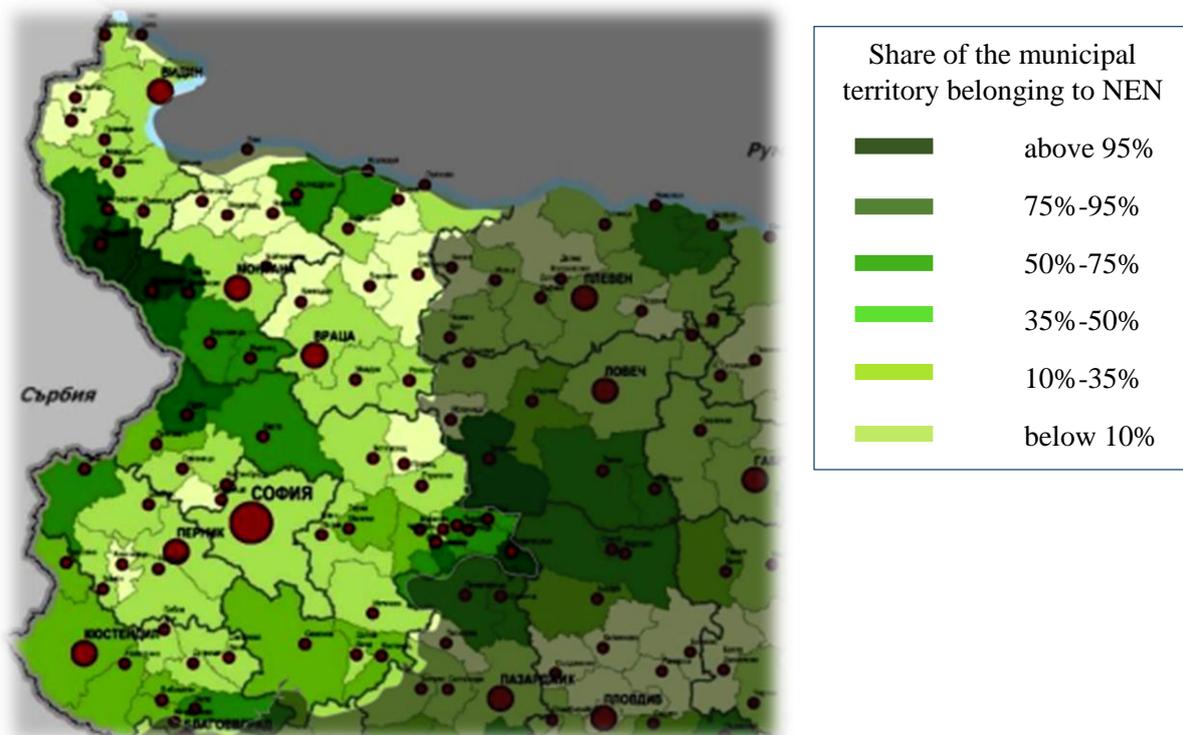
with an average forecast intensity of 10-12 t/ha per year, followed by the areas of Kyustendil (5-8 t/ha per year) and . The highest relative risk of wind erosion exists for the cropland in the areas of Vratsa (50-60% of the areas), followed by Vidin and Montana (40-50% of the areas).

In Serbia, 86% of its territory is endangered by soil erosion of various rates. Hilly and mountainous regions, which constitute three-quarters of Serbia's land area, are naturally susceptible to soil erosion and torrents. Nearly all of these regions are exposed to erosion processes and half of them to high-intensity erosion. The most endangered region in Serbia is the southeast part of the country that is close to the Bulgaria border²⁰.

2.7.3. Protected areas, Biodiversity, Flora and Fauna

Bulgaria has 1 017 protected areas which cover approximately 5,3% of the country's territory. Their total area gradually increased from 5,2% in 2007 to 5,3% in 2014, and that percentage remained unchanged in 2016 when the total number of protected areas is 1 012. By the end of 2016 Bulgaria had designated 339 protected zones in the Natura 2000 network and those covered 34,4% of the national territory. The above data rank Bulgaria's National Ecological Network (NEN) as third in the EU.

Map 4: Share of the municipal territory belonging to NEN in BG CBC area



Source: National Centre for Regional Development - Bulgaria

²⁰ <https://www.sciencedirect.com/science/article/pii/S2095633915300277>

The border area is characterized by a variety of flora, fauna and natural habitats. It is characterized by clean and preserved environment. Numerous plains and valleys form a strong natural potential for the development of agriculture, forestry and tourism.

The region is rich in natural parks, protected areas and natural reserves due to its location in the centre of the Balkan Peninsula.

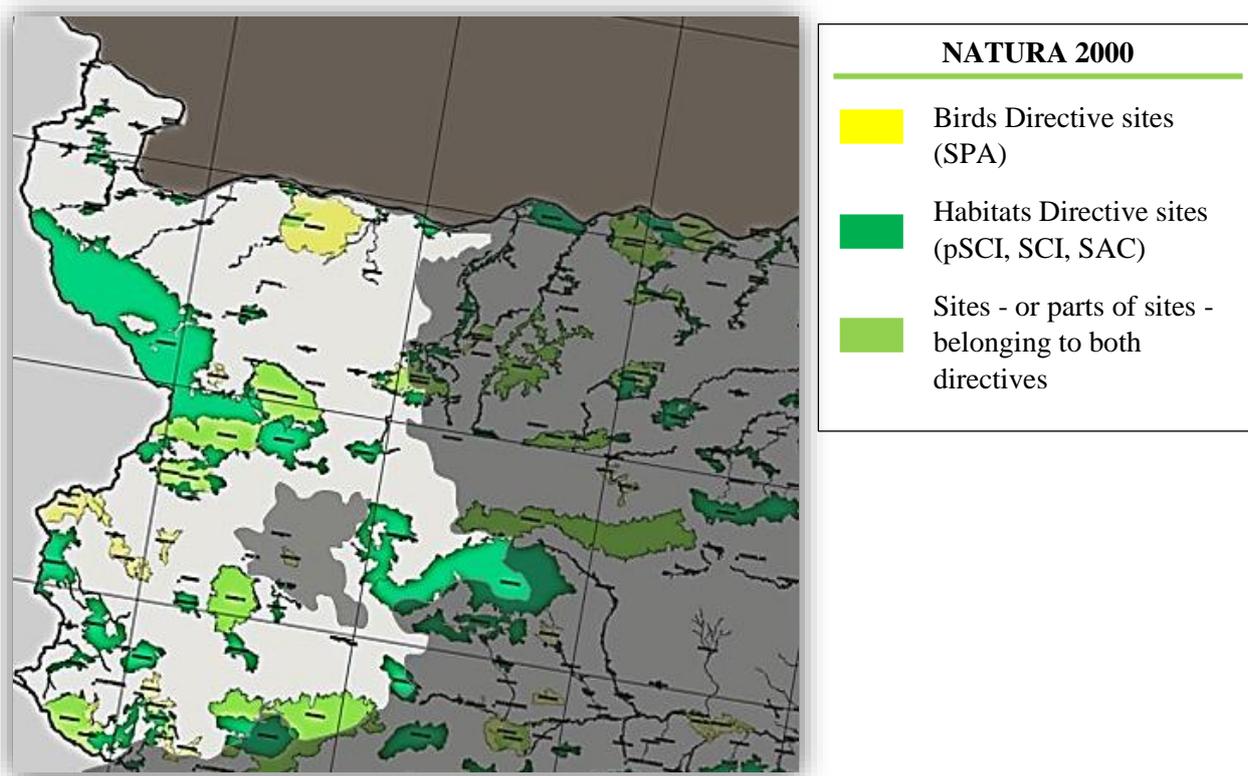
A further credit to the natural wealth of the region bring also its healthy thermal springs, which form a factor with significant added value to the potential for tourism development in the region.

Numerous geomorphologic phenomena (caves, natural bridges, gorges and canyons), hydrologic (springs), dendrology monuments and smaller nature reserves are protected by formal instruments as well. These natural beauties combined with the rich historical and cultural heritage of the region are unique regional assets which should be built on, invested in and further developed to improve the CBC region's attractiveness as a tourist destination and a place for living with good quality of life.

In the *Bulgaria* there are 55 reserves, 345 natural monuments, 3 national parks and 11 nature parks in the country. The total number of protected areas and sites are 1 012 and the protected species are 574. Part of the abovementioned national parks are located on CBC area, namely: Rila National Park, Central Balkan National Park, Vitosha Nature Park, Vrachanski Balkan Nature Park, etc. The Belogradchik Rocks have been declared a Natural Landmark by the Bulgarian government and are a major tourist attraction in the region. The area of Chuprene in Bulgaria is a natural reserve which is included in the UNESCO and UNO list of protected areas. The Dragoman Marsh in Bulgaria is a valuable habitat for rare and endanger plan and animal species and an important resting place for migrating birds. Other protected sites are the Seven Lakes of Rila (part of the protected area Rila National Park and in the Protected Area of the ecological network Natura 2000), and the Stob Pyramids (protected area of the category Natural monuments). Special bird protection areas can be found on the Bulgarian side as well. Vidin district also plays significant role for migration of soaring birds from eastern parts of Europe to the wintering areas in Africa with bird migration route – Via Aristotelis. The road connects the Danube with the Aegean Sea passing from Vidin District through Vrachanski Balkan and the Iskar Ravine, the Sofia Plain and the valley of Struma River. The valley of Mesta River is sometimes referred to as a branch of that route. Along these routes there are wetlands of international importance, with suitable nutrition conditions, microclimate and wind regime.

Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 27 EU countries, both on land and at sea. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the Birds Directive and the Habitats Directive.

Map 5: Natura 2000 sites



https://ec.europa.eu/environment/nature/natura2000/db_gis/pdf/BGn2k_0802.pdf
<https://natura2000.eea.europa.eu/#>

The number of protected areas in the Bulgarian CBC region included in NATURA 2000 is 129 (including 89 Habitats Directive sites and 40 Birds Directive sites) as follows:

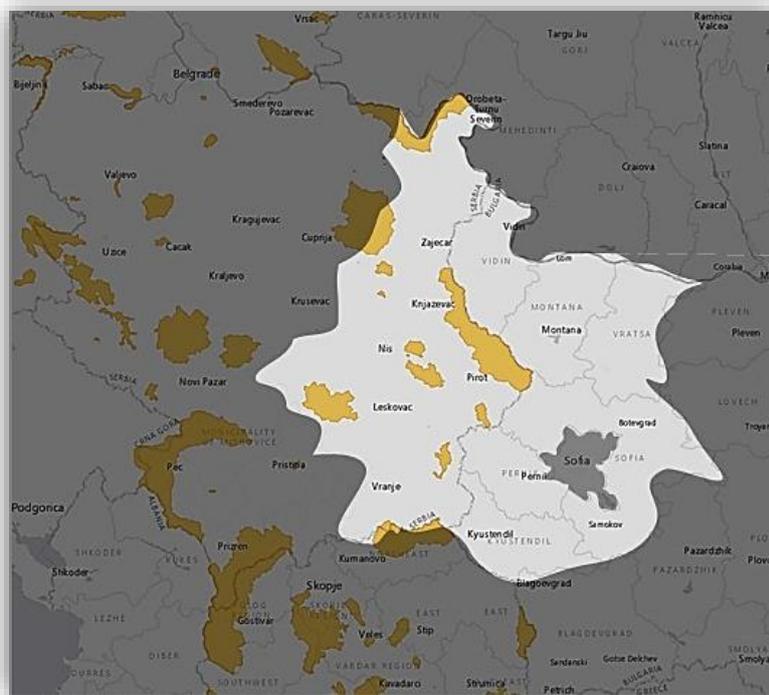
Table 27: Number of Natura 2000 sites per district

District	Birds Directive sites	Habitats Directive sites
Vidin	2	19
Vratsa	3	16
Montana	9	13
Sofia	14	19
Kyustendil	8	12
Pernik	4	10

Source: MOEW, Bulgaria

The list of protected natural values of *Serbia* includes 5 National Parks, 10 Nature Parks, 14 Landscapes of Outstanding Features, 72 Nature Reserves and Special Nature Reserves, 287 Natural Monuments²¹. The majority of afforested land is in Bor District (8% of the national value), Pčinja District (7% of the national value) and Zaječar District (6,6% of the national value). Nature Park Sićevačka gorge and the landscape of outstanding qualities Vlasina are located in the CBC region. Major Nature Reserves and Protected Areas in the Serbian part are: Pčinja valley, Stara Planina encompassing Zaječar, Dimitrovgrad, Pirot and Knjazevac, Sicevacka gorge around Niš and Bela Palanka, Lepterija-Sokograd, Ozrenske Livade near Sokobanja, Vlasina, Radan Mountain encompassing Kursumlija, Prokuplje, Bojnik, Lebane and Medvedja (Ce). The Lazar Canyon is one of the most important centres of plant and trees diversity on the Balkans. The Mali and Veliki Krš mountains are interesting, being the habitat of 11 species of birds of prey that are endangered species in Europe. Surrounding landscape of the archaeological site Gamzigrad is also formally protected as “Area of cultural and historical importance”. The surroundings of the town of Bor represent one of the most interesting geographical locations in Serbia. Other environmentally sensitive spots are located along the border with Bulgaria in municipalities of Majdanpek and Kladovo and in Toplica district and municipalities of Bor and Svrijig. The entire protected area is approx. 300 thousand ha in area.

Map 6: EMERALD Network sites in Serbia



Source: <http://emerald.eea.europa.eu/>

²¹ <http://www.panacomp.net/national-parks-and-nature-reserves-of-serbia/>

EMERALD Network is a network of Areas of Special Conservation Interest developed on the territory of the Bern Convention Parties and it represents prolongation of the principles and criteria of the Natura 2000 network in non-EU countries, hence it is a basic tool for preparation of countries for their future work under Natura 2000 and implementation of Birds and habitats Directives. Most of the border-region is mountainous to alpine terrain, except for a short undulating and hilly terrain in the northern part and a strip in the area where the main road from Sofia to Belgrade passes. The mountains are generously forested with deciduous and evergreen trees that provide excellent opportunities for tourism and recreational activities.

Most of the borderline coincides with the ridgeline of the Western Balkan Mountains and has few road connections between both sides.

2.7.4. Climate change

Several climate variables, including global and European temperatures and sea level, have repeatedly broken long-term records in recent years. Climate change has substantially increased the occurrence of climate and weather extremes, including heat waves, heavy precipitation, floods and droughts. Climate change is creating risks to, and in some cases opportunities for, the environment, the economy and people.

The Programme area is characterized with favourable climate conditions. The climate zones are from moderate-continental, transitional-continental to mountainous. Due to the ongoing climate change, future increase of natural and man-made disasters has to be assumed for the programme area.

2.7.5. Environment risks

In recent year's natural disasters as droughts, floods, forest fires and landslides have become more frequent in the Programme area due to the ongoing climate change. This will have a negative impact on all sectors of the economy, human health, ecosystems and biodiversity.

Forests in the region preserve the majority of the area's protected plants and endangered animal species. In that respect the Southern part of the area face greater risks from droughts, fires and landslides, while the Northern part of the area face greater risks from floods in the plains.

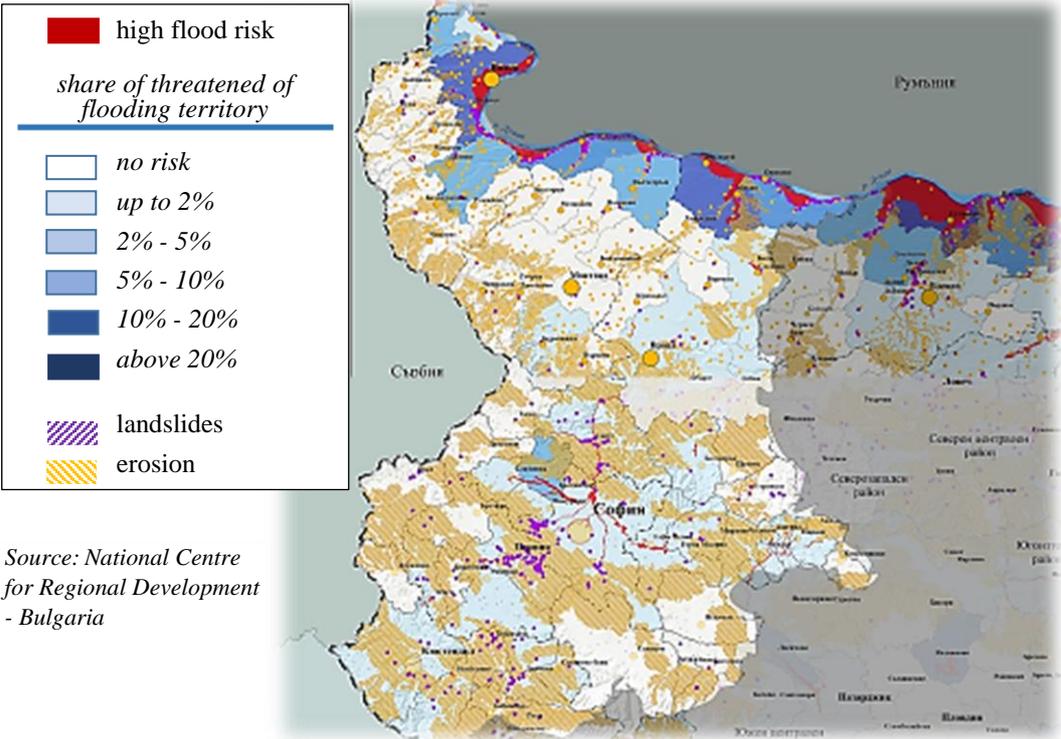
Floods

In the past years due to human interaction floods are a constant threat to the area. Areas near the Danube are faced with fluvial floods, while others encountered flash floods due to extreme

weather. The risk of fire is also increasing as a consequence of hot and dry summers in some regions, which are likely to increase due to climate change.

Among the 10 worst natural disasters (with respect to the number of affected people) in Serbia from 2006 to 2013 there have been six floods (in 2007, 2009, and twice in 2010 and in 2013) with 23,150 people affected. The floods in 2014 on the territories of Bulgaria and Serbia ones again spotlight the need for establishing joint initiatives towards prevention and mitigation the consequences of natural and man-made disasters in the CBC area. Some 4,500 kilometers of roads and 250 bridges were destroyed or damaged by floods and landslides in Serbia during 2014. A total of 2,260 buildings have been destroyed (houses, buildings, commercial buildings, etc.), and about 1,800 were damaged. In Bulgaria most damage caused landslides and floods, and most reconstruction costs for the 2010-2017 period were covered in 2011 to the amount of BGN 424 127 000.

Map 7: Scheme of areas under natural threat and risk in the BG CBC area



Forest fires

Forest fires cause serious damages to the environment and agriculture. They often result in human casualties as well. The most common causes for forest fires are as follows: self-ignition

of dry grass near forests, natural phenomena (lightnings), negligent handling of fire, uncontrolled burning of household waste, etc.

The consequences of forest fires are various, including: ecological (deforestation and erosion of soil, destruction of unique habitats of rare, protected species etc.), Economic (loss of timber, necessity of resources for remedy measures etc.) and Social (deterioration of business conditions, decline in tourism sector, depopulation of affected country sides etc.).

Though the table below presents a general decrease in the number of forest fires in Bulgaria their share in the CBC area shows an increasing tendency in the last five years that has to be taken into account in view of the serious consequences and damages caused by forest fires.

Table 28: Forest fires (numbers per year)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
BG total	1 630	2 185	3 010	764	2 245	2 474	2 448	741	480
CBC total	157	425	319	347	492	619	644	320	181
<i>CBC share</i>	9,6%	19,5%	10,6%	45,4%	21,9%	25,0%	26,3%	43,2%	37,7%
Vidin						6	34	22	9
Vratsa		118	83	27	19	48	88	83	156
Montana	14		1	43	65	105	112	90	1
Pernik	19	48				3	3	1	
Sofia	62	106	212	155	273	246	310	124	11
Kyustendil	62	153	23	122	135	211	97		4

Source: NSI

During the period 2012-2016 there were 199 reported forest fires in the Serbian CBC area, covering an area of 32.29 ha. In October 2019 a large forest fire started on the Bulgarian side of the Stara planina, spread over the border and caught over 4,000 ha of forests and pastures, with 2/3 being on the Serbian side.

The frequency of natural disasters have increased worldwide in the recent years especially since the middle of 1990s. A series of disasters have taken place and have caused serious material damages and casualties in many regions in Bulgaria and Serbia, including the border region. Reducing the risk of natural disasters requires timely and coordinated measures aiming to limit the damages caused by extreme natural phenomena and to protect the population living in high-risk areas. In that respect improvement and maintenance of the capacity of the professional units from both partnering countries to protect the population from accidents and natural disasters is necessary. Having in mind the already established good cooperation between the responsible bodies in Bulgaria and Serbia a strategic approach on risk prevention and rapid

response management in case of different emergencies – wildfires, disasters, earthquakes, collapses etc. could be envisaged.

2.7.6. Other natural risks

Landslides

Heavy rain, earthquake events and human activity contribute to the activation of landslides in Bulgaria which are most prominent along the Danube River and the Black Sea coast. The greater part of the landslide phenomena occur in the basic landslide regions - the high Danube bank in the area of the Lom depression and the right slopes of the tributaries, the regions around Sofia, Pernik and Bobov Dol.

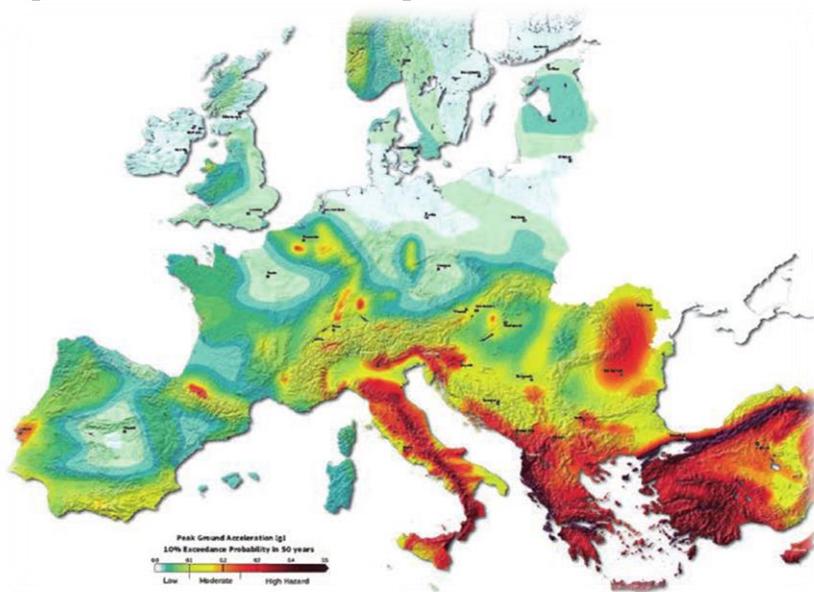
There are three categories in terms of exposure to landslides: low, moderate and high risk of landslides.

The Bulgarian CBC region is characterized by moderate to high landslide development.

Seismic Risk

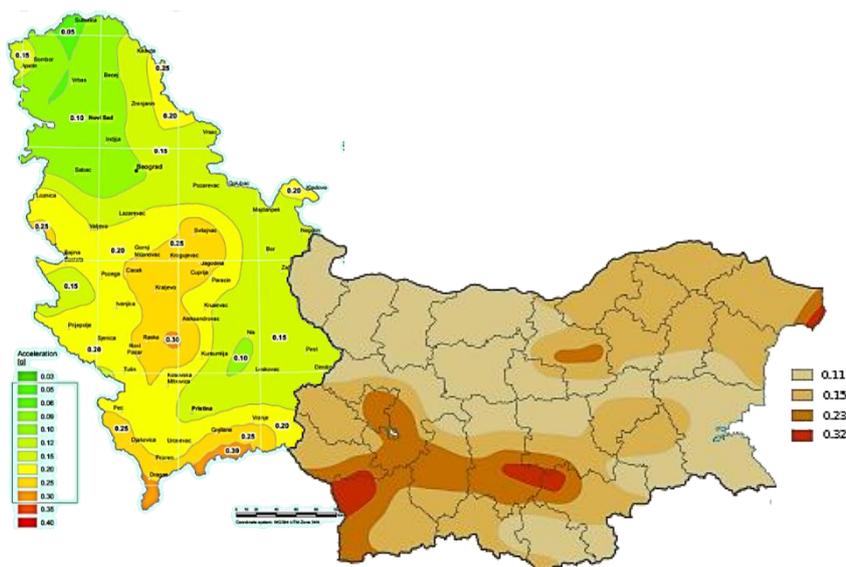
The countries of the Balkan Peninsula are located in the Aegean seismic zone, which is part of the Mediterranean earthquake area. Given the relatively high population density and high density of construction, even in the case of weaker earthquakes significant adverse effects may be observed.

Map 8: Seismic hazard in Europe²²



²² https://www.researchgate.net/figure/European-Seismic-Hazard-Map-25_fig2_301789957

Map 9: Seismic hazard in both countries



Earthquakes in Bulgaria are among the most dangerous natural disasters, as 97% of the country's territory is threatened by seismic impact.

The cross-border area is exposed to moderate and in some regions relatively high seismic risk. The Bulgarian districts in the southern part of the CBC area belong to the most vulnerable to earthquakes regions in the country.

Policies to reduce the risk of natural disasters aim to limit damage from extreme natural phenomena; to protect as much as possible the population living in high risk areas; to raise awareness, and thus improve the culture of behaviour; to develop and maintain the capacity of the units to protect the population from accidents and natural disasters. Overall civil protection mechanisms, administrative response capacity and interoperability have a lot of improvement potential.

During the programming periods 2007-2013 and 2014-2020 there are good examples for cooperation between respective Bulgarian and Serbia institutions in terms prevention of local population from natural and man-made hazards.

The problems with pollution will not be easy to overcome - there is a persistent lack of funding in the municipal budgets and there are no sufficient national funds. However, it will take years due to the heavy financial burden on Bulgarian and Serbian enterprises to meet the environmental standards and to introduce environmentally-friendly technologies.

In addition, adaptation to climate change involves all authorities at local, regional and national

levels, the private sector, civil society organisations and citizens to achieve the defined strategic objectives, namely: 1) integrating adaptation to climate change in all sectors, improving the legal framework and policies; 2) development of institutional capacity through building of expertise, knowledge base, monitoring and reporting; 3) raising awareness: improving education, participation of society in adaptation actions and 4) building sustainability by strengthening infrastructure, protecting natural and human capital and ecosystems.

2.8. INFRASTRUCTURE

2.8.1. Transport infrastructure

TEN-T network

Through the territory of the CBC region pass two of the core TEN-T network corridors with extensions to third countries, as follows:

Rhine-Danube corridor provides the main east-west link across Continental Europe. Tracing its route along the Danube River, it connects Strasbourg and Southern Germany with Central European cities to culminate at the Black Sea port of Constanta.

Orient/East-Mediterranean corridor that links northern Germany (Hamburg-Berlin) to Eastern Europe (Prague-Bratislava, Budapest-Timişoara-Craiova-Sofia) and South Eastern Europe (Sofia-Thessaloniki-Athens/Pireaus).

Map 10: TEN-T network



Map 11: Orient/East-Mediterranean corridor



Map 12: Rhine-Danube



Sources for all maps: <https://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/map/maps.html?corridor=4&layer=8,9>
<https://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/site/en/maps.html>

Road Network

Although it is strategically located in view of current and future international transport traffic flows, the border area is presently not in a position to fully benefit from this asset.

The lack of network connections from Bulgaria to Serbia create important obstacles to trade and to the economic development as well as social and territorial cohesion of the border region. The group of roads of international and national importance includes motorways, I-st class roads and some of the II-nd class roads categorized in the European network that are subject to significant traffic, including transit.

The Bulgarian CBC region is crossed by 3 out of 6 motorways:

- *A2 Hemus Motorway* from Sofia to Burgas;
- *A3 Struma Motorway* from Sofia to Kulata border checkpoint;
- *A6 Evropa Motorway* from Sofia to Kalotina border checkpoint.

The cross-border region is served by 3 of 9 first-class roads as follows:

- *Road I-1* border Romania-Vidin-Montana-Vratsa-Botevgrad-Sofia-Blagoevgrad-Kulata-border Greece / European categorization E79 /. The road is part of the core TEN-T network - Orient / Eastern Mediterranean, with the southern part of the route defined by Struma Motorway.
- *Road I-6* border North Macedonia-Gyueshevo-Kyustendil-Radomir-Sofia-Karlovo-Kazanlak-Burgas forms the direction of part of one of the additional routes included in the expanded TEN-T network as a connection between the capitals Sofia and Skopje.
- *Road I-8* border Serbia-Kalotina-Dragoman-Sofia-Pasardzhik-Plovdiv-Haskovo-Svilengrad –Turkish border

In addition the Bulgarian part of the eligible area is served by second class roads, namely:

- *Road II-11* passing through the territories of Vidin, Montana, Vratsa and Pleven;
- *Road II-81* between the cities of Sofia and Lom, passing through the territory of Sofia District and Montana District;
- *Road II-13* passing through the territories of Montana, Vratsa and Pleven districts;
- *Road II-82* on the territory of District of Sofia-city and Sofia District;
- *Road II-62* passing through the territory of Kyustendil and Sofia districts;
- *Road II-15* passing entirely through the territory of Vratsa District;
- *Road II-63* passing entirely through the territory of Pernik District.

The rest of the second class road sections are below 50 km long are only of local importance.

Table 29: Length (km) and structure of National Road Network in Bulgaria, 2018²³

Administrative unit	Total	Motorway	I class	II class	III class
Vidin	612	-	71	91	450
Montana	623	-	64	162	397
Vratsa	649	-	65	231	353
Sofia	1512	138	317	351	706
Pernik	574	15	80	66	413
Kyustendil	629	44	85	54	446
CBC total	4 599	197	682	955	2 765
<i>share of road categories</i>	<i>100%</i>	<i>4,28%</i>	<i>14,83%</i>	<i>20,77%</i>	<i>60,12%</i>
<i>share from total BG</i>	<i>23,14%</i>	<i>26,02%</i>	<i>23,32%</i>	<i>23,74%</i>	<i>22,72%</i>
Bulgaria total	19 876	757	2 925	4 022	12 172

Source: NSI

The analysis of the structure of the road network in the different regions of the Bulgarian part of the eligible area shows that all six regions have relative high share of second and third-class roads on their territory – 23,14% of all roads in the country (4 599 km in total) are situated in the Bulgarian part of the border area. The Bulgarian part of the eligible territory the share from the total road, there were - 26,02% of motorway, 23,32% of first-class roads, 23,74% second-class of road and 22,72% of third-class road. As 2018 the share of road categories in the Bulgarian eligible area there were 60,12% of third- class road, 20,77% of second-class road, 14,83% of first-class road and 4,28% of Motorway. The data provided tells us that in the Bulgarian part of the eligible territory is represents almost ¼ part of all road in Bulgaria.

In 2018 there is 43 275 km of road in the Republic of Serbia, while in the Serbian part of the eligible territory there is a total of 10 853 km of roads.

Table 30: Length of roads in Serbia, 2016-2018 (km)

Administrative unit	2016	2017	2018
Bor	1 494	1 495	1 470
Zaječar	1 425	1 409	1 405
Jablanica	1 750	1 906	1 716
Nišava	1 320	1 393	1 317
Pirot	1 025	1 035	1 040
Pčinja	2 926	2 795	2 688
Toplica	1 191	1 200	1 216
Serbia	44 995	45 479	43 276

Source: SORS

Through the programme territory pass 25% of all roads in Serbia. Though the road network is

²³ https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=754

quite well developed in Serbia its quality and technical condition are not satisfactory. 32% of highways and regional roads are 25 year old or more and only 10% were constructed less than 15 years ago. 58% of regional and 54% of local roads are qualified as bad or very bad quality roads. However, when it comes to highways, the situation has significantly improved with the completion of the construction of the A4 highway from Nis to the Bulgarian border in the length of 106 km, as well as sections of the A1 highway from Leskovac (more precisely Grabovnica) to the border with northern Macedonia (more precisely Levosoja) in the length of 74 km.

Table 31: Length (km) and structure of National Road Network in Serbia

Administrative unit	TEN-T & connections	IA roads	IB roads	Density (km/1000km ²)
Bor	0.0	0.0	296.8	200.0
Zaječar	0.0	0.0	165.6	180.0
Jablanica	0.0	74.3	104.9	210.0
Nišava	35.5	190.0	46.1	230.0
Pirot	51.8	51.8	42.6	170.0
Pčinja	0.0	110.3	87.8	190.0
Toplica	0.0	0.0	85.3	140.0

Source: SORS

Due to the social and economic difficulties in both countries, road maintenance activities have suffered from a lack of funding which has resulted in an increase deterioration of the roads. The majority of the roads are two lane; those which link smaller settlements and the roads in mountainous and semi-mountainous areas (4-class roads) are in an extremely poor condition. Since 2007 there have been some positive tendencies in transport infrastructure development, but transport in the region still suffers from a lag in the development of combined transportation and modern logistic technologies as well as from a low level of information technologies of the transport systems.

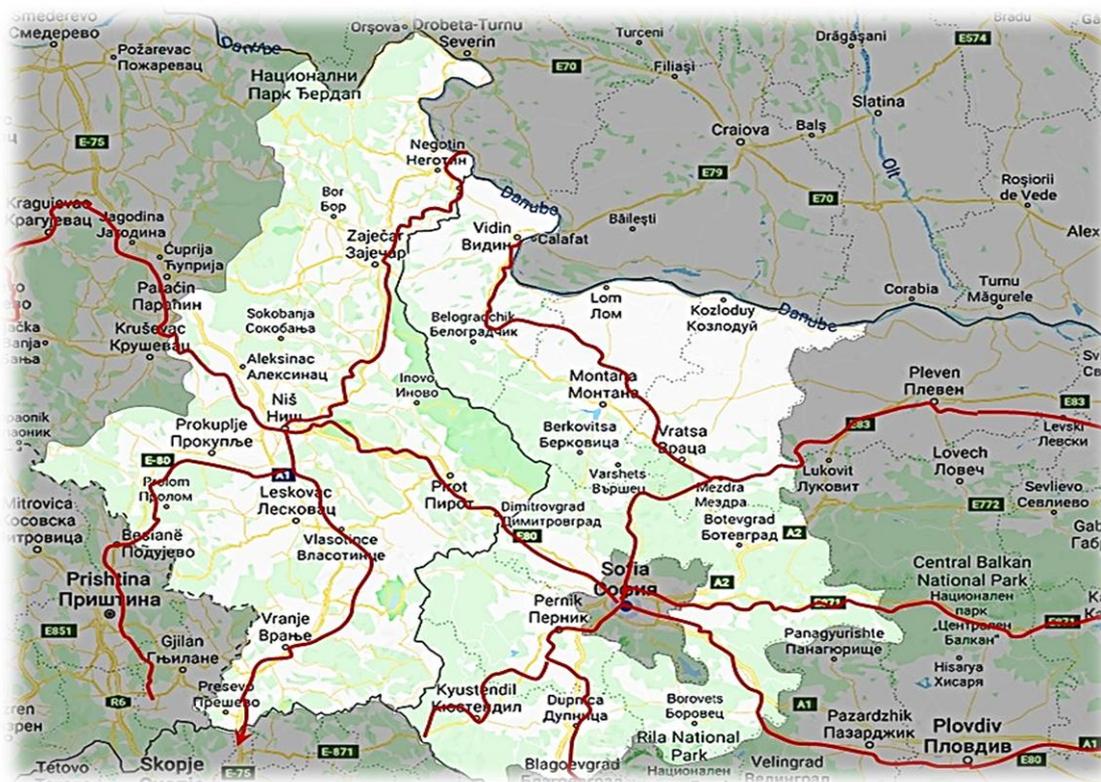
Railway network

The railway network of the region is very much identical to the road one in terms of its general layout - almost each main road link has as a parallel railway line. There are 4 030 km of railway lines in operation on the territory of Bulgaria (2017), of which 865 km are in the CBC area.

- *Railway line 1* - Kalotina - Sofia - Plovdiv - Svilengrad - the state borders with Turkey and Greece;
- *Railway line 2* - Sofia - Mezdra - Pleven - Levski - Gorna Oryahovitsa - Targovishte - Shumen - Varna;

- *Railway line 5* - Sofia - Vladaya - Pernik - Radomir - Dupnitsa - Blagoevgrad - Kulata (border with Greece);
- *Railway line 6* - Voluyak - Batanovtsi - Radomir - Kyustendil - Gyueshevo (border with North Macedonia).

Map 13: Bulgarian railway lines



Source: NSI and SORS

The railway density of the Republic of Serbia is comparable with that of the EU-27, only 32,7% of lines are electrified and 7% are double-tracked. Only 70% of tracks permit a load equivalent to the EU standard. The Belgrade - Niš line does not.

Table 32: Length of railways lines by districts, 2018²⁴

Administrative unit	Railway (km)
Vidin	108
Montana	114
Vratsa	112
Sofia	295
Pernik	115
Kyustendil	121
Bulgaria	4 030
Serbia	3 739

Source: NSI and SORS

²⁴ Information is provided as of 31.12.2018 for Bulgaria and as of 31.12.2018 for Republic of Serbia

The railway network of the region is very much identical to the road one in terms of its general layout - almost each main road link has as a parallel railway line. The only railway connection between the two countries (Sofia-Niš-Belgrade) is single-tracked as at present almost fully electrified but has several black points where the speed has to be seriously slowed down (parts of the Niš - Preševo and the Niš - Dimitrovgrad lines are designed for speeds of only 80 - 100 km/h). Serbia's main railway lines have been designed for maximum speeds of 120 km/h.

Most of the railway lines inside the border area are quite old and need a complete overhaul. The situation is similar for the track equipment, the signals and the control system.

The reconstruction of the rail infrastructure in the Bulgarian part of the CBC region is already in progress. The same goes for the Serbian part of the CBC area where modernization and rehabilitation of the section Niš – Brestovac of the international railroad towards Thessaloniki (Pan-European Corridor X) is taking place with support of IPA funds (project worth 60 million Euros).

2.8.2. EuroVelo - European cycle route network

In addition to the TEN-T network in the CBC area passes two of the European cycle routes, namely EuroVelo 13 Iron Curtain Trail and EuroVelo 6 Atlantic-Black Sea. EuroVelo 13 gives the possibility of visiting 20 countries starting in northern Finland passing near the Baltic Sea, Germany, Czech Republic, Slovakia-Bratislava, Romania and ending in Bulgaria at the small Black Sea town of Rezovo. Following this route for more than 9,950 km is a living history lesson but also provides a welcome reminder of the peace and reconciliation that have followed the fall of the 'Curtain'.

Map 14: Eurovelo corridors



Source: <https://en.eurovelo.com/ev13> and <https://en.eurovelo.com/ev6>

EuroVelo 6 gives the possibility of visiting 10 countries starting in eastern France passing central European countries (Switzerland, Germany, Austria, Slovakia, Hungary, Croatia), Serbia, Romania, Bulgaria and ending in Constanta (Romania). Following this route than is a beautiful coasts, rivers and castles.

The Eurovelo routes have a touristic purpose, hence they do not link large cities but aim for places with important natural or cultural heritage.

2.8.3. Border crossings

There are 5 (five) border crossing checkpoints: Bregovo - Mokranje, Kula - Vrska Čuka, Kalotina - Gradina, Strezimirovci and Otomanci - Ribarci, but only one of them (Kalotina - Gradina) is suitable for international traffic.

At Bregovo - Mokranje a totally new checkpoint has to be built as the existing one is situated in the village, a bit too far from the actual border. The access there is comparatively good and the traffic intensity is low. The investments in the building of a new checkpoint will enhance the cross-border connectivity.

In the border crossing checkpoint (BCCP) Kula - Vrska Čuka, the access also comparatively

good and there is too low of traffic intensity.

The Kalotina border checkpoint is located on the main road and railway connections between the two countries. The border checkpoint is one of the most important crossing for Bulgaria due to its proximity to Sofia through which passes the main traffic between Europe and Asia.

Strezimirovci is a brand new border crossing checkpoint, corresponding to the requirements but the building and the equipment are not yet fully operational.

A new positive trend for improving regional accessibility is the agreement for opening of three new border crossing checkpoints between the two countries: Salash - Novo Korito, Bankya - Petachinci, and Treklyano - Bosilegrad.

2.8.1. Airports

There are two airports that serve the border region - international airport in Sofia-city and the international airport in Niš. Though the city of Sofia is out of the eligible are, this still is the only airport on the Bulgarian side of the border region

The Sofia Airport is a largest international airport in the Republic of Bulgaria, which has implemented an ambitious investment programme over the last 10 years by constructing a second terminal building, a new runway and a number of related facilities. In 2016 the Sofia Airport set a record with cargo transport - 21 173 t., as well as in 2017 set a record in passengers with airport servicing 6 490 096.

The airport in Niš is a small but developing international airport (the second biggest in Serbia). It was designed for both cargo and passenger transport. In order to boost the development of the airport, the local-self-government subsidised the plane tickets and that attracted several low cost companies. In 2017 the Niš Airport set a record with passengers and cargo transport, with airport servicing 331 581. The airport position is 0.5 km away from the highway connecting the Belgrade - Niš - Sofia and Belgrade - Niš - Skopje - Thessaloniki corridors.

2.8.2. Inland waterways

The inland waterways provides opportunities for the development of environmental friendly and low cost transport services which makes it a viable alternative to road transport. Having an outlet to one of the most important European waterways – the Danube River, the region thus gains a significant advantage. The important ports in the Bulgarian CBC area are as follows:

- Port of Vidin: this is the second river port in Bulgaria, included in the core TEN-T network

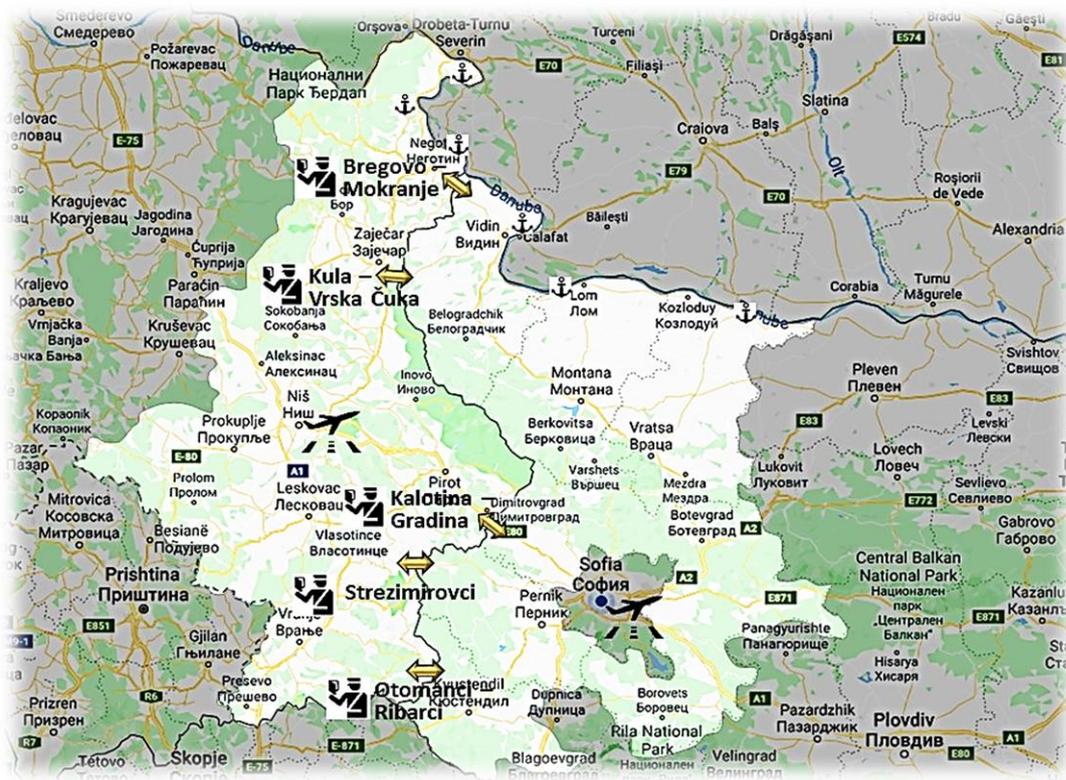
on the territory of the country as a part of the transport Rhine-Danube corridor (inland waterway the Danube River with Port of Vidin and Port of Ruse, and intermodal terminal in Ruse). At the same time, this port is also a part of the other corridor of the core TEN-T network passing through the territory of the country, i.e. the Orient/East-Mediterranean corridor (railway and road route in the direction of Vidin - Sofia - Kulata and a branch Sofia - Plovdiv - Burgas/Svilengrad (Turkish border)).

- Port of Lom and Port of Oryahovo are part of the Vidin port area from the Rhine-Danube corridor, but are included as inland waterway ports in the comprehensive TEN-T network. In addition to general and bulk freight, Port of Oryahovo also serves passengers, and the Oryahovo Ferry Terminal processes ro-ro freight.

The ports in the Serbian CBC region are as follows:

- Kladovo International Passenger Port - The Government of the Republic of Serbia, in January 2017 established the port area of the international passenger dock in Kladovo. The Port infrastructure - the pontoon, was built with funds from the budget of the Republic of Serbia. At the time, there were no cruise ships at the passenger dock in Kladovo. The port operator has procured a suitable passenger ship and, in cooperation with the Romanian side, is expected to soon establish a regular shipping line between Kladovo and Turnu Severin. The main problems are the outdated facilities and the lack of investments to improve and develop the ports infrastructure.
- Port in Prahovo (Bor District) - The port is located at 861 km on the right bank of the Danube, on the tripoint between Serbia, Bulgaria and Romania. The Port of Prahovo is of an open type and has the operational coast of 560 m long. The 1270 m industrial track is connected to the national railway network.
- Donji Milanovac International Passenger Port (Majdanpek Municipality) - The Government of the Republic of Serbia in September 2016 established the international passenger dock in Donji Milanovac, Municipality of Majdanpek. Through the Public Invitation, the Port Management Agency has selected PUC "Donji Milanovac" as the port operator of the international passenger port, which has been issued a license and with which in 2018 an Agreement on Port Activity was signed. As the number of berths for passenger ships is steadily increasing, the Port Operator has committed itself to expanding the capacity of the port in the form of construction of a new dock.

Map 15: Border crossing checkpoints, airports and ports



Source: NSI and SORS

2.8.3. Information and Communication Technologies (ICTs)

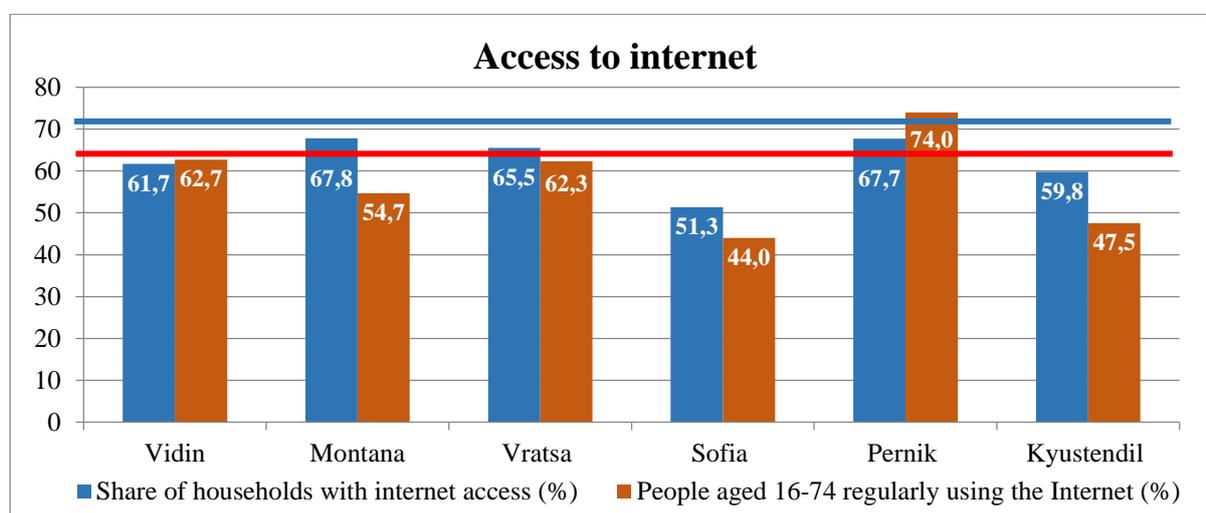
Progress in information society development is considered crucial to meeting the needs of society and economy. Gradually, the ICTs are becoming widely available to the public, both in terms of accessibility and cost, with access rates sharply rising between 2007 and 2013, and a little smoother between 2013 and 2018. For ten years, the share of households with Internet access in the EU-28 has reached 85%, which is 30 percentage points higher than 2007. ICTs in recent years the ITCs have been a major factor for the growth of the economic productivity and the development of the societies as a whole. As a potential development alternative to the regional transport infrastructure, ICTs can provide an important opportunity for the better connection of the border region to the outer world thus decreasing the problem arising from the relative isolation due to its peripheral location.

Table 33: Access to internet, 2018

Administrative unit	Share of households with internet access (%)	People aged 16-74 regularly using the Internet (%)
Vidin	61.7	62.7
Montana	67.8	54.7
Vratsa	65.5	62.3
Sofia	51.3	44.0
Pernik	67.7	74.0
Kyustendil	59.8	47.5
BG average	72.1	63.6
RS average	73.0	
EU 28 average	86.0	

Source: NSI, 2018 and <https://ec.europa.eu/eurostat/databrowser/view/tin00073/default/table?lang=en>

Figure 13: Access to internet in BG CBC area



Source: NSI, 2018

In the period 2013-2017, the relative share of households with Internet access increased by 13,6 percentage points and the use of broadband increased by 13,3 points.

For the period 2013-2017, the relative share of households with Internet access increased by 13.6 percentage points and the use of broadband increased by 13.3 points.

Despite the positive trend in the recent years, the broadband coverage in Bulgaria is still under the EU28 average and there is an imbalance between the densely populated areas and sparsely populated ones.

According to the statistical data for 2018, Pernik district has the highest percentage of people aged 16-74 who regularly use the Internet from the rest of the districts - 74%, which is more than average for Bulgaria in 2018. Pernik and Montana are districts with the highest percentage of share of households with internet access respectively 67,7% and 67,8% but the whole CBC

are is below the national average.

In 2019, 80,1% of households in the Republic of Serbia have an internet connection. Internet access in South and Eastern Serbia is 72,2%. The access to Internet is ensured mostly via local cable provides, but also via ADSL services.

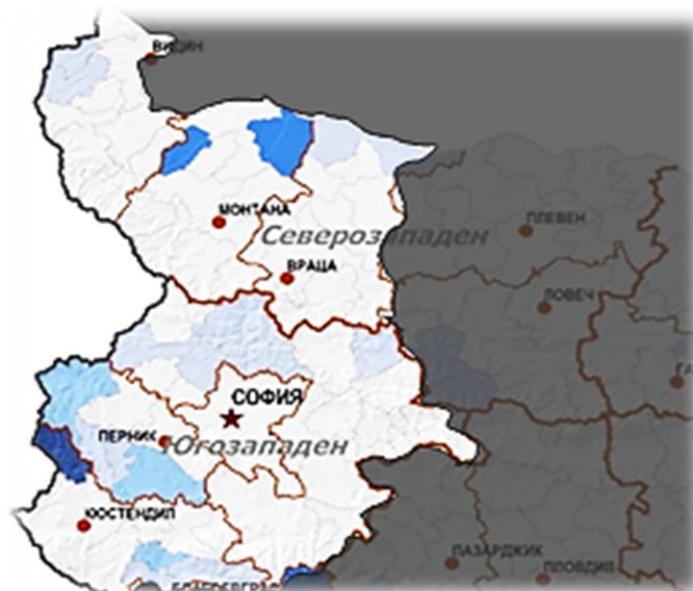
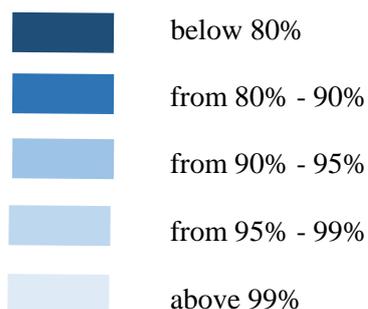
During the last few years, telecommunication in both countries have developed rapidly. Digital connectivity is equally important in today`s globalized world. Despite recent progress, digital society is still lagging behind in the progmamme area compared to the EU average. Eurostat data (2018) show that the “percentage of households with internet access at home”: 72% from Bulgaria and 73% for Serbia compared to the EU average of 89%. The liberalization of the markets favors the development of new technologies and diversification of the services provided.

2.8.4. Water supply and sewage

The border region is in much better position in terms of availability of a water supply resources and infrastructure compared to many of other areas and localities in both countries. However, the obsolescent equipment, mostly asbestos pipes, leads not only to health and hygiene problems but also to ineffective operation (water losses, frequent need of repairs, etc.).

Map 16: Share of water supplied households in the Bulgarian CBC area, 2017

Share of the population supplied with water



Source: National Centre for Regional Development - Bulgaria

The programme area is in a better position in terms of availability of water supply resources and infrastructure compared to many of other areas and localities in both countries. Bulgaria has a well-developed water supply system, which at the end of 2017 provides water to 99,4% of households are connected to the water supply network and 76% of households are connected to the sewer network. Over 5 000 settlements are covered by centralized water supply systems, with a total water pipeline length of more than 75,000 km. In the Bulgarian part of eligible area the share of population supplied with water is ranging in general between 90 - 99% with the exception of Treklyano municipality followed by Valchedram and Brusartsi. In Serbian programme region the water supply system is underdeveloped with about 77% of the population has access to the public drinking water supply.

In Serbian CBC area regarding the sewerage system, only the main settlements (bigger municipalities) have sewerage systems. The majority of waste waters produced in the region flow directly to the rivers causing damages and significant environmental problems. For the water pollution, the municipalities in the eligible region are relatively active in applying for and obtaining financing for construction and reconstruction of the sewerage and water supply network. Although the measures taken, the region still is lagging behind the national average indicators on environment - i.e. population with access to WWTP, waste collection, population connected to sewerage networks, etc. Some WWT facilities are currently under construction, expecting significantly to improve the environmental situation at Programme region. Groundwater provides approximately 70% of the total demand for water in Serbia both for household and industry. However, the capacity to meet the demand varies across the country. According to the data for 2017, on Serbia 88,47% of households are connected to the water supply network and 63,27% of households are connected to the sewer network. On the Serbian side of the CBC Programme area the total length of the water supply network is 6 139 kilometers and the sewerage network is 3 912 kilometers. The share of households connected to the water supply network in the whole BG border region is close to the national average with the exception of Pernik and Montana districts.

The share of households connected to the water supply network on the Serbian part of eligible area shows significant differences between the districts varying from 50,61% to 93,43%. The only district with figures above the national average (88,47%) is Zaječar with 93,43%.

The share of households connected to the sewerage network on the Bulgarian programme territory with the exception of Sofia and Pernik districts is below the average for the country (76%). However more than 25% of the households are still not connected to the sewerage network. On Serbian territory the situation is similar: with the exception of Pčinja district all

other districts have lower figures than the national average.

Table 34: Number of households connected to the water supply and sewer network on CBC area, 2017

District	Share of households connected to the water supply network	Share of households connected to the sewerage network
Vidin	99,80%	57,20%
Montana	98,30%	59,60%
Vratsa	99,60%	57,20%
Sofia	99,30%	77,10%
Pernik	98,50%	79,10%
Kyustendil	99,40%	75,20%
Bulgaria	99,40%	76,00%
Bor	80,06%	61,98%
Zaječar	93,43%	59,17%
Jablanica	67,57%	43,51%
Nišava	50,61%	33,55%
Pirot district	83,32%	61,72%
Pčinja	83,73%	65,18%
Toplica	63,08%	53,66%
Serbia	88,47%	63,27%

Source: NSI and SORS

2.8.5. Waste management

There is a tendency for better implementation of the basic principles of waste management by reducing their volume, reuse and recycling. The unregulated landfills, located near the roads and the entrances of the settlements, are gradually closed down. There is also a change in the treatment of waste management, landfill or cell separation for other types of waste to reduce the risk of pollution of the environment and its components - soils, surface and groundwater.

As regards solid wastes processing, at the Bulgarian side of the border there was 42 active municipal landfills which serve almost the entire population of the region - 99,53%. Most polluted region was Pernik where the collected municipal wastes per capita of population served by municipal waste services (as of 2012) amounts to 1 446 kg/h/year. The collected household waste in the period 2011-2017 decreased from 488 thousand tons to 325 thousand tons. In general a decreasing tendency of the share of municipal waste in the CBC area is observed.

Figure 14: Graph Generated waste per composition per country, 2018²⁵

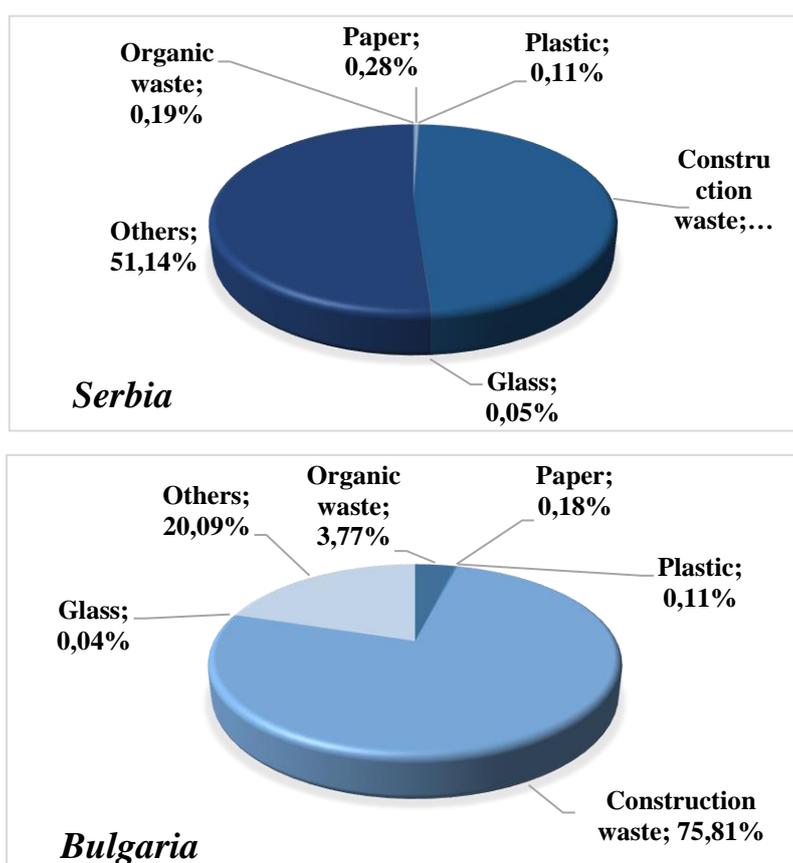


Table 35: Municipal waste (in thousand tons)

Administrative unit	2011	2012	2013	2014	2015	2016	2017
Total BG	3 572	3 249	3 135	3 193	3 011	2 881	3 080
Vidin	34	31	30	31	22	26	24
Montana	37	42	43	40	38	34	35
Vratsa	37	39	50	51	45	41	48
Sofia	134	107	121	136	126	119	112
Pernik	185	187	75	60	44	39	51
Kyustendil	62	58	58	58	52	52	55
Total BG CBC	488	464	378	376	328	312	325
<i>share</i>	<i>13.65%</i>	<i>14.30%</i>	<i>12.06%</i>	<i>11.77%</i>	<i>10.88%</i>	<i>10.83%</i>	<i>10.56%</i>

Source: NSI

²⁵ NSI - <https://www.nsi.bg/en/content/5086/waste-activity>
 SORS - <https://publikacije.stat.gov.rs/G2019/PdfE/G20191171.pdf>

According to a report by the SEPA on waste management in the 2011-2017 period, a total of 2.15 million metric tons of waste was generated, of which 1.80 million metric tons, or 83,7%, was collected by municipal public utilities. The median daily amount of municipal waste landfilled per capita was 0.84 kg, and the annual figure was 0.30 metric tons. This does not include some 20% of generated municipal waste which ends up in illegal dump sites. There are 164 officially registered municipal solid waste landfills in Serbia of which 24 have a regional character. South and East Serbia region accounts for approximately 28% of all landfills in the country. There is no landfill in the municipality of, Kursumlija, Zitoradja, Gadzin Han and Crna Trava²⁶. The most contemporary in terms of methods of treatment and processing of waste is solid waste landfill located in Vranje, where conditioning of waste takes place. However, due to urban functions of the city of Niš it is that area where the main solid waste facilities are located. Serbia in general has very low quality standards of solid waste disposal management becoming one of the most pressing environmental challenges for the country. Only 60% of solid waste is officially collected and the rest is dumped illegally. 23% of the landfills are located either on the river bank or within a radius of 100 m to it or too close to human settlements.

2.8.6. Renewable energy source

Water, wind and solar energy are used in the country for production of alternative electricity, depending on the specific natural conditions of each region.

Table 36: Built capacities by type and by district in Bulgaria, 2018

Administrative unit	Hydro power plants	Photovoltaic power plants	Wind Power Plants	Biomass Power Plants	Total number	Total power	Density MW/1000km ²
Vidin	11.6	34.8	-	1.5	58	47.9	15.8
Montana	29.5	15.0	0.0	1.5	31	46.0	12.7
Vratsa	24.2	29.4	4.5	2.4	45	60.5	16.7
Sofia	61.3	2.3	0.0	4.9	49	68.5	9.7
Pernik	-	2.5	6.0	-	33	8.4	3.5
Kyustendil	38.5	6.3	-	-	38	44.7	14.5
Bulgaria	2 362.4	1 052.8	700.2	64.2	2 337	4 179.7	37.7

Source: NCRD

Increasing energy efficiency is the most serious challenge in the field of energy sector in Bulgaria. On the one hand, there is a great scope for action (due to the low baseline), but on the other hand, the slow pace of energy efficiency improvement does not allow reaching the desired values. Energy efficiency is therefore the highest priority in the country's energy policy, as set

²⁶ The Serbian Agency for Environmental Protection

out in the Energy Strategy by 2020.

The key areas, identified as potential for energy saving, are the energy saving on final consumption, incl. households, transport, industry and services and energy savings in energy generation and transformation processes, incl. development of the gas distribution network, reduction of the energy transmission and distribution losses, increasing the efficiency of thermal power plants, increasing the share of energy produced by highly efficient cogeneration.

Throughout the energy sector, i.e. energy generation, transformation and transmission, there is a great potential for energy savings and regulatory and market economic incentives to implement energy efficiency measures for both energy companies and end-users are introduced in this respect.

Development and expansion of domestic gasification in the country has a great potential as well, taking into account the fact that the use of natural gas for heating and household needs requires three times less energy compared to the use of electricity. Creation of conditions for access to the gas distribution network of 30% of the country's households in order to achieve efficient use of heating energy by the population seems difficult at present (13% with access to gas supply and 3% gasified households as of 31.06.2018).

As the most efficient and secure way to meet the energy needs, the Energy Strategy identifies the decentralised renewable energy production, including in private homes. Significant efforts are foreseen to be made to improve the energy performance of buildings, both private and public, including accelerated introduction of the requirements for buildings with near zero net energy consumption in the public sector, in line with the EU regulations.

The energy efficiency programmes developed and implemented by municipalities (according to Article 12 of the Energy Efficiency Act) already produce their results, mostly improvement of the energy performance of buildings. Highest energy and fuel savings are achieved by thermal insulation of exterior walls and thermal insulation of roofs. These two types of measures, together with the ESMs for energy from renewable sources, are also leading in terms of greenhouse gas savings.

The consumption of energy from renewable sources is still limited in the programme area. According to the latest date (2017)²⁷, the share of renewable energy in gross final energy is close to 19% in Bulgaria and 21% in Serbia – by contrast, the EU 2020 target is 20%. Bulgaria's

²⁷ *CROSS BORDER ORIENTATION PAPER for IPA CBC cooperation programmes with the participation of regions of Bulgaria, North Macedonia and Turkey, p.19*

energy policy is taking place in line with the commitments made to achieve the “20/20/20” climate and energy targets of the Europe 2020 Strategy for smart, sustainable and inclusive growth and pursues the three key targets set out in this package. Under the target “20% reduction in greenhouse gas emissions”, Bulgaria has a favourable position since the CO2 emissions per inhabitant in Bulgaria are lower as opposed to most of the developed European countries. In line with the commitments made to implement the European Energy 2020 Strategy, Bulgaria has already exceeded the national targets set for increasing the usability of renewable energy sources (RES). Construction of different types of power plants from renewable sources went through its “peak” in the middle of the 2007-2013 period, when the capacity built was almost 50 %, and in the period 2013-2018 - just over 2 %, which is due to the changed state policy in this regard.

Table 37: Greenhouse gas emissions (in CO2 equivalent)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU (28)	92,7	90,7	84,1	85,9	83,2	82,1	80,5	77,5	78,1	77,8	78,3
Bulgaria	67,2	65,9	57,0	59,5	64,7	59,7	54,6	57,6	60,7	58,2	60,5
Serbia²⁸	101.8	100	89.4	86.4	93.5	85.8	87.5	75.1	84.3	87.4	-

Source: EUROSTAT

²⁸ https://ec.europa.eu/eurostat/statistics-explained/index.php/Enlargement_countries_-_environment_statistics

2.9. CULTURAL, HISTORICAL AND NATURAL HERITAGE

2.9.1. Cultural and historical heritage, institutions

Culture undoubtedly plays a role as a factor for better quality of life and sustainable development. The term 'cultural heritage' has changed content considerably in recent decades, partially owing to the instruments developed by UNESCO. Cultural heritage does not end at monuments and collections of objects. It also includes traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts.

One of the biggest strengths of the border region is its rich and unique culture, which could easily be utilized as a driving engine for regional development, regeneration and prosperity. According to the Cross Border Orientation Paper for IPA CBC, the cross border areas include a high quality potential on both, natural and cultural assets that goes from lakes, reserves, natural parks, to cultural sites, religious and historical.

Culture is among the most important factors in the cross-border cooperation framework, since it provides a clear view of common features and provides a common identity for the region. It is a prerequisite for an attractive tourism product and could furthermore be easily utilized as a driving engine for regional development and prosperity. Neolithic, Thracian, Roman, Byzantine and Medieval cultures have piled up assets in many objects and museum artefacts. Therefore, one of the most prominent features of culture in CBC area is regional variety noticeable in both moveable and immovable cultural heritage, intangible cultural heritage, the creation of contemporary art and culture and the products of contemporary art industries.

Intangible cultural heritage

The importance of intangible cultural heritage is not the cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through it from one generation to the next. It includes: the spoken tradition and languages, customs, rites, celebrations, rituals, beliefs, music, songs, dances, culinary and enology traditions, traditional crafts, traditional medicine, traditional games and sports, cultural value carriers and important elements in the preservation of historical memory.

Intangible cultural heritage is the main source of identity and has strong links to history. It is at the heart of international and national festivities and events, which are an important resource

for the development of cultural and knowledge tourism.

Many cultural forms of expression such as music, dance, the spoken word, rites, annual village and town gatherings or traditional cultural skills are threatened by extinction. This process is driven by a continually globalising international culture and progress in the technical and information sciences, on the one hand, and by the vulnerable nature of this category of cultural heritage, its temporal transience and the fact that in many cases it exists solely at the time of being performed or skills to perform it are being taught, on the other hand.

Bulgaria registers various elements in UNESCO's representative list of the intangible cultural heritage of humanity on a regular basis and 5 of them have been approved by 2019. Out of them four are located on the eligible CBC area, namely:

- *Cultural practices associated to the 1st of March*. The name of the holiday celebrated in the whole country means "Grandma March" in Bulgarian and the wearing of Martenitsi is a Bulgarian tradition related to welcoming the spring, which according to Bulgarian folklore begins in March.
- *Surva folk feast in Pernik region* takes place each year on 13 and 14 January to celebrate the New Year according to the old calendar. The core of the celebration is a popular masquerade ritual performed in villages throughout the region.
- *The tradition of carpet-making in Chiprovtsi*. The carpets are renowned for their composition, ornamental motifs and colour. Carpet weaving goes hand in hand with beliefs, verbal formulae and ritual practices. Carpet weaving is deeply integrated into the social and cultural life of the population.
- *Bistritsa Babi, archaic polyphony, dances and rituals from the Shoplounk region*. The traditional dances and polyphonic singing found in the Shoplounk region are still performed by a group of elderly women, the Bistritsa Babi. This tradition includes ancient forms of the horo chain dance and the ritual practice of lazarouane, an initiation ceremony for young women.

In addition one of the two intangible cultural heritages included in the Register of Good Safeguarding Practices can also be found in the cooperation area – *Bulgarian Chitalishte (Community Cultural Centre): practical experience in safeguarding the vitality of the Intangible Cultural Heritage*. Community centres are traditional public institutions in Bulgaria with a 150-year old tradition, which serve educational and enlightenment functions, provide a venue for local talent groups and enjoy the reputation of a robust cultural institution with a

specific mission to preserve and develop traditional national values. According to the latest survey conducted in 2017 there are 3 321 community centres in Bulgaria (663 in towns and 2 658 in villages). In the modern era, having preserved their social legitimacy and flexibility and owing to their geographical coverage that spans the entire territory of Bulgaria, community houses continue to meet the present-day needs of Bulgarian society as centres for cultural, information and social activities.

During the period 2012-2017 the number of community houses increased by 241 (7.8 %) - a trend that has seen new community houses emerge in both towns and villages. The number of community houses per 100 000 does not show significant disparities at regional and district level owing to their relatively even dispersal across Bulgaria, including in smaller agglomerations.

All three elements on Serbian territory included in UNESCO's representative list of the intangible cultural heritage of humanity belong to the CBC area, namely:

- *Singing to the accompaniment of the Gusle* is an ancient art of performing primarily heroic epics practised for centuries as a form of historical memory and an expression of cultural identity.
- *Kolo, traditional folk dance*. It is performed by dancers who are interlinked to form a chain, usually moving in a circular line. It is accompanied by music and involves all members of the local community participating in the gathering.
- *Slava, celebration of family saint patron's day*. In Serbia, Orthodox Christian families celebrate an important holiday in honour of the patron saint, Slava, who is believed to be their protector and provider of welfare. The celebration consists of the ritual offering of a bloodless sacrifice and a feast held for relatives, neighbours and friends.

All intangible cultural heritage assets mentioned above are proof of the successful steps taken by national cultural institutions to promote cultural heritage and attract the interest of visitors and tourists in Serbia and Bulgaria. This is in keeping with the trend of greater population mobility within Europe, which enables more people to attend cultural events and traditional festivities.

Tangible Cultural heritage

The cultural heritage of the region includes monuments and sites related to churches, old towns and old rural areas, archaeological sites, as well as monuments devoted to commemoration of historical events or figures. Remains from ancient civilizations can still be found in many places

on both sides of the border. Ancient architecture, where it is preserved, has many similar features. A vast number and variety of important architectural, archaeological, and ethnological monuments of cultural importance exist in the border region. All monuments present a perfect ground for the development of joint tourism routes, joint studies, promotion and advertising, joint actions for preservation, intercultural education, etc.

For the purposes of this analysis, mostly high-value items of world and national cultural heritage with a corresponding high potential as drivers for economic growth and tourism have been examined. The UNESCO List of World Cultural Heritage includes important sites nominated and approved under the World Heritage Programme of World Heritage Committee of the United Nations Educational, Scientific and Cultural Organization (UNESCO). The programme aims to catalogue, name and preserve sites with extraordinary cultural or natural importance for the global heritage of humanity.

The diversity of historical periods and cultural values, national parks, numerous reserves and natural landmarks are a prerequisite for socialization and valorisation through tourist products in Bulgaria. UNESCO's List of World Cultural and Natural Heritage includes 10 sites registered in Bulgaria (7 cultural and 3 natural heritage sites).

Table 38: World heritage sites in Bulgaria

No	Site	Type	Registered
1	Boyana Church	cultural reserve	1979
2	Ivanovo Rock Churches	cultural reserve	1979
3	Kazanlak Tomb	cultural reserve	1979
4	Madara horseman	cultural reserve	1979
5	Nesebar - Old Town	cultural reserve	1983
6	Rila Monastery	cultural reserve	1983
7	Sveshtari burial mound	cultural reserve	1985
8	Pirin National Park	nature reserve	1983
9	Srebarna Nature Reserve	nature reserve	1983
10	The centennial beech forests of the Carpathians and other area in Europe	nature reserve	2017

Source: UNESCO <https://whc.unesco.org/en/statesparties/bg>

Serbia is a country of nature and cradle of culture representing a geographical connection between Central Europe, Mediterranean and Eastern Europe. There are five (5) cultural world heritage sites in Serbia.

Table 39: World heritage sites in Serbia

No	Site	Type	Registered
1	Stari Ras and Sopoćani	cultural reserve	1979
2	Studenica Monastery	cultural reserve	1986
3	Medieval Monuments in Kosovo	cultural reserve	2004
4	Gamzigrad-Romuliana, Palace of Galerius	cultural reserve	2007
5	Stećci Medieval Tombstone Graveyards	cultural reserve	2016

Source: UNESCO <https://whc.unesco.org/en/statesparties/rs>

In the programme area, there are two World Heritage cultural sites or natural sites - Gamzigrad-Romuliana, Palace of Galerius in Serbia and Rila Monastery in Bulgaria.

- *Rila Monastery* is the largest and most famous Eastern Orthodox monastery in Bulgaria. The whole complex occupies an area of 8800 m² and is rectangular in form with a tower and the main church situated centred in the inner yard. Founded in the 10th century, the Rila Monastery is regarded as one of Bulgaria's most important cultural, historical and architectural monuments and is a key tourist attraction for both Bulgaria and Southern Europe.
- The Roman memorial complex of *Gamzigrad-Romuliana, Palace of Galerius*, in the east of Serbia, was commissioned by Emperor Caius Valerius Galerius Maximianus, in the late 3rd and early 4th centuries. It was known as Felix Romuliana, named after the emperor's mother. The site consists of fortifications, the palace in the north-western part of the complex, basilicas, temples, hot baths, memorial complex, and a tetrapylon. The group of buildings is also unique in its intertwining of ceremonial and memorial functions.

Most of the cultural heritage monuments are in disrepair and require enormous investments for restoration and preservation. In the past years a lot has been invested in culture preservation but still there is a need of further conservation of cultural heritage.

The UNESCO Tentative List of World Cultural Heritage²⁹ includes 16 tangible immovable sites in Bulgaria and 12 in Serbia among which one cultural/historic landmark is located in the CBC area – *Frontiers of the Roman Empire - The Danube Limes in Bulgaria*³⁰ and *Frontiers of the Roman Empire*³¹ (for Serbia).

²⁹ <https://whc.unesco.org/en/tentativelists/>

³⁰ <https://whc.unesco.org/en/tentativelists/6126/>

³¹ <https://whc.unesco.org/en/tentativelists/6060/>

The Roman Limes section in Bulgaria Limes is about 471 km long and runs along the river Danube through the regions of Vidin, Montana, Vratsa, Pleven, Veliko Tarnovo, Russe and Silistra including 33 sites out of which 9 are located in the eligible area, as follows:

- Vidin District: Vidin (Bononia) Roman town and Roman town Colonia Ulpia Traiana Ratiaria
- Montana district: Ancient town and necropolis Aimus and Roman fortress Cebrus/Kebros
- Vratsa district: Roman fortress Regianum/Bigrane, Ancient fortress Augustae, Ancient fortress and prehistoric settlement, Roman quarry for limestone and Roma fortress Valeriana

The Serbian Limes Section starts at Neštin, close to the Croatian border, and ends at Rakovica (Dorticum) and is 588 km long including in total 60 sites out of which 24 located in the CBC area as follows: 17 sites in Kladovo municipality and 7 in Negotin municipality.

In addition from the Serbian UNESCO Tentative List of World Cultural Heritage one cultural sites is also located in the CBC area, namely *Negotinske Pivnice*. Those are a rural compound (settlements consisting of wine cellars) which are located in the Negotin Frontier area. These cellars and the wine were incorporated in many birth and burial rituals. Negotinske Pivnice with partially preserved vineyards are a testimony of the local population tradition of continuous growing of vineyards from the Roman times up to the present day.

Immovable cultural heritage (ICH)

CBC area is rich in immovable cultural properties which belong to a certain historical period as prehistoric, ancient, medieval, Renaissance, modern and modern times, as well as of scientific and cultural value such as archaeological, historical, architectural and construction, artistic, urban, cultural landscapes with culture our layering of human-natural interaction, park and garden art, ethnographic, cultural routes.

Out of many places of cultural and historical interest linked to history and national memory, only a handful with national and regional importance are presented:

Table 40: Main landmarks in Serbia and Bulgaria³²

SERBIA	
District	Main Landmarks
Bor	Kladovo Fortress, Djerdap national park, Lepenski Vir, Trajan's Bridge, Rajko's Cave, Bukovo, Hestil (RTB Bor)

³² <https://en.wikipedia.org/wiki/Serbia#Tourism>; <https://en.wikipedia.org/wiki/Bulgaria>

Zaječar	Felix Romuliana (Galerius' Palace)
Nišava	Niš Fortress, Skull Tower (Ćele kula), Niška Banja
Pirot	Church of St. Petka, the monastery of St. John the Theologist,
Toplica	Tower "South - Bogdanova", Monastery of St. Nicholas
Jablanica	Roman necropolis in Mala Kopasnica, a late Roman-early Byzantine (6th century AD) town of Caričin Grad or Iustiniana Prima, the Jasunjski Monasteries, church of St. John the Baptist
Pčinja	Marko's Fortress, ancient Turkish public baths, Pasha's House
BULGARIA	
<i>District</i>	<i>Main Landmarks</i>
Vidin	Baba Vida Medieval Fortress, Bononia (Danube Limes), Belogradchik Rocks, Belogradchik Fortress and Magura Cave, Mosque, Osman Pazvantoglu's Cross Barracks, Jules Paskin's Birthplace, the town of Kula (Castra Martis)
Vratsa	Residential Revival Architecture in Vratsa, Vrachanski Balkan Nature Park and Botev Road Memorial Complex, Ledenika Cave
Montana	Kaleto, Ancient fortress (Castra ad Montanesium), Chiprovsky waterfall
Sofia	Clock tower in Botevgrad, Trajan's Gate fortress, Elenska Basilica, The Town of Koprivshitsa Architectural and Historical Reserve,
Pernik	Krakra Fortress, St Petka Rock Church
Kyustendil	Rila Monastery, The Stob Pyramids

The major challenges for cultural heritage preservation are research underfunding, the maintenance, conservation, protection and display arrangements for a significant number of sites; the lack of clarity as to the status of many sites; the delay in the digitalisation of register, data and materials about cultural heritage sites; treasure hunting; the making of replicas of archaeological artefacts and the smuggling of moveable cultural heritage artefacts into other countries. Therefore, the cultural tourism is among the priorities of the tourism policy due to the huge untapped potential and the competitive market niches in the area.

Moveable cultural heritage is an expression and symbol of national and collective memory. It includes archaeological, ethnographic, historical, art, natural, technical, archival, written and literary moveable cultural heritage artefacts.

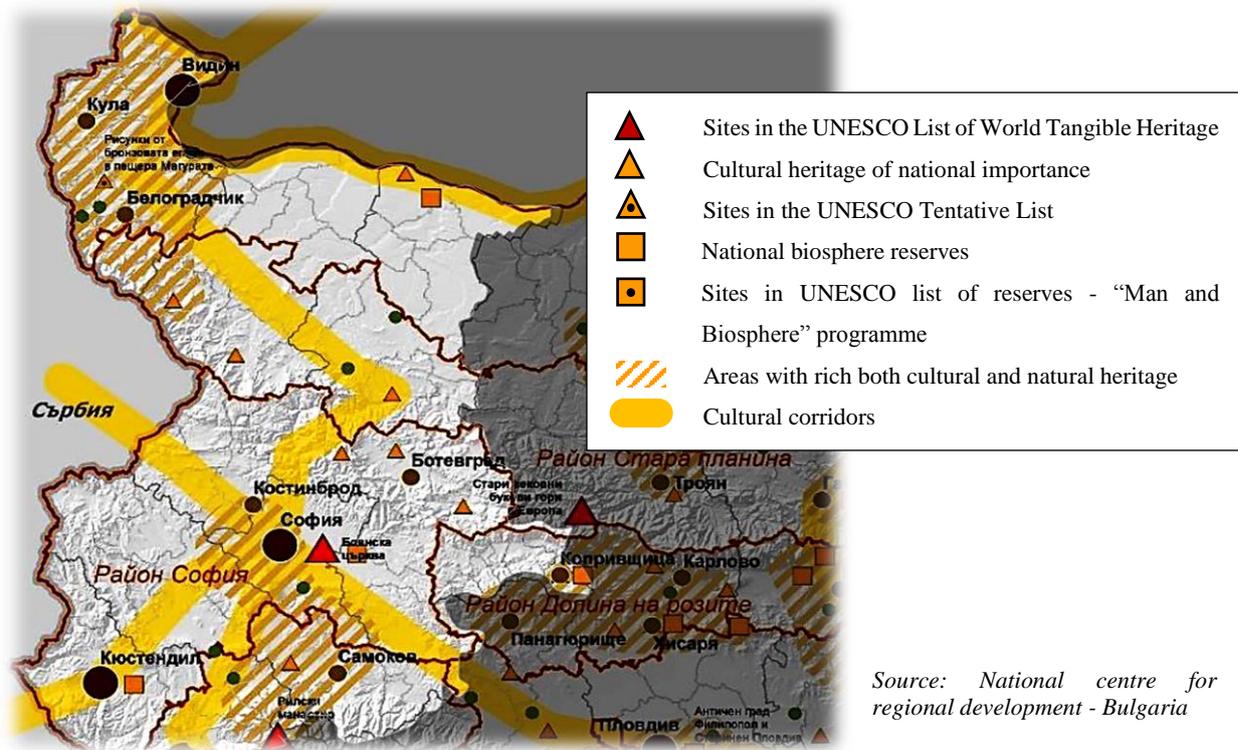
The Cultural Corridor Diagonal road (connecting South East Europe to Asia) passes through the territory of the cross-border region. This cultural corridor is one of the most ancient arteries, of trans-continental, even of world importance. Starting from Central Europe into Slovenia, passing successively through Croatia, Bosnia and Herzegovina, Serbia, North Macedonia, Bulgaria and Turkey, continuing to the Far East. Its numerous branches are on one hand geographically determined (passing the valleys of big rivers, the lowlands between the mountain chains, the convenient passages), striving to the Bosphorus strait.

The Western Trans-Balkan Road crosses South-East Europe in a north-south direction. The

corridor unites the territories on both sides of the Balkan-Balkan Mountains, passing through Romania, Bulgaria and Greece. The road connects Western and Central Europe with the Aegean Sea and the Mediterranean, intersecting the Danube Road, Diagonal Road, Sofia-Ohrid Road and Via Egnatia. The Western Trans-Balkan Road is a peculiar axis of spread of ancient Greek culture to the north, a specific axis in time, connecting habitats with distinguished cultural values from different historical periods.

Via Trayana Roman Road, built during the times of Emperor Traian in the 1st century AD, crosses the Balkan Range at the Beklemeto-Troyan Pass and connects Mizia with Thrace and the White Sea. It arises in the 2nd connection between the cities of Eskus (Gigen village) and Nove (Svishtov) in the north, through Montemno (Beklemeto-Troyan passage) to Trimontium (Plovdiv) in the south

Map 17: Cultural corridors and heritage in Bulgaria



The region is rich in diversified culinary traditions and handcrafts. These traditions could play an important role in the promotion and the tourism offer of the region but, so far, are largely underestimated.

Cultural institutions

The performances of theatres, opera and musical theatres, musical collectives (philharmonics, authentic folklore singing and dancing troupes and orchestras) are a token of the rich cultural

life of local communities and regions.

In the past few years, the professional institutes of culture were very well developed both in Bulgaria and Serbia. Traditional cultural organizations such as libraries, museums, galleries, community and cultural centres, etc. have a long-lasting presence.

In Serbia there are no data on cultural institutions available at the district level, but at the level of statistical regions. Therefore, for the purposes of this analysis, summary data for the statistical region of Eastern and Southern Serbia is presented, which coincides with the territory of cross-border cooperation between Serbia and Bulgaria. For Bulgarian side is provided cumulative value for all 6th eligible districts (Vidin, Vratsa, Montana, Sofia – district, Pernik and Montana).

Table 41: Cultural infrastructure in CBC area (total)³³

	Serbian CBC area	Bulgarian CBC area
Theaters	16	8
<i>Shows / Performances</i>	701	867
Museums	28	25
<i>Visits</i>	353 103	673 000
Cinemas	16	6
<i>Attendance</i>	310 560	119 110
Libraries	108	4
Radio stations	39	9
TV stations	52	9

The data collected show that, as far as cultural infrastructure is concerned, it is stagnant, that the number of visits, i.e. citizens meeting their needs, is either the same or slightly increasing. The identified challenges faced by cultural institutions responsible for the protection and public display of items of moveable cultural heritage, in addition to the poor condition of museum buildings and conditions for the storage of collections, include the non-utilisation of modern ICT to enhance the display and socialisation of museum artefacts and the poorly developed links between museums and educational institutions.

2.9.2. Natural heritage

The list of protected areas in Bulgaria includes 3 national parks, 11 nature parks and 55 nature reserves and many other nature landmarks (caves, waterfalls, etc.).

UNESCO list of reserves as part of the “Man and Biosphere” programme comprises 10

³³ *Municipalities and regions in Serbia, 2018.* <https://www.stat.gov.rs/sr-latn/publikacije/publication/?p=11634>
 Responce to MEI request for data, NSI

biosphere reserves located in Bulgaria, out of which two are situated in the CBC area, namely:

- *Bistrishko Branishte Biosphere Reserve* is situated on the north-east slope of the Vitosha Mountain, south of Sofia. It is entirely included in the Vitosha Nature Park. The reserve was established in 1934 to protect the wonderful landscape and natural flora of Vitosha Mountains.
- *Tchoupréné Biosphere Reserve* is situated on the northern slopes of the Stara Planina on the Serbia`s border in north-west Bulgaria. It covers an area of 1981,5 hectares between 1300 and 2033 meters above sea level.

The UNESCO Tentative List of World Cultural Heritage includes 16 tangible immovable sites in Bulgaria among which three nature landmarks are located in the CBC area as follows:

- *Belogradchick Rocks* are located in the western foothills of the Balkan mountain range and are a spectacular rock formation. The rock sculptures are spread on an area more than 30 km in length and 5km in width, the highest formation rising to 20m. Once covered by the sea, and subsequently sculpted by nature for more than 20 million years, these red-colored rocks have been amazingly formed to resemble mythical creatures, people, animals, and birds. One can climb these incredible formations and go inside some of the many caves nestled between them. The rocks and mountainside have provided natural protection from several historic uprisings and a fortress, dating back to 1-3AD, was built deep within the rocks using their natural defence.
- *Vratsa Karst Nature Reserve* covers an area of 1438.9 ha and includes the northern rocky slopes of the Vratsa Mountain, West Balkan Mountain Range. The Reserve contains an impressive, continuous 10 km long rocky outcrop with NW-SE direction, divided in the middle by the Vratsata Gorge and Leva River. The "Vratsata" Gorge, is a geologic phenomenon with international significance. The vertical rock walls of the gorge reach 450m being the highest cliffs on the Balkans and the highest at this altitude in Europe. The highest seasonal waterfall in Bulgaria is found in the Vratsa Karst Reserve as well - the Skaklia waterfall, which is more than 140 m high.
- *Magura cave* is situated on the northern slopes of the western Balkan Mountains near the village of Rabisha, Vidin district. The beginnings of the formation of the cave go back 15 million years ago. The cave has a number of accessible halls and galleries which were inhabited during the Bronze Age and which contain remnants of settlements and drawings on the walls. The remnants in the largest hall bear evidence to the existence of life from

3100 years to 900 years BC - i.e. the early Iron Age. In one of the side galleries a large number of ritual drawings can be seen, which are among the masterpieces of late prehistoric art in Europe. The Magoura Cave has been declared a monument of culture and a remarkable natural site.

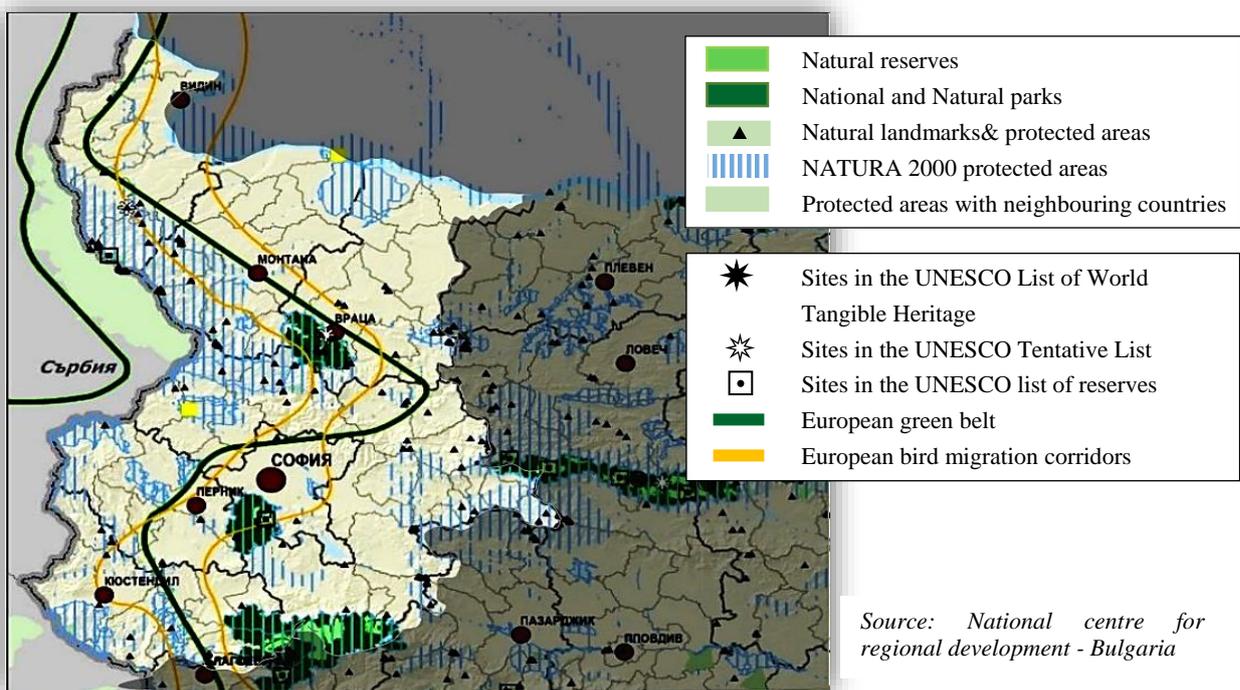
Some other nature landmarks, located in the Bulgarian CBC area are as follows:

- *Rila National Park* is the largest park in the country. It is hidden in the heart of Rila Mountain, approximately 100 km south of Sofia and covers an area of 81 000 hectares. The park is inhabited by more than 3 000 animal and 100 bird species and almost 90% of its territory is taken up by venerable coniferous trees such as spruce, white fir and Scots pine, among others. It contains over 120 natural lakes and four reserves: Parangalitsa, Central Rila Reserve, Ibar and Skakavitsa. The park is a preferred destination for all people who enjoy mountain-related activities. It offers an impressive network of eco trails that are accessible throughout the whole year and some great mountain biking routes.
- *Vrachanski Balkan Nature Park* is situated in the municipalities Vratsa, Krivodol, Mezdra, Varshets, and Svoge. The flora and fauna of Vrachanski Balkan Nature Park includes species, many of which are protected on national, European and international level. The territory of the park is included in the European Union network of nature protection areas NATURA 2000.
- *Ledenika cave* is situated in the western Balkan Mountains at 16 km from the city of Vratsa. It features an abundance of galleries and impressive karst formations including stalactites and stalagmites, and is known to contain icicles. Ledenika falls within the territory of Vrachanski Balkan Nature Park. Listed in the 100 Tourist Sites of Bulgaria.
- *The Dragoman marsh* is a karst marsh in the western part of the Sofia Basin, located east of the town of Dragoman and on some 38 km from Sofia city. The area falls within two of the NATURA 2000 sites. The marsh lies on the migration path of the Via Aristotelis birds, here they stop in the rich marsh vegetation to rest before flying again.
- *Razhishka Cave* is situated in the western Balkan Mountains overlooking the left bank of the Iskar River in the homonymous gorge at a height of 140 m over the river. It is located near the village of Milanovo, Sofia Province. It has been inhabited by humans during the Iron Age.
- *The Stob pyramids* are one of the most popular rock pyramid formations in Bulgaria. They are located above the village of Stob, Kyustendil district in the western part of the Rila

Mountains. The average height of the pyramids is between 7 and 10 meters, some individual pyramids reach a height of 12 meters.

The NATURA 2000 sites and Natural Protected Areas offer great potential for eco-tourism in the region. The area of nature protection, the target to establish the Natura 2000 network represents a clear cross border cooperation learning opportunity from EU member states.

Map 18: Natura 2000 areas,³⁴ Bulgaria



The list of protected natural values of Serbia includes 5 National Parks, 10 Nature Parks, 14 Landscapes of Outstanding Features, 72 Nature Reserves and Special Nature Reserves, 287 Natural Monuments etc. UNESCO list of reserves as part of the “Man and Biosphere” programme comprises 10 biosphere reserves located in Serbia but none of them is located in the border region. The UNESCO Tentative List of World Cultural Heritage includes 12 tangible immovable sites in Serbia among which two nature landmarks are located in the CBC area:

- *The Djerdap National Park* is located on the right shore of the Danube River and it stretches along the river course of 100 km from the Golubac Fortress to the ancient Diana fortress in Karatas. The Djerdap National Park covers 636 sq km, which makes it the biggest national park in Serbia. As for its natural beauties and culture, Djerdap National Park is significant

³⁴ Source: National centre for regional development – Bulgaria

on EU level and provide visitors embrace variety of its preserved natural heritage.

- *The “Đavolja Varoš” (Devil’s Town) natural landmark – Monument of Nature* is situated on the southern slopes of Radan Mountain on the right bank of Žuta reka (Yellow river), in the central part of South-Eastern Serbia, Toplica district. The red earth columns and pyramids of Djavolja Varos have various interesting shapes on the area of 4,300 sq. meters. There are over 200 formations – towers standing tall from 2 -15 meters with width at base 4 to 6 meters. These formations were created by strong erosion of the soil that was scene of intense volcanic activity millions of years ago. Most of the towers have "caps" or "heads" of andesite, which protect them from further erosion.

Some other nature landmarks, located in the Serbian CBC area are as follows:

- *Rajko’s cave* is a cave near the copper and gold mines of Majdanpek in eastern Serbia, Bor district. Rajko's Cave falls in the category of river caves. A river of the same name runs through it. In the cave one can find very interesting cave halls, baths, draperies and other cave decorations from pure white crystal calcite.
- *Jelasnicka Klisura – Jelasnica River Gorge* is situated at the foot of the Suva Planina Mountain in the South-East Serbia, within the municipality of Niš. The Jelasnicka river Gorge represents the unique biodiversity system and is one of the most prominent gorges in the Balkans - due to beautiful landscape, geo-morphological characteristics, natural values, the well preserved ecosystem, and exclusive flora and fauna.
- *Nature Park Stara planina* is located in eastern Serbia on the territory of the municipalities of Zaječar, Knjazevac, Pirot, and Dimitrovgrad. Stara planina is part of the mountain complex of the Balkans, whose western part is located in Serbia. The mountain massif of Stara Planina is dominated by the rivers Trgoviški Timok, Beli Timok, Visočica and Toplodolska, while mountain massifs are covered with mountain streams, rapids and waterfalls. The highest peak of Stara Planina in Serbia is Midžor
- *Rosomac Canyon* is located in the village of Slavinja, 30 km from the town of Pirot. Rosomach is a canyon formed by the river Rosomach (Kamenichka), known for its unusual stepped curves and formations. It also called Rosomački pots, because the unusual shape, edges layered with multiple extensions with whirlpools that resemble pots.
- *Bigar Waterfalls* are located in the Balkan Range, East Serbia and are 35 meters high. The name comes from a stone, which is located on this place "bigra". The surroundings of Bigar Falls offer other smaller waterfalls and lakes suitable for swimming, but also the opportunity

to visit the Monastery of St. Onuphrius.

- *Lazareva Pećina (Lazar's Cave)*, is the longest explored cave in Serbia. Located in Bor municipality, near Zlot, the cave is also sometimes referred to as Zlotska Cave. It is 9407 metres long. The cave is situated near the entrance of the deep canyon carved into the mountains by the river Zlotska. Some of the paths are illuminated and tourist services offered for visitors. It has been protected since 1949.
- Đerdapska klisura (Iron Gates), is a gorge on the river Danube. It forms part of the boundary between Serbia (to the south) and Romania (north). Located in Bor district on the Serbian side of the border. Archaeologists have named the Iron Gates Mesolithic culture, of the central Danube region circa 13,000 to 5,000 years ago, after the gorge. Wider protected area on Serbian side was declared the UNESCO global geopark in July 2020.

3. SWOT ANALYSIS

GEOGRAPHICAL FEATURES	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Favourable geographic and transport location; ✓ Favourable climate and geo-morphologic conditions; ✓ Proximity of the BG capital (District of the city of Sofia) located in the centre of the BG eligible area. 	<ul style="list-style-type: none"> ✓ Peripheral position of the border areas within the territory of the countries; ✓ Mountain relief of the region that impedes transport development.
Opportunities	Threats
<ul style="list-style-type: none"> ✓ Opportunities for development taking direct advantage of the favourable location and transport connections; ✓ Cooperation in the field of efficient and wider use of the Danube river resource – transport, tourism, irrigation, etc.; ✓ Opportunities for development of the lagging behind municipalities in terms of favourable geographical situation and resources; ✓ Existing natural potential for development and diversification of different forms of tourism. 	<ul style="list-style-type: none"> ✓ Isolation of smaller municipalities.

ECONOMIC DEVELOPMENT	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Economic growth in Bulgaria and Serbia in recent years; ✓ Increased economic activity of SMEs; ✓ Availability of active border gates and potential daily visits from neighbor countries; 	<ul style="list-style-type: none"> ✓ Tourism potentials moderately valorized; ✓ Interregional differences in terms of GDP per capita across the NUTS III districts/equivalents of the of the eligible area;

<ul style="list-style-type: none"> ✓ Available industrial premises and facilities, as well as industrial craft traditions, business support and business incubators established of the Serbian part of the eligible area; ✓ Good resources for economic diversification (agricultural land, tourism, water, traditions); ✓ General positive trend of the main economic development indicators. 	<ul style="list-style-type: none"> ✓ Lack of internationally competitive products, low standard accommodation infrastructure; ✓ Low development of SMEs, predominance of microenterprises, increasing vulnerability; ✓ Low entrepreneurial activity and weak capacity of SMEs to access funds.
Opportunities	Threats
<ul style="list-style-type: none"> ✓ Transition to circular economy, reduction in the resource and energy dependency as well as reduction and recovery of waste; ✓ Increased demand for sustainable tourism and organic products potential for diversification and promotion of alternative tourism products - cultural and wine tourism ; ✓ Increasing importance of SMEs in the economy; ✓ SMEs development and direct support could lead to further economic development of the co-operation area; ✓ Orientation towards high-technology manufacturing activities in the primary and secondary sectors of the economy ✓ Applying innovative approaches (digitization, innovative industries etc.). 	<ul style="list-style-type: none"> ✓ Economic disparities, mainly between urban and rural areas; ✓ Vulnerability to national and world wide financial and economic crisis; ✓ Vulnerability of micro and small enterprises, as well as and tourism sector to the negative consequences of world-wide pandemic situations; ✓ Low technological level of the economy; ✓ Reduction of trained professionals in response to the new challenges for the economic sectors; ✓ Further lagging behind in the competitiveness of the least developed areas.

LABOUR MARKET	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ General positive trend of the employment rate; ✓ Relatively high levels of youth employment; ✓ With the exception of Vidin district decrease of unemployment rate in the active population in the eligible area. 	<ul style="list-style-type: none"> ✓ People at risk of poverty and social exclusion; ✓ Continuous emigration of young people in active age from the Bulgarian part of the eligible area;

	<ul style="list-style-type: none"> ✓ Discrepancy between professional qualification of the labour force and labour market demands and expectations in Bulgarian part of the eligible area; ✓ Interregional differences in terms of unemployment rate among the NUTS III districts of the of the BG eligible area.
Opportunities	Threats
<ul style="list-style-type: none"> ✓ Regional approaches to increase of employability in perspective sectors and foster cross-border labour mobility; ✓ Setting up conditions for professional development and attracting young people from abroad; ✓ Setting up conditions, developing knowledge and skills for labour mobility; ✓ Development of dual education approach. 	<ul style="list-style-type: none"> ✓ Further increase of population at risk of poverty and exclusion ✓ Unemployment leads to migration; ✓ Poor employment opportunities in the rural areas lead to concentration of business activities and employment opportunities mainly in the big towns; ✓ The education is not labour market demands orientated, limited improvement of the educational system and unstable educational reform in Bulgaria.

SOCIAL DEVELOPMENT	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ A relatively well developed network of sports facilities; ✓ High share of people with primary and secondary education; ✓ Existing high share of universities in the CBC area / proximity of the BG capital where almost 25% of the total number in the higher education institutions are located; ✓ Relatively good coverage of social and primary health service networks; ✓ Access of the population to all levels of education. 	<ul style="list-style-type: none"> ✓ People at risk of poverty and social exclusion; ✓ Decrease in the number of schools and students in Bulgarian part of the eligible area; ✓ Dropouts from educational system on the Serbian part of eligible area; ✓ Well educated people are migrating to more developed urban areas. ✓ Low share of population with higher/university education, especially in the Bulgarian CBC region.

Opportunities	Threats
<ul style="list-style-type: none"> ✓ Promotion of social entrepreneurship; ✓ Social innovation and cross-border cooperation models for improving social, cultural and health services and inclusion of the disadvantaged groups; ✓ Opportunities for cross-border initiatives and exchange of know-how between institutions; ✓ Development of labour skills and opportunities; ✓ Opportunities for cooperation among the educational institutions and business community across the border; ✓ Opportunities for cooperation among healthcare institutions across the border. 	<ul style="list-style-type: none"> ✓ Poor employment opportunities in the rural areas and smaller settlements lead to concentration of business activities and employment opportunities mainly in the bigger towns; ✓ Further increase of population at risk of poverty and exclusion; ✓ Emigration of young and educated (brain drain); ✓ Insufficient provision of healthcare service; ✓ Vulnerability of healthcare systems to the negative consequences of world-wide pandemic situations; ✓ Increase of elderly population due to negative population growth and migration processes; ✓ Increased demand to extension healthcare actions due to higher share of older population.

ENVIRONMENT	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Diversity of natural environment; ✓ High density of the river network with relatively good eco-status; ✓ Natural resources (forests, waters, thermal spring, mineral resources); ✓ Well-developed National Ecological Network in the CBC region; ✓ Protected areas (national and nature parks, reserves) with well-preserved unique bio-diversity and unique eco-systems. 	<ul style="list-style-type: none"> ✓ Low awareness of the population regarding nature and environment protection; ✓ High degree of vulnerability to climate changes; ✓ Relatively high risk of floods and earthquakes; ✓ Relatively high levels of PM10 and PM2.5 in the urban areas; ✓ Outdated infrastructure related to risk prevention; ✓ Low level of development of eco-friendly tourism;

Opportunities	Threats
<ul style="list-style-type: none"> ✓ Increase of the adaptive capacity and support for preventive actions; ✓ Joint risk management and emergency preparedness; ✓ Direct support of SMEs dealing in the sphere of green economy; ✓ Awareness raising related to climate change; ✓ Common actions to raise awareness on the importance of environment protection; ✓ Cross-border cooperation for sustainable use and management of natural resources of mutual interest; ✓ Existing rich biodiversity as a precondition for diversification of tourism sector, development of eco-tourism; ✓ Increase in the national financial resources to invest in environmental protection and construction of infrastructure for environmental services; ✓ Utilisation of the territories with “clean” environment to pursue recreation activities and organic farming. 	<ul style="list-style-type: none"> ✓ Industrial risks related to the pollution of waters and soils; ✓ Loss of biodiversity due to river pollution; ✓ Uncontrolled use of natural resources; ✓ Inefficiency in water resources management and flood protection interventions leading to an increase in flood consequences.

INFRASTRUCTURE	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Two of the core TEN-T network corridors(Orient/East-Mediterranean and Rhine-Danube corridors) pass through the CBC territory; ✓ Relative high share of motorways and first-class roads in the CBC area; ✓ Existence of five functioning Border-crossing Check Points (BCCP). 	<ul style="list-style-type: none"> ✓ The road network in the in the Bulgaria part of the eligible area needs additional improvement; ✓ Weak connections of small cities to main roads; ✓ The level of households with access to Internet in the cross-border area is still lower than the average for the respective country; ✓ Insufficient capacity and low rates of waste recycling. ✓ No significant ports on BG territory

<ul style="list-style-type: none"> ✓ One airport with national and international significance is situated in the RS CBC area - Nis and close proximity to the BG CBC area of the located in Sofia airport; ✓ The households with internet access is constantly increasing; ✓ Well-developed water supply system 	<ul style="list-style-type: none"> ✓ Out of date railroad connection between the two countries
Opportunities	Threats
<ul style="list-style-type: none"> ✓ Further development and maintenance of the transport infrastructure of the eligible area; ✓ Potential for the development of the strategic road-railroad-river network (South-Eastern Axis Belgrade-Nis-Sofia; Danube river); ✓ Replacement and/or reconstruction and modernisation of the water supply network and facilities for reducing water losses. 	<ul style="list-style-type: none"> ✓ Damages in the existing infrastructure due to floods and storms; ✓ Lack of finance for investment in public infrastructure; ✓ Insufficient investments in infrastructure may increase the isolation of the cross-border area; ✓ Deterioration of the environment because of delayed waste-water recovery and treatment;

CULTURAL, HISTORICAL AND NATURAL HERITAGE	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Availability of rich cultural and historical/ archaeological heritage both in Serbia and Bulgaria; ✓ Existing variety of cultural and historic monuments and sites; ✓ The Cultural Corridor Diagonal road (connecting South East Europe to Asia) passes through the territory of the cross-border region; ✓ Rich natural heritage with unique flora and fauna. 	<ul style="list-style-type: none"> ✓ Insufficiently developed infrastructure for access to the cultural and historical sites; ✓ Insufficient joint actions in the field of cultural heritage exchange; ✓ The differences between the administrative systems in the two countries - an obstacle for joint measures concerning preservation of natural and cultural heritage.
Opportunities	Threats
<ul style="list-style-type: none"> ✓ Growth of cultural exchange across the border; ✓ Valorization of natural and cultural resources; 	<ul style="list-style-type: none"> ✓ Poor level of protection of natural environment, including absence of environmental infrastructure;

<ul style="list-style-type: none">✓ Introducing new innovative technologies/ equipment to improve the cultural, historical and natural heritage;✓ Great potential in cooperative measures (e.g. joint planning, strategies, mapping) related to nature and landscape protection and promotion.✓ Direct support of SMEs and diversification of tourism sector.	<ul style="list-style-type: none">✓ Insufficient financial support for cultural activities and cultural heritage exchange;✓ Low integration of the cultural, historical and natural heritage in the tourism product development.
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4. CONCLUSIONS

Given the above territorial and SWOT analyses conclusions can be drawn on the most relevant spheres and ways of intervention which will contribute most in tackling the needs and opportunities of the cross border region. In general both, strategic and competitive approaches for project selection, are appropriate to be applied depending on the concrete objectives to be addressed.

Taking into account the economic development of the border area as well as the significant unfavourable economic and social effects of COVID-19 health crisis, the CBC programme is considered as most suitable in supporting local businesses in peripheral and border regions for overcoming the negative consequences of the pandemic. Given the fact that most affected from the crisis are the micro and small enterprises typically having insufficient capital and poor development potentials, a direct support to SMEs is more appropriate than the usual indirect support from the current and previous programming periods. The most suitable way for providing the above support is through a competitive approach – open calls or other financing tools which provide a possibility for simplified procedures and absorption of funds (such as Small Project Fund).

For avoiding uncoordinated, dot-like investments a more integrated territorial approach is desirable based on the needs and competitive advantages of the region. For the last two programming periods the limited resources of the programme were directed to scattered sectoral investments based on open calls where coordination with the local territorial needs is not sufficient. For the future programme high attention shall be given to the specificities of the territory and an integrated approach to address the local needs and priorities. Such an approach will support the regional economies through dedicated measures which will exploit the full potential of the region. Smart integrated investments for fostering the territorial development and in particular local economy would bring high added value and ensure the leverage effect of the funds. Based to art. 3 (1) of the draft Interreg regulation for the programming period 2021-2027 the overarching principle of the cross-border cooperation programmes is to promote integrated regional development. In that respect PO5 “A Europe closer to citizens” is deemed most relevant for the thematic concentration of the future programme based on a common territorial development strategy.

The frequency of natural disasters have increased worldwide in the recent years especially since the middle of 1990s. A series of disasters have taken place and have caused serious material

damages and casualties in many regions in Bulgaria and Serbia, including the border region. In that respect an important step towards efficient disaster management and resilience is enhancing the capacity of both partner countries to protect and prepare the population for actions in case of disasters. Having in mind the already established good cooperation between the competent authorities in Bulgaria and Serbia as well as the need for comprehensive, efficient and sustainable solutions a strategic approach on risk prevention and rapid response management in case of different emergencies – wildfires, disasters, earthquakes, collapses etc. could be envisaged for support under the programme within the scope of Policy objective 2: A greener, low-carbon Europe, involving competent authorities as beneficiaries and a wide-range of target groups and stakeholders from the border region including business, academia, students, volunteers, professionals etc.

Having in mind that 2021 – 2027 Multiannual Financial Framework and Cohesion Policy Legal Framework are still subject of negotiations, the final decision of the Joint Programming Working Group on the thematic concentration of the INTERREG Bulgaria - Serbia Programme will be taken on one hand on the basis of the above conclusions and the agreements reached in the dialogues.

Considering the requirements regarding the thematic concentration and following the analysis of the strategic framework related to the next programming period and of the region’s characteristics, needs and challenges that may be solved via cross-border cooperation the following scenario is proposed as a basis for the development of the BG-RS Programme strategy.



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