Interreg – IPA CBC
Romania - Serbia

EUROPEAN UNION

TECHNICAL ASSISTANCE FOR THE PREPARATION OF THE DOCUMENTS NECESSARY FOR THE PERFORMANCE OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) PROCEDURE FOR THE ROMANIA – REPUBLIC OF SERBIA

INTERREG IPA CROSS-BORDER COOPERATION PROGRAMME FOR THE PROGRAMMING PERIOD 2021-2027

SCOPING REPORT

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Interreg – IPA CBC
Romania - Serbia

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Authors:

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Contact to the consulting service provider:

KVB Consulting & Engineering SRL

147 Mitropolit Varlaam Street, District 1, Bucharest 12903, Romania

Contact to the lead author:
Geographer Roxana OLARU
KVB Consultig & Engineering SRL, roxana.olaru@kvb.ro, +40 733 107 793

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LIST OF ACRONYMS

CBC	Cross-Border Cooperation
DRS	Strategy for the Danube Region
EMERALD	An ecological network made up of Areas of Special Conservation Interest
EU	European Union
EUSDR	The EU Strategy for Danube Region
EUSAIR	EU Strategy for the Adriatic-Ionian Region
IPA	The EU Instrument for Pre-Accession Assistance
IUCN	International Union for Conservation of Nature
NUTS	Nomenclature of Territorial Units for Statistics
OP	Operational Programme
SEA	Strategic Environmental Assessment
SEA Directive	Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.
Scoping	Determination of scope of the Strategic Environmental Assessment
Sqkm	Square kilometre

1 INTRODUCTION

1.1 Purpose of the Scoping Report

This document is part of the Notification to be submitted to the Competent Environmental Authority, for initializing the SEA procedure for the proposed Romania – Republic of Serbia Interreg IPA Cross – Border Cooperation Programme for the programming period 2021-2027. The Romania-Serbia IPA CBC Programme for the programming period 2021 – 2027 is currently available on the site: http://www.romania-serbia.net/, the section dedicated to Programming post 2020 and attached in the Annex 1 of the present report.

In this document are provided the relevant information for consideration of the environmental authorities in Serbia and Romania, in order to obtain their advice on the scope of the SEA study that should be elaborated in view of obtaining the necessary environmental approval.

The interested institutions, parties and persons were already invited to submit their observations and suggestions for improving the draft programming document.

2 DETERMINING THE SUBJECT OF THE PROGRAMME TO THE SEA

2.1 The outline of the programme

The scoping document is prepared for the first draft (August 4-th, 2020) of the Romania-Serbia IPA CBC Programme for the programming period 2021 – 2027, which includes three counties of Romania (Timiş, Caraş-Severin and Mehedinţi) and six districts of the Republic of Serbia (Severnobanatski, Srednjobanatski, Južnobanatski, Braničevski, Borski and Podunavski). The total area is 40.596 sqkm. (53,1 % in Romania/ 46,9% in Serbia). The programme area is split in two NUTS2 regions in Romania, and two NUTS2 regions in Serbia.

2.2 Objectives and areas of intervention

The following 4 Policy Objectives will be financed through the future Romania-Republic of Serbia Interreg IPA CBC Programme for the programming period 2021-2027:

- A greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management.
- A more social Europe implementing the European Pillar of Social Rights, by improving access to inclusive services, improving access and quality of education, ensuring equal access to healthcare services and developing the necessary infrastructure for achieving these objectives across borders, on the long term.
- A Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives.
- A safer and more secure Europe – an Interreg Specific Objective- by promoting actions in the field of border management, as well as migration and mobility management, including migrants protection.

2.3 Priorities that the programme covers

Justification for the selection of policy objectives and the Interreg specific objectives, corresponding priorities and the forms of support are presented below, according with Section 1.3, Table 1 of the currently analysed Programme (see Annex 1).

Priority 1: Environmental protection and risk management

Justification of the priority 1: Investments in the fields of environmental protection and risk management are based on the needs of the programme area, such as: underperforming environmental infrastructure, environmental hotspots and risks, lack of awareness of the population on environmental threats and lack of knowledge about environmental friendly solutions, etc.

This priority responds to the following Interreg specific objective: *A greener, low carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management.*

The specific objectives within this priority are:

1.Enhancing nature protection and biodiversity, green infrastructure in particular in the urban environment, and reducing pollution;

2.Promoting renewable energy;

3.Promoting energy efficiency measures and reducing green-house gas emissions;

4.Promoting climate change adaptation, risk prevention and disaster resilience.

Priority 2: Education and health care

Justification of the priority 2: Investments in infrastructure and services for education, skills and health care are based on the needs of the programme area, such as: poor accessibility to social and health care services in remote regions, old medical health care infrastructure, high unemployment rates among young active population in the rural areas, vulnerable groups, poor social inclusion. Special attention will be dedicated to digital education and trainings to improve the overall level of digital skills and competences and to investments in facilitating access to ICT devices, especially for young people in rural and remote areas.

This priority responds to the following Interreg specific objective: *A more social Europe implementing the European Pillar of Social Rights*

The specific objectives within this priority are:

1. 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 recognized across borders;

2. Improving access to inclusive and quality services in education, training and life-long learning through developing infrastructure, including by fostering resilience for distance and online education and 27 training;

3. Improving accessibility, effectiveness and resilience of healthcare systems and long-term care services across borders.

Priority 3: Integrated tourism and cultural & natural heritage

Justification of the priority 3: Sustainability is key for the tourism of tomorrow. Conservation of biodiversity, respect for the socio-cultural authenticity of host communities, securing the social welfare and economic security of the host communities, and sustainable use of environmental resources need to be the pillars of the new model of tourism. This crisis is an opportunity to place stronger emphasis on tourism strategies to coordinate action across all stakeholders. Integrating a circular economy model in the complete tourism value chain, involving producers, distributors, consumers, and environmental protection agencies is crucial. The transition to resource-efficient and low carbon tourism operation is necessary, while keeping a strong focus on resilience and competitiveness of the sector. Tourism is one of the fastest growing industries and EU is responsible for an increase of 10% in GDP and 27 million direct and indirect jobs, across all EU member states. The investments and measures to be implemented are based on the needs of the programme area, such as: low ”digital demand” regarding tourism in both countries, lack of competitive tourism products and low competences for product development and marketing and are building on the strengths of the region, as excellent geographical position for tourism; numerous natural, historical and cultural heritage sites and great thermal and wellness 28 assets.

This priority responds to the following Interreg specific objective: *A Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives.*

The specific objectives within this priority are:

1. Fostering the integrated social, economic, and environmental local development, cultural heritage and security, including for rural and coastal areas also through community-led local development.

Priority 4: Border management

Justification of the priority 4: EU support for an Interreg specific objective dedicated to external borders will help reduce vulnerability of the external borders based on comprehensive situational awareness, guarantee safe, secure and well-functioning EU borders. Also, external border programmes are aimed at preparing the candidate and pre-candidate countries for their EU membership, including by helping setting up systems and procedures in preparing the perspective of future internal borders. The need for financing of the Interreg specific objective 2 derives from the specificities of the Programme area, where the length of the border in the territory covered by the programme is 548 km, out of which 235 km (42,8%) on the Danube River, thus representing 1% of the entire EU external border.

Along this common border there are 8 road border crossings, 2 railroad crossings and 1 fluvial crossing. With over 4 million persons and 1.5 million freight transport means crossing the border each year, the Programme needs to set up priorities and measures dedicated to border crossing management and mobility.

Moreover, global migration and its related challenges, such as insecurity and instability are shaping a new and rapidly evolving world and these dynamics will affect Europe quite significantly. According to Frontex, the Western Balkans continue to be hit by irregular migration to reach Western Europe. Serbia as the central route of the Western Balkans is a main passage point in that respect. However, the borders between Serbia and Romania experienced a lesser influx of migrants in 2018 compared to other borders.

This priority responds to the following Interreg objective: *A safer and more secure Europe.*

3 DETERMINING THE LIKELY SIGNIFICANCE OF EFFECTS

3.1 Environmental effects at regional and transboundary level

The priorities, measures and interventions covered by the Romania-Republic of Serbia Interreg-IPA CBC Programme for the programming period 2021-2027 will have an overall positive environmental impact.

The programme area benefits from the existence of a vast area of national natural parks, with both touristic and environmental value. But special attention needs to be paid to protecting these areas and the existing biodiversity.

The economic profile of the program area, with large mining exploitations, creates environmental hotspots of intense soil and air pollution. Also, the decline of the industrial activity leads to the growth of abandoned industrial sites and contaminated areas. These brown fields pose a significant threat to human health, flora and fauna without the possibility to reclaim the areas in the short term, hence the need to invest in measures for rehabilitating/decontaminating the land and giving it back to the community or to nature.

The lack of awareness of the population regarding the environmental threats, together with insufficient waste and waste water management infrastructure leads to landfills and uncontrolled waste dump. For example, “in Serbia only 12% of the population is connected to urban wastewater treatment (status 2017). In Romania, almost half of the population is connected to collective wastewater systems with strong disparities between urban and rural areas”.

The program promotes measures for rehabilitating the land of industrial sites, old or illegal landfill sites, contaminated areas and giving them back to the community for social, economic or housing activities or simply restoring it into natural sites.

The low level of monitoring of soil, water and air pollution diminishes the level of population awareness regarding the real level of pollution in their communities.

The programme invests in actions and measures for raising awareness regarding the importance of protecting the environment and responsible behaviour.

Although the urban centres located in the programme area are not major ones, their carbon footprint is still significant due to the use of highly polluting cars, non-sustainable heating systems, together with insufficient energy efficiency measures.

This is the reason why the programme proposes this specific objective, for funding investments in green infrastructure in urban areas and for funding raising awareness measures of the resident population. This concept of “green infrastructure” is a relatively new one and special attention will be paid to promoting it and to developing pilot solutions that can be replicated later. The most common structures that will be targeted are: parks, tree-lined avenues, green roofs, open spaces, playing fields, agricultural land and woodland inside towns, etc.

The programme proposes measures like:

• Investments in the field of natural resources, ecosystems and biodiversity, including technologies for environmental protection;

• Implementation of measures for reducing pollution and raising awareness (e.g. waste collection and treatment, cycling lanes, sorting and 5R measures);
• Investments in activities dedicated to the control of pollution and rehabilitation of rivers and brownfields;
• Investments in activities dedicated to rehabilitation of industrial sites and contaminated land;
• Investments in air quality measures;
• Investments in the field of environmental protection (e.g. urban green areas);
• Investments in green infrastructure in urban areas (e.g. storm-water management, sustainable drainage systems, green streets, green roofs, permeable/porous paving, natural cooling of buildings, recycling systems, subsurface detention, cisterns and rain barrels and blue and/or green infrastructure);
• Joint strategies and action plans tackling the issue of pollution and biodiversity protection;
• Testing of new tools, instruments, experiments, transfer of solutions between relevant stakeholders and increasing the cross-border cooperation in the field of biodiversity, green infrastructure and reducing pollution.

All the measures proposed have the potential to contribute to Pillar II "Protecting the Environment" of the EUSDR and also to Pillar III "Environmental Quality" of the EUSAIR.

It is proposed that when implementing each project deriving from the the Priorities proposed by the Programme, to conduct an environmental impact assessment to determine the significance of the impact and the remedial and compensatory measures, when applicable. At this time, the information is not sufficient to determine the probable meaning of the effects set out in Annex II to the SEA Directive.

In this regard, it is proposed to undertake a simplified form of SEA and focus it on providing suggestions for detailed planning of each of the intervention in order to reduce possible risks and maximize their environmental benefits.

3.2 Characteristics of the affected territory

The programme area for the Romania- Republic of Serbia Interreg IPA CBC Programme for the programming period 2021-2027 includes three counties of Romania and six districts of the Republic of Serbia.

One important fact is that the programme area is at the centre of the European Danube Macro-Region and it partially overlaps with the European Adriatic-Ionian Macro-Region, where Serbia participates with its entire territory. The two partner countries include a large share of the Danube river basin, their total surface representing 10% of the basin in Serbia and 29% in Romania.

The total area is 40.596 sqkm. (53,1 % in Romania/ 46,9% in Serbia), including the Romanian counties Timiş, Caraş-Severin and Mehedinţi, and the Serbian districts (Severnobanatski, Srednjobanatski, Južnobanatski, Braničevski, Borski and Podunavski). The programme area is split in two NUTS2 regions in Romania, and two NUTS2 regions in Serbia.

In Serbia, three Banat districts belong to the Autonomous Province of Vojvodina,an administrative entity classified as NUTS2 statistical region according to the Decree on Nomenclature of Statistical Territorial Units (Official Gazette of the Republic of Serbia No. 109/2009 and 46/2010), which has revised the territorial statistical units in Serbia according

to the EU criteria. The Braničevski, Borski and Podunavski districts belong to the NUTS2 statistical region of Southern and Eastern Serbia.

In Romania, Mehedinți County belongs to the Development Region South West. The two counties of Caraș-Severin and Timiș belong to the Development Region West.

The programme territory in the Republic of Serbia represents 20.8% of the country, a larger share than in Romania, where the three counties represent just 9% of the national territory. A population of roughly 2.2 million lives in the programme area.

The length of the border in the territory covered by the programme area between Romania and the Republic of Serbia is 548 km, out of which 235 km (42,8%) on the Danube River. The length of the border in the programme area represents 26% of the external borders of the Republic of Serbia, and 17% of the external borders of Romania". Along this common border there are 8 road border crossings, 2 railroad crossings and 1 fluvial crossing. Also, there are 6 fluvial ports in Serbia, and 3 on the Romanian shore.

The geography of the region is complex and heterogeneous.

The Banat Plains extend in the North in the Serbian Districts and Timiș County. Moving to South-East, transition hills between the plains and mountains lead to the center occupied by the Southern Carpathians range, with Banat Mountains, Țarcu-Godeanu Mountains and Cernei Mountains and elevations between 600 and 2100 meters in Caraș Severin district. The Danube flows in the South Banat plains, at the border with the Braničevski district and it reaches the border between Romania and Serbia in the vicinity of Baziaș in Romania. In Romania, Timiș, Cerna, Caraș and Nera rivers cross the counties, some of them through spectacular valleys and gorges.

Danube network, which has benefited from EU financing in the previous programming period.

Between the southern Carpathian Mountains and the north-western foothills of the Balkan Mountains, the Danube flows through the Iron Gates gorges (Iron Gates is another name of Đerdapska klisura and it is stretching from Golubac to Simska klisura, 98 km. The Đerdap / Portile de Fier water gate is half on Romanian and half on Serbian side). The Romanian side of the gorge comprises the Portile de Fier natural park, whereas the Serbian part comprises the Đerdap national park. In the South East there is the Western end of the Southern Carpathians. In the Borski district there are Veliki Krš, Mali Krš and Stol mountains, dominated by karst formations, and are collectively known as "Gornjanski kras". In Romania there are the Mehedinţi Mountains with heights of up to 1500 m. The heights decrease towards the South East, passing through the hills to a high plain to the Western end of the Romanian Plain.

3.3 Characteristics of the environmental effects of the programme

The SEA will consider the following key issues of concern:

- Biodiversity;
- Landscape;
- Flooding and droughts;
- Water quality;
- Soil erosion and contamination;
- Industrial pollution events and contamination.

4 DEFINING THE SCOPE OF THE ASSESSMENT

4.1 Relevant plans, programmes and environmental protection objectives

Romania-Republic of Serbia Interreg-IPA CBC Programme for the programming period 2021-2027 has important relationships concerning more than two strategic documents that address environmental protection matters related to the study area, such as:

- EU Strategy for Danube Region;
- National Plan for the Adoption of the acquis communitaire (2013-2016) of the Republic of Serbia.

The EU Strategy for Danube Region (EUSDR)

The Programme shall seek to create synergies and complementarities with EUSAIR and to contribute directly to the implementation of the Macro- Regional Strategy for Danube Region. The EU Strategy for the Danube Region (EUSDR) provides an overall framework for parts of Central and South East Europe area aiming at fostering integration and integrative development. The Danube Region covers 14 countries (Germany, Austria, the Slovak Republic, the Czech Republic, Hungary, Slovenia, Romania, Bulgaria, Croatia, Serbia, Bosnia and Herzegovina, Montenegro, Republic of Moldova and Ukraine). Thus, the Danube Region encompasses the entire Programme area, whilst all projects to be financed contribute in a way and in a certain proportion to the achievement of EUSDR objectives.

The Strategy's four pillars (Connecting the Danube Region, Protecting the environment in the Danube Region, Building prosperity in the Danube Region and Strengthening the Danube Region) are all addressed by the Priorities and objectives of the Programme.

It is accompanied by a "rolling" Action Plan breaking down eleven Priority Areas into actions and project examples. The proposed list of the strategic actions was taken into account in the Programme strategy.

The relations between the programme area and the Danube Region can be analysed in the following main fields: mobility, energy, environment, risks, and socio-economic development.

In all these fields of interaction challenges and opportunities can be identified, according to the scale of the phenomena, local, regional or international, and 23 according to the main driving factors like the global environmental changes or the international tourism markets for example.

In some areas, a strong interdependency between the programme area and the larger Danube region can be identified. These areas are dominated by international and interregional factors, with impacts that largely overcome the regional dimension. Some examples: reduction and prevention of pollution of land, water and air by industrial and urban sources, control and mitigation of environmental risks, development of the integration of the European Transport Networks. In these areas the action of the project partners should be focused on the integration of the local actions with the strategies at the level of Danube region.

In other areas, interventions do not entirely depend, but can benefit from cooperation at the larger Danube regional level. Among these areas, the preservation of environmental resources, biodiversity, landscape; development of renewable energy sources; increase of

tourism; reduction of localized pollution sources; promotion of smart innovation initiatives can be mentioned as potential beneficiary of the cross-border cooperation actions.

During its implementation, the programme can develop specific project assessment criteria to encourage projects that support the priorities of the EUSDR (e.g. budget earmarking, specific calls for EUSDR, allocation of extra points to projects contributing to macro-regional targets and actions).

The EU Strategy for Adriatic Ionian Region (EUSAIR)

The EU Strategy for the Adriatic and Ionian Region (EUSAIR) is a macro-regional strategy which provides an overall framework for Adriatic-Ionian Region countries (Croatia, Greece, Italy, Slovenia, Albania, Bosnia & Herzegovina, Montenegro, Serbia and the Republic of North Macedonia) and stakeholders. The general objective of the EUSAIR is to promote economic and social prosperity and growth in the region by improving its attractiveness, competitiveness and connectivity, and it addresses common challenges and opportunities in four thematic areas/ pillars:

1. Blue Growth

2. Connecting the Region

3. Environmental Quality

4. Sustainable Tourism

The Action Plan of the Strategy should be implemented by mobilising and aligning all available EU, international, national and private funding of relevance for the four pillars and the specific topics identified under each pillar.

Opportunities to generate stronger strategic synergies between EUSAIR and national-level EU-programming, regional or sector initiatives include the integration of EUSAIR priorities in the framework of large impact projects with multiplier effects and/ or coordinated projects. Several programmes can contribute to the funding of these coordinated projects and thus the effects will be multiplied and the impact of the EU funding on the ground will be more visible.

The National Plan for the Adoption of the acquis of the Republic of Serbia.

The latest revised National Programme for the Adoption of the Acquis (NPAA) is the most significant and most comprehensive document in the process of European integration of Serbia. This is due to the fact that in addition to harmonisation of the complete domestic legislation with the EU law, it also envisages the obligation to strengthen administrative capacities during the accession negotiations with the EU, as well as long-term financial planning and responsible budget planning.

According to the NPAA, full harmonisation of legislation with the EU law has been envisaged by the end of 2021, followed by a period of monitoring the implementation of regulations

until membership. The goal of the Government is that by the end of 2021 Serbia becomes completely prepared for EU membership in technical sense, regardless of the date of formal closing of accession negotiations and achieving of full-fledged membership.

For the first time, the NPAA envisages the obligation of domestic institutions to strengthen administrative capacities in the field of European integration. Bearing in mind the dynamics of accession negotiations and an increasing number of open chapters, it is necessary to provide capacities both for the preparation and drafting of new regulations and for their efficient implementation. Special attention shall be paid to capacity building in the area of planning of projects for funding from the EU pre-accession assistance funds and bilateral development assistance.

In cooperation with the Ministry of Finance, a financial guide for monitoring the financial effects of NPAA has been prepared. As a strategic priority of the Government of Serbia, state administration institutions are now obliged to responsibly and sustainably plan budget funds for the implementation of obligations in the process of European integration. At the same time, planning implies the obligation to identify priority projects for financing from international assistance funds.

According to the NPAA, the Republic of Serbia is highly motivated to develop further relations with neighbours and countries in the region of South-East Europe, thus affirming one of the priorities of its foreign policy – improvement of regional cooperation. In the strategy of Serbia, regional cooperation, especially through regional fora and initiatives, although not replacing the process of integration to the EU, represents a central contribution to strengthening of bilateral relations with the neighbours and the states from the South - East Europe region.

Republic of Serbia is actively contributing specially to the Danube Macro Region Strategy, thus assigning a special role to the Romania-Serbia Interreg-IPA CBC Programme 2021-2027, for the contribution to the wider strategy, and the creation of an integrated framework for the achievement of the EUSDR and EUSAIR objectives.

4.2 Identified environmental problems

The 1st draft of the proposed OP outlines the following key environmental strengths and weaknesses of the study area as follows:

- Corridors X, IV and VII and vicinity of international airports;
- Variety of landscapes, geo and bio diversity;
- Natural resources (World Heritage natural sites, natural parks, Natura 2000 sites, thermal spring, forests, waters, mineral resources);
- Rich cultural and historical/ archaeological heritage;
- Favourable conditions for agriculture in the valleys, as well as for agro/food industry;
- Presence of tertiary education institutions;

- Relatively good coverage of primary education, social and primary health service networks;
- Regional and local involvement for investing in joint risk management and emergency preparedness;
- Local and regional support for implementing joint measures to preserve biodiversity, valuable landscapes and cultural/historical/ architectural heritage;
- Strong cross-border cooperation links built since the External Borders Initiative Programme (2003);
- High potential for various types of tourism based on thermal and wellness natural and historical resources and on cultural activities;
- The area is in the core of the Danube basin and of the European Danube macro-region;
- Common actions in order to increase the competitivity of local industries;
- Poor internal connectivity within the border area;
- Large areas exposed to environmental and climate change risks;
- Low awareness of the population regarding nature and environment protection;
- The geography of the eligible area is complex and heterogeneous;
- Most underdeveloped areas deep rural-urban divide;
- Low economic viability of agricultural holdings;
- High unemployment and skills mismatch in the labour market;
- Poor access to education and health care services for disadvantaged groups;
- Low number of joint plans for environmental risks and low coordinated risk management and emergency preparedness actions;
- Public utility services for waste management and wastewater treatment underdeveloped;
- Tourism potentials unaddressed, lack of competitive products, low standard accommodation infrastructure, lack of coordinated touristic offers and services;
- High number of people at risk of poverty and social exclusion;
  Language barriers, weak capacity for project generation and development and co-financing.

4.3 SEA Objectives

The most relevant environmental reference framework for the proposed Romania-Republic of Serbia Interreg-IPA CBC Programme 2021-2027 are the priorities defined in the environmental pillar of the EU Strategy for the Danube Region and of the the EU Strategy for the Adriatic and Ionian Region (EUSAIR), as referred in the above sections of the two strategic documents.

The objectives for the Priority Area 'Environmental protection and risk management are:

1. Enhancing biodiversity, green infrastructure in the urban environment and reducing pollution;
2. Promoting renewable energy;
3. Promoting energy efficiency measures;
4. Promoting climate change adaptation, risk prevention and disaster resilience.

The objectives for the Priority Area 'Education and health care' are:

5. Improving acces 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 recognized across borders;
6. Improving access to incluisive and quality services in education, training and life-long learning through developing infrastructure, including by fostering resilience for distance and on-line education and training;
7. Improving accessibility, effectiveness and resilience of healthcare systems and long-term care services across borders.

The objectives for the Priority Area "Integrated tourism and cultural & natural heritage" are:
8. Fostering the integrated social, economic and environmental local development, cultural heritage and security, including for rural and coastal areas also through community -led local development".

The objectives for the Priority Area "Border management" are:
9. A safer and more secure Europe.

The SEA will appraise the proposed Romania- Republic of Serbia Interreg-IPA CBC Programme for the programming period 2021-2027 against the above specified 9 targets defined in the environmental pillar of the EU Strategy for the Danube Region.

4.4 Baseline information

Environmental baseline information from the Republic of Serbia
Biodiversity, flora, fauna

General information

It is estimated that in Serbian territory over 1000 species of flora is endangered, according to the Red list of Serbian flora (2002). Most of the endangered plants in Serbia is in the IUCN category of "rare plants". The most endangered part in Serbia's biodiversity considers the forest ecosystems and especially sensitive ecosystems (e.g. wetland habitats, prairie habitats, continental salt marshes, sandy terrains, mountain habitats) some of which are refugial habitats for relict and endemic species.
NATURA 2000 represents the political basis of protection for EU nature and biological diversity. NATURA 2000 is not a strict system of reserves where human activity is prohibited. It includes areas with strict regime of protection, but better part of this network remains in private property where it is extremely important to ensure sustainable management for these areas both in ecologic and economic aspects. Establishment of network for protected areas represents compliance with requirements toward UN Convention for biological diversity.

EMERALD network is European ecological network of spatial units and habitats which are of special national and international significance in the aspect of preserving biodiversity and comprised of Areas of Special Conservation Interest (ASCI) in territory of all Convention signatory countries.

By the Convention criteria for preservation of wild flora and fauna and natural habitats a list of potential EMERALD areas is made, and it includes 61 areas. Overall area is 1.019.269

ha which is 11.54% of Serbian territory. Some of these areas are in districts which are being studied in this programme.

Likely future trends

The systems of natural and semi-natural areas, the ecological corridors and surrounding areas form a coherent ecological network system. The EU 2020 Biodiversity Strategy sets out specific targets for ecosystem services, maintenance and re- establishment of spatial planning and the integration of green infrastructure.

The main risk factor is human intervention, but it is also important to prepare against certain natural influences. The natural and cultural values are mainly endangered by intensive agriculture, illegal material gain, and infestation by invasive species. Constructive co-operation between different authorities and more effective involving of different stakeholders (farmers, authorities, municipalities, NGOs, and academic institutions) is necessary.

It is essential to rehabilitate the degraded habitats, growing areas with the involvement of farmers as much as possible. In the future, special attention should be paid to climate change on habitats and living communities, and the rehabilitation and reconstruction tasks as well.

Landscape

There are several objects with important landscape values in the designated districts, and should be therefore taken into consideration.

National Park Djerdap

A blend of time and nature on land and water, the largest national park in Serbia, Djerdap National Park, is located in north-eastern Serbia, on the border with Romania. Spanning 637.99 square kilometers along 100 km of the Danube's right bank, from Golubac to Karataš near Kladovo, the National Park comprises zones with various protection regimes for natural objects, cultural monuments, fauna and relict plant species, which illustrate the development of vegetation series from times immemorial until the present day. The first level of protection comprises 8.83% ie. 56.33 km2 territory of the Park, the second degree comprises 21.03% ie. 134.15 km2, and finally, the third level comprises 70.14% ie. 447.51 km2. Djerdap National Park is often called 'river national park' because the Danube makes up a significant portion of the Park. The miraculous Iron Gate, the largest and longest water breakthrough in Europe, is also a natural botanical garden and the biggest European archeological open-air museum.

Deliblato Sands Special Nature Reserve

Deliblato sands Area /Deliblatska Pescara/ is the Special Nature Reserve located in southern part of Banat, 50 km from Belgrade, 40 km from Romania border between the Danube river and the western Carphatian slopes. The Deliblato Sands is a geo-morphological formation of eolian origin of exceptional specific beauty and multiple scientific importance, created during the Ice age by large quantities of eolian silicate and carbonate sands. Deliblato Sands is of diluvial origin and makes the largest European continental sands area. Deliblato

Sands Nature Reserve is the largest oasis of sand, steppe, forest and wetland vegetation on the Pannonian Plain. Sand that spread all over the vast Pannonian Plain caused great problems in the past.

Deliberate planting of numerous trees began during the reign of Queen Maria Theresa that contributed to rich vegetation in present time. Deliblato Sands covers the total size of 33.610 hectares. This wide and unique European natural phenomenon is characterized mostly by ellipsoid-shaped sand masses up to 15 km in length. There individual sand dunes reach length of 750 meters and heights near 60 meters. Deliblato sands area is the only sandy terrain in Europe originated from the Pannonian Sea withdrawals 35 km long and wide 9-12 kilometers. Due to its beautiful forest and unspoiled surroundings, it was proclaimed to be the Special Nature Reserve. Deliblato Sands Area attract nature-lovers, eco-researches, fishermen and hunters. Within the borders of The Special Nature Reservation of Deliblato Sands there are 2 strict and 16 genetical reserves and 6 natural monuments. Due to specific natural and climatic conditions, although it is at the altitude of only 200 m, Deliblato sands has a climate similar to the mountain. Deliblatska peščara is poorly populated, with few villages, mostly on the outskirts of the reserve.

Deliblato Sands Area is known as "The European Sahara". It is natural habitat of numerous herbs and animal species, specially rare birds and game. Deliblato Sands Area is on UNESCO tentative list of Protected Natural Heritage.

Special Nature Reserve Meadows of Great Bustard – Mokrin

Category IV in IUCN classification, Habitat and Species Management Area. Located in Northern Banat in the area of Kikinda and Čoka Municipalities covering the space of 979 ha. Habitat for natural rarity Great Bustard (Otis Tarda), one of the most endangered bird species in Europe and world. This is the only remaining habitat for this species in Serbia and former Yugoslavia. It also has a mosaic complex of plant communities, both specific for some localities and typical Pannonian phytocoenosis or for the region of Northern Banat as a whole. Most diverse type of vegetation is salt marsh vegetation. Also specific and rare flora (Pannonian endemic and subendemic species and other rare species). Specific insect, amphibian, reptilian, bird and mammal fauna with a high degree of diversity and also other nature rarities (2/3 of birds have natural rarity status). The current state indicates an increase in population of Great Bustard. Level II protection, and has two separate zones, A and B.

Special Nature Reserve Slano Kopovo – Novi Bečej

In the year 2001, 976 hectares of “Slano Kopovo”, a special nature reserve, was declared by the Serbian Government as a natural value of the utmost significance, rated first category. The Association of Huntsmen from Novi Becej has been nominated as its official trustee. Slano Kopovo represents one of the last preserved salt land marshes in Vojvodina. In the past, the river Tisa used to change its course frequently, flooding the nearby plains, so “Slano Kopovo” is one of the ancient meanders of the river Tisa. Slano Kopovo is an immeasurable center of the biological diversity of the flora and fauna on the territory of Vojvodina as well as an example of salty habitats at the verge of complete disappearance. It is one of the most important and most particular bird habitats in Serbia, as well as in the middle Europe. Slano Kopovo is the nesting place for a number of rare and endangered

species of birds, but even more important is its significance as an en route station for birds in migration from many parts of Europe and from west Siberia. Slano Kopovo is a very special place for birds such as cranes, snipes, herons, ducks and geese. During the migration period in the spring and in the autumn, here in Slano Kopovo over 15000 grey cranes (Grus grus), over 20 000 different species of ducks, and over 5000 geese can gather in just one moment.

Special Nature reserve "Stari Begej –Carska bara"

Special Nature reserve "Stari Begej –Carska bara" is located on the alluvial plain of the Rivers Begej and Tisa close to the road directions connected with Zrenjanin, Belgrade, Novi Sad etc. This is the complex of 1,676 ha consisting of the river bed of the River Begej, Carska bara (Imperial Marsh), Tiganjica, Zegmenjica, Mala bara (Small Marsh), Perleska bara and neighboring bogland.

Being the nature reserve Carska Bara is the habitat for 240 rare species of birds,out of which 130 are non-migratory and 110 migratory. Therefore this nature reserve is one of the most important stations in Europe. Due to its natural resources it is included in the list of the Ramsar, IBA and IPA region.

As it is one of the most important resting places on the migration route of migratory birds, some species stay only ten days, and some like the Siberian wild geese, abide there during winters (hibernate). All of eight species of herons built their nests in Carska bara, so the heron has become a trademark of the reserve. Within the rich and varied bird colony, there are other types, such as the pelican, coot, white-tailed eagle, hen harries and western marsh harriers, cormorant, Eurasian Sparrow hawk and others.

In the mosaic disposition of forest, meadow, prairie and wetland vegetation some rare and protected plant species such as white and yellow water lilies, plum thistles, wild flowers, water chestnut Loose-Flowered Orchid etc, have found their habitat.

Natural monument Lazarev kanjon

Lazarev Kanjon ('Lazar's Canyon') is in eastern Serbia and is part of eastern Kučaj. Lazarev Kanjon is important for its relief, its water-formed features and its natural life. It was formed by the erosive action of the Lazareva Reka river, a right tributary of the Zlotska Reka river. This magnificent canyon is carved into the limestone of the Dubašnička Ravan, and is joined by the more shallow, smaller canyons of the Milujska Reka and Pojenska Reka rivers, as well as by the Demizloka canyon.

Lazarev Kanjon is one of the least negotiable canyons in Serbia. It is 4.5 km long, 350 to 500 m deep, and at its narrowest is 4 m wide. It is notable for its vertical limestone cliffs with a flattened limestone plateau from which the carving of the valley began. It is also unique for its variety of surface and underground karst relief forms such as karst valleys, sinkholes, karren, kamenica, caves and caverns. More than 70 caves and potholes have been discovered in the area of Lazarev Kanjon, the most significant being Lazareva Pećina and Vernjikica. The area is also of interest for its variety of forms of surface and subterranean waters.

The flora of this region is some 50% more diverse than the flora of the national parks of Kopaonik, Šara and Djerdap, and as much as 5 times more diverse than the flora of Serbia as a whole, which is an indication of its significance as a centre of floral diversity in the Balkans.

The plant life is characterised by numerous and varied endemic and subendemic plants, as well as by the presence of 52 relict plant species dating back to various geological eras.

Lazarev Kanjon is a region populated by Italian and Turkish oak, together with oriental hornbeam, though a total of 16 tree and 10 plant communities have been recorded. The territory of the Lazareva Pećina cave is home to 57 tall and short tree species and 27 shrub species. This is a major centre of European deciduous tree species and a rare refuge of the Stankewicz pine. Also very important are the Austrian black pine woods on the canyon cliff-edges and the beech and pine woodlands.

The canyon is home to 35 species of mammal (bats, chamois and others), 96 bird species (Golden Eagle, Peregrine Falcon, Eagle Owl, Tawny Owl, Wallcreeper, Yellow-billed Chough, Common Kingfisher, Syrian Woodpecker, Red-rumped Swallow and others), 9 reptile species, 8 amphibian species and numerous, as yet insufficiently studied species of insect and cave fauna.

Nature Park Vršačke planine

Vršačke planine (rum. Munţii Vârşeţ, also known as Vršački Breg, rum. Dealurile Vârşeţului) are located in the middle of Pannonian Plane in southwestern part of Banat. They cover a space of 170 square kilometers, of which 122 are in Serbia and 48 square kilometers belong to Romania. Due to it`s unique location, diversity in flora and vegetation, rich forest ecosystems, beautiful landscapes and viewpoints, the better part of the forest area in these mountains, covering 4.177 ha, was protected in 1982. as Nature Park. In the period between 2001 and 2005, a study about revision of protection was made. In December 2005 Municipality of Vršac made a decision about protecting the landscape of exceptional characteristics Vršačke planine in the area of 4.408 ha, of which 190 ha is under first level of protection.

The main goal of nature protection in this category is pointed at preserving and improving this protected space for local population recreation needs and tourism. For these reasons it should be known that the established protection in Vršačke planine does not pose a limitation to development of recreational and touristic potential, on the contrary it should help improving and organizing the ecosystem.

Water quality

General information

On the basis of the multiannual monitoring, concentrations of BP5K parameters show that ammonium ion, nitrates and orthophosphates are within allowed amounts for class I and II, which is equivalent to excellent and good ecological status.

In the last fourteen years the worst quality was in the waters of Vojvodina`s rivers and canals. Expressed with indicator Serbian Water Quality Index, compared to the total number of samples from all watersheds, the result is very bad in as much as 83% of the samples from Vojvodina`s territory. Poor condition of water quality in this watershed is further accompanied by the information that even 45% of samples are in categories bad and very bad.

Based on the analyses of biological quality of watercourses with the saprobity index method, in 70% of measuring stations satisfactory status is achieved (excellent and good)

while in 30% of measuring stations status is not satisfactory (moderate and low). It is important that during this research no water bodies with poor status were identified.

Quality of underground waters close to big rivers

Today, underground waters are supplying 65% of water needs for households and industries In Republic of Serbia, and in Vojvodina this is the only way of water supplying. According to the available statistical data about exploitation of underground waters for the public water supplying and estimate of the amounts for the rural population, today in Serbia about 600 million m3 of underground water is being used.

Total capacities of existing underground water sources In Serbia are about 670 million m3 per year, and estimated potential amount of underground waters until 2021 is 1.948 million m3 per year. In relation to the existing capacities, today is used 90% of exploitable capacities from existing sources, while in relation to the estimated potential amounts 31% could be used.

Existing databases are not reliable enough for estimating the impact of today`s and future exploitation on the change of quality and quantity of underground waters in Serbia. Generally speaking the monitoring program is unsuitable in relation to the scope and content of today`s condition of endangered quality of underground waters, especially because of the influence of polluted watercourses, urban-industrial agglomerations and the influence of agrotechnical measures in agricultural areas.

Water pollution

Untreated municipal and industrial waste waters are still the greatest source of pollution.

The response of pollutants is still unsatisfactory for the compliance of their legal obligations and reporting about emissions in waters.

Likely Future trends

There is a need for the modernisation of livestock farms, transformation of machinery stock and fuel storage facilities, adequate management of liquid manure and agricultural wastes, outer and inner integrated establishment and maintenance of drainage. The interventions providing the achievement of good ecological state of waters by adequately selected agrotechnological operations should be preferentially supported. Stopping of further increase in nitrate concentration of groundwaters can be ensured by the compliance and enforcement of nitrate sensitive areas regulation.

The risk of groundwater pollution and the degree of pollution can be reduced by following measures: change in land use, afforestation, establishment of wetland habitats and fish ponds, establishment of rational and integrated surface water management, Natura 2000 grants, organic farming, modernisation of livestock farms, spreading of extensive animal management, modernisation of machinery stock and fuel storage facilities, adequate management of liquid manures and agricultural wastes, prevention of the development of stagnant waters. Appropriate risk management of water acquisition and distribution is also an important part. The lack of maintenance of water supply systems leads to microbiological

and / or chemical contamination. Lack of reconstruction of water utilities jeopardizes the safety of the service as well.

Soil erosion and contamination

General information

On the territory of Republic of Serbia different forms of erosion dynamic processes can be found (landslides, landfalls, screes, erosions…). Besides the natural factors which are causing these processes, inadequate usage of terrain also contributes to the making, development and intensifying of these processes.

Terrain instability, with occurring landslides, landfalls, screes and collapsing of riverbed banks vary in dimension and activity, is present in about 25 – 30% of Serbian territory. In relation to the total Serbian territory landslides take 20 – 25%. Also, occurring terrain instabilities are present in river valleys and in unsecured slopes in road zones. Screes are found in about 5 – 10% of Serbian territory.

Landslides are mostly 5-10 m deep, in which also appear smaller secondary, active landslides with acute cinematic status. In connected petrified rocks, landslides are limited to decomposed rocky mass and diluvial zone, while in neo-geogenic rock complex they are deeper (often ever 10m). Deepest landslides formed in Danube and Sava coastal area.

Landfalls are mostly found in canyon valleys, broken rock masses, mostly limestone and serpentinite, endangering roads and watercourses causing barriers to form. Debris are mostly occurring on higher slopes predominantly in limestone terrains and usually outside of settlements (mountain terrains of eastern and western parts of Serbia).

Erosion activities on slopes are present in terrains comprised of unbound, weak bounded and degraded rock masses. Combined with torrential flows, wherein in times of snow melts and intensive precipitation, their activity is intensified.

Fluvial erosion with collapsing of river bed banks and terrain flooding are present on the banks and in immediate zones of constant watercourses, and are caused by abundant precipitation, snow melting and by development of slope erosion and torrential activities in upper and middle parts of the watershed in highlands and mountain regions.

Intensive riverbed carving and collapsing of banks in river valleys can cause landslides in unstable and relatively stable slopes. Collapsing of river banks is present in unregulated parts of river beds, mostly outside of urban areas, where the agricultural areas are predominantly endangered. There are also unregulated or insufficiently regulated banks in urban areas.

Based on the data of Republic Institute of Statistics in 2012, 6296 km2 of soil in Serbia eroded, while 374 km2 was stabilized.

Eroded soil is a soil which was completely or partially deprived of its fertile layer and vegetation, so its capacity for plant production is significantly decreased or disabled. On stabilized soil there is no more washouts, landfalls and carrying of new deposit material.

Likely future trends

The overall condition of soils is favourable, but the agriculture-affected areas are endangered by functionality reducing, fertility degradation (e.g., erosion, wind erosion, loss of organic material set) risks. Degradation processes occur due to improper land use, resulting

increasing costs of agricultural production, ecological/water balance (increasing drought sensitivity) circles break-up, build-up of hazardous substances (food safety), and water, drinking water contamination. Implementation of integrated nutrient management practices plays an important role in sustainable land use. The expansion of infrastructure, industry and settlements leads to significant land permanently withdraw from agricultural production and long-term soil sealing.

Climate change, Droughts and Flooding

According to data trend over the last 35 years an increase of yearly air temperature by 1 degree C is noted on Serbian territory in the last 100 years. Shorter periods have greater positive values which means that the increase of temperature at yearly level has intensified over the last couple of decades. Although there are periods with positive and negative trends, since 1982 negative trends ceased and only an increase in temperatures was noted and it lasts still today.

Besides the increase in temperature, over the last 50 years also was noted a 10% decrease of precipitation from its normal values. Negative trends of yearly sum of precipitation coincide with the positive temperature change trends.

Estimates for Serbia are that by the end of this century an increase in temperature even by 4 degrees C can be expected. Compared to the temperature changes, where in all of Europe an increase is expected, future trend for precipitation is somewhat more complex. Estimates are that certainly there will be a decrease during the summer periods in Mediterranean, so also for Serbia a future decrease of 20% for the summer is expected.

These climate changes certainly are contributing to more frequent droughts and also higher probability for flooding events due to the complex and changed interaction of climate elements. A testament to that are unprecedented floods that happened this year and did vast damages to Serbia, and also some recent dry years occurred. The North-eastern part of the country however was not endangered in recent flooding events, but in 2009 after snow melts flooding took place also in Borski district, and several rivers were overflowing.

Environmental baseline information from Romania

Biodiversity, flora, fauna

General information

Romania's biodiversity is one of the most diverse in Europe, presenting a large variety of ecosystems and species. The Romanian territory has 5 bio-geographical regions. The country fauna is hosting 105 mammal species, 19 amphibian species, 25 reptile species, 216 fish species, 410 birds' species, etc.

The Romania-Serbia Interreg-IPA CBC Programme 2021-2027 has as area of development in Romania, the territory of 3 counties: Mehedinti, Caras-Severin and Timis.

Flora and fauna in relevant Romanian counties from the eligible area

The flora and fauna have specific and diverse features according to the climate and relief forms. The southern elements have a great effect on Mehedinti on the Romanian side. Several Mediterranean plants and animal species are present in the programme area such as fig tree, almond, and horned viper. There are also several species of scorpion, lizard, and newt in the

Romanian side of the cross-border area. Some species of the Mediterranean flora have spread in the Danube gorge, i.e., Oriental hornbeam (Carpinus orientalis), Turkish hazel (Corylus colurna).
The forests cover a significant part of the territory, thus the sustainable management of forests is a crucial issue. Forests are very important for the erosion protection of agriculture lands, as well as for the biodiversity conservation.
At counties' level, the biodiversity is characterised through a great diversity of types of natural habitats as well as species of flora and fauna, as follows.

Mehedinti County
The research indicates that the county has great floristic diversity, over 4000 taxa, belonging to the phylums: *Phycophyta, Lychenophyt, Fungi, Bryophyta, Cormophyta*. Endemic species are around 28 in the *Iron Gates Natural Park* and 23 in *Domogled-Cerna Valley National Park*. A significant number of plant species are rare, endangered and endemic, whose area is only in the Iron Gates Natural Park, thus requiring special measures of protection. These include: *Stipa danubialis*, Iron Gates apiaceae (*Prangos carinata*), Rhodope tulip (*Tulipa hungarica*), bluebell (*Campanula crassipes*) etc. Habitats encountered within Mehedinti are meadows and scrubland, forest, rocky, caves and wetland. Status of wild flora and fauna is directly linked to the state of natural habitats, by the impact caused by the action of other environmental factors.
In the same area it is a great diversity of species of vertebrates and invertebrates. Among vertebrate animals the situation so far is as follows: Pisces Class, Amphibians Class, Birds Class, Mammals class. Avifauna consists of a large number of species of birds, mostly concentrated in Iron Gates Natural Park and two wetlands in the county. The great number of species present is due to the variety of biotopes in this area, on a small area a large number of species can be found, which is rare in our country.

Caras-Severin County
In this area there are 62 habitats of national interest and a number of 51 habitats of community interest were identified, of which 13 priority habitats in Europe; 218 plant species of national interest and 18 plant species of Community interest.
According with the available data, the Nera Beuşniţa National Park, 1086 species of superior plants, including 108 rare species and 13 endemic species, were found. Domogled-Cerna Valley National Park is characterized by a remarkable floristic diversity, the rich floristic inventory totaling about 1110 species of vascular plants (superior) of which 66 species (belonging to 23 families) are endangered taxa, rare and partly endemic. In Semenic-Carasului Gorges National Park, inferior plants are represented by a number of 270 taxa belonging to micophytes and 18 taxa belonging to the group of lichens. The best investigated is the Cormophyta group, represented by a total of 1277 species, from different biotopes. The whole flora of Iron Gates Natural Park is represented by all five phyla of the plant kingdom, as follows: Phycophyta, 71 families, 171 genres and 549 species; Lychenophyta with 34 families, 67 genres and 375 species; Fungi, 48 families, 252 genres and 1077 species; Bryophita, 31 families, 98 genres and 296 species; Cormophyta with 67 orders with 114 families, 540 genres, 1395 species, 272 subspecies and 5 varieties.

The wildlife that can be found in the county of Caras- Severin consists of a total of 230 species of national and 70 species of Community interest identified so far. Fauna of the Iron Gates Natural Park consists of 5205 taxa, including 4873 invertebrates and 332 vertebrates. Among vertebrates, Aves class has a high presence, with 205 representatives, followed by the class Pisces, with 63 representatives, the least represented class is Amfibia, with only 12 taxa. In Nera- Beusnitei Gorges National Park, a number of invertebrate 1,890 taxa and 124 taxa of the vertebrates were identified. Domogled-Cerna Valley National Park is the area with the highest biodiversity of Lepidoptera, nearly 1,500 species of butterflies (1463) can be found here, 45% of the Lepidoptera fauna of the country is concentrated here. Through the variety, richness and originality, fauna of this land with a unique climate has a great importance and also for many species it represents the northern limit of the area of distribution. The diversity of elements is primarily due to the variety of habitats which led to the existence of many species and even low plain steppe, water meadows, and numerous elements characteristic to hilly, karst and mountainous regions.

The Anina Mountains showed that this area is a refuge during glaciations that allowed survival of tertiary species as: Amphimellania holandri - among invertebrates and Cobitis elongata - of vertebrates. The invertebrate fauna is dominated by beetles and opilionide, followed by springtails, arahnee, chilopods, isopods, Orthoptera, formicide, gastropods, dipterous larvae etc. Some gastropods as: Carpathica langi, Zenobiella umbrosa are endemic and of plecoptere some are considered Carpathian endemic: Nemoura carpathica, Chloroperla kisi. Among invertebrates 17 species of community interest including 9 priority were identified, such as: Rosalia alpina, Cerambix cerdo, Carabus variolus, Lucanus cervus, Oxyporus mannerheimii, Pilemia tigrina, Theodoxus transversalis, Buprestis splendens, Callimorpha quadripunctaria. The pronounced continental climate with Mediterranean influences favored especially in the Danube wetlands and Balta Nera wetland and Islands Ostrov and Randall wetlands, Divici Pojejena – life of many birds with many southern and western Asian elements. This area is one of the few areas in the country where species diversity of rare items can be observed and where, on a small area such a large number of species of birds can be seen: winter visitors, summer visitors, passage species and sedentary species. Some of the birds' inventories are of community interest or are included in the Wetlands Convention and other international treaties to which Romania is a party. Among the bird species protected under the provisions of Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds, we mention: Anas querquedula, Ciconia ciconia, Egretta garzetta, Ardea purpurea, Falco Naumanni Phalacrocorax pygmaeus. These birds are subject to the protection and preservation regime established in the special avifauna conservation areas: Ostrov Moldova Veche wetland, Ostrov-Calinovat wetland, Pojejena Divici wetland and Balta Nera wetland. These areas are included in the SPA Natura 2000 site proposal.

Ichthyofauna is represented by species: Zingel streber, Zingel zingel. Fauna reptiles - is represented by thermophilic elements, many of which are rare but vulnerable such as Lacerta muralis, Testudo hermanni, Vipera ammodytes ammodytes, Emys orbicularis. Mammals are mainly represented by 10 species common in general to all mountain chains in our country and many other species that live only in the south - west of the country. Fauna species present in our county and protected at European level: Canis lupus (wolf), Ursus arctos (brown bear), Aquila chrysaetos (golden eagle), Rhinolophus ferrumequinum (great horseshoe bat), Myotis

capaccinii (long fingered bat), Cobitis elongata (Balkan Loach), Callimorpha quadripunctaria (striped butterfly).

Timis County

In *Timis County*, the ocean climate influences and climatic differences between lowland and mountain relief imposed by altitude of the landscape, resulted in a large number of habitats. Another factor that causes large variety of habitats is represented by the chemical composition of the rocks in the substrate (soil, subsoil).

The natural vegetation of Timis county is characterized by small-scale forest-steppe plant and by a high frequency of hydro and hydrophilic species in the lowlands and plains with excess moisture. The eastern part of the county, occupied by Poiana Rusca Mountain, is covered from the point of view of forest vegetation, with forests of oak, beech forest, mixed with hornbeam, and on the upper slopes of the mountain we find forests of spruce mixed with fir, sporadically with pine. Timis county hosts last archaic mire in the western part of the country - Satchinez Marshes Reservations, which allowed the conservation of wild birds, protected by European and national legislation. The reservation contains a mixed colony where protected species are nesting in: Ardea purpurea - red heron, Ardeola ralloides – squaco heron, Nycticorax nycticorax - Night Heron, Botaurus stellaris – great bittern, Ixobrychus minutus – little bittern, Egretta alba - Great Egret, Egretta garzetta - little egret.

In Muran Marshes Reservation protected area a significant number of bird species strictly protected by international conventions were identified. Protected area is limited to the eastern part by the Pişchia forest, whose protection is needed because many species of birds of prey that feed on within the reservation have the forest as a place of refuge and/or nesting. Of these species, we mention the following : Haliaetus albicilla - White-tailed , Pandion haliaetus – fish hawk, Falco subbuteo - hobby, Falco tinnunculus – common kestrel, Falco vespertinus - Red-footed Falcon, Falco columbarius - Winter falcon, Falco peregrinus - peregrine falcon, Pernis apivorus - Honey Buzzard, Milvus migrans - black kite, Milvus Milvus - red kite, Circaetus gallicus - toed eagle, Aquila heliaca - Imperial Eagle, Aquila pomarina - Lesser Spotted Eagle, Buteo buteo - common buzzard, Buteo lagopus – rough legged buzzard, Accipiter nisus – northern sparrowhawk, Accipiter gentilis - northern goshawk .

In Timis county, habitats of community interest were identified, habitats described in the standard formulations of Natura 2000 sites, as follows: sweet water habitats, habitats of humid meadows and communities of high semi-natural hays, habitats of mesophyll meadows, habitats of continental halophilic and gypsophilia steppe, habitats common to the temperate broadleaf forest, habitats common to Mediterranean broadleaf forests and habitat common to temperate bushes, meadows habitats and panonic and ponto-sarmatic salty marshes habitats, Balkan-panonic forests habitats of quercus cerris and sessile, sub-panonic steppe meadows habitats.

Also, in Timiş County the following types of habitats of national interest (corresponding to the Natura 2000 described or whose presence was specified in the county "Habitats from Romania") were identified: habitats of marshes, shrubbery steppes and halophilic forests, freshwater stagnant water habitats, habitat of saline and brackish water bodies, habitats of temperate heaths and thickets, habitats of meadows and tall herb communities (weeds), mesophilic grassland habitats, habitat of temperate deciduous forest with falling leaves,

habitats of meadow forests and bushes, marshes habitats and habitats characteristic to water edges vegetation.

There are species of flora and fauna in Timis county characteristic to plains, wetlands, forest areas, natural grasslands. Among the species of flora identified and with ecological significance we mention: Ophioglosum vulgatum – snake's tongue, Pteridium aquilinium - Field fern, Asplenium ruta-muraria - rust, Dryopteris filix-mas - fern, Salvinia natans – floating fern, Alnus glutinosa – black alder, Quercus cerris – Turkey oak etc. Among the species of flora for which national botanical reservations have been declared in the county: Frittilaria meleagris - variegated tulip, Narcissus stellaris subsp poeticus - daffodil, Stipa capillata – perennial bunchgrass, Agropyron cristatum – crested grass.

The plant species of Community interest identified are: Salvinia natans – floating fern and Trapa natans – water caltrop. These species were identified in Satchinez Marshes protected area.

The *Timiş County avifauna* is represented by many species of which: Ardea cinerea - gray heron, Ardeola ralloides - yellow heron, Nycticorax nycticorax - Night Heron, Botaurus stellaris - bittern pond, Ardea purpurea - red heron, Ixobrychus minutus – little bittern, Egretta alba – large egret, Egretta garzetta - little egret, Ardea purpurea - red heron, Podiceps cristatus – great crested grebe, Podiceps nigricollis - Black-necked grebe, Phalacrocorax pygmeus - pygmy cormorant, Anas querquedula - garganey, Anas strepera – gadwall, Aythya ferina – common pochard, Aythya nyroca - ferruginous duck, Anas crecca – common teal, Anas clypeata - Northern Shoveler, Anas penelope - widgeon, Circus aeruginosus - Western marsh-harrier, Circus cyaneus - Northern harrier, Falco subbuteo - hobby, Falco vespertinus - red-footed Falcon, Falco tinnunculus - kestrel, Buteo buteo - common buzzard, Buteo lagopus – rough legged buzzard, Accipiter nisus – northern sparrowhawk, Accipiter gentilis - northern goshawk, Perdix perdix - partridge etc.

Ichthyofauna of Timis County is represented by the species: Aspius aspius (asp), Zingel zingel (common zingel), Gymnocephalus baloni (Balon's ruffe), Gobio albipinnatus (white fin gudgeon), Rhodeus sericeus amarus (amur bilterling), Misgurnus fossilis (eel), Sabajewia aurata (golden loach), Cobitis taenia (spined loach), Zingel streber (streber), Gobio Kessleri (Kessler's gudgeon). Among the species of amphibians and reptiles: Bombina Bombina (fire bellied toad), Emys orbicularis (pond turtle), Salamandra salamandra (salamander), Triturus dobrogicus (Danube crested newt). Invertebrate species: Carabus hungaricus, Lycaena disappear, Gortyna borelii lunata, Arytrura musculus. Strictly protected fauna species present in the Timis County are: Lynx lynx - lynx, Ursus arctos - Brown bear, Lupus canis - Wolf and Felis silvestris - Wild cat.

Expected trends - challenges and control measures

Challenges

Biological diversity is in a continuous threat due to increased economic activities exert pressures on the environment.

Major consequences on biodiversity are found in a number of significant changes in the qualitative and quantitative structure and functioning of ecosystems. From the perspective of principles and objectives of conservation and sustainable use of biodiversity components, the main relevant consequences are:

- an active process of erosion of biological diversity is expressed by the disappearance or reduction in the number of species, especially mammals and birds;
- fragmentation of the habitats of many species and disruption of longitudinal connectivity (through river damming) and side (by damming of floodplains,
- blocking or severe curtailment of migration routes of fish species and access to spawning areas and feeding);
- reduction or elimination of habitat types and ecosystems in transitional areas (shelterbelts, alignments of trees, wetlands in the structure of large farms or large lotic systems) with profound adverse effects on biological diversity and diffuse pollution control functions , soil erosion, runoff and flood wave evolution, biological control of pest species populations, groundwater replenishment and water bodies;
- dismantle and reducing the productive capacity of agricultural biodiversity components; impact on the landscape.

Uncontrolled tourism practiced intensively creates a negative impact on biodiversity components, the deterioration and degradation of flora, disrupting animal species, soil degradation downhill trails marked by failure and the camper and open fires in unauthorized places, dumping of household waste in space unsuitable for this purpose. All this has caused great pressure on the natural environment, leading to its degradation, thus requiring the implementation of the concept of ecotourism, not only in protected areas but also outside them.
Extend of the urban areas within natural protected areas or their vicinity generates a huge pressure on protected natural areas.

Exploitation of natural resources and fragmentation of natural habitats endanger wildlife.
Biodiversity conservation should be achieved on the basis of efficient and sustainable management of natural capital components and ensuring protection arrangements for vulnerable species, endemic or endangered can be done through the establishment of protected areas.

Control measures

All activities that could have a significant impact on biodiversity are subject specific assessments (environmental assessment for plans and programs, environmental impact assessment and evaluation projects appropriate) and issued regulatory act only after proving, by reports realized by approved firms or individuals. By implementing appropriate assessment requirements of the potential effects of plans / programs or projects on protected natural areas of community interest, ensure that any plan / program or project may significantly affect the protected area of community interest, alone or in combination with other plans / projects that are in the regulatory procedure laid down in the strategy or development.

Biodiversity impact assessment is based on evaluation criteria that relate to: the degree of damage to species and natural habitats in the territory of impact; changing parameters ecosystem; fragmentation of ecosystems; mitigation measures.

Landscape

The three components of the landscape that gives its uniqueness and attractiveness are:

- Cultural elements (settlements, infrastructure, construction, human activities)
- Biodiversity and
- Geomorphological structure (relief, geological features, hydrological).

An important element in the landscape is the cultural heritage through historic monuments.

Cultural Heritage

From a structural point of view, the monuments are grouped into four categories according to their nature:

I. Archaeological Monuments

II. Monuments of architecture

III. Public monuments

IV. Memorial and funeral

In terms of value, historical monuments include the following categories:

- Category A - monuments of national interest
- Category B - monuments of local interest

The complete list is maintained and regularly updated by the Ministry of Culture of Romania, through the National Heritage Institute, version dating from 2010. This list includes subsequent updates made by the Minister of Culture.

In the border region of Romania there are 1740 historical monuments, as followed: 338 in Timis, 833 in Caras-Severin and 569 in Mehedinti.

Landscape

On the Romanian side of the Romania – Republic of Serbia Interreg IPA CBC Programme for the programming period 2021-2027, there is a variety of landscapes: mountains with gorges and canyons, hills and plateaus, plains and river plains, rivers and lakes.

Mehedinţi County is characterised by the grand landscape of the Danube River and its canyon, the mountain scape diversity, the presence of remarkable flora and fauna elements, many of which have been included in scientific reserves.

The list of the landscape attractions of the area includes:

- the Iron Gates I area, with the Danube canyon, clisura with the Large and Small Cazane, reservoirs, the hydropower and navigation system, the many viaducts built over wild valleys, the city of Orşova, spreading in an amphitheatre on the bank of the Cerna bay.
- Ostrovul Şimian – an island downstream of Drobeta Turnu Severin, hosting the relocated the citadel of the sunken Ada-Kaleh island.
- the Northern part o the county, characterised by beautiful landscapes. It includes the town of Baia de Aramă, and about 4 km north-west of Baia de Aramă the Ponoare Karst complex, with several natural monuments (the natural bridge at Ponoare, karst lakes Zatonul Mare and Zatonul Mic, Ponoare Cave and the clints plateau above the cave). Topolniţa Cave is also in this area, having an explored length of 10.330 m, the second largest in the country.

Expected trends

In recent decades, the natural and landscape in Romania have been influenced by the development of economic activities , especially given the recent years of growth, based on an excessive exploitation of natural resources. Under these conditions, many species of plants and animals are threatened with extinction and the landscape change is an important indicator for environmental deterioration.

Ecosystems consist of a variety of species have a higher probability of remaining stable when there is some loss or damage, than ecosystems with reduced functions.

Habitat fragmentation is caused by a range of different factors related to changes in land use, including urban sprawl, transport infrastructure and enhanced agricultural and forestry practices. Loss of natural areas has repercussions that extend beyond the disappearance of rare species.

Thus, it is necessary to ensure the necessary natural conditions through an integrated approach to land use by:

- Improving connectivity between existing natural areas to counter fragmentation and enhance their ecological coherence, for example by protecting hedges, strips of vegetation on the fields and small streams ;
- Emphasizing the permeability of landscape to support species dispersal, migration and movement , for example using land in a favourable manner for flora and fauna or the

introduction of organic farming or forestry schemes which support extensive farming practices ;

- There are multifunctional areas, where land use supports healthy, such areas where agriculture, forestry, recreation and ecosystem conservation work all in the same space. Such combinations to benefit both sides, from multiple point of view, at the society level, but also at the individual level (farmers, foresters, tourism). This approach is providing valuable ecosystem services such as water purification and soil improvement and creating attractive spaces that people can enjoy ;
- Spatial guided development of infrastructure outside the sensitive areas, thus reducing the risk of additional fragmentation of habitats .

Water quality

Romania has adopted and reported the second generation of River Basin Management Plans under the Water Framework Directive and the European Commission has assessed the status and the development since the adoption of the first River Basin Management Plans, including suggested actions in the EIR report 2017. The most significant pressures on surface waters are diffuse pressures from discharges not connected to sewerage network (25% of surface water bodies), diffuse pollution from agricultural (12%) and urban waste water (5%). For groundwater bodies the most significant pressure is diffuse pollution from agriculture and discharges not connected to sewerage networks, both affecting 10% of groundwater bodies The most significant impact on surface waters is nutrient pollution/enrichment (affecting 27% of surface water bodies) followed by organic pollution (17%) and most significant impact on groundwater is chemical pollution (affecting 10% of groundwater bodies). More assessment methods have been developed between the first and second River Basin Management Plans, including physicochemical quality elements, hydro-morphological quality elements and River Basin Specific Pollutants. The confidence in assessments of ecological status has improved for rivers and more biological quality elements and supporting quality elements have been used for classification of status in the second River Basin Management Plans.

Surface Waters

Ecological condition of natural bodies of surface water - rivers monitored in the Bega – Timiş – Caraş Basins.
In Bega – Timiş - Caraş hydrographic basins, 25 natural water bodies were evaluate – rivers, in total 1,005.89 km. Of the 1,005.89 km monitored for ecological potential, the distribution on lengths in relation to the ecological condition being as follows: 882.86 km (87.77%) in good ecological condition and 123.03 km (12.23%) in moderate ecological condition.

The ecological potential of the highly modified surface water bodies (CAPM) - rivers monitored in the Bega – Timiş – Caraş hydrographic basin. Within the Bega – Timiş - Caraş hydrographic basin, 13 water bodies highly modified were evaluated - rivers totalling a number of 478.91 km. Of the 478.91 km monitored for ecological potential, the distribution on lengths in relation to the ecological condition being as follows: 257.56 km (53.78%) were

in a good ecological potential (FEB) and 221.35 km (46.22%) in a moderate ecologic potential (PEMO).

The ecological potential of the highly modified artificial surface water bodies - monitored in the Bega – Timiş – Caraş Basins. Within the Bega – Timiş - Caraş hydrographic basin, 1 artificial water body (CAA) with a length of 43.98 km, was evaluated. From the point of view of ecological potential, all the 43.98 km (100%) fit the moderate ecological potential.

Ground Waters

The quality of the groundwater of the programme's area monitored in 2012, determined the classification of the groundwater bodies' status in "good" and "poor", as presented in the table below.

Weather-related extreme events and natural disasters

The category of extreme weather events that might cause in Romania important damages or even natural disasters includes phenomena such as: heavy rains/ floods, land falls, ice dams on the water courses, hail, electric storms, glazed frost, avalanche, storms, snow storms, dryness, heat waves, cold snaps.

According to the data of the Natural Disasters Insurance Pool (PAID), for Romania, the highest exposure to natural disasters is associated to earthquakes, floods and landfalls, which might cause human casualties and high economic costs across the entire country.

Climate

In the cross-border area, the climate is temperate-continental with very hot summers, small amounts of precipitation, and cold winters marked by irregular intervals with strong snowstorms and frequent warming. Some particular influences marked the territory, respectively: Mediterranean influence in Mehedinti county with strong contrasts between winter and summer temperatures.

Extreme phenomena on record and their consequences are relevant for the area of concern. The southern part of the country was affected by snow storms, when snow drifts were formed by strong winds tumbling and blowing off snow. Black ice was formed in some days, as well as fog associated with hoary frost. In January, the national monthly average precipitation, 59.1 mm, was 59% higher than the normal climate standard. The precipitation regime was predominantly surplus in the Southern half of the country and on limited areas in the rest of the country.

Climate forecasts

From a quantitative perspective, more than 90% of the climate models foresee, for 2090-2099, harsh draughts in summer, in Romania, **especially in the South** (with negative deviations compared to 1980-1990, of more than 20%). Concerning winter precipitation, deviations are slighter and the uncertainty higher.

Agricultural land and its vulnerability to climate change

In terms of pluviometry data, more than 90% of the climate patterns forecast for the period 2090-2099 revealed severe droughts during summer, especially in South and South-East of Romania (with negative deviations compared with the period 1980-1990, more than 20%). With respect to the precipitations during winter, the deviations are smaller and the uncertainty higher.

The agriculture represents the most vulnerable field, the studies showing the following aspects.

Soil erosion and contamination

According to provisional data, different slope processes affect 3,372,916 ha, of which 664,879 ha excessively-strongly. Of these, large areas affected by erosion and landslides are also found in the West Development region (329238 ha), were two of the eligible counties are located (Caras-Severin and Timis).

Other natural and/or anthropogenic processes affecting soil quality are primary and/or secondary consolidation, inventoried for 1.553.276 ha, out of which very strong and excessive consolidation on 214.081 ha. The largest areas are found in the West Development Region (32.4%).

Industrial pollution events and contamination

In Romania, around 915 industrial installations must have a permit according to the IED61. In 2015, the industrial sectors in Romania with the most IED installations were: the intensive rearing of poultry or pigs, comprising 48 %, followed by the waste management sector (11 %), chemicals (10.5 %) and energy-power (6.3 %).

The industrial sectors identified as contributing the most emissions to air are: (i) the energy-power sector for all pollutants except non-methane volatile organic compounds (NMVOCs) and ammonia (NH3); (ii) metal production for cadmium (Cd), arsenic (As), chromium (Cr), lead (Pb), mercury (Hg), zinc (Zn) and polychlorinated dibenzodioxins and polychlorinated dibenzofurans (PCDD/F); (iii) 'other activities' (mostly the intensive rearing of poultry or pigs and surface treatment) for NMVOCs and ammonia; and (iv) waste management for mercury.

4.5 Methods of the assessment

The SEA report will be prepared in accordance with the EC-endorsed "Handbook on SEA for Cohesion Policy 2007-2013" which represents a primary reference material for undertaking SEA which is still valid and remains recommended for the programming process 2021-2027.

The handbook has been endorsed in 2006 by the two concerned directorates of the European Commission (DG Regional Development and DG Environment) as advisory material that is still being recommended for applying the SEA Directive within the programming of EU Structural Funds [1].

5 STRUCTURE OF THE SEA REPORT

The SEA Report will address all items specified in the Annex I of the SEA Directive. It will include the following items:

Executive summary

(j) a non-technical summary of the information provided under the headings below.

Introduction

(a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes.

Environmental baseline

(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.

(c) the environmental characteristics of areas likely to be significantly affected.

(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.

Relevant environmental objectives and appraisal of the proposed strategy pursued in the programming document:

(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;

Expected likely significant environmental effects, proposed mitigation measures and monitoring arrangements

(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;

(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;

(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;

(i) a description of the measures envisaged concerning monitoring;

[1] http://ec.europa.eu/environment/eia/pdf/SEA%20Guidance.pdf

6 SEA PROCEDURE

6.1 Consultations

The Managing Authority for the Romania- Republic of Serbia Interreg-IPA CBC Programme for the programming period 2021-2027 wishes to have the SEA report as soon as possible, in accordance with the decision taken by the Competent Environmental Authority. The SEA Study will be provided for consultations to the public and relevant environmental authorities in accordance with national legislative requirements in both Serbia and Romania.

7 EXPECTED ENVIRONMENTAL EFFECTS ON THIRD COUNTRIES

As outlined in the chapter 3.1, the proposed Romania- Republic of Serbia Interreg-IPA CBC Programme for the programming period 2021-2027 will likely achieve overall positive transboundary impacts and is not expected to have any significant adverse transboundary impacts that would warrant attention.

Interreg – IPA CBC
Romania - Serbia

EUROPEAN UNION

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