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STRATEGIC ENVIRONMENTAL ASSESSMENT SCOPING REPORT

for the Interreg VI-A Romania-Bulgaria Programme

ROMANIA - BULGARIA

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Interreg VI-A Romania-Bulgaria Programme 2021-2027

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SCOPING REPORT

for the Interreg VI-A Romania-Bulgaria Programme 2021-2027

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ABBREVIATIONS AND ACRONYMS

CBC	Cross-Border Cooperation
CBD	Convention on Biological Diversity
COM	European Commission
EC	European Commission
EIA	Environmental Impact Assessment
ERDF	European Regional Development Fund
EU	European Union
EUSDR	European Union Strategy for the Danube Region
ICPDR	International Commission for the Protection of the Danube River
Interreg VI-A RO-BG	Interreg VI-A Romania-Bulgaria Programme
ITC	Information and Communication Technology
MPWDA	Ministry of Public Works, Development and Administration
MS	Member State
NUTS	Nomenclature of Territorial Units of Statistics
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
TEN-T	Trans-European Transport Network
UNESCO	United Nations Framework Convention on Climate Change

1 INTRODUCTION

The present Scoping report is part of the contract for drafting the Interreg VI-A Romania-Bulgaria Programme (Interreg VI-A RO-BG) 2021-2027, which will be funded by the EU, from the European Regional Development Fund – ERDF. The elaboration of the Programme will be done in accordance with the regulatory framework for the programming process, which is set out in the EC legislative package for 2021-2027 period.

The Scoping report represents the first step of the Strategic Environmental Assessment for the Programme. The Strategic Environmental Assessment based on the SEA Directive EU/2001/42 aims at assessing the impact on the environment of the Interreg VI-A Romania-Bulgaria Programme 2021-2027, being thus an integral part of the whole programming process.

According to Article 3(3) and 3(4) of the SEA Directive, the environmental assessment is required for certain categories of plans and programmes, only when they are determined to be likely to have significant environmental effects.

The environmental assessment shall be carried out since the characteristics of the Interreg VI-A Romania-Bulgaria Programme 2021-2027 meets the categories and requirements which determine the necessity for the Strategic Environmental Assessment procedure, due to the following reasons:

- the Interreg VI-A RO-BG Programme concerning the cross-border area between Romania and Bulgaria, for the 2021-2027 programming period, is subject to preparation and adoption by national and regional authorities in Bulgaria and Romania, and submit for adoption through legislative procedure by the Governments;
- the implementation area of the Interreg VI-A RO-BG Programme is abundant in natural protected areas, located both in Romania and in Bulgaria, along the Danube River;
- the Interreg VI-A RO-BG Programme concerning the cross-border area between Romania and Bulgaria, for the 2021-2027 programming period, is financed by the European Union and by the Romanian and Bulgarian Governments;
- the Interreg VI-A RO-BG Programme is prepared for several sectors (see chapter 4) and it sets a framework for future development consent of projects (listed on Annexes I and II of the EIA Directive) within the cross-border area;
- the Interreg VI-A RO-BG Programme concerning the cross-border area between Romania and Bulgaria, for the 2021-2027 programming period, is likely to have significant effects on the environment (details given in chapter 6).

Therefore, the SEA has to be carried out during the preparation of the Programme and has to be completed before the final approval and submission to the European Commission, in order to ensure the high level of protection of the environment and to contribute to the integration of the environmental aspects into the preparation and adoption of the Interreg VI-A Romania-Bulgaria Programme 2021-2027, with accent on the promotion of sustainable development.

Purpose of the Scoping report

The Scoping report plays an essential role within the entire process of the Strategic Environmental Assessment, being very important at the beginning of the process, thus:

Scoping report	•Screening stage •Scope and level of detail of the informations to be included in the Environmental report •Consultations with the environmental authorities and all the envolved stakeholderes on the Scoping report •Integration of the possible comments/ remarks from the consulted authorities/ stakeholders
Environmental report	•Assessment of the environmental effects of the Interreg VI-A RO-BG •Setting up the measures decided for monitoring •Consultations with the environmental authorities, the public and all the envolved stakeholderes on the Environmental report
SEA Statement	•Integration of the possible comments/ remarks from the consulted authorities/ stakeholders/ public •Coordination with the entire programming process •Summary of how the environmental considerations and the expressed opinions regarding the Environmental report were taken into account and incorporated into the Programme final version

Through the Scoping report will be identified: the main areas of intervention for the Interreg VI-A RO-BG, summarized the relevant regulatory framework and the methodology planned to be applied during the environmental assessment process. The Scoping report includes the background information concerning:

- the content of the programme;
- the relevant geographic area and timeframe;
- overall information regarding the area of implementation and identification of the environmental factors and problems related to those;
- the legal background and identification of the environmental problems;
- the relevant plans, programmes and environmental protection objectives;
- appropriate environmental indicators that will be the basis of the SEA;
- the approach of the assessment;
- the methods used to evaluate the positive and negative impacts;
- consultations on the SEA process, involvement of the responsible bodies, stakeholders, sources of information;
- methods used for generating and evaluating of the reasonable alternatives.

The present report serves as an input for the authorities in order to decide upon the necessity of conducting an SEA for the Interreg VI-A RO-BG and to consult on that. Based on the results,

a decision will be given regarding the scope and the level of detail contained in the Environmental report. All the remarks/ comments on the Scoping report received from the consulted authorities/ stakeholders will be taken into account, with the purpose to incorporate all the environmental considerations into the Environmental report and, in the end, into the final version of the Programme.

2 ASSESSMENT FRAMEWORK

2.1 THE INTERREG VI-A ROMANIA-BULGARIA PROGRAMME

The assessment object of the SEA is the Interreg VI-A Romania-Bulgaria Programme 2021-2027. The SEA of the Interreg VI-A Romania-Bulgaria Programme is conducted in line with the relevant European Directive (2001/42/EC on the assessment of effects of certain plans and programmes on the environment) and the national legislations of the involved countries.

The scoping report is based on the latest draft version of the Interreg VI-A RO-BG "OP RO-BG Strategy-draft August 2021".

2.2 THE GEOGRAPHICAL FRAME FOR SEA

The participating countries of the Interreg VI-A Romania-Bulgaria Programme are Romania and Bulgaria. The Interreg VI-A RO-BG is based on the NUTS III units and includes seven Romanian counties (Mehedinți, Dolj, Olt, Teleorman, Giurgiu, Călărași and Constanța) and eight Bulgarian districts (Vidin, Vratsa, Montana, Veliko Tarnovo, Pleven, Ruse, Dobrich and Silistra).

The fifteen administrative units (NUTS III) included into the programme area are parts of six administrative regions (NUTS II), as it follows:

- Romanian South-West Development Region Oltenia: Mehedinți, Dolj and Olt counties;
- Romanian South Muntenia Development Region: Teleorman, Giurgiu and Călărași counties;
- Romanian South-East Development Region: Constanta county;
- Bulgarian North West Region: Vidin, Vratsa, Montana and Pleven districts;
- Bulgarian North Central Region: Veliko-Tarnovo, Ruse and Silistra districts;
- Bulgarian North East Region: Dobrich district.

The programme area has a total surface of 69.285 km^2, two thirds being located in Romania and one third being located in Bulgaria (according on the current geography of the Cross-Border Cooperation - CBC programme), thus covering 19.8 % of the total area of the two countries and counting more than 4 million inhabitants.

The map of the Interreg VI-A Romania-Bulgaria Programme area is presented in the figure below.

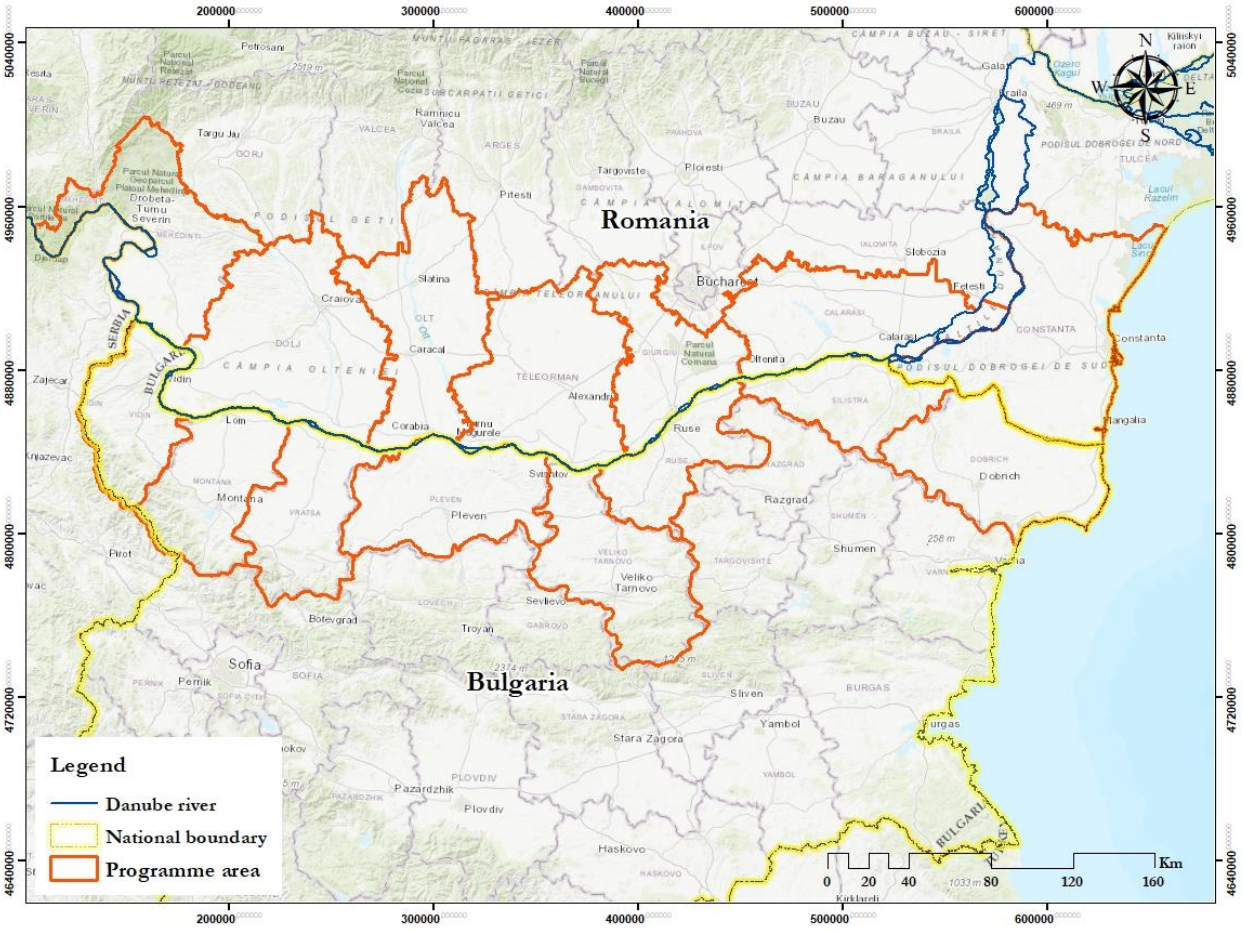

Figure no. 2-1 The eligible area for the Interreg VI-A Romania-Bulgaria Programme

2.3 TIME FRAME FOR SEA

In accordance with the Article 4(1) of the SEA Directive "The environmental assessment referred to in Article 3 shall be carried out during the preparation of a plan or programme and before its adoption or submission to the legislative procedure".

The time frame for conducting the SEA for the Interreg VI-A Romania-Bulgaria Programme is actually referring to the programming period 2021-2027 and is related to the identification of the development trends regarding the expected state of the environment and the possible impacts on the environmental issues.

The SEA process of the Interreg VI-A RO-BG started in parallel with the elaboration of the programme document and, according to the planning activities, it will be completed before its adoption or submission to the legislative procedure. The SEA procedure is expected to start, both in RO and BG, in June 2021.

2.4 THE LEGAL FRAME FOR SEA IN THIS PROGRAMME CONTEXT

2.4.1 THE MAIN LEGAL FRAME

The main legal frame for SEA for the Interreg VI-A Romania-Bulgaria Programme context is:

- European Directive 2001/42/EC on the assessment of effects of certain plans and programmes on the environment;
- Convention on Environmental Impact Assessment in a trans boundary context (1991) (the Espoo Convention);
- Protocol on Strategic Environmental Assessment (2003);
- 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 (CPR), May, 2019;
- Proposal for a 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;
- Report from the Commission to the Council the European Parliament, the European Economic and Social Committee and the Committee Regions *"On the application and effectiveness of the Directive on Strategic Environmental Assessment (Directive 2001/42/EC)"*, COM (2009) 469 final;
- EC Guidance on the "Implementation of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment";
- Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment, European Commission, 2013;
- Guidelines on Climate Change and NATURA 2000, European Commission, 2013.

2.4.2 THE LEGAL FRAME IN THE INTERREG VI-A ROMANIA-BULGARIA PROGRAMME PARTICIPATING COUNTRIES

The SEA for the Interreg VI-A Romania-Bulgaria Programme is planned and carried out in line with the relevant EC Directive and Regulations (listed above) and the following national legislations:

Participating countries	**National legislative acts**
Romania	Government Decision no. 1076/8.07.2004 for setting up the environmental assessment procedure of certain plans and programmes "Manual on the completion of the environmental assessment for plans and programmes" – 2006, approved by Ministerial Order no. 117/2006
Bulgaria	Environmental Protection Act (EPA) – Prom. SG. 91/25 Sep 2002, last amendment SG. 36/3 May 2019 SEA Ordinance (SEA-O) for the conditions and the order for implementing ecological assessment of plans and programmes - Prom. SG. 57/2 Jul 2004, last amend. SG. 67/23 August 2019

3 THE RELEVANT ENVIRONMENTAL POLICY FRAMEWORK

The definition of the relevant issues, their corresponding environmental objectives and derived guiding questions are presented in the following table.

3.1 ENVIRONMENTAL POLICY FRAMEWORK

The list of relevant international legal and policy frameworks by which the Interreg VI-A Romania-Bulgaria Programme may be influenced is presented in the following table:

Biodiversity, flora and fauna
Habitats Directive (92/43/EC) on the conservation of natural habitats and of wild fauna and flora *Birds Directive* (2009/147/EC) on the conservation of wild birds COM (2018) 811 final – *Progress in the implementation of the EU Forest Strategy "A new EU Forest Strategy: for forests and the forest sector"* *Convention on Biological Diversity* (CBD) (1993) – Opinion of the European Committee of the Regions - The contributions of EU cities and regions to the CBD COP14 and the post-2020 EU Biodiversity Strategy (2018/C 461/04) *EU Biodiversity Strategy for 2030* The European Green Deal – COM(2019) 640
Air and climate change
Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC *Directive 2008/50/EC* of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe COM (2014) 15 final – *A policy framework for climate and energy in the period from 2020 to 2030* The European Green Deal – COM(2019) 640
Soil and land use
COM (2006) 231 final – *Thematic Strategy for Soil Protection* *Directive 2008/1/EC* of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control Mining waste directive (2006/21/EC) The European Green Deal – COM(2019) 640
Waters (surface waters and ground waters)
Water Framework Directive (2000/60/EC) The Groundwater Directive 2006/118/EC Directive 98/83/EC on the quality of water intended for human consumption Council Directive (91/271/EEC) concerning urban waste water treatment Convention on Cooperation for the Protection and Sustainable use of the Danube River The ICPDR Danube River Basin District Management Plan "Joint statement on Inland Navigation and Environment - 2007" (https://www.icpdr.org/main/activities-projects/joint-statement-navigation-environment)

"Guiding principles on Sustainable Hydropower - 2013" (https://www.icpdr.org/main/activities-projects/hydropower) The ICPDR Action Programme on Sustainable Flood Protection Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks The European Green Deal – COM(2019) 640
Landscape and land cover
European Landscape Convention
Material assets, cultural heritage
Convention concerning the protection of the world cultural and natural heritage, 16 November 1972 Europe Convention for the Protection of the Architectural Heritage of Europe 1985 Europe Convention for the Protection of the Archaeological Heritage 1992
Population and human health
Directive 2002/49/EC relating to the assessment and management of environmental noise (the Environmental Noise Directive – END) The Third Health Programme (Regulation (EU) No 282/2014 of the European Parliament and of the Council of 11 March 2014 on the establishment of a third Programme for the Union's action in the field of health (2014-2020) and repealing Decision No 1350/2007/EC)[1] The European Green Deal – COM(2019) 640
Waste management
Directive 2018/851/EC of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste The Council Decision 2003/33 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 99/31/EC Directive 2010/75/EC on industrial emissions (IPPC) The Seveso III Directive 2012/12/EU on the control of major-accident hazards involving dangerous substances Circular economy package The European Green Deal – COM(2019) 640
Energy consumption, use of renewable resources, traffic and transport
Energy Efficiency Directive (2012/27/EU) Renewable Energy Directive (RED) (2009/28/EC) Energy Efficiency Action Plan (2012) EU Climate change and Energy Package 2020

3.2 ENVIRONMENTAL ISSUES

According to SEA Directive 2001/42/EC, Annex I, letter f: "the likely significant effects[2] 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", the

[1] EU Health Programme 2014-2020. https://ec.europa.eu/health/funding/programme/2014-2020_en
[2] These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects

environmental issues likely to be impacted by the Interreg VI-A Romania-Bulgaria Programme need to be identified.

For the identification of the relevant environmental issues we need to consider also the environmental legal and policy framework relevant for the Interreg VI-A RO-BG (presented in the previous section).

Thus, accordingly to the above-mentioned, we selected the following environmental issues relevant for the Strategic Environmental Assessment of the Interreg VI-A RO-BG:

- Biodiversity
- Population and human health
- Soil and land use
- Water
- Air
- Climate change
- Material assets
- Cultural heritage
- Landscape
- Energy efficiency
- Sustainable transport
- Circular economy
- Risk management
- Raising awareness on environmental issuses

Further, we present the justification for selecting each of the environmental issue presented above:

Biodiversity, flora and fauna
The implementation area of the Interreg VI-A RO-BG is characterised by a great biological diversity, structured along and around the Lower Danube corridor, which is a major natural corridor linking the two countries. Along the implementation area are many natural protected areas, such as: 7 nature parks (3 in Romania and 4 in Bulgaria), 1 national park in Romania, 3 national biosphere reserves (1 in Romania – Danube Delta and 2 in Bulgaria), 21 Ramsar sites (15 in Romania and 6 in Bulgaria), Natura 2000 sites (126 in Romania and 127 in Bulgaria) and many natural/ scientific reserves. There are many issues regarding the proper management of all these natural protected areas within the implementation area, but the main conflicts still appear at the local communities' level.
Population and human health
Romania and Bulgaria are registering the highest number of citizens in risk of poverty and social exclusion in EU. The school population and number of students have been decreasing in 2012-2018, within the Interreg VI-A RO-BG cross-border area. Concerning the provision of health services, in the Romania cross-border area hospitals have a wider dispersion throughout the territory and are more accessible to more areas, but the infrastructure and the personnel are more crowded, while in Bulgaria, although hospitals are

distributed in fewer urban centres, there are more hospital beds available per 1000 inhabitants and the doctors have less patients assigned[3].
Soil and land use
The Interreg VI-A RO-BG cross-border area presents a comparable degree of landslide susceptibility, as the southern part of Europe does. According to the European Soil Data Centre[4], the landslide risk is lower on the Romanian border compared to the Bulgarian one, where there are hilly and plateau areas corresponding to higher altitudes. The tailings dams and landfills can also be affected by the landslides in the area, resulting in fatalities and contaminating soils, surface waters and ground waters, so it's an important issue to be analysed within the next programming period.
Waters (surface waters and ground waters)
The border between Romania and Bulgaria is represented for its largest part (470 km out of 630 km) by the Danube River, only Dobrich district from Bulgaria and Constanta county from Romania being connected through land, the rest being separated by the Danube. According to Eurostat data, within the Interreg VI-A RO-BG cross-border area the equipment and infrastructure systems regarding the water supply and wastewater are insufficient, compared to other regions of Europe. Within the implementation area, the wastewater from households and industry represents a major pressure on the aquatic environment, due to the loads of organic matter and nutrients, as well as hazardous substances. Thus, is necessary to take into account these issues within the policy making and the territorial planning from the implementation area of the Interreg VI-A RO-BG.
Air
Ambient air quality is a very important aspect for the health of the population. In some areas there are exceedances of the annual limit value, and the exposure of the population to various pollutants such as PM2.5 causes premature deaths.
Climate change
In the last years were identified several aspects related to the climate change in the implementation area, such as[5]: increase of the average annual temperature (by more than 3.6◦ on both banks of the Danube), droughts (with serious consequences in the agricultural sector, which represents the most important economic sector in the area; often resulting also a desertification process), tornado events (especially in Constanta county), coastal erosion, greenhouse gas emissions etc. Thus, adaptation and mitigation to climate change should be set as a priority for the policy making and the territorial planning within the implementation area, during the next decades.
Material assets
The lack of development of road, rail or naval infrastructure could cause significant economic losses. Also, the absence of capitalization of areas with high tourist potential could generate such losses for the two countries. For this reason, it is necessary to improve all the possibilities that could bring material assets.
Cultural heritage
It's important to maintain a common cultural heritage, traditions, history, since is well-known that the economic, technological, social and political changes within the Danube region have led to a decrease in what concern the traditional knowledge, customs and values

[3] Territorial analysis for the Romania-Bulgaria cross-border region, Interreg Romania-Bulgaria Programme 2021-2027, page 263
[4] European Soil Data Center, Joint Researcher Center, European Commission, 2018
[5] Territorial analysis for the Romania-Bulgaria cross-border region, Interreg Romania-Bulgaria Programme 2021-2027, page 161

that were preserved along the centuries. Thus, it is necessary to take into account these aspects within the entire programme area.
Landscape and land cover
Regarding the landscape, the main element from the implementation area is the Danube River. In what concerns the land cover, agriculture remains a traditional sector both in Romania and in Bulgaria, with major impact on the economic sectors of the two countries. So, it's important to still address this aspect through adequate measures within the next programming period.
Energy efficinency
It is well-known that the Interreg VI-A RO-BG cross-border area offer a big potential for renewable sources of energy, due to its micro-climate and environmental characteristics, especially in what concern the solar energy and biomass, given the agricultural development of the area, and as well, hydropower seems to have a high potential.
Sustainable transport
Regarding the traffic and transport, the cross-border region is still not well connected to the main transport networks of the European Union. Even if the transport of goods and passengers increased on the Danube and the trend continues to grow, are still on-going many bottlenecks reducing the transport performance of this corridor, most of them being on the Romanian-Bulgarian border.
Circular economy
One of the most sensitive issues in the Interreg VI-A RO-BG cross-border area is represented by the waste management, despite the formal progress registered in both countries as a result of the adoption of the national waste management plans. According to the Commission's "Early Warning Report" (2018)[6], Romania is considered at risk of non-compliance with the 2020 municipal waste recycling target of 50% (compliance standards from the Romania's Accession Treaty). In what concern the districts in Bulgaria, according to the National Institutes of Statistics, the highest degree of recycling in 2017 was recorded in Vratsa district of 8.27%, while in 2 districts (Vidin and Silistra) was recorded a 0.00% degree of recycling. It is necessary to look forward at the future requirements coming from the European Commission, the Circular Economy package, regarding the key elements of the revised waste proposals. All these aspects will further have greater pressure on the waste issues existing in both countries, thus responsible measures have to be taken into account within the policy making and the territorial planning for the implementation area.
Risk management
In the cross-border area, according to historical data, there is a 1% probability of occurrence of average floods, which can occur on average once every 100 years, in areas included in the program and especially along the Danube both in Romania and in Bulgaria. They mainly affect the population.
Raising awareness on environmental issues
Absence of informing the population about the negative effects on environmental aspects, but also the measures to be taken, they can refuze the actions that are necessary to improve and maintain the quality of the environment.

[6] Commission Staff Working document - *The early warning report for Romania* – accompanying the document „Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committe of the Regions - on the implementation of EU waste legislation, including the early warning report for Member states at risk of missing the 2020 preparation for re-use/recycling target on municipal waste", SWD(2018) 423 final

3.3 ENVIRONMENTAL OBJECTIVES AND GUIDING QUESTIONS

In this section we set up some relevant environmental objectives (R.E.O.) for each environmental issue presented in the previous section, based on the identified environmental policy framework.

The guiding questions for each of the environmental issue come from the environmental protection objectives, which are based on the EU level policies.

The following principles were taken into account when the environmental objectives have been set up:

- an objective represents a statement of what is intended further, mentioning a chosen direction of change;
- an objective is set up to ensure that the adequate level of consideration is achieved regarding a certain environmental issue;
- SEA objectives should derive from the environmental issues;
- SEA objectives are set up in order to test the environmental effects of the programme or to compare the effects of alternatives, so that the objectives of the programme to be correlated and based on adequate recommendations and the establishment of the SEA objectives can result in developing ideas for shaping them more environmentally friendly and sustainable.

The Interreg VI-A Romania-Bulgaria Programme will be assessed based on the established relevant environmental objectives (SEA objectives) and the associated guiding questions.

The following table presents the SEA objectives derived from the previous presented framework and associated guiding questions for each of the environmental issue.

R.E.O.1 Biodiversity, flora and fauna
Possible SEA objectives
R.E.O.1.1 Conservation of natural habitats and species of wild flora and fauna, including the manintenance and the development of new national networks of protected areas, integrating ecological corridors. **R.E.O.1.2** Help to decrease the fragmentation of habitats or species (both aquatic and terrestrial), to promote green infrastructures, to restore river continuity, wetland areas which are connected with the aquifers. **R.E.O.1.3** Promotion of common and efficient management of cross-border natural habitats and species of protected interest. **R.E.O.1.4** Restoration of degraded ecosystems and management of invasive species, as well as their reduction.
Guiding questions
Will the programme have an effect on the Natura 2000 network? Will the programme have an effect on promotion and protection of the natural habitats and on the degree of habitats and species fragmentation? Will the programme promote a common management of the cross-border natural habitats and species? Will the program have an effect on the process of ecosystem restoration and degradation, as well as on the management of invasive species?
R.E.O.2 Population and human health

Possible SEA objectives
R.E.O.2.1 Diminishing risk factors and improving life style condition and health status of human population. **R.E.O.2.2** Reducing existing disparities regarding the accessibility to the essential public infrastructures (such as drinking water network, sewage system including waste water treatment etc.). **R.E.O.2.3** Reducing risk factors for depopulation, improving and protect the health of the human population
Guiding questions
Will the programme lead to diminution of the risk factors and improvement of the life style conditions and health status of human population? Will the programme help to reduce existing disparities regarding the accessibility to the essential public infrastructures and services? Will the program reduce the risk factors for depopulation and improve the protection of human health?
R.E.O.3 Soil and land use
Possible SEA objectives
R.E.O.3.1 Limiting impact on the soil and maintaining its productive capacity (maintaining soil functions on the highest possible level). **R.E.O.3.2** Limiting pollution (point or diffused) of soil and facilitate soil protection from water and wind erosion. **R.E.O.3.3** Promoting sustainable land use (e.g. supporting of High Nature Value (HNV) farming, revitalization of brownfields and recultivation of old landfills). **R.E.O.3.4** Protecting and improving soil quality and limiting soil pressures
Guiding questions
Will the programme affect the increasing of soil quality? Will the programme help to limit pollution of soil and facilitate soil protection? Will the programme promote sustainable land use? Will the program affect soil quality improvement and limit pressure?
R.E.O.4 Waters (surface waters and ground waters)
Possible SEA objectives
R.E.O.4.1 Improving ecological and chemical status/ ecological potential of water bodies and maintaining their ecological functions. **R.E.O.4.2** Promoting sustainable use of water resources, including the identification and protection of potential sources of freshwater supply. **R.E.O.4.3** Prevention of accidental pollution incidents, reducing organic, nutrient and hazardous substance pollution. **R.E.O.4.4** Improving waste water treatment and the reduction of nitrate pollution (e.g. nitrates for agricultural sources or industrial recharges).
Guiding questions
Will the programme lead to the improvement of the ecological and chemical status/ ecological potential of the water bodies? Will the programme support the sustainable water resource management (concerning water quantity, quality, groundwater vulnerability and surface – water sensitivity)? Will the programme help on pollution prevention and reduction on the water bodies? Will the program improve the wastewater treatment process and reduce nitrate pollution?
R.E.O.5 Air
Possible SEA objectives
R.E.O.5.1 Maintain and improve the quality of ambient air within the limits set by the legal norms.

Guiding questions
Will the programme help to maintain and improve the quality of the ambient air within the limits set by the legal norms?
R.E.O.6 Climate change
Possible SEA objectives
R.E.O.6.1 Improving common risk assessment and management system for natural and industrial risk areas, connected to climate change. **R.E.O.6.2** Promotion of policies and measures to adapt and mitigate climate change (e.g. sustainable water resources management, green infrastructures for flood protection etc.). **R.E.O.6.3** Reducing, preventing and minimizing the negative effects of climate change.
Guiding questions
Will the programme affect the improvement of common risk assessment and management system for natural and industrial risk areas, connected to climate change? Will the programme support actions to contribute to the implementation of policies and measures to adapt and mitigate climate change? Will the program help to reduce, prevent and minimize the negative effects of climate change?
R.E.O.7 Material assets
Possible SEA objectives
R.E.O.7.1. Prevention and reduction of the economic losses.
Guiding questions
Will the programme support prevention and reduction of economic losses?
R.E.O.8 Cultural heritage
Possible SEA objectives
R.E.O.8.1 Protection and conservation of cultural heritage (historic buildings, archaeological sites etc.), including preservation of local traditions and customs.
Guiding questions
Will the programme aim at the protection and conservation of cultural heritage, including preservation of local traditions and customs?
R.E.O.9 Landscape and land cover
Possible SEA objectives
R.E.O.9.1. Protection and improving of natural landscape and traditional rural one. **R.E.O.9.2.** Increasing awareness among the population concerning the value of landscape, their importance, by promoting training and education about the landscape policy, protection, management and planning.
Guiding questions
Will the programme support the improvement of the natural landscape and of the traditional rural one? Will the programme help to increase awareness regarding the value and importance of the landscapes?
R.E.O.10 Energy efficincy
Possible SEA objectives
R.E.O.10.1 Improving and promoting energy efficiency and use of energy resources.
Guiding questions
Will the programme lead to an improvement of energy efficiency and use of energy resources?
R.E.O.11 Sustainable transport
Possible SEA objectives
R.E.O.11.1 Reducing environmental externalities of transport activities.

R.E.O.11.2 Increasing the use of clean vehicles, alternative fuels and non-polluting means of transport
Guiding questions
Will the programme support the reduction of environmental externalities of transport activities? Will the program increase the use of clean cars, alternative fuel and non-polluting means of transport?
R.E.O.12 Circular economy
Possible SEA objectives
R.E.O.12.1. Reducing the quantities of waste generated and the quantities disposed of by storage. Increasing the degree of recycling and reintegration **R.E.O.12.2.** Reduction of non-renewable resources exploitation and facilitation of using renewable ones.
Guiding questions
Will the program help reduce waste and increase recycling? Will the programme help to reduction of non-renewable resources exploitation?
R.E.O.13 Risk management
Possible SEA objectives
R.E.O.13.1. Prevention and reduction of hazard
Guiding questions
The program will reduce and prevent hazards?
R.E.O.14 Raising awareness on environmental issues
Possible SEA objectives
R.E.O.14.1. Improving environmental behavior by encouraging sustainable practices and public participation
Guiding questions
Will the program raise awareness of environmental issues?

4 AN OUTLINE OF THE CONTENT, MAIN OBJECTIVES OF THE PROGRAMME

4.1 PROGRAMME JUSTIFICATION AND PURPOSE

Interreg VI-A Romania-Bulgaria Programme vision focuses on the reinforcement of the socio-economic fabric of the Romania-Bulgaria cross-border territory, through developing and retaining human capital, creating opportunities for personal and professional development, providing an attractive, safe and sustainable living environment and supporting innovation and entrepreneurship.

4.2 THE OUTLINE OF THE CONTENT OF THE PROGRAMME

The Interreg VI-A Romania-Bulgaria Programme's strategy involves the following policy objectives:

- P.O. 3 A more connected Europe – mobility and regional ICT connectivity;
- P.O. 2 A greener, low-carbon Europe
- P.O. 4 A social Europe
- P.O. 5 A Europe closer to citizens.

The vision builds on the polycentric development concept, which was also part of the 2014-2020 Programme's vision, proposing a network of key urban hubs along the Danube, with enhanced institutional collaboration and economic synergies that could start articulating a common development strategy in order to mutually strengthen the secondary and peripheral cities. The network of small and medium-sized cities, such as the twin cities along the Danube, is already developed across the region, which is a plus in terms of services provided to the rural areas around them or to the potential for better service provision and jobs creation.

4.3 MAIN OBJECTIVES OF THE PROGRAMME AND THE ACTIVITIES FORESEEN

The policy objectives comprise of the following selected specific objectives and types of actions:

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
P.O.3 A more connected Europe – mobility and regional ITC connectivity	Developing and enhancing sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility;	A well-connected region	*1. Actions enhancing connectivity and mobility across the Danube*	-
			Soft measures:	-
			• Identifying and addressing the missing links in road and rail infrastructure: studies, strategies, joint solutions, joint tools etc;	**YES**
			• Supporting the preparatory process for enhancing the border connectivity and mobility in the area, for all transport modes, including the construction of new bridge crossings across the Danube, through pre-feasibility and feasibility studies, design projects, environmental assessments, joint solutions, tools, action plans etc.;	**YES**
			• Improving and expanding transport infrastructure: studies regarding traffic safety reducing accidents on all modes of transport, awareness campaigns, connectivity/mobility studies for understanding freight and passenger flows, commuting etc.;	**YES**
			• Increasing and implementing the efficiency of public transport: studies, equipment and IT solutions for increasing predictability, reliability and efficiency of public transport, especially in relation to water transport (e.g. ferries).	**NO**
			• Designing and implementing integrated solutions for supporting mobility and connectivity in time of crisis.	**NO**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			• Designing and implementing sustainable transport solutions for better connectivity and mobility in the area.	**YES**
			Hard measures:	**-**
			• Improving and expanding road infrastructure - Works for road infrastructure modernization (only in duly justified cases, with high cross-border impact and character), safety measures (equipment/signalling);	**YES**
			• Improving and expanding rail infrastructures -works for modernization, reconstruction and construction of railway stops and stations;	**YES**
			• Improving access to port and ferries - Works for infrastructure modernization leading to ferries, works improving hinterland connections with ports (railway and road);	**YES**
			• Improving and developing intermodal nodes and connections.	**YES**
			2. Actions improving the navigation conditions and safety on the Danube and the Black Sea	**-**
			Soft measures:	**-**
			• Reducing administrative burdens and other types of bottlenecks: studies, analyses, solutions, tools.	**NO**
			• Developing and implementing joint co-ordinated strategies, tools and pilot applications to improve the navigation conditions on Danube and Black Sea (e.g, joint feasibility studies, engineering	**YES**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			planning documents, morphological and hydrodynamic studies in establishing the sediment accumulation conditions etc.).	
			Hard measures:	
			• Developing and implementing integrated measures in order to improve the navigation conditions for the common sector of the Danube and the Black Sea in the cross-border area (eg. integrating the marking systems on Danube, equipment, signalling etc.).	**YES**
PO2. A greener, low-carbon Europe	Promoting climate change adaptation and disaster risk prevention, resilience, taking into account ecosystem-based approaches	A greener region	• Improving risk prevention and intervention capacity in the RO-BG CBC region, through the development of joint operational centers, intervention plans and training curricula, in order to develop disaster resilience.	**NO**
			• Improving cross-border coordination, knowledge and capability to adapt water management in the RO-BG CBC region to climate change and to the associated risks (floods, hydrological droughts, pollution).	**NO**
			• Raising awareness, building networks of communities and stakeholders and implementing educational activities on the negative effect of the climate change, especially among the local communities, tourists and forest owners;	**NO**
			• Developing methods and tools to improve the capacity of relevant stakeholders in the prevention and mitigation of climate change impact (e.g. designing and implementation of action plans, methodologies, policies, tools etc.) and to exchange knowledge and	**NO**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			good practices related to help adaptation planning and decision-making on climate change related issues;	
			• Identifying, assessment and reducing of the negative implications of climate change on socio-economic activities in the area (e.g. development and implementation of joint strategies, tools, plans, solutions , joint support activity);	**YES**
			• Developing methods and tools to help adaptation planning and decision-making on climate change adaptation measures;	**NO**
			• Reforestation, conservation and forest protection measures, including implementing community-based forest monitoring systems related to climate change;	**NO**
			• Preventing and reversing desertification through integrated management of land and water (e.g. protecting the vegetative cover, planting trees, establishing seed banks, enriching the soil with nutrients, reintroducing selected species) in order to adapt to climate change;	**YES**
			Development of flood defence structures and addressing all aspects of flood management focusing on limiting the climate change impact, including flood forecasts and early warning systems such as bridge and rail track improvements, improvement of dam facilities, building/consolidating river banks, building green "buffer areas" in urban areas to allow drainage, mobilizing cross-border stakeholders by: ▪ standardising the procedures of climate change adaptation;	**YES**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			▪ collaborating on developing local adaptation / mitigation plans.	
	Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution		• Promoting, facilitating and encouraging citizens engagement in protecting biodiversity, including its conservation and sustainable use;	**NO**
			• Data collection and information sharing in respect to biodiversity between the two sides of the border	**NO**
			• Evaluation, enhancement and promotion of ecosystem services on local and regional level;	**NO**
			• Sharing good practices and implementing eco-friendly and innovative solutions that address invasive alien species and strengthen sustainable environment management practices (e.g. pollinator-friendly management, management of water bodies, forests etc.)	**NO**
			• Supporting the establishment of seed banks, restocking of soil organic matter and organisms that promote higher plant establishment and growth, and reintroduction of selected species.	**YES**
			• Protecting nature and biodiversity located near settlements by creating new access passages/green infrastructure, etc.;	**YES**
			• Promoting and using of eco-friendly building materials and services, for example through developing guidelines, promoting of best	**NO**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			practices, adopting green principles in public procedures, promoting the ecological urbanism principle etc.);	
			• Raising awareness of the benefits of green spaces, including in urban areas, encouraging local actions for greener settlements and rehabilitation of brownfields;	**YES**
			• Developing green architecture to increase roofing and facade greening, support gardening, promoting green eco-friendly solutions for replacing pesticides and herbicides in urban areas etc.;	**NO**
			• Developing urban and peri-urban green areas, including connections between green spaces (urban parks, green sport facilities, forests, riverbank greens);	**NO**
			• Improving pollution control by supporting investments in monitoring and data collection on air, soil and water pollution, particularly in urban areas, including through setting up tools for measuring the air, soil and water quality and providing real-time data (e.g. networks of sensors and applications and platforms to allow reporting by the public);	**NO**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			• Promoting effective waste management thorough: waste separation and recycling; awareness raising on sustainable waste management;	**YES**
			• Supporting water and land management through green solutions (for example: swales, creek restoration and nature scaping, urban drainage systems, naturalized stormwater pond, etc.).	**YES**
PO4. A more social and inclusive Europe [implementing the European Pillar of Social Rights	Improving equal access to inclusive and quality services in education, training and lifelong learning through developing accessible infrastructure, including by fostering resilience for distance and on-line education and trening - contribution to SO 4.5 ESF+	An educated region	• Investments in infrastructure and educational facilities (e.g. learning spaces such as classrooms, labs, libraries, workshops, gyms, outdoor learning spaces but also other facilities, such as restrooms, lockers, teachers' offices, cafeterias, dorms) for all education levels, including technical and vocational training and LLL etc.; special attention will be given to ensuring accessibility for persons with disabilities.	**NO**
			• Investments in ensuring proper endowment for learning facilities with focus on digitalization: equipment, tools, etc., especially those that support the development of practical and/or digital skills and remote learning, such as computers, videoconferencing/distance education equipment VR learning etc.	**NO**
			• Development of extensive and structured language-learning activities, as a vector for building trust across the border, for creating	**NO**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			the premises for future exchanges and also an employment-boosting factor;	
			• Development of joint education schemes in areas where accessibility is not a hindrance or using digitised tools and methods.	**NO**
			• Development of cross-border internship or placements and student exchange programmes for young graduates/students.	**NO**
			• Development of partnerships between higher education establishments and the business, in order to improve the market orientation and the quality aspect of education, and offer young students the possibility to train and/or study on the other side of the border. Long-term exchanges are particularly envisaged.	**NO**
			• Development of partnerships between education and training institutions and stakeholders, at all education levels (early to tertiary), to support mutual learning and exchange of practices between teachers and trainers on both sides of the border	**NO**
			• Development of joint initiatives supporting adult education and learning (LLL), including facilitating learning mobility.	**NO**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			• Development of joint initiatives and actions to support access to quality inclusive education and training, including LLL, to vulnerable or marginalized groups, including disabled persons, SEN ('Special educational needs' is a legal definition and refers to children with learning problems or disabilities that make it harder for them to learn than most children the same age), Roma ethnic group etc.	**NO**
			• Measures for developing highly technical skills and competences.	**NO**
PO5. A Europe closer to citizens	Fostering the integrated and inclusive social, economic and environmental local development, culture, natural heritage, sustainable tourism and security, in areas other than urban areas.	An integrated region	1. Developing the EuroVelo 6 cycling route	**-**
			• Developing the necessary cycling infrastructure, including safety measures, first aid and service points, signalling etc. Priority will be given to projects ensuring connection to tourist attractions – cultural, natural heritage sites and to other means of transport. Connecting infrastructure (incl. reconstruction or modernization of relevant road sections) is also considered, on a limited length, in duly justified cases.	**YES**
			• Ensuring road safety for the sections overlapping the EuroVelo Route, in view of complying with standards related to traffic signalling systems and/or additional development of infrastructure dedicated to cyclists and pedestrians, such as tunnels, bypasses, bridges, overpasses and walkways and protected cycling paths	**NO**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			• Ensuring effective connections with and access to and from other means of transport, including ports and rail stations – adapting infrastructure	**YES**
			• Ensuring availability of public transportation in connection to the cycling route	**NO**
			• Ensuring appropriate services along the EuroVelo Route, such as: accommodation, food, drink and rest and recreation areas, services including Bike Pit-Stops, information, bookable offers, other assistance	**YES**
			• Ensuring communication and information, online and along the route, including mobile/e-applications for cyclists, etc.	**NO**
			2. Supporting tourism activities, connected sectors and industries	**-**
			• Investments in economic competitiveness of local businesses including, but not limited to: construction/ modernisation of productive facilities; supply of relevant equipment; adoption of digital technologies etc.	**YES**
			• Set-up of natural sites for economic use: trails / paths, waste disposal, security, signalling, camp sites, other open-air attractions etc.	**YES**

Selected policy objective	Selected specific objective	Priority	Types of actions	EIA Requirement YES/NO*
			• Supporting sites with tourist potential: construction, modernization/restauration of castles, fortresses, churches, monasteries, palaces, archaeological sites, private/public museums, libraries, art collections/galleries, exhibitions places, wineries, agro-farms (e.g. lavender farms/fields; roses farms/fields, traditional oil factories, sheepfolds), adventure parks, open air attractions etc.	**YES**
			• Creating common historical, natural and cultural heritage products and services, expanding and improving services, targeting new markets and creating jobs in the cross-border area, including by setting up on-site and on-line shops, especially for traditional / local products (local food, bread, wine, cheese, rose, lavender, honey etc.);	**YES**
			• Support for local and regional actors to valorise potentially valuable touristic objectives /sites / experiences, including by creating sustainable tourism trails, or developing quality labels for excellence in services, promoting and marketing the touristic offer etc. Taking advantage of social media trends – such as “insta-tourism”, is also encouraged;	**NO**
			• Training of staff, particularly digital skills.	**NO**

* Yes/No selected based on precautionary approach, yes selected for all uncertain cases.

5 CHARACTERISTICS OF THE CURRENT STATE OF THE ENVIRONMENT

5.1 THE OUTLINE OF THE PROGRAMME AREA FROM ENVIRONMENTAL POINT OF VIEW

5.1.1 BIODIVERSITY, FLORA AND FAUNA

In the territory of the eligible area, according to the different climate and altitude conditions, five bio-geographical regions are represented that ensure the rich biological diversity of the cross-border area. The Northern Balkans are the only mountains that represent the Alpine bioregion in the programme area. The Continental bioregion covers most of the territory, starting from the west from the Southern Carpathians in Romania and the Balkans in Bulgaria, throughout plateaus and plains, to the East to Pontic bioregion. As an exception, the Steppic bioregion is characteristic only to South-Eastern Romania, in Romanian Plain and Dobrogea Plateau. The most Eastern part of eligible area is represented by the lower bioregion of the Black Sea.

The area hosts biodiversity values of both European and global importance. The endemic plants and animal's characteristic of the lower Carpathians, Balkanic mountains, Danube River and Black Sea coastal ecosystems are essential biodiversity components in Europe.

The forests of the Carpathians and Balkan Mountains are still great habitats for large carnivores such as brown bear (*Ursus arctos*), wolf (*Canis lupus*) and Eurasian lynx (*Lynx lynx*).

In the Danube Basin along the tributary rivers, fragments of riparian wetland and forest ecosystems are characteristic and protected as they are influenced by temporary water inundations. These ecosystems provide feeding, resting and nesting places for many bird species.

The eligible area is abundant in natural protected areas, mostly represented by 253 Natura 2000 sites covering approx 20% of the total eligible area. The Romanian part comprises more than 658.000 ha and the Bulgarian part circa 750.000 ha.

The natural protected areas and Natura 2000 sites present within the territory of the Interreg VI-A RO-BG are presented in the figures below.

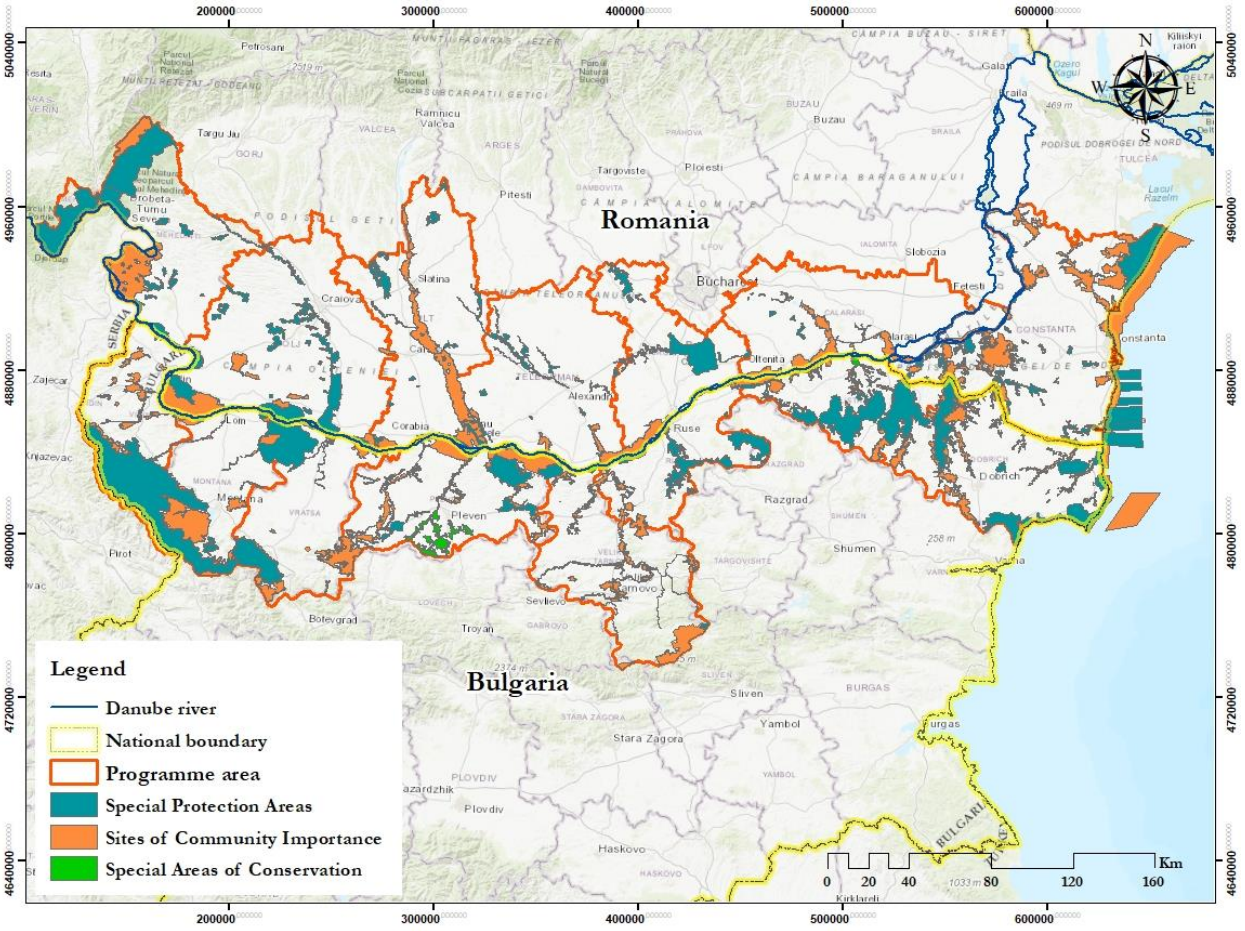

Figure no. 5-1 Natura 2000 sites in the eligible area

Most important natural protected areas of national importance in the cross-border area Iron Gates Natural Park, Mehedinţi Plateau Geopark, Domogled – Valea Cernei National Park and Comana Natural Park in Romania and Rusenski Lom Natural Park, Vrachanski Balkan Nature Park and Persina Nature Park in Bulgaria.

Iron Gates Natural Park, located in the south-west part of the country, on more than 115.000 ha and bordered for 140 km by the Danube, is a rare mix of biodiversity, geological attractions, traditional villages and multicultural heritage. It's also a favorite place for many aquatic birds that live in the park or migrate here for the mild winters, the area of the Iron Gates being included on the Ramsar list of wetlands of international importance. Most of the 205 bird species identified in the park are in fact aquatic birds and if you have an eye for it, you can spot Black Storks, Pygmy Cormorants, the Small Egret or the White Great Egret.

Mehedinţi Plateau Geopark is a natural protected area of national interest where sub-Mediterranean influences and the presence of limestone contributed to the development of some special and rare plants found in the red book of Romania's Flora. In an area of 106,500 ha, located in South Western part of Romania, in Mehedinţi County,. the Mehedinţi Geopark hosts a variety of remarkable attractions and has one of the most spectacular sceneries. The land itself is a fine combination of breathaking sceneries, geological formations such as caves

and gorges, Dacian and Roman archeological vestiges, monuments of vernacular architecture and villages in which many traditions and ancient crafts are still being preserved.

Domogled – Valea Cernei National Park is a protected area situated on the administrativ territory of counties Caraş-Severin, Gorj and Mehedinti. In Mehedinţi County, covering an area of aprox. 8200 ha, it stretches across over the Vâlcan Mountains and the Medinţi Mountains. Domogled - Valea Cernei National Park, houses a rich population of carnivores: bear, fox, lynx, otter, marten, badger, wildcat, but also Carpathian deer, deer, birds: golden eagle, peregrine falcon, common buzzard, red kite, white-throated dipper and northern goshawk.

Comana Natural Park is located in the flat plain of southern Romania is characterized by a high diversity of flora and fauna and consisting mainly of forests, agro-ecosystems, meadows, rivers, lakes, canals, oxbow lakes and a micro-delta. Some 157 bird species have been observed in the park, which regularly supports more than 20,000 waterbirds, many of them migratory. The park also supports numerous fish species, including the endemic *Petroleuciscus boristhenicus* and the internationally threatened *Umbra krameri*. Neajlov River and its microdelta are optimal habitats for the Otter (*Lutra lutra*), Tree-marten (*Martes martes*), Fitchew (*Putorius putorius),* Jackal (*Canis aureus*), and Badger (*Meles meles*). Of the 1,300 plant species, 72 are threatened nationally and species like *Marsilea quadrifolia* are also protected in Europe. Special conservation areas have been established for thorn *Ruscus aculeatus* as well as for the Romanian peony *Peonia peregrina*, which lends its name to the Peony Festival, celebrated in the park in May. The site plays an important role in water purification, flood protection, shoreline stabilization, groundwater recharge, and stream flow maintenance. About 10,000 people who live inside the park directly benefit from these services and also use the site for fishing, hunting and traditional agriculture.[7]

Rusenski Lom Natural Park is situated in Northeast Bulgaria, along the canyon shaped valley of Rusenski Lom River – the last right tributary of the Danube River. From each altitude in Rusenski Lom Natural Park amazing views burst. Within the endless river valley curves are waved as well as forests, the wild beauty of rock peaks and the old castles and settlements. Rusenski Lom Natural Park flora numbers 902 species of higher plants. Birds amount to a total of 192 species, 174 of them under protection – this is the reason why the Lom river valley has been announced to be a significant ornithological spot. Along the valley 70 out of totally 90 species of Bulgaria's mammals can be found; 26 of them are various species of bats. The high percentage of rare and protected species of mammals is due to the diversity of living conditions and habitats and proves the exclusive conservational significance of the Park for their preservation.[8]

Vrachanski Balkan Nature Park is the second largest of the country's parks, which covers the Vratchanska Mountain and the massif of the Lakatnishki cliff rocks. It has a territory of 28,844 ha most of which is covered with karst limestones, 1300 meters thick. Unique in their beauty caves and chasms can be seen in the park. On the territory of the park have been registered about 950 species of high plants, of which more than 80 are rare species. From scientific and preservation point of view the most interesting species are the groups living in the caves (vertebrates and bats) and the day birds of prey. There are 214 registered species of vertebrates in the park. The park has exceptional ornithological variety with around 166 species of birds, 150 of which have been given European protected status. Vratchansky Balkan is an important

[7] Ramsar Sites Information Service. https://rsis.ramsar.org/ris/2004
[8] Danube Parks, The Network of Protected Areas from 9 Danube countries. http://www.danubeparks.org/?park=15

nesting place for 120 species of birds, some of them have a dense population: Black Stork, Egyptian Vulture, Long-legged buzzard, Imperial Eagle, Peregrine Falcon, Rock Partridge and others. Within the limits of the park lies the reserve Vrchanski karst. It covers an area of 1453 ha, situated along the northern stone cliff slopes of Varchanska Mountain. The territory of the reserve is inhabited by the rare and endangered species of peregrine falcon, short-toed eagle, long-legged buzzard, 8 species of bats.

Persina Nature Park is a wetland area along the Bulgarian side of the Danube that was established on December 4, 2000. Situated on the territory of three municipalities (Nikopol, Belene and Svishtov), it covers 21,762 ha. The designation of the park aims at conservation and restoration of Danube wetlands. Special attention is paid to the numerous islands and their natural status. The park is named after Persin Island, which is part of the Belene Islands Complex. It is 15 km long and 6 km wide, making it the fourth largest Danube island and the largest in Bulgaria. Another island group is located near Nikopol. Because of its uniqueness and high importance, the island group was proclaimed a Ramsar site on September 24, 2002. At 18,330 ha, it is the biggest such site in Bulgaria. The most significant ecosystems within the park are the flooded forests along the Danube and the inland marshes. In order to protect these habitats, several protected areas are established. A visitor centre for the park is located in Belene.

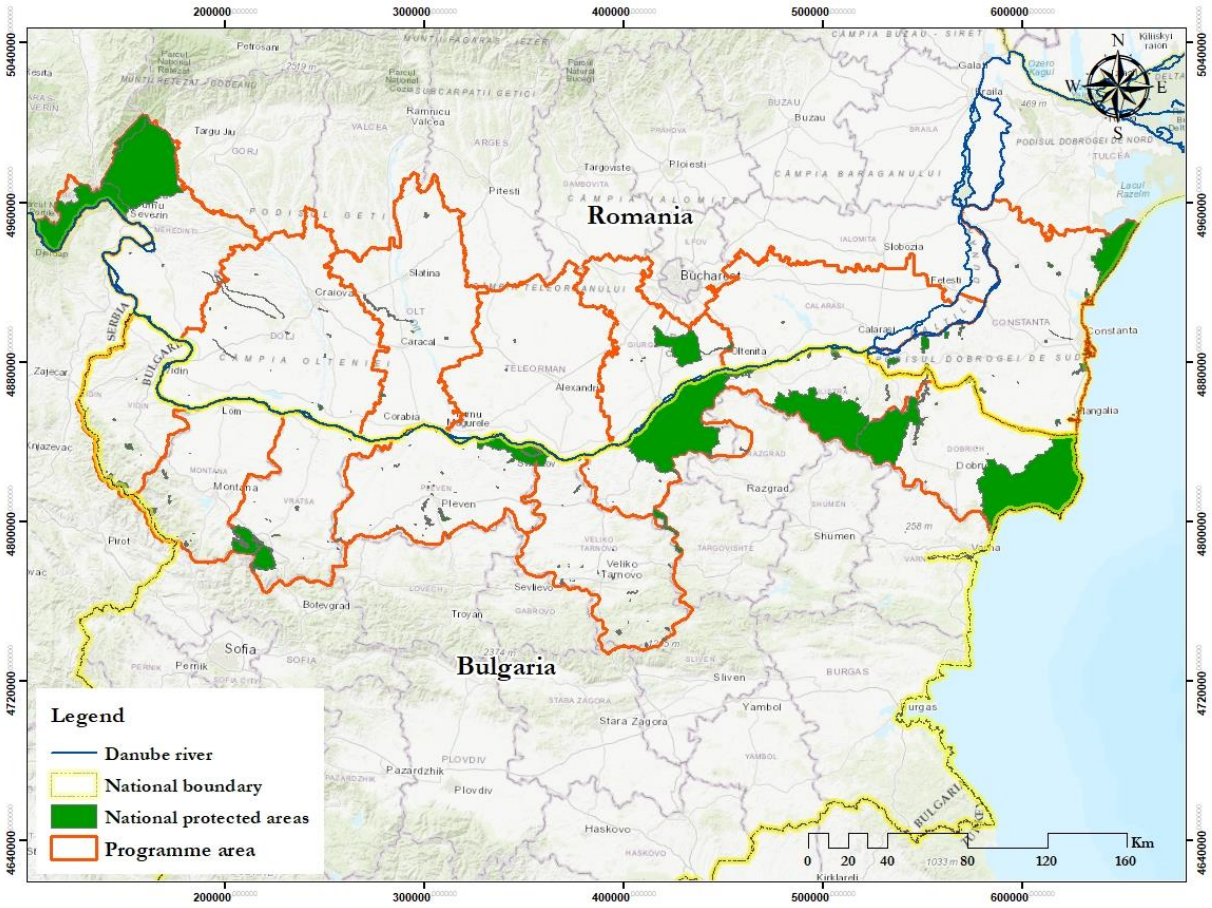

Figure no. 5-2 National protected areas in the eligible area

Along Danube River there are also designated 6 important wetlands as Transboundary Ramsar sites, for which the governments of Bulgaria and Romania have declared their readiness and shared responsibility for joint coordinated management. The Secretariat of the Ramsar Convention has recognized the following, already earlier listed Ramsar Sites, part of the Lower Danube Green Corridor, as Transboundary Ramsar Sites:

- Lake Călărași (Iezerul Călărași) (RO) - Srebarna (BG)
- Suhaia (RO) - Belene Islands Complex (BG)
- Bistret (RO) - Ibisha Island (BG)

The biodiversity and natural heritage face several threats and adverse impacts of anthropogenic and of natural origin. Land abandonment, habitat degradation, conversion and fragmentation, deforestation, the diminishing population of small settlements, industrialisation, pollution, urbanisation and overexploitation of natural resources, climate change and mass tourism can have adverse impacts on the landscape and on the biodiversity in the cross-border area and the migration of animals.

5.1.2 POPULATION AND HUMAN HEALTH

According to the latest data available on National Statistic Institutes of Romania and Bulgaria (2019), the population recorded in the cross-border region was of 4,15 million inhabitant, 2,82 million (68%) in Romania and 1,33 million (32%) in Bulgaria. On the latest census from 2011, the population in programme's eligible area was 4,77 million which underlines the decline characterizing the regional demography. The distribution of the population and the demographic trends are highly related to the co-existence of urban centers and large rural areas. According to the TerrEvi ESPON project[9], the demographic changes on the Romanian side are less accentuated in the counties where great urban centers are located. On the Bulgarian side, however, the population decrease is continuous and unaffected by the existence of main urban centers in the districts. The highest population density in this area is recorded (according to National Institute of Statistics) in Romania for the south-eastern county of Constanța and in Bulgaria (according to National Statistical Institute) for the north-central district of Pleven with respectively 95,7 and 50,7 inhabitants/km^2; contrasting with the southwestern county of Mehedinți and the north-western district of Vidin that face each other across the Danube and record respectively 48,9 and 27,3 inhabitants/km^2.

The Romania-Bulgaria cross-border region is highly affected by negative outcomes of the demographic transition. The main demographic phenomenon, common to both sides of the Danube, is an accentuated ageing of populations generated by a strong outward migration and a low birth rate.

In the last two decades and especially so after the accession to the EU in 2007, Bulgaria has achieved some improvements in population's health status indicators.[10] However, it is falling behind compared with the EU28 average, with the newer EU Member States, and especially compared with the better performers. Due to a slow pace of improvement, the Bulgarian 2015 life expectancy was already 0.3 years lower than life expectancy in Romania (75 years). The gap with the EU28 average (80.6 years) has been widening in the last decade and stood at

[9] ESPON Project TerrEvi (2012). ESPON Factsheet, Romania - Bulgaria
[10] Postolovska, I. (2015). International comparisons of Bulgaria's health system performance: background paper. Washington, D.C.: World Bank Group

5.9 years of difference in life expectancy in 2015 (Eurostat, 2018). According to WHO[11], the health system in Bulgaria continuously suffers from substantial weaknesses, which contributes to unsatisfactory population health. Health inequalities between urban and rural populations as well as inequalities in access to the health system continue to grow. The improvement of the population health status, as reflected in some health indicators, has been unsatisfactory, with some indicators even deteriorating.

In Romania, based on the point of population dynamics and health, of special concern is the mortality rate in the counties of the programme eligible area, exceeding the national death rate in all counties except Constanta (12,4‰). The highest rate (18,5‰) was recorded in Teleorman County. Also, alarming is the number of deaths before the age of 1 in 1000 live born ranging from 10‰ in Călăraşi and Mehedinţi counties to 43‰ in Constanţa county.[12]

The statistics of death causes shows that the top-ranking cause of death in Romania is circulatory system diseases, followed by tumours.

Regarding cultural diversity, population of the Bulgarian districts is more ethnically diverse than in the Romanian counties. We can define two types of ethnic minorities: the ones that are geographically located in some of the counties/districts as the Turkish minority and the ones that are present in all the counties/districts from both sides of the border as the Romi minority.

5.1.3 SOIL AND LAND USE

In the Danube River basin, the main soil-forming rocks are the loess, carbonate materials, conglomerates and sandstone, and in the lowlands and the river terraces – alluvial and delluvial mantle. The most widely found are Chernozems – calcic, haplic and luvic. Second by importance, are the Fluvisols – calcaric, eutric, salic and gleyic (alluvial and alluvial-meadow soils). Gleysols are found at some sites along the river. Phaeozems, Luvisols (dark-grey forest soils) and Vertisols are found in the western part of CBC area.

The carbonate Chernozems most widely found soils in the Danube basin are very vulnerable to erosion because of the soft main soil-forming rocks - the loess. The extent of the erosion varies depending on the plant coverage and human impact. Wind erosion - widely spread Water erosion - approximately 70 t/km^2 per year of the upper humus layer is lost into the Danube River.

In the process of harmonizing national policies with those of the European Union and the transposition and implementation of EU rules and regulations, the issue of soil pollution is one of the fundamental aspects of environmental protection. EU strategy on soil distinguishes a number of topics related to the general process of soil degradation, such as: erosion, damage to organic matter, contamination, salinization, compaction, reduction soil biodiversity, sealing, landslides, floods. Soils in the country have a wide range of types, due to the complexity of conditions as pedogenetic factors. The great variety of soils in the territory, characterized by different physical and chemical properties, determine a different behavior from the pollutants they come with in contact, as well as against the action of climatic factors.

As regards landslides, the Romania-Bulgaria cross-border area has a comparable degree of landslide susceptibility as the southern part of Europe. This aspect should be considered when

[11] World Health Organisation (2018). Bulgaria Health System Review 2018
[12] National Institute of Statistics https://insse.ro/cms/en

creating Soil Thematic Strategies that consider inventory, susceptibility, hazard and risk at various scales.

The Romanian counties are as affected and as susceptible to landslides as the Bulgarian districts. Landslides can also affect mine waste tips and tailings dams and landfills, causing fatalities and contaminating soils and surface and ground water. In areas affected by landslides, these are a major source of soil erosion and sediment yield to valleys and rivers, and hence of reservoir silting.

According to Territorial Analysis[13], agriculture remains a traditional sector both in Bulgaria and in Romania, directly impacting the socio-economic processes in the two countries. In 2013, 74.18% (5,362,561 ha) of the total area of the cross-border region (7,229,089 ha) was represented by agricultural land. Most of the agricultural area (3,071,699 ha, that is 57.28%) is located on the Romanian side of the cross-border territory, while the rest of 2,290,862 ha is on the Bulgarian side. Compared to the European average (42% of all EU land area is covered by agricultural lands), the CBC area has a higher percentage of agricultural land.

The Romanian border territory is important for the agriculture at national level, representing approximately 28% of the total arable land. The agricultural land on the Romanian Danube border represents 78.12% of the total Romanian land resources. By far, the most agricultural county is Teleorman, with 86% of its land being used for agricultural purposes.

The Bulgarian side of the cross-border region represents 52% of all arable lands in Bulgaria. The region is representative for its vineyards, accounting for more than 20% of the total vineyard fields in Bulgaria. The district of Dobrich is occupying the first place in the country in terms of agricultural land with 375,350 ha, out of which more than 88% are used. On the other hand, the district of Vidin ranks second in the country in terms of the amount of non-used agricultural land. The unused agricultural land in the district represents 7.7% of all unused agricultural land in Bulgaria and the highest rate within the district with 21.7%. From the new crops, the crop of goji berry found in Vratsa, Vidin and Veliko Tarnovo should be mentioned.

Also, in terms of forestry, the entire cross-border area sums up over 20%, with notable differences between the two countries (Romanian side – 15.97% and the Bulgarian side – 25.84%). We can observe that the forestry areas remain constant over time (Figure 47) or even increase in counties such as Constanţa. Even though there is a general decreasing trend at national level, these areas seem to preserve one of their main resources, especially to protect them against landslides and floods. This is the official reported situation which does not take into account the illegal deforestation that has been discussed both at national and European level.

Deforestation remains an important issue, both at the European and CBC level, but serious measures are being taken in both countries, especially by the Ministries of Environment and specific NGOs (with their public warning role). It cannot be denied that more efforts can be observed in the counties/districts where illegal logging has more serious effects. Nevertheless, it should also be considered that forestry along the Danube has its own major role of protecting, especially against flood, landslides and other natural hazards.

Land use within the territory of the Interreg VI-A RO-BG is presented in the figure below.

[13] Territorial Analysis for Romania-Bulgaria Cross-border region, 2020, page 110-111

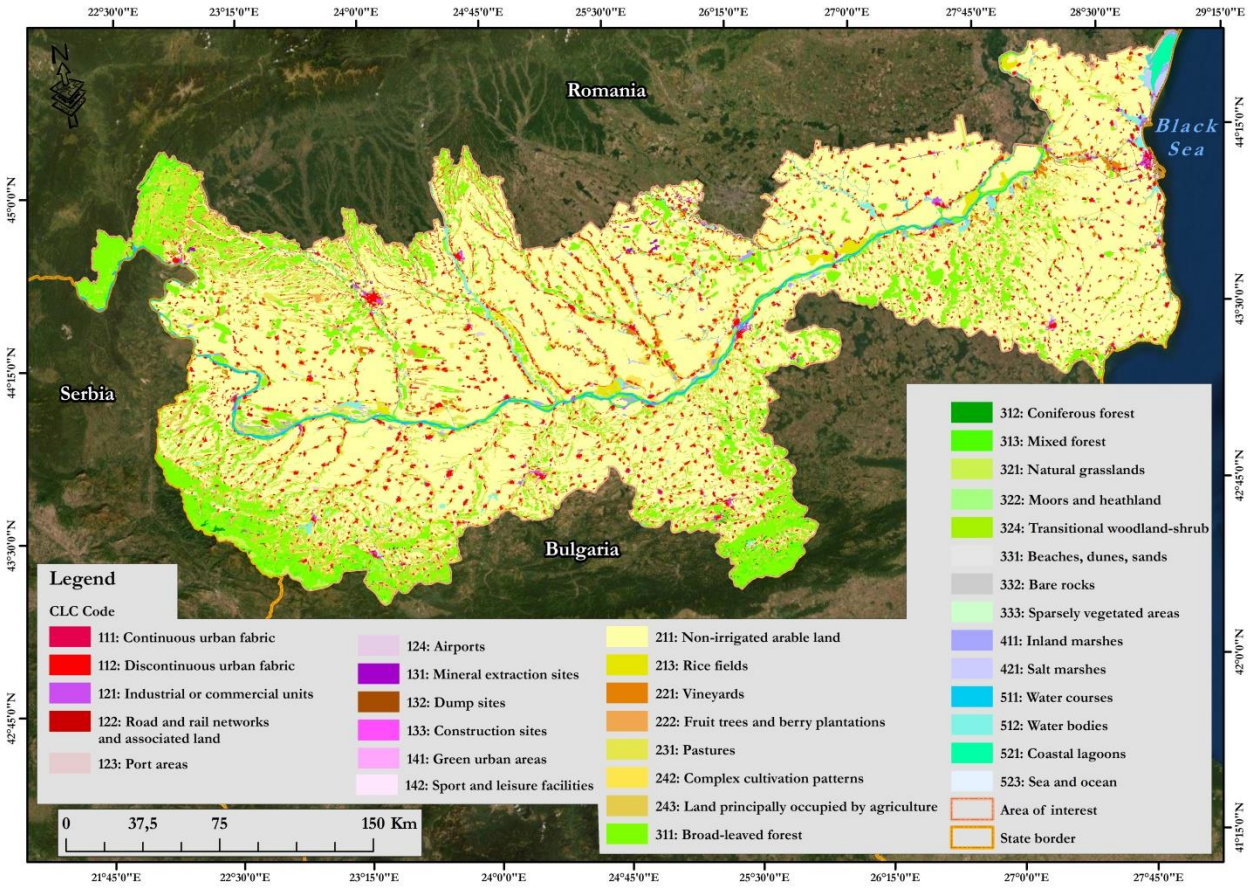

Figure no. 5-3 Land use in the eligible area (Source: CLC 2018)

5.1.4 WATERS (SURFACE WATERS AND GROUND WATERS)

The Danube River is both the borderline between Romania and Bulgaria and the main environmental feature in the region.

Two distinct sections of the Danube River can be identified in the Romanian-Bulgarian cross-border region:

- between Gura Văii (north of Drobeta Turnu Severin) and Călăraşi,
- between Călăraşi and Pătlăgeanca.

Romania

In Romania, the surface water bodies and groundwater bodies are under the management of the National Administration „Romanian Water" (NARW), which includes within its structure 11 Water Basin Administrations (WBA).

The following River Basin Administrations are controlling the water bodies in the eligible area of the programme:

- WBA Jiu;
- WBA Olt;
- WBA Argeş - Vedea;
- WBA Buzau - Ialomiţa;

- WBA Dobrogea - Litoral.

Along the major course of the Danube River, administered by Water Basin Administrations (WBA) Jiu, WBA Olt, WBA Argeş - Vedea, WBA Buzau - Ialomiţa and WBA Dobrogea – Litoral, a total number of 7 water bodies were identified and evaluated (4 water bodies on the main course and 3 water bodies on the 3 branches, all with a monitored total length of 1,260 km). The 7 water bodies were designated as being 2 natural water bodies and 5 highly modified water bodies.

Following the assessment of data from Hydrographic Management Plans 2nd Cycle 2016-2021, it resulted that the entire monitored length had a good ecological condition, respectively, a good ecological potential[14].

Regarding the monitoring of groundwater, in the Romanian side there are 43 groundwater bodies from which 10 are classified as poor chemical status, the most frequently identified nutrients being various forms of nitrogen and phosphorus (nitrates, nitrites, ammonia, organic nitrogen from plant debris or other organic compounds and phosphates).

Excess nutrients, whatever the source may be, come by washing or infiltration into groundwater, rivers, lakes and seas. By boiling, the nitrate concentration in water increases, and purification filters do not absorb nitrates.

Naturally, nitrates (NO_3) and phosphate (PO_4) from waters come from aquatic animal manure (mainly fish), from the soil forming lacustrine basin or aquifer specific organic matter decomposition. Excess phosphates and nitrates come from human activities, namely the human waste and various industrial and agricultural sources (fertilizers and animal manure).

Agriculture and animal breeding involves significant pollution of groundwater, often cumulative and persistent in water layers.

Bulgaria

Water management in the Republic of Bulgaria is carried out at national and basin level. In the cross-border programme's area there are two regions for water management at basin level, namely Danube Region Basin Directorate for Water Management (including about 87 surface water bodies within the scope of the Programme) and Black Sea Basin Directorate for Water Management (including 7 surface water bodies within the scope of the Programme).

The main water streams within the scope of the Programme are:

- Within the Danube Region Basin Directorate (DRBD) with the center in Pleven: Danube, Iskar, Vit, Osam, Ogosta, Rivers west of Ogosta, Yantra, Rusenski Lom, Danubian Dobrudzha streams;
- Within the Black Sea Basin Directorate (BSBD) with the center in Varna: The Black Sea Dobrudzha streams.

Water from the rivers to DRBD is used for irrigation and potable purposes. Most important are the waters of the Danube, used for transportation, fishing and irrigation. There are a large number of ravines, which are filled with water only in spring when the snow melts and rains are more torrential.

[14] River Basin Management Plans 2016-2021 http://www.rowater.ro/

In recent years a trend of improvement in the overall environmental condition of water is observed. Upper reaches of rivers are characterized by unpolluted to slightly polluted water. In some areas there is a decrease in the number of areas with abnormal status and no new areas with disturbed hydro-biological status are established. Notwithstanding the above positive trend in recent years, a number of points and sections of rivers are registered to be of severely degraded environmental quality.

The only streams within the BSBD having regard to the program are the Black Sea Dobrudzha Rivers. The analyzed area is the poorest of freshwater resources in the country.

The Black Sea Dobrudzha streams occupy the upper northeastern part of Bulgaria. Unlike other rivers in Bulgaria, starting from the steep slopes of high mountains and gradually descending to the plains, the Dobrudzha streams start from the vast plains of the highlands and down in the river valleys and have surface runoff only in their upper currents; due to the high permeability of the soil and the small slope, the water downstream gradually sinks in and disappears long before mouthing the rivers.

Typical of Dobrudza streams is that they exist at a certain distance after their source and then sink in the loess formations of Dobrudza and the downstream dry valleys and do not form a surface tributary to the Black Sea.

In the Bulgarian range of the program, 47 groundwater bodies are formed in the geological environment of tectonic units and imposed structures from Triassic to Quaternary inclusive, of which 41 bodies within the Danube Region of Water Management and 6 units in the territory of the Black Sea Water Management Region.

According to the results of the monitoring carried out under Order No. RD-715/02.08.2010 of the Minister of Environment, 34 groundwater bodies in the Danube region and six bodies in the Black Sea region are in "good" quantitative status, while 7 underground water bodies in the Danube region are in " bad" quantitative status[15].

Groundwater bodies in "bad" chemical status are mostly of non-pressure nature and shallow water level, fed by precipitation and temporary surface water flows. They are not or poorly protected against ingress of contaminants mainly from diffuse sources: agricultural activities (agriculture and livestock breeding) associated with the application of fertilizers and pesticides and disposal of waste (solid and liquid manure) from livestock farms, settlements with no sewerage system, landfills that do not meet the European requirements, ineffective operating treatment facilities of livestock farms. The most important among these are agricultural activities and settlements without sewerage system that issue mainly nitrates and ammonium . Source of groundwater contamination with sodium and chloride in the coastal strip, registered near Krapets, is the intrusion of saline sea waters.

The main water flows from territory of the Interreg VI-A RO-BG are presented in the figure below.

[15] http://www.bd-dunav.org/

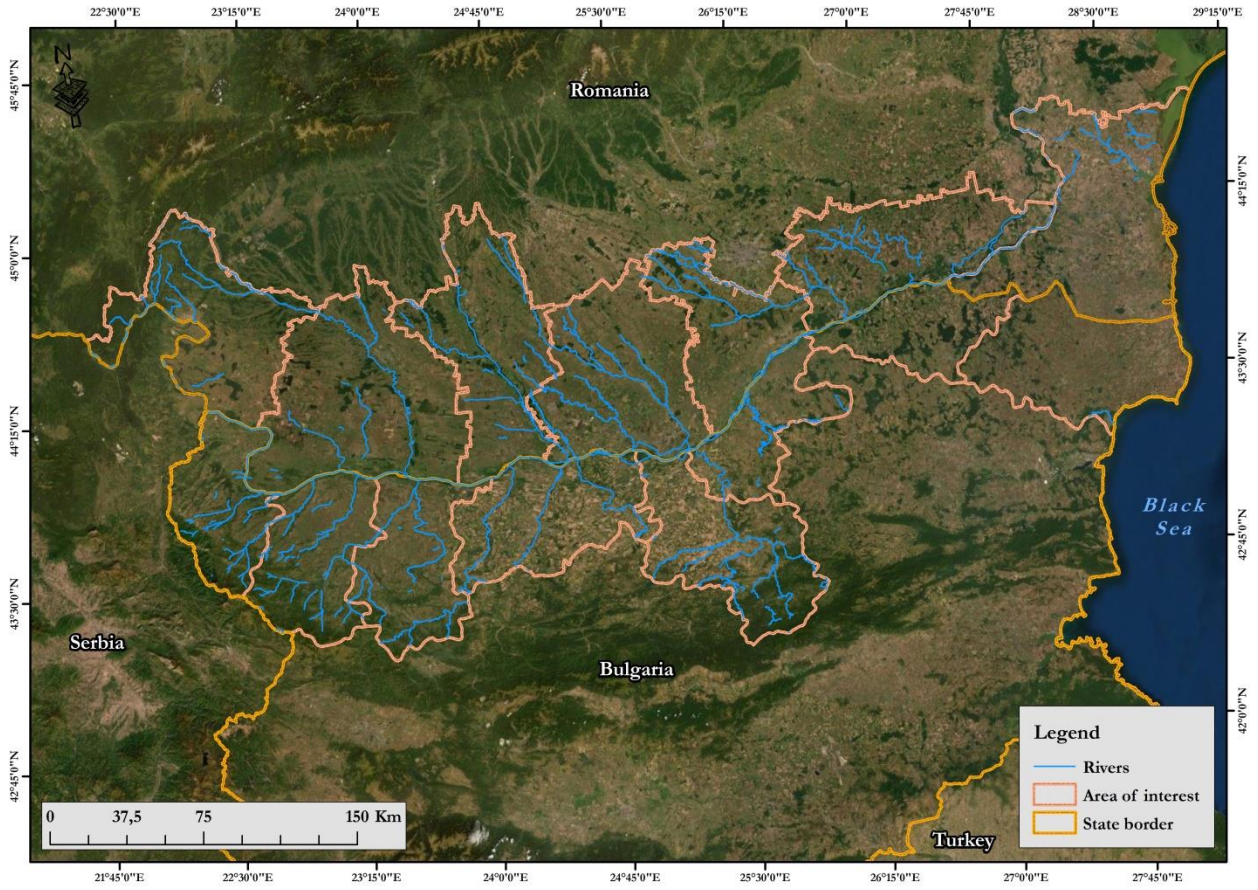

Figure no. 5-4 Main water flows in the eligible area

5.1.5 AIR

In the cross-border area, the climate is characterized as 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 Mehedinți and Dolj counties, marine influences in Constanța county and Dobrich district with strong contrasts between winter and summer temperatures. In the South-eastern part, some Northern influences can be felt, cold air coming from the North - East to the South - West, strong winds bringing very cold winters.

Regarding the air quality of the cross-border eligible area, main monitored pollutants for both Bulgarian and Romanian sections are: sulfur dioxide (SO_2), nitrogen oxides (NO_2) and nitrogen oxides (NO_x), carbon monoxide (CO), ozone (O_3), volatile organic compounds, benzene and particulate matter (PM10 and PM2.5).

According to „Air quality in Europe" 2018[16],2019[17] report, increasing concentrations of PM2.5, NO_2 and O_3 pollutants can cause premature deaths to the population due to exposure to them. Analyzing the situation in Romania and Bulgaria for the 3 pollutants, in 2016 and 2018 most

[16] EEA Report, No 12/2019, Air quality în Europe-2019 report, ISSN 1977-8449
[17] EEA Report, No 10/2019, Air quality în Europe-2019 report, ISSN 1977-8449

deaths were caused by exposure of the population to increasing concentrations for PM2.5, NO_2 and O_3.

The registered annual average of PM2.5 pollutant in Romania was 16.8 μg/m^3 in 2016 and 17.6 μg/m^3 in 2018, although the allowed annual limit was not exceeded, this increase was also found in the number of registered deaths, reaching from 22400 to 25000 people.

In the case of Bulgaria, there was a decrease in the average annual value in 2018 by 2.3 μg/m^3 compared to 2016 with an annual average of 21 μg/m^3, but also the number of premature deaths suffered a slight decrease from 13100 to 12,500 people.

For the NO_2 pollutant in Romania, an increase was registered from 17.6 μg/m^3 to 19.3 μg/m^3, and the number of premature deaths increased from 2600 to 3500 people.

In Bulgaria, there was a slight increase in NO_2 concentration from 18.8 μg/m^3 to 19 μg/m^3, and the number of deaths remained constant.

The concentration of O_3 pollutant in Romania increased from 2485 to 3684 μg/m^3/day, this increase being reflected in the number of premature deaths, reaching from 490 to 730.

And in Bulgaria the increase was lower, from 3347 to 3760 the same situation was the number of premature deaths from 280 to 320 people.

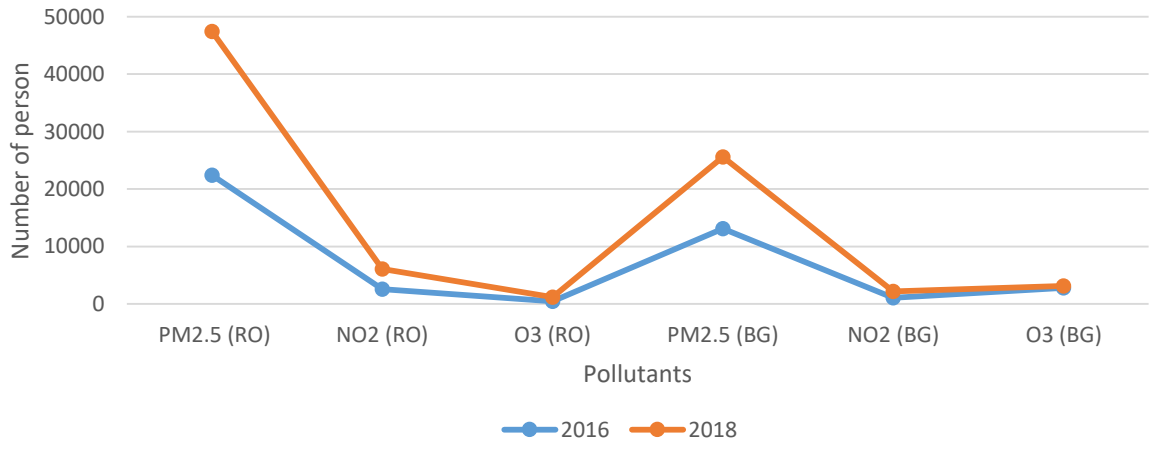

Figure no. 5-5 Premature deaths due pollution

In Bulgaria works a system for monitoring the air quality based on monitoring points. The system of air quality monitoring it is connected with the regional laboratories in Sofia, Plovdiv, Pleven, Stara Zagora, Varna and Ruse[18]. According to the Clean Air Act the main indicators characterizing the air quality at ground level are: suspended particulates, particulate matter, sulphur dioxide, nitrogen dioxide and / or nitrogen oxides, carbon monoxide, ozone, lead, benzene, polycyclic aromatic hydrocarbons and heavy metals (cadmium, nickel arsenic and mercury). Requirements of Directive 2008/50/EC on ambient air quality and cleaner air for Europe is transposed into national law by Ordinance № 12 (2010) of the Bulgarian Ministry of Environment and Water and the Ministry of Health.

[18] https://www.iqair.com/bulgaria

For Romania there are also monitoring points for air quality, which are equipped with automatic measurement sets for key air pollutants. They are a part of a national network for air quality monitoring (RNMCA) and are distributed throughout the country in accordance with the criteria set out in EU directives in the field of air quality[19].

To protect human health sampling of air are carried out so as to provide data according to the following:

- determining the locations where the highest concentrations of a harmful substance are found. For these locations it is likely the population to be directly or indirectly exposed to these substances for a significant period of time;
- determining the pollution levels which are representative of the exposure of the population;
- determining deposit values that the population have indirect exposure to through the food chain.

The data for the air pollutants for Bulgarian crossborder region are taken from the published monthly and quarterly newsletters of Bulgarian Executive Environment Agency and from the daily reports for the state of the environment of Regional Inspectorates for Environmental Protection and Water (RIEPW) located in the Danube basin - Rousse RIEPW, which controls three areas: Ruse, Razgrad and Silistra; RIEPW - Veliko Tarnovo responsible for Veliko Tarnovo and Gabrovo (Gabrovo is not within the programme's area); RIEPW Pleven for Lovech and Pleven (Lovech is not within the programme's area); RIEW Vratsa responsible only for Vratsa, RIEPW - Montana - responsible for Montana and Vidin and Regional Inspectorate – RIEPW - Varna responsible for Varna and Dobrich.

In accordance with the World Health Organization's guidelines, the air quality in Bulgaria is considered moderately unsafe. The most recent data indicates the country's annual mean concentration of PM2.5 is 19 μg/m^3, exceeding the recommended maximum of 10 μg/m^3.

Contributors to poor air quality in Bulgaria include thermal power plants, food processing, and vehicle emissions. Available data indicates that urban areas such as Ruse and Veliko Tarnovo have consistently high levels of air pollution[20].

The data for air quality in Romanian crossborder region are taken from the annual reports of the Romanian Ministry of Environment and Climate Change - National Agency for Environmental Protection and the Regional Environmental Agency in Mehedinţi, Dolj, Olt, Giurgiu, Călăraşi, Teleorman and Constanţa.

The same as the situation in Bulgaria, the contributors to poor air quality in include thermal power plants, food processing and vehicle emissions with high levels of air pollution in urban areas[21].

[19] Filipova, Margarita & Zheleva, Ivanka & Rusev, Petar & Stefanova, Antoaneta & Tcvetanova, Irina. (2016). ANALYSIS OF THE STATE OF AMBIENT AIR IN THE BORDER REGION BULGARIA ROMANIA. 440-449. 10.21698/simi.2016.0062
[20] International Associacion for Medical Assistance to Travelers, Bulgaria General Health Risks: Air pollution. https://www.iamat.org/country/bulgaria/risk/air-pollution
[21] National Air Quality Monitoring Network. http://www.calitateaer.ro

5.1.6 CLIMATE CHANGE

One of the major global environmental pressures today is represented by climate change, a process heavily stimulated by society's main activities and consumption patterns, correlated with the lack or slow pace of the process of implementing mitigation strategies and policies. It may be considered one of the greatest and most profound challenges humanity has to deal with, as climate change expands its outcomes over the economic, social and environmental components of society.

The negative outcomes of climate change could be more pronounced in vulnerable regions, where economic, social or environmental issues are already present, as in the case of the regions in the proximity of the lower Danube from Romania and Bulgaria, in the cross-border territory (all Romanian counties and Bulgarian districts in the cross-border area are considered to have a high degree of vulnerability to climate change).

For both countries, droughts represent an important issue, but Romania reported a higher number of droughts than Bulgaria in territories from the cross-border area. The droughts will have serious consequences in the agricultural sector, not just for the current period, but also for the next decades. This phenomenon will not have singular effects, but it will also result in a desertification process, with significant impact on the south-western part of Romania and the district of Dobrich in Bulgaria.

Other important aspects of the climate change analysis reveal extreme weather events, such as tornado events (the Romanian side is more exposed, especially Constanţa County). Furthermore, erosion, together with storm events and rivers draining in low-lying coastal areas, are and will be furthermore the main factors triggering coastal flood-risk. Coastal erosion also represents a threat not only to households or economic activities, but also to the biodiversity conservation policy promoted at EU level.

Greenhouse gas emissions also have an important role in the enhancement of the climate change phenomenon. There are important steps that have been taken by both countries. They have recorded a decrease in carbon dioxide emissions in the last 30 years and Bulgaria has achieved its Effort Sharing Targets, but Romania is still a long way from reaching these targets. However, the CO_2 emissions trend is positive, and it is expected to remain the same in the next 10 years, on account of an increase of the socio-economic wellbeing[22].

Bulgaria and Romania actively participate in the global efforts to mitigate climate change and adapt to the changes that already have taken place, seemingly that on 22nd of April 2016, both Countries signed the Paris Climate Agreement, which undoubtedly marks a historic breakthrough – after many years of negotiations, and came to the conclusion that the only response is the shared actions to reduce greenhouse gas emissions, setting a global goal of limiting global warming to 2 degrees Celsius and a vision for the ambitious target of 1.5 degrees[23].

[22] Territorial Analysis for Romania-Bulgaria Cross-border region, 2020, page 156
[23] https://ec.europa.eu/clima/policies/international/negotiations/paris_en

5.1.7 MATERIAL ASSETS, CULTURAL HERITAGE

Tangible assets are a component of the anthropogenic environment. In the framework of the Programme it is assumed that most relevant will be the assets pertaining to transport infrastructure, cultural infrastructure, social infrastructure, and infrastructure for coping with flood and landslide.

The eligible area is rich in touristic attractions, both in cultural and in natural heritage. One can find here a diverse pool of attractions. The entire eligible area has quality thermal water and remarkable natural landscapes, as well as numerous nature conservation areas. The cultural heritage of the area includes various historical monuments, churches, original ethnographical and folklore elements. Built on the excellent geothermal conditions, the various well-established spa facilities are also important touristic attractions.

In Romania, the List of Historical Monuments, including archaeological sites, is maintained and updated by the Ministry of Culture and has official and legal character. According to the latest update approved by the Ministerial Order no. 2.828/2015, in the Romanian Territory which is part of the programme, are located 3940 Historical Monuments, distributed by counties, as shown in the table below.

Table no. 5-1 Number of Historical Monuments located in the Romanian Side

County	Number of HM
Constanţa	694
Călăraşi	285
Giurgiu	540
Teleorman	393
Dolj	700
Mehedinţi	570
Olt	758
TOTAL	**3940**

In each of the seven Romanian counties covered by the programme, there are objectives belonging to the cultural heritage, including archaeological sites, which shall be described in detail, as appropriate, once the locations of actions proposed by the programme would be known[24].

Within Mehedinti County, the best known historical monuments, as well as other cultural heritage objects and tourist attractions include:

- The vestiges of Trajan's Bridge (a bridge built during the inter-war period of the Dacian wars led by Emperor Trajanus against Decebalus);
- The Drobeta Castrum (built at the same time as Trajan's Bridge);
- The ruins of the mediaeval church near the Roman castrum;
- Sfânta Ana Monastery;
- the citadel on former Ada-Kaleh Island, now under the waters of the reservoir, relocated on Ostrovul Simian;
- Sfinţii Voievozi Church, erected in he Byzantine style and painted in the 17th century;
- the citadel of Strehaia Monastery, built around 1500;

[24] http://www.monumenteromania.ro/

- Gura Motrului Monastery.

The best-known heritage objects in Dolj County include:

- The wooden church Toţi Sfinţii in Talpăşeşti;
- Memorial House of Elena Farago;
- Jitianu Monastery in Podari;
- Bucovăţ Monastery in Craiova;
- Maglavit Monastery in Maglavit.

Olt County retains the traces and vestiges of an amazing culture Archaeological digs revealed the presence of human settlements throughout history, certifying continuity of civilization in this area. The vestiges belong to the Stone Culture, Criş Culture, Vădastra and Sălcuţa. The following cultural heritage objects are also well known:

- The fortified Geto-Dacian settlement at Sprâncenata.
- The walls of the Byzantine citadel at Celei - Corabia with the Secret Fountain, a unique monument of Byzantine Roman architecture.
- The Church of Căluiu Monastery, with original frescoes depicting Michael the Brave's wife and the Buzeşti Brothers.
- Brâncoveni Monastery.
- The mediaeval Watchtower at Hotăreni.
- The Fortress at Câmpul Mare.
- Memorial House of outlaw Iancu Jianu, in Caracal.
- Nicolae Titulescu Memorial Centre in the village of the same name.
- Clocociov Monastery, built on a settlement belonging to Michael the Brave.
- Trinity Church in Corabia, an imposing religious architectural monument.
- The church in Stoicăneşti, painted by Gheorghe Tătărescu, etc.

The best-known heritage objects in Călăraşi County include:

- Lower Danube Museum opened in 1951, with two departments: The Archaeology Service and the Art, Ethnography and Restoration-Preservation Department. The building is a remarkable architectural monument, specific to the 19h c.
- The church of former Negoeşti Monastery is a unique historical and religious architecture monument. Established in 1648 - 1649 by ruler Matei Basarab, it was rebuilt in 1777 and restored in 1850.
- The church of former Plătăreşti Monastery was also erected in the times of Matei Basarab, but is remarkable in its architecture and interior wall painting.

Heritage objects in Giurgiu County include:

- in the municipality of Giurgiu: the ruins of the old mediaeval citadel, the History museum, the Clock Tower, monuments dedicated to the heroes of the Independence War and to the French soldiers killed in Giurgiu during WWI;
- the monument at Călugareni;
- Ancient Argedava (a Dacian-Getic tribal union, the place where Burebista emerged) etc.

Among the heritage objects in Teleorman, County, the following are worth mentioning:

- The Roman citadel of Turris;

- The mediaeval citadel Turnu;
- The ruins of the Monastery at Plaviceni din Plopii Slăviteşti;
- The ruins of the Bălăceanu Court at Tătăraştii de Sus;
- The memorial house of Zaharia Stancu;
- Royal cathedral Sf. Alexandru in Alexandria.
- Constanta County contains many heritage objects, such as:
- The Roman altar at Adamclisi;
- The amphitheatre;
- The cave dwelling complex at Murfatlar;
- Gallery-aqueducts.

The county cultural heritage also includes many worshipping sites of different religions.

One of the most famous area, is represented by the archaeological site of Histria. Greek colony on the Dobrogea coast of the Black Sea (today on the Sinoe Lake bank), Histria was founded by the middle of the 7th century BC, by colonists from Miletus (according to the data conveyed by Eusebius, a possible founding date could be the years 657/656 BC, and according to the tradition mentioned by Ps. Skymnos, the year 630 BC could represent the date of the foundation of the settlement) and existed for 14 centuries, until the 7th century AD. It is the oldest Greek colony on the west coast of the Black Sea, and one of the first founded in the basin of this sea. It is also the oldest town attested on the territory of present-day Romania.

According to the Register of National Cultural Valuables (NCV) to the National Institute for Immovable Cultural Heritage of Bulgaria, the total number of all types of NCV is over 40,000, among which 13,500 are archaeological.

The archaeological NCVs are relatively evenly distributed throughout the country and are largely outside the settlements.

Table no. 5-2 Number of National Cultural Valuables located in the Bulgarian side

District	Number of NCVs
Dobrich	834
Vidin	138
Montana	128
Vratsa	91
Pleven	469
Veliko Tarnovo	928
Ruse	552
Silistra	436
TOTAL	**3576**

One of the most prominent cultural sites in the region are the Rock-hewn Churches of Ivanovo, included in the UNESCO World Heritage List. These are a group of monolithic churches, chapels and monasteries hewn out of solid rock and completely different from other monastery complexes in Bulgaria, located near the village of Ivanovo, 20 km south of Ruse, on the high rocky banks of the Rusenski Lom, 32 m above the river. The complex is noted for its beautiful and well-preserved medieval frescoes[25].

[25] UNESCO, World Heritage Centre. https://whc.unesco.org/en/list/45/

There are 56 culture monuments on the territory of Vidin Region (archaeological objects of antiquity and middle age, churches and musk from XV-XIX century as well as buildings from 1880-1925). Among the most prominent cultural sites in the region is the ancient fortress of Baba Vida, which was built on the ruins of an older ancient fortress – Bononia. At first the mediaeval fortress was rather small in size, with the parameters of a watch-tower. Its reconstruction into a bigger mediaeval castle had happened during the first rulers of the Vidin principality and its larger expansion – during tsar Ivan-Sratsimir, with who is related the building of the main tower of the fortress. After decades of research and restoration, today the "Baba Vida" fortress is an original outdoor museum with internal expositions revealing the life customs of the mediaeval Bulgarian fortresses and important periods of the history of mediaeval Bulgaria. Other cultural and historical sites in the region of Vidin include the Koluka History Museum, The musk and the Pazvantoglu's library, The Synagogue, St. Dimitar Cathedral, and other.

We have to mention the existence of cultural routes located in the Middle and Lower Danube Region, the Roman Emperors Route (RER) and the Danube Wine Route which are part of the European network of cultural routes. The main objective of the routes, encompassing 20 spots along the Roman Emperors Route and 12 wine regions along the banks of the Danube, is the promotion and development of cultural cross-border tourism in the Danube regions of Bulgaria, Croatia, Romania and Serbia, which contribute profoundly to the European heritage and cultural identity.[26]

5.1.8 LANDSCAPE AND LAND COVER

The cross-border region is characterised by an exceptional biological diversity and by valuable natural landscapes which are uneasily accessible and endangered by climate change.

In the framework of the European Landscape Convention, the study "Increasing the value of the Romania-Bulgaria cross-border area landscapes" aimed at providing first elements to encourage public authorities to adopt policies and measures at local, regional and cross border level for protecting, managing and planning landscapes so as to maintain and improve landscape quality and bring the public, institutions and local and regional authorities to recognise the value and importance of landscape and to take part in related public decisions. The integration of the landscape dimension in the preparation of spatial management policies, both general and sectorial, will lead to a better protection and management of natural heritage in the cross-border area. In the framework of this study, the following tasks has been completed:

- An analysis of the current legislative situation concerning landscapes protection and management in Romania and Bulgaria;
- A methodology for the inventory, evaluation and classification of the landscapes in the cross-border area;
- A landscape atlas of the cross-border area;
- A technical documentation for the implementation of panoramic viewpoints;
- A report with recommendation of policies, measures and projects for the landscapes' protection and the promotion.

[26] "Cultural Route of the Council of Europe" certified in 2015 https://www.coe.int/en/web/cultural-routes/the-roman-emperors-and-danube-wine-route

On the Romanian side there is a variety of landscapes: mountains with gorges and canyons, hills and plateaus, plains and river plains, rivers and 95 lakes. The best known are hereinafter introduced for the administrative units within the programme scope.

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

A 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 citadel of the sunken Ada-Kaleh Island.
- The northern part of 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.

Dolj County is characterised by a variety of landscapes such as hills (Dealul Amaradiei), plains (Câmpia Romana, Lunca Dunării), rivers (the Jiu, the Danube); lakes (Bistret, Fantana Banului, Maglavit, Golenti, Ciuperceni), which are all tourist attractions, along with the natural reserve of remarkable landscape value.

Natural attractions of Olt County, include The Danube Valley, with its islands and beaches, offering valuable landscapes of recreational value, The Olt Valley, looking like a garland of lakes after the now operational hydropower developments were put in place, attracting by the beauty of the images created by the vast water surfaces, forests, with a variety of tree species, which create outstanding landscapes throughout the vegetation stages.

It is said of Călăraşi County that the Danube creates fairy-tale landscapes:

- Natural reserves Ostrovul Ciocăneşti;
- Ostrovul Haralambie and Ostrovul şoimul are only some of the areas that deserve full attention. Sarulesti, a community on the left bank of Mostiştea River;
- Valea Roşie Lake, in the commune of Mitreni, is remarkable, as a naturally occurring salt lake.

Giurgiu County is renowned for the landscapes in and around the commune of Comana. The Comana forest reserve is a natural monument, a paradise of flora and fauna specific to the Danube Plain.

Teleorman County is characterised by a variety of landscapes:

- plains (Câmpia Găvanu-Burdea, Burnaz, Boian, Lunca Dunării);
- rivers (the Olt, the Calmatui, the Vedea, the Danube);
- lakes (Bercelu, Sărat, Balta Rosie, Balta lui Bran, Călina, Balta Luciei, Vârtoape, Suhaia).

Constanţa County is renowned for its outstanding natural landscapes in 26 nature reserves, including:

- Cheile Dobrogei;
- Natural Reserve Masivul Cheia;
- The Chalky Walls at Petroşani;
- Nature reserve Obanul Mare and Movile Cave;
- Fossil-bearing lake Aliman
- Natural reserve Acvatoriul litoral marin Vama Veche-2 Mai;
- Hârşova Canals, etc.

Bulgaria features notable diversity with the landscape ranging from highlands to lowlands, including the typically continental Danubian Plain (ancient Moesia) in the north. Concerned area falls within the Moesian hilly plateau plane and part of the Balkan system. Typical of the region's landscapes belong to the classes of lowland landscapes intermontane plain-lowland landscapes, valley landscapes and mountain landscapes.

The northern boundary of the region coincides with the Bulgarian north border. Dominating groups of landscapes in the border area are chernozem steppe plains of loess rocks with high agricultural use, landscapes chernozem steppe plains on carbonate rocks with moderate agricultural use, and landscapes of flat open karst in carbonate sedimentary rocks of karst surfaces, which - to the south - pass into the open karst landscapes on the slopes of canyon valleys, intersecting planes of sedimentary carbonate rocks.

The eastern boundary of the analysed area coincides with part of the eastern border of Bulgaria. Along the coast from north to south predominantly repeat landscape groups of coastal strips, landscapes of rocky cliffs, landscapes of flat open karst in carbonate sedimentary rocks of karst surfaces, landscapes of lagoon lakes (wetlands), landscapes of dense forests on the low talus deposits and landscapes of dense forests on the low uncohesive Holocene marine sediments.

There are also groups of landscapes of meadow-steppe rolling beds of valleys in the inner montane uncohesive Quaternary deposits having high level of agricultural use, landscapes of woodland-meadow-steppe rolling beds of valleys in the inner montane pans on Cretaceous sediments having moderate level of agricultural use, landscapes of lowland dense forests on alluvial deposits, landscapes of lowland xenophyte shrub woodland on Mesozoic and Palaeogene clay-sandy sediments with relatively low level of agricultural use, and landscapes of mid-montane deciduous forests on non-carbonate sedimentary rocks[27].

Among the sensitive landscapes are considered to be unique landscapes of natural attractions that are protected by law.

5.1.9 ENERGY EFFICIENCY

The energy sources are quite rare on the Bulgarian side of the border, but the Romanian side has some crude oil and natural gas reserves and the cross-border area is rich in terms of minerals, such as border coal, limestone, marble, kaolin, stone, siderite, etc. The region is a very important location for energy production, both Bulgarian and Romanian nuclear power plants are located along the Danube and major renewable energy production sites are close to

[27] Landscapes identification and character assessment In the ROMANIA - BULGARIA CROSS BORDER AREA, http://www.danube-ecotourism.com/

the RO-BG cross-border area. For instance, the main hydroelectric power station (Iron Gate I and II) along the Danube is located on the Serbian-Romanian border.

Moreover, thanks to its natural assets, the region has significant potential to expand the use of renewable energy. Natural conditions for wind power generation are widely acknowledged making the coastal area already a part of the European Large-Scale Wind Power Zone. The region is also well positioned for photovoltaic power generation and geothermal energy is yet another option for the North-East of the Bulgarian part of the area.

5.1.10 SUSTAINABLE TRANSPORT

The total length of the roads in the cross-border area is cca. 16,600 km, including district and communal roads. The total density of public roads is 22.95 km/100 km^2, which is very low, compared to the EU average of 110 km/100 km^2. The density of roads along the Danube is to a great extent under the national average. The public road network is more concentrated in Romania compared to Bulgaria.

According to the "Territorial Analysis for Romania-Bulgaria Cross-border region, 2020"[28], in the cross-border area, the most developed road network is still on the Romanian side. Olt, Dolj and Constanța counties have the longest network of national and county roads. In Bulgaria the longest network of category I, II and III roads belong to Veliko Tarnovo district, a value exceeding only the lowest ranked county from Romania.

Most of the road network has a durable road surface but it is worn out and the available protective equipment does not correspond to the contemporary requirements. In certain sections, the bad condition of the roads creates serious difficulties for the winter maintenance of the road network which often leads to isolation of settlements.

The cross-border region only contains one motorway between Bucharest and Constanța (220 km). Other motorways, according to Romania General Transport Master Plan, are in in execution on the timetable of 2020-2035, but there are no motorways passing the Romania-Bulgaria border. All cross-border links are served by national or at least county roads. Just two crossings between the county of Constanța and the districts of Silistra and Dobrich are served by communal / local roads.

The transport system of the Romania - Bulgaria cross border region, which entails four modes of transportation - road, water, rail and air, suffers serious challenges. First, there is almost no connectivity at a cross-border level and its connectivity with the TEN-T corridors is very low. There is no optimized system of connections between the different modes of transportation. Thus, the accessibility of the region to businesses and people is seriously limited. Second, the road infrastructure is heavily used for transit and internal transportation, creating bottlenecks and reducing the efficiency of the freight and passenger transportation in the eligible area of the programme. The costs for the business as well as the transportation time are higher. This further pose traffic safety issues. Indeed, the number of traffic accident, including with fatalities is very high. The underutilized green transport results in higher carbon emissions in the target area.[29]

[28] Territorial Analysis for Romania-Bulgaria Cross-border region, 2020, page 175
[29] Association of Danube River Municipalities "Danube" (ADRM) Bulgaria and The Ecological Initiative and Sustainable Development Group, The "Investigation of opportunities for reducing the TEN-T network use within the cross-border

One point of infrastructure deficit on the cross-border area was represented by the lack of reliable, consistent navigation along the Danube. Currently, according to Romania General Transport Master Plan, a project is being under development to bring improvements, in particular the shared Romanian – Bulgarian section of the Danube.

Roads and railway infrastructure within the territory of the Interreg VI-A RO-BG is presented in the figure below.

Figure no. 5-6 Roads and railway infrastructure in the eligible area

One of the ecological transport options available in the program area is represented by waterways.
According to Territorial analysis the Danube has been for a long time, one of Europe's most important inland waterways. The Danube River connects the Black Sea with various ports in south-eastern and central Europe, as well as having additional connections with Western Europe.
Water transport on the Danube is hampered by certain factors such as the depth of the river and the capacity of the ports. Due to the effects of climate change, such as high temperatures and falling rainfall, fairway conditions were unfavorable in 2018 compared to the last two years.

region RomaniaBulgaria through optimization of the freight and passenger transport and the development of a joint mechanism for support of the intermodal connections" project preparation, 2016

In the period 2012-2018, the critical points regarding the fairway conditions are in the area around Milka / Belene / Coundur (BG) and Cochirleni (RO)[30].

5.1.11 CIRCULAR ECONOMY

One of the most serious problems of the environmental protection field is the waste generation in large quantities and their inadequate management. With respect at the municipal waste, the collection and disposal of municipal waste is the municipality responsibility, directly, through the specialised departments within the Local Boards, or indirectly – by granting this duty to special sanitation services, on a contract basis. The sanitation services exist and operate mainly in the urban areas.

According to the Commission's 'Early Warning Report' (2018), Romania is considered at risk of non-compliance with the 2020 municipal waste recycling target of 50 % (compliance standards from the Romania's Accession Treaty). The circular economy remains underdeveloped, although it has potential in this area and The New Action Plan regarding the Circular Economy of the European Commission will have more specific targets and measures concerning the decrease in terms of waste generated quantities and their types

In 2017, the municipal waste generation per capita in Romania was 272 kg, an 18 kg increase from 2013 but still considerably below the EU average of around 487 kg.[31]

According to the following table, the largest waste producers in 2017 were registered in counties Constanța, Dolj and district Ruse; they do not compensate by recycling, having a recycling rate under 3% (the target is at least 50%). The highest recycling rate has been registered in Olt County with a 13.79% rate, which is still low considering the European target of 50%. Another identified issue is the fact that many counties/districts do not report any recycling facts, which can become even more dangerous in terms of EU compliance.

Table no. 5-3 Total waste (tons) and degree of recycling 2017

DISTRICT	TOTAL WASTE 2017 (mil. tons)	DEGREE OF RECYCLING	COUNTY	TOTAL WASTE 2017 (mil. tons)	DEGREE OF RECYCLING
Vidin	24.147	0	Teleorman	72.895	5.83
Montana	35.265	2.84	Olt	54.032	13.79
Vratsa	48.364	8.27	Călărași	42.122	0
Pleven	84.632	3.54%	Giurgiu	43.146	0
Dobrich	68.499	2.92%	Constanța	347.717	2.69
Veliko Tarnovo	91.073	7.69%	Dolj	140.021	0.13
Ruse	110.989	2.70%	Mehedinți	49.846	9.04
Silistra	44.741	0			

Source: Territorial Analysis for Romania-Bulgaria Cross-border region, 2020

A field in which the two countries perform better is the field of plastic recycling, where, in 2017, Bulgaria recycled 65% of its 120 million tons of generated plastic and Romania recycled 47% of the 349 million tons.

[30] FairwayDabube (May 2019), Fairway Rehabilitation and Maintenance Master Plan for the Danube and its navigable tributaries.
[31] European Commision (2019). The EU Environmental Implementation Review 2019, Country Report – Romania. Brussels

It is very important to look also at the future requirements coming from the European Commission, especially at the key elements of the revised waste proposal which include:

- A common EU target for recycling 65% of municipal waste by 2030;
- A common EU target for recycling 75% of packaging waste by 2030;
- A binding landfill target to reduce landfill to maximum of 10% of municipal waste by 2030;
- A ban on landfilling of separately collected waste;
- Promotion of economic instruments to discourage landfilling;
- Simplified and improved definitions and harmonised calculation methods for recycling rates throughout the EU;
- Concrete measures to promote re-use and stimulate industrial symbiosis –turning one industry's by-product into another industry's raw material;
- Economic incentives for producers to put greener products on the market and support recovery and recycling schemes (e.g. for packaging, batteries, electric and electronic equipment, vehicles).

All these requirements will put an even higher pressure on the waste issues existing in the two countries and measures have to be taken in this regard.

The European Commission in the „Early Warning Report"[32], listed Bulgaria among the Member States at risk of missing the 2020 municipal waste recycling target, and recommended country-specific actions to close the gap. Meaning so there will be a necessary to compliance with recycling targets for the post-2020 period.

In both countries, all municipalities are obliged to collect at least four recycling streams, plus biodegradable waste (waste collection points are mainly for packaging materials, such as glass, metal and plastic, paper and residual waste).

According to The Environmental Implementation Review 2019[33], Bulgaria still has one of the highest landfill rates for municipal waste in the EU (at 62% in 2017 compared to the EU average of around 24%). Bulgaria reported that all landfills which do not comply with EU standards have stopped accepting waste but its implementation record needs to be further improved: as a matter of priority, they need to be definitively closed and rehabilitated, and illegal dumpsites eliminated. Despite significant progress in the closure of noncompliant sites, their rehabilitation remains a challenge. In 2013, Bulgaria introduced a law that required waste collection fees to be calculated based on the generated waste (the 'pay-as-you-throw' principle), instead of being based on the value of the real estate property. It was due to enter into force on 1 January 2015 but this has been postponed a number of times, the last target date being 1 January 2018. In October 2017, an amendment to the Law on Local Taxes and Fees

[32] European Commission (2018). Report on the implementation of EU waste legislation, including the early warning report for Member States at risk of missing the 2020 preparation for re-use/recycling target on municipal waste
[33] European Comission (2019). The EU Environmental Implementation Review, Country Report - BULGARIA, Brussels

clarified the methods for calculating costs and waste collection fees, but further postponed the implementation of the polluter-pays principle until the beginning of 2022.[34]

5.1.12 RISK MANAGEMENT

Between 2000 and 2005, catastrophic floods occurred along the Danube River[35]. According to historical data, there is a 1% probability of occurrence of average floods, which can occur on average once every 100 years, in areas included in the program and especially along the Danube both in Romania and in Bulgaria. They mainly affect the population.

5.1.13 RAISING AWARENESS ON ENVIRONMENTAL ISSUES

As a result of the pandemic caused by COVID-19, the impact of human activities on the environment was reduced, and at the same time the population became much more grateful for the importance of green spaces[36]. This phenomenon can have a positive impact on environmental protection, being a triggering factor for raising public awareness about the importance of a clean, healthy and ecologically balanced environment. The main areas that require careful attention are: waste management, conservation of biodiversity and natural resources, sustainable transport, improving the urban environment and energy efficiency, regeneration and decontamination of derelict industrial land and air quality.

5.2 IDENTIFIED ENVIRONMENTAL PROBLEMS

The key problems and focus points derive from the current state of the environment of the eligible Programme area.

Biodiversity, flora and fauna

Along the Interreg VI-A Romania-Bulgaria Programme's implementation area are many natural protected areas, such as: 7 nature parks (3 in Romania and 4 in Bulgaria), one national park in Romania, 3 national biosphere reserves (one in Romania – Danube Delta and 2 in Bulgaria), 21 Ramsar sites (15 in Romania and 6 in Bulgaria), many Natura 2000 sites (126 in Romania and 127 in Bulgaria) and many natural/ scientific reserves.

According to the Territorial analysis for Romania-Bulgaria Cross-border region, 2020[37], there are many issues regarding the proper management of all these natural protected areas within the implementation area, but the main conflicts still appear at the local communities' level:

- when the authorities are trying to extend the protected areas, when management plans or rehabilitation measures are being implemented, when there are issues concerning the reintroduction of some species etc. One of the most important issues is that most of the Natura 2000 sites from the implementation area of the Programme do not have an approved management plan, have issues regarding the custody of the area and also large areas of these Natura 2000 sites have a private ownership, leading to stronger conflicts and disputes in what concern the implementation of the protection measures;

[34] https://www.dnevnik.bg/
[35] European Enviroment Agency - Floods
[36] Sandra Rousseau, Nick Deschach, 2020, Public awareness of nature and the environment during the COVID-19 crisis
[37] Territorial Analysis for Romania-Bulgaria Cross-border region, 2020, page 120

- when the Natura 2000 sites that are located in the vicinity of the towns/ cities, in case of which appear some negative impacts like: uncontrolled waste storage, destruction of the markings, uncontrolled fires, illegal camping, creation of new access roads, increased erosion, disturbance of the wildlife etc.;
- when the Natura 2000 sites have been declared starting with 2007, without consultation of the population or of the local stakeholders, in this way appearing many tensions between the local communities and the Natura 2000 sites, concerning: the use of forest, water, energy and non-renewable resources.

Important stress points:

- land use changes (deforestation, urbanization etc.), agricultural impacts;
- overexploitation of natural resources;
- uncontrolled waste storage, uncontrolled fires etc.;
- illegal exploitations, tourism, constructions and poaching;
- lack of clear institutional provisions related to property rights;
- lack of joint protection of natural values.

Air and climate change

The air pollution within the Interreg VI-A Romania-Bulgaria Programme's implementation area represents an issue that needs to be carefully looked at, since the current analysis[38] reveals the challenge of missing data, which could indicate the lack of monitoring or transparency with respect to air quality, a good starting point being monitoring and ensuring data availability.

In the last years were identified several aspects related to the climate change in the implementation area, such as[39]: increase of the average annual temperature (by more than 3.6◦ on both banks of the Danube), droughts (with serious consequences in the agricultural sector, which represents the most important economic sector in the area; often resulting also a desertification process), tornado events (especially in Constanta county), coastal erosion, greenhouse gas emissions etc.

Important stress points:

- insufficient infrastructure and management related to air quality;
- Changes of climate parameters, increasing extreme weather events causing increasing probability of natural hazards (droughts, floods, landslides, tornado events, coastal erosion etc.);
- Lack of joint disaster management infrastructure.

Soil and land use

According to the European Soil Data Centre[40], the landslide risk is lower on the Romanian border compared to the Bulgarian one, where there are hilly and plateau areas corresponding to higher altitudes. The Interreg VI-A RO-BG cross-border area presents a comparable degree of landslide susceptibility, as the southern part of Europe does.

[38] Territorial Analysis for Romania-Bulgaria Cross-border region, 2020, page 122
[39] Territorial analysis for the Romania-Bulgaria cross-border region, Interreg Romania-Bulgaria Programme 2021-2027
[40] European Soil Data Centre, Joint Researcher Center. https://esdac.jrc.ec.europa.eu/

The tailings dams and landfills can also be affected by the landslides in the area, resulting in fatalities and contaminating soils, surface waters and ground waters, so it's an important issue to be analysed within the next programming period.

Important stress points:

- soil pollution;
- soil degradation;
- decrease of productivity of the agricultural lands due to more frequent and longer periods of drought.

Waters (surface waters and ground waters)

According to Eurostat data, within the Interreg VI-A RO-BG cross-border area the equipment and infrastructure systems regarding the water supply and wastewater are insufficient, compared to other regions of Europe. Within the implementation area, the wastewater from households and industry represents a major pressure on the aquatic environment, due to the loads of organic matter and nutrients, as well as hazardous substances.[41]

Important stress points:

- lack of an adequate infrastructure for sewage collection and treatment;
- pollution of surface and groundwater (organic, nutrient, hazardous substances);
- hydromorphological alterations (interruption of river and habitat continuity, disconnection of adjacent floodplains/wetlands, hydrological alteration).

Landscape and land cover

The specificity of the implementation area is given by the presence of a high-density river network and its floodplain landscape. In what concerns the land cover, agriculture remains a traditional sector both in Romania and in Bulgaria, with major impact on the economic sectors of the two countries.

Important stress points:

- land use changes (illegal logging in both countries);
- overexploitation of natural resources by industry and agriculture;
- lack of information transfer and education on ecosystems and values/ lack of implementing cooperative measures related to landscape protection and promotion.

Material assets, cultural heritage

It's important to maintain a common cultural heritage, traditions and history since is well-known that the economic, technological, social and political changes within the Danube region have led to a decrease in what concern the traditional knowledge, customs and values that were preserved along the centuries.

Important stress points:

- degradation of traditional values;
- insufficient infrastructure and management related to a common cultural heritage, traditions, history;

[41] Territorial Analysis for Romania-Bulgaria Cross-border region, 2020, page 254

- lack of transfer knowledge to inhabitants, tourists – to be promoted through sustainable tourism.

Population and human health

There are several aspects of concerning within the CBC area, when it comes to population and human health:

- Romania and Bulgaria are registering the highest number of citizens in risk of poverty and social exclusion in EU;
- The school population and number of students have been decreasing in 2012-2018, within the Interreg VI-A RO-BG cross-border area;
- Concerning the provision of health services, in the Romania cross-border area hospitals have a wider dispersion throughout the territory and are more accessible to more areas, but the infrastructure and the personnel are more crowded, while in Bulgaria, although hospitals are distributed in fewer urban centres, there are more hospital beds available per 1000 inhabitants and the doctors have less patients assigned.

Important stress points:

- deficient communal and ICT infrastructure;
- lack of an adequate health and social infrastructure;
- risk of poverty;
- lack of efficient educational programs regarding a healthy life style.

Circular economy

One of the most sensitive issues in the Interreg VI-A RO-BG cross-border area is represented by the waste management, despite the formal progress registered in both countries as a result of the adoption of the national waste management plans:

- according to the Commission's "Early Warning Report" (2018)[42], Romania is considered at risk of non-compliance with the 2020 municipal waste recycling target of 50% (compliance standards from the Romania's Accession Treaty);
- in what concern the districts in Bulgaria, according to the National Statistics Institute, the highest degree of recycling in 2017 was recorded in Vratsa district of 8,27%, while in Vidin and Silistra there was no recycling recorded.

The Interreg VI-A RO-BG cross-border area offer a big potential for renewable sources of energy, due to its micro-climate and environmental characteristics, especially in what concern the solar energy and biomass, given the agricultural development of the area, and as well, hydropower seems to have a high potential.[43]

Important stress points:

- low level of waste recycling;

[42] Commission Staff Working document - *The early warning report for Romania* – accompanying the document „Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committe of the Regions - on the implementation of EU waste legislation, including the early warning report for Member states at risk of missing the 2020 preparation for re-use/recycling target on municipal waste", SWD(2018) 423 final

[43] Territorial analysis for the Romania-Bulgaria cross-border region, Interreg Romania-Bulgaria Programme 2021-2027, page 145

- low efficiency of selective waste collection programmes;
- overloaded controlled landfills;
- insufficient knowledge of people concerning the sustainability and waste management.
- insufficient ratio of renewables in energetics;

Sustainable transport

Regarding the traffic and transport, the cross-border region is still not well connected to the main transport networks of the European Union. Even if the transport of goods and passengers increased on the Danube and the trend continues to grow, are still on-going many bottlenecks reducing the transport performance of this corridor, most of them being on the Romanian-Bulgarian border.

Important stress points:

- low accessibility and availability of the region due to infrastructural deficiency.

6 DETERMINING THE LIKELY SIGNIFICANCE OF EFFECTS OF THE PROGRAMME

The effects of the Interreg VI-A Romania-Bulgaria Programme have been estimated by the specificity of the programme and the types of actions planned as likely to be significant, having cumulative nature, according to the *Criteria for determining the likely significance of effects referred to in Article 3(5)* of the European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment:

The characteristics of Interreg VI-A RO-BG Programme 2021-2027, having regard, in particular, to:	
✓ the degree to which the Programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources	High degree - it creates the framework for projects with potential significant impacts.
✓ the degree to which the Programme influences other plans and programmes including those in a hierarchy	Moderate degree - it may influence other plans and programmes at national, regional and local levels.
✓ the relevance of the Programme for the integration of environmental considerations in particular with a view to promoting sustainable development	The Programme has a low relevance for the integration of environmental considerations.
✓ environmental problems relevant to the Programme	Only to a low degree.
✓ the relevance of the Programme for the implementation of Community legislation on the environment (e.g. plans and programmes linked to waste-management or water protection)	Low relevance.
According to the characteristics of the effects and of the area likely to be affected, having regard, in particular, to:	
✓ the probability, duration, frequency and reversibility of the effects	High probability, long term duration and permanent effects.
✓ the cumulative nature of the effects	Proposed types of actions may cumulate with other projects
✓ the transboundary nature of the effects	Effects may be generated on Romania and Bulgaria territories.
✓ the risks to human health or the environment (e.g. due to accidents)	Low risk.
✓ the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected)	Most of the proposed types of actions generate effects at a local scale.
✓ the value and vulnerability of the area of implementation likely to be affected due to: • special natural characteristics or cultural heritage;	Areas likely to be affected are represented by the Natura 2000 sites along Danube corridor.

• exceeded environmental quality standards or limit values; • intensive land-use (such as areas of intensive agricultural or forestry growing, production, areas with dense population etc.).	
✓ the effects on areas or landscapes which have a recognised national, Community or international protection status	Habitat loss, habitat alterations, habitat fragmentation.

The main focus of the Interreg VI-A Romania-Bulgaria Programme is on the reinforcement of the socio-economic fabric of the Romania-Bulgaria cross-border territory, through developing and retaining human capital, creating opportunities for personal and professional development, providing an attractive, safe and sustainable living environment and supporting innovation and entrepreneurship.

7 METHODS OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT

The SEA is planned and carried out in line with the SEA Directive 2001/42/EC, which defines the strategic environmental assessment and its national transposition in the two participating countries.

7.1 SEA PROCEDURE

The objective of the SEA Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes.

The main steps, which define the methodological approach for the strategic environmental assessment process, are as follows:

- *Screening stage*: the Central Authority for Environmental Protection decides regarding the obligation to carry out the environmental assessment, as well as the studies necessary to be developed within the SEA procedure for the Programme. Following the screening decision of the competent authority for environmental protection, regarding the obligation to carry out the environmental assessment, the next steps consist in the Scoping stage and preparing the Environmental Report. The screening procedure should be carried out in consultation with all participating countries' environmental authorities;
- *Scoping and consultation on the Scoping report*: the Scoping report aims to identify the main areas of intervention, representing a summary of the relevant regulatory framework and methodologies planned to be used in the strategic environmental assessment. The Scoping report will also include: the main environmental issues and the relevant legal framework for each environmental component; the concept of assessment and relevant environmental indicators; the methods for assessing the positive and negative effects and the alternatives considered in the strategic environmental assessment. The determination of the Environmental report's scope and level of detail should take place in consultation with the environmental authorities from all the participating countries, which should confirm that the proposed procedure and consultation process comply with the relevant national laws and regulations;
- *Environmental report*: the Environmental report will identify, describe and evaluate the potential significant environmental effects of the implementation of the Programme, as well as its reasonable alternatives, taking into account the objectives and geographical area of the Program. The structure of the Environmental Report will respect the framework content presented in Annex I of SEA Directive. In accordance with the specific requirements, the Environmental Report will also include:
    - a non-technical summary according to the provisions of Annex 1 letter j of the SEA Directive;
    - a description of any measures taken to monitor the effects, in accordance with the provisions of Article 9.1 (c) and Article 10 of the above-mentioned Directive;

- information on public consultations and with the environmental authorities in accordance with Articles 6 and 7 of the SEA Directive;

- *Setting up the measures decided for monitoring:* according to the provisions of Article 9.1 (c) and Article 10 of the SEA Directive, the Environmental Report will include the description of the measures taken to monitor the effects of the Interreg VI-A Romania-Bulgaria Programme on the environment. This will be done taking into consideration the received opinions from the consultation process;
- *Coordination with the Programme elaborators regarding the proposed measures for monitoring the effects of the Programme implementation on the environment:* the elaboration of those monitoring measures/ indicators will need a very close cooperation with the planners of the Interreg VI-A RO-BG Programme;
- *SEA Statement:* will contain the manner in which the legal requirements for the preparation of the Environmental Report were respected; how the opinions expressed by the public and the authorities consulted were taken into account in making the decision to issue the Environmental approval; the considerations on the basis of which the Programme approved alternative was chosen compared to other alternatives; the way in which the effects of the Programme on the environment will be monitored.

The SEA procedure is planned according to the following steps, activities, deliverables and timeframe foreseen:

Steps of the SEA procedure	Activities	Deliverables	Timeframe foreseen
Pre-procedure	1. Identification of the environmental authorities in both partner states 2. Inclusion in the SEA team of a local Bulgarian expert 3. Preparation of the First Version of the Programme	Draft version of the program	November 2019
Initiation of the procedure	4. Initiation of the procedure in Romania and Bulgaria	Notification	June 2021
Screening stage	5. Preparation of a short Screening Report, if the case 6. Decision of the Screening stage	Screening Report, if the case	July 2021
Scoping stage	7. Preparation of the Scoping Report 8. Consultation on the Scoping Report 9. Decision of the Scoping Stage	Scoping Report	August 2021
Finalisation of the Programme	10. Organisation of working groups in Romania and Bulgaria	Environmental Report	August 2021

Steps of the SEA procedure	Activities	Deliverables	Timeframe foreseen
and elaboration of the Environmental Report	11. Preparation of the Environmental Report 12. Preparation of Appropriate Assessment Study (if requested by Env. Authority)*		
Analysis of the Environmental Report quality	13. Consultations in Romania and Bulgaria and integration of recommendations 14. Transboundary consultations (if is the case) 15. Organisation of public debates both in Romania and Bulgaria; 16. Draft version of the Environmental Report	Draft version of the SEA	October/November 2021[44]
Finalization and decision making	17. Finalisation of the Environmental Report 18. Beginning of integration of Environmental Report measures into the Programme 19. Preparation of SEA Statement 20. The issuing of SEA decision	Final version of the Programme SEA statement	November/ December 2021[40]

* If the Appropriate Assessment Study is requested the duration of the procedure will be longer.

7.2 METHODOLOGICAL TOOLS

"Alternative 0" and Programme impact

A main important question of the SEA process is regarding the analysis of the state of the environment, in case the Interreg VI-A RO-BG Programme is not implemented, in order to determine the way in which it can contribute to the improvement of the environment quality in the study area.

The analysis of the evolution of the state of the environment, if Interreg VI-A RO-BG Programme is not implemented, is equivalent with "Alternative 0" and assumes its estimation based on the available data, according to which the current state of the environment has been determined.

Thus, considering the issues presented in chapter 3 in relation to each individual environmental aspect, the evolution of the state of the environment would be presented in the light of the current state of the environment from the study area and the description of the possible

[44] Estimated date only if transboundary counsultation takes place

development based on reasonable assumptions, if Interreg VI-A RO-BG Programme will be implemented.

Impact assessment

The environmental impact of the Interreg VI-A RO-BG Programme will be assessed in case of each identified environmental issue and related to the selected policy objectives and priorities/ interventions/ type of actions.

The purpose of this assessment is to identify possible synergies or inconsistencies between the two sets of objectives (Interreg VI-A RO-BG specific objectives and the relevant environmental objectives – REO, established for each identified environmental issue).

This assessment will be performed according to the Guidelines regarding the environmental assessment for plans and programs, elaborated within the project EuropeAid/121491/D/SER/RO (PHARE 2004/016 – 772.03.03) "Strengthening the institutional capacity for implementation and enforcement of the SEA Directive and Reporting Directive".

The compatibility relationship will be analysed within the matrix, as follows:

- "+" if the objectives are compatible;
- "-" if the objectives are not compatible;
- "?" when it was considered that the compatibility depends on certain assumptions;
- "=" when the objectives are identical or nearly identical;
- If between the two analysed objectives was not identified any connection, the box was left blank.

Relevant environmental objectives / Specific objectives	REO1 Biodiversity	REO2 Air quality	REO3 Soil	REO4 Waters	REO5 Landscape	REO6 …
1. …						
2. …						
3. …						

Description of impacts and measures

The potentially impact on the environment will be analysed and the proposed measures need to be presented with special focus on key findings and recommendations.

The proposed measures/ recommendations are designed to prevent, reduce and compensate as far as possible for the considerably harmful environmental impacts. In this respect, all priorities/ interventions that may generate negative effects, as a result of the Programme implementation, on one or more environmental aspects will be assessed. This step will be carried out at the level of single priorities/ interventions.

Monitoring measures

Article no. 10 of the EU Directive regarding the Strategic Environmental Assessment (SEA) no. 2001/42/ EC stipulates the need for monitoring in order to identify, at an early stage, any

potential adverse effects of implementing the plan/ programme, and take the necessary remediation measures.

The monitoring is carried out by reference to a set of indicators allowing measuring the positive and negative impacts on the environment. These indicators must be set such as to facilitate the identification of changes induced by the plan/ programme implementation.

In the framework of the SEA appropriate indicators have to be proposed in a clear and comprehensible way. In order to assure a high quality, the used indicators should be closely interlinked with the existing databases.

The responsible body for the implementation of the monitoring program of the Interreg VI-A Romania-Bulgaria is MPWDA, as the holder of the Programme.

As a general rule and with the scope to avoid confusion and duplication, the proposed indicators for the Programme will be analysed first from environmental point of view, if they are relevant for the identified environmental issues and the environmental objectives. The Environmental report will propose additional environmental indicators in case of those environmental objectives that are not covered by the programme indicators.

The following details will be given in the case of indicators proposed for monitoring the significant environmental effects:

- Measurement unit;
- Frequency of reporting;
- Target;
- Specific source for providing the necessary data.

Parts and content of the Environmental report

The following sections are part of the Environmental report, as required by the SEA Directive:

- The Environmental report, which contains:
  - ✓ the chapters of the Environmental report fully follow the Annex I of the SEA Directive;
  - ✓ a description of any measures taken for monitoring the effects in accordance with the provisions of Article 9.1 (c) and Article 10 of the SEA Directive – the description of the planned monitoring measures on how the monitoring of the environmental effects of the implementation of the Programme should be carried out;
  - ✓ a description of the public consultations and with the environmental authorities, in accordance with Article 6 and 7 of the SEA Directive. Will be described also information about the consultation process to be carried out. It will also be ensured compliance with the obligations of Directive 2001/42 / EC on public consultation with relevant actors identified under the national laws of Romania and Bulgaria.
- Non-technical summary of the Environmental report – represents an easy-to-read non-technical summary, which allows for the dissemination of the content of the Environmental report to the general public;

The Environmental statement will be summarizing how the environmental consideration has been integrated into the Programme final version, over the entire elaboration process.

The environmental statement will be drawn up in the final version, after the European Commission has express the decision approving the Programme (a first draft of this statement will be provided after the completion of the SEA procedure, before the program is submitted to the EC).

7.3 DATA BASIS AND LEVEL OF DETAIL

The data used in the Environmental report will be based mainly on statistical sources. In the frame of the environmental assessment of the effects of the Interreg VI-A RO-BG Programme on the environment, to identify the environmental issues and trends that characterize the eligible area of the Programme, lots of information needs to be collected, that will provide the basis for the identification and monitoring of the environmental effects of the Programme.

Among the type of official sources that will be consulted we mention: NUTS-classification (if the NUTS level data are available, if not, country level data will be used), EUROSTAT database in the European Economic Area and in the EU-Candidate countries, database of the European Environment Agency, on-line database of the participating countries (e.g. national statistical office). Also, can be useful statistical classification reports and comparable indicators from World Bank, UNESCO, United Nations statistics, International Energy Agency etc.

The main instruments to be used for the Environmental report elaboration are represented by: analysis of existing data sets and trends analysis (where possible), GIS mapping and analysis, matrices for compatibility assessment, matrices for significance of effects assessment.

7.4 CONSULTATION PROCESS WITHIN STRATEGIC ENVIRONMENTAL ASSESSMENT

The SEA Directive 2001/42/EC requires that the environmental authorities and the public of the partner states have to be consulted within the SEA Procedure. In this respect, consultations will be initiated both in the Scoping stage (regarding the content of Scoping Report) and in the stage of analysis of the Environmental Report quality and decision making.

The finalization of the Programme, the establishment of the scope and the level of detail of the information to be included in the Environmental report, as well as the analysis of the likely significant effects of the programme on the environment will be done within a Working Group. According to the legal provisions, the Working Group is made up of representatives of the programme initiator, of the competent authorities for environmental protection and health, of other authorities interested in the effects of the implementation of the Programme, as well as of the experts who elaborate the Environmental Report. According to the legal provisions, the establishment of the Working Group is the obligation of the Programme initiator. The working group will have a non-permanent character, being constituted especially for this Programme, based on the nominations made by the authorities they represent. Nominations will be made at the request of the Programme initiator.

According to the Romanian SEA legislation (Government Decision no. 1076/2004, provisions of Art. 28 and 29), responsibility for public information and participation in decision-making related to SEA procedure is shared between environmental competent authority and P/P owner.

"The competent authorities for environmental protection ensure the public information and participation to the environmental assessment procedure", and "the costs of public information in newspaper and public participation to the environmental assessment process during the issuing of the environmental approval procedure for plans and programmes are burden by the owner of the plan or programme" (Art. 28).

Considering that the programme initiator is the Romanian Ministry of Public Works, Development and Administration (MPWDA), the usual practice is to invite in the Working Groups representatives of both national level authorities presented in the following tableThe minimum authorities participating in the Working Group will be indicated by the Ministry of Environment in Romania, respectively by the Ministry of the Environment and Water in Bulgaria in the Decision of the Screening stage. In the following table are presented national level authorities identified in the scoping process.

Table no. 7-1 National level authorities identified in the scoping process

Managing / Competent Governmental Authorities in Romania	Managing / Competent Governmental Authorities in Bulgaria
Ministry of Development, Public Works and Administration (MA)	Ministry of Regional Development and Public Works (NA)
Ministry of Environment, Water and Forests	Ministry of Environment and Water
Ministry of Health	Ministry of Health
Other Central Authorities (e.g. for transport, agriculture and rural development, labour, family and social protection, economy, energy, etc.)	
Environmental Protection Agencies (from counties involved in the programme)	Regional Inspectorates of Environment and Water
River Basin Administrations for Water (from river basins involved in the programme)	Water Management Basins Directorates

Apart from the above-mentioned key stakeholders, the Working Group Members and the representatives of key Non-Governmental Organisations in the Programme area will be consulted in the SEA process. Other institutions, key groups and representatives of the public may also be involved in the process of consultations.

According to Art.6 and Art.7 of the SEA Directive the Environmental Report and the Programme must be made available to the relevant authorities and the public. In the case of the relevant Programme authorities would be the respective Ministries of Environment or their corresponding structure in the state concerned. The Environmental Report will be accessible for consultation at the same time with the draft Programme (SEA Directive - Article 6.2 and Annex 1). Subsequent to the consultation responses collected, an explanation shall be given showing how the Environmental Report and consultation replies have been taken into consideration in the Programme (SEA Directive - Article 8).

Steps of the process:

- Two announcements in mass-media (newspaper) in both countries on the opening of the consultation process;
- Send the notification to environmental authorities in both countries: starting day for the "official" consultation;
- E-mail invitation of main stakeholders to participate in the consultation;
- The draft environmental report and the OP draft as well as an announcement document will be published on the Programme's website by the JS;
- Consultation held in both countries – 45 days will be available to send remarks on the draft environmental report. Non-reception of comments will be considered as approval of the document. Comments are to be sent back in written form and in English on the web-page of the Programm or in e-mail also.
- Collection of comments
- Public debate will be organised after the submission of the OP including the environmental report to the environmental authorities, and after the open consultation phase of 45 days. The public debate will be announced 60 days before its date.
- Making a proposal on how to integrate the comments into the programme and why not including certain comments
- Amending the programme: according to the result of the consultation process in both participating countries
- Drafting the information note / Statement

During the consultation period, other relevant stakeholders, like representatives of the Regional Development Agencies, County Councils and Province Councils from the Programme area, have to be identified and consulted regarding the programme content and its likely effects on the environment.

The main instrument that will be used for the SEA procedure is represented by the "working group", in which will be discussed and analysed different aspects, including the likely significant effects of the programme on the environment.

For the stakeholders' consultation, besides the instruments foreseen by the legislation in force (e.g. public debate), the following instruments are considered: on-line questionnaires and workshops or "face-to face" meetings.

7.5 RELATIONSHIP WITH OTHER RELEVANT PLANS AND PROGRAMMES

The SEA analysis identifies the key international/ national documents that are relevant in terms of the environment connection with the Interreg VI-A Romania-Bulgaria Programme 2021-2027. Practically, in order to achieve a unitary approach, the relation between the relevant plans, programmes and strategies (PPS) must comply with a hierarchical structure, i.e. a relationship of coordination/ subordination, according to the scale at which is related. Thus, the ideal situation is the one where PPS's that address the same scale (i.e. national/ regional/ county) presents objectives and targets that are fully consistent and derive from those set at a higher level. Thus, to align the general direction regarding the Romania and Bulgaria's priorities

related to the natural and socio-economic environment, Interreg VI-A RO-BG Programme objectives must be consistent with those set by strategic documents at national level of each country, of the relevant regional and local strategies or those aiming the Danube region or the Dobrogea area etc.

Among the most important documents for which the analysis will be performed we present the following:

- The European Green Deal;
- Reflection Paper Towards a Sustainable Europe by 2030[45] - contribution to the Sustainable Development Goals (SDGs);
- The revised Territorial Agenda[46];
- EU Strategy for the Danube Region (EUSDR, 2020);
- Border Orientations: The Border Orientation Paper for the Romania-Bulgaria cross-border area[47];
- EU Biodiversity Strategy by March 2020;
- Convention on Cooperation for the Protection and Sustainable use of the Danube River[48];
- The "Sturgeon 2020" – a strategy and programme for the protection and rehabilitation of the Danube sturgeons[49];
- Report on the implementation of the EU Adaptation - Strategy COM (2018) 738[50];
- other strategic documents at national level of each country, of the relevant regional and local authorities.

7.6 INTERLINKING OF ELEMENTS OF THE WHOLE PLANNING PROCESS

The SEA process of the Interreg VI-A RO-BG started in parallel with the elaboration of the programme document and according to the planning activities it will be completed before its adoption or submission to the legislative procedure.

Therefore the SEA has to be carried out during the preparation of the Programme and has to be completed before the final approval and submission to the European Commission, in order to ensure the high level of protection of the environment and to contribute to the integration of the environmental aspects into the preparation and adoption of the Interreg VI-A Romania-Bulgaria Programme 2021-2027, with accent on the promotion of sustainable development.

A complete analysis of the proposals formulated within the consultation process of the partners will be provided and ensured, and all these will be registered in a document, that could be an annex to the Programme document. For each of them will exist a recommendation of response/ a recommendation on how to tackle/ implement them. These will be then discussed and refined

[45] https://ec.europa.eu/commission/sites/beta-political/files/rp_sustainable_europe_30-01_en_web.pdf
[46] https://www.territorialagenda.eu/home.html
[47] http://interregrobg.eu/images/fisiere/Future%20programme/CE%20Orientation%20Paper%20RO-BG.pdf
[48] https://www.icpdr.org/main/icpdr/danube-river-protection-convention
[49] ICPDR & Danube Sturgeon Task Force & Danube Region strategy (2016). Sturgeon 2020, A program for the protection and rehabilitation of Danube sturgeons. https://www.icpdr.org/
[50] REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the implementation of the EU Strategy on adaptation to climate change (2018) https://eur-lex.europa.eu and https://ec.europa.eu/clima/policies/adaptation

together with the programme bodies. So, after all the comments and recommendations received in the consultation with partners will be integrated in the Programme draft, together with the SEA and EC recommendations, if the case, the programme partners will once again be consulted on the final version of the Interreg Programme.

The overview on the main SEA recommendations and how these have been considered and integrated into the Programme will be described within the Non-technical Summary and the SEA Statement.

7.7 ANALYSIS OF ALTERNATIVES

The SEA Directive 2001/42/EC requires that the Environmental report shall identify, describe and evaluate the likely significant effects on the environment of implementing the Programme and the reasonable alternatives, taking into account the objectives and the geographical scope of the Programme (an outline of the reasons for selecting the alternatives dealt with).

The alternative comprises also the “Alternative 0” (non-implementation of the programme) and the gradually elaborated draft of the Programme.

The assumption is that the final version of the Programme represents the best alternative as it has been improved during an iterative process through the cooperation among programming and SEA process.

7.8 TRANSBOUNDARY CONTEXT

The transboundary effects of the Interreg VI-A Romania-Bulgaria Programme 2021-2027 will be analysed according to the criteria of the European Directive 2001/42/EC on the assessment of effects of certain plans and programmes on the environment and Annex III of the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context.

8 SELECTIVE BIBLIOGRAPHY

1. Association of Danube River Municipalities "Danube" (ADRM) Bulgaria and The Ecological Initiative and Sustainable Development Group, The "Investigation of opportunities for reducing the TEN-T network use within the cross-border region RomaniaBulgaria through optimization of the freight and passenger transport and the development of a joint mechanism for support of the intermodal connections" project preparation, 2016
2. Commission Staff Working document - *The early warning report for Romania* – accompanying the document „Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committe of the Regions - on the implementation of EU waste legislation, including the early warning report for Member states at risk of missing the 2020 preparation for re-use/recycling target on municipal waste", SWD(2018) 423 final
3. Dimova A, Rohova M, Koeva S, Atanasova E, Koeva-Dimitrova L, Kostadinova T, Spranger A. Bulgaria: Health system review. Health Systems in Transition, 20(4): 1–256
4. European Commission, Report on the implementation of EU waste legislation, including the early warning report for Member States at risk of missing the 2020 preparation for re-use/recycling target on municipal waste, COM(2018) 656
5. European Soil Data Center, Joint Researcher Center, European Commission, 2018
6. Filipova, Margarita & Zheleva, Ivanka & Rusev, Petar & Stefanova, Antoaneta & Tcvetanova, Irina. (2016). ANALYSIS OF THE STATE OF AMBIENT AIR IN THE BORDER REGION BULGARIA ROMANIA. 440-449. 10.21698/simi.2016.0062
7. ICPDR & Danube Sturgeon Task Force & Danube Region strategy (2016). Sturgeon 2020, A program for the protection and rehabilitation of Danube sturgeons. https://www.icpdr.org/
8. International Associacion for Medical Assistance to Travelers, Bulgaria General Health Risks: Air pollution. https://www.iamat.org/country/bulgaria/risk/air-pollution
9. Landscapes identification and character assessment In the ROMANIA - BULGARIA CROSS BORDER AREA, http://www.danube-ecotourism.com/
10. National Air Quality Monitoring Network. http://www.calitateaer.ro
11. National Institute of Statistics https://insse.ro/cms/en
12. Postolovska, I. (2015). International comparisons of Bulgaria's health system performance: background paper. Washington, D.C.: World Bank Group
13. Ramsar Sites Information Service. https://rsis.ramsar.org/ris/2004
14. REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the implementation of the EU Strategy on adaptation to climate change (2018) https://eur-lex.europa.eu and https://ec.europa.eu/clima/policies/adaptation
15. River Basin Management Plans 2016-2021 http://www.rowater.ro/

16. Territorial analysis for the Romania-Bulgaria cross-border region, Interreg Romania-Bulgaria Programme 2021-2027
17. The EU Environmental Implementation Review 2019, Country Report - BULGARIA, Brussels, 4.4.2019 SWD(2019) 113
18. UN Biodiversity Conference (CBD COP 15) http://sdg.iisd.org/events/2020-un-biodiversity-conference/
19. UNESCO, World Heritage Centre. https://whc.unesco.org/en/list/45/
20. World Health Organisation (2018). Bulgaria Health System Review 2018
21. Border Orientation Paper Romania-Bulgaria http://interregrobg.eu/images/fisiere/Future%20programme/CE%20Orientation%20Paper%20RO-BG.pdf
22. http://sdg.iisd.org/events/2020-un-biodiversity-conference/
23. http://www.bd-dunav.org/
24. http://www.calitateaer.ro/
25. http://www.danubeparks.org/?park=15
26. http://www.monumenteromania.ro/
27. https://ec.europa.eu/clima/policies/international/negotiations/paris_en
28. https://ec.europa.eu/commission/sites/beta-political/files/rp_sustainable_europe_30-01_en_web.pdf
29. https://ec.europa.eu/health/funding/programme/2014-2020_en
30. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0738&from=EN and https://ec.europa.eu/clima/policies/adaptation/what_en#tab-0-1
31. https://rsis.ramsar.org/ris/2004
32. https://whc.unesco.org/en/list/45/
33. https://www.coe.int/en/web/cultural-routes/the-roman-emperors-and-danube-wine-route
34. https://www.iamat.org/country/bulgaria/risk/air-pollution
35. https://www.iqair.com/bulgaria
36. https://www.territorialagenda.eu/home.html

9 ANNEXES

9.1 ANNEX I: SUMMARY OF CONSULTATIONS AND COMMENTS RECEIVED ON THE SCOPING REPORT

9.2 ANNEX II: LIST OF ENVIRONMENTAL AUTHORITIES TOOK PART IN THE CONSULTATION OF THE SCOPING REPORT

Institution	Department