Preparation of Strategic Environmental Assessment Report for the Interreg VI-A IPA Croatia-Serbia

STRATEGIC ENVIRONMENTAL ASSESSMENT REPORT

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
AAP	Ambient air pollution
AMI	Areas of Mutual Interest
AQM	Air quality management
CBC	Cross Border Cooperation
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
EC	European Commission
EEA	European Environment Agency
EIA	Environmental Impact Assessment
END	Environmental Noise Directive
EU	European Union
EUSAIR	European Strategy for the Adriatic and Ionian Region
EUSDR	European Strategy for the Danube Region
GEF	Global Environment Facility
IBA	Important Bird Areas
ICT	Information and communication technology
IPA III	Instrument for Pre-Accession Assistance
IPA	Important Plant Areas
IPPC	Integrated Pollution and Prevention Control
IUCN	the International Union for Conservation of Nature
MaB	Man and Biosphere Programme (UNESCO)
MESD	Ministry of Economy and Sustainable Development
MRDEUF	Ministry of Regional Development and EU Funds
MS	Member State

Abbreviation	Explanation
NGO	Non-Governmental Organization
PO	Policy Objective
RES	Renewable energy source
SEA	Strategic Environment Assessment
SEEFCCA	Southeast European Forum on Climate Change Adaptation
SO	Specific Objective
SPRS	Spatial Plan of Republic of Serbia
PTF	Programming Task Force
TL	Team Leader
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WFD	EU Water Framework Directive 2000
WWF	World Wide Fund for Nature / World Wildlife Fund
WWTP	Wastewater treatment plant

1. INTRODUCTION

Strategic Environmental Assessment (SEA) is a procedure carried out with the purpose to assess the likely significant effects on the environment which may arise out of implementation of a strategy, plan and programme (SPP). The objective of the procedure is to optimize the development proposed by an SPP, i.e. resolve the issues of cumulative effects, large-scale impacts, intersectoral and indirect impacts, which otherwise cannot be foreseen within the EIA procedures.

The objective of the SEA Directive (Art. 1) 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 with a view to promoting sustainable development. Through SEA, the decision-maker is informed about the degree of uncertainty of likely impacts, consistency of objectives (both SPPs and environmental protection), the sensitivity of the current environment and the range of available alternatives of the SPP under consideration.

The SEA procedure for the Interreg VI-A IPA Croatia – Serbia (hereinafter referred to as the Programme) was initiated by the adoption of the Decision on the commencement of the SEA procedure (CLASS: 910-06/21-01/1; File No. 538-10-3-1-1/433-21-5) of 11 November 2021. Prior to the commencement of the SEA, the Decision was brought by the Croatian Ministry of Economy and Sustainable Development (hereinafter: MINGOR) that the Programme did not require Main Assessment as a part of the Appropriate Assessment to be conducted.

Scoping was conducted in the period from 11 November to 11 December 2021, with public consultations held on 29 November 2021 via Teams online platform. As a part of the scoping step, a scoping report was prepared and delivered to all the relevant participants in the SEA procedure and posted on the Programme website. The results are documented in this SEA Report.

The Programme proponent is the Ministry of Regional Development and European Union Funds, while the SEA practitioner in this procedure is Eko Invest d.o.o. company from Zagreb, Croatia, that holds authorization by the Croatian Ministry of Economy and Sustainable Development for performance of environmental and nature protection tasks (**15.4** Consent for the performance of professional environmental tasks and **15.5** Consent to carry out professional nature protection tasks).

1.2 List of Stakeholders

The project is managed by several bodies formed for the purposes of review of the overall implementation of the project, management and control, providing assistance to stakeholders, auditing etc. and by National Authorities of the participating countries which are responsible for setting up and ensuring efficient functioning of the national control systems. National Authorities are also responsible for conducting the scoping step, and will later be involved in review of the SEA Report and carrying out public consultations. The list of persons participating in scoping is provided below:

Republic of Croatia	**Republic of Serbia**
National Authority: Ministry of Regional Development and EU Funds	National Authority: Ministry of European Integration
Ministry of Economy and Sustainable Development	Ministry of Environmental Protection
Ministry of Agriculture	
Ministry of Health	
Ministry of Labour, Pension System, Family and Social Policy	
Ministry of Tourism and Sport	
Ministry of Science and Education	
Ministry of Culture and Media	

According to Croatian regulations, the said authorities were invited to submit their opinions on the scope and level of detail to be elaborated in the SEA Report based on the draft Programme and the prepared Scoping report supplemented with a Questionnaire. National Authorities delivered their opinions on the Scoping report which regarded technical corrections.

All comments and opinions on the scoping report and the programme document were analysed and subsequently integrated in the Decision on the SEA Report contents enclosed in the SEA Report. The Decision on the SEA Report is the basis for the elaboration of this SEA Report. The full answers to the comments received are available at the Ministry of Regional Development and EU Funds.

2. OUTLINE OF INTERREG VI-A IPA CROATIA – SERBIA

The Programme will support cross-border cooperation between the participating countries in the upcoming programming period 2021-2027.

The proposed programme area is identical to the one of the previous programming period 2014-2020 and is defined by NUTS 3 regions - counties in Croatia and Districts in Serbia. The area includes four counties in Croatia: Osječko-baranjska, Vukovarsko-srijemska, Brodsko-posavska, Požeško-slavonska and five districts in Serbia: North Bačka, West Bačka, South Bačka, Srem, and Mačva. The programme area extends over 25.505 km2 thus representing 18,4% of Croatian territory and 17% of Serbian territory. The total population of the area is around 2,14 million people (1,54 million in Serbian part based on estimates for the year 2019 and around 599.000 in Croatian part of the Programme area according to latest census from 2021).

The programme area has significant potential and numerous advantages, but is also facing different challenges affecting sustainable development such as climate change, environmental degradation, and the transition to a climate-neutral economy. Expected Programme results will contribute to reaching the goals set by the European Green Deal and underlined by the United Nations 2030 Agenda for Sustainable Development. The Programme is directly linked to the European Strategy for the Danube Region (EUSDR) and the European Strategy for the Adriatic and Ionian Region (EUSAIR).

Figure 1. Programme territory

The Programme overall objective is sustainable development of programme area through smart, green and socially innovative projects. Beside to further strengthen the social, economic and territorial development of the cross-border area, the Programme aims is to encourage and support cross border cooperation to make the area more resilient to common challenges (economic transition processes, climate change, and the long-term socioeconomic consequences of the COVID-19 pandemic), through the implementation of joint projects and actions to be supported within three selected policy objectives, and appertaining specific objectives:

Policy Objective 1 (SMARTER EUROPE):

- SO 1.1 Developing and enhancing research and innovation capacities and the uptake of advanced technologies

Policy Objective 2 (GREENER EUROPE):

- SO 2.2 Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001, including the sustainability criteria set out therein;

- SO 2.4 Promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system-based approaches.

Policy Objective 4 (SOCIAL EUROPE):

- SO 4.5 Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family-based and community-based care;
- SO 4.6 Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation.

The selected policy objectives have been translated into four priority axes which will enable the programme to become the tool for implementing smart solutions that answer to the programme area needs and challenges. Within four priority axes, five specific objectives indicate specific changes that the Programme anticipates achieving through implementation of specific actions.

The overall strategic framework with appertaining actions and outputs and results with indicators are shown in the **Table 1**. The financial allocations appertaining to each programme priority represent a preliminary proposal only and are subject to change. They are used as potential indication of intensity of investment, i.e. intensity of likely impacts of a priority axis.

Table 1. Proposed list of outputs and results with indicators per each programme priority/specific objective.

Programme Priority and financial allocation (%)	Specific objective - as per Regulation	Types of Actions	Output and results indicators
PA1 – Cooperating for smarter programme area **Financial allocation - 19%**	**SO 1.1 - Developing and enhancing research and innovation capacities and the uptake of advanced technologies**	1. Supporting cross-border innovation and technology based on smart specialization approach and improving cooperation between research institutions, SMEs, public sector, and business support organisations 2. Supporting pilot lines, early product validation, certification, advanced manufacturing capabilities including via science – business collaboration 3. Strengthening and modernising business support services (including small scale infrastructure preferring nature-based solutions) that could help with: trainings, marketing, developing and or implementing new services/products, using ICT and new technologies, implementing innovative solutions in business organisation and processes (blockchain, big data, cloud computing, Internet of Things, advanced manufacturing, robotics, artificial intelligence, cybersecurity, etc.) 4. Accelerating innovation and technology transfer (e.g., bio, green and circular economy, agriculture, food production, smart manufacturing, climate change, biodiversity, skills development for smart specialization, etc.) in order to support the roll out of innovative solutions 5. Pilot actions aimed at transferring good practices on green economy trends and standards 6. Enhancing support services for SMEs and entrepreneurs to improve their access to research and technological innovations 7. Enhancing transfer and upscaling of proven green solutions to reduce the environmental footprint of production processes and open up green business opportunities	RCO 84 - Pilot actions developed jointly and implemented in projects RCO 116 - Jointly developed solutions RCR 104 - Solutions taken up or up-scaled by organisations RCO 87 - Organisations cooperating across borders RCR 84 - Organisations cooperating across borders after project completion

		8. Improving capacities and integration of innovative solutions using ICT for public sector needs 9. Supporting the establishment of Living Labs, test-beds and ecosystems to promote the development and actual use of innovative solutions 10. Supporting cooperation of public authorities in development, implementation and monitoring of smart specialisation strategies and other policy tools for development of innovative economy 11. Establishing connections and long-term cooperation between research institution especially in joint capacity building for innovation and technology transfer to businesses	
PA2 - Cooperating for greener and climate change resilient programme area **Financial allocation - 45%**	**SO 2.2 - promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001, including the sustainability criteria set out therein**	1. Development of joint solutions to increase the production of additional capacity for renewable energy (e.g. solar, geothermal, biomass, etc.) including small scale infrastructure preferring nature-based solutions 2. Development and implementation of joint pilot actions that improve the integration of sustainable renewable energy sources in different sectors (e.g. building and construction sector, industry, agriculture, forestry etc.) 3. Joint solutions, research and pilot actions on RES (e.g. circular solutions, use and reuse of sustainable materials, demo centres/plants) 4. Implementing pilot actions to test innovative and climate-neutral solutions through e.g. taking up and exploiting R&D results for the energy efficient renovation and heating and cooling of buildings (including cultural heritage buildings) 5. Improving energy demand management and fostering behavioural changes of consumers for reducing energy consumption and a resource-efficient and sustainable use of energy 6. Promoting the production and use of advanced biofuels (produced from non-food crops, such as cellulosic biofuels and waste biomass)	RCO 84 - Pilot actions developed jointly and implemented in projects RCO 116 - Jointly developed solutions RCR 104 - Solutions taken up or up-scaled by organisations

		7. Strengthening the cross-border cooperation and transfer of knowledge in the region through exchange of experience, information (awareness raising) and capacity building through online and in-situ trainings to improve skills in the field of use of renewable energy sources	
	SO 2.4 - Promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches	1. Development and introduction of joint climate change adaptation, disaster prevention and first response plans, as well as solutions and systems for monitoring, prevention and management of potential risks (e.g. floods, wildfires, landslides, droughts, earthquakes, invasive alien species, etc.) 2. Encouraging intersectoral/interstate cooperation in risk prevention and rapid response management through development and implementation of joint protocols, procedures, approaches and measures, such as establishment of joint emergency centres, small scale infrastructure preferring nature-based solutions, response vehicles, equipment, shelters, etc. 3. Strengthening of institutional and expert capacities and raising awareness to address environmental issues, climate change and disaster risks reduction (e.g. workshops, methodologies, protocols, educational materials, joint training for civil protection units) 4. Development of cross-border risk assessment and disaster risk strategies for cross-border hazards such as droughts, floods, landslides, fires, invasive alien species directly threatening biodiversity and eco-systems 5. Exchanging knowledge and good practices on eco-system based climate change adaptation measures and implementing pilot actions for protection and restoration towards resilient eco-systems, e.g. rivers and wetlands, forests, cross-border connectivity of habitats, agro-forestry, biodiversity, landscapes, climate proofing, modelling and forecasting 6. Testing integrated climate-adaptation solutions in pilot actions, which combine technological, ecological, social, cultural, governance and	RCO 83 - Strategies and action plans jointly developed RCO 84 - Pilot actions developed jointly and implemented in projects RCO 116 - Jointly developed solutions RCR 79 - Joint strategies and action plans taken up by organisations RCR 104 - Solutions taken up or up-scaled by organisations

		financial aspects taking into account good practices available at local, regional, national or European level 7. Increasing climate resilience of critical infrastructure and cultural/natural heritage sites through improved risk preparedness and risk management plans 8. Integrating climate change aspects into water management on local, regional and interregional level (considering e.g. water quality, flooding, rainwater management and water retention, water scarcity, drinking water supply including smart water pricing, ground water, forecasting) 9. Sharing knowledge and developing solutions for climate proofing the agricultural and forestry sectors to increase their resilience towards e.g. droughts, floods, outbreaks of pests, invasion of invasive alien species 10. Developing solutions for strengthening eco-system services for human health and wellbeing to support social resilience and counteracting socio-economic impacts of climate change.	
PA3 - Cooperating for healthier and more inclusive programme area **Financial allocation - 20%**	**SO 4.5 - Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family-based and community based care**	1. Development and implementation of ICT solutions and (pilot) actions to support digitalization in health and social care 2. Improving health care and access to long-term care for vulnerable groups, with focus on children, elderly and disabled persons 3. Improving the accessibility and effectiveness of cross-border public health care services by investing in telemedicine, diagnostics, mobile clinics and mobile assets, including small scale infrastructure preferring nature-based solutions 4. Transfer of knowledge through exchange of experience, awareness raising, lifelong learning, education and training programmes, and capacity building through online and in-situ trainings to improve skills in the field of health care and social care and enhance the delivery of primary care and family-based and community-based care services	RCO 84 - Pilot actions developed jointly and implemented in projects RCO 116 - Jointly developed solutions RCR 104 - Solutions taken up or up-scaled by organisations RCO 85 - Participations in joint training schemes RCR 81 - Completions of joint training schemes RCO 87 - Organisations cooperating across borders RCR 84 - Organisations cooperating across borders after project completion

		5. Developing and implementing joint activities/solutions to promote healthy lifestyles, active and healthy aging, disease prevention	
PA4 - Cooperating for more sustainable and socially innovative tourism and culture **Financial allocation - 16%**	**SO 4.6 - Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation**	1. Developing and implementing joint (pilot) actions to support diversification and sustainability of the tourism by investing in lesser-known destinations and diverse forms of tourism (cultural, rural, agro, active, etc.) including small-scale infrastructure preferring nature-based solutions 2. Developing and implementing innovative solutions and creating smart destinations (e.g. through digitalisation and creative industries), and new services and products for specific targeted market segments such as seniors, young people or people with disabilities including small scale infrastructure preferring nature-based solutions 3. Development and implementation of measures to protect, develop and promote sustainable cultural heritage and cultural services, public tourism assets and tourism services including investments in physical regeneration and security of public spaces (including small scale infrastructure preferring nature-based solutions), in the scope of their inclusion in the touristic and/or cultural circuit 4. Support of social innovation in tourism and culture - development of existing or new tourism and culture businesses 5. Protection, development and promotion of natural heritage and eco-tourism including Natura 2000 sites 6. Integration of existing tourist products into cross-border thematic routes, products or destinations and their further advancement 7. Capacity building for innovation in tourism and cultural heritage, focusing on recovery and resilience, and sustainable development of new or upgrading of existing cross-border tourism products, product	RCO 77 - Number of cultural and tourism sites supported RCR 77 - Visitors of cultural and tourism sites supported RCO 87 - Organisations cooperating across bordersRCR 84 - Organisations cooperating across borders after project completion

		diversification to adapt to new trends and needs 8. Adoption of green concepts and standards in cross-border tourist products and services and sustainable use of culture and tourist potentials of the border regions	

The performance framework for the Programme covers indicators selected for each specific objective, data quality assurance criteria and methods for calculation of target and milestone achievement. There are two types of indicators defined for each specific objective: output indicators which measure deliverables of interventions, and result indicators which measure the effects of the planned interventions.

The programme strategy is based on territorial and socio-economic analysis, with the related SWOT analysis and the identified challenges have been translated into specific objectives. Each specific objective details an indicative list of actions which have to comply with the intent of the objective, but is not exhaustive. However, as the analysis of the Programme structure revealed the specific objectives to be too generalized, indicative actions were selected as the most appropriate element of the Programme to be used for the analysis of impacts.

3. RELATIONSHIP OF THE PROGRAMME WITH OTHER RELEVANT STRATEGIES PLANS AND PROGRAMMES

This chapter gives an overview of the legislation, policies, strategies, plans and programmes which have been considered for the purpose of preparation of the SEA Report, and for the assessment of internal compliance of the CBC Programme with them.

The Strategic Environmental Assessment procedure is regulated by the Environmental Protection Act, Nature Protection Act, Regulation on Strategic Environmental Assessment, Regulation on information and participation of the public and public concerned in environmental matters of Croatia, and the Act on Environmental Protection, Act on Strategic Environmental Assessment, Decree on establishing the List of Projects for which Impact Assessment is mandatory and the List of Projects for which EIA can be required of Serbia.

The relevant strategies, plans and programmes proposed in the scoping step have been analysed in order to establish compliance of the Programme with them and in order to determine SEA objectives. The analysis is presented in the Table below.

Table 2. Relationship of the Programme with other relevant strategies, plans and programmes

Document	Policy objectives	Contribution and compliance of the Programme
United Nations 2030 Agenda for Sustainable Development	The universal agenda encompasses 17 sustainable development goals and 169 targets in order to realize human rights and achieve gender equality through the balance of the three dimensions of sustainable development. The agenda is committed to eradication of poverty and hunger, protection of the planet, prosperity, peace in participation of all the countries and all the people. Sustainable Development Goals: 1. End poverty in all its forms everywhere 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture 3. Ensure healthy lives and promote well-being for all at all ages 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all 5. Achieve gender equality and empower all women and girls 6. Ensure availability and sustainable management of water and sanitation for all 7 Ensure access to affordable, reliable, sustainable and modern energy for all 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation 10. Reduce inequality within and among countries 11. Make cities and human settlements inclusive, safe, resilient and sustainable 12. Ensure sustainable consumption and production patterns 13. Take urgent action to combat climate change and its impacts	The level of investment in research and technological development in programme area is still very low, private sector research & development is very limited, and university-industry collaboration is insufficient resulting in low technology transfer, moreover intellectual property protection is weak. Sustainable growth is increasingly related to the capacity of regional economies to innovate and transform, adapting to an ever changing and more competitive environment. Investments in research and innovation increase the programme area attractiveness. Research and innovation actions are cross-sectoral, with potential for integration of different sectors and topics. Implementation of targeted scientific research may have a positive impact on economy and programme area competitiveness. Cross-border cooperation offers a clear added value in addressing, among others, the following specific needs: - Supporting the transition to a more resilient, innovative, competitive, digitalised and green economy; - Improving access to research and innovation, in particular in non-urban areas; - Improving digital and green skills, especially of work forces in technology priority areas that are linked to regional smart specialisation strategies; - Improving scientific research with the aim of improving business in the private sector, innovation, new technologies that contribute to profitability and competitiveness; - Enhancing the cooperation between institutions to support entrepreneurship in order to increase competitiveness; - Promoting long-term competitiveness; - Creating tools that encourage cooperative research activities in different sectors and knowledge transfer. Demographic change in terms of migrations, increased ageing and low birth rate is one of the common challenges in the Programme area.

	14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	Stopping negative demographic trends, such as the general depopulation of the Programme area, declining natural growth or negative migration balance - are the challenges that will be faced in the Programme area in the coming years. Furthermore, the health system, although in place, is not sustainable in the long term given the additional burden following the pandemic. The occurrence of COVID-19 forced both countries to undertake a number of changes in the field of population health protection. Cross-border cooperation offers a clear added value in addressing, among others, the following specific needs: - Improving accessibility, effectiveness and resilience of health care and long-term social care services across borders; - Digitalization and modernization of health care services; - Improving health care infrastructure; - Improvement of non-institutional social care services; - Development of new models of social inclusion, adapted to the specificities of the area; - Exchange of know-how and capacity building. Although the importance to the state economy is more visible and important in Croatia than in Serbia, with the GDP share of tourism being as high as 20%, making the economy dependent on an ever-growing number of arrivals and foreign tourists visiting it is also important in Serbia. When accompanied with a short tourist season in Croatia that is limited and focused on 3 months of peak season and 3 months of preseason, it is evident that this poses a great risk which has now sadly been put into practice with the pandemic having a huge impact on tourism worldwide. Nevertheless, tourism will have a huge impact on the recovery of the economy with a potentially different, more locally centred approach. New trends in promotion and booking, new

		accommodation types, and travel motivations in the global tourism market have to be taken into account that would foster the development of tourism in the region. In addition, this has to be planned with increasing levels of environmental consciousness and a bigger interest in heritage and culture, while strengthening local economic activity at the same time. The support to the development of visitor activities that enable visitors to meet local residents and engage in cultural tourism activities and events will be key in fostering this sector. It is vital to create a joint offer of tourist products and services and provide new destination management tools. Cross-border cooperation offers a clear added value in addressing, among others, the following specific needs: - Diversification of tourism offer; - Development of innovative and sustainable cross-border tourism products and services; - Development of skills and competence for tourism and culture and creative industries; - Cooperation in product and service development in culture and creative industries; - Adaptation of tourism systems to climate change and greening of tourism products and services; - Development of integrated destination management system; - Create joint (cross border) destinations under one label.
European Green Deal	It is a set of policy initiatives by the European Commission with the overarching aim of making the EU climate neutral by 2050. The plan is to review each existing law on climate merits, and to introduce new legislation on the circular economy, building renovation, biodiversity, farming and innovation. The main objective of the EU Green Deal is for the EU to become the first climate neutral continent by 2050, resulting in a cleaner environment, more affordable energy, smarter transport, new jobs and an overall better quality of life.	Interreg programme is committed to address threats of climate change and environmental degradation. Protection of biodiversity, ecosystems and wildlife are essential for the sustainable management of natural resources. The programme should also tackle water pollution, land degradation, droughts, promote resilience and disaster risk reduction as well as sustainable tourism. It should develop in the direction of urban development and management for the purpose of improving quality of the people. Programme area is rich in natural heritage resources and biodiversity. Therefore, the responsibility and need to support a greener, low-carbon and resilient Programme area, which is threatened by climate changes, through the projects/activities is essential.

	It aims at combating unevenly dispersed effects of the energy transition, reducing greenhouse gas emissions and the impact of climate change and other environmental challenges.	In line with the EU Green Deal, territories have to respond to the challenges of environmental degradation and climate change, by boosting the efficient use of resources, protecting and restoring biodiversity as well as cutting pollution.
EU Climate and Energy Package	It is a set of laws passed to ensure EU meets its climate and energy targets. Key targets for 2030 include: ○ At least 40% cuts in greenhouse gas emissions ○ At least 32% share for renewable energy ○ At least 32.5% improvement in energy efficiency This framework helps guide towards low-carbon economy to ensure affordable energy for all consumers, increase security of supply, reduce dependence on energy import, create new jobs opportunities, and bring environmental and health benefit through reduced emissions.	Energy sources will increasingly be affected by climate change. Coal-based energy production might face increasing pressure as it is a leading emitter of CO_2, while less water availability poses risks for hydropower production, leading to interrupted electricity supply and higher prices. This could further exacerbate energy poverty, which is already a major challenge in parts this part of Europe. In addition, environmental damages and water shortages caused by hydropower plants, especially many smaller ones, have led to protests and blockades of construction sites and roads in the past in the Programme territory. The Programme area has favourable conditions in terms of renewable energy resources. Croatia and Serbia are strategically rethinking their energy development in the coming period and both countries have developed their own strategic documents with the aim of controlled energy development and environmental protection. Switching to renewables is key to green transition and environmental protection. There is a continuing need to promote energy efficiency and reduce greenhouse gas emissions and support the transition to renewable energy sources. Cross-border cooperation offers a clear added value in addressing, among others, the following specific needs: - Increasing the use of renewable energy sources to reduce greenhouse gas emissions; - Fostering and uptake of renewable energy technologies and solutions; - Improving the transition to renewable sources among different actors; - Improving capacities of relevant stakeholders;

		- Strengthening policies for integrated low carbon planning; - Fostering behavioural changes for reducing energy consumption.
EU Strategy on Adaptation to Climate Change	The Strategy sets out how the EU can adapt to the unavoidable impacts of climate change and become climate resilient by 2050. The strategy has four principal objectives: to make adaptation smarter, swifter and more systemic, and to step up international action on adaptation to climate change.	The Programme area is one of the most vulnerable areas in Europe where serious consequences of climate change are already being felt. Over the past 50 years, analysing the climate-relevant data, the overall air temperature trends indicate the inclinations of average temperature increase in whole Croatia. The same goes for Serbia, i.e., in the 2008-2017 period, the mean annual temperature was 1.5°C higher than the values in the 1961-1990 period in most of the territory of Serbia. Moreover, since the water richness of the Programme area: Danube and Sava rivers, another common challenge is the prevention of floods. Adaptation to climate change is a burning need for both countries. In addition to floods, the Programme area has the most problems with drought (due to rising average temperatures). Therefore, challenges connected to climate change and hydrological extremes are especially important to adapt to. There is the need to improve the capacities and knowledge of the policy makers and other sectors for increased resilience 18 eco-systems and communities towards climate change impacts and environmental disaster risk management in everyday life. In order to increase the resilience to climate change and disasters of the Programme area, there is the clear need for tailored adaptation actions and a better preparedness and disaster risk management (to minimize the economic, social and environmental impact generated by climate change). Cross-border cooperation offers a clear added value in addressing, among others, the following specific needs: - Increasing resilience of Programme area to climate change and disasters also through identifying risks and taking solutions to strengthen resilience to climate change; - Fostering integrated climate change adaption policies and plans at local and region level (more effective climate change adaptation plans and coordinated approach to tackling climate change adaptation); - Developing disaster risk reduction strategies and plans for

		programme area and fostering its implementation; - Enhancing the implementation of tailored climate change adaptation measures across sectors; - Increasing risk awareness (educational campaigns and communication actions), preparedness and forecasting methods by developing cross-border hazard identification and risk assessment; - Improve the coordination and cooperation in integrated risk management systems between participating countries in the Programme area; - Improving capacities of relevant stakeholders and awareness raising (educational campaigns and communication actions to raise public awareness in order to adapt to climate change); - Joint adaptation actions in sectors particularly affected by climate change, e.g., food production, environmental protection, agriculture and forestry in addition to national measures.
EU Biodiversity Strategy for 2030	The strategy provides a long-term plan for the protection of nature and reversing degradation of ecosystems. European biodiversity will be put on the path to recovery by 2030 for the benefit of people, climate and the planet. The Strategy aims to build resilience to future threat posed by climate changes and proposes commitments and actions regarding expansion of NATURA 2000 areas, binding nature restoration targets, funding for biodiversity. Restoration targets include capturing and storing carbon, prevention and reducing the impact of natural disasters, ensuring soil health, improving knowledge through monitoring of ecosystems and their services.	The Programme observes high biodiversity values as a potential that can generate additional benefits for the economy, especially tourism that can be promoted as sustainable and aimed at nature preservation. Fruška gora, Papuk, Kopački rit as well as the Upper Danube region represent a great natural potential that has to be preserved and presented through soft tourism related projects in the programme area. However, its value is also acknowledged as something to be preserved through green, low-carbon and resilient measures, especially seen as the Programme area is threatened by climate change. Boosting the efficient use of resources, protection and restoration of natural systems and cutting down pollution will contribute to the objectives of the Biodiversity Strategy.
Territorial Agenda 2030	The aim of the Territorial Agenda 2030 is to strengthen territorial cohesion in Europe. This means ensuring a future for all regions, by enabling equal opportunities for citizens and enterprises. Territorial cohesion reinforces cooperation and solidarity and reduces inequalities. To do so, the Territorial Agenda provides strategic orientations for spatial planning and for strengthening the territorial dimension of all relevant policies at all governance levels.	The health systems are well developed in both countries but pose a question of sustainability with debts and public investment being high. The GDP % for healthcare is pretty much the same in both countries, with low long term care investment. In both countries and Programme area, the main cause of death are illnesses connected to the circulatory system. Better infrastructure for an ever more ageing population is needed with better palliative care and more non institutional care. The COVID-19 pandemic is a global shock that has not

		spared Croatia and Serbia. It represents an unprecedented burden on their health and social protection systems. Therefore, it is evident that the quality and distribution of health services will be one of the priorities in the future period. Tourism and culture play an important role in the economies and identity of both countries. The cross-border area of Croatia and Serbia abounds with natural, historic and cultural resources, but with a generally low level of marketing of the region's cultural heritage. Since the Programme area is homogenous in that respect, the challenges can be resolved through joint cross-border interventions.
European Strategy for the Danube Region (EUSDR)	The Danube region covers 9 EU Member States and 5 non-EU countries. All of them are joining forces to address common challenges related to environmental threats, navigability of rivers, lack of road and rail connections, energy poverty, unbalanced socio-economic development, uncoordinated education and research and lack of security. The EUSDR addresses a wide range of issues, divided among 4 pillars: "Connect the Region", "Protecting the Environment", "Building prosperity", and "Strengthening the Region"	The EUSDR pillars are reflected within the programme's priorities primarily in the field of green and sustainable energy and environmental protection, as well as in the field of culture and sustainable tourism.
European Strategy for the Adriatic and Ionian Region (EUSAIR)	the objective of the EUSAIR is to promote sustainable economic and social prosperity in the region through "Blue Growth", "Connecting the Region", "Environmental Quality" and "Sustainable Tourism"	The EUSAIR pillars are reflected within the programme's priorities primarily in the field of green and sustainable energy and environmental protection, as well as in the field of culture and sustainable tourism.
National Development Strategy of the Republic of Croatia	The Strategy aims to support the twin digital and green transition of the Croatian society and economy. The National Strategy outlines 4 strategic priority clusters: Sustainable economy and society, Strengthening resilience to crises, Green and digital transition, and Balanced regional development. Furthermore, the main goal of Croatian Smart Specialisation Strategy is to increase the competitiveness and transformation of the Croatian economy, concentrating knowledge resources and linking them to a limited number of priorities. Croatia has chosen five thematic priority areas as its main focus for S3: Health and quality of life, Energy and sustainable environment, Transport and mobility, Safety and finally,	National Development Strategy is hierarchically the supreme strategic planning act which is used in forming and implementation of development policies, which are then in turn elaborated by local and regional development plans. In such a context, Interreg programme has to comply with the development directions and objectives of the National Strategy. As regards digital transition, for Croatia it includes digitalisation of public administration and the provision of online public services and increasing fixed and wireless digital connectivity to facilitate investment in digital

	Food and the bioeconomy. In addition, it has chosen two horizontal themes (key development technologies; information and communications technologies) which can contribute to increased added value to Croatian manufacturing and foster new economic activities, productivity and employment growth.	infrastructure in remote rural areas that are lagging behind. All specific objectives of the Interreg Programme are in line with the National Strategy, and allow for: - improvement of research and innovation capacities, with focus on ICT and new technologies and processes; - support of bio, green and circular economy in manufacture and production, but also in cultural and creative industries; - development of use and integration of RES in different sectors; - development and implementation of resilience projects for climate-change induced risks, along with capacity building and awareness raising in addressing environmental issues; - improving health care and care for vulnerable groups; - supporting sustainable tourism and culture.
National Sustainable Development Strategy of the Republic of Serbia	The National Strategy encompasses and integrates requirements of the 2030 Agenda through establishing a balance of three pillars of sustainable development: sustainable economic growth and economic and technological progress, sustainable social development, and environmental protection. The Strategy outlines 5 Priorities: 1) EU membership; 2) Development of competitive market economy and balanced economic growth; 3) Development of human resources and increased employment; 4) Development of infrastructure and balanced regional development; 5) Protect and promote the environment and achieve rational use of natural resources.	All specific objectives of the Interreg Programme are in line with the National Strategy, and allow for: - improvement of research and innovation capacities, with focus on ICT and new technologies and processes; - support of bio, green and circular economy in manufacture and production, but also in cultural and creative industries; - development of use and integration of RES in different sectors; - development and implementation of resilience projects for climate-change induced risks, along with capacity building and awareness raising in addressing environmental issues; - improving health care and care for vulnerable groups; - supporting sustainable tourism and culture;
River Basin Management Plan of	The content of the document complies with the requirements of the EU water directives and covers water status management and flood risk management.	The Interreg programme directly addresses the issue of adaptation to hydrological extremes and prevention of floods, but at the same time also the

the Republic of Croatia 2016-2021	By implementing the Programme of Measures under the RBMP, Croatia continues with systematic fulfilment of water management obligations it assumed by signing the EU Accession Treaty.	arising problems of droughts and potential lack of water as a result of rising average temperatures in the programme area. The Interreg programme will contribute to achievement of the RBMP objectives through: - Increasing resilience of Programme area to climate change and disasters also through identifying risks and taking solutions to strengthen resilience to climate change; - Fostering integrated climate change adaption policies and plans at local and region level (more effective climate change adaptation plans and coordinated approach to tackling climate change adaptation); - Developing disaster risk reduction strategies and plans for Programme area and fostering its implementation; - Enhancing the implementation of tailored climate change adaptation measures across sectors; - Increasing risk awareness (educational campaigns and communication actions), preparedness and forecasting methods by developing cross-border hazard identification and risk assessment; - Improve the coordination and cooperation in integrated risk management systems between participating countries in the Programme area; - Improving capacities of relevant stakeholders and awareness raising (educational campaigns and communication actions to raise public awareness in order to adapt to climate change); - Joint adaptation actions in sectors particularly affected by climate change, e.g., food production, environmental protection, agriculture and forestry in addition to national measures.
Sava River Basin Management Plan	The Sava River Basin Management Plan (RBMP) has been developed according to the requirements of the EU Water Framework Directive (WFD) which establishes a legal framework to protect and enhance the status of all waters and protected areas including water dependent ecosystems, prevent their deterioration and ensure long-term, sustainable use of water resources. The RBMP brings the Programme of measures prepared for surface water, groundwater, other water management issues such as invasive alien species,	The Interreg programme directly addresses the issue of adaptation to hydrological extremes and prevention of floods, but at the same time also the arising problems of droughts and potential lack of water as a result of rising average temperatures in the programme area. The Interreg programme will contribute to the achievement of the RBMP objectives through: - Increasing resilience of Programme area to climate change and disasters also through identifying risks and taking solutions to

	and quantity and quality of sediments, protected areas and ecosystem services and financing the programme of measures. It also proposes guidelines for integration of water protection in activities having the greatest impact on water systems such as flood protection, navigation, hydropower exploitation and agriculture and planning within the climate change context.	strengthen resilience to climate change; - Fostering integrated climate change adaptation policies and plans at local and region level (more effective climate change adaptation plans and coordinated approach to tackling climate change adaptation); - Developing disaster risk reduction strategies and plans for Programme area and fostering its implementation; - Enhancing the implementation of tailored climate change adaptation measures across sectors; - Increasing risk awareness (educational campaigns and communication actions), preparedness and forecasting methods by developing cross-border hazard identification and risk assessment; - Improve the coordination and cooperation in integrated risk management systems between participating countries in the Programme area; - Improving capacities of relevant stakeholders and awareness raising (educational campaigns and communication actions to raise public awareness in order to adapt to climate change); - Joint adaptation actions in sectors particularly affected by climate change, e.g., food production, environmental protection, agriculture and forestry in addition to national measures. Even though the Interreg Programme supports biodiversity indirectly through the improvement of the overall environment and sustainable and rational use of natural resources, more focus can be put on biodiversity protection and ecosystem services, especially water and water-dependent ecosystems.
Plan for the air protection, protection of the ozone layer and climate change mitigation in the Republic of Croatia for the period 2013-2017	The main objective of the plan is to establish methods of prevention or gradual decrease of air pollution in order to protect human health, quality of life and the environment as a whole. Specific objectives include improvement of the integrated air quality management and air quality monitoring management, reduction and limitation of contaminant emission, reduction and limitation of greenhouse gas emission having an unfavourable effect on acidification, eutrophication and photochemical pollution, damaging the ozone layer and maintaining GHG sink. It also ensures availability of information to the public and funding the preparation and implementation of	Both countries have not achieved the set goal of reducing CO_2 emissions. Emission values are still high. Smart energy systems are a relatively new and unexplored concept in the Programme area that has only recently begun to be actively used. Switching to renewables is key to green transition and environmental protection. There is a continuing need to promote energy efficiency and reduce greenhouse gas emissions and support the transition to renewable energy sources.

	measures to reduce and limit contaminating substances emission, mitigation and adaptation to climate change and enhancement and strengthening administrative, scientific and professional institutions and their capacities.	Cross-border cooperation offers a clear added value in addressing, among others, the following specific needs: - Increasing the use of renewable energy sources to reduce greenhouse gas emissions; - Fostering and uptake of renewable energy technologies and solutions; - Improving the transition to renewable sources among different actors; - Improving capacities of relevant stakeholders; - Strengthening policies for integrated low carbon planning; - Fostering behavioural changes for reducing energy consumption.
Low-Carbon Development Strategy of the Republic of Croatia until 2030 with an outlook to 2050	The purpose of this Low-Carbon Strategy is to initiate changes in Croatian society that will contribute to the reduction of greenhouse gas emissions and which will allow for the separation of economic growth from greenhouse gas emissions. The Low-Carbon Development Strategy leads to a vision of a society in which we will live healthier and more comfortably, with low-carbon growth and efficient resource management. The existing national building stock will be renovated, and new buildings will be built according to the principles of nearly zero energy buildings and the circular economy. Energy supply will be more secure, from renewable sources and with low emissions, and energy consumers will also be energy producers. The combination of on-site electricity generation and public grid supply will provide a high level of security of electricity supply. The transport system will be intermodal and integrated, mainly with electric vehicles and with the use of low-carbon and climate-neutral fuel. Industry and agriculture will be efficient and connected to all sectors of the economy, while reducing the generation of waste materials in an integrated and circular economy. The general objectives of the Strategy are as follows: • achieving sustainable development based on knowledge, a competitive low-carbon economy and efficient use of resources	Programme area is rich in natural heritage resources and biodiversity. Therefore, the responsibility and need to support a greener, low-carbon and resilient Programme area, which is threatened by climate changes, through the projects/activities is essential. Programme territory has to respond to the challenges of environmental degradation and climate change, by boosting the efficient use of resources, protecting and restoring biodiversity as well as cutting pollution. Thus, the focus of the Interreg Programme is on reducing harmful emissions by the use of renewable sources and increasing energy efficiency, thus contributing to a cleaner environment and better quality of life.

	• increasing the security of energy supply, sustainability of energy supply, increasing energy availability and reducing energy dependence • solidarity by fulfilling the obligations of the Republic of Croatia under international agreements, within the framework of EU policy, as part of our historical responsibility and contribution to global goals • reduction of air pollution and the impact on the health and quality of life of citizens.	
Energy Sector Development Strategy of the Republic of Serbia for the period by 2025 with projections by 2030	Energy Sector Development Strategy in the Republic of Serbia by 2030 shall offer the road of market restructuring and technological modernization of energy sector of the Republic of Serbia in order to better prepare for the period of the growth of general demand for goods and services. More precisely, Energy Sector Development Strategy in the Republic of Serbia by 2030 shall offer the road of market restructuring and technological modernization of energy sector of the Republic of Serbia in order to better prepare for the period of the growth of general demand for goods and services.	Programme area is rich in natural heritage resources and biodiversity. Therefore, the responsibility and need to support a greener, low-carbon and resilient Programme area, which is threatened by climate changes, through the projects/activities is essential. Programme territory has to respond to the challenges of environmental degradation and climate change, by boosting the efficient use of resources, protecting and restoring biodiversity as well as cutting pollution. Thus the focus of the Interreg Programme is on reducing harmful emissions by the use of renewable sources and increasing energy efficiency, thus contributing to a cleaner environment and better quality of life.
Climate Change Adaptation Strategy in the Republic of Croatia for the period to 2040 with a view to 2070	Adapting to climate change is fundamentally a horizontal issue, i.e. a problem that needs to be resolved in an integrated way with a high degree of coordination between participants. Even so, eight key sectors have been selected (hydrology; water and marine resources; agriculture; forestry; fishery; biodiversity; energy; tourism and health) and two cross-sectoral thematic areas (spatial planning; coastal areas management and risk management). In addition to the sectoral measures, a set of horizontal measures has been defined, which are relevant to several sectors, i.e. have a cross-sectoral character (spatial planning and management of coastal areas and risk management).	The Interreg Programme mission, beside to further strengthen the social, economic and territorial development of the cross-border area, is as well, to encourage and support cross border cooperation to make the area more resilient to common challenges. Such challenges are particularly focused on consequences of climate change, but also on new circumstances which will develop as a result of climate change and adapting the sectors so that they could respond to risk disaster prevention requirements, strengthen resilience, taking into account ecosystem-based approach.
National strategy for the inclusion of the	The overall objective of the Strategy is to raise awareness and build capacity on the possibilities of using Clean Development Mechanism projects as a way	Strategy aims at reaching targets in line with the Kyoto Protocol and defining mechanisms for achieving them. Both countries have not achieved the set goal

Republic of Serbia in the Kyoto Protocol clean development mechanism	to encourage sustainable development and facilitate faster implementation of the Kyoto Protocol in the Republic of Serbia. The specific objective of the Strategy is to define a framework for identifying all relevant Clean Development Mechanism projects of national importance and to implement them more effectively, by finding the most appropriate and cost-effective means of implementation. In line with the overall objective, the individual objectives of this strategy are to: increase the capacity of stakeholders; raise knowledge, above all, of potential project owners and promoters; build individual and institutional capacities needed to identify, prepare, implement and evaluate such Clean Development Mechanism projects; provide a strategic review of opportunities and identification of perspective types of Clean Development Mechanism projects, as well as possible problems in their realization; identify key prerequisites necessary for faster development and implementation of Clean Development Mechanism projects; promote investments and informing the interested public about the results and lessons learned.	of reducing CO_2 emissions. Emission values are still high. Smart energy systems are a relatively new and unexplored concept in the Programme area that has only recently begun to be actively used. Switching to renewables is key to green transition and environmental protection. There is a continuing need to promote energy efficiency and reduce greenhouse gas emissions and support the transition to renewable energy sources. Cross-border cooperation offers a clear added value in addressing, among others, the following specific needs: - Increasing the use of renewable energy sources to reduce greenhouse gas emissions; - Fostering and uptake of renewable energy technologies and solutions; - Improving the transition to renewable sources among different actors; - Improving capacities of relevant stakeholders; - Strengthening policies for integrated low carbon planning; - Fostering behavioural changes for reducing energy consumption.
Waste Management Strategy for the Republic of Croatia	The strategy regulates management of different types of waste, from its generation to final disposal, with the general target of developing and maintaining an integrated waste management system that relies on minimization of waste generation and no-landfill concept in order to reduce adverse impacts on the environment, climate and human health. Its principal objectives are development of an integrated waste management system, establishment of waste management centres, remediation and closure of existing landfills, and improved information and reporting system for waste management.	The Programme supports reduction of waste generation and landfilling through use of waste biomass for energy production and implementation of circular solutions, and use and reuse of sustainable materials provided in S= 2.2 Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001 including sustainability criteria set out therein. Sustainability criteria regard protection of high biodiversity land and land with high carbon stock, that is aiming at minimising the risk of using forest biomass derived from unsustainable production. Moreover, Installers of biomass, heat pump, shallow geothermal and solar photovoltaic and solar thermal energy shall be certified by an accredited training programme or training provider. Training programme shall give account of market situation of biomass, cover ecological aspects of its use, fire protection, combustion and fitting systems, design, installation and maintenance of boilers and stoves, as well as good knowledge of EU standards and technologies.

Waste Management Plan for the Republic of Croatia for the period 2017-2022	Waste Management Plan is an implementation document of the Waste Management Strategy the principal objectives of which are derived from the waste management state assessment and obligations arising from EU legislations. By 2022 Croatia shall enhance its municipal waste management systems, enhance its special waste category management, enhance its hazardous waste management, rehabilitate locations polluted by waste, implement education and information activities, improve its waste management information systema and its administrative procedures in waste management.	The Programme supports reduction of waste generation and landfilling through use of waste biomass for energy production and implementation of circular solutions, and use and reuse of sustainable materials provided in S= 2.2 Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001 including sustainability criteria set out therein. Sustainability criteria regard protection of high biodiversity land and land with high carbon stock, that is aiming at minimising the risk of using forest biomass derived from unsustainable production. Moreover, Installers of biomass, heat pump, shallow geothermal and solar photovoltaic and solar thermal energy shall be certified by an accredited training programme or training provider. Training programme shall give account of market situation of biomass, cover ecological aspects of its use, fire protection, combustion and fitting systems, design, installation and maintenance of boilers and stoves, as well as good knowledge of EU standards and technologies.
Waste Management Strategy for the Republic of Serbia for 2019-2024	The Strategy marks a shift from the concept of regional sanitary landfills to the model of regional waste management centres which will deal with sorting, separation, recycling and treatment of non-recyclable waste.	The Programme does not directly address waste management system, rather the SEA will take into account objectives of the EU waste management policy and assess generation and management of waste arising from the implementation of the Programme and propose suitable protection measures if necessary.
Recovery and Resilience Plan for Croatia 2021-2026	RRP defines directions and investment areas in order to achieve economic and social recovery in response to COVID-19 pandemic. RRP contributes to achievement of four general EU objectives, that is promotion of economic, social and territorial cohesion, strengthening economic and social resilience, reducing social and economic effects of the crisis and promotion of green and digital transition. It is likewise important to ensure equal possibilities and access to labour market, just working conditions and to ensure social protection and inclusion. RRP encompasses the following components: economy, public administration justice and state assets, education science and research, labour market and social protection, health, structure renovation.	The Programme reflects the RRP in strengthening energy sector, development of sustainable tourism by investment into continental tourism and prolongation of tourist season duration, and supporting digital transition for sustainable economy through capacity building, introduction of digital and innovative solutions. Both documents are oriented towards digital and green transition based on modernisation of economy and society through increased investments in innovation and new technologies. They plan for decarbonisation of the energy sector, energy saving measures, use of RES, energy efficiency improvement, greenhouse-gas emission reduction and strengthening climate change resilience.

The relevant international legislation taken into consideration for the purpose of establishing SEA objectives for the Programme, and the derived SEA objectives is analysed in the Table below.

Table 3. Legislation taken into account for the purpose of establishing SEA objectives

Convention	Environmental policy objectives	Principle SEA objectives
United Nations Framework Convention on Climate Change (UNFCCC) (Rio de Janeiro, 1992)	The Convention identified climate change as a serious global problem and commits the international community to combat it. The parties to the Convention aim to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human-induced interference with the climate system (global warming). In order to achieve this goal, the Convention defines responsibilities of industrialized and developing countries in order to take account of their different capabilities and current emission values.	- Sustainable management of natural resources - Protection of biodiversity, ecosystems and wildlife - Strengthening resilience and disaster risk reduction
UNFCCC Kyoto Protocol (1997)	The Protocol operationalizes the UNFCCC by committing industrialized and developing economies to reduce greenhouse gasses in accordance with agreed individual targets for CO2, CH4, N2O, PFCs and SF6.	- Reducing impacts on air and climate
Paris Agreement (Paris 2015)	Paris Agreement is a legally binding international treaty on climate change. Its goal is to limit global warming and achieve climate neutral world by 2050 and it also aims to strengthen countries' abilities to deal with the impacts of climate change and support the countries in their efforts.	- Reducing impacts on air and climate - Strengthening resilience and disaster risk reduction
UN Convention on Biological Diversity (Rio de Janeiro, 1992)	The Convention is the international legal instrument for the „conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources ".	- Sustainable management of natural resources - Protection of biodiversity, ecosystems and wildlife
Convention on the Conservation of European Wildlife and Natural Habitats – Bern Convention (Bern, 1979)	The Convention aims to promote cooperation between the signatory countries in order to conserve wild flora and fauna and their natural habitats and to protect endangered migratory species. The signatory parties are responsible to promote national policies for the conservation of wild flora, fauna and natural habitats, integrate the conservation objectives into national planning, development and	- Sustainable management of natural resources - Protection of biodiversity, ecosystems and wildlife

	environmental policies and to promote education and disseminate information on the need for their conservation.	
Convention on the Conservation of Migratory Species of Wild Animals – Bonn Convention (Bonn, 1979)	Convention aims to build and strengthen global conservation efforts for migratory species in the air, on land and in the seas.	- Sustainable management of natural resources - Protection of biodiversity, ecosystems and wildlife
Convention on Wetlands of International Importance especially as Waterfowl Habitat - Ramsar Convention (Ramsar, 1971)	The parties to the convention agree to nominate at least one wetland in its territory to the List of Wetlands of International Importance, agree to manage all their wetlands based on the concept of wise use, which is the maintenance of the ecological character of the wetland and allowance of sustainable use for the benefit of people and the environment	- Sustainable management of natural resources - Protection of biodiversity, ecosystems and wildlife
Council Directive 79/409/EEC on the conservation of wild birds (EU Birds Directive)	This directive relates to the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the Treaty applies. It covers the protection, management and control of these species and lays down rules for their exploitation. Member States shall take the requisite measures to maintain the population of the species referred to in article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements.	- Sustainable management of natural resources - Protection of biodiversity, ecosystems and wildlife
Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EU Birds Directive)	The aim pursued by this Directive is to ensure biodiversity through the conservation of natural habitats and of wild fauna and flora in the territories of the Member States. Pursuant to this Directive, measures shall be designed and undertaken in order to maintain or restore, as the case may be, natural habitats and species of wild fauna and flora. To this end, a coherent European ecological network of special areas of conservation shall be set up under the title Nature 2000 (art. 3).	- Sustainable management of natural resources - Protection of biodiversity, ecosystems and wildlife
Directive 2000/60/EC of the European Parliament and of the Council of 20 October 2000	WFD objectives include improving water quality, protection of aquatic ecosystems and reducing water pollution. Also, the Directive requires	- Improving water quality and reducing water pollution

establishing a framework for Community action in the field of water policy (Water Framework Directive)	Members states to coordinate efforts to contribute to control transboundary water problems.	
European Landscape Convention (Florence, 2000)	The Convention introduced a Europe-wide concept centering on the quality of landscape protection, management and planning and covering the entire territory, not just outstanding landscapes. Convention supports cross-border cooperation on local and regional level and preparation of joint landscape programmes.	- Protection of cultural and landscape values
Convention on Protection of the World Natural and Cultural Heritage (World Heritage Convention, Paris, 1972)	The Convention aims to promote cooperation among nations to protect heritage around the world that is of such outstanding universal value that its conservation is important for current and future generations.	- Protection of cultural and landscape values
European Convention on the Protection of the Archaeological Heritage (Revised) (Valetta, 1992)	The aim of the Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study. It acknowledges serious threat to the European archaeological heritage with deterioration due to major planning schemes, natural risks, clandestine or unscientific excavations and insufficient public awareness, for which reason the signatories agree on the protection measures, integrated conservation of archaeological heritage, financing of research and conservation, collection and dissemination of information, promotion of public awareness and prevention of illicit circulation of elements of archaeological heritage.	- Protection of cultural and landscape values
Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki, 1992)	The Convention promotes sustainable management of shared water resources, implementation of sustainability objectives, prevention of conflicts and promotion of peace and integration. It requires control and reduction of transboundary impact, and use of transboundary waters in a reasonable and equitable way to ensure their sustainable management.	Advancement of co-ordinated efforts to adapt to the impacts of climate change and avoid tensions is ensured through SEA objectives regarding preservation of water quality and reducing pollution

Convention on Environmental Impact Assessment in a Transboundary Context (1991, Espoo)	The Convention sets out the obligations of the parties to assess the environmental impact of certain activities at an early state of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse impact across boundaries.	Advancement of coordinated efforts to adapt to the impacts of climate change and avoid tensions has been ensured through the legislative framework of the SEA procedure.
Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (Aarhus, 1998)	The Aarhus Convention establishes a number of rights of the public, both individuals and associations, with regard to the environment. The Parties are required to make necessary provisions so that public authorities contribute to these rights to become effective. It includes the right to access to environmental information, public participation in environmental decision-making, and access to justice.	Principles of the Convention has been ensured through the legislative framework of the SEA procedure.

4. CURRENT STATE OF THE ENVIRONMENT IN THE PROGRAMME TERRITORY AND LIKELY EVOLUTION OF THE ENVIRONMENT WITHOUT IMPLEMENTATION OF THE PROGRAMME

4.1 Current state of the environment

This chapter provides the description of the current state of the environment in the Programme territory for the purpose of providing context for understanding the likeliness of development of both positive and negative impacts as a result of the implementation of the Programme. Apart from the current state, development trends have also been taken into consideration of the environmental factors established in scoping as of the most concern.

The description of the current state of the environment is based on the already existing data sources. Because of the strategic nature of the programme which is relatively abstract, the environmental baseline was also described on a strategic level and will be used to define sensitivity of the area in general, and the description of the likely development of the environment without the implementation of the Programme, that actually represents the zero alternative, will be used as a reference point for the assessment. Collection of more specific data will be required for the assessment of impacts at project level. The delivered information corresponds to the scope and contents proposed, and elaborated within scoping which and addresses the topics of most concern and likely to be affected by the Programme.

4.1.1 Demography

The proposed programme area includes four counties in Croatia: Osijek-Baranja, Vukovar-Srijem, Brod-Posavina, Požega-Slavonia and five districts in Serbia: North Bačka, West Bačka, South Bačka, Srem, and Mačva. The border counties on the Croatian side are Osijek - Baranja and Vukovar-Srijem counties, and on the Serbian side, West Bačka, South Bačka and Srem Districts.

Osijek-Baranja County includes 7 towns and 35 municipalities, Vukovar-Srijem 5 towns and 26 municipalities, Brod-Posavina 2 towns and 26 municipalities, and Požega-Slavonia County has 5 towns and 5 municipalities. In the Serbian part of the programme area, the North Bačka district includes Subotica as a single town and two municipalities, West Bačka has 3 municipalities and Sombor, South Bačka has 11 municipalities and Novi Sad, in Srem there are 6 municipalities and Srijemska Mitrovica while in Mačva district there are 7 municipalities and Šabac.

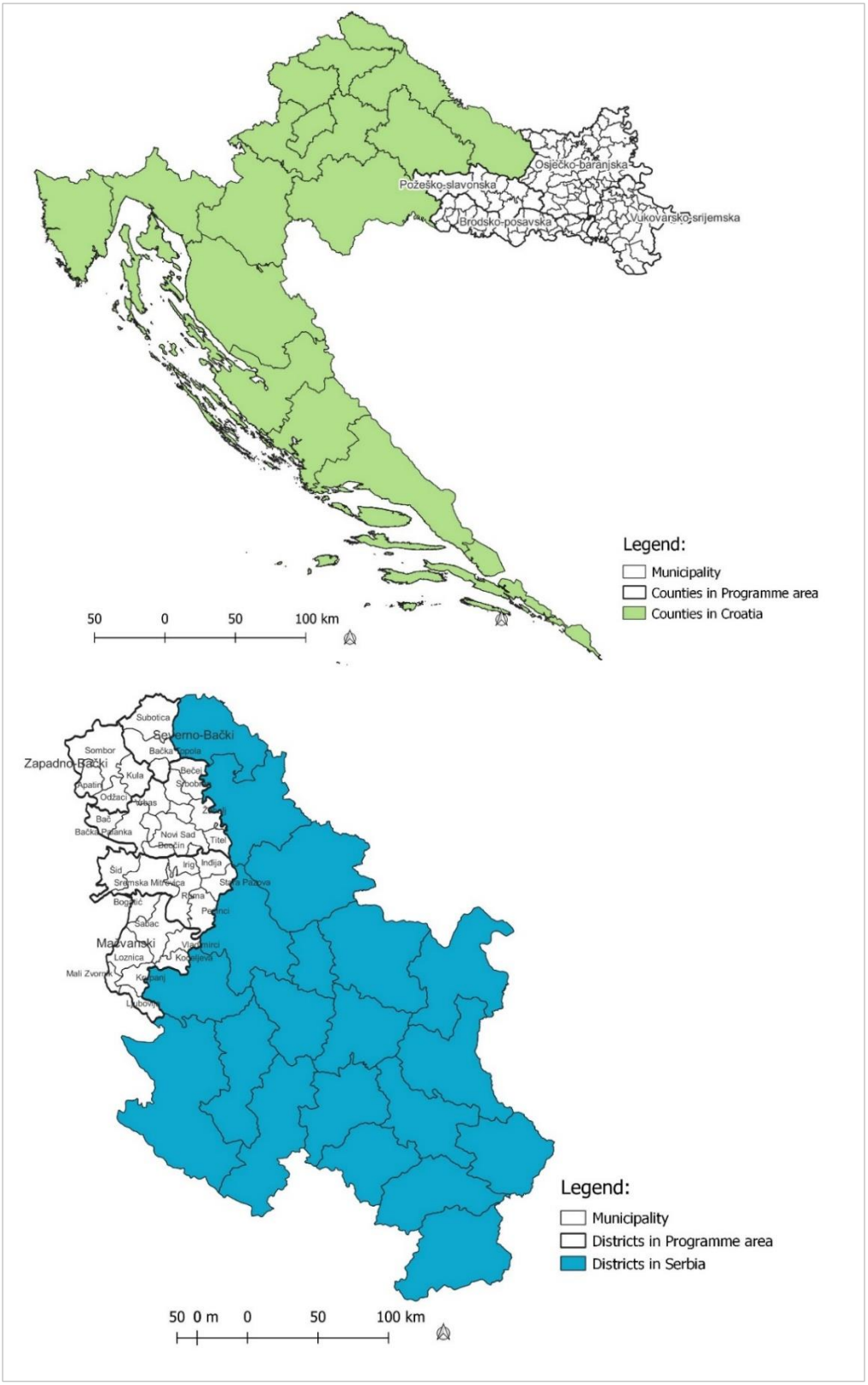


Figure 2. Counties/districts and towns in the Programme area

The programme area extends over 25.505 km^2 thus representing 18,4% of Croatian territory and 17% of Serbian territory. The northern part of the programme area borders with Hungary, while the southern Croatian and south-western part of the Serbian programme area borders with Bosnia and Herzegovina. The total population of the area is around 2,14 million people which shows a rapid decline in population, which is more visible on the Croatian side of the programme.

When compared to the national decline in population, for the Serbian part of the programme this is more or less the same, but the Croatian side of the programme shows a significantly higher percentage than the national average. The data shows that the population number in both countries has also crossed over the symbolic line of under 7 million for Serbia, and under 4 million people for Croatia. This part of Europe in general is witnessing a large-scale emigration of its young and educated population to the EU, mainly driven by low employment prospects and economic opportunities in the region. This clearly shows that demographic decline is likely to continue in the future. For example, according to latest 2021 census in comparison with 2011, Osijek-Baranja County has decrease in population of about 15 %, Vukovar-Srijem – 20 %, Brod-Posavina 18 % and Požega-Slavonia County about 17 %.

Table 4. Population for largest towns in the programme area, according to latest census

CROATIA			**SERBIA**		
City	Year	Population	City	Year	Population
Osijek	2021	96.848	Novi Sad	2016	319.484
Slavonski Brod		50.039	Subotica		138.331
Vinkovci		28.247	Šabac		112.414
Požega		22.364	Sombor		81.401
Vukovar		23.915	Sremska Mitrovica		77.123

Source: https://brojstanovnika.cu.rs/opstina/sabac and https://www.dzs.hr/

As it is written above (**Table 4**), the largest town in the Croatian programme area is Osijek in Osijek-Baranja County, with the population of 96.848 citizens, and the biggest one in Serbia programme area is Novi Sad with the population of 319.484 citizens.

Looking at the economic scale and rate, the programme area is below the average of each of the belonging countries, with the difference being more visible in the Croatian part of the programme, with only around 60% of GDP per capita of the national average. Still, the lowest GDP per capita in Croatia is still higher than the biggest in Serbia, which shows the difference in economic power. The major difference between the two border areas is that the Croatian part of the programme is considered to be one of the less developed regions of the country, and the Serbian part of the programme area being considered as one of the most developed (together with Belgrade region).

The COVID-19 pandemic resulted in lockdowns and other containment measures had major impacts on health, economy in the programme area, but also on cross-border cooperation. Due to travel

restrictions, mobility has decreased with likely negative impacts on tourism in the future. Tourism sector should in the future focus on activities and locations which will meet COVID requirements.

4.1.2 Air quality

Ambient air pollution (AAP) is a serious global health problem that accounts for an estimated 4.2 million premature deaths worldwide per year.

People in this part of Europe are frequently exposed to air pollution levels above those considered safe, particularly in the winter. The increased exposure to air pollution and its linkage to higher prevalence of lung, respiratory, or chronic obstructive pulmonary disease (COPD) is also likely to increase the vulnerability of the affected population to the currently ongoing COVID-19 pandemic.

In this part of Europe, the residential sector is the largest source of harmful $PM_{2.5}$ emissions. While not yet the dominant source of air pollution, transport-based emissions are gaining in prominence and in contrast to heating represent a year-round growing environmental challenge. Apart from increased emissions in urban areas, the Programme territory is an important East-West transit route, with significant oscillations, peaking in the summer.

The EU accession process provides an incentive to improve air quality in Serbia by adapting legislation and learning from the experience of other EU countries. In addition to strengthening the legal and policy framework for air quality management (AQM) at the national level, it is important to develop subnational solutions, particularly for urban pollution hot spots. By acting on air pollution reduction, countries prepare the grounds for the long-term transition to a low-carbon economy and climate change mitigation, yet the synergies and trade-offs have to be carefully evaluated and understood.

The map of European Air Quality Index displays up-to-the minute data for the whole of Europe, indicating air quality of individual countries, regions and cities.

The maps below show the data on the most recent measurements taken over from Europe's air quality monitoring network. They have been taken over on 13 January 2022.

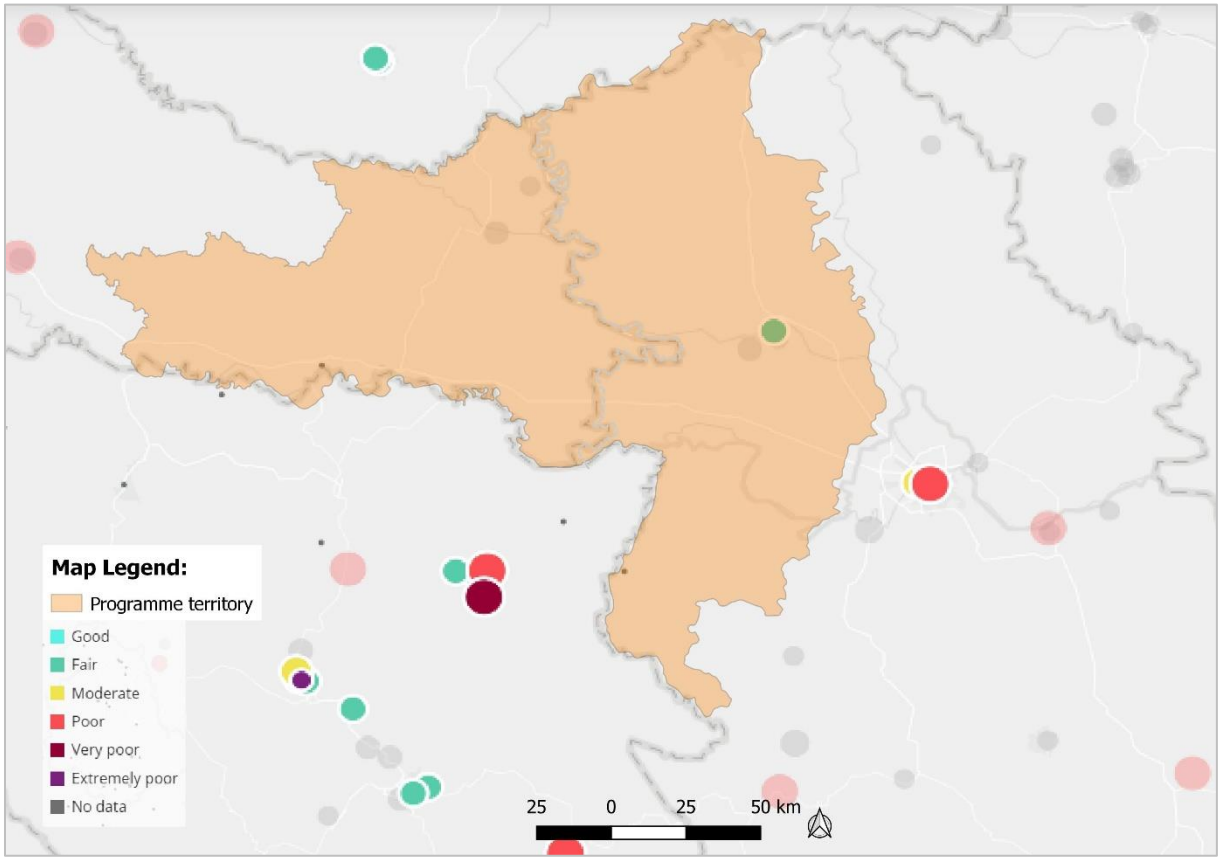


Figure 3. Map of air quality index
Source: https://www.eea.europa.eu/themes/air/air-quality-index/index

In the programme area the air quality is or without data or good quality. Circles and dots on the map represent the locations of air quality monitoring stations. The colour corresponds to the air quality index at the given hour at that station. Measurements of up to five key pollutants supported by modelled data determine the index level that describes the current air quality situation at each monitoring station.

In the table below there is a key presenting five polluting agents and the respective index level (**Figure 4**).

Pollutant	Index level (based on pollutant concentrations in µg/m3)					
	Good	**Fair**	**Moderate**	**Poor**	**Very poor**	**Extremely poor**
Particles less than 2.5 µm ($PM_{2.5}$)	0-10	10-20	20-25	25-50	50-75	75-800
Particles less than 10 µm (PM_{10})	0-20	20-40	40-50	50-100	100-150	150-1200
Nitrogen dioxide (NO_2)	0-40	40-90	90-120	120-230	230-340	340-1000
Ozone (O_3)	0-50	50-100	100-130	130-240	240-380	380-800
Sulphur dioxide (SO_2)	0-100	100-200	200-350	350-500	500-750	750-1250

Figure 4. Legend explained
Source: https://www.eea.europa.eu/themes/air/air-quality-index/index

On the map below the air quality stations in the programme area measure fair air quality, which means 20-40 pollutant concentrations in µg/m3[1], for PM_{10}.

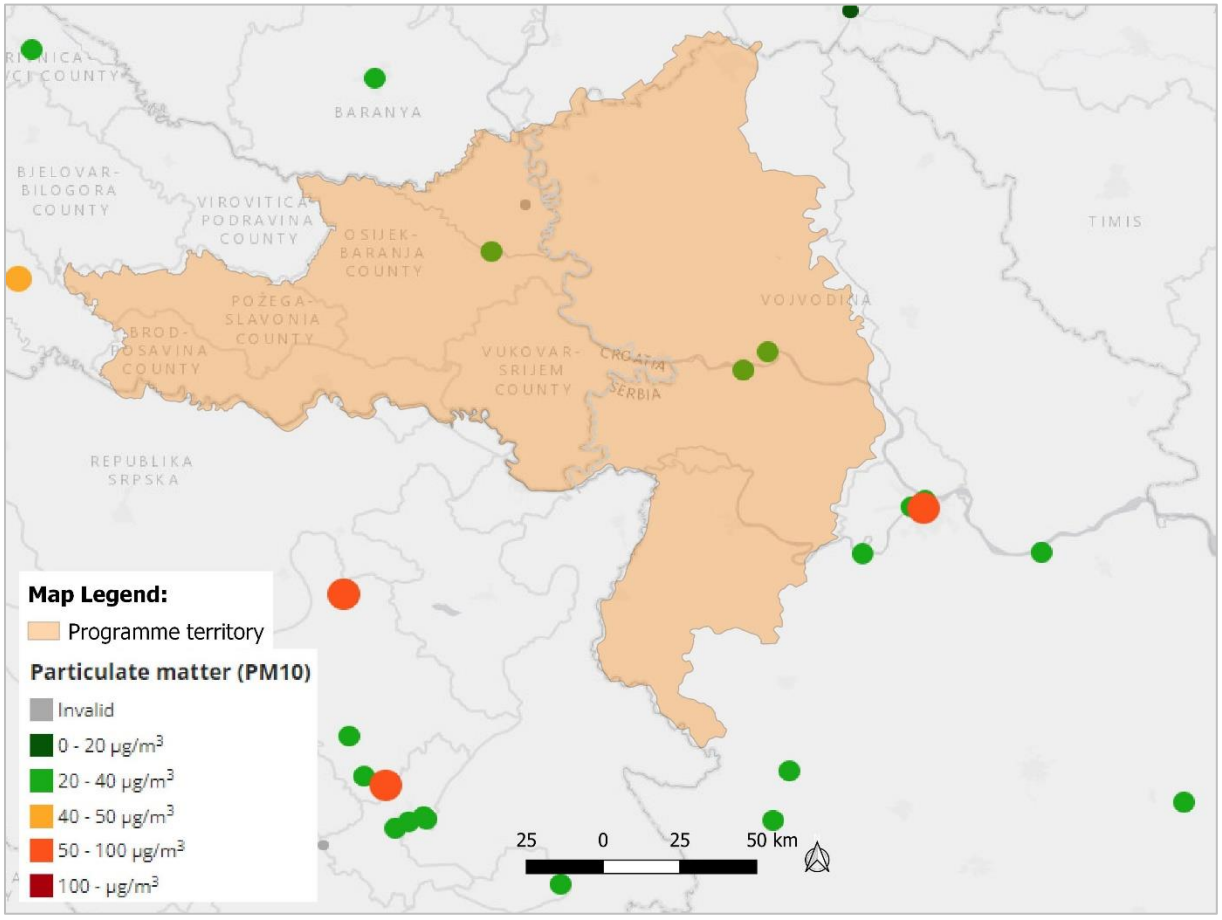


Figure 5. Map of air quality in Programme area in accordance with PM_{10} pollutant
Source: https://www.eea.europa.eu/data-and-maps/explore-interactive-maps/up-to-date-air-quality-data

[1] The concentration of an air pollutant (e.g. ozone) is given in micrograms (one-millionth of a gram) per cubic meter air or µg/m3.

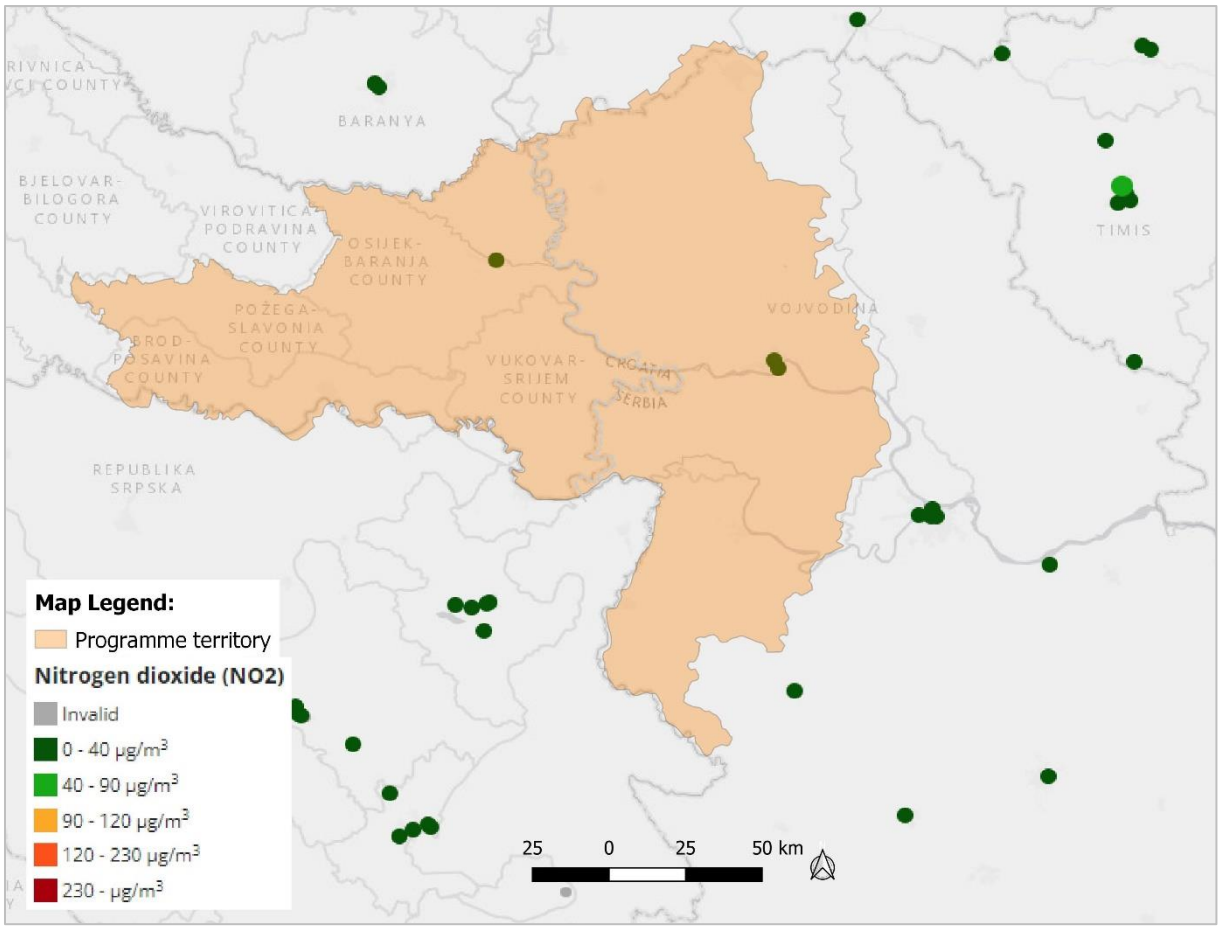


Figure 6. Map of air quality in Programme area in accordance with NO_2 pollutant
Source: https://www.eea.europa.eu/data-and-maps/explore-interactive-maps/up-to-date-air-quality-data

In the map above the air quality stations in the programme area measure good air quality, which means 0-40 µg/m3, for NO_2.

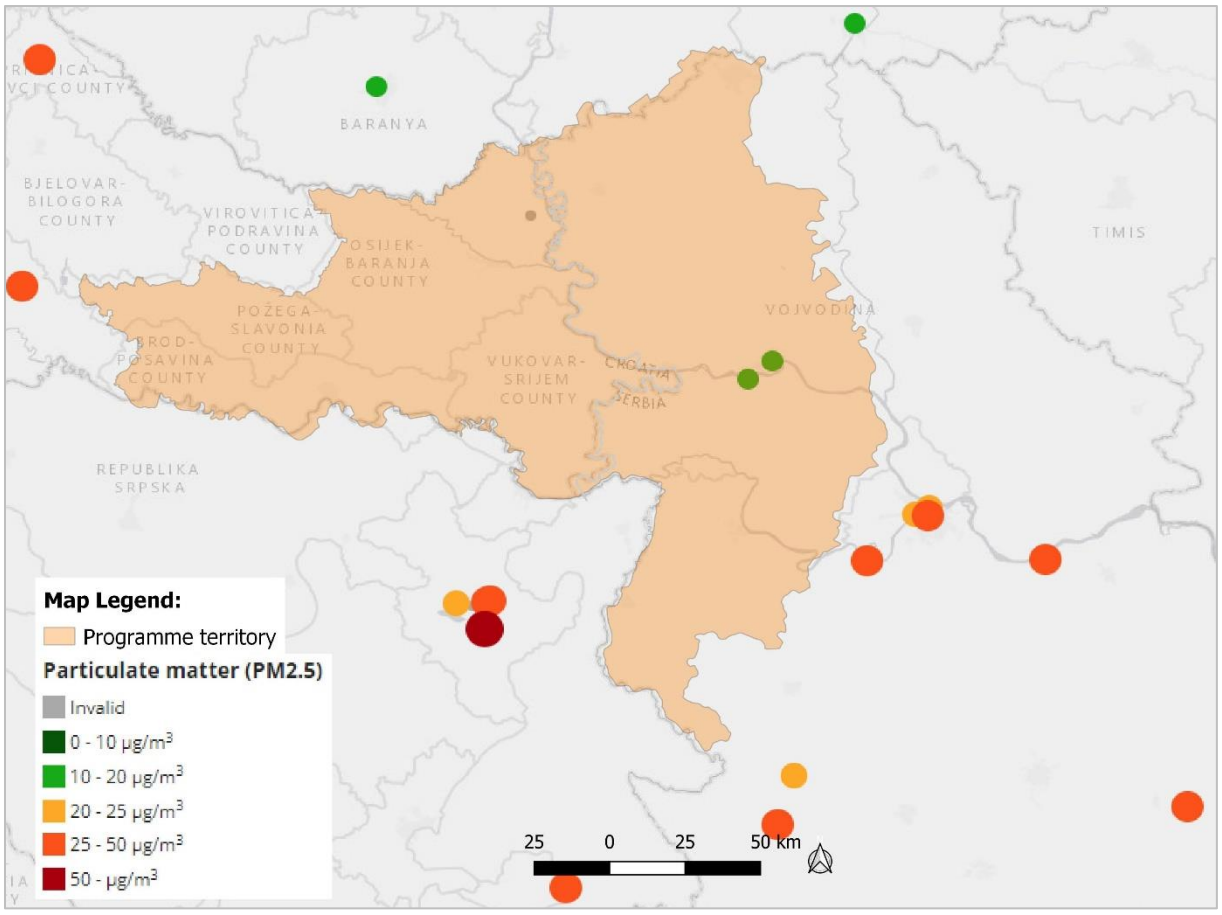


Figure 7. Map of air quality in Programme area in accordance with $PM_{2.5}$ pollutant
Source: https://www.eea.europa.eu/data-and-maps/explore-interactive-maps/up-to-date-air-quality-data

In the map above the air quality stations in the programme area measure good fair quality, which means 10-20 µg/m3, for $PM_{2.5}$.

The regional problem is ozone pollution which is not the only consequence of emissions within the programme area. This pollution is characteristic for the entire territory of the Croatia and Serbia due to the geographical location and climate conditions. The ozone pollution is cross-border problem with long-range transport from the territory of west Europe.

4.1.3 Climate

The programme area belongs to the greater Pannonian Basin region, situated between the Central and Southeast Europe. Topographically it is surrounded by the Carpathian Mountains and the Alps and divided in half by the Danube and Tisza. The most important climate modifiers for the Programme area are the Adriatic and the Mediterranean seas, the Dinarides orography with their form, altitude and position relative to the prevailing air flow, and openness of its north-east parts to the Pannonian plain, and the diversity of vegetation.

Croatia's climate is determined by its position in the northern mid-latitudes and corresponding weather processes on a large and medium scale. Part of Croatia belonging to the programme territory

temperate continental climate and throughout the whole year it is in a circulation zone of mid-latitudes, where the atmospheric conditions are very variable. They are characterised by diversity of weather situations with frequent and intense exchanges during the year. These are caused by moving systems of low or high air pressure, often resembling vortices hundreds and thousands of kilometres in diameter. The climate of continental Croatia and programme territory also is modified by the maritime influence of the Mediterranean which is stronger in the area south of the Sava River than in the north part and which weakens towards the east. Orography, for example, facilitates intensification of short term heavy precipitation on the windward side of the orographic obstacle or the appearance of precipitation shadow on the leeward side. Weather characteristics differ between seasons.

The greatest part of Croatia has a continental moderately warm, rainy climate. The mean annual air temperature in the lowland area of northern Croatia is 10-12 °C. The eastern part of Croatia (Slavonia and Baranja), which make a part of the programme territory has the least precipitation in Croatia (650 mm), which precipitation decreasing from the west to the east.

Climate of Serbia can also be described as moderately warm rainy climate, with more or less pronounced local characteristics. Spatial distribution of climate parameters is caused also by geographical location, relief and other local influences as a result of combination of relief, distribution of air pressure of major scale, terrain exposition, presence of river systems, vegetation, urbanisation etc. Like in Croatian part of Programme territory, the weather and climate of Serbia is also influenced by the Mediterranean Sea, Alpes/Dinarides and Pannonian plain. Prevailing meridional location of river ravines and plains in the northern area of Serbia makes possible the deep southward intrusion of polar air masses. Serbia has a continental climate, warm and humid from June through September, and cold and dry from December through February. Average annual air temperature for the area with the altitude of up to 300 m amounts to 10.9°C. The areas with the altitudes of 300 to 500 m have average annual temperature of around 10°C and over the 1000 m of altitude around 6°C.

Annual precipitation sums rise in average with altitude. In lower regions annual participation height range in the interval from 540 to 820 mm. Areas with the altitude over 1000 m have average 700 to 1000 mm of precipitation and some mountainous summits in southwestern part of Serbia have heavier precipitation up to 1500 mm. Major part of Serbia has continental precipitation regime with higher quantities in warmer part of the year. June is the rainiest with average of 12 to 13 % of total annual precipitation sum. And February and October have the least precipitation.

In conclusion, the programme area has characteristics of humid continental climate, with relatively low precipitation, hot summers and cold winters. The once largely forested land turned into a drained plains area is prevalently agricultural, with rich loamy loess soil. The weather is generally complex caused by interaction of wet winds from the west, drier winds from the south and cool winds from the mountain areas. Average annual temperature in the programme area is about 10.6°C, with average

annual precipitation of about 600 mm. Snow cover is characteristic for colder part of the year, from November to March and majority of days with snow cover is January.

Programme area is marked on the European Koppen map below as the area of temperate continental climate / humid continental climate (Dfb).

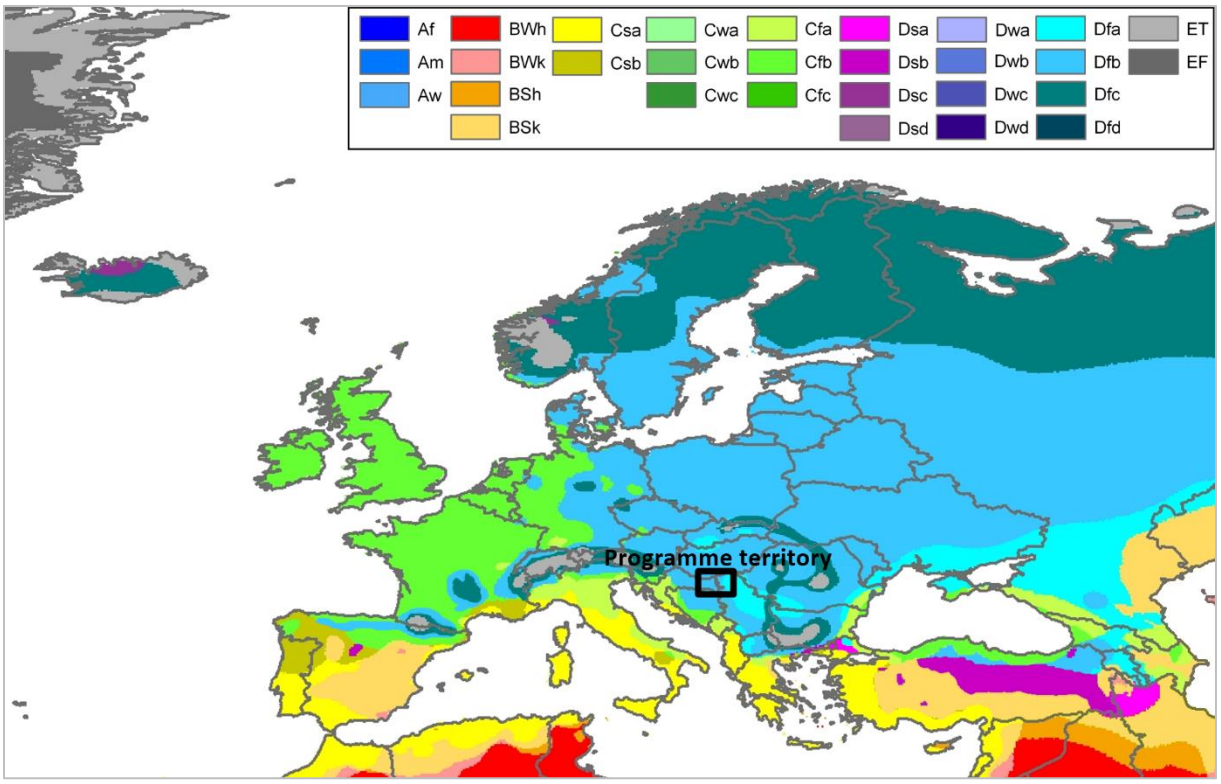


Figure 8. Köppen-Geiger climate classification map of Europe
Source: https://commons.wikimedia.org/wiki/File:Europe_K%C3%B6ppen_Map.png

4.1.3.1 Climate change

Climate change is no longer a growing threat, but it is happening now and will get more serious in the future, even if global efforts to reduce greenhouse gas emissions prove effective. Climate change affects all aspects of the environment and economy and jeopardize sustainable development of the society. They affect frequency and intensity of extreme weather events, such as precipitation, floods, torrent, storms, draughts, heat waves or fires, but also gradual changes such as air temperature rise, soil and water rise, desertification etc. Therefore, minimising the risks from global climate change requires targeted actions to adapt to the impacts of climate change, in addition to actions to reduce greenhouse gas emissions. Adaptation must be tailored to the specific circumstances in different regions and cities of Europe.

Both globally and in Croatia, the 1991-2000 period was the warmest decade of the 20th century. The increase of mean annual air temperature which in the 20th century was between +0,02C up to +0-07C per 10 years, continued and amplified in the 21st century as well. The summer of 2012 was very hot in

this part of Europe, and the hottest and the third-driest in Serbia. In the programme area, the magnitude and frequency of heat waves have increased.

During the period from 1961 to 2010, the trends of mean, mean minimum, and mean maximum air temperatures show warming throughout Croatia. Trends in annual air temperature are positive and statistically significant, and changes are greater in the continental part of the country than on the coast and in the Dalmatian hinterland. The maximum air temperature was exposed to the biggest change (increase). The highest contribution to the overall positive air temperature trend was due to the summer trends, and the trends for winter and spring equally contributed to the increase in mean maximum temperatures. The slightest changes were in regard to the autumn air temperature. Observed warming is also reflected in all temperature extremes indices.

In addition to the "historical" climate simulation for the period 1971-2000, the RegCM, regional climate model, calculated change (forecasts) for the future climate in two periods: 2011-2040 and 2041-2070, assuming the IPCC scenarios of greenhouse gases concentrations development RCP4.5 and RCP8.5. The RCP4.5 scenario is characterized by the medium level of greenhouse gas concentrations with relatively ambitious expectations of their future reduction, which would peak in around 2040. The RCP8.5 scenario is characterized by a continuous increase of greenhouse gas concentrations, which, by the year 2100, would be up to three times higher than today.

Listed below are the future changes for the RCP4.5. scenario.

Table 5. Climate projection in the Republic of Croatia to year 2040 with a view to year 2070.

Future climate projections according to the RCP4.5 scenario compared to the period 1971-2000 obtained by climate modelling		
Parameter	2011-2040	2041-2070
Air temperature	Medium: increase of 1 to 1.4 °C (all seasons, the entire Croatia)	Medium: increase from 1.5 to 2.2 °C (all seasons, the entire Croatia - especially continent)
Precipitation	Average annual quantity: a slight decrease (except for a slight increase in the northwest of Croatia)	Average annual quantity: further decrease trend (up to 5%) in almost all of Croatia except for north-western parts.
	Seasons: different signs; winter and spring in most of Croatia a slight increase + 5-10%, and summer and fall decrease Decrease in the number of rainy seasons. The number of dry seasons would increase	Seasons: decrease in all seasons (up to 10% of the mountains and northern Dalmatia) except in winter (increase of 5 - 10% in northern Croatia) The number of dry seasons would increase.
Snow cover	Decrease	Further decrease (especially mountainous areas)
Wind	Winter and spring without change, but in the summer and especially in the autumn on the Adriatic increase of medium wind speed at 10m up to 20-25%	Winter and spring mostly without change.
Evapotranspiration	Increase in spring and summer 5 - 10%	Increase in spring and summer 5 - 10%
Soil humidity	Decrease in northern Croatia	Decrease throughout Croatia (most in summer and autumn).
Extreme weather conditions	Decrease in number of cold days (with Tmin <10C) and increase in Tmin values along with increase of days with heat (with Tmax >+ 30°C).	Further decrease in the number of days with Tmin <-10 °C and up to 12 days with heat more than the reference period (6-8)
Solar irradiance	In the summer and autumn increase throughout Croatia, in spring increase in northern Croatia; in winter decrease throughout Croatia	Increase in all seasons except winter (the highest increase in mountainous and central Croatia)

Source: Climate Change Adaptation Strategy in the Republic of Croatia for the period to 2040 with a view to 2070 (White Book)

According to the **Table 5**, in the period from 2011 to 2040, mean annual air temperature values are expected to increase almost uniformly (1.0 to 1.2 °C) throughout Croatia. In the period 2041-2070, the expected trend of rising temperatures would continue and would amount to between 1.9 and 2 °C. Warming will be higher in summer than in winter, in some places even exceeding the seasonal mean by more than 2.5 degrees. As a result of increased ground-level pressure over central and southern Europe in winter, the winters in Croatia will be more stable than at present. The scenario predicts reduced precipitation amounts in summer; however, no amplitude of decrease may be identified with certainty. An overall temperature rise and fall of humidity, especially in winter, will result in reduced

snowfall and less snow on the ground. The cloudiness is expected to decrease, even by up to 15% in winter. Since climate change depends on geographic position, development and vulnerability of the region, their impact will also be different, meaning that adaptation has to be tailored to specific circumstances.

Since 1960 average annual temperature in Serbia has increased by 0.15°C per decade. While there has not been a significant change in average annual rainfall since 1960, there is a documented increased in drought severity between 1990-2016 compared to 1960-1989. Over the past two decades a number of weather-related extreme events including harsh winters, droughts, and floods have resulted in extreme financial losses and economic impacts, particularly in the agricultural sector, and even loss of human life. In 2012, temperatures exceeded 35 degrees Celsius for over 50 days, resulting in over one million hectares of lost agricultural production. In 2014, an historically heavy rainfall event and resulting flood affected more than 1.5 million people (or about 20% of the country's population) and caused $2 billion in damage.

Climate change projections for Serbia include a high probability of continuing temperature increases, along with more frequent and prolonged drought and increased risk of wildfires.

An assessment of future climate conditions has been done for the following periods: 2011-2040, 2041-2070 and 2071-2100, compared to the base period 1961-1990 (EBU-POM regional climate model was used). Two possible scenarios of future climate conditions were shown (IPCC/SRES scenarios, mid-line A1B and extreme A2). Changes in air temperature and precipitation have been analysed at both seasonal and annual level, and selected indices of extremes have been studied. Under A1B scenario for the period 2011-2040 an increase in temperature of 0.5-0.9 °C is expected, and an increase 1.8-2.0 °C from 2041-2070.

According to A2 scenario the expected temperature rise is 0.3-0.7 °C and 1.6-2.0 °C for the periods 2011-2040 and 2041-2070. By the end of the century (2071- 2100) the expected change of temperature as per A2 scenario is 3.6-4.0 °C, and 3.2-3.6 °C according to A1B scenario. Warming is most pronounced during the summer and fall season, going over 4.0 °C by the end of the century.

Precipitation trend under both scenarios compared to the base period is positive during the period 2011- 2040, and decreases toward negative values across Serbia by the end of the century. Under A1B scenario, annual precipitation change ranges from +5% to -20% by the end of the century. Under A2 the change ranges from +20% to -20%. The summer season shows the most pronounced deficit.

4.1.3.2 Climate impacts and vulnerabilities

There are three major characteristics of the changing climate in the programme area: increase in total average temperature, decrease in precipitation, although not radical and increase in frequency and intensity of extreme weather events.

The main conclusions drawn from the modelling of future climate projection carried out by the Meteorological and Hydrological service of Croatia were that there will be a significant warming throughout the country, accompanied with decrease in rainfall which will result in droughts and create problems with water supply and soil moisture.

Moreover, the entire programme area is flood-prone as it is situated in the Danube basin. There is a heavy flooding trend in Croatia influenced by the Sava and Drava rivers.

According to the SEEFCCA 2012 document, the impacts of climate change are identified as risks in rising sea levels, extreme temperatures and precipitation, drought, wind, storms, fires and floods, which, for example, is the only identified as significant risks in Croatia according to the National Risk Assessment (approximately 15 % of the territory of Croatia is in risk of floods). The SEEFCCA vulnerability assessment covers the territories of Croatia, FYR Macedonia, Montenegro and Serbia.

In the table below (**Table 6**) are projections of risks of climate changes in Southeast Europe during the 21st century.

Table 6. Projected changes of natural hazards as a result of climate change in Southeast Europe

Hazard	**Projected changes in behaviour of natural hazards as a result of climate change**		
	2030-e	**2050-e**	**2070-e**
Flooding	Risk of flash floods to increase; snowmelt flooding likely to arrive earlier in the year.		100-year floods to become less frequent
Droughts	Warmer temperatures and increasing numbers of consecutive dry days Decrease in surface runoff by up to 23%.	Surface runoff to decrease by 20 to 30 %	Surface runoff to decrease by up to 36%; 100-year droughts return every 50 years or less
Extreme temperature (high)	Extreme high temperatures to rise, longer-lasting heat waves	Higher average summer temperatures, heat waves are more frequent, begin earlier in the year and last longer	
Extreme temperature (low)	Winter extreme low temperatures increasing;	Up to seventeen fewer frost days per year by mid-century	Risk of cold waves significantly decreased.
Storms and high winds	Wind speeds to increase slightly.	Higher wind speeds along the Adriatic coast bring more coastal storms and coastal flooding from storm surges	
Wild fires	Risk increases as longer droughts and higher extreme temperatures become more common.		

Source: SEEFCCA, 2012., *South East European Forum on Climate Change Adaptation 2011.-2012., - Regional Climate Vulnerability Assessment, synthesis report – Croatia, FYR Macedonia, Montenegro, Serbia.*

The greatest impacts of the climate change are expected on human health, ecosystems, water resources and sectors including energy and infrastructure and agriculture.

Flooding in the programme territory can occur throughout the year, with the peak in spring when the precipitation is high and there is snow melt. It is expected that by the end of the 21st century, floods will increase to up to 20% in the frequency of 100-year floods for large rivers such as the Danube and Sava. Apart from harmful effects of water, reduced precipitation may increase incidents of droughts and reduce surface and groundwater levels, thus having an impact on water supply.

Potential impacts of climate change and major signifiers of vulnerability is on various sectors in Programme territory and also on the area of this part of Europe: agriculture and forestry, biodiversity, energy, human health and civil protection, tourism, water resources.

Agriculture is a major contributor to GDP in the participating countries, as the production is concentrated in Slavonia and Vojvodina, where crops are vulnerable to decreasing precipitation and increasing temperatures. Climate change will affect rainfed crops, and increase in temperature may also increase fungal diseases and pests.

More frequent extreme events such as heavy rainfall and flooding may damage electricity distribution systems and cause disruptions in power supply, power outages, reduced power production on both sides of the border. Floods may moreover lead to landslides, and threaten housing, roads, bridges and other infrastructure.

Significant changes in vegetation as a result of climate changes is expected to grasslands, riparian habitats and forested ecosystems. Decline in forest cover, habitat changes and loss of biodiversity is expected, as well as population and distribution of population of species.

4.1.4 Earthquakes and seismic activity

Seismic activities in the programme area on the territory of both countries are show by European Seismic Hazard Map.

The European Seismic Hazard Map displays the ground shaking (i.e. Peak Horizontal Ground Acceleration, PGA) to be reached or exceeded with a 10% probability in 50 years. This reference value represents the shaking to be expected during the human lifetime in an standard building, corresponding to the average recurrence of such ground motions every 475 years, as prescribed by the national building codes in Europe. It's important to note that these values can be exceeded with a 10% probability every 50 years. The ground shaking is expressed in terms of the unit gravitational acceleration g. The share peak ground acceleration value across Europe range from 0g to over 0.5g Low hazard areas (PGA≤0.1g) are coloured in blue-green, moderate hazard areas in yellow-orange and high hazard areas (PGA>0.25g) in red-black.

The programme territory is in area from 0.0. to 0.15 g. If these seismic wave accelerations are compared with the MCS scale, then acceleration from 0.0 to 0.05 it may correspond to an earthquake magnitude of 6° (strong earthquakes) and acceleration from 0.05 to 0.1 g it may correspond to an earthquake magnitude of 7° (very strong earthquakes) and acceleration from 0.1 to 0.2 g are in 8° (devastating earthquakes) of MCS scale.

The programme area is not at high risk of strong earthquakes, but this does not exclude their occurrence. Earthquakes, listed magnitudes can cause damage to buildings and injuries to the population on objects of older design, while in nature they can cause small landslides, dents, cracks in the soil. Damage to embankments and other hydrotechnical objects is also possible.

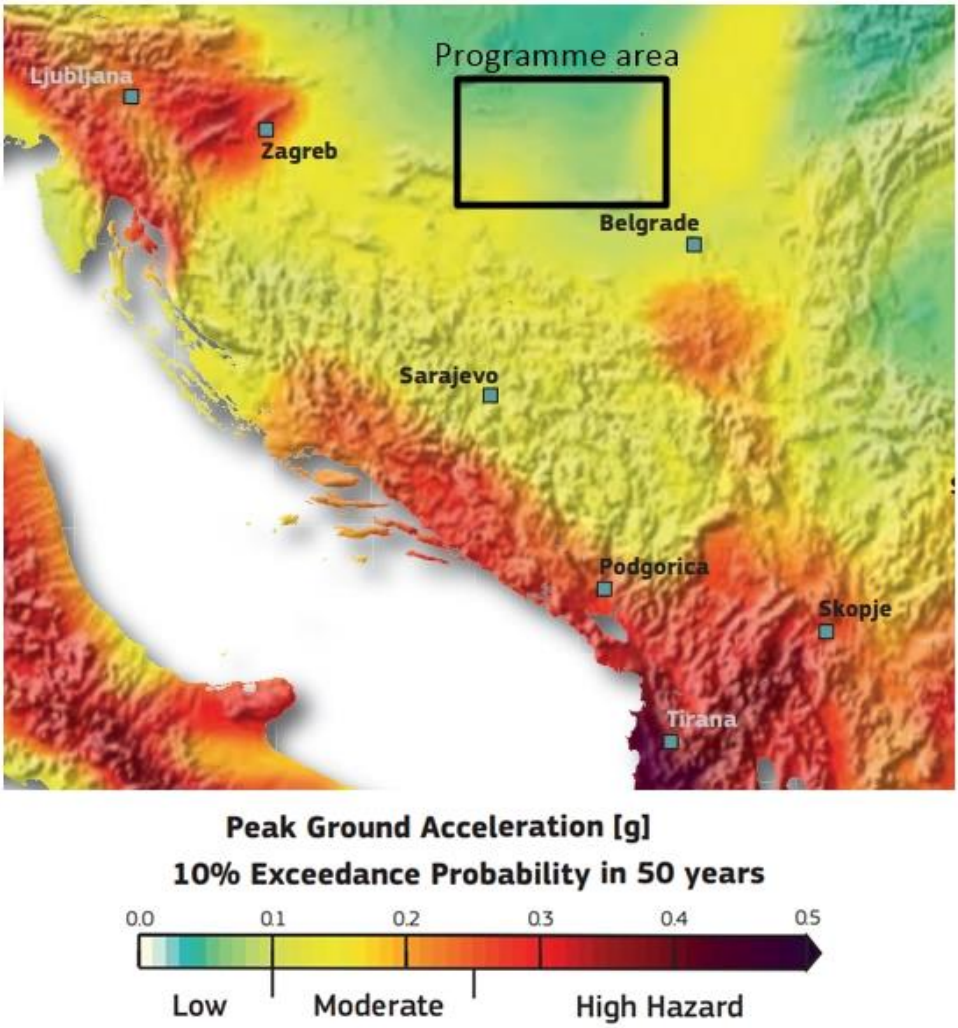
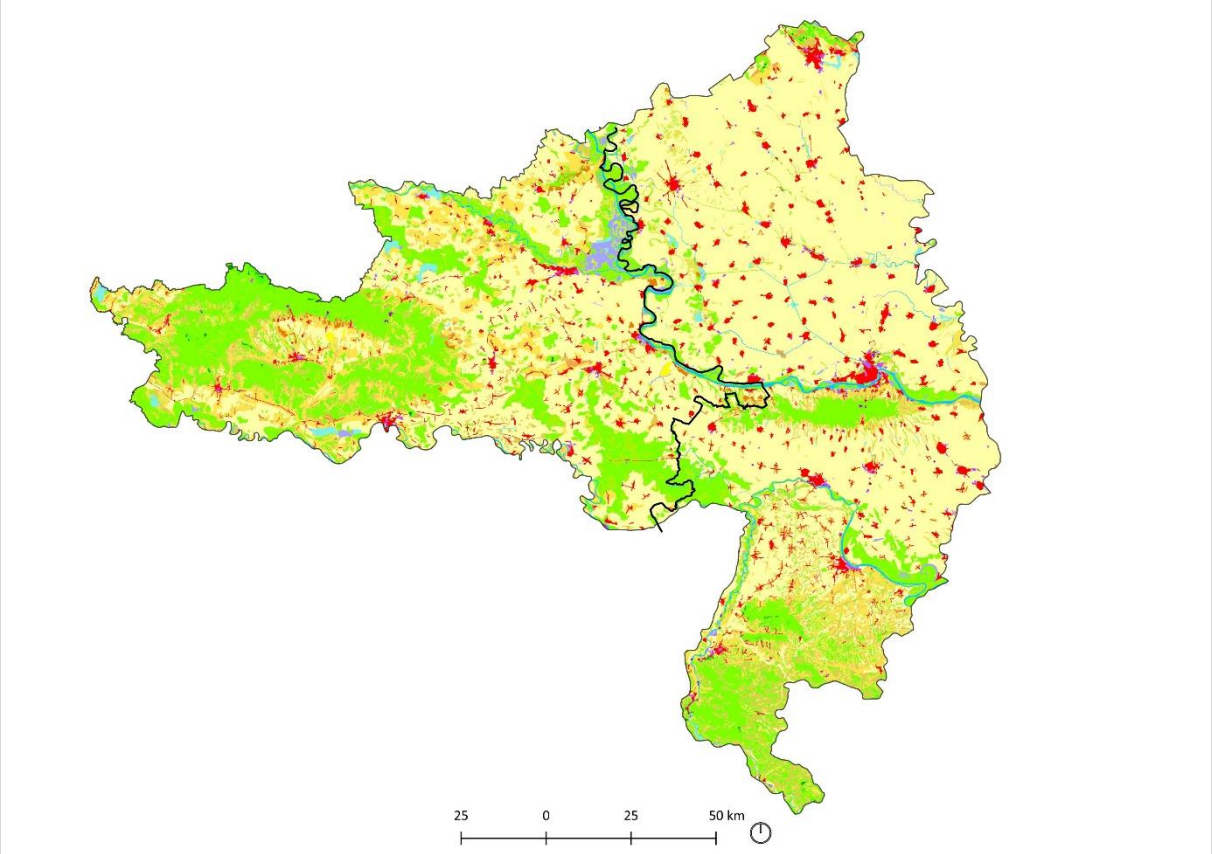


Figure 9. General Programme area on European Seismic Hazard Map

Source: https://op.europa.eu/en/publication-detail/-/publication/b1d1d53c-1201-4225-87c6-56340dd5cc15, European Seismic Hazard Map edited by D.Giardini, J.Woessner and L.Danciu, Swiss Seismological Service, ETH Zurich, 2013.

4.1.5 Soil and Land Use

For the overview of land use in the Programme area is made according to the CORINE classification of the method of land use (**Figure 10**). Corine Land Cover is a digital database on the state and changes to the land cover and land use split into 44 different land cover classes. According to the map below (**Figure 10**), in the Programme area there are 28 categories of land use. For a better overview of land use data in the Programme territory, the land use categories were divided into 4 main categories – artificial surfaces, agricultural areas, forest and semi-natural areas, wetlands and water-bodies. The land use categories in the overall Programme territory is shown in **Table 7.**



Legend:

Programme area
State border Croatia-Serbia

Corine Land Cover 2018.

111 - Continuous urban fabric
112 - Discontinuous urban fabric
121 - Industrial or commercial units
122 - Road and rail networks and associated land
123 - Port areas
124 - Airports
131 - Mineral extraction sites
132 - Dump sites
133 - Construction sites
141 - Green urban areas
142 - Sport and leisure facilities
211 - Non-irrigated arable land
212 - Permanently irrigated land
213 - Rice fields
221 - Vineyards
222 - Fruit trees and berry plantations
223 - Olive groves
231 - Pastures
241 - Annual crops associated with permanent crops
242 - Complex cultivation patterns
243 - Land principally occupied by agriculture with significant areas of natural vegetation
244 - Agro-forestry areas
311 - Broad-leaved forest
312 - Coniferous forest
313 - Mixed forest
321 - Natural grasslands
322 - Moors and heathland
323 - Sclerophyllous vegetation
324 - Transitional woodland-shrub
331 - Beaches - dunes - sands
332 - Bare rocks
333 - Sparsely vegetated areas
334 - Burnt areas
335 - Glaciers and perpetual snow
411 - Inland marshes
412 - Peat bogs
421 - Salt marshes
422 - Salines
423 - Intertidal flats
511 - Water courses
512 - Water bodies
522 - Estuaries

Figure 10. Land use and Land cover according to CORINE Land Cover classification

Source: CLC 2018 – Copernicus Land Monitoring Service

Table 7. Share of land use categories in the Programme territory

Land use category	Surface area within the Programme territory (%)
Artificial Surfaces	4,68%
Agricultural Areas	69,32%
Forest And Seminatural Areas	23,36%
Wetlands And Water Bodies	2,63%

Agricultural areas account for 69,32 % of total areas according to CLC 2018.

The most represented land use category within agricultural areas is Non-irrigated arable land (211) with a share of about 75 % of all agricultural areas. It represents agricultural areas of different crops that are mainly distributed throughout the Programme area, and are predominant in lowland parts of the Croatian and Serbian parts of the Programme territory. Agricultural surfaces have developed in the flood plains of the meandering rivers of the Drava, Sava, Danube and their tributaries, which were very suitable for agriculture because of soil quality and irrigation conditions. Agricultural potential and/or suitability is one of the most important environmental qualities of the Programme territory. A smaller share of agricultural areas is occupied by vineyards, pastures, permanently irrigated land and fruit trees and berry plantations.

The largest forest and seminatural areas are located on the western parts of the Programme territory of which broad-leaved forests are the most common land use category.

Among the artificial surfaces, the largest share relates to discontinuous urban fabric (112) and industrial or commercial units (121).

Wetlands and water bodies predominantly refer to water courses and inland marshes with a lower share of water bodies within this category. Most of land use surfaces within this category regard large river areas such as the Drava, Sava, Danube and their tributaries. This category is particularly sensitive and mostly protected in different protection hierarchy regimes of which the most important one is the Mura – Drava – Danube biosphere reserve (MaB).

4.1.6 Hydrography and water body status

The EU Water Framework Directive 2000 is by far the most important water legislation in the EU, the primary purpose of which is to establish a new integrated approach to water protection, improvement and sustainable use. It applies to all water bodies, including surface waters, groundwater, transitional waters and coastal waters which is achieved through a set of measures and controlled by extensive monitoring programme. WFD has been transposed into both Croatian and Serbian legislation and its application is mandatory in the Republic of Croatia as a Member State.

The Programme territory belongs to the Danube River Basin District, and to the international Sava River Basin District stretching through Slovenia, Croatia, Bosnia and Herzegovina and Serbia (below).

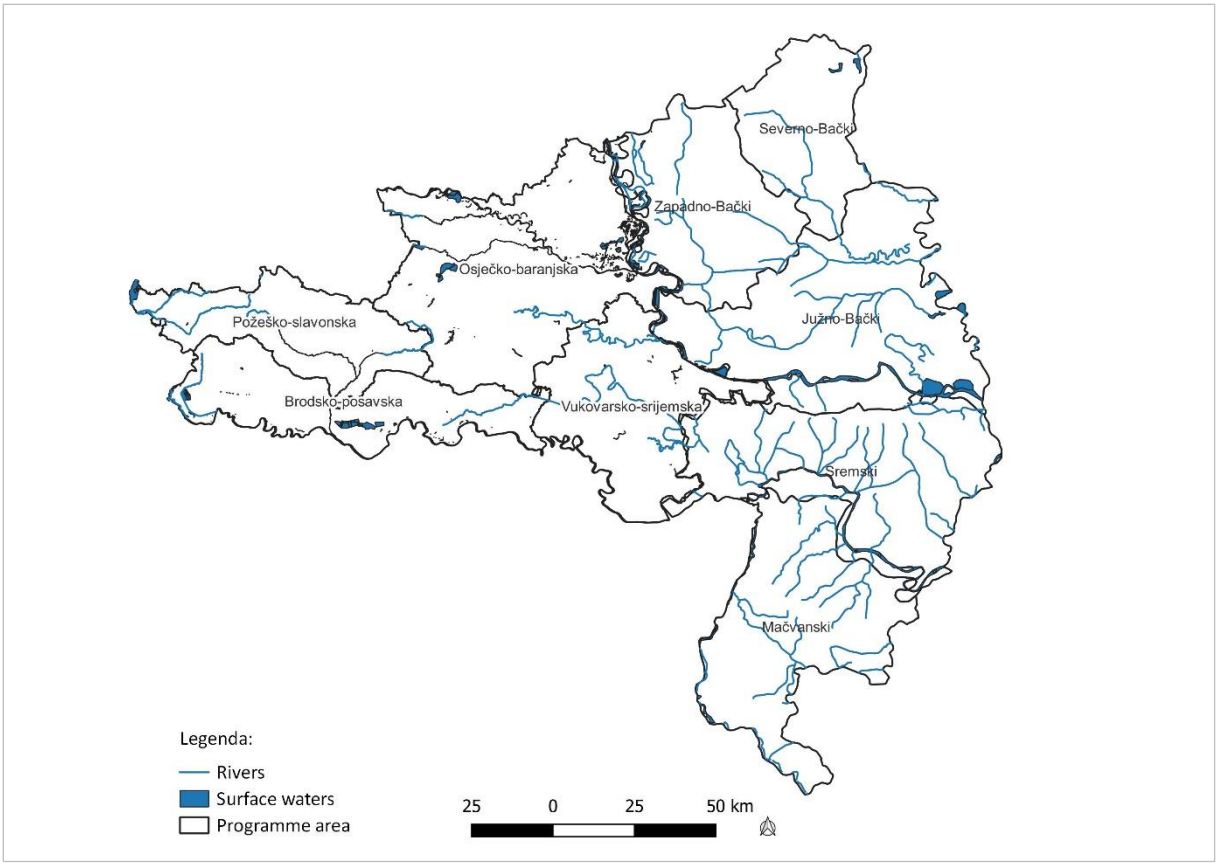


Figure 11. Hydrological network in the Programme area

4.1.6.1 Status of water bodies

The status of water bodies is the result of natural processes and specificities, different use of water and anthropogenic factors. The WFD stipulates that Member States should achieve good status for all surface and groundwater bodes, which is assessed through their ecological status. Ecological status is influenced by water quality and habitat degradation. On the EU level, the percentage of water bodies with less than good ecological status varies, with Croatia having 50-60% of surface water bodies which are not in good status. The lowest qualitative status of surface water bodies in Serbia is in the programme territory, where 39.5% of water bodies have poor and bad quality (SWQI index), 67.6% of samples of which are of bad quality. The Great Bačka Channel, designed as a part of the Danube-Tisa-Danube system, has been polluted and neglected for decades and today is one of the black spots in Serbia.

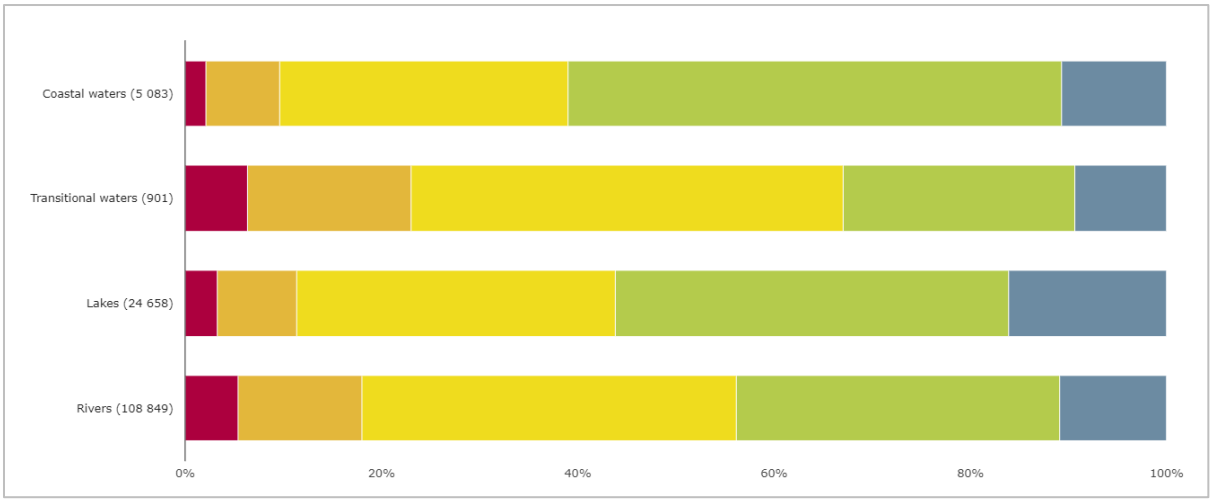


Figure 12. Distribution of ecological status in the EU by count of water bodies
Source: https://www.eea.europa.eu/ims/ecological-status-of-surface-waters

Groundwater on the other hand is a major source of drinking water and a base flow of rivers and wetlands. Maintaining its quantity and quality is therefore vital for both humans and water-dependent ecosystems. Pressures on groundwater chemical quality may arise from diffuse pollution from agricultural sources, nitrogen pollution in areas with low connection to public sewerage systems and contaminated sites from waste or industry. According to EEA 2018 Report, Croatia falls within the group of Member States with low percentage of groundwater bodies not in good chemical status.

The program area is well situated in terms of water supply, but to maintain such a state it is necessary to properly dispose of water resources, as well as ensuring a clean water supply for all residents. Wastewater treatment is still a relatively underdeveloped concept but will become increasingly necessary in the future. In addition, it is important to protect groundwater from pesticides and nitrates from the soil. In this process, the implementation of water regulations is important, as well as investment in infrastructure for monitoring and management of surface and groundwater.

Among the numerous causes for water pollution, the most significant remain:

- uncontrolled discharge of municipal waste-water without connection to public sewer system
- industry lacking appropriate sewerage and waste-water treatment
- agriculture through use of mineral fertilizers and protection agents, and undeveloped farms, and
- waste management.

However, it is a fact that current water status and protection against pollution is primarily the result of lack of funding, mostly for the construction of WWTPs, and not the lack of legal regulations.

Water Management Strategy of the Republic of Serbia identifies three major problem groups regarding water quality, namely:

- insufficient drinking water quality
- overexploitation of groundwater
- insufficient protection of water sources

Insufficient water quality is specific for rural areas, since households are generally not connected to public water supply, and use individual solutions such as illegally bored water wells instead. Such drinking water supplies are of poor quality and contaminated with arsenic on both sides of the border. Water management companies differ in level of development, staffing and organization, and are the main suppliers of water services.

The previous approach to water protection based on immission criteria, that is limiting discharge of contamination into water did not yield good results, and positive steps have been made in adopting the environmental objectives, including combined approach, and the polluter-pays principle.

Improvements in urban waste management, increase in connections to water-supply and sewerage systems, and agriculture and expected to bring improvements as regards water quality, and it is unlikely that new sources of pollution will be created in the upcoming programme period.

4.1.6.2 Flood risk management

Floods are naturally occurring phenomena which can incur heavy economic and human losses. However, through the right measures, they can be reduced and their impacts limited. Under the Floods Directive, all Member States have to prepare flood hazard maps and flood risk maps identifying areas with medium and extreme event likelihood. Protection against detrimental effects of water is mostly ensured through the construction of protective and regulation water structures. Floods are also supported by erosion process, especially in torrential areas, after removal of vegetation. Flood risk hazard map for the Sava River Basin District is presented in the Figure below.

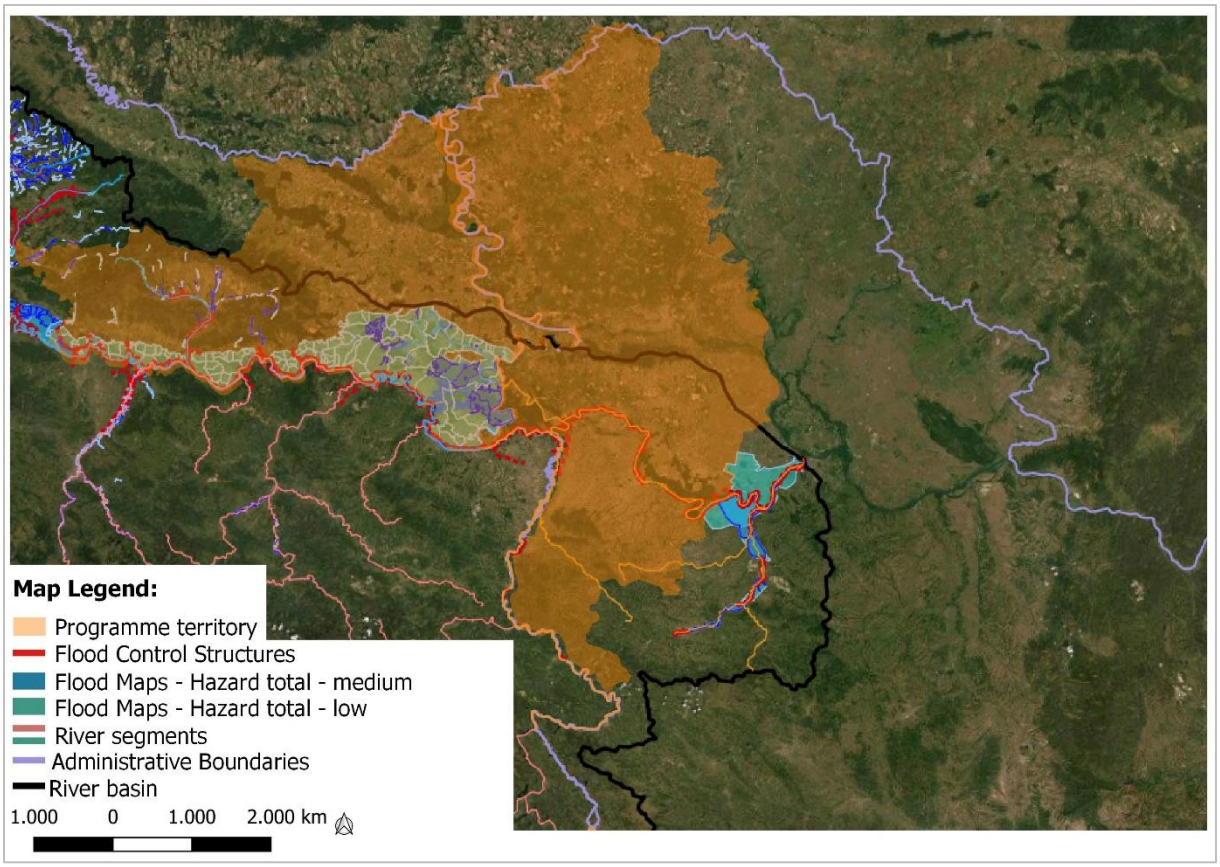


Figure 13. Flood risk hazard map

Sava Flood Risk Management Planning identified the areas of mutual interest for flood protection in the Sava River Basin. AMIs represent basic structural elements for analysis and a framework for identification of non-structural and national structural measures that may contribute to achieving flood risk management objectives of common interest in the Basin. Such objectives include:

- Avoidance of new flood risks
- Reduction of existing flood risks (during and after the floods)
- Strengthening resilience
- Raising awareness about flood risks
- Implementing solidarity principle.

AMIs in the programme area are presented in **Figure 14** below.

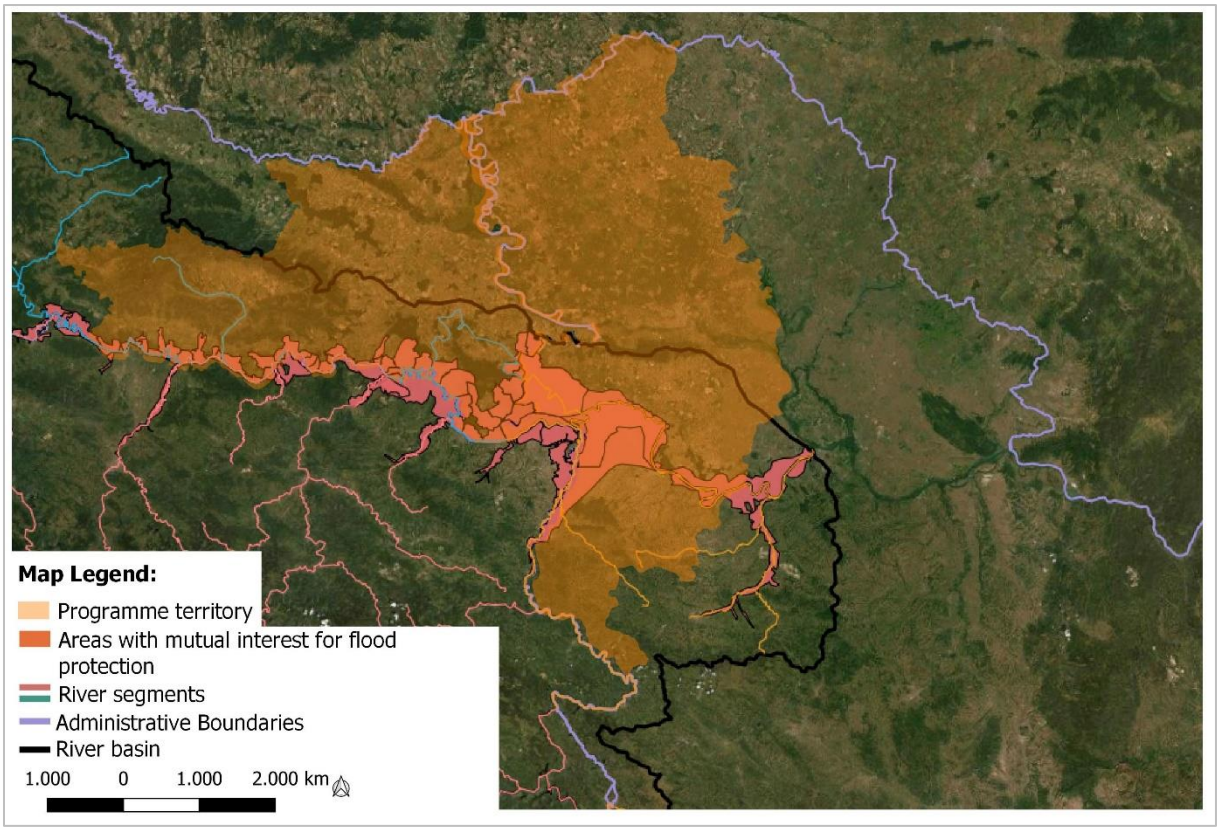


Figure 14. Areas with mutual interest in flood protection

4.1.7 Biodiversity

Biodiversity conservation is a particularly important topic in the Programme area given the richness and diversity of natural areas. Preservation of biodiversity and ecosystems and nature protection are necessary elements for the path to greener Europe.

4.1.7.1 Biodiversity in the Programme area

The Republic of Croatia has a great wealth of biological and landscape diversity, and a very high level of conservation, particularly within the context of Western and Central Europe. Nevertheless, a trend of loss of biological and landscape diversity persists in the country. Croatia can be divided into 16 distinct landscape units, which include features such as karst fields and rivers, mountain chains and limestone plateaus. Forests cover 44% of the country's land surface, of which 37% comprises high forests and the remainder different degrees of degraded forest vegetation. Approximately 95% of forest vegetation exists in a state of natural composition, which is rare and extremely valuable at both European and global level. Seventy-eight percent of forest vegetation is state-owned. Wetlands have the highest level of biological and landscape diversity and are the most threatened of Croatia's ecosystems.

The number of known taxa (species and subspecies) in Croatia is almost 40.000, although it is suspected that the total number of species is considerably higher (between 50.000 to more than 100.000). According to the available data, Croatian flora consists of 8.582 known taxa, while certain

estimates put this number at almost 10.000 taxa. The estimated number of fungi in Croatia is 17.000 which is twice that of the flora. However, fungi are by far the most poorly researched group of organisms in Croatia. To date, 3.800 fungi species have been recorded, representing only 22% of the estimated number. With 101 mammal species, 90 of which are autochthonous, Croatia is among 8 European countries with the greatest mammal diversity. Croatia's ornithofauna is amongst the richest in Europe when considering the 78 bird species which breed in Croatia and are threatened at the European level. The total number of bird species is 375 and of these, 234 breed on Croatian territory. Among the 38 species of reptiles in Croatia, 9 are endemic. Twenty species of amphibians, including 8 endemics, have been recorded in Croatia. With 151 freshwater fish species in the rivers and lakes, 18 of which are Croatian karst endemics, Croatia is one of the most diverse countries in Europe in terms of ichthyology. This species diversity is the result of the country's geographic position, covering two drainage basins (Adriatic and Black Sea) and the presence of distinct karst habitats. The Black Sea (Danube) Basin (covering 62% of the territory) is inhabited by 81 fish species, while the number of species in the Adriatic Basin (covering only 38% of the territory) is as high as 88 species. 433 fish taxa have been recorded in the Adriatic Sea, accounting for 65.2% of all known fish taxa in the Mediterranean Sea. This number is a subject to constant change. To date, 15.474 taxa of terrestrial and 1.780 taxa of freshwater invertebrates have been recorded in Croatia. They are dominant in abundance and diversity, but are insufficiently studied. 351 taxa of terrestrial invertebrates and 172 taxa of freshwater invertebrates are endemic. Most endemic freshwater species inhabit underground waters. The most threatened groups among the threatened species according to the Red Lists are freshwater fishes (42%) and cave fauna (37%), followed by terrestrial and aquatic snails, dragonflies and breeding birds (each 23%).

There are almost 3.000 species from 16 different taxonomic groups assessed within Croatian Red List, out of which more than 45% of taxa are threatened. Within the assessed taxonomic groups, the largest share of threatened species are freshwater fishes (~42%), cave fauna (~37%) and snails (~25%). Willow shrubs found near large continental rivers and galleries of oleander in southern Dalmatia are among the endangered and rare shrub habitats in Croatia.

National habitat classification of Croatia defines the following main habitat classes, with each divided into four levels of habitat types:

A inland surface water and wetland habitats
B inland unvegetated and sparsely vegetated habitats
C grassland, bogs, fens and tall forbs habitats
D scrub habitats
E forest habitats
F coastal habitats
G marine habitats
H underground habitats
I cultivated non-forested land and habitats with weeds and ruderal vegetation
J constructed and industrial habitats
K complexes

The first eight classes contain the majority of natural habitat types in Croatia.

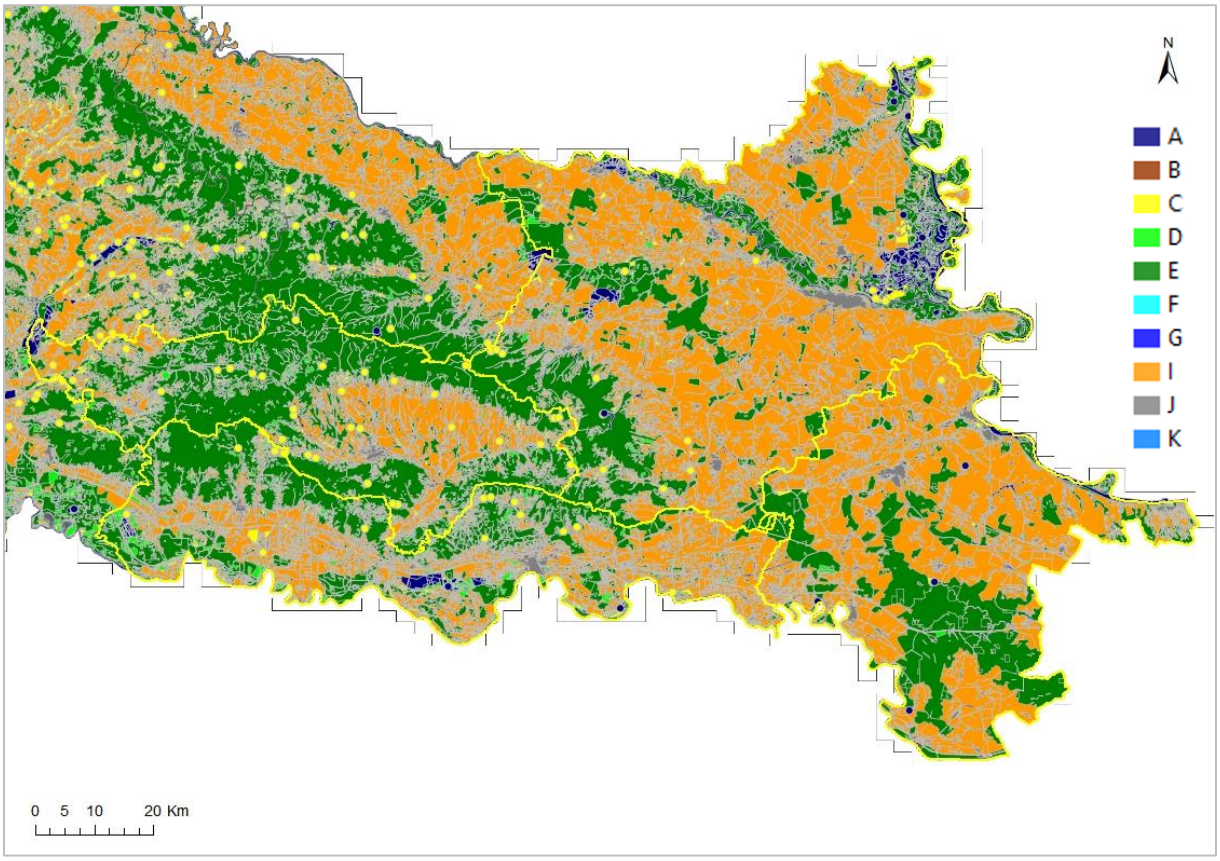


Figure 15. The map of terrestrial non-forest habitats (2016) in the Programme area (Croatia)

In the Programme territory on Croatian side, agricultural areas predominate, followed by forest habitats. Although they are not present in large numbers, of all rare and endangered habitat types, the most sensitive are wetlands and floodplains, the conservation of which is of utmost importance to protect endangered wildlife, especially birds where wetlands and aquatic habitats are important breeding grounds, for feeding as well as for rest during migrations.

According to the Habitat Map of the Republic of Croatia (2004), the most common forest habitats within the Programme area are mesophilic and neutrophilic pure beech forests, oak-hornbeam and pure hornbeam forests and floodplain pedunculate oak forests.

Also, Croatia has 97 Important Plant Areas, covering 964.655 hectares. The majority qualify through the presence of both threatened species and threatened habitats.

Only 18 IPAs in Croatia are either fully or partly protected at national level and overlap with existing protected areas (Parks of Nature or National Parks). In four cases the area of the IPA is greater than that of the protected area, 14 IPAs and Protected Areas overlap 100%.

The top ten threats to IPAs in Croatia are similar to those throughout the region[2], but the issue of land abandonment is the greatest threat to Croatian IPAs, affecting 62% of sites. Development related threats affect 44% of sites and 33% are threatened by development specifically associated with tourism: coastal and island IPAs are especially vulnerable. The influence of climate change is only broadly assessed and remains unknown for many sites.

Croatian part of the Programme territory is bordered by the Sava, Drava and Danube rivers. Large areas of wet oak woods contain the greatest biological diversity of the region, with significant populations of threatened European bird species. Rivers, marshes and carp ponds are important habitats for migratory waterfowl. Wet meadows and pastures, remnants of inland dunes and the most westerly elements of steppe flora and fauna are also present in this region.

The most recent study of ecosystem services, the Study of Freshwater Ecosystem Services in Croatia, prepared within GEF/UNDP project 'Support to the implementation of the CBD Strategic Plan 2011–2020 in Croatia', evaluated the benefits of freshwater ecosystems in the Danube basin implemented in a pilot-area of the Drava River. Detected ecosystem services relevant for the Sava-Drava-Danube floodplains include: provisioning services (timber production, biomass energy, fish production and angling, game and hunting, drinking water supply, agriculture production, energy production), regulating services (flood mitigation, sediment deposition, water self-purification, carbon sequestration-storage, local climate regulation, air quality, erosion prevention, drought mitigation and water storage), supporting services (habitats for species, biological corridors) and cultural services (aesthetic value, recreation/tourism, naive art, local crafts-willow baskets, traditional architecture, indigenous breeds).

The Republic of Serbia has heterogeneous flora and fauna, which includes both widespread and endemic species (Balkan, local and stenoendemic). Diverse climatic vegetation zones, including a large number of extrazonal, intrazonal and azonal ecosystems, such as wetlands, peat lands, salt marsh lands and sands, strongly influence the high biodiversity of the Republic of Serbia. The total area of the Republic of Serbia currently covered by forests is 2.2 million ha (40 % of the total central area of the Republic of Serbia.) Areas under forests in Serbia include combination of deciduous forest (beech and oak), in the percentage of about 60.7 %, conifer forests, in the percentage of 4.7 %, and mixed deciduous-conifer forests, covering 33 % of the area. With regard to autochthonic forest genetic resources, greatest value is seen in endemic and endemo-relict species (*Pinus peuce, P. heldreichii, Pinus nigra ssp. gocensis, Picea omorika, Taxus baccata, Prunus laurocerasus, Acer heldreichii, Fraxinus pallisae, Forsythia europaea, Corylus colurna, Daphne blagayana, D. mesereum* and others).

During the last ice age the territory of modern Serbia provided numerous refugia (parts of a species' range less influenced by climate change) for a number of species. As a result, Serbia is inhabited by many relict and endemorelict species.

According to official data approximately 44.200 taxa have been officially registered in the Republic of Serbia (species and subspecies), which is not the final figure. According to real estimates, there are

[2] Development: tourism, urban, industrial and infrastructure development; Poor forestry practices: damaging afforestation and deforestation and inappropriate management of forests; Water mismanagement dredging and canalisation, drainage, management systems and constructions of dams/dykes.

probably 60.000 taxa living in Serbia. The largest groups of organisms are insects with over 35.000 recorded species.

With 3.662 defined taxa of vascular plants in the species and subspecies range (39% of total European flora), Serbia has been classified as one of the countries with the highest flora diversity in Europe. Within the Republic, 625 species of fungi (*Macromycetes*) have been registered and described, as well as 586 species of lichen, whereby it is estimated that the number of fungi species is far greater. Out of 178 species found in the European Red List, there are 42 species present in Serbia, which means 23.6%. Between 98 and 110 fish and cyclostomata species have been registered to date. A total of 13 species have been submitted for the Serbian Red List of vertebrates, and 19 taxa of international importance have been registered. There are 21 amphibian species and 25 reptile species living in Serbia, including approximately 20 subspecies. The number of birds in all categories (breeding birds, birds which spend winter in Serbia, those which are registered when migrating, potentially present birds) is approximately 360, while there are 343 bird species of international importance. There are 94 registered mammal species, making 50.51% of the total European teriofauna. Of that number, 68 species are found in the Serbian Preliminary Red List of vertebrates, with 16 species in the European Red List.

The first Red Book in Serbia, the Red Data Book of Flora of Serbia–Extinct and Critically Endangered Species, was published in 1999. The Red Book of Butterflies of Serbia (*Lepidoptera: Hesperioidea and Papilionoidea*) was released in 2003, followed by the Red Books of Fauna (I—amphibians and II—reptiles), published in 2015. Concerning vertebrates, only a Preliminary List of Species of Vertebrate Red Book was developed in 1990–1991, as the starting point for the development of a comprehensive Red List of vertebrates. Currently, there is an ongoing project financed by the Ministry of Agriculture and Environmental protection, 'Development of the Red Book of plants, animals and fungi in the Republic of Serbia' (2015–2017), which will further the preparation of Red Books. The Red Book of Birds is in its final phase of preparation.

At the broader regional level, species and habitats in the Serbian part of the Carpathians were assessed for the Carpathian Red List of species and habitats, drafted within the project 'Bioregio Carpathians' (2014).

In 2003 the Ministry of Science and Environmental Protection initiated the project "Harmonization of the national nomenclature in habitats classification with international community standards". One result of this project was the formation of the first integral Classification System of the Republic of Serbia's Habitats, based on the EUNIS Habitat Classification System, which is itself based on analysis of phytocenological, ecological and bio-geographic data, as well as of other relevant data related to nature in the Republic of Serbia. The Republic of Serbia is currently preparing its National Habitat Classification.

Out of 233 habitat types protected in Europe, a total of 73 can be found in Serbia. There are 63 habitat types with a clear presence in Serbia. However, 10 habitat types are still questionable, and must be confirmed through more field mapping.

Fresh water habitats are exceptionally endangered. Fragmentation index of river habitats in Serbia is 0.01895, with significant increase since 1930. Based on data for 43 dams with the existing data on the

year of construction, it may be noted that fragmentation index increased in the period 1930-2010. The largest number of dams are up to 20 m high, while 5 dams are about 100 m high. However, the construction of dams on the Danube resulted in a significant negative effect, primarily on the sturgeon species, which could no longer sail upstream. Catches of Acipenseridae species and eel are observed as an effect of two dams building in Danube.

A total of 126 derivative small hydro power plants have been built in Serbia since 2010. There is a trend of increasing the number of small hydro power plants. However, due to the potentially harmful effect of the derivative small hydro power plant on biodiversity, numerous activities of the civil society associations, local communities and the scientific public to limit the construction of small hydro power plants have been carried out, specifically there is a demand to ban building in protected areas. Also, WWF Adria research showed that slightly more than 30 % of the analysed rivers were identified as best-preserved and most valuable ones for nature protection. This clearly indicates that most of the river ecosystems have been significantly altered and disturbed, and that it is necessary to invest significant effort to keep the remaining preserved habitats from further degradation.

Ecosystem services are increasingly being considered in environmental and conservation planning, although valuation of ecosystem services in Serbia is still in the initial stages. The concept is still not widely accepted by the public and there is no adopted methodology or system for implementing such research. However, a number of site-specific studies on the valuation of biodiversity and awareness raising projects have been conducted in recent years, i.e.:

- The Institute for Nature Conservation of Vojvodina Province implemented the project 'Application of a principle of sustainable use of areas important for conservation of biodiversity within ecological network in the Autonomous Province of Vojvodina' in 2011.
- A study for valuation of ecosystem services was developed for the Koviljsko-Petrovaradinski Rit Special Nature Reserve in the framework of the UNDP/GEF financed project 'Ensuring financial sustainability of protected areas' (2015), implemented by the Institute for Nature Conservation of Vojvodina Province.

Several other region-wide projects included promotion and awareness raising of the valuation of ecosystem services in Serbia. The project 'Biodiversity and ecosystem services for local sustainable development in the Western Balkans' (2009–2013), was implemented by the European Centre for Nature Conservation, Regional Environmental Centre and local authorities of 18 municipalities in the SEE, focused on raising awareness of local people on the value of nature. One of the results of the 'Danube Payment for Ecosystem Services (PES) project: promoting payments for ecosystem services and related sustainable financing schemes in the Danube basin', implemented by WWF, with the financial support of the GEF through UNEP and the European Commission, was the Analysis of PES Needs and Feasibility in Serbia (2012).

Serbia has 62 Important Plant Areas (IPAs). 31 qualified through all three criteria, including criterion B, indicating the presence of at least 600 native plant taxa within the IPA. Approximately 40% of the total IPA area is covered by forest (mostly broadleaved) and semi-natural grassland habitats cover almost 30%.

56% of Serbian IPAs are nationally protected in full or in part - nearly half at a higher level of protection. 44% of IPAs are not under protection and frequently exposed to anthropogenic threats. These unprotected IPAs are currently under evaluation and may be proposed for protection in near the future. The most frequent threats to Serbian IPAs are land abandonment, fragmentation and invasive species but the most acute threats come from deforestation and water extraction.

Northern lowland Serbia consists of the south east Pannonian plain where wide alluvial lowlands and surrounding loess plateaus are found along the Danube, Sava, Tisa, Tamiš and Begej rivers. Two mountains are found here: Fruška Gora (538m) and Vršačke planine mountains (640m). Southern Serbia is mountainous except the valleys of the Velika, Morava, Western Morava, Southern Morava, Nišava and Ibar rivers. The mountains belong to four systems: Dinaric Alps, Carpathian-Balkan mountains, the Rhodopes and Scardo-Pindhic. In the east., old ignaceous rocks and limestone and siliceous bedrocks support croplands with some steppe and sand-steppe vegetation with remnants of diverse continental psammophyte vegetation. West and central Serbia is formed of limestone, serpentine and ignaceous rocks.

Along the main rivers, alluvial forest of white willow, white and black polar, ash and pedunculate oak, as well as small areas of marshes with rich macrophyte flora, occur.

Mountainous regions of Serbia are covered by mixed oak forests, mainly by Hungarian-Turkish oak and Sessile oak-Hornbeam communities. The vegetation belts above are composed of beach or beech-silver fir forests. Subalpine forest is either spruce forests in the continental mountains and Macedonian or White-barked Pine. The limestone and serpentine gorges and canyons hold a very rich flora of numerous relict and endemic taxa.

Mountain areas above the tree line are also rich in diverse chasmophytic, scree and rocky ground communities composed by endemic and Alpine orophytes.

Every IPA has at least one high or moderate threat affecting it which has the potential to destroy habitat or cause sudden decline in the populations of threatened species. The most important threats are directly related to human activity: water extraction, drainage, creation of reservoirs, expansion of agriculture in lowland areas, fertilisation of natural meadows in mountain areas and poor forest management (both afforestation and deforestation).

4.1.7.2 Protected areas

There is a total of 1193 protected areas in Croatia, 783 Natura 2000 sites - 38 Special Protection Areas (Birds Directive) and 745 Sites of Community Importance (Habitat Directive) - as well as 410 sites designated under national laws.

Nationally-designated protected areas

According to the Croatian Nature Protection Act, a protected area is defined following IUCN's definition (Dudley, 2008). Croatia has designated 410 protected areas divided into nine national protected area categories, totalling 821.330,01 ha. This accounts for 9,3 % of the total country surface protected. If compared to the global and European levels, Croatia is significantly behind in protecting the marine ecosystems, as less than 2% of the marine area is protected.

Different types of protected areas are: Strict Reserve, National Park, Special Reserve, Nature Park, Regional Park, Natural monument, Significant Landscape, Park-Forest and Horticultural monument.

Table 8. Overview of the current state of protected areas in the Republic of Croatia

Category of Protected areas	number PA %	Area (ha)	surface RH
STRICT RESERVE	2	2.413,57	0,03
NATIONAL PARK	8	97.958,72	1,11
SPECIAL RESERVE	79	40.770,33	0,46
NATURE PARK	12	494.996,05	5,62
REGIONAL PARK	2	102.556,31	1,16
NATURAL MONUMENT	79	203,85	0,002
SIGNIFICANT LANDSCAPE	79	137.809,59	1,57
PARK - FOREST	27	2.866,10	0,03
HORTICULTURAL MONUMENT	120	1016,11	0,01
Area of protected areas within other protected areas		59.323	
TOTAL ZP IN RH	408	880.590,63	10

Out of the total number of protected areas, 41 are in the Programme area, of which 3 are Nature Parks. Part of Lonjsko polje Nature park is located in Brod-Posavina County, Kopački rit Nature Park in Osijek-Baranja County, and Papuk Nature Park in Požega-Slavonia County.

Table 9. Protected areas in Programme area

Category of Protected areas	Number PA %	Area (ha)
SPECIAL RESERVE	10	7.357,51
NATURE PARK	3	45.347,27
REGIONAL PARK	1	26.080,88
NATURAL MONUMENT	4	1,39
SIGNIFICANT LANDSCAPE	5	20.426,08
FOREST PARK	1	16,69
HORTICULTURAL MONUMENT	17	196,6
Area of protected areas within other protected areas		6.280,64
TOTAL ZP IN RH	41	93.145,78

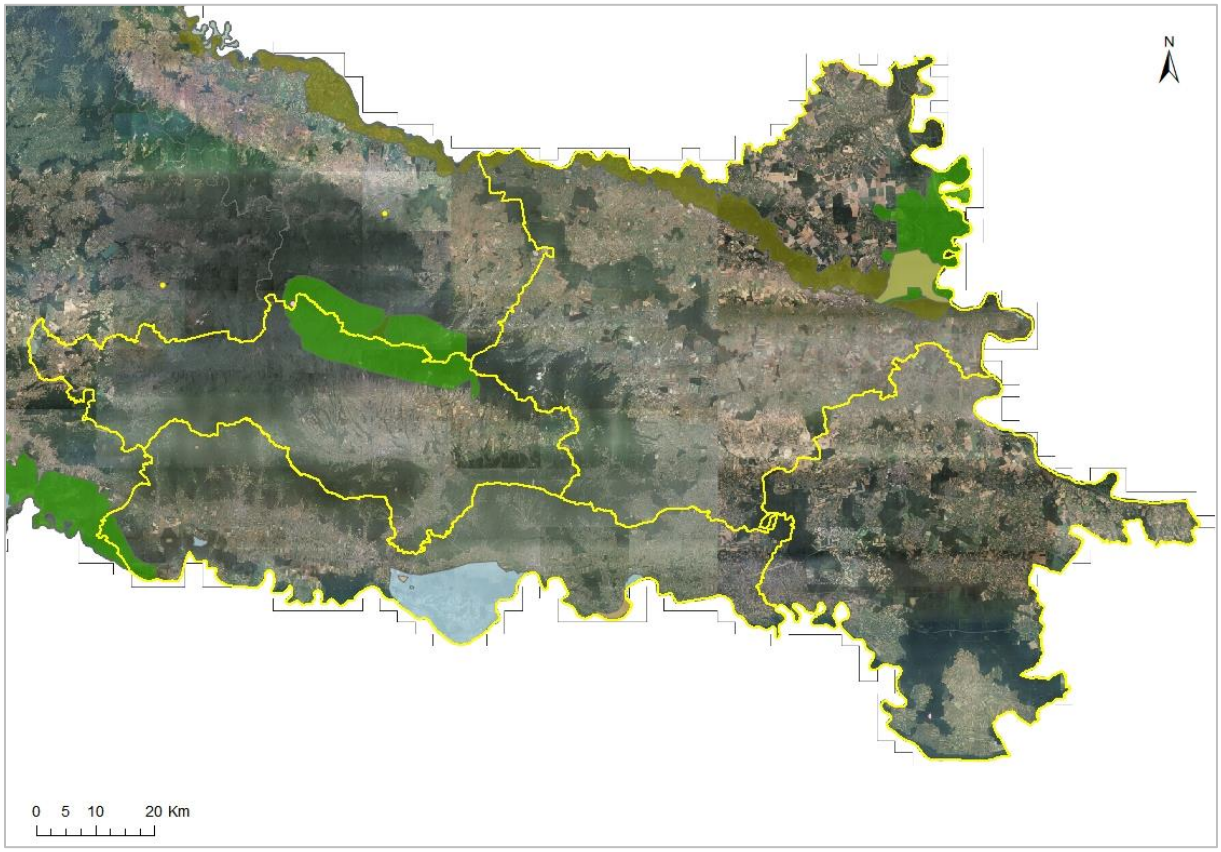


Figure 16. Geographical distribution of protected areas in Croatia

According to data from the Central Register of Protected Natural Areas of Serbia, there are 464 protected areas in Serbia, covering 6,54% (5.787,05 km^2) of the country's territory. The Nature Protection defines the following protected natural assets: protected areas, protected species and movable protected nature documents. Seven types of protected areas in Serbia include: national park, nature park, protected landscape, strict nature reserve, special nature reserve, nature monument, and protected habitat. The largest surface falls under the category of nature park.

Table 10. Number and surfaces of protected areas in Serbia

Category of Protected areas	Number	Area (ha)
National Parks	5	1.502,24
Nature Parks	18	2.143,59
Landscapes	20	656,06
Reserves	70	1.341,69
Protected habitat	4	14,14
Nature Monument	349	129,33
TOTAL	464	5.787,05

Source: IUCN, Summary of national assessments of the state of nature conservation systems in South-Eastern Europe, 2018, https://portals.iucn.org/library/sites/library/files/documents/2018-040-En-Asses.pdf

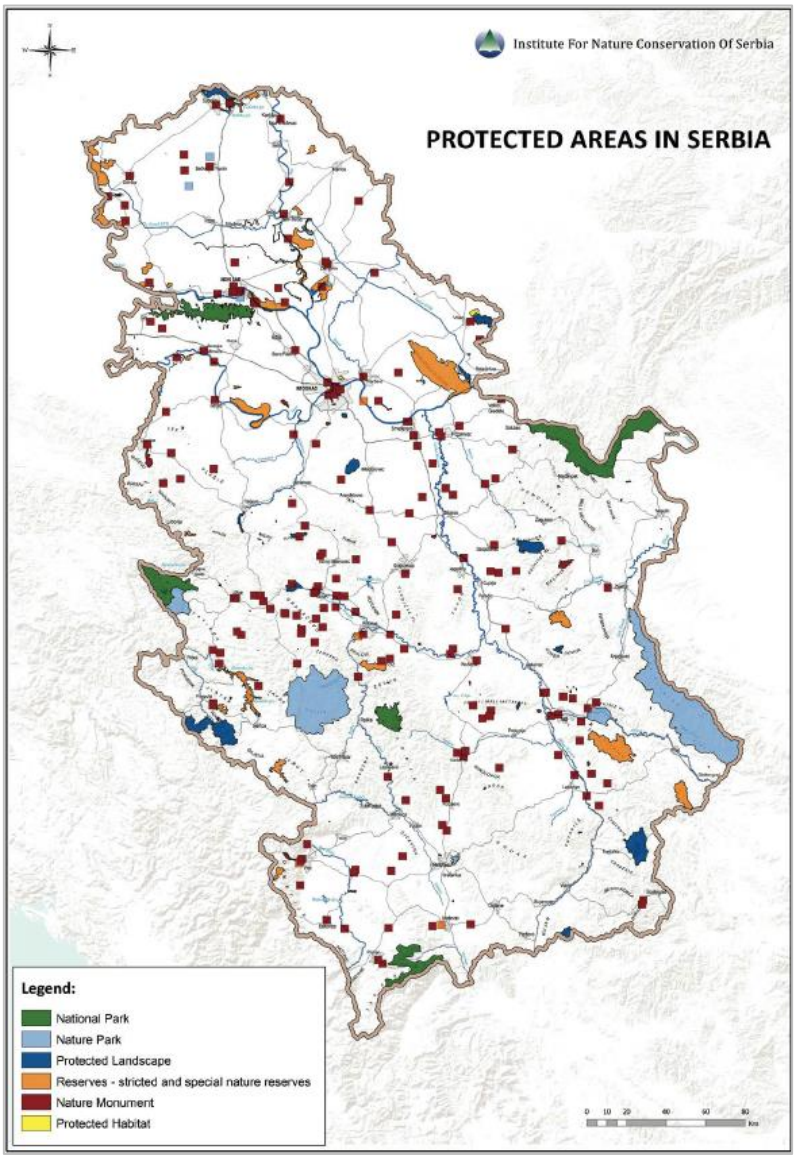


Figure 17. Geographical distribution of protected areas in Serbia

Natura 2000 sites

Natura 2000 is the largest coordinated network of protected areas in the world, which is one of the outstanding EU achievements. It stretches across all Member States and currently covers over 18% of the EU's land area and more than 6% of its sea's territories. The Natura 2000 biogeographical process encourages cooperation and makes sure that protection measures can be tailored to suit specific regional needs.

Natural ecosystems and their vital services are under pressure from urban sprawl, intensive agriculture, pollution, invasive species and climate change. EU nature legislation, most notably the Birds Directive and the Habitats Directive, forms the backbone of biodiversity policy and the legal basis for nature protection network.

The Birds Directive (Directive 79/409/EEC) adopted in 1979 is the oldest piece of EU legislation on the environment and one of its cornerstones. Amended in 2009, it became the Directive 2009/147/EC. It laid down the basic requirements for the protection of all naturally occurring wild bird species in EU. Habitat loss and degradation are the most serious threats to the conservation of wild birds. The Directive therefore places great emphasis on the protection of habitats for endangered and migratory species. It establishes a network of Special Protection Areas (SPAs) including all the most suitable territories for these species. Since 1994, all SPAs are included in the Natura 2000 ecological network, set up under the Habitats Directive 92/43/EEC.

The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Some 200 rare and characteristic habitat types are also targeted for conservation in their own right. Adopted in 1992, the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements.

Natura 2000 sites in Croatia cover 257 species and 77 habitats from the nature directives. The number of species and habitats protected in each site varies depending on the location of the site, the biodiversity in the region, the designation being used, and the features the site is being created to protect. The Natura 2000 network covers 36.67% of the land territory and 16. 26% of inland waters and territorial sea (29.34% of the total area of the Republic of Croatia).

The network includes 783 Natura 2000 sites - 38 Special Protection Areas (Birds Directive) and 745 Sites of Community Importance (Habitat Directive). Around one quarter of Natura 2000 surface (26.14%) is already protected in Croatia. 58 of Natura 2000 sites are in the programme area.

Table 11. Natura 2000 network in Croatia

	Land surface / km²	% of the country's land surface	Coastal marine waters/ km²	% of the country's internal and territorial waters	Total surface / km²	% of the country's total surface	Number of Natura 2000 sites
Sites of Community Importance (SCI)	16.059,57	28.38	4.903,12	15.44	20.962,69	23.73	735
proposed Sites of Community Importance (pSCI)					1.827,02		5
Special Areas of Conservation (SAC)	624,23	1.10	193.99	0.61	818,220	0.93	5
Special Protection Areas (SPA)	17.107,55	30.23	1.040,13	3.28	18.147,68	20.54	38
Natura 2000 total	20.754,97	36.67	5.204,63	16.39	25.959,60	29.38	783

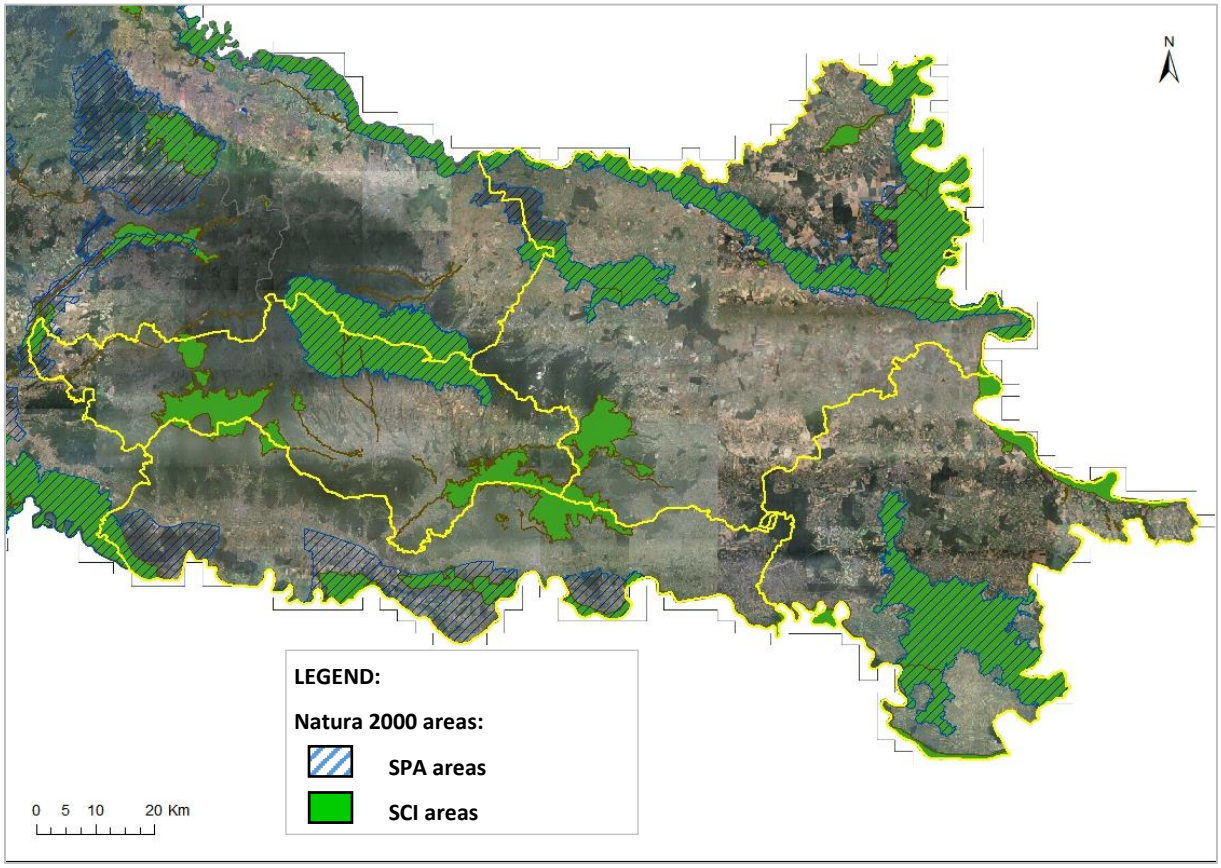


Figure 18. Natura 2000 network sites in the programme area (Croatia)

Following the Decision of the Croatian Ministry of Economy and Sustainable Development (hereinafter: MINGOR), the Programme does not require Main Assessment as a part of the Appropriate Assessment as significant adverse impacts on ecological network may be excluded.

Pursuant to Article 38 of the Law on Nature Protection, Ecological network of the Republic of Serbia is established as a functionally and spatially connected entity in order to conserve habitat types of particular importance for the protection, renewal and/or improvement of degraded habitats and for the conservation of habitats of wild species of flora and fauna. The Ecological network comprises of ecologically important areas of national and international importance and ecological corridors, and it represents an assembly of functionally or spatially connected ecologically significant areas of national and international importance, which through their biogeographic presence and representativeness significantly contribute to the conservation of biodiversity and sustainable utilization of resources, including ecologically significant areas of the EU Natura 2000. The Regulation on ecological network ("Official Gazette of RS", No. 102/2010) regulates ecological network and provide guidelines for management and funding thereof. The ecological network covers 18,492.01 km² or 20.93 % of Serbia's territory. Biodiversity conservation policy of the European Union is based on the Birds Directive and the Habitats Directive. The process of establishment of NATURA 2000 network in Serbia is ongoing.

4.1.7.3 Internationally important areas

In Croatia, Plitvice Lakes National Park has been on the UNESCO World Heritage List since 1979 and along with Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe belong to World natural Heritage Sites in the country. Velebit Mountain Nature Park is a UNESCO Biosphere Reserve (1977), while the Regional Park Mura-Drava-Danube was designated as the Mura Drava Danube transboundary Biosphere Reserve in 2012, shared with Hungary. Five Ramsar Sites in Croatia include four sites designated in 1993; the nature parks Kopački Rit, Lonjsko Polje and Mokro Polje including Krapje Đol, Crna Mlaka, Neretva River Delta; and one site designated in 2013; Vransko Lake. Furthermore, international recognition of Papuk Nature Park as Papuk UNESCO Global Geopark adds to the network of diverse internationally designated sites in Croatia since 2015.

A number of protected areas are under consideration for applying for international recognition. Kornati National Park, Velebit Mountain Nature Park and Telašćica Nature Park are on the Tentative List of World Heritage Sites. The Lika field and the Ogulin-Plaški plateau are being evaluated as possible Ramsar Sites. Mljet and Kornati national parks, and Telašćica and Lastovo otočje nature parks are also being considered for the List of Specially Protected Areas of Importance for the Mediterranean, under the Barcelona Convention.

At the regional level, Croatia is currently engaged in preparation of a nomination 'Dinaric karst' for inclusion on the Tentative List of the UNESCO World Heritage Convention, jointly with BiH, Italy, Montenegro, Serbia and Slovenia. Another similar initiative currently in realization is related to the European beech forests serial site.

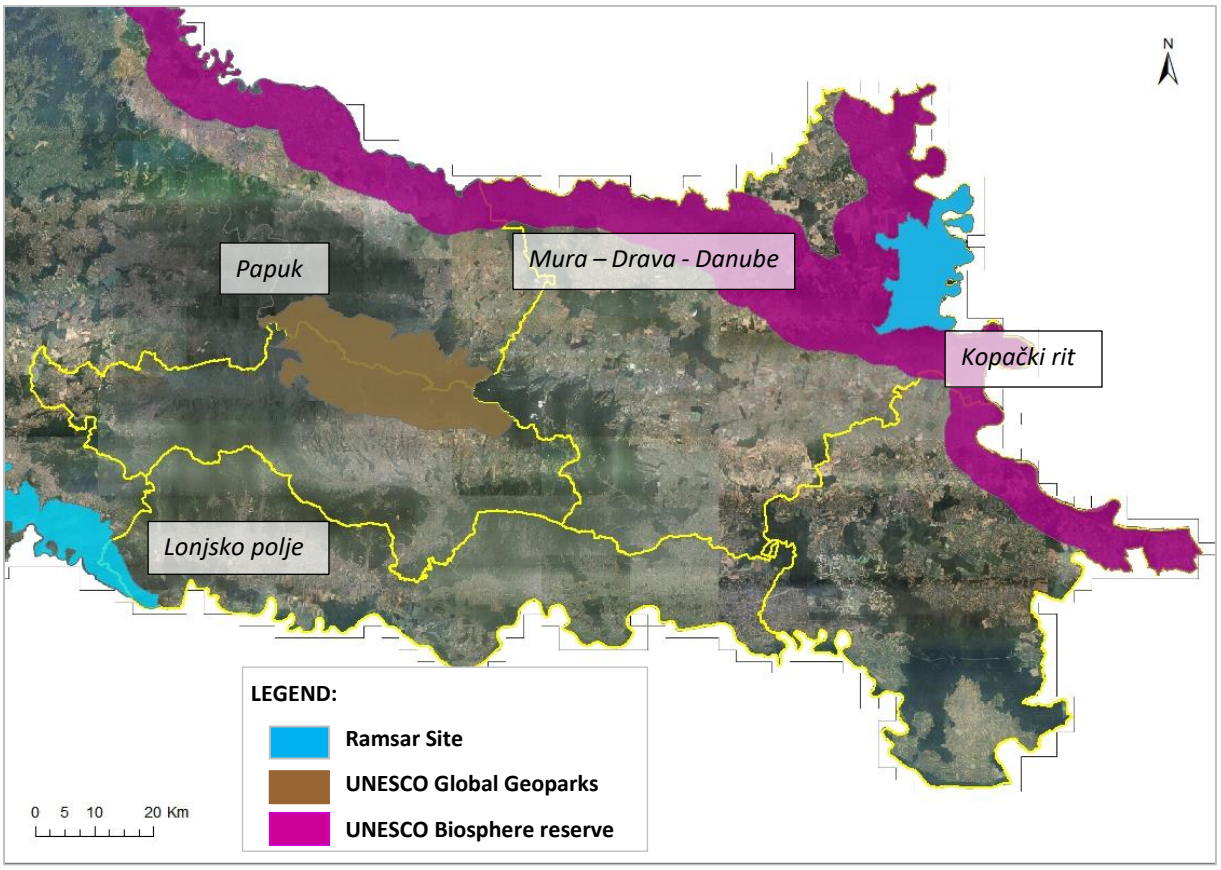


Figure 19. Internationally recognised protected areas in programme area (Croatia)

Based on the implementation of international conventions and programmes, Serbia has so far identified the following areas: nine Ramsar Areas (in accordance with the Ramsar Convention, i.e. the Convention on the Protection of Wetlands with international importance, particularly as habitats of wetland birds, they have been declared as internationally important wetlands); areas of international importance for plants (61 Important Plant Areas), areas of international importance for birds (within the framework of the Important Bird Area/IBA programme - there are 42 areas), and selected areas for prime butterflies (Prime Butterfly Areas/PBA - 40 areas), as well as 61 Emerald areas (nominated for the "Emerald" European Ecological Network, comprised of areas of special interest for the conservation of European wild flora and fauna and their natural habitats, based on the Bern Convention). These areas are part of the Serbian Ecological Network which includes 101 natural goods (the Ecological Network Regulation, "Official Gazette of the Republic of Serbia", no. 102/10).

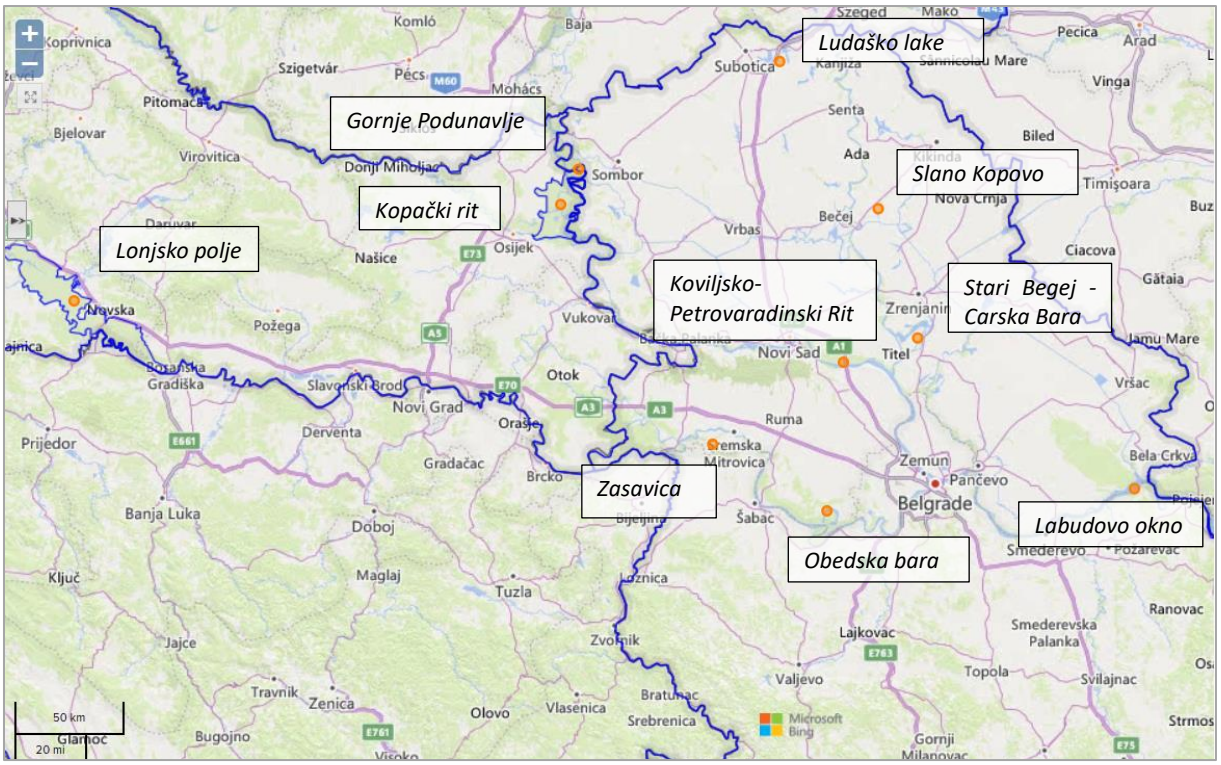


Figure 20. Ramsar sites in the program area
Source:https://rsis.ramsar.org/rissearch/?f%5B0%5D=regionCountry_en_ss%3ASerbia&f%5B1%5D=regionCountry_en_ss%3ACroatia&pagetab=0

In Serbia, two Biosphere Reserves have so far been designated, namely "Golija - Studenica" in 2001 and "Bačko Podunavlje" in 2017. It is also planned to establish the first transboundary Biosphere Reserve in our country, which would include the Tara National Park and the Šargan - Mokra Gora Nature Park in the Republic of Serbia and the Drina National Park that has recently been designated in the Republic of Srpska (Bosnia and Herzegovina).

4.1.7.4 Threats to biodiversity and ecosystem services in the Programme area

Habitats and wild species in Croatia are predominantly threatened by anthropogenic activities due to the use of natural resources, or due to takeover and use of space. On the other hand, disappearance of certain human activities, such as mowing or grazing, can also have a negative impact on biodiversity and result in natural succession, change in ecological conditions and disappearance of species. All types of grassland are endangered as a result of abandonment of extensive agriculture. Wet habitats, such as peat bogs, are particularly threatened.

The construction of transport infrastructure (roads, railways, navigation channels) represents one of the key reasons behind habitat fragmentation in the Republic of Croatia. Impacts of increasing traffic can be seen in increased noise, consequential disturbance of animals and pollution along roads and railways, resulting in unfavourable living conditions in the surrounding habitats. Additional consequences include road kills, inability of animals to access natural resources, and intensified

spreading of invasive species. Habitat fragmentation is also caused by increasing urbanization and intensive agriculture.

Projects that affect upon integral units of forest areas have a particularly significant impact. Forests are threatened mainly by pollution, inappropriate water management, transportation and other infrastructure, conversion of forest into agricultural land and for infrastructure construction, deforestation, fragmentation, forest fires and uncontrolled cutting in private forests.

The major threats to freshwater ecosystems include the construction of hydroelectric power plants, accumulations, construction of drainage channels for irrigation, stocking by alien species and introduction and translocation of invasive alien species, as well as pollution.

Dams represent physical barriers that interrupt the migrations of organisms along rivers and watercourses, and they impact upon changes in habitat conditions both upstream and downstream. As a consequence of habitats degradation including change of biotic and abiotic characteristics, the most threatened vertebrate group are freshwater fish species. The impact of dams is present along most of the Croatian rivers, and the consequences include the disappearance of certain fish species and changes to the quantitative and qualitative structure of fish communities. Regulation of watercourses and changes in the water regime represent the key threats to all water dependant habitat types such as river gravels, sand shores and muddy shores, karst watercourses with tufa-creating communities and tufa barriers, as well as all types of wet grasslands and floodplain forests.

Invasive Alien Species (IAS) are one of the key threats to biodiversity in the Republic of Croatia. They also have a direct negative impact on the economy, due to the harm caused to infrastructure and hydro energy facilities, but also an indirect negative impact, due to decreased labour effectiveness caused by the health problems associated with allergies.

Climate change is also considered one of the key reasons of the loss of biodiversity at the global level due to impacts on nesting times, migrations and distribution of species. These effects have already been detected in the Republic of Croatia, for example in the periods of arrival of certain migratory bird species and the beginning of their nesting.

One of the most important direct mechanisms of nature protection implemented in other sectors is the integration of nature protection requirements in physical planning documents and in natural resource management plans. Inclusion of green infrastructure in spatial planning can significantly contribute to mitigating a decrease in habitat fragmentation.

The integration of nature protection requirements, nature protection measures and conservation guidelines for the ecological network is also ensured in the process of adoption of water area management plans, and in the preparation and implementation of projects and works in water management. The Water Act itself requires the achievement of good ecological status of waters, which includes chemical, biological and hydromorphological elements of water quality. When it comes to watercourses with disrupted hydrological status due to performed works, provisions of the Water Act require the implementation of revitalization/restoration measures. Provisions on the integration of nature protection requirements and nature protection measures also pertain to the agricultural sector.

However, there is a need to strengthen the principles of conservation and sustainable use of natural resources in sectoral plans, strategies, programmes and policies, and in natural resource management plans and physical planning documents. Moreover, it is necessary to define effective conservation measures, including for species and habitat types sensitive to climate change, and integrate them into sectoral documents, in order to get sectors more involved in management planning and in the management itself, including the financing of management.

The Strategy and action plan for the protection of biological and landscape diversity of the Republic of Croatia from 2008 has not dealt with ecosystem services directly, and this topic was tackled comprehensively for the first time in the Report on the State of Nature in the Republic of Croatia for the period 2008-2012. However, in the early 1990s, this topic was recognized within the services provided by forest ecosystems, as reflected in the concept of "non-market forest functions" that was integrated in the Forest Act. The concept of ecosystem services has a major potential as an added value in the existing approach to nature protection, but it is still not sufficiently recognized in various sectors. Inter alia, the goals are to make natural values more visible, in order to use state-of-the-art approaches and scientific knowledge to ensure the adoption of high-quality strategic decisions at the local and national level, aligned with sustainable use of natural resources.

Several studies on the topic of ecosystem services have been published in the Republic of Croatia so far. Other activities include the publication of a study entitled Mapping and Assessment of Ecosystems and Their Services in the Republic of Croatia, also intended for the wider public, as well as the Ecosystem Map of the Republic of Croatia, which is available via the GIS web service of IENC. However, more work is needed in the field of ecosystem services, including revision of map of ecosystem services as well as preparation of the list of priorities for restoration of ecosystems and their services.

The main pressures on habitats in Serbia are caused by human activities, such as watercourse regulation, water regime modifications, construction and tourism, while species are mostly threatened by direct habitat destruction. Excessive use through commercial harvesting of plants and fungi, or through fishing, exposes the populations of a number of wild species to danger. Intensive agriculture and tourism, pollution of water, soil and air, and poaching constitute significant threats to wild species. A decline in traditional low-productivity agriculture has also been identified, causing transformation of previously large pastures and meadows into wooded groves, with their loss of biodiversity. The impacts of climate change, with recorded influences on reproductive periods and success, migrations, and changes in species distribution, should not be disregarded. Most of these pressures are relevant for protected areas. Further threats in protected areas are related to construction and tourism development. Also, protected areas note a constant decrease of financing by the state. In recent years, this has resulted in insufficient employment of new nature conservation experts and a lack of continuous education for existing staff. Such a situation calls for the need to find alternative funding sources.

Due to the effect of numerous negative anthropogenic factors, in recent period the trend of vulnerability and loss of biodiversity has been registered in Serbia.

Official administrative measures in the Republic of Serbia towards aimed at halting the trend of vulnerability and loss of biodiversity is the implementation of relevant conventions, especially the Convention on Biodiversity, as well as Bern, CMS, CITES and others, and within national system, through the Law on Nature Conservation and related laws and bylaws.

Basic problems in the conservation and protection of biodiversity in Serbia are: infringement of prescribed regimes and measures for the protection of plants and animals, landscape and geological heritage, primarily due to excessive exploitation of natural resources, poor coverage by urban planning documentation and the prominent illegal construction of facilities in protected areas, insufficient public investments in the conservation and sustainable development of the most representative areas and key types of biodiversity in the Republic of Serbia, radical change of habitat conditions, fragmentation and/or destruction of natural ecosystems due to various forms of anthropogenic impacts, change of land use of woodland and agricultural areas, illegal and/or incompetent picking of certain commercial species (mushrooms, herbs, etc.), insufficient implementation of regulations by competent inspection services, insufficient support for keeping cost effective primitive breeds, species, sorts and types of domestic animals and grown plants in the ambient of constant modernization of the composition of breeds and sorts, which brings about the reduction of the diversification of genetic material in agriculture under market pressure.

4.1.8 Cultural heritage and Landscape

4.1.8.1 Historical development of the area

The programme area had been continuously inhabited throughout the history from the very beginning of the Early Iron Age in 8th century BC to the arrival of the Celts in the 4th century BC and shared common cultural and historic impacts. The Romans inhabited the area in the early 1st century and left great marks in the area by connecting it by rivers, roads, developing transport and commerce. During the Great Migration, the area witnessed passage of the Huns, Ostrogoths, Avars, until the arrival of the Slavs in 7th century, who settled there permanently. In the 9th century, the Serbian part of the territory became a part of the Bulgarian empire, while the Croatian territory was a part of the Pannonian duchy ruled by Croatian dukes and fell under Hungarian rule in the 13th century.

In the late 19th and early 20th century, both sides of the border were under the Habsburg rule for which reason the main towns share the common architectural style. Secession became the focus point of a cross-border project aiming at increase the visibility of valuable cultural heritage of that age and to connect visual identities of Osijek (Croatia) and Subotica (Serbia).

Cultural heritage in the Programme area includes a large number of protected immovable cultural property, both fully protected and under preventive protection or proposed for protection. Immovable cultural properties include categories as: individual cultural property, cultural and historical ensembles, cultural landscapes, archaeological and memorial sites. According to the Register of cultural property of the Republic of Croatia, in the Programme territory there are 1179 cultural assets 947 of which are immovable (individual structures, cultural and historical ensembles, and archaeological sites), 194 movable and 38 of which are intangible. Protected cultural property is presented in the **Table 12** below. According to the Information System of Immovable Cultural

Properties of Republic of Serbia, in the Programme territory there are 646 cultural properties which are divided into categories of: monument of culture, significant site, archaeological site and spatial cultural-historical site. **Table 13** shows an overview of protected properties within stated categories in the Programme territory.

Table 12. Overview of immovable cultural property per Croatian counties in the Programme territory.

County	**Immovable cultural property**		
	Individual structures	**Cultural-historical ensembles**	**Archaeology**
Osječko-baranjska county	260	13	151
Vukovarsko-srijemska county	148	9	84
Brodsko-posavska county	68	2	47
Požeško-slavonska county	115	5	45
Total	945		

Table 13. Overview of immovable cultural property per Serbian districts in the Programme territory.

District	**Immovable cultural property**			
	Monument of Culture	**Significant Site**	**Archaeological Site**	**Spatial Cultural-Historical Site**
West Bačka	58	1	2	3
North Bačka	81	4	1	3
South Bačka	158	8	12	11
Mačva	71	9	4	3
Srem	177	20	16	4

Source: https://nasledje.gov.rs/index.cfm?jezik=Engleski, accessed on 5th of April 2022

On the large and strategic scale of this SEA report, the most important cultural properties are those protected on large scale. In the Programme area, there are no properties that are inscribed on the UNESCO World Heritage List, but there are a few sites that are on the Tentative List and those include:

- Historical-town Planning Ensemble Tvrđa (Fort) in Osijek (submitted in 2005.) – Croatia

- Cultural landscape of Bač and its surroundings (submitted in 2019.) – Serbia
- Frontiers of the Roman Empire – the Danube Limes (submitted in 2020.) – both Croatia and Serbia

The Spatial Plan of Republic of Serbia (hereinafter: SPRS) also lists forts in Petrovaradin and historical ensembles and settlements of Sremski Karlovci as cultural properties listed on the Tentative List of UNESCO World Heritage.

The majority of the Programme territory consists of rural areas, so it's important to recognize the everyday living (cultural) landscapes and values of these non-protected areas are sensitive to change and important to notice as part of the environmental protection objectives.

In the Programme area, cultural heritage faces mostly the same problems as global or regional spatial trends. The SPRS and the Strategy of Protection, Preservation and Sustainable Economic Use of Cultural Heritage of Republic of Croatia list general problems in the sector of cultural heritage:

- Lack of management plans and efficient policies that promote protection and sustainable use of cultural heritage as a development resource
- Constant pressures and impacts from modernization trends such as uncontrolled or illegal construction, urban sprawl, big infrastructural projects, etc.
- Lack of perceiving and assessing cultural heritage sites in its context and surroundings which leads to degradation of integrity of the sites
- Lack of significance of characterization of cultural landscapes as background documents for spatial plans and strategic projects
- Inadequate treatment of cultural heritage in spatial planning: lack of analysis and valorisation
- Endangerment of entire historical ensembles, not just individual properties by pressures of modern age
- Negative demographic trends in rural areas lead to decay of properties due to abandonment of areas, lack of maintenance and loss of use, etc.

4.1.9 Landscape

The programme territory is located in the very eastern part of Croatia – Slavonija, Srijem and Baranja which borders with northwest Serbia and includes Vojvodina as Serbian part of programme territory.

The spatial coverage is mostly defined by river plains, and the overall landscape is mostly characterised by lowland river plains of meandering Drava and Danube. This created big areas of flat terrain and wide floodplains in both countries that extend on the majority of the Programme territory which are, in accordance with the above, mostly used as agricultural areas. The area of the Programme is mostly rural in character and has more than a few urban areas as development centres such as Novi Sad, Osijek, Slavonski Brod, Sombor, Subotica and so on. In the Programme territory, significant relief forms of higher altitudes, vertical and horizontal dissections include Papuk, Psunj, Požeška gora on the very west part of Programme territory, Fruška gora in the central eastern part and Boranja, Jagodnja and Sokolska planina towards the southeast part of the Programme territory.

Because of the sinuous and meandering character of rivers in this area, the most common characteristics of Drava, Sava and Danube channel patterns in the Programme territory is a large number of cut off meander bends, oxbows, deep pools etc. Dominant slope of these areas is quite low since the relief is mostly composed of plains. As the rivers and its characters are the fundamental element of the Programme landscape, it's important to mention that the Mura – Drava – Danube biosphere reserve protected by UNESCO (MaB) extends through the centre of the area, composes the majority of natural and territorial borders and is one of the most important areas to protect internationally.

The Spatial Plan of Republic of Serbia (hereinafter: SPRS) recognizes main regions of national landscapes, in which the Programme area falls into the Vojvodina – Pannonian – Podunavlje region, which includes, mountains of western Serbia, alluvial plains of Danube and Tisa, Deliblato sands, Vršac mountains, Bačka loess plateau, mountain range of Fruška gora and Posavina landscape macroregion.

According to the Landscape regionalization of Croatia according to natural features, the landscape of the Programme area falls under the regions of lowland areas of northern Croatia, Pannonian mountains and partly into the Bilogora – Moslavina area.

The current state of landscapes in the area is very dependent on spatial trends, legislative framework and spatial planning praxis of the countries that manage the landscapes. Negative global spatial trends are also visible and prominent in landscapes of the Programme area which results in degraded landscapes, loss of fundamental specific landscape features, degradation of the structure of everyday landscapes and ambiental values of landscapes.

Some of the main factors which pose a threat in physical landscapes and landscape management include illegal and inappropriate construction and urbanization (especially construction of buildings like residential properties, tourist and recreational facilities), scattered development and construction, large infrastructural projects such as roads, water management facilities, agricultural trend such as meliorations, monocultures, intensification of production and consolidation of agricultural mosaic patterns, hydropower plants, etc. It's important to mention negative processes that significantly affect rural landscapes – deruralisation and deagrarisation which lead to loss of characteristic rural landscape elements, succession of traditional agricultural fields, abandonment of traditional rural architecture,

etc. Rural landscapes can usually be more sensitive to change because of the high proportion of nature in its structure and because of small rural living complexes with traditional features.

Not taking landscape character into consideration, its target values, qualities, typology and the sensitivity of the landscape during planning various activities causes constant changes to the landscape and loss of spatial identity.

4.1.10 Human health and safety

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO Constitution, 1946). It is by now well acknowledged that health is affected by policies, plans, programmes and projects planned and implemented not just within the health sector, but in other sectors as well. This is in line with the broader concept of environmental and social determinants of health and provides space for action outside health sector to prevent negative impacts on human health, and to promote positive ones.

Today we also acknowledge the key role that natural and built environment has on human health, especially the impacts generated in interaction with environmental components, such as air, water or soil by which hazardous substances and contaminants come into contact with people. In the context of growing spatial development and urbanization, the impact of noise, light pollution and non-ionizing irradiation are becoming increasingly important.

Air

According to air quality maps for PM 10, PM 2.5. and NO_2, the air quality in the programme area is generally good. Although according to available data from EEA, no major air pollution was recorded in the programme area, certain settlements are certainly burdened with emissions of harmful substances into the air due to large numbers of inhabitants, industry, major traffic routes and proximity to major cities as major sources of pollution.

While generally good in the programme area, further improvements are needed to reduce adverse effects of pollution generated from fossil fuel combustion from heating and transport.

Soil

Soil is a key element of our environment its potential degradation can have major implications for both air and water quality, as well as human well-being. It can affect the wider environment, including climate change. The most dominant pressures on soil in the programme area are agricultural practices and changes in land use and land management, including spreading of urbanization. Such practices result in deterioration of soil quality such as loss of organic matter, soil loss, contamination, erosion and landslides.

Water

Water supports wetland habitats and species, and is essential for our health, in addition to supplying households and industry with drinking water. Risk to human health may arise from flood events and poor quality private water supplies. The most important pressures come from water pollution due to

discharge of untreated urban waste water, abstraction, energy production, flooding and introduction and spread of invasive and non-native species.

Groundwater is a major source of drinking water and maintaining its quantity and quality is therefore vital for both humans and water-dependent ecosystems. The programme area is well situated in terms of water supply, but to maintain such a state it is necessary to properly dispose of water resources, as well as ensuring safe drinking water for all residents. It is important to protect groundwater from pesticides and nitrates from the soil. In this process, the implementation of water regulations is important, as well as investment in infrastructure for monitoring and management of surface and groundwater.

Climate change

There are three major characteristics of the changing climate in the programme area: increase in total average climate in total average temperature, decrease in precipitation, although not radical and increase in frequency and intensity of extreme weather events. Climate change projections for programme area include a high probability of continuing temperature increases, along with more frequent and prolonged drought.

The greatest impacts of the climate change are expected on human health, ecosystem, water resources and sectors including energy and infrastructure and agriculture.

Climate change impacts will affect human health across the region. Heat waves are expected to decrease workers' productivity and increase heat- and air pollution-related mortality. A warmer and wetter climate is also favourable for mosquitos that transmit diseases. Furthermore, extreme floods can directly threaten people's lives and increase the risk of water and vector-borne diseases, as well as other infectious diseases.

While it does not exactly cause conflict, it may be said that it increases pressures, or acts as a risk multiplier. To be more exact, climate change may affect peoples' lives by changing the access or availability of natural resources and lead to unequal economic development, it may put food supply and energy security at risk, and finally, it may also affect food production and increase food price.

Environmental noise

Environmental noise is defined by the Environmental Noise Directive (END) as unwanted or harmful outdoor sound created by human activity, including noise emitted by means of transport, road traffic, rail traffic, air traffic and from sites of industrial activity (EU, 2002). Today it has been proven and accepted that, except discomfort, noise also causes health disorders and various diseases. The END places an obligation on Member States to prepare noise maps and resulting action plans to decrease noise levels in the exposed areas and to select quiet areas, that is acoustically friendly areas.

The most intense impact of noise on humans is caused by traffic, especially road traffic. Noise from road traffic is present during the day and night and is a threat to the health and quality of life of residents along main road routes. Bypasses are generally not built in the settlements, which means that noise from traffic corridors inevitably exists.

Allowed outdoor noise levels according to the purpose of the space are presented in the table below (**Table 14**).

Table 14. Maximum allowable immission noise assessment levels in the open and close space for Serbia and Croatia

CROATIA			
Bread area	**Space purpose**	**Maximum permissible rated noise levels of mission L_{RAeq} u dB(A)**	
		for the day (L_{day})	**for the night (L_{night})**
1.	Zone of protected quiet areas intended for rest and recovery including national park, special reserve, nature park, regional park, nature monument, significant landscape, forest park, monument of park architecture, quiet areas outside the populated area	50	40
2.	Zone intended for permanent housing and/or residence, quiet areas within the populated area	55	40
3.	Mixed, predominantly residential zone	55	45
4.	Zone of mixed, predominantly business purposes with housing, with occasional housing, predominantly farms	65	50
5.	An economic zone predominantly crafts. Business zones predominantly service, commercial and commercial or utility-service purposes. Catering tourist purpose zone including hotels, tourist resort, campsite, individual catering facilities with accompanying facilities. Sports and recreational purpose zone on land including golf course, riding center, racetrack, winter sports center, tennis center, sports center - baths. Sports and recreational purpose zone on sea and rivers including a well-tended bathing area, water sports centers. Zones of nautical ports including anchorage, boat storages, land marinas, port.	65	55

6.	Economic purpose zone of predominantly industrial production activity. Zones of seaports of state importance for essential activities, zones of seaports of particular international economic importance, zones of seaports of county importance. Zones of river ports of state and county importance.	The noise level from the noise source within this zone and at the boundary with the nearest zone 1, 2, 3 or 4 in which the highest immission noise levels are expected, noise shall not exceed the permitted noise levels at the boundary of zone 1, 2, 3 or 4.	
SERBIA			
1.	Rest and recreation areas, hospital zones and recovery facilities, cultural and historical sites, large parks	50	40
2.	Tourist areas, campsites and school zones	50	45
3.	Purely residential areas	55	45
4.	Business and residential areas, commercial and residential areas and children's playgrounds	60	50
5.	City Center, Craft, Trade, Administrative Administration Zone with Apartments, Zone Along Highways, Highways and City Roads	65	55
6.	Industrial, storage and service areas and transport terminals excluding residential buildings	At the border of this zone, noise must not exceed the limit in the zone with which it borders	
7.	Living rooms (bedroom and living room) in an apartment building with closed windows.	35	30
8.	In public and other facilities, at closed windows: Health institutions and private practice, and in them: sick rooms	35	30
9.	Clinics	40	40
10.	Operating block without medical devices or equipment	35	35
11.	Rooms in children and pupils' vacation facilities, and bedrooms of nursing homes and pensioners	35	30

12.	Educational facilities (classrooms, auditoriums, cabinets, etc.), cinema halls and reading rooms in libraries	40	40
13.	Theatre and concert halls	30	30
14.	Hotel rooms	35	30

Source: Law on Environmental Noise Protection (Official Gazette of RS No. 36/09, 88/10), Regulation on the maximum permissible noise levels in terms of noise source, time and place of occurrence (OG 143/21).

The system of monitoring noise in the environment, including complete maps with the state of noise emissions as well as adequate evaluation of the impact of noise on human health, is not found either on the territory of the Republic of Croatia or on the territory of the Republic of Serbia.

According to the law, on the territory of Croatia it is necessary to make for cities with more than 100.000 inhabitants, major railway lines with more than 30.000 train passes per year, major roads with more than 3.000.000 passes per year, and major airports with more than 50.000 take-off or landing operations per year. On Serbian territory there is a similar situation with made noise maps for about 843 km of state roads and the Nis agglomeration. The Action Plan for the development of strategic noise maps for railway infrastructure began in 2021. In view of the above, there is no environmental noise monitoring system in the programming area.

The most common sources of noise in the program area are from transport and industrial plants, while a smaller problem is caused by noise coming from local sources (households, catering establishments or some other smaller service facilities).

Light pollution

Light pollution is a side effect of industrial civilization. Its sources are internal and external lighting, advertising, streetlights, harbours etc. It is excessive use of artificial light and may have serious environmental consequences on human health, but also on wildlife and climate.

Light pollution occurs due to increased illumination of the sky during the night, excessive intensity of lighting use, and is caused by the scattering of visible and invisible light (UV and infrared light) of natural or artificial origin. Light pollution applies primarily to areas located outside the areas to be illuminated. The main cause of pollution is irregular lighting fixtures, that is, lighting fixtures that do not scatter light only towards the ground (vertically).

Light pollution causes the following negative consequences: feeling bright, endangering traffic safety, disturbing the migrations of birds, bats, insects and other animals, disrupting plant growth, compromising natural balance in protected areas, obstructing observation of the sky, disturbing the image of the night landscape.

According to the light pollution map (**Figure 21**), it may be concluded that in the programme area light pollution is present in urban areas making parts of agglomerations of larger towns.

The largest cause of light pollution in urban areas is public lighting. It is also evident that in less developed parts light pollution is minimal. Past research suggests that the territory of the Republic of Croatia as well as the territory of the Republic of Serbia is severely light polluted. The areas that still possess the natural brightness of the night sky are small and isolated.

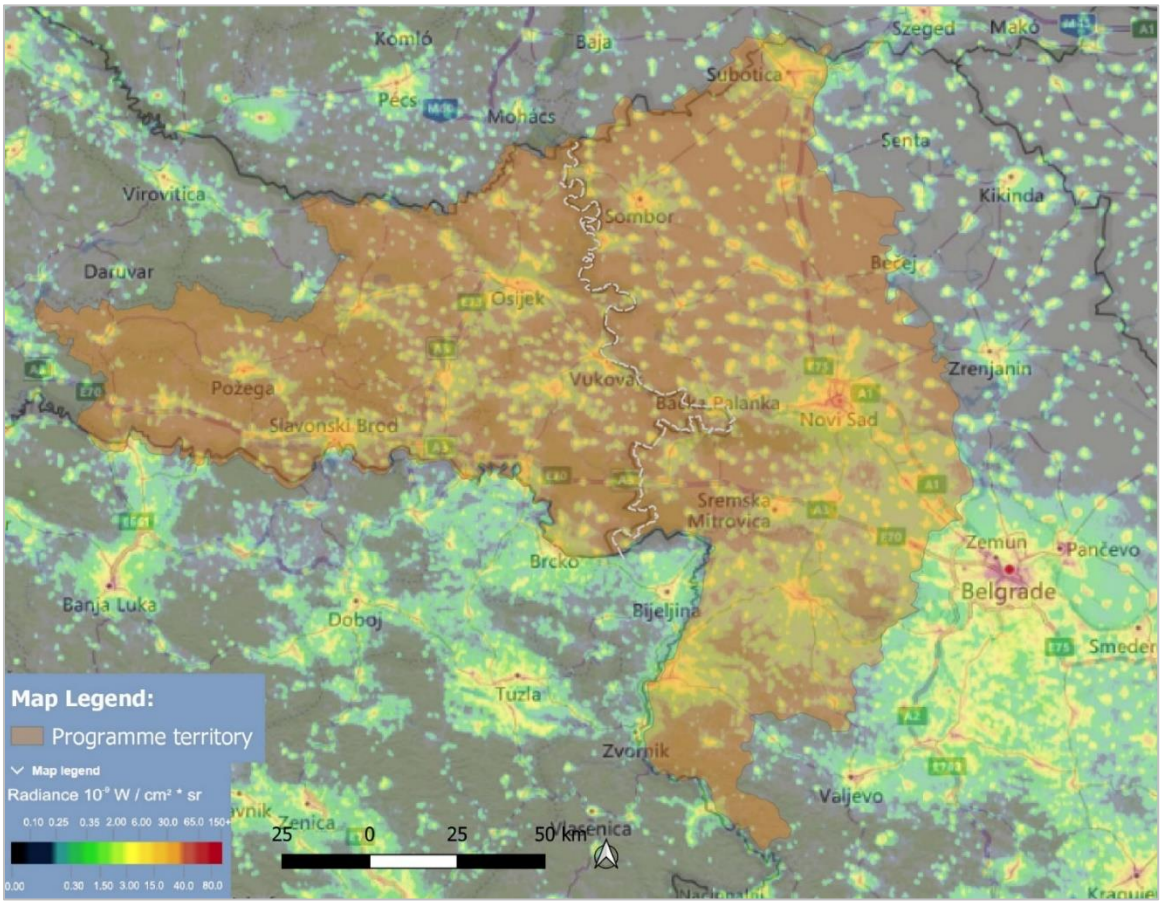


Figure 21. Map of light pollution in Programme area
Source: https://www.lightpollutionmap.info/

Electromagnetic radiation / Non-ionizing radiation

Non-ionizing radiations are electromagnetic fields and electromagnetic waves with a frequency lower than 3.000.000 GHz or ultrasound frequencies lower than 500 MHz that do not matter ions in interaction with substances. The source of non-ionizing radiation is any device that produces one or more types of non-ionizing radiation.

Non-ionizing radiation includes low-energy ultraviolet radiation, visible light, infrared radiation, radio frequency and microwave fields, extremely low frequency fields as well as static electric magnetic fields.

The network of wireless communication with its associated transmitters is rapidly expanding, most intensively placed in urban environments and along roads, and although there are numerous works there is still not enough knowledge about the causal relationship between non-ionizing radiation and human health.

In Croatia, the body responsible for the construction and installation of base stations is the Ministry of Construction and Physical Planning, which regulates the requirements and procedures for obtaining the necessary consents and permits when setting up sources while the Ministry of Health controls the levels of electromagnetic fields around the source of electromagnetic fields. Source control is carried out before installation, after commissioning and if it has been proven that the actual levels of the electromagnetic field are within the permitted limits, regular inspections are carried out during the operation of the source organized by the owner of the source. In addition, research and measurements are controlled by HAKOM – Croatia's regulatory agency for network activities, which has its own unit of measurement. That is, the Ministry of Health is responsible for implementing non-ionizing radiation protection measures in accordance with the Non-Ionizing Radiation Protection Act (OG 91/10) and the Regulations on Protection against Electromagnetic Fields (OG 146/14).

In Serbia, the body responsible for implementing non-ionising radiation protection measures is the Ministry of Environmental Protection, according to the Non-Ionizing Radiation Protection Act (OG of RS, No. 36/2009). Inspection is carried out by the competent Ministry through the Inspector for Environmental Protection within the scope of the above law. The Local Self-Government Unit is entrusted with inspecting sources of non-ionising radiation for which the approval for the construction and start of work is issued by the competent authority of the local self-government unit.

4.1.11 Waste Management

Waste management in Croatia has been harmonized with European policy by introduction of an integrated waste management system which relies on construction of regional waste management centres covering several counties, as the most important infrastructure facilities, along with rehabilitation and closure of all other landfills in the territory.

Integrated waste management system implies application of different waste management procedures which are mutually compliant due to safe and efficient removal of waste from the environment, thus minimising hazardous effects to human health and the environment, and at the same time with the acceptance of the environmental protection principles. The Act on sustainable waste management governs the waste management hierarchy as:

1. Prevention of generation of waste
2. Preparation of waste for reuse
3. Recycling
4. Other recovery procedures, such as energy recovery
5. Waste disposal.

In Croatia, the waste statistics vary depending on the region, with the best results having been achieved in the more developed urban areas with lower tourist inflow. The Croatian part of the Programme territory thus has still not established 100% of waste collection coverage, and has lower waste generation per inhabitant in relation to the national average. Still, over 90% of waste is being landfilled, apart from Osijek Baranja county which recovers 22% of waste. Recovered material mostly regard paper and cardboard, glass, bulk waste, plastic packaging and metal.

Waste management is still one of the greatest challenges and one of the most demanding areas in terms of adjustment to the EU standards. In the subsequent period, education and information activities directed to waste generation prevention and separation of useful waste at all levels have to be intensified. Moreover, as a prerequisite, existing and new infrastructure for waste management has to be constructed and improves, which will allow for further development of the system and treatment of collected waste.

Serbia is also stepping up the efforts to align their policy with the EU policy objectives in increase of reuse and recycling of waste, as well as the application of waste hierarchy principle, but has not yet completed harmonization procedure.

Some improvement has been achieved, but there is still a major deficit in solid waste management infrastructure, whether at the level of collection, treatment, recovery or final disposal. Sanitary landfills currently cover only 25% of population, and recycling rates are very low, because of the lack of collection and recycling channels organized by the local authorities which are competent for waste management. Such a system causes environmental problems in terms of air pollution, soil and water contamination, impacting human health as well.

Waste management is still one of the greatest challenges and one of the most demanding areas in terms of adjustment to the EU standards. Hazardous waste management is without solution in both countries. The major issues include increased volumes of waste stent to landfill, limited waste separation at the point of generation, along with low recovery and treatment rates, shortage of municipal waste recovery and treatment plants, underdeveloped information and reporting system.

Waste is an anthropogenic biproduct which cannot be avoided, but which has many negative impacts on the immediate environment, from air, soil and water contamination to its contribution to climate change through GHG emissions.

In light of the new circular economy action plan which builds on the European Green Deal as a sustainable development tool, EU is seeking to reduce pressure on natural resources and promote circular economy processes, encourage sustainable consumption and ensure that the generated waste is kept in the economy as long as possible.

Croatia sees its contribution to the circular economy through the bioeconomy, the production of renewable biological resources and the conversion of these resources, together with waste streams, into value-added products such as food, feed, biological products, and bioenergy. Of great importance is biomass as the main raw material that will enable the decarbonization of the entire production chain - from the field to the table. There is also a strong emphasis on sustainable waste management, which includes primarily household recycling systems (where raw materials are created for reuse), while the rest is taken to waste management centres for further processing. It is estimated that the introduction

of a circular economy in Serbia could provide 30,000 new jobs and increase the competitiveness of the domestic economy, especially in the recycling sector. Also, a very important motivation is to reduce dependence on imported resources to ensure a secure long-term supply of energy and raw materials - dependence on fuel imports is significant, around 28-30 percent.

4.2 Likely evolution of the environment without implementation of the Programme

Consideration of likely environmental development without the implementation of the Programme is important for understanding the contribution of the Programme in environmental protection in relation to the current conditions. The analysis presented herein is based on presumptions that changes in the environment are inevitable as a result of natural processes, continued human activities which are not directly related to the implementation of the Programme, and have at the same time been regulated by other acts and instruments.

The analysis results have been presented in tabular manner and it shows the development trends during a longer periods of time, and the expert assessment of likely effects as a result of non-implementation of the Programme.

Table 15. Review of likely evolution of the environment without implementation of the Programme

Environmental topics	Likely evolution of the environment
Air	Although according to available data from EEA, no major air pollution has been recorded in the programme area, certain settlements are certainly burdened by emissions of harmful substances into the air due to the large number of inhabitants, industry, major transport routes and the proximity of larger cities as a major source of pollution. The most affected areas include larger cities such as Slavonski Brod and Osijek in the Croatian part of the programme area and Subotica, Sombor, Ruma, Šabac and Novi Sad in the Serbian part of the programme area. With implementation of national strategies and BATs applicable for industrial polluters, it may be foreseen that the emission levels will gradually reduce. However, even though the Interreg programme supports mechanisms already in place, it is likely that cross-border cooperation may facilitate resolving transboundary issues and implementation of renewable energy projects on both sides of the border.
Climate	The programme area has characteristics of humid continental climate, with relatively low precipitation, hot summers and cold winters. The weather is generally complex caused by interaction of wet winds from the west, drier winds from the south and cool winds from the mountain areas. Average annual temperature in the programme area is about 10.6°C, with average annual precipitation of about 600 mm. Snow cover is characteristic for colder part of the year, from November to March and majority of days with snow cover is January. With implementation of national policies aimed at reducing greenhouse emissions and implementation of environmental procedures, it is likely that the current emission levels will decrease in time, thus reducing impacts on climate.
Climate changes	The greatest impacts of the climate change in the upcoming period are expected on human health, ecosystems, water resources and sectors including energy and infrastructure and agriculture. Flooding in the programme territory can occur throughout the year, with the peak in spring when the precipitation is high and there is snow melt. Adaptation to climate change is a burning need for both countries. In addition to floods, the programme area has the most problems with drought (due to rising average temperatures). In the absence of the implementation of the programme, specific objectives and priorities that have directly positive effect on climate changes such as PA2 Cooperating for greener and climate change resilient programme area and SO 2.4. Failure on implement of the programme could have a negative impact on climate change mitigation and adaptation, as it includes greenhouse gas emission reduction activities (use of alternative fuels, renewable energy) and actions that will affect adaptation to climate change with a view to reducing the vulnerability of natural and social systems (climate adaptation, disaster prevention, adoption of green concepts, etc.)
Water status	Pressures on groundwater chemical quality mostly arise from diffuse pollution from agricultural sources, nitrogen pollution in areas with low connection to public sewerage systems and contaminated sites from waste or industry. Among the numerous causes for water pollution there is uncontrolled discharge of municipal waste-water without connection to public sewer system, industry lacking appropriate sewerage and waste-water treatment, agriculture through use of mineral fertilizers and protection agents, and undeveloped farms, and waste management. Contamination of water with arsenic of natural origins is also present.

	The floods are also one of problem in programme area. Floods are naturally occurring phenomena which can incur heavy economic and human losses. Protection against detrimental effects of water is mostly ensured through the construction of protective and regulation water structures. Floods are also supported by erosion processes, especially in torrential areas, after removal of vegetation. The Programme directly affects this area through integration of climate change aspects into water management policies, including water quality, flooding, scarcity of water, drinking water supply, pricing of water services etc., but also supports actions for the protection of aquatic habitats, rivers and wetlands in the transboundary context, which will facilitate solving water management issues administratively and through increased cooperation. Since the programme territory is regulated by legislative and sectoral strategic documents, it is assumed that there will be a gradual improvement in the water body quality in the medium-term, while more pronounced improvement is to be expected as the application of the WFD takes hold.
Biodiversity	The absence of the implementation of the Programme, i.e. actions related to the bioecological characteristics of the Programme area, may worsen the existing state of protected natural values and protected areas of nature as well as endangered habitats and/or habitats for endangered species.
Cultural heritage and landscape	Landscapes of the Programme area are consisted of large geomorphological and water elements which created a good basis for agricultural use. The majority of the Programme area is considered to be rural in character and the most vulnerable and valuable areas are those linked to riverine landscapes. Therefore, to preserve existing landscape values, it's necessary to preserve rural areas, agriculture (in terms of cultural landscapes) and river areas (especially those of higher natural and biological values). Since the Programme proposes objectives which focus on smarter, greener, healthier, more inclusive and sustainable Programme area, the lack of implementation of the Programme would result in, most likely, hardly significant positive changes in the environment and the continuation of negative spatial trends which affect overall landscape characters. The expected evolution of landscapes without implementation of the Programme includes deruralisation, deagrarisation, lack of awareness, inappropriate management policies or lack thereof. The most significant objectives which contribute to the state of landscapes and cultural heritage are those focused on sustainable tourism and alternative forms of it. The lack of implemented measures as such will most likely have an impact of prolonging lack of awareness of landscape and cultural heritage as a spatial resource.
Human health	Health system, although in place, is not sustainable in the long term given the additional burden following the pandemic. The occurrence of COVID-19 forced both countries to undertake a number of changes in the field of population health protection. Natural and built environment has key role on human health, especially the impacts generated in interaction with environmental components, such as air, water or soil by which hazardous substances and contaminants come into contact with people. The air quality in programme area is generally good, but further improvements are needed to reduce adverse effects of pollution generated from fossil fuel combustion from heating and transport. Also, the most dominant pressures on soil in the programme area are agricultural practices and changes in land use and land management, including spreading of urbanization and the most important pressures come from water pollution due to discharge of untreated urban waste water, abstraction, energy production, flooding and introduction and spread of invasive and non-native species.

	The programme offers actions aimed at health care system improvement through fostering resilience, including that of primary care, and promoting the transition from institutional to family-based and community based care which offers clear added value in addressing improving accessibility, effectiveness and resilience of health care and long-term social care services across borders.

5. ENVIRONMENTAL CHARACTERISTICS OF THE AREAS LIKELY TO BE SIGNIFICANTLY AFFECTED BY THE IMPLEMENTATION OF THE PROGRAMME

The Programme is by nature a strategic document which proposes implementation of interventions in order to achieve a set of objectives, which are described generically and may be implemented anywhere in the programme territory.

Considering the programming period of 7 years and the type of planned interventions, it may be concluded that the areas and environmental factors which are already under significant pressure, will be most affected by the implementation of the Programme, such as water resources.

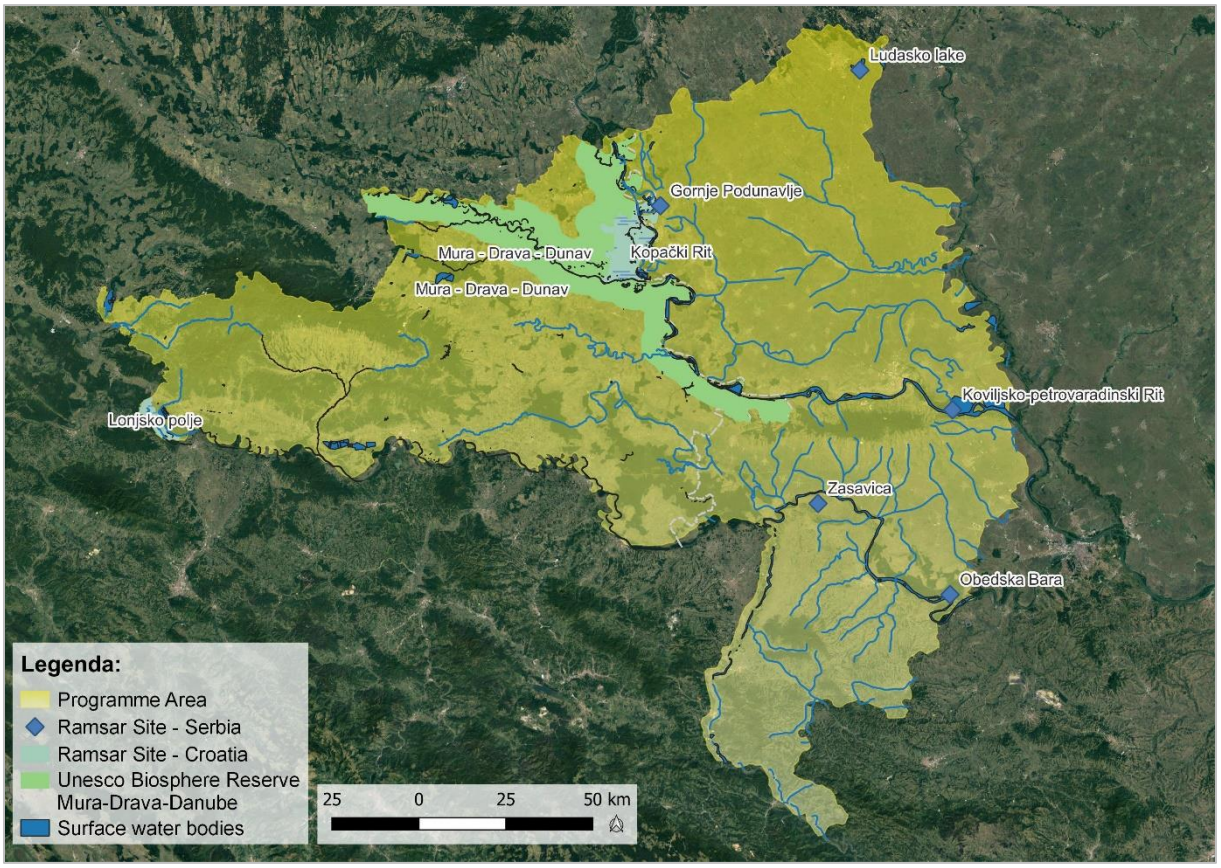


Figure 22. Map of surface water bodies and Ramsar sites

The Programme territory is characterised by biological diversity, fertile soils and wetlands, which is largely the consequence of the present water resources. Water has high potential for supply of most of population and industry, but is at the same time very vulnerable in terms of contamination. Surface and groundwater pollution is primarily a result of anthropogenic activities. Urban waste water collection and treatment is therefore one of the key priorities along the Danube River Basin, which has been proclaimed sensitive. The end objective is to protect its lower part and the Black Sea from eutrophication. Apart from untreated municipal waste waters, water resources are under the pressure of industrial activities, agriculture and the developed stock breeding.

Apart from chemical and physical properties, surface water bodies are also under the impact of hydromorphological modifications generated at river courses for the purpose of hydro-power

exploitation, water-supply, flood protection, navigation etc. Such modifications interrupt the continuity of the course and habitats, and are also highly significant for water and water-dependent ecosystems.

Infrastructure planned on surfaces watercourses may have a negative impact on water status, therefore the best available techniques and environmental practices should be developed and implemented. It is extremely important that such projects are taken into consideration as an integral part of the process, and that special attention be paid to ecological status of water bodies.

Pressures on water bodies which might be generated by the interventions planned by the Programme have been identified as follows:

- Hydro-power exploitation – as principal cause of hydromorphological changes
- Flood protection – one of the main reasons for interruption of course and habitat continuity due to execution of technical measures through construction of new embankments and stabilisation of river banks.

Impacts on water resources which are not a direct result of human activity are the effects of climate change on watercourses, that is changes in flood regimes and surface and groundwater quantities.

The programme territory is also the home to great variety of species. UNESCO declared the Mura-Drava-Danube Transboundary Biosphere Reserve in 2021, the world's first five-country biosphere reserve. Kopački rit Nature Park makes its part and is the largest internal delta of the Danube and one of the largest European wetlands. It is listed as an Important Bird Area (IBA) and is protected under the Ramsar Convention.

6. EXISTING ENVIRONMENTAL PROBLEMS RELEVANT TO THE PROGRAMME

Based on the analysis carries out in chapter CURRENT STATE OF THE ENVIRONMENT IN THE PROGRAMME TERRITORY AND LIKELY EVOLUTION OF THE ENVIRONMENT WITHOUT IMPLEMENTATION OF THE PROGRAMME the following environmental problems and conflicts have been identified (**Table 16**).

Table 16. Existing environmental problems in the Programme area

Environmental topic	Environmental problem
Air	Air pollution by particulate matter, as a result of heating practices, especially in winter
Climate	Air pollution and greenhouse gases from use of solid fuels
Climate changes	Risk of flash floods
	Natural disasters – very frequent hail and extreme changes in meteorological conditions
	Heat islands in the centres of large settlements and zones of high density of construction and population
Water status	Insufficient connection to sewer system with adequate waste water treatment
	Unsatisfactory wastewater treatment
	The lowest qualitative status of surface water bodies in Serbia is in the programme territory, where 39.5% of water bodies have poor and bad quality (SWQI index), 67.6% of samples of which are of bad quality.
	Insufficient drinking water quality
	Overexploitation of groundwater
	Water loss from water-supply systems
	Insufficient protection of water sources
Biodiversity	Destruction of seminatural and natural habitats as a result of land reclamation schemes
	Habitat fragmentation due to the construction of transport infrastructure
	Changes in freshwater ecosystems due to the construction of hydroelectric power plants, hydro reservoirs, watercourse regulation and construction of drainage channels for irrigation

Environmental topic	Environmental problem
	Pollution of watercourses
	Abandonment of extensive agriculture
	Loss, fragmentation and degradation of seminatural and natural habitats due to the land use change
	Illegal landfills are a major environmental problem that most affects forests and speleological objects
	Spread of Invasive Alien Species (IAS)
	Loss of biodiversity due effects of climate change
Cultural heritage and landscape	Degradation of rural landscapes due to urbanization and linear structure development, deruralisation and deagrarisation
	Inappropriate and illegal construction that doesn't take into consideration type of landscapes and its sensitivities which causes significant loss and degradation of historical landscape values
	Lack of knowledge and education about landscapes in professional and civil areas
	Lack of implementation of key goals of European Landscape Convention in praxis from top to bottom
	Development of inappropriate land uses in areas of high value and sensitivities which aren't adapted to the context of area Loss of historical rural and urban landscapes due to inappropriate construction
Human health	Insufficient connection of the population to the public water supply system
	Light pollution as a result of proximity to urbanized areas
	Elevated noise emissions due to transport
	Negative impact on air quality and noise emissions due to intense traffic
Waste Management	Insufficient waste management infrastructure to uphold the integrated waste management systems

Environmental topic	**Environmental problem**
	Poor results in reduced generation of waste and the rate of reused/recovered municipal waste Low recycling rates Many illegal landfills, particularly in high-biodiversity areas No hazardous waste solution Lack of roadmap for circular economy development (Serbia)

7. SEA OBJECTIVES

SEA objectives have been established in order to assess environmental impacts, taking into consideration the requirements and objectives of relevant strategic documents and international treaties and agreements ratified by the participating countries, analysed in chapter 3 RELATIONSHIP OF THE PROGRAMME WITH OTHER RELEVANT STRATEGIES PLANS AND PROGRAMMES. The selection of objectives was carried out on the basis of programme area, environmental baseline and current trends, and the effects the proposed actions of the programme are likely to have on the environment, as established by preliminary analysis performed during scoping.

Due to interconnectedness of the overall environment, the objectives were not formed per each environmental factor separately, rather an objective covers a group of environmental aspects. Every environmental protection objective is supported by several sub-objectives, based on the established environmental conflicts and registered problems acting as assessment criteria. The impact of the programme may be monitored through indicators, which because of the strategic nature of the programme are qualitative, rather than quantitative.

Table 17. Environmental protection objectives

Environmental protection objectives	Sub-objectives	Environmental factors	Indicator
Improving water quality and reducing water pollution	-Improvement of physical and chemical properties of water bodies -Increase in share of treated waste-water -Sustainable use of surface and groundwater -Protection of aquatic and water-dependent ecosystems - Awareness raising on water loss - Improvement of water loss monitoring techniques - Enhancement of water supply infrastructure - Reducing overexploitation of limited water resources	Water Human health Biodiversity	-Status of surface and groundwater bodies -Connection on public sewerage systems -Number of WWTPs -Water exploitation
Protection of biodiversity, ecosystems and wildlife	-reduction of environmental pollution -reducing impacts on climate -battling climate changes -awareness raising on importance of biodiversity -use of “nature-based solutions” in the protection, restoration or management of natural and semi-natural ecosystems, the sustainable management of aquatic systems and agriculture -prevention of spreading of invasive species	Biodiversity Soil Climate and climate changes Landscape	-preserved favourable condition of protected species and habitats -involvement of the local community in protection and conservation activities -registered presence of new invasive species or spread of the already present invasive species
Sustainable management of resources	-development of sustainable tourism -rational use of land and resources -increasing the use of energy derived from renewable energy	Biodiversity Soil Water Landscape Material assets Waste management	-tourist infrastructure in protected areas -number of energy-efficiency projects implemented -production of energy from RES

Environmental protection objectives	Sub-objectives	Environmental factors	Indicator
	-supporting circular economy principles -introduction and implementation of integral approach regarding water sanitary safety based on the risk including the entire supply chain, from catchment area, intake, treatment, storage and distribution		-number of brownfield areas activated -biomass consumption
Protection of cultural heritage and landscape values	-preservation of cultural assets and archaeological localities -ensuring sustainable landscape management, protection and preservation	Cultural heritage Landscape	-number of plans or pilot projects involving cultural assets -number of implemented landscape character assessments -number of visitors in new tourist destinations
Reducing impacts on air and climate	-Transition to climate neutrality -Reduction of green-house gasses from energy sector -Improvement of energy efficiency -Development of RES projects	Air Climate Human-health	-development of green infrastructure projects -emissions and carbon dioxide sink – CO_2 -SECAPs developed
Strengthening resilience and disaster risk reduction	-Implementation of adaptation measures in plans and projects -Protection of infrastructure and population against extreme events	Human-health Material assets	-development of green infrastructure projects -SECAPs developed
Protection of human health and well-being	-increased connections to water utility services -ensuring sanitary safe drinking water, that is achieving compliance of water intended for human consumption with relevant parameters	Human health Water Air Climate	-connections to the public water supply system -number projects developed according to BATs -noise protection measures integrated in strategies and physical plans

Environmental protection objectives	Sub-objectives	Environmental factors	Indicator
	-reduced exposure to harmful emissions -reduced risk of flooding		

8. ASSESSMENT OF ALTERNATIVES

In May 2018, the European Commission presented proposal regulations laying down future legal framework of the Cohesion Policy in the financial perspective 2021-2027. Proposed legislative package includes regulations relevant for European Territorial Cooperation programmes ("Interreg") in next financial perspective.

At the beginning of December 2020, trialogue negotiations between European Commission, Council of the European Union and European Parliament was concluded as they reached political agreement on regulations for the Cohesion Policy in financial perspective 2021-2027.

Cohesion Policy legislative package for financial perspective 2021-2027 entered into force on 1 July 2021. Regulations are applicable from 1 January 2021 to 31 December 2027.

The legislative package includes the following regulations:

- the Regulation containing the common provisions governing the eight funds managed jointly by the Member States and the European Commission (CPR) – Regulation (EU) No 2021/1060;
- the Regulation on the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) – Regulation (EU) 2021/1058;
- the Regulation on the European Social Fund Plus (ESF+) – Regulation (EU) 2021/1057;
- Interreg regulation containing specific provisions for the "European Territorial cooperation" objective supported by the European Regional Development Fund and external financing instruments – Regulation (EU) 2021/1059;
- the Just Transition Fund (JTF) Regulation, which completes the set of cohesion policy funds available for the 2021-2027 period – Regulation (EU) 2021/1056.

Regulation relevant for Interreg programmes are ERDF, CPR and Interreg Regulation.

In 2021-2027 Interreg programmes can choose between five policy objectives (POs):

- **A more competitive and smarter Europe** – innovative and smart economic transformation and regional ICT connectivity (PO1);
- **A greener, low-carbon Europe** – a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation and risk prevention and management and sustainable urban mobility (PO 2);
- **A more connected Europe** – enhancing mobility (PO 3);
- **A more social and inclusive Europe** – implementing the European Pillar of Social Rights (PO 4);

- **Europe closer to citizens** – sustainable and integrated development of all types of territories and local initiatives (PO 5).

Also, two Interreg-specific objectives are also supported in the financial period 2021-2027:

- **better cooperation governance;**
- **a safer and more secure Europe.**

The Programming Task Force (PTF) responsible for development of territorial and socioeconomic analysis, discussing policy objectives, stimulating cross-border dialogues and other tasks related to the preparation of the programme held 8 meetings so far.

Territorial analysis was developed as an analytical basis that provides guidance and recommendations with prioritisation of policy objectives to be funded in the next programming period of Interreg VI-A IPA Croatia-Serbia 2021-2027. It is to highlight that the Territorial analysis underlined some general challenges to be taken into account when preparing the programme objectives and priorities.

These challenges are:

- a rapid decline in population, which is more visible on the Croatian side of the programme area; there is a decline in population by over 16%. This clearly shows that the future programme should take into consideration the issue of demographic decline.
- the economic scale and rate, the programme area is below the average of each of the belonging countries, on the Croatian side, while the Serbian part is more developed that the national average.
- the health condition of the population living in the support area, the consequences of the pandemic, staff shortages - in the medical sector, as in other sectors, there is an outflow of staff to other urban centres and regions with a higher level of development potential.

In terms of selection of the policy objectives Territorial analysis showed that the programming period 2021-2027 should take into consideration the following policy objectives and for the purposes of this document below are shown the findings and conclusions related to the selected policy objectives:

1. SMARTER EUROPE

2. GREENER EUROPE

4. SOCIAL EUROPE

As a part of the preparation of the new programme, a public consultation process was conducted in order to receive feedback from interested stakeholders, discuss the relevance of the highlighted policy objectives and to further narrow down the focus of the Programme.

The aim of public consultations with stakeholders was to provide strategic support in the selection of policy objectives and related specific objectives, as well as in determining the specific objectives of the

programme and the associated indicators, as well to discuss the challenges and the needs of the programme area and the opportunities/possibilities of financing within the future programme.

The consultations targeted the following groups of stakeholders: public administration bodies, chambers, development agencies, science/technology parks, centres for entrepreneurship, local/regional government units, public institutions, LAGs, utility companies, educational/scientific institutions, public hospitals, health centres, CSOs (civil society organisations), tourist boards, SMEs.

The PTF is assigned with the tasks concerning preparing public consultations, development of territorial and socioeconomic analyses of the Programme area, discussing policy objectives, stimulating cross-border dialogues with stakeholders and all other tasks related to the preparation of the Programme. The first PTF meeting was held in December 2019 and up to date 8 PTF meetings have been held, for the purposes of this document here are mentioned following PTF decisions:

4th PTF meeting – 31 March 2021: PTF approved the Territorial and socio-economic analysis of the programme area and concluded that final decision on proposed policy objectives should be made after public consultations**.**

5th PTF meeting - 15 June 2021: PTF members agreed to proceed with the 3 preselected POs in the public consultations: Smarter Europe (PO1), Greener Europe (PO2) and Social Europe (PO4). Furthermore, for the purposes of interviews and workshops 10 SOs were agreed upon: research and innovation, SME competitiveness, digitization of society (PO1); renewable energy sources, energy efficiency, climate change adaptation, circular economy, nature protection and biodiversity (PO2); access to health care and sustainable tourism and culture (PO4).

6th PTF meeting - 22 July 2021: Agreement on specific objective within each PO was reached. The following POs and related SOs are selected for the new Programme:

Policy Objective 1 (SMARTER EUROPE):

- SO 1.1 Developing and enhancing research and innovation capacities and the uptake of advanced technologies

Policy Objective 2 (GREENER EUROPE):

- SO 2.2 Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001, including the sustainability criteria set out therein
- SO 2.4 Promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches

Policy Objective 4 (SOCIAL EUROPE):

- SO 4.5 Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family-based and community based care
- SO 4.6 Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation.

7th PTF meeting – 13 October 2021: Programme strategic framework including programme intervention logic was approved by PTF members after the cross-check of the needs in justification of PA2, SO 2.4 – Promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches and modification of indicators

8th PTF meeting – 9 February 2022: Decision was reached on allocations for each Priority axis and specific objective, on types of actions and selected indicators.

9. ASSESSMENT OF LIKELY SIGNIFICANT IMPACTS ON THE ENVIRONMENT

Among the policy objectives to be considered taking into account territorial analysis results, public consultations and strategic orientation of both participating countries, PO1 Smarter Europe, PO2 Greener Europe and PO4 Social Europe were selected. Selected Policy objectives will be achieved through selected specific objectives within priority axes, each specific objective supported by a series of actions. Result and output indicators are identified for every specific objective, for which reason the assessment will focus on specific objectives as the most specific factors of development direction, but analysing every planned action in terms of its location, scope, impact and intensity, if possible. Indicators will be used as parameters of action intensity in that context, wherever possible.

The assessment will be carried out by means of an analytical matrix which allows to directly connect the impacts of an action with an environmental factor/objective, to establish relationships between the elements analysed and to determine the scope and cumulative nature of impacts.

9.1 Framework methodology for the assessment of likely significant impacts

The assessment of likely significant effects of the Programme implementation shall be conducted in conformity with the best practice methodology[3]. The applied methodology is generally accepted and is based on identification of impacts through analytical matrix, then comparing the actions of the Programme (in rows) to the previously established environmental protection objectives (in columns).

Environmental protection objectives indicate the desired direction of change of state and are formed for environmental factors in relation to local specificities and issues. They present the basis for testing the effects of the Programme on the environment, that is, it is to be concluded whether the objectives of the Programme contribute to achieving the selected environmental protection objectives or not. The objectives defined for strategic environmental assessment are derived from environmental protection documents adopted on the international level, European Union level, national and regional level, and from the overview of the environmental baseline and the environmental problems established by the experts preparing the Environmental Report. The objectives are accompanied by environmental protection indicators, that is the criteria used for monitoring the achievement of objectives and impact of the plan on the development of the environment.

[3] United Nations Economic Commission for Europe (2012.). Resource Manual to Support Application of the Protocol on Strategic Environmental Assessment. UNITED NATIONS New York and Geneva

The Regional Environmental Center for Central and Eastern Europe (2001.). International Workshop on Public Participation and Health Aspects in Strategic Environmental Assessment. Szentendre, Hungary.

Strategic Environmental Assessment. - Practice-Orientated Training for Policy Makers, Administration Officials, Consultants and NGO Representatives

Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment". European Commission DG Environment. Undated.

Andreas Sommer (2005.). Strategic environmental assessment: From scoping to monitoring. Content requirements and proposals for practical work. Hallein.

Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment, 2013.

The assessment of impacts considers the type and scope of the planned interventions and actions in relation to the planned location of their implementation if the location can be established. Because of the strategic nature of the programme, environmental baseline shall be used to define sensitivity of the area in general, and the description of the likely development of the environment without the implementation of the Programme, that actually represents the zero alternative, shall be used as a reference point for the assessment. The significance of the impacts shall be determined by expert opinion, based on the sensitivity of the area in dependence of the nature of the planned actions, that is, pressures, and the magnitude of change. The said process takes into account the duration, spatial scope and the intensity of the impact, where possible. The selected tool for the presentation of impacts is analytical matrix which identifies the interventions of the Programme with likely negative impacts on the environment.

Sensitivity of the receptor is a characteristic defined through 1) existing regulations and guidelines, 2) societal value (economic, social and environmental) and 3) vulnerability for the changes. It is assessed in its current state before the occurrence of any changes arising from the Programme implementation. The overall sensitivity of the receptor is established so that the highest protection and societal values are considered, which are then adapted according to the vulnerability. The Table below describes the sensitivity categories to be used in assessment.

Very high	The receptor is protected by law and is very valuable for the society and it is very likely it shall be endangered even by lesser impacts of the proposed development.
Moderate	Regulation sets recommendations or reference values for an object in the impact area, or the project may impact an area conserved by a national or an international program. The receptor has a high societal value or is protected by law, but has low vulnerability to change.
Low	Few or no recommendations which add to the conservation value of the impact area, and no regulations restricting use of the area (e.g. zoning plans).

Magnitude of change describes the characteristics of the changes likely to be caused by the Programme. Magnitude of change is a combination of 1) intensity (expressed by unit of measurement and compared to reference value) and direction of change, which may be positive (green) or negative (red), 2) spatial extent (where applicable) and 3) duration of the impact, including reversibility of change. Magnitude of change is assessed irreverently of the sensitivity of the receptor to proposed changes. In the assessment of magnitude of change, intensity should be taken as a starting point, and then adapted based on the spatial extent and duration to obtain an overall estimate. The Table below describes the magnitude of change to be used in assessment.

High	The proposal has beneficial effects of high intensity and the extent and the duration of the effects are high.
Low	An effect is positive and observable, but the change to environmental conditions or on people is small.
No impact	No change is noticeable in practice. Any benefit or harm is negligible.
Low	An effect is negative and observable, but the change to environmental conditions or on people is small.
High	The proposal has harmful effects of high intensity and the extent and the duration of the effects are high.

The Table below is used in the assessment of significance, with the positive effects marked in green, and the negative in red. Since the most relevant dimensions for characterization of impacts depend on the type of impact, discretion from the expert is required, so the decisions are accompanied with respective explanations.

Impact significance		**Magnitude of change**				
		High	Low	No change	Low	High
Sensitivity of the receptor	Low	Low	Low	No impact	Low	Low
	Moderate	High	Low	No impact	Low	High
	High	High	High	No impact	High	High

Apart for the magnitude of impacts, impacts are also assessed based on their pathway and interaction, as well as cumulative impacts. Taking into consideration the abstract nature of the programme, the pathway of the effects was sometimes difficult to assess.

Regarding the likely transboundary impact of the Programme implementation, the document is cross-border in both nature and scope, its aim being to have cross-border impacts. Therefore, the impacts of the actions/objectives in the SEA Report will be considered as transboundary by default, and consultations will be held in both participating countries. The SEA Report will also analyse the likely transboundary impacts on the territories not included in the Programme – so far there is no reason to assume that there will be cross-border impacts on Hungary, Bosnia and Herzegovina or Romania.

Pursuant to the *Environmental Protection Act* (OG 80/13, 15/18, 14/19, 127/19) of the Republic of Croatia, Appropriate Assessment is carried out for strategies, plans and programmes which individually or together with other strategies, plans and programmes have a likely negative impact on conservation objectives and integrity of the ecological site area. Pursuant to the *Nature Protection Act* (OG 80/13, 15/18, 14/19 and

127/19) and the *Environmental Protection Act* (OG 80/13, 15/18, 14/19, 127/19), at the request of the Managing Authority, the Ministry of Economy and Sustainable Development brings a Decision whether the Main Assessment of the Programme is to be conducted. Following the results of the preliminary assessment on ecological network, the Decision was brought (CLASS: UP/I 612-07/21-37/259; File No.: 517-10-2-3-21-3) of 22 October 2021 that the Programme is acceptable for NATURA 2000 ecological network and the Main Assessment on ecological network needs not be carried out.

9.2 Results of the assessment of the impact of the implementation of the Programme on environmental objectives

The result of the assessment of the impact of the implementation of the Programme on environmental objectives is presented through the analytical matrix (**Table 18**). As mentioned in the previous chapter, the analytical matrix presents the impacts by contrasting the Programme's actions with the established environmental objectives of the strategic assessment.

Table 18. Analysis of the impact of Programme implementation on SEA objectives

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
PA1 – Cooperating for smarter programme area; Financial allocation - 19% The Programme area stakeholders are aware of the 4th industrial revolution and EU-wide momentum for a green and digitised economy. To remain competitive, Croatian and Serbian cross border region has to encompass and manage the ongoing transition and economic transformation. Research and innovation drive, enable and accelerate the shift towards green and digital transitions and support competitiveness and economic development.							
SO 1.1 - Developing and enhancing research and innovation capacities and the uptake of advanced technologies The main needs of the Programme area to be achieved by this Specific Objective are to increase innovation and research capacity, strengthen knowledge transfer, add value to existing economic activities, and create new jobs. Research and innovation activities are of particular importance for cross-border cooperation because they are cross-sectoral, with the potential to integrate different areas and topics. Knowledge and technology transfer remains a key need. In this regard, it is also necessary to ensure the availability of a skilled workforce empowered by training and further education, in particular taking into account relevant smart specialization strategies.							
1. Supporting cross-border innovation and technology based on smart specialization approach and improving cooperation between research institutions, SMEs, public sector, and business support organisations							
The action covers cooperation between public, research, education institutions, SMEs and business centres and hubs with the objective to enhance joint innovation and technological solutions, which has no significant impacts on SEA objectives. Therefore, no mitigation measures are proposed for this action.							
2. Supporting pilot lines, early product validation, certification,							

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advanced manufacturing capabilities and technology transfer, including via science – business collaboration.							
The main focus of the action is putting into place existing validation, certification mechanisms and transfer of knowledge with no significant or direct impacts on the environment in general or SEA objectives in particular. Since there are no negative impacts identified, no mitigation measures are proposed.							
3. Strengthening and modernising business support services (including small scale infrastructure preferring nature-based solutions) that could help with: trainings, marketing, developing and or implementing new services/products, using ICT and new technologies, implementing innovative solutions in business organisation and processes (blockchain, big data, cloud computing, Internet of Things, advanced manufacturing, robotics, artificial intelligence, cybersecurity, etc.)							
The main focus of the action is supporting company operation, including ICT and other infrastructure development and implementation, which may support enhance economic growth in the area, but has no significant or direct impacts on the environment in general or SEA objectives in particular. Since there are no negative impacts identified, no mitigation measures are proposed.							
4. Accelerating innovation and technology transfer primarily (but not exclusively) in the areas of bio, green and circular economy, agriculture, food production, smart manufacturing, climate change, biodiversity, skills development for smart specialization etc., in order to support the roll out of innovative							

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solutions.							
The main focus of the action is facilitating innovation and technology transfer in various fields, with focus on bio, green and circular economy, which may support enhance and facilitate economic growth in the area, especially small scale, but has no significant or direct impacts on the environment in general or SEA objectives in particular. Moderate benefits to reducing impacts on air and climate biodiversity could be expected through support to bio and green economy. However, sustainable use and effective use of natural resources in line with objectives of EUBD Strategy 2030 are to be taken into consideration during planning of actions. In order to further support circular economy, the value chain should include efficiency of resources used, as well as responsible sourcing.							
5. Pilot actions aimed at transferring good practices on green economy trends and standards							
Pilot actions planned may be test procedures, new instruments, tools, experiments or transfer of practices. In total 12 pilot actions are foreseen to be carried out within projects. No direct or significant impacts on SEA objectives are identified by this action, for which reason no mitigation measures are proposed.							
6. Enhancing support services for SMEs and entrepreneurs to improve their access to research and technological innovations							
The action provides for soft initiatives which will facilitate access to innovations by businesses, but has no direct or significant impacts on SEA objectives are identified by this action, for which reason no mitigation measures are proposed.							
7. Enhancing transfer and upscaling of proven green solutions to reduce the environmental footprint of production processes and open up green business opportunities							
Increasing the use of green and sustainable solutions in production and boosting green businesses cumulatively improves the state of environment by decreasing pollutants and negative emissions be it by air, water, soil or other pollution. Incorporating green solutions in the industry sector and implementing effective policies for green businesses means generally less							

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impact on the environment, raising awareness on alternative and less impactful solutions and also raising accessibility and diverse use of these solutions. In order to further support circular economy, the value chain should include efficiency of resources used, as well as responsible sourcing.							
8. Improving capacities and integration of innovative solutions using ICT for public sector needs							
Digitalization of public sector is an objective foreseen by national development strategies as it improves coordination between authorities, streamlining administrative processes, which in the end improves services provided to the citizens. Such improvement should cover areas as digital security, system development, usability, portals etc. especially taking into consideration the needs discovered during the COVID-19 pandemic. As a precondition for implementation of projects under this action, development of broadband infrastructure has to be ensured, especially in rural areas where connectivity services have not been sufficiently developed. Even though the action strongly contributes to digital strategy objectives, there are no direct or significant impacts on SEA objectives identified by this action, for which reason no mitigation measures are proposed.							
9. Supporting the establishment of Living Labs, test-beds and ecosystems to promote development and actual use of innovative solutions							
The action is focused on development of experimental platforms for innovative companies and developers to test and validate their solutions and products in real-life conditions. The action is focused on activities of very broad scale and it is unclear whether the stated innovative solutions will have an impact on the environment, since innovative solutions can cover a large set of sectors and activities, from prototype development to intellectual property. It is therefore proposed that the action be supplemented with indication of sectors (supported within the Programme) so that the likely impacts be reduced to the scope of assessment made within this SEA Report.							
10. Supporting cooperation of public authorities in development, implementation and monitoring of smart specialisations strategies and other policy tools for							

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development of innovative economy							
Smart specialisation is a place-based approach to development, focusing on strengths and potential of economy of a region, with a broad view of innovation. The action provides for cooperation initiatives which will facilitate access to innovations by businesses, but has no direct or significant impacts on SEA objectives are identified by this action, for which reason no mitigation measures are proposed.							
11. Establishing connections and long-term cooperation between research institution especially in joint capacity building for innovation and technology transfer to businesses							
The action is aimed at establishment of cooperation and implementation of joint projects among research organizations across borders, with the target value of 34 organizations involved in cross-border projects. As the action is directed to cooperation and research, it has no direct or significant impacts on SEA objectives, for which reason no mitigation measures are proposed.							
PA2 - Cooperating for greener and climate change resilient programme area Programme area is rich in natural heritage resources and biodiversity. Therefore, the responsibility and need to support a greener, low-carbon and resilient Programme area, which is threatened by climate changes, through the projects/activities is essential. In line with the EU Green Deal, territories have to respond to the challenges of environmental degradation and climate change, by boosting the efficient use of resources, protecting and restoring biodiversity as well as cutting pollution.							
SO 2.2 - Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001, including the sustainability criteria set out therein Heat and electricity generation are responsible for over a quarter of GHG emissions, therefore emissions reductions are vital to decarbonisation. Programme territory has a potential to increase the production of renewable energy, as it is rich in resources. It is therefore essential to support development of green low-carbon projects to make the area more resilient to							

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climate change. There is need to continue promoting energy efficiency and reducing greenhouse gases and support transition to renewable energy sources.							
1. Development of joint solutions to increase the production of additional capacity for renewable energy (e.g. solar, geothermal, biomass, etc.) including small scale infrastructure preferring nature-based solutions							

Even though the area under consideration may be observed as a single environmental unit, the two countries have different renewable energy potentials, supported by different schemes at national level. In that sense the Directive on renewable energy supports cross-border participation in achieving Union targets more cost-efficiently. Cross-border participation also allows for impacts to be assessed on the integral environment, not limited by administrative borders or affiliation of the participating countries.

The Renewable Energy Directive, as well as the European Green Deal, emphasise the importance of regional cooperation in reaching EU targets, especially through joint projects and support schemes. Removal of technical, political and legal barriers preventing cooperation regard potential incompatibility of legislation, lack of infrastructure and market integration, preference of use of RES benefits nationally. The SO should also include awareness raising activities, information provision regarding cooperation mechanisms etc.

Even though construction of facilities may have direct and indirect negative impacts on certain SEA objectives, the location of potential project investments is unknown, and pursuant to national laws applicable in the programme area, specific projects have to be planned by the valid physical planning documents and comply with the environmental and physical planning legislation, especially in view of the already carried out environmental assessments.

Depending on the use of renewable energy sources, different environmental impacts are possible, primarily due to the loss of habitat, i.e., areas under existing vegetation, which may consequently mean the loss of suitable habitats for endangered species. Wind as a RES will not be promoted within this Programme, therefore, the impacts of windfarms and exploitation of wind power will not be analysed in further detail. Implementation of RES projects may have cumulative impacts on hydromorphology in case of implementation of hydropower exploitation systems. Possible habitat degradation and change in case of hydropower exploitation systems, solar and biomass plants, greatly depends on the scale of the projects as well

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as on their locations. Depending on the technology used, geothermal energy exploration and exploitation may impact water quality and consumption especially if located in proximity to surface waters or regulation structures, while open loop systems emit contaminating substances into air.

Even though the action will likely contribute to sustainable management of resources through waste reuse for energy production purposes, sustainability criteria set out in the Renewable Energy Directive as regards biomass regard protection of high biodiversity land and land with high carbon stock, that is aiming at minimising the risk of using forest biomass derived from unsustainable production, which may have negative impacts on biodiversity. Moreover, Installers of biomass, heat pump, shallow geothermal and solar photovoltaic and solar thermal energy shall be certified by an accredited training programme or training provider. Training programme shall give account of market situation of biomass, cover ecological aspects of its use, fire protection, combustion and fitting systems, design, installation and maintenance of boilers and stoves, as well as good knowledge of EU standards and technologies.

Implementation of RES projects may also result in (independent or cumulative) degradation of cultural and landscape values (especially in case of hydropower plants). Implementation of these RES solutions can change the values of landscape and cultural heritage long-term, therefore it is important to develop these projects with guidelines depending on certain places/landscapes, and sensitivities of areas. Likewise, integrated systems of RES can have negative impact on cultural heritage, meaning mostly damaging of facades and similar for which reasons, specialists from different sectors should also be included in this action, from biologists to conservationists.

The base and guideline for developing RES projects should be modelling of suitability for each RES in specific areas so that both key environmental values and development can be balanced. Planning of RES projects should also take into accountoperation and transmission systems that transport electricity, thus supporting the integration of renewable energy into the power grid.

At the same time, the action has a strong contribution to SEA objectives related to climate mitigation, sustainable use of natural resources, and consequently to human health through reduction of use of fossil fuels, and thus reduction of harmful pollutants discharged into the air. It should also be mentioned that power generation installations under this action should not refer to those blending renewable fuels. In order to be able to efficiently implement adaptation measures, the vulnerability assessment across energy sector should be conducted.

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2. Development and implementation of joint pilot actions that improve the integration of sustainable renewable energy sources in different sectors (e.g. building and construction sector, industry, agriculture, forestry etc.).							
The effects of this action are decisively positive if minor. The action relies on the already established mechanisms and potential, and seeks to facilitate its integration into designed sectors, which may have small positive impact on sustainable use of resources, and reducing impacts on air and climate through reduced emissions and protection of human health and wellbeing through improved life quality and reduced energy prices in the long-run. Moreover, joint actions imply transfer of knowledge irrespective of the border but transferrable to areas of similar affiliation. It should however be mentioned that integrated systems of RES can have negative impact on cultural heritage, meaning mostly damaging of facades and similar for which reasons, specialists from different sectors should participate in development of these actions, including conservationists. It is proposed that joint SECAP be prepared on local or the Programme territory.							
3. Joint solutions, research and pilot actions on RES (e.g. circular solutions, use and reuse of sustainable materials, demo centres/plants)							

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Sustainable materials as s source of renewable energy applications strongly supports sustainable development and circular economy objectives, and at the same time fight against climate change. Sustainable materials regard biomass and waste material, which however rely on an organized waste management system and sustainable material market. The action refers to the preparation of documentation and research on green renewable energy in terms of introducing sustainable materials and raising awareness of the general public. The realization of this action could lead to the development of green infrastructure and the reduction of total electricity consumption and thus the reduction of greenhouse gas emissions and the realization of economic savings. The use of sustainable materials and the promotion of circular solutions can have a direct positive impact on the main SEA goal of sustainable management of natural resources. In transition to green economy, forest-based products, as well as forest-based products which have already been used in economy should be considered, however, without negative impacts on forest resources. The transition to green energy as well as their development has cumulatively positive impacts to climate change by reducing harmful emissions and consequently a positive impact on human health. A positive impact on sustainable management of resources is also expected since the action includes circular solutions, reuse of materials, similar actions and research themes which will improve the general state of resource management, especially regarding waste management which should also be prioritised in this action. The only concern is the existence of preconditions in the programme territory for application of this action, for which reason it is proposed that SO also includes sustainable material marketing initiatives. It is also emphasized that biomass as sustainable material is intended as waste material generated from forestry and agriculture, and that in no way it implies harvesting of energy crops or deforestation for the purposes of accumulation of wood mass. The justification of this action should be further elaborated, since it basically covers the same activities as action 1. Above.							
4. Implementing pilot actions to test innovative and climate-neutral solutions through e.g. taking up and exploiting R&D results for the energy efficient renovation and heating and cooling of buildings (including cultural heritage buildings)							

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Green building is design, construction and operation that seeks to minimize negative environmental impacts of building and at the same time increase positive ones through improved energy efficiency, use of sustainable material and recycled material. Thus implementation green building principles and solutions into existing and future buildings strongly reduces impacts on climate, especially taking into consideration the importance of the construction sector. It should however be taken into consideration that when it comes to implementing and renewing energy infrastructure on cultural properties, due to nature of immovable heritage and its historical value, it's very submissive to damage to its material.							
5. Improving energy demand management and fostering behavioural changes of consumers for reducing energy consumption and a resource-efficient and sustainable use of energy							
The stated action includes actions regarding management and education of consumers on energy solutions that are appropriate to modern day challenges due to impact on and adjustment to climate change and environmental protection standards. Although many people are concerned about the environment, they do not always take practical steps to reduce energy consumption. Understanding how people behave and use energy will overcome barriers in implementation of this action, as education is not the only way in changing and directing consumer behaviour towards more environmentally friendly solutions. Apart from education, incentives, encouraging through social networks, as well as schemes linking various aspects of energy saving and energy efficiency are also to be considered. The action itself does not have a direct impact on environment, but it will definitely have an indirect positive impact on the SEA objective of reducing impacts on air and climate and sustainable use of resources.							
6. Promoting the production and use of advanced biofuels (produced from non-food crops, such as cellulosic biofuels and waste biomass)							
Implementing solutions as advanced biofuels makes the transition from impactful and non-renewable energy sources more accessible and helps to widen the use of RES. Promoting the implementation, production and use of advanced biofuels instead of traditional energy sources strongly contributes to the objective of reducing impacts on climate. Even though the use of biomass is mostly related to a specific location where biomass is produced, thus avoiding transportation costs, generally speaking, growing energy crops may have negative impacts on water through increased exploitation (thus reducing available reserves for human consumption) and indirect contamination from agricultural sources, biodiversity							

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through change of habitats, by taking up new land, cutting of lower-value wood mass which is important for functioning of the ecosystems, or use of agricultural land for non-food crops. It should therefore be stressed that in case of use of biomass from non-food crops, low-value agricultural land should be used, or already degraded locations and that waste biomass be prioritised over biomass production. Likewise, bioenergy plants may reduce visual values of landscape, so they should be directed towards locations with lower visual impacts. However, it's crucial to implement these solutions with significant precaution measures and assess the possible impact of individual activities and projects of this action. In order to enhance efficiency of the action, sustainable waste management should be promoted through separate waste collection in order to increase biomass resources, and at the same time to support circular economy principles.							
7. Strengthening the cross-border cooperation and transfer of knowledge in the region through exchange of experience, information (awareness raising) and capacity building through online and in-situ trainings to improve skills in the field of use of renewable energy sources							
The stated action includes actions that do not have a spatial component, but mostly focus on cooperation, education and general support to RES in terms of knowledge and skills. With that in mind, the proposed action isn't considered to have significant impact on the environment, but through education and support to RES it will indirectly help to achieve the objective of reducing impacts on climate and strengthening climate resilience and adaptation.							
SO 2.4 - Promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches In addition to floods, the programme area has the most problems with drought (due to rising average temperatures). Challenges connected to climate change and hydrological extremes are especially important to adapt to. In order to increase the resilience to climate change and disasters of the programme area, there is the clear need for tailored adaptation actions and a better preparedness and disaster risk management. In addition to floods, the programme area has the most problems with drought (due to rising average temperatures). Challenges connected to climate change and hydrological extremes are especially important to adapt to. In order to increase the resilience to climate change and disasters of the programme area, there is the clear need for tailored adaptation actions and a better preparedness and disaster risk management. It is important to harmonize and standardize the preparation of local							

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community responses and their actions at the cross-border level for effective emergency preparedness and response. To achieve this, cross-border cooperation is essential in particular in strengthening appropriate communication tools that need to be simple, action-oriented, and tailored to the general public.							
1. Development and introduction of joint climate change adaptation, disaster prevention and first response plans, as well as solutions and systems for monitoring, prevention and management of potential risks (e.g. floods, wildfires, landslides, droughts, earthquakes, invasive alien species, etc.).							
The Programme foresees 8 pilot actions and 8 jointly developed solutions by 2029. Programme area belongs to the Danube River Basin District, setting the flood risk management objectives to avoidance of new risks, reduction of existing risks, strengthening resilience, raising awareness and solidarity principle. These objectives focus on the reduction of potential adverse consequences of flooding for human health, the environment, cultural heritage and economic activity and address all aspects of flood risk management. Therefore, all planned or proposed flood risk management actions should be conducted in line with the Flood Risk Management Plan for the Danube River Basin District, that is the umbrella Danube River District Management Plan and Sava River District Management Plan. The action includes development of strategies, plans, monitoring systems etc. the intensity of the impact of which cannot be measured, but it is expected to have overall positive impacts. However, it allows for development and implementation of solutions for prevention and management of risks which may include small-scale construction projects in the fields of physical planning, agriculture, management of hazardous effects of water, forestry management, energy, transport, urban development etc. Since types of interventions is unknown, only general assessment may be given applying the precaution principle. Likely negative impacts are generally connected to construction activities, and may affect biodiversity cultural heritage and landscape. Conversion of riparian areas and the expansion of urban areas and infrastructure disrupt the connectivity between the river bed and its floodplain. Restoring and reconnecting these areas, where feasible, can significantly improve biodiversity habitats as well as the flood protection, water purification and supply functions of these ecosystems. Nature-based solutions can also							

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improve the urban environment creating benefits for both citizens and biodiversity. Such solutions span from the conservation of natural ecosystems within commuting zones to the restoration, creation and management of multifunctional green urban areas in order to improve local climate, reduce urban overheating, mitigate flooding, air pollution and biodiversity loss. Any spatial developments have to be in compliance with physical planning documents in force, for which reason it is proposed that more emphasis be given to integration of adaptation principles in physical planning documents of participating countries. Also, any potential negative impacts will be assessed through impact assessment procedures carried out at the project level. It is proposed that SECAPs be prepared at local or the Programme territory area. It is also suggested that action added awareness raising of the need to integrate disaster risk reduction concerns into planning and development process at official level in order to "climate-proof" development, rather than focus only on disaster preparedness and response.							
2.Encouraging intersectoral/interstate cooperation in risk prevention and rapid response management through development and implementation of joint protocols, procedures, approaches and measures, such as establishment of joint emergency centres, small-scale infrastructure preferring nature-based solutions, response vehicles, equipment, shelters, etc.							
To improve resilience against flooding, the society has to have an adequate emergency response during and after flooding to limit adverse effects and to facilitate recovery and the standard of living comparable to the pre-flooding status. Encouraging interstate cooperation in risk prevention would achieve faster management and responses and solutions in the event of natural hazards such as earthquakes and floods. The action would accelerate common protocols, procedures, approaches and measures related to infrastructure reconstruction, organization of equipment, vehicles, shelters, etc. This will have a positive impact on the SEA goals of strengthening resilience and reducing disaster risk and consequently on human health.							

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3. Strengthening of institutional and expert capacities and raising awareness to address environmental issues, climate change and disaster risks reduction (e.g. workshops, methodologies, protocols, educational materials, joint training for civil protection units).							
Planned actions are operational and organizational and do not cause any immediate impacts on SEA objectives, however, they are preconditions for some positive long-term effects in the future.							
4. Development of cross-border risk assessment and disaster risk strategies for cross-border hazards such as droughts, floods, landslides, fires, invasive alien species directly threatening biodiversity and eco-systems.							
As it can be seen from the description of environmental baseline, the programme area includes areas with mutual interest in flood protection. In line with the Danube River Basin Flood Risk Management Plan, reduction of existing risks should be developed on flood risk maps aiming at reduction of adverse consequences for human health, the environment, cultural heritage and economic activities. The action does not foresee construction of infrastructure, which might bring about negative impacts on environmental factors, rather to development of strategies, plans, transfer of knowledge etc. the intensity of the impact of which cannot be measured, but it is expected to have overall positive impacts.							
5. Exchanging knowledge and good practices on eco-system based climate change adaptation measures and implementing pilot actions for protection and restoration towards resilient eco-systems, e.g. rivers and wetlands, forests, cross-border							

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connectivity of habitats, agroforestry, biodiversity, landscapes, climate proofing, modelling and forecasting							
This action is a strong contribution to biodiversity preservation and strengthening resilience to climate change. Developing and supporting practices that have a positive impact on the environment and act in the direction of replacing harmful (traditional) practices and infrastructure will have a large positive indirect impact on the environment, especially when it comes to implementing quality pilot projects based on expertise, place-based and nature-based solutions. It's necessary to include local and/or international experts (especially when it comes to specific cross-border projects) when developing these projects and the background documentation for them to ensure quality systemic and integrative approach with implemented good global practices and relevant methodologies.							
6. Testing integrated climate-adaptation solutions in pilot actions, which combine technological, ecological, social, cultural, governance and financial aspects taking into account good practices available at local, regional, national or European level							
Although this action focuses on testing and research of pilot projects and actions which work towards to effective climate-adaptation solutions, the results of this action in its content will positively work towards achieving the objective of strengthening resilience and disaster risk reduction. However, all the proposed climate adaptation actions regard natural environment or building resilience in the most important sectors, including agriculture, forestry, water management and tourism, but neglect the importance of adaptation measures to be conducted in urban areas, especially in big towns such as Osijek and Novi Sad. Green infrastructure may be introduced both through spatial planning and as individual (pilot) projects. Green infrastructure is a tool in helping to ensure ecological and cultural functions and sustainability in urban areas, and in particular regard land conservation, landscape fragmentation, but also climate change adaptation and mitigation, improving health and quality of life of inhabitants. Urban green spaces help maintain temperature, provides protection against floods, acts as carbon storage and gives added ambiental and recreational functions. Given the low state of waste management in the Programme territory, and the impending climate change related impacts, the most critical may be identified as increased risk of waste decomposition, increased impacts from odour and dust, risk of flooding and flood-related disruptions, reduced water availability, all which incur additional costs and changes in the operation,							

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leading to loss of availability or lessened reliability of services. It is therefore suggested that waste management plans and projects concerning strengthening resilience of waste management sector be incorporated within this action. It is proposed that pilot actions be focused on a municipal or local scale for more detailed development and easier monitoring and implementation.							
7. Increasing climate resilience of critical infrastructure and cultural/natural heritage sites through improved risk preparedness and risk management plans							
Improving the current state of crucial infrastructure and its resilience towards climate change is necessary in modern day to achieve safe (living) environments. Though it's important to implement better solutions to existing infrastructure, it's also important to acknowledge and implement solutions in places where there is lack of general effectiveness considering modern day environmental challenges, e.g. green infrastructure solutions and green building principles. When it comes to improving climate resilience of cultural and natural heritage, due to their value and sensitivity, there must be a preliminary analysis in terms of specific sites ability to accept change and preserve existing values. Therefore, when it comes to heritage, both natural and cultural of any hierarchical level, the activities and actions in mind should be done with background expert documents and supervision.							
8. Integrating climate change aspects into water management on local, regional and interregional level (considering e.g. water quality, flooding, rainwater management and water retention, water scarcity, drinking water supply including smart water pricing, groundwater, forecasting)							

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Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
Water is the key to reaching sustainable management and disaster risk targets. The action focuses on improvement of water management practices, improving ecosystems and reducing the risks of water-related disasters. Transboundary cooperation is essential in addressing climate impacts across borders, by establishing exchange of data, stability, broader view of physical planning and finally, shared costs and benefits. Another important aspect of successful implementation of this action is job creation, thus helping economy. Climate change impacts freshwater related risks and decrease, socioeconomic losses from flooding, occurrence of droughts through less rainfall and less soil moisture, affects negatively water-dependent ecosystems by altering water quality, which again poses the risk to drinking water. The problem of insufficient understanding of how climate change will affect water resources in decision making however still persists. In addition, rural and urban risks are different, and policy interventions should reflect that aspect as well (access to infrastructure, agriculture etc.). The action should also include waste-water collection and treatment and management of waste sludge. Currently, water management relies on traditional solutions, including built flood protection infrastructure. In order to mitigate negative impacts on water and water-dependent ecosystems, and landscape, they require significant additional financial resources (biodiversity protection, preserving continuity of watercourse, increased energy efficiency measures and devices, high maintenance costs etc.). In selecting the equipment for traditional technological solutions, climate proof should be a priority. In selecting the climate change mitigation measures, nature-based solutions should be preferred as they include additional benefits to sustainable development objectives. Apart from implementation of NBSs, the action should cover preservation of wetlands, reforestation, and preservation of natural floodplains. Transboundary cooperation should include collecting and sharing information, developing joint vulnerability assessments, developing joint adaptation strategies where Basin institutions should play a central role. The Programme territory is abundant in water, but surface and groundwater are often of poor quality as a result of lack of sewerage and waste-water treatment. In construction of new water sanitation infrastructure, it is important that it is safe and resilient to climate-related risks. Hydro-power generation requires significant amount of water, and may pose significant impacts on the environment, for which reason large HPPs are no longer planned in Croatia. Therefore, for operation of new infrastructure, use of renewable sources such as solar, small HPPs and bioenergy plants is to be considered. The action will also benefit human health and safety from increase of sanitary safety of water intended for human consumption, and indirectly from implementation of water loss reduction measures, including awareness raising, which are needed given the current water loss rates due to insufficient investments into maintenance and reconstruction of water supply infrastructure							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
as well as intensive climate changes and changes caused by tectonic activities. It is recommended that both participating countries assess their water losses and reduce them if they exceed the thresholds specified by national legislation. The expected outcomes of the action include creating favourable and safe living conditions both for inhabitants and performance of economic activities, which are a prerequisite for implementation of actions of SO 4.6 regarding development of sustainable tourism.							
9. Sharing knowledge and developing solutions for climate proofing the agricultural and forestry sectors to increase their resilience towards e.g. droughts, floods, outbreaks of pests, invasion of invasive alien species							
Agriculture is both a source and a sink for GHG emissions. Climate changes will affect conditions needed for agricultural production and yield. It will also increase water demand and trigger spread of weeds, pests and diseases. Potential adaptation options include engineering practices and non-engineering solutions. Engineering practices refer to drainage and irrigation, storage, and non-engineering regard water consumption, change of crops, land use planning etc.). A precondition for implementation of this action is development of vulnerability assessments, and selecting adaptation targets (increased income, increased food security, ensuring sufficient water resources etc.).Climate adaptation solutions may also regard introduction of more resilient crops and species, which should undergo preliminary assessment and monitoring in case of unwanted spread into the environment and change of habitat conditions. The selected practice should include reducing carbon intensity of agriculture and avoid and prevent leakage into groundwater. Even tough livestock production is a significant source of GHG emissions, it also has a potential to mitigate climate change by implementation of good practices, which regard efficiency increase and management. Forests regulate ecosystems, protect biodiversity, have an important role in carbon cycle and can help drive sustainable growth and take part in circular economy. Forests are significantly affected by climate change by the change in flood regimes, rainfall, increased risk of pest infestation, and spread of diseases, for which reason adaptation of forests is essential if the carbon sinks are to be maintained. At the same time, forests are important carbon sinks, and their preservation is critical for preservation of overall life on the planet. Climate proofing practices should therefore focus on finding trees with increased carbon sinks, improving groundwater management, and soil quality. By appropriate forest management strategies, they							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
can help shelter communities from droughts, floods and landslides. Forests also ensure food products. Degradation of forests reduces their resilience to climate change and decreases their ecosystem services, so by enhancing resilience of forests and support of forest services, positive impacts may be expected on water-dependent ecosystems. Forests in the programme territory are managed either by the state, or by private owners which should be primary beneficiaries of this action as it regards both change in forest policies, legislation and institutional framework. Vulnerability assessments carried out for forests which have to be included in forest management plans. The action has to result in maintenance or increase of the existing carbon stocks and maintenance or improve the capacity of forests to deliver multiple services.							
10. Developing solutions for strengthening eco-system services for human health and wellbeing to support social resilience and counteracting socio-economic impacts of climate change							
Ecosystem based adaptation is sustainable management, conservation and restoration of ecosystems as a part of an overall adaptation strategy that takes into account the multiple social, economic and cultural co-benefits for local communities (CBD 2010). Examples of EbA includes wetland and floodplain management to prevent floods and maintain water flow and water quality, conservation and restoration of forests and natural vegetation to prevent erosion and landslides, as well as establishment of diverse agroforestry systems to help maintain crop yields. The main focus is on preserving, restoring and managing ecosystem structure and function. Solutions should also focus on immediate objectives in battling climate effects and then draw on intersectoral cooperation as EbA requires collaboration and coordination between multiple sectors and stakeholders (agriculture, water, energy, transport). This action should include activities such as implementing green infrastructure and green building principles since the action is focused on the human living environment and its adaptation to climate change challenges. Human health and climate change should be viewed from a larger spatial scale and be treated strategically through spatial plans on every hierarchical level, strategies for adapting to climate change and reducing the impact on climate change. It's important to emphasize the importance of this approach since climate change is a result of cumulatively inadequate solutions, so treatment and adjustment such be also treated as such, not only as individual solutions on parcel level.							
PA3 - Cooperating for healthier and more inclusive programme area							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
The health systems are well developed in both countries but pose a question of sustainability with debts and public investment being high. The GDP % for healthcare is pretty much the same in both countries, with low long term care investment. In both countries and Programme area, the main cause of death are illnesses connected to the circulatory system. Better infrastructure for an ever more ageing population is needed with better palliative care and more non institutional care. The COVID-19 pandemic is a global shock that has not spared Croatia and Serbia. It represents an unprecedented burden on their health and social protection systems. Therefore, it is evident that the quality and distribution of health services will be one of the priorities in the future period.							
SO 4.5 - Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family-based and community-based care Programme area is facing depopulation trends, declining natural growth and negative migration balances, as well as burden on health and social protection systems. The health system in the Programme territory (and beyond) suffers from lack of funds, maintenance and aging.							
1. Development and implementation of ICT solutions and (pilot) actions to support digitalization in health and social care.							
The main focus is implementation and supporting of ICT solutions and pilot actions in health and social care in the programme area which may support growth in health and social domain in the programme area but has no significant or direct impacts on the environment in general or SEA objectives in particular. Since there are no negative impacts identified, no mitigation measures are proposed.							
2. Improving health care and access to long-term care for vulnerable groups, with focus on children, elderly and disabled persons							
Implementation of this action may include small-scale investment in infrastructure, however, since such developments are regulated by applicable legislation and is generally implemented in already guilt areas, its impacts on the environment and SEA objectives will be insignificant.							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
3. Improving the accessibility and effectiveness of cross-border public health care services by investing in telemedicine, diagnostics, mobile clinics and mobile assets, including small scale infrastructure preferring nature-based solutions							
The implementation of this action includes increasing the efficiency of health services through the procurement and development of high-tech equipment in medicine. The action will have positive effects on the SEA objective of protection of human health and well-being.							
4. Transfer of knowledge in the region through exchange of experience, awareness raising, lifelong learning, education and training programmes, and capacity building through online and in-situ trainings to improve skills in the field of health care and social care and enhance the delivery of primary care and family-based and community-based care services.							
The main focus of the action is exchange of experience and improving skills in the field of health and social care which may support health and social growth in area but has no significant or direct impacts on the environment in general or SEA objectives in particular. Since there are no negative impacts identified, no mitigation measures are proposed.							
5. Developing and implementing joint activities/solutions to promote healthy lifestyles and active and healthy ageing, disease prevention							
Action is expected to have a positive impact on human health and well-being, and has the potential to be connected with sustainable tourism actions.							
PA4 - Cooperating for more sustainable and socially innovative tourism and culture							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
Tourism and culture play an important role in the economies and identity of both countries. The cross-border area of Croatia and Serbia abounds with natural, historic and cultural resources, but with a general low level of marketing of the region's cultural heritage. Since the programme area is homogenous in that respect, the challenges can be resolved through joint cross-border interventions. Although the importance to the state economy is more visible and important in Croatia than in Serbia, with the GDP share of tourism being as high as 20%, making the economy dependent on an ever-growing number of arrivals and foreign tourists visiting it is also important in Serbia. When accompanied with a short tourist season in Croatia that is limited and focused on 3 months of peak season and 3 months of preseason, it is evident that this poses a great risk which has now sadly been put into practice with the pandemic having a huge impact on tourism worldwide. Nevertheless, tourism will have a huge impact on the recovery of the economy with a potentially different, more locally centred approach. New trends in promotion and booking, new accommodation types, and travel motivations in the global tourism market have to be taken into account that would foster the development of tourism in the region. In addition, this has to be planned with increasing levels of environmental consciousness and a bigger interest in heritage and culture, while strengthening local economic activity at the same time. The support to the development of visitor activities that enable visitors to meet local residents and engage in cultural tourism activities and events will be key in fostering this sector. It is vital to create a joint offer of tourist products and services and provide new destination management tools.							
SO 4.6 - Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation The tourism sector plays an important role in the economy of the programme area and will have a huge impact on the recovery of the economy with a potentially different, more locally centred approach. In the next programming period, it is important to develop a more resilient and sustainable tourism sector that will preserve the identity of the programme area and its shared resources, natural and cultural heritage that is currently challenged by insufficient conservation and sustainable valorisation. Cross-border valorisation of shared heritage can support job creation and activate cultural and creative industries as drivers of innovation, especially in the field of social innovation. New trends in promotion and booking, new accommodation types, and travel motivations in the global tourism market have to be taken into account that would foster the development of tourism in the Programme area.							
1. Developing and implementing joint (pilot) actions to support diversification and sustainability of the tourism by investing in lesser-known destinations and diverse forms of tourism (cultural, rural, agro, active, etc.) including small-scale							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
infrastructure preferring nature-based solutions							
Tourism is a major economic sector in Croatia, with its principal products being "the Sun and the Sea" and sold over the Adriatic coast. Continental tourism is not as developed, so national strategies particularly support diversification of tourist products and continental tourism in order to balance regional development. The action therefore conforms with the activities planned by both the EU and national sectoral strategies supporting sustainable tourism. Rural areas include combinations of natural and cultural values, but they are also vulnerable for their dependence on their preservation. However, lesser known destinations may be lacking in infrastructure and not be able to support the planned turnout of visitors. The protected areas are governed by the Nature Management Plans and Visitors Management Plans, but that kind of strategic vision may not be applicable to other areas of interest. Alternative forms of tourism can have quite a positive impact on protection of cultural and landscape values since they make the foundation of successful sustainable tourism, especially in regards to rural, agrotourism, cultural tourism, active tourism, etc. These forms of tourism benefit from protecting cultural heritage, landscapes and nature because it is its key product. There will be increased inflow of visitors who will create physical damage and disruption to habitats and will require accommodation, infrastructure, increase resource use (primarily water and energy). Infrastructure may be secured through local accommodation which may have to be increased, and infrastructure may have to be built to allow a larger number of visitors and greater variety of visitors thus affecting biodiversity and water quality. Positive impacts of these interventions will be achieved only through including the biodiversity mitigation measures. It is necessary to implement these projects and activities with expert knowledge and basis, which primarily includes developing strategies of sustainable and rural tourism, documents that analyse the ability of certain places to accept change with reference to all of the SEA objectives in this report. Further on, these projects should include place-based solutions, nature-based solutions, appropriate design, implemented mitigation measures and other expert studies as seen in good praxis globally. It is also suggested that climate risk assessment be conducted for tourist sector and tourist assets in the Programme territory so as to safeguard them from potential risks.							
2. Developing and implementing innovative solutions and creating smart destinations (e.g. through digitalisation and creative industries), and new services and products for specific							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
targeted market segments such as seniors, young people or people with disabilities, including small scale infrastructure preferring nature-based solutions							
Innovation in tourism may include new products, processes, marketing innovations, but also improvements to existing practices. Recent studies in SE region show that regions specializing in tourism have low-value added products and services oriented to mass consumption, reduced socio-economic impacts and excessive use of natural resources. In order to balance out regional development, national development strategies support diversification of tourist offer drawing on regional specificities. Creating smart destinations may be one of the ways to fight travel restrictions imposed by the COVID-19 pandemic. Travellers' behaviours have changed, making them choose less crowded and better organized destinations. Smart destinations are locations supported with smart technologies to improve tourist experience, and their development will result in increase of visitors, but will not have significant impacts beyond those already assessed for other actions.							
3. Development and implementation of measures to protect, develop and promote sustainable cultural heritage and cultural services, public tourism assets and tourism services including investments in physical regeneration and security of public spaces (including small scale infrastructure preferring nature-based solutions), in the scope of their inclusion in the touristic and/or cultural circuit							
This action positively impacts cultural heritage and the objective of protecting its values since its key goal is to improve the state and benefits of cultural heritage. However, this action should include landscape and landscape heritage as well, since there is a significant lack of quality landscape management, professional and civil awareness and implementation of landscape protection.							
4. Supporting social innovation in tourism and culture - development of existing or new tourism and culture businesses							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
Social innovations may be seen as solutions to social problems that lead to changed social practices. Such innovations may be technological, as new communication channels, use of augmented reality in tourist experience, use of wearable devices, or development of new business models etc. The action has no significant negative impacts on SEA objectives.							
5. Protection, development and promotion of natural heritage and eco-tourism including Natura 2000 sites							
The stated action will generate positive impact on natural heritage in terms of raising awareness, implementing needed measures to maintain key values of specific sites and generate profit from natural heritage which will contribute to economic state of specific areas. However, this action should be viewed from a point of precaution, since natural heritage sites are in itself sensitive to change, and tourism generates traffic and requires infrastructure (be it soft in construction nature, nature and place-based in solution or hard in terms of materials and maladaptation to environmental context) which generates negative impacts on sites in terms of pollution, loss of habitat, disturbance of species, etc. Ecotourism per definition is focused on education of visitors about nature and environment in local surroundings, sometimes including the travellers in conservation activities. Potential problems include community participation and inadequate support infrastructure, including waste management. Waste management should be emphasized to reduce possible pollution of valuable sites, since one of the biggest impacts of tourism is waste pollution (mostly littering). Carrying capacity aspect and preservation of ecosystem services should also be considered in product development.							
6. Integration of existing tourist products into cross-border thematic routes, products or destinations and their further advancement							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
The programme area shares similar historical and cultural traditions and natural landscapes. Cross-border regions can thus benefit from cooperation to create greater diversity and differentiation in tourist products and range, including more effective promotion, and addressing specific problems in tourism development. Currently, there aren't many established cross-border itineraries. There is a successful project implemented within the Interreg programme for the previous period – S.O.S. – Subotica Osijek Secession Tourist Route designed to elaborate reconstruction and renovation of cultural heritage in Slavonia and Vojvodina. Sustainable tourism aims to minimise negative impacts from its dependence on natural resources and enhance positive practices resulting in growth of a target area. Sustainable tourism should therefore build on existing products, having in mind protection of the environment, conservation of cultural heritage, creating authentic experiences, but also ensuring sufficient infrastructure and capacities, and promoting responsible travel practices. Thus, with development and implementation of tourist products and thematic routes, the current state of these environmental components would be improved via increased use and visitations, raising awareness and general acts of promotion. Since the Programme area is largely characterised by riverine landscapes and the most sensitive area in that matter is the UNESCO Mura – Drava – Danube biosphere reserve (MaB) and in that context, the cross-border tourist routes should be planned and designed with the sensitivity of the overall area in mind. In principle, the more attractive tourist areas are those of higher natural (or cultural) values and therefore more sensitive to change.							
7. Capacity building for innovation in tourism and cultural heritage, focusing on recovery and resilience, and sustainable development of new or upgrading of existing cross-border tourism products, product diversification to adapt to new trends and needs							
The stated action is focused on human resources and building capacity in tourism and cultural sector. The action is a prerequisite for successful implementation of other sustainable tourism actions and has no identifiable negative impacts on the environment.							
8. Adoption of green concepts and standards in cross-border tourist products and services and sustainable use of culture and tourist potentials of the border regions							

DRAFT INTERREG PROGRAMME							
Programme Actions	**SEA OBJECTIVES**						
Impact assessment	Improving water quality and reducing water pollution	Protection of biodiversity, ecosystems and wildlife	Sustainable management of resources	Protection of cultural heritage and landscape values	Reducing impacts on air and climate	Strengthening resilience and disaster risk reduction	Protection of human health and well-being
Green concepts in tourism generally refer to concepts resulting in reduced environmental impact. Implementation of green standards covers a wide variety of tourist aspects such as accommodation facilities, travel agencies, communication strategies, but also transport and energy consumption, waste generation etc. It depends on the existing policies and institutions, and state of economy. As the action covers a broader region, it should also include sustainable mobility objectives, as transportation is an important aspect of tourism development and a significant contributor to air contamination and generator of greenhouse gasses.							

As it can be seen from the matrix above, the Programme will have few significant impacts on the environment, the great majority of which will be positive. This is because of the Programme's compliance with hierarchically higher documents/policies and its focus on "soft actions" which largely build on the already established systems and infrastructure and seek to make them more sustainable and to reduce the present pressures. Some Specific Objectives regard improvements in sectors not related to environmental components, for which reason they have no impacts on the SEA objectives whatsoever. This regards SO 1.1. Developing and enhancing research and innovation capacities and the uptake of advances technologies and 4.5 Ensuring equal access and health care and fostering resilience of health systems, including primary care, and promoting transition from institutional to family-based and community-based care. In conformity with the Green Deal, the Programme seeks to equip the Programme territory in facing the challenges imposed by the ongoing climate change and making it more resilient both in terms of infrastructure and human resources educated across sectors, both public and businesses and at the same time to create benefits to the overall environment.

While some actions have been assessed to have significant positive impacts on SEA objectives, most effects will be moderate, either because of the legislative and institutional barriers or because of the level of development in the Programme territory. However, they are likewise important as they may prepare the system for actions planned in the future. Even though such actions do not generate negative impacts, measures have been proposed to enhance their effects their likelihood of success.

The identified negative impacts result as a rule from construction actions, mostly regarding the possibility of implementation of RES projects and plants, with application of the precaution principle, since the location, scope and details of such actions are presently unknown. Even though SO 2.4 Promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches, will benefit in making the area more resilient, certain actions may negatively affect biodiversity objectives, assessed also with the application of the precautionary principle. However, no impacts have been assessed as significantly negative, since the implementation of actions has to conform to physical planning documents in force and undergo environmental assessments at project level.

9.2.1 Cumulative impacts

The assessment was carried out at proposed action level, and even though the action list is not exhaustive, it allowed for identification of main causes of stress, impact paths, intensity of change, as well as capacity of environmental factors, i.e. SEA objective, to sustain such change. It is evident that the occurrence of cumulative impacts is more likely in locations where more projects will take place in a limited area or which cause parallel stress factors. The analysis of individual actions thus helped in assessing the likelihood that their implementation within the same time frame in the same area will bring about amplified positive or negative impacts, and to evaluate which SEA objectives will be under the greatest pressure (**Figure 23**).

As it can be seen from the graph below, the Programme has the potential to generate both positive and negative cumulative impacts on the environment, the greatest intensity of which will be positive. It will strongly contribute to SEA objectives of Strengthening resilience and disaster risk reduction, Reducing impacts on air and climate, consequently indirectly positively affecting Protection of human

health and well-being. The effects on emission reduction and climate adaptation stem from actions directly aimed at promotion and use of RES and building resilience in the area, depending on the specificity of the area. Such actions may be infrastructural, thus solving particular problems, or organizational and operational aimed at transforming the economy and society. Positive impacts of smaller intensity and scope regard Protection of cultural heritage and landscape values directly through sustainable tourism actions, but also indirectly as a result of reduced emissions and introduction of general green solutions in technology and building. Positive effects on biodiversity, ecosystems will also mostly be indirect through implementation of green solutions, development of sustainable forms of tourism in natural areas and through supporting eco-system services benefiting human health.

Even though of a lesser scope, the Programme may likewise generate cumulative negative impacts on the Protection of biodiversity, ecosystems and wildlife directly through implementation of RES projects, especially hydro, from traditional methods of battling hazardous effects of water, but also biomass and tourism because of the vulnerability of this SEA objective. Impacts on cultural heritage and landscape have been assessed jointly, but distinction in the description has been made in the matrix. Thus the negative cumulative effects, even though of lesser scope, have been identified as indirect arising from construction development, but taking into consideration that there is no systematic protection of landscape in the Programme territory, apart from an odd landscape study and measures provided in physical plans, and that not enough emphasis is given to it in the assessments on project levels.

9.2.2 Climate proofing

Climate proofing is a process that integrates climate change mitigation and adaptation measures into the development of infrastructure project and enables the investors to make informed decisions on projects that qualify as compatible with the Paris Agreement. Technical guidelines for the preparation of climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01) are prepared, among other, for the purpose of integrating climate proofing considerations into environmental assessments, including Strategic Environmental Assessment (SEA). Climate change consideration will contribute in the planning phase which is important especially in sectors such as transport, where decisions and in particular those related to climate change mitigation are taken at an early stage (e.g. prioritizing certain modes of transport, policies, patterns/habits).

Potential impacts of climate change on infrastructure have been integrated into this SEA procedure from the onset, as climate change mitigation and adaptation are core objectives of the Programme under assessment. The programme relationship with the Paris Agreement and other EU and global policies has been analysed, and the Assessment of the Programme Compatibility with the DNSH Principle has also been prepared.

The analysis of climate change and the consideration of climate scenarios in the Programme area led to the conclusion that the effects of climate change relate to different sectors in the programming area. For example, more frequent extreme events such as intense precipitation can lead to flooding and endanger electricity distribution, water supply or other infrastructure. On the other hand, a

decrease in precipitation and an increase in temperature can lead to a decrease in yield, the appearance of pests or other diseases, thereby endangering agricultural production.

Mitigation measures are necessary to reduce the impacts of climate change and to ensure that these changes can be managed. Mitigation affects the causes and is implemented by reducing greenhouse gas emissions or using alternative forms of fuel/energy. On the other hand, adaptation to climate change involves undertaking a specific set of activities aimed at reducing the vulnerability of natural and social systems to climate change.

The table below, and according to the technical guidelines for the preparation of climate change infrastructure in 2021-2027, presents the key questions on climate change mitigation and adaptation and the way in which they have been considered in the Programme and the SEA Report.

Table 19. Key questions for SEA related to the mitigation and adaptation of climate change

Mitigation of climate change			
Main concerns related to:	**Some key questions for identifying climate change mitigation issues**	**Examples of Programme activities related to climate change mitigation**	**Examples of SEA measures related to climate change mitigation**
Energy demand in industry	Will the proposed programme increase or decrease demand for energy in industry? Does the programme encourage or limit opportunities for low-carbon businesses and technologies?	-Development of joint solutions to increase the production of additional capacity for renewable energy (e.g. solar, geothermal, biomass, etc.) including small scale infrastructure preferring nature-based solutions -Joint solutions, research and pilot actions on RES (e.g. circular solutions, use and reuse of sustainable materials, demo centres/plants) -Improving energy demand management and fostering behavioural changes of consumers for reducing energy consumption and a resource-efficient and sustainable use of energy	-SO should include awareness raising activities, information providing regarding cooperation mechanisms and financing schemes (SO 2.2.-1) -RES production and exploitation should cover energy storage in-situ, if possible -Conduct vulnerability assessment across energy sector in order to efficiently implement adaptation measures. (S.O 2.2 – 1)

Energy demand in housing and construction	Will the programme increase or decrease demand for construction of housing and for energy use in housing?	-Implementing pilot actions to test innovative and climate-neutral solutions through e.g. taking up and exploiting R&D results for the energy efficient renovation and heating and cooling of buildings (including cultural heritage buildings) -Development and implementation of joint pilot actions that improve the integration of sustainable renewable energy sources in different sectors (e.g. building and construction sector, industry, agriculture, forestry etc.).	-For operation of new infrastructures, use of RES such as solar and small HPPs and bioenergy plants should be considered. (SO 2.4 – 8)
GHG emissions in agriculture	Will the programme increase or decrease generation of methane and nitrous oxide in agriculture? Will the programme increase or decrease the efficiency of the use of nitrogen in fertilising practices? Will the programme adversely affect or protect carbon rich soils?	-Promoting the production and use of advanced biofuels (produced from non-food crops, such as cellulosic biofuels and waste biomass)	-Climate proofing practices in forestry and agriculture should focus on finding trees with increased carbon sinks, improving groundwater management, and soil quality. (SO 2.4. – 9)
Travel patterns and GHG emissions from transport	Will the programme increase personal travel – the number and length of journeys and the mode of travel? Will it entail a shift from more-emitting to less-emitting modes of	-Adoption of green concepts and standards in cross-border tourist products and services and sustainable use of culture and tourist	-Sustainable tourism actions should also include sustainable mobility measures such as use of public transportation, alternative mobility modes, low-emission transport. (SO 4.6-8)

	travel (e. g. from personal cars to public transport or from buses to electric trains)?	potentials of the border regions	
Adaptation to climate change			
Main concerns related to:	**Some key questions for identifying climate change adaptation issues**	**Examples of Programme activities related to climate change adaptation**	**Examples of SEA measures related to climate change adaptation**
Transition to a climate resilient economy and society	Consistency with the global goal on adaptation of the Paris Agreement Consistency with a transition towards climate resilience (with an adequate level of resilience to acute and chronic climate change impacts) Consistency with the relevant National/Regional/ Local/City Strategy and/or plans on adaptation to climate change Consistency with the EU Strategy on adaptation to climate change	-Encouraging intersectoral/interstate cooperation in risk prevention and rapid response management through development and implementation of joint protocols, procedures, approaches and measures, such as establishment of joint emergency centres, small-scale infrastructure preferring nature-based solutions, response vehicles, equipment, shelters, etc. -Strengthening of institutional and expert capacities and raising awareness to address environmental issues, climate change and disaster risks reduction (e.g. workshops, methodologies, protocols, educational materials, joint training for civil protection units). -Testing integrated climate-adaptation solutions in pilot actions, which combine technological, ecological, social, cultural, governance and financial aspects	-Conduct climate risk assessment for tourist sector and tourist assets so as to safeguard them from potential risks. (S.O 4.6 – 1) -Prepare or update forest management plans to include climate adaptation measures. (S.O 2.4 – 9)

		taking into account good practices available at local, regional, national or European level -Developing solutions for strengthening eco-system services for human health and wellbeing to support social resilience and counteracting socio-economic impacts of climate change	
Heatwaves	What urban areas, population groups or economic activities are most vulnerable to heatwaves? Does the programme reduce or enhance the 'urban heat island' effect? Will the programme increase or reduce the resilience of landscape/forests to wildfires?	-Increasing climate resilience of critical infrastructure and cultural/natural heritage sites through improved risk preparedness and risk management plans	-Include experts in preparation of project documentation which must contain a preliminary analysis in terms of specific sites ability to accept change and preserve existing values. (SO 2.4.-7) -Implement green infrastructure activities in urban areas to provide carbon sinks. (SO 2.4. – 9) -Implement green infrastructure solutions in order to improve climate resilience in urban areas. (SO 2.4. – 6) -The action should include actions such as implementing green infrastructure and green building principles since the action is focused on the human living environment and its adaptation to climate change challenges (SO 2.4.-10) -Implement green infrastructure solutions in order to improve the quality of life of people. (SO 2.4. – 6)
Drought	Will the programme increase water demand and to what extent? Are there any potential significant risks associated with	-Development and introduction of joint climate change adaptation, disaster prevention and first response plans, as well as solutions and systems for	-Integrate disaster risk reduction concerns into planning and development process at official level in order to "climate-proof" development, rather than focus only on disaster preparedness and response. (S.O 2.4 – 1)

	worsening water quality during droughts?	monitoring, prevention and management of potential risks (e.g. floods, wildfires, landslides, droughts, earthquakes, invasive alien species, etc.). -Sharing knowledge and developing solutions for climate proofing the agricultural and forestry sectors to increase their resilience towards e.g. droughts, floods, outbreaks of pests, invasion of invasive alien species	
Flood regimes and extreme rainfall events	What infrastructure is at risk due to its location in flood zones? Will the proposed programme reduce or enhance the capacity of ecosystems and flood plains for natural flood management? Will the programme increase the exposure of the vulnerable livelihoods and cultural heritage, people with certain socio-economic characteristics or sensitive receptors (e.g. critical infrastructure) to floods, or impact cultural heritage?	-Integrating climate change aspects into water management on local, regional and interregional level (considering e.g. water quality, flooding, rainwater management and water retention, water scarcity, drinking water supply including smart water pricing, groundwater, forecasting) -Development and introduction of joint climate change adaptation, disaster prevention and first response plans, as well as solutions and systems for monitoring, prevention and management of potential risks (e.g. floods, wildfires, landslides, droughts, earthquakes, invasive alien species, etc.).	- New water sanitation infrastructure should be safe and climate resilient. (SO 2.4 – 8) - Support alternative methods of water collection for irrigation of energy crops (SO 2.2 – 6) - The action of integrating climate change aspects into water management should also include preservation of wetlands, reforestation and preservation of natural floodplains. (SO 2.4 – 8)

		-Development of cross-border risk assessment and disaster risk strategies for cross-border hazards such as droughts, floods, landslides, fires, invasive alien species directly threatening biodiversity and eco-systems.	
Landslides	What property, persons or environmental assets and e.g. cultural heritage are at risk because of landslides and their vulnerability?	-Development and introduction of joint climate change adaptation, disaster prevention and first response plans, as well as solutions and systems for monitoring, prevention and management of potential risks (e.g. floods, wildfires, landslides, droughts, earthquakes, invasive alien species, etc.).	

Source: Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01)

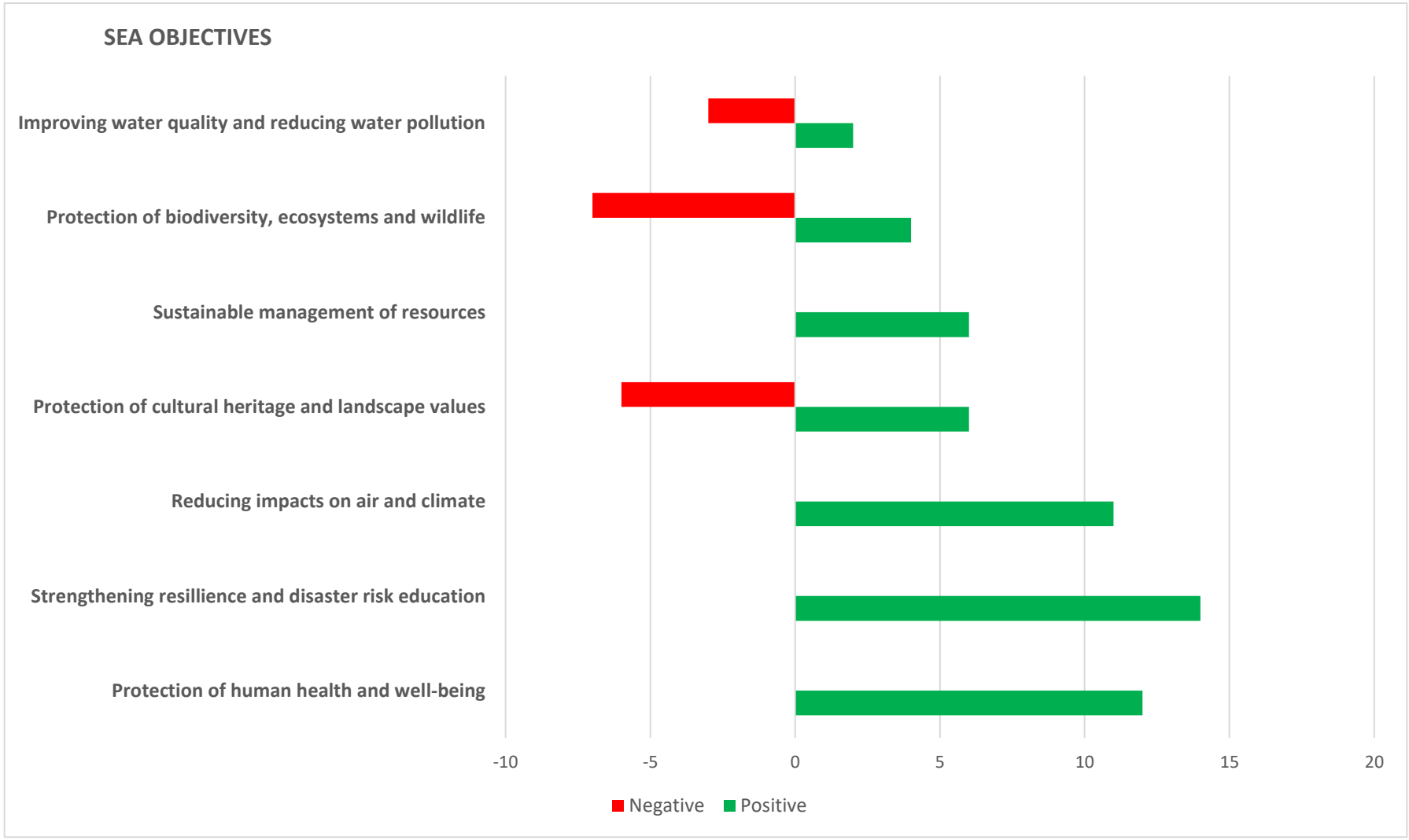

Figure 23. Presentation of quantified impacts of the Programme on environmental objectives

10. TRANSBOUNDARY IMPACTS

Taking into consideration that the Programme is transboundary in nature and scope, aiming at achieving impacts on the cross-border region, the impacts were regarded as transboundary by default, with consultations being held in both participating countries.

As regards the likelihood of occurrence of impacts across borders of the Programme territory, taking into consideration the typology of proposed actions as well as their local spatial scope, the implementation of specific objectives proposed by the Programme are not expected to generate cross-border impacts on the neighbouring Hungary, Bosnia and Herzegovina and Romania.

11. ENVIRONMENTAL PROTECTION AND ENHANCEMENT MEASURES

This Chapter describes measures for prevention, reduction and mitigation of likely negative impacts generated through implementation of the Programme, as assessed in chapter **9.2** *Results of the assessment of the impact of the implementation of the Programme on environmental objectives*

Protection measures have been defined on the basis of identified negative cumulative impacts and are designed to minimize or completely avoid them. Apart from measures proposed in response to identified negative impacts, the SEA Report also proposes integration of enhancement measures formed in response to observed opportunities to improve environmental state or to increase sustainability of the solutions proposed by the Programme.

Both the protection and enhancement measures may also serve as criteria and limitations to be used in lower hierarchy documents, including implementation conditions to be observed in implementation of the Programme and projects proposed by the Programme.

Table 20. Environmental protection and enhancement measures

Ord. Nr.	SEA OBJECTIVES	Proposed measure/guideline
1.	Improving water quality and reducing water pollution	1. Support alternative methods of water collection for irrigation of energy crops (SO 2.2 – 6) 2. Prioritise nature-based solutions (SO 2.4 – 8) 3. The action of integrating climate change aspects into water management should also include preservation of wetlands, reforestation and preservation of natural floodplains. (SO 2.4 – 8) 4. Transboundary cooperation should include collecting and sharing information, developing joint vulnerability assessments, developing joint adaptation strategies where Basin institutions should play a central role. (SO 2.4 – 8) 5. New water sanitation infrastructure should be safe and climate resilient. (SO 2.4 – 8) 6. For operation of new infrastructures, use of RES such as solar and small HPPs and bioenergy plants should be considered. (SO 2.4 – 8) 7. Developments within this Programme shall not harm the current maximum water flow rate (DNSH) 8. The action (S.O. 2.4 – 8) should also include waste-water collection and treatment
2.	Protection of biodiversity, ecosystems and wildlife	1. Consider use energy crop fields as rehabilitation measure for degraded agricultural land, for exp. Near landfills or other land unsuitable for food production, eroded soil etc. (SO 2.2. – 6) 2. Prohibit change of use of forest land for energy crop production purposes (SO 2.2. – 6) 3. Include local and/or international experts (especially when it comes to specific cross-border projects) when developing projects for protection and restoration towards resilient ecosystems, landscapes climate-proofing, modelling and forecasting and the background documentation for envisioned projects. (SO 2.4 – 5) 4. Conduct campaigns to eliminate invasive species in the Programme territory as part of protection projects. (SO 4.6. – 1) 5. Implementation of stated solutions should be done with expert supervision (SO 2.4. – 7) 6. As a precondition to developing climate proofing for agricultural and forestry sectors, vulnerability assessment and selection of adaptation targets is necessary. (SO 2.4. – 9)

Ord. Nr.	SEA OBJECTIVES	Proposed measure/guideline
		7. Climate proofing practices in forestry and agriculture should focus on finding trees with increased carbon sinks, improving groundwater management, and soil quality. (SO 2.4. – 9) 8. Tourist products and cross border tourist routes should be planned and designed with the sensitivity of the overall area in mind, especially when it comes to MaB reserve Mura – Drava – Danube. (SO 4.6. – 6) 9. In development and preparation of projects and products, include an analysis of carrying capacity aspect and preservation of ecosystem services. (SO 4.5. – 6) 10. Introduce green infrastructure to improve ecosystem services in urban areas. (SO 2.4. – 6) 11. No developments is to be built on arable land or high biodiversity value land (DNSH)
3.	Sustainable management of resources	1. Suitability modelling for each RES in specific area should be the basis and the guideline for the development of RES. (SO 2.2.-1) 2. Apart from education, incentives, encouraging through social networks, as well as schemes linking various aspects of energy saving and energy efficiency are also to be considered. (SO 2.2. – 5) 3. The planned projects and activities should include place-based solutions, nature-based solutions, appropriate and contextual design, implemented mitigation measures and other expert studies as seen in good praxis globally. (SO 4.6. – 1) 4. Joint solutions should be developed in cooperation with specialists from all affected areas, from physical planners, biologists, conservationists etc. (SO 2.2.-1) 5. In the preparation of planned actions and projects include experts for cooperation and develop expert background documents. (SO 4.6.-1) 6. Develop strategies of sustainable and rural tourism and other preliminary documents that analyse the ability of certain places to accept change with reference to all of the SEA objectives in this report. (SO 4.6.-1) 7. In order to minimize likely impacts on cultural property, technical solutions should be developed and implemented in

Ord. Nr.	SEA OBJECTIVES	Proposed measure/guideline
		cooperation and under the supervision of conservationists and/or other experts. (SO 2.2. – 2) 8. Demolition waste generated within this Programme has to be prepared for recycling (DNSH) 9. Improved infrastructure within this Programme shall not relate to the traditional fossil fuel industry. (DNSH) 10. Sustainability criteria regard protection of high biodiversity land and land with high carbon stock, that is aiming at minimising the risk of using forest biomass derived from unsustainable production. (S.O 2.2 – 1) 11. Installers of small-scale biomass, heat pump, shallow geothermal and solar photovoltaic and solar thermal energy shall be certified by an accredited training programme or training provider. (S.O 2.2 – 1) 12. In order to further support circular economy, the value chain should include efficiency of resources used, as well as responsible sourcing. (S.O.1 – 4) 13. Should public lighting systems be included within larger projects as secondary activity, technical criteria to be complied with shall be specified in the Programme implementation period, pursuant to the Act on Protection from Light Pollution (OG 14/19) and Regulation on lighting zones, permitted lighting values and management of lighting systems and other special regulations, with the purpose of increasing energy efficiency and use of RES in systems, and increase of safety standards. (S.O. 2-5)
4.	Protection of cultural heritage and landscape values	1. In order to minimize likely impacts on cultural property, technical solutions should be developed and implemented in cooperation and under the supervision of conservationists and/or other experts. All physical interventions on protected cultural property are subject to special protection conditions issued by the competent authority . (SO 2.2.-1, 2.2.-2, 2.2. – 4, 2.4-1) 2. Prioritise use of brownfield locations for bioenergy plants. (SO 2.2.-6) 3. Implementation of projects should be done under expert supervision (SO 2.4 -7) 4. The action should include landscape and landscape heritage as well, since there is a significant lack of quality landscape management, professional and civil awareness and implementation of landscape protection. (SO 4.6-3)

Ord. Nr.	SEA OBJECTIVES	Proposed measure/guideline
		5. During preparation and development of tourist routes, include a preliminary expert analysis of sensitivity of protected cultural and natural heritage areas with the goal of minimum negative impact. (SO 4.6.-6) 6. Support introduction of green infrastructure in order to decrease the trend of landscape fragmentation and improve visual values of urban and rural areas. (SO 2.4. – 6)
5.	Reducing impacts on air and climate	1. SO should include awareness raising activities, information providing regarding cooperation mechanisms and financing schemes (SO 2.2.-1) 2. Sustainable tourism actions should also include sustainable mobility measures such as use of public transportation, alternative mobility modes, low-emission transport. (SO 4.6-8) 3. Include experts in preparation of project documentation which must contain a preliminary analysis in terms of specific sites ability to accept change and preserve existing values. (SO 2.4.-7) 4. Implement green infrastructure activities in urban areas to provide carbon sinks. (SO 2.4. – 9) 5. Preparation of SECAP is proposed as a means to elaborate both climate and climate adaptation measures for the entire Programme territory, or its part. (SO 2.4. – 1) 6. RES production and exploitation should cover energy storage in-situ, if possible.
6.	Strengthening resilience and disaster risk reduction	1. Focus of the action should not only be on optimization of the current processes, but finding new technical solutions and new work methods. (SO 1.1.-8) 2. Include local and/or international experts (especially when it comes to specific cross-border projects) when developing projects and the background documentation for them to ensure quality systemic and integrative approach with implemented good global practices and relevant methodologies (SO 2.4.-5) 3. Implement green infrastructure solutions in order to improve climate resilience in urban areas. (SO 2.4. – 6) 4. Preparation of SECAP is proposed as a means to elaborate both climate and climate adaptation measures for the entire Programme territory, or its part. (SO 2.4. – 1) 5. Integrate disaster risk reduction concerns into planning and development process at official level in order to “climate-proof”

Ord. Nr.	SEA OBJECTIVES	Proposed measure/guideline
		development, rather than focus only on disaster preparedness and response. (S.O 2.4 – 1) 6. Conduct vulnerability assessment across energy sector in order to efficiently implement adaptation measures. (S.O 2.2 – 1) 7. Conduct climate risk assessment for tourist sector and tourist assets so as to safeguard them from potential risks. (S.O 4.6 – 1) 8. Prepare or update forest management plans to include climate adaptation measures. (S.O 2.4 – 9) 9.Integration of climate adaptation measures into forestry sector will ensure the maintenance or increase of existing carbon stocks and maintenance or improve the capacity of forests to deliver multiple services. (S.O 2.4 – 9)
7.	Protection of human health and well-being	1. The action should include actions such as implementing green infrastructure and green building principles since the action is focused on the human living environment and its adaptation to climate change challenges (SO 2.4.-10) 2. Implement green infrastructure solutions in order to improve the quality of life of people. (SO 2.4. – 6)

12. DIFFICULTIES DETECTED IN THE DEVELOPMENT OF A STRATEGIC STUDY (E.G. TECHNICAL WEAKNESSES OR LACK OF KNOWLEDGE AND EXPERIENCE) IN COLLECTING THE NECESSARY DATA

Due to the strategic nature of the measures planned by the Programme, it is difficult to fully assess the environmental impact of interventions with complete reliability. In particular, the strategic environmental assessment was limited by the following key factors:

- The proposed interventions do not include a spatial component, but a general description of the actions without any indication of concrete interventions, which makes it difficult to safely assess possible environmental impacts, which is why the impacts for most measures were assessed in a broader context using precautionary measures.
- Assessment of actions, results and expected outcomes, in addition to the absence of spatial and quantitative reference, was made difficult to determine the significance of individual impacts, especially related to the construction of infrastructure.
- Since there are no comprehensive and standardized databases on the state of the environment in the Republic of Croatia and Republic of Serbia, collected data on the state and trends of individual environmental factors for the purposes of SEA Report do not correspond in level of detail or relevance, or have been found to be mutually incomparable. Likewise, discrepancies were often encountered.
- According to instructions of the National Authorities, official data for Croatia and Serbia were requested from National and competent authorities, as well as from GIS centres, of which only the Ministry of Construction, Transport and Infrastructure of the Republic of Serbia replied. Due to lack of official data, data for Serbia were taken from various publicly available sectoral documents of the state and regional level, which often did not offer sufficient focus on the Programme area.

13. DESCRIPTION OF THE ENVISAGED MONITORING MEASURES

Monitoring the real impacts of the implementation of the Programme aims to verify that its implementation achieves the objectives set, then identify the negative impacts of implementation (anticipated and unforeseen), and to ensure that the environmental measures proposed by the strategic assessment are implemented.

In addition to the environmental monitoring systems already in place the results of which are considered essential for monitoring the impact of Program on the SEA objectives, i.e. the component and environmental pressures, the strategic assessment did not identify new environmental monitoring measures.

14. LEGISLATION AND SOURCES

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17. Regulation on the list of habitat types and maps of habitats (Official Gazette 27/21)
18. Act on the Protection and Preservation of Cultural Property (Official Gazette 69/99, 151/03, 157/03, 87/09, 88/10, 61/11, 25/12, 136/12, 157/13, 152/14, 98/15, 44/17, 90/18, 32/20, 62/20 and 117/21)
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22. Decree on limit values of air pollutant emissions from stationary sources (Official Gazette 42/21)

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15. ANNEXES

15.1 Decision to start the strategic environmental assessment process

REPUBLIKA HRVATSKA
MINISTARSTVO REGIONALNOGA RAZVOJA
I FONDOVA EUROPSKE UNIJE

P / 2056474

KLASA: 910-06/21-01/1
URBROJ: 538-10-3-1-1/433-21-5
Zagreb, 10. studenog 2021. godine

Na temelju članka 5. stavka 2. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš (Narodne novine, broj 3/17), ministrica regionalnoga razvoja i fondova Europske unije donosi

ODLUKU
o započinjanju postupka strateške procjene utjecaja na okoliš za Interreg IPA program prekogranične suradnje Hrvatska – Srbija 2021. – 2027.

I.

Danom stupanja na snagu ove Odluke započinje postupak provođenja strateške procjene utjecaja na okoliš za Interreg IPA program prekogranične suradnje Hrvatska – Srbija 2021. – 2027. (u nastavku teksta: Program).

II.

Postupak strateške procjene provest će Ministarstvo regionalnoga razvoja i fondova Europske unije (u nastavku teksta: Ministarstvo) koje je nadležno za provedbu Programa na temelju Odluke Vlade Republike Hrvatske o utvrđivanju programa europske teritorijalne suradnje u Republici Hrvatskoj za financijsko razdoblje Europske unije 2021.-2027. i davanje suglasnosti tijelima zaduženima za njihovu pripremu da potvrde njihov sadržaj, KLASA: 022-03/21-04/269, URBROJ: 50301-05/14-21-3 od 29. srpnja 2021. godine.

III.

U postupku strateške procjene utjecaja na okoliš za Interreg IPA program prekogranične suradnje Hrvatska – Srbija 2021. – 2027. Ministarstvo će provesti određene radnje u skladu s odredbama Zakona o zaštiti okoliša (Narodne novine, broj 80/13, 153/13, 78/15, 12/18, 118/18) i Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš, redoslijedom provedbe kako je utvrđeno u Prilogu I, a koji je sastavni dio ove Odluke.

IV.

U okviru provedbe strateške procjene utjecaja Programa na okoliš nije potrebno provesti postupak Glavne ocjene prihvatljivosti za ekološku mrežu prema rješenju Ministarstva gospodarstva i održivog razvoja, KLASA: UP/I 612-07/21-37/259, URBROJ: 517-10-2-3-21-3 od 22. listopada 2021. godine u kojem je navedeno da je Interreg IPA program prekogranične suradnje Hrvatska – Srbija 2021. – 2027. prihvatljiv za ekološku mrežu.

Interreg - IPA CBC
Croatia - Serbia

V.

Ministarstvo će pokrenuti postupak strateške procjene utjecaja na okoliš u roku od osam dana od dana donošenja ove Odluke. U svrhu određivanja sadržaja strateške studije Ministarstvo će zatražiti mišljenja tijela nadležnih za pojedine sastavnice okoliša i opterećenja za okoliš, koja su navedena u Prilogu II, a koji je sastavni dio Odluke.
Nakon pribavljenih mišljenja relevantnih tijela, Ministarstvo će donijeti odluku o sadržaju strateške studije u skladu s člankom 10., stavkom 2. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš.

VI.

Ministarstvo regionalnoga razvoja i fondova Europske unije obvezno je informirati javnost o odluci o pokretanju postupka strateške procjene i izradi strateške studije, u skladu s člankom 160. Zakona o zaštiti okoliša i člankom 5. Uredbe o informiranju i sudjelovanju javnosti i zainteresirane javnosti u pitanjima zaštite okoliša (Narodne novine, broj 64/08).

VII.

Ova Odluka stupa na snagu danom donošenja.

MINISTRICA REGIONALNOGA RAZVOJA I FONDOVA EUROPSKE UNIJE

REPUBLIKA HRVATSKA – MINISTARSTVO REGIONALNOGA RAZVOJA I FONDOVA EUROPSKE UNIJE – ZAGREB

Nataša Tramišak, mag. iur.

Prilozi:

1. Redoslijed radnji koje će se provesti u postupku strateške procjene utjecaja Programa na okoliš
2. Popis tijela koja će sudjelovati u postupku provođenja strateške procjene utjecaja na okoliš

Dostaviti:

1. Ministarstvu gospodarstva i održivog razvoja
2. Pismohrana, ovdje

Interreg - IPA CBC Croatia - Serbia

OBRAZLOŽENJE

Razlozi za donošenje Interreg IPA programa prekogranične suradnje Hrvatska – Srbija 2021. – 2027. iz točke I. ove Odluke utvrđeni su u Odluci Vlade RH o utvrđivanju programa europske teritorijalne suradnje u Republici Hrvatskoj za financijsko razdoblje Europske unije 2021.-2027. i davanje suglasnosti tijelima zaduženima za njihovu pripremu da potvrde njihov sadržaj, KLASA: 022-03/21-04/269, URBROJ: 50301-05/14-21-3 od 29. srpnja 2021. godine. U članku III. te Odluke naveden je popis programa teritorijalne suradnje, koji između ostalih, sadržava i Interreg IPA program prekogranične suradnje Hrvatska – Srbija 2021. – 2027. Nadalje, člankom IV. iste Odluke utvrđeno je da je Ministarstvo tijelo nadležno za cjelokupnu organizaciju i koordinaciju procesa pripreme navedenog Programa.
Predviđeno je da je Interreg IPA program prekogranične suradnje Hrvatska – Srbija 2021. – 2027. obuhvati aktivnosti u okviru 3 cilja politike od ukupno 5 koje podupire Europski fond za regionalni razvoj, a koji su navedeni u članku 5. stavku 1. Uredbe (EU) 2021/1060. U sklopu svakog odabranog cilja politike, dogovoreni su i specifični ciljevi, koji su navedeni u nastavku.

Kroz cilj politike 1 „Konkurentnija i pametnija Europa promicanjem inovativne i pametne gospodarske preobrazbe i regionalne povezivosti u području IKT-a“, specifični cilj 1.1 Razvoj i jačanje istraživačkih i inovacijskih kapaciteta te primjenu naprednih tehnologija, predviđa se financiranje sljedećih indikativnih aktivnosti:

- podrška probnim/pokusnim linijama, ranom odobrenju (validaciji) proizvoda, certifikaciji, naprednim proizvodnim mogućnostima i prijenosu tehnologije, uključujući suradnju između znanosti i poslovnog sektora;
- jačanje i modernizacija usluga poslovne podrške koje bi mogle pomoći kod osposobljavanja, u marketingu, razvoju i implementaciji novih usluga/proizvoda, korištenju IKT usluga i novih tehnologija, prilikom uvođenja inovativnih rješenja u organizaciju poslovanja i procese (*blockchain* tehnologija, računarstvo u oblaku (*cloud computing*) tehnologija velikih podataka (*Big Data*), tehnologija internet stvari (*IoT*), napredna proizvodnja, robotika, umjetna inteligencija, kibernetička sigurnost itd.);
- ubrzavanje inovacija i prijenos tehnologija (npr. bio i zelena ekonomija, poljoprivreda, proizvodnja hrane, pametna proizvodnja, kulturne i kreativne industrije, razvoj vještina za pametnu specijalizaciju i buduće digitalne tehnologije, itd.).

Kroz cilj politike 2 „Zelenija, otporna Europa s niskom razinom emisija koja prelazi na gospodarstvo s nultom neto stopom emisija ugljika promicanjem prelaska na čistu i pravednu energiju, zelenih i plavih ulaganja, kružnoga gospodarstva, ublažavanja klimatskih promjena i prilagodbe klimatskim promjenama, sprečavanja rizika i upravljanja njime te održive urbane mobilnosti“, specifični cilj 2.2 Promicanje obnovljive energije u skladu s Direktivom (EU) 2018/2001, uključujući kriterije održivosti utvrđene u njoj, predviđa se financiranje sljedećih indikativnih aktivnosti:

- razvoj zajedničkih rješenja kako bi se povećali kapaciteti za proizvodnju energije iz obnovljivih izvora (npr. vjetar, solarna energija, geotermalna energija, biomasa itd.);
- razvoj i provedba zajedničkih pilot akcija koje poboljšavaju integraciju održivih obnovljivih izvora energije u različite sektore (npr. sektor graditeljstva i zgradarstva, industrija, poljoprivreda, šumarstvo itd.);
- zajedničke studije, istraživanja i pilot akcije o obnovljivim izvorima energije (npr. kružna rješenja, uporaba i ponovna uporaba održivih materijala) i podizanje svijesti šire javnosti.

Kroz specifični cilj 2.4 Promicanje prilagodbe klimatskim promjenama i sprečavanja rizika od katastrofa te otpornosti, uzimajući u obzir pristupe utemeljene na ekosustavima, predviđa se financiranje sljedećih indikativnih aktivnosti:

- razvoj i uvođenje zajedničkih rješenja i sustava za praćenje, sprječavanje i upravljanje potencijalnim rizicima (npr. poplave, požari, klizišta, suše, itd.);

- poticanje međusektorske/međudržavne suradnje u sprječavanju rizika i upravljanju brzim odgovorom kroz razvoj i provedbu zajedničkih protokola, postupaka, pristupa i mjera, poput infrastrukture, specijaliziranih vozila, opreme, skloništa itd.;
- jačanje institucionalnih i stručnih kapaciteta i podizanje svijesti za rješavanje pitanja okoliša, klimatskih promjena i smanjenja rizika od katastrofa (npr. radionice, metodologije, protokoli, edukativni materijali, zajednička obuka za jedinice civilne zaštite);
- razvoj prekogranične procjene rizika i strategija rizika od katastrofa za prekogranične opasnosti kao što su suše, poplave, klizišta, požari.

Kroz cilj politike 4 „Uključivija Europa s istaknutijom socijalnom komponentom provedbom europskog stupa socijalnih prava", specifični cilj 4.5 Osiguravanje jednakog pristupa zdravstvenoj skrbi i poticanje otpornosti zdravstvenih sustava, uključujući primarnu skrb, te promicanje prijelaza s institucionalne skrbi na skrb unutar obitelji i zajednice, predviđa se financiranje sljedećih indikativnih aktivnosti:

- razvoj i provedba IKT rješenja i akcija za podršku digitalizaciji u zdravstvu;
- zajedničko ulaganje (uključujući infrastrukturu manjeg obujma) i poboljšanje zdravstvene zaštite i dugotrajna skrb za ugrožene skupine, s naglaskom na djecu, starije osobe i osobe s invaliditetom;
- aktivnosti suradnje radi poboljšanja otpornosti i učinkovitosti pružanja zdravstvenih usluga (npr. visokotehnološka oprema za telemedicinu, dijagnostiku itd.);
- prijenos znanja u regiji kroz razmjenu iskustava, podizanje svijesti te jačanje znanja i kapaciteta putem online i in-situ treninga u cilju poboljšanja vještina u području zdravstvene zaštite i socijalne skrbi (uključujući primarnu skrb i skrb zajednice).

Kroz specifični cilj 4.6 Jačanje uloge kulture i održivog turizma u gospodarskom razvoju, socijalnoj uključenosti i socijalnim inovacijama, predviđa se financiranje sljedećih indikativnih aktivnosti:

- razvoj i provedba zajedničkih akcija za podršku raznolikosti turizma ulaganjem u manje poznate destinacije i različite oblike turizma (kulturni, seoski, agroturizam, aktivni turizam itd.);
- razvoj i implementacija inovativnih rješenja, stvaranje pametnih destinacija (npr. putem digitalizacije, kreativnih industrija i stvaranje mreža dionika – „hubova" i platformi) te novih usluga i proizvoda za određene ciljane segmente tržišta (starije osobe, mladi ljudi ili osobe s invaliditetom);
- razvoj i provedba mjera zaštite, razvoja i promicanja kulturne baštine i kulturnih usluga;
- podrška društvenim inovacijama u turizmu i kulturi - razvoj postojećih ili novih turističkih i kulturnih djelatnosti (uz naglasak na zaštiti, razvoju i promicanju prirodne baštine i eko-turizma).

U skladu s navedenim, Programom je predviđeno financiranje i provedba aktivnosti iz područja jačanja istraživačkih i inovacijskih kapaciteta i primjene naprednih tehnologija, obnovljive energije i prilagodbe klimatskim promjenama u cilju sprečavanja rizika od katastrofa, kao i iz područja zdravstva, kulture i održivog turizma.

PRILOG I

Redoslijed radnji koje će se provesti u postupku strateške procjene utjecaja Programa na okoliš

Radnje koje se provode u postupku strateške procjene utjecaja Programa na okoliš su:

1. Ministarstvo regionalnoga razvoja i fondova Europske unije (u daljnjem tekstu: Ministarstvo) započinje postupak u roku od osam dana od dana donošenja ove Odluke. Prva radnja u tom postupku je određivanje sadržaja strateške studije. U svrhu određivanja sadržaja strateške studije Ministarstvo će u navedenom roku zatražiti mišljenja tijela nadležnih za pojedine sastavnice okoliša i opterećenja na okoliš o sadržaju strateške studije (tijelima će se dostaviti odluka o izradi programa i programska polazišta i ciljevi). U svrhu usuglašavanja mišljenja o potrebitom sadržaju strateške studije provodi se rasprava s gore navedenim tijelima. Ove radnje provode se u skladu s odredbama članka 7. do 10. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš.
2. U postupku određivanja sadržaja studije Ministarstvo objavljuje na internetskoj stranici odluku o izradi programa, programska polazišta i ciljeve te informira javnost o načinu sudjelovanja u postupku strateške procjene, a u skladu s odredbama članaka 5., 6. i 12. Uredbe o informiranju i sudjelovanju javnosti i zainteresirane javnosti u pitanjima zaštite okoliša.
3. Nakon pribavljenih mišljenja tijela iz točke 1., Ministarstvo donosi odluku o obaveznom sadržaju strateške studije u skladu s člankom 10. i 11. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš te objavljuje Odluku na web-stranici Ministarstva.
4. Ministarstvo u roku od 8 dana od donošenja Odluke o sadržaju strateške studije, istu dostavlja ovlašteniku koji će izraditi stratešku studiju (u skladu s člankom 12. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš).
5. Nakon što ovlaštenik izradi stratešku studiju i nositelj izrade programa izradi radni materijal nacrta prijedloga programa, Ministarstvo donosi odluku o upućivanju strateške studije i nacrta prijedloga programa na javnu raspravu u skladu s člankom 23. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš.
6. Postupak sudjelovanja javnosti u javnoj raspravi o strateškoj studiji i nacrtu prijedloga programa provodi se prema odredbama članaka 5., 6. i 12. Uredbe o informiranju i sudjelovanju javnosti i zainteresirane javnosti u pitanjima zaštite okoliša.
7. Istodobno s upućivanjem na javnu raspravu, Ministarstvo stratešku studiju i nacrt prijedloga programa dostavlja na mišljenje tijelima nadležnim za pojedine sastavnice okoliša i opterećenja na okoliš.
8. Nakon provedene javne rasprave, a prije upućivanja nacrta konačnog prijedloga programa u postupak donošenja, Ministarstvo je dužno prema odredbi članka 25. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš pribaviti mišljenje Ministarstva gospodarstva i održivog razvoja o provedenoj strateškoj procjeni.
9. Prije stavljanja u proceduru donošenja pri utvrđivanju konačnog prijedloga programa, obvezno se uzimaju u obzir rezultati strateške procjene, mišljenja tijela i/ili osoba određenih posebnim propisom te se razmatraju primjedbe, prijedlozi i mišljenja javnosti i rezultati prekograničnih konzultacija ako su bile obvezne, koji su dani na nacrt prijedloga programa i mišljenje Ministarstva gospodarstva i održivog razvoja.
10. Nakon donošenja programa, Ministarstvo izrađuje izvješće o provedenoj strateškoj procjeni i programu praćenja provedbe programa u skladu s člankom 27. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš.
11. Izvješće o provedenoj strateškoj procjeni i donesenom programu Ministarstvo objavljuje na internetskoj stranici u skladu s člankom 27. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš.

PRILOG II

Popis tijela koja će sudjelovati u postupku provođenja strateške procjene utjecaja na okoliš

1. Ministarstvo gospodarstva i održivog razvoja
   - Uprava za zaštitu prirode
   - Uprava za klimatske aktivnosti
   - Uprava za procjenu utjecaja na okoliš i održivo gospodarenje otpadom
   - Uprava za energetiku
   - Uprava vodnog gospodarstva i zaštite mora
   - Uprava za industriju, poduzetništvo i obrt
2. Ministarstvo kulture i medija
   - Uprava za zaštitu kulturne baštine
3. Ministarstvo poljoprivrede
   - Uprava šumarstva, lovstva i drvne industrije
   - Uprava za poljoprivredno zemljište, biljnu proizvodnju i tržište
4. Ministarstvo zdravstva
   - Uprava za primarnu zdravstvenu zaštitu, zdravstveni turizam, lijekove i medicinske proizvode, javno zdravstvo i javnozdravstvenu zaštitu
5. Ministarstvo rada, mirovinskoga sustava, obitelji i socijalne politike
   - Uprava za tržište rada i zapošljavanje
   - Uprava za obitelj i socijalnu politiku
6. Ministarstvo turizma i sporta
   - Uprava za održivi razvoj i konkurentnost turističke destinacije
   - Uprava za razvoj poduzetništva, investicije i konkurentnost turističkoga gospodarstva
7. Ministarstvo znanosti i obrazovanja
   - Uprava za znanost i tehnologiju

15.2 Decision on the content of the Strategic Environmental Impact Assessment Study

REPUBLIKA HRVATSKA
MINISTARSTVO REGIONALNOGA RAZVOJA
I FONDOVA EUROPSKE UNIJE

P / 2062371

KLASA: 910-06/21-01/1
URBROJ: 538-07-3-1-2/429-21-23
Zagreb, 20. prosinca 2021. godine

Na temelju članka 68. stavka 3. Zakona o zaštiti okoliša (Narodne novine, broj 80/13, 153/13, 78/15, 12/18 i 118/18) i članka 10. stavka 2. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš (Narodne novine, broj 3/17), ministrica regionalnoga razvoja i fondova Europske unije, donosi

ODLUKU
o sadržaju Strateške studije procjene utjecaja Interreg IPA programa prekogranične suradnje Hrvatska-Srbija 2021.-2027. na okoliš

I.

Ovom Odlukom utvrđuje se sadržaj Strateške studije procjene utjecaja Interreg IPA Programa prekogranične suradnje Hrvatska-Srbija 2021.-2027. (u daljnjem tekstu: Program) na okoliš (u daljnjem tekstu: Strateška studija). Odluka se donosi u okviru postupka strateške procjene utjecaja na okoliš koji je započeo Odlukom o započinjanju postupka strateške procjene utjecaja na okoliš za Interreg IPA Program prekogranične suradnje Hrvatska-Srbija 2021.-2027. (KLASA: 910-06/21-01/1, URBROJ: 538-10-3-1-1/433-21-5), od 10. studenog 2021. godine.

Programska polazišta, obuhvat i ciljevi programa

II.

Program suradnje utvrđen je Odlukom Vlade Republike Hrvatske o utvrđivanju programa europske teritorijalne suradnje u Republici Hrvatskoj za financijsko razdoblje Europske unije 2021.-2027. i davanje suglasnosti tijelima zaduženim za njihovu pripremu da potvrde njihov sadržaj (KLASA: 022-03/21-04/269, URBROJ: 50301-05/14-21-3), od 29. srpnja 2021. godine. U točci III. Odluke navedeno je da se, za financijsko razdoblje Europske unije 2021.-2027., utvrđuje lista programa suradnje, između ostalih i IPA Program prekogranične suradnje Hrvatska-Srbija 2021.-2027. Točkom IV. iste Odluke utvrđeno je da je Ministarstvo regionalnoga razvoja i fondova Europske unije tijelo zaduženo za cjelokupnu organizaciju i koordinaciju procesa pripreme Programa.

Cilj Programa je održivi razvoj programskog područja kroz pametne, zelene i društveno inovativne projekte.

Interreg - IPA CBC
Croatia - Serbia

Program suradnje obuhvatit će aktivnosti unutar 3 cilja politike od njih 5, koliko je ih je predviđeno člankom 5. Uredbe (EU) 2021/1060 Europskog parlamenta i Vijeća od 24. lipnja 2021. godine, a koje podupire Europski fond za regionalni razvoj. Uz ciljeve politike, odabrano je 5 specifičnih ciljeva, koji su između ostalih, predviđeni člankom 3. Uredbe (EU) 2021/1058 Europskog parlamenta i Vijeća od 24. lipnja 2021. godine.

- Cilj politike 1: Konkurentnija i pametnija Europa promicanjem inovativne i pametne gospodarske preobrazbe i regionalne povezivosti u području IKT-a:
  - Specifični cilj 1.1. Razvoj i jačanje istraživačkih i inovacijskih kapaciteta te primjena naprednih tehnologija;

- Cilj politike 2: Zelenija, otporna Europa s niskom razinom emisija koja prelazi na gospodarstvo s nultom neto stopom emisija ugljika promicanjem prelaska na čistu i pravednu energiju, zelenih i plavih ulaganja, kružnoga gospodarstva, ublažavanja, klimatskih promjena i prilagodbe klimatskim promjenama, sprečavanja rizika i upravljanja njime te održive urbane mobilnost:
  - Specifični cilj 2.2 Promicanje obnovljive energije u skladu s Direktivom (EU) 2018/2001, uključujući kriterije održivosti utvrđene u njoj;
  - Specifični cilj 2.4 Promicanje prilagodbe klimatskim promjenama i sprječavanje rizika od katastrofa te otpornosti, uzimajući u obzir pristupe utemeljene na ekosustavima.

- Cilj politike 4: Uključivija Europa s istaknutijom socijalnom komponentom provedbom europskog stupa socijalnih prava:
  - Specifični cilj 4.5 Osiguravanje jednakog pristupa zdravstvenoj skrbi i poticanje otpornosti zdravstvenih sustava, uključujući primarnu skrb, te promicanje prijelaza s institucionalne skrbi na skrb unutar obitelji i zajednice,
  - Specifični cilj 4.6 Jačanje uloge kulture i održivog turizma u gospodarskom razvoju, socijalnoj uključenosti i socijalnim inovacijama.

Sadržaj strateške studije za Program suradnje

III.

Strateška studija treba sadržavati poglavlja u kojima su dane sljedeće informacije:
- pregled sadržaja i glavnih ciljeva Programa i odnosa s drugim odgovarajućim planovima i programima,
- relevantni aspekt postojećeg stanja okoliša i mogući razvoj okoliša ako ne dođe do provedbe plana ili programa;
- okolišne značajke područja na koja provedba programa može značajno utjecati;
- postojeći okolišni problemi koji su važni za Program, uključujući, posebno, one koji se odnose na bilo koja područja od posebne važnosti za okoliš, kao što su područja određena u skladu s posebnim zakonima o zaštiti okoliša;
- ciljevi zaštite okoliša utvrđeni na međunarodnoj razini, razini Zajednice i države članice, a koji su relevantni za Program i način na koji su ti ciljevi i svi aspekti zaštite okoliša uzeti u obzir tijekom njegove pripreme;
- vjerojatno značajni utjecaji (sekundarni, kumulativni, sinergijski, kratkoročni, srednjoročni i dugoročni, stalni i privremeni, pozitivni i negativni) na okoliš, uključujući pitanja kao što su biološka raznolikost, stanovništvo, zdravlje ljudi, fauna, flora, tlo, voda, zrak, klimatski

čimbenici, materijalna dobra, kulturna baština, krajolik i međuodnos između navedenih čimbenika;
- mjere predviđene za sprječavanje, smanjenje i što potpunije otklanjanje značajnih štetnih učinaka na okoliš provedbe Programa;
- kratki pregled razloga za odabir razmotrenih alternativnih rješenja i opis načina provođenja procjene, uključujući eventualne poteškoće (kao što su tehnički nedostaci ili nedostatak znanja i iskustva) na koje se naišlo pri prikupljanju potrebnih informacija;
- opis predviđenih mjera praćenja;
- ostale podatke i zahtjeve utvrđene tijekom utvrđivanja djelokruga u posebnom postupku;
- ne-tehnički sažetak informacija iz prethodnih točaka.

Slijedom provedenog postupka određivanja sadržaja strateške studije utjecaja na okoliš, potrebno je, uz već gore navedeno, analizirati i sljedeće aspekte u poglavlju okoliša:

1. Bioraznolikost:
- flora, vegetacija i staništa uključujući šumske ekosustave,
- Important Plant Areas (IPA),
- karta tipova kopnenih staništa za programsko područje,
- karta kopnenih ne šumskih staništa za Programsko područje,
- fauna,
- zaštićena područja u Programskom području,
- NATURA 2000 područja u programskom području (POP, POVS, vPOVS i PPOVS.).

2. Klima i klimatske promjene:
- oborine, vjetar, temperatura,
- klimatske promjene,
- projekcija emisija stakleničkih plinova po sektoru,
- opasnosti i rizici klimatskih promjena na području Programa,
- Smjernice o integriranju klimatskih promjena i biološke raznolikosti u procjenu utjecaja na okoliš (PUO).

3. Voda
- hidrografske i hidrogeološke karakteristike područja,
- vodni resursi – površinski vodotoci, podzemne vode,
- stanje vodnog okoliša,
- upravljanje rizicima od poplava.

4. Kulturna baština i krajolik
- povijesni pregled i specifičnosti područja,
- stanje kulturne baštine na Programskom području, posebice arheološke baštine, povijesnih ruralnih i urbanih naselja i tradicijske arhitekture,
- vrste krajolika u programskom području,
- stanje krajobraza u programskom području, posebno kulturnih krajolika.

5. Zdravlje ljudi
- demografske podatke o programskom području, karakteristike gustoće naseljenosti, prirodne promjene stanovništva, društvene i ekonomske karakteristike,
- vektori okoliša koji utječu na zdravlje ljudi (voda, zrak, tlo, buka),
- svjetlosno zagađenje,
- elektromagnetska zračenja,

- procjena populacijskih, materijalnih i kulturnih dobara i okolišnog rizika za programsko područje,
- posljedice klimatskih promjena koje značajno utječu na zdravlje ljudi (učestalost toplinskih valova, razvoj patogena i prenositelja bolesti, povećanje ozljeda uslijed poplava/oluja i sl.).

Temeljem rješenja Ministarstva gospodarstva i održivog razvoja KLASA: UP/I 612-07/21-37/259; URBROJ: 517-10-2-3-21-3, od 22. listopada 2021., u skladu s člankom 48. stavkom 5. Zakona o zaštiti prirode (Narodne novine, broj 80/13, 15/18, 14/19 i 127/19), Strateška studija ne treba sadržavati poglavlje Glavna ocjena prihvatljivosti za ekološku mrežu.

Popis tijela i/ili osoba određenih posebnim propisima, koja su sudjelovala u postupku određivanja sadržaja strateške studije

IV.

1. Ministarstvo gospodarstva i održivog razvoja
   - Uprava za zaštitu prirode
   - Uprava za klimatske aktivnosti
   - Uprava za procjenu utjecaja na okoliš i održivo gospodarenje otpadom
   - Uprava za energetiku
   - Uprava vodnog gospodarstva i zaštite mora
   - Uprava za industriju, poduzetništvo i obrt
2. Ministarstvo kulture i medija,
   - Uprava za zaštitu kulturne baštine
3. Ministarstvo poljoprivrede
   - Uprava šumarstva, lovstva i drvne industrije
   - Uprava za poljoprivredno zemljište, biljnu proizvodnju i tržište
4. Ministarstvo zdravstva
   - Uprava za primarnu zdravstvenu zaštitu, zdravstveni turizam, lijekove i medicinske proizvode, javno zdravstvo i javnozdravstvenu zaštitu
5. Ministarstvo rada, mirovinskog sustava, obitelji i socijalne politike
   - Uprava za tržište rada i zapošljavanje
   - Uprava za obitelj i socijalnu politiku
6. Ministarstvo turizma i sporta
   - Uprava za održivi razvoj i konkurentnost turističke destinacije
   - Uprava za razvoj poduzetništva, investicije i konkurentnost turističkog gospodarstva
7. Ministarstvo znanosti i obrazovanja
   - Uprava za znanost i tehnologiju

Informiranje javnosti

V.

U svrhu informiranja javnosti, informacija o provedbi postupka određivanja sadržaja strateške studije za Interreg IPA Program prekogranične suradnje Hrvatska – Srbija 2021.-2027. objavljena je na internetskim strancima Ministarstva regionalnoga razvoja i fondova Europske unije (/razvoj.gov.hr/) te na internetskoj stranici Programa (https://www.interreg-croatia-serbia.eu/) u razdoblju od 12. studenog 2021. godine do 11. prosinca 2021. godine.

Interreg - IPA CBC
Croatia - Serbia

Tijekom navedenog razdoblja zaprimljena su mišljenja i/ili prijedlozi o sadržaju i razini obuhvata podataka koji se moraju obraditi u strateškoj studiji od Ministarstva rada, mirovinskoga sustava, obitelji i socijalne politike (KLASA: 910-04/21-01/27, URBROJ: 524-04-02-01/2-21-2, od 22. studenog 2021.), Ministarstva zdravstva (KLASA: 351-03/21-01/100, URBROJ: 534-03-3-2/10-21-2, od 25. studenog 2021.), Ministarstva znanosti i obrazovanja (KLASA: 910-03/21-05/00001, URBROJ: 533-03-21-0002, od 29. studenog 2021.) Ministarstva gospodarstva i održivog razvoja, Uprave za zaštitu prirode (KLASA: 612-07/21-58/50, URBROJ: 517-10-2-3-21-2, od 30. studenog 2021.), Ministarstva poljoprivrede (KLASA: 910-04/21-01/11, URBROJ: 525-05/0046-21-2, od 1. prosinca 2021.), Ministarstva gospodarstva i održivog razvoja, Uprave za energetiku (od 8. prosinca 2021), Ministarstva turizma i sporta (KLASA: 351-02/21-02/17, URBROJ: 529-04-02-01-01/3-21-2, od 9. prosinca 2021.), te Ministarstva kulture i medija, Uprave za zaštitu kulturne baštine (KLASA: 612-08/21-11/0079, URBROJ: 532-05/4-21-2, od 10. prosinca 2021.).

U skladu s člankom 9. stavkom 4. Uredbe o strateškoj procjeni utjecaja strategije, plana i programa na okoliš, Ministarstvo regionalnoga razvoja i fondova Europske unije organiziralo je 29. studenog 2021. godine raspravu u svrhu usuglašavanja mišljenja o sadržaju strateške studije i utvrđivanja konačnog sadržaja strateške studije.

Osnovni podaci o izrađivaču Programa

VI.

Za izradu Programa suradnje nadležno je Ministarstvo regionalnoga razvoja i fondova Europske unije prema Odluci Vlade Republike Hrvatske o utvrđivanju programa europske teritorijalne suradnje u Republici Hrvatskoj za financijsko razdoblje Europske unije 2021.-2027. i davanje suglasnosti tijelima zaduženim za njihovu pripremu da potvrde njihov sadržaj.

Nadležnost za izradu strateške studije

VII.

Stratešku studiju mora izraditi pravna osoba koja ima suglasnost Ministarstva zaštite okoliša i prirode za obavljanje stručnih poslova zaštite okoliša – poslova stručne Izrade studije o značajnom utjecaju plana i programa na okoliš, u skladu s člankom 4. Pravilnika o uvjetima za izdavanje suglasnosti pravnim osobama za obavljanje stručnih poslova zaštite okoliša (Narodne novine, broj 57/10).

Objava Odluke o sadržaju strateške studije

VIII.

U skladu s člankom 160. Zakona o zaštiti okoliša i člankom 5. Uredbe o informiranju i sudjelovanju javnosti u pitanjima zaštite okoliša (Narodne novine, broj 64/08), a u svrhu informiranja javnosti, ova se Odluka objavljuje na internetskoj stranci Ministarstva regionalnoga razvoja i fondova Europske unije (/razvoj.gov.hr/) te na internetskoj stranici Programa (https://www.interreg-croatia-serbia.eu/).

Interreg - IPA CBC
Croatia - Serbia

IX.

Ova Odluka stupa na snagu danom donošenja.

MINISTRICA REGIONALNOGA RAZVOJA I FONDOVA EUROPSKE UNIJE

REPUBLIKA HRVATSKA 1 ZAGREB MINISTARSTVO REGIONALNOGA RAZVOJA I FONDOVA EUROPSKE UNIJE

Nataša Tramišak, mag. iur.

15.3 Decision of the Ministry of Economy and Sustainable Development on the need to carry out the Main Assessment for the Ecological Network

REPUBLIKA HRVATSKA
MINISTARSTVO GOSPODARSTVA
I ODRŽIVOG RAZVOJA
10000 Zagreb, Radnička cesta 80
Tel: 01/ 3717 111 fax: 01/ 3717 149

Uprava za zaštitu prirode

KLASA: UP/I 612-07/21-37/259
URBROJ: 517-10-2-3-21-3
Zagreb, 22. listopada 2021.

Ministarstvo gospodarstva i održivog razvoja temeljem članka 48. stavka 5. vezano uz članak 26. stavak 2. i članak 46. stavak 1. Zakona o zaštiti prirode (Narodne novine, br. 80/13, 15/18, 14/19, 127/19), povodom zahtjeva nositelja izrade plana, Ministarstva regionalnog razvoja i fondova Europske unije, Miramarska cesta 22, Zagreb, za provedbu postupka prethodne ocjene prihvatljivosti za ekološku mrežu Interreg IPA programa prekogranične suradnje Hrvatska-Srbija 2021.-2027., nakon provedenog postupka, donosi

R J E Š E N J E

I. Da je Interreg IPA program prekogranične suradnje Hrvatska-Srbija 2021.-2027. prihvatljiv za ekološku mrežu.

II. Ovo Rješenje objavljuje se na mrežnim stranicama Ministarstva gospodarstva i održivog razvoja.

O b r a z l o ž e n j e

Nositelj izrade Programa, Ministarstvo regionalnoga razvoja i fondova Europske unije podnijelo je zahtjev (KLASA: 910-06/21-01/1, URBROJ: 538-07-3-1-2/429-21-1) za provedbu postupka prethodne ocjene prihvatljivosti Interreg IPA programa prekogranične suradnje Hrvatska-Srbija 2021.-2027. (dalje u tekstu: Programa) za ekološku mrežu. U zahtjevu su u bitnom navedeni podaci sukladno odredbama članka 48. stavka 2. Zakona o zaštiti prirode (dalje u tekstu: Zakon).
U provedenom postupku ovo Ministarstvo je razmotrilo predmetni zahtjev, razloge donošenja, ciljeve i obuhvat Programa te je utvrdilo sljedeće:

Interreg IPA program prekogranične suradnje Hrvatska-Srbija 2021.-2027. obuhvatit će aktivnosti u okviru 3 cilja politike od ukupno 5 koje podupire Europski fond za regionalni razvoj, a koji su navedeni u članku 5. stavku 1. Uredbe (EU) 2021/1060. U sklopu svakog odabranog cilja politike, dogovoreni su i specifični ciljevi.
Programom je predviđeno financiranje i provedba aktivnosti iz područja jačanja istraživačkih i inovacijskih kapaciteta, primjene naprednih tehnologija, obnovljive energije i prilagodbe

1/4

klimatskim promjenama u cilju sprječavanja rizika od katastrofa, kao i iz područja zdravstva, kulture i održivog turizma.
Interreg IPA program prekogranične suradnje Hrvatska-Srbija 2021.-2027. financira se iz Europskog fonda za regionalni razvoj te iz Instrumenata pretpristupne pomoći (IPA III).

Kroz cilj politike 1 „Konkurentnija i pametnija Europa promicanjem inovativne i pametne gospodarske preobrazbe i regionalne povezivosti u području IKT-a", specifični cilj 1.1 Razvoj i jačanje istraživačkih i inovacijskih kapaciteta te primjenu naprednih tehnologija, predviđa se financiranje sljedećih indikativnih aktivnosti:

- podrška probnim/pokusnim linijama, ranom odobrenju (validaciji) proizvoda, certifikaciji, naprednim proizvodnim mogućnostima i prijenosu tehnologije, uključujući suradnju između znanosti i poslovnog sektora;
- jačanje i modernizacija usluga poslovne podrške koje bi mogle pomoći kod osposobljavanja, u marketingu, razvoju i implementaciji novih usluga/proizvoda, korištenju IKT usluga i novih tehnologija, prilikom uvođenja inovativnih rješenja u organizaciju poslovanja i procese (*blockchain* tehnologija, tehnologija velikih podataka *(Big Data)*, tehnologija internet stvari (*IoT*), napredna proizvodnja, robotika, umjetna inteligencija, kibernetička sigurnost itd.);
- -ubrzavanje inovacija i prijenos tehnologija (npr. plava i zelena ekonomija, poljoprivreda, proizvodnja hrane, kružna ekonomija, pametna proizvodnja, kulturne i kreativne industrije, razvoj vještina za pametnu specijalizaciju i buduće digitalne tehnologije).

Kroz cilj politike 2 „Zelenija, otporna Europa s niskom razinom emisija koja prelazi na gospodarstvo s nultom neto stopom emisija ugljika promicanjem prelaska na čistu i pravednu energiju, zelenih i plavih ulaganja, kružnoga gospodarstva, ublažavanja klimatskih promjena i prilagodbe klimatskim promjenama, sprečavanja rizika i upravljanja njime te održive urbane mobilnosti", specifični cilj 2.2. Promicanje obnovljive energije u skladu s Direktivom (EU) 2018/2001, uključujući kriterije održivosti utvrđene u njoj, predviđa se financiranje sljedećih indikativnih aktivnosti:

- proizvodnja dodatnih kapaciteta obnovljivih izvora energije (npr. vjetar, solarna energija, geotermalna energija, biomasa itd.);
- razvoj i provedba zajedničkih pilot akcija koje poboljšavaju integraciju održivih obnovljivih izvora energije u različite sektore (npr. sektor graditeljstva, industrija, poljoprivreda, šumarstvo itd.);
- zajedničke studije, istraživanja i pilot akcije o obnovljivim izvorima energije (npr. kružna rješenja, uporaba i ponovna upotreba održivih materijala) i podizanje svijesti šire javnosti.

Kroz specifični cilj 2.4 Promicanje prilagodbe klimatskim promjenama i sprječavanja rizika od katastrofa te otpornosti, uzimajući u obzir pristupe utemeljene na ekosustavima, predviđa se financiranje sljedećih indikativnih aktivnosti:

- razvoj i uvođenje zajedničkih rješenja i sustava za praćenje, sprječavanje i upravljanje potencijalnim rizicima (npr. poplave, požari, klizišta, suše, itd.);
- poticanje međusektorske/međudržavne suradnje u sprječavanju rizika i upravljanju brzim odgovorom kroz razvoj i provedbu zajedničkih protokola, postupaka pristupa i mjera, poput infrastrukture, specijaliziranih vozila, opreme, skloništa itd;

- jačanje institucionalnih i stručnih kapaciteta i podizanje svijesti za rješavanje pitanja okoliša, klimatskih promjena i rizika od katastrofa (npr. obuka za jedinice civilne zaštite).

Kroz cilj politike 4 „Uključivija Europa s istaknutijom socijalnom komponentom provedbom europskog stupa socijalnih prava", specifični cilj 4.5 Osiguravanje jednakog pristupa zdravstvenoj skrbi i poticanje otpornosti zdravstvenih sustava, uključujući primarnu skrb, te promicanje prijelaza s institucionalne skrbi na skrb unutar obitelji i zajednice, predviđa se financiranje sljedećih indikativnih aktivnosti:

- razvoj i provedba IKT rješenja i akcija za podršku digitalizaciji u zdravstvu;
- zajedničko ulaganje i poboljšanje zdravstvene zaštite i dugotrajna skrb za ugrožene skupine, s naglaskom na starije osobe i osobe s invaliditetom;
- aktivnosti suradnje radi poboljšanja otpornosti i učinkovitosti pružanja zdravstvenih usluga (npr. visokotehnološka oprema za telemedicinu, dijagnostiku itd.).

Kroz specifični cilj 4.6 Jačanje uloge kulture i održivog turizma u gospodarskom razvoju, socijalnoj uključenosti i socijalnim inovacijama, predviđa se financiranje sljedećih indikativnih aktivnosti:

- razvoj i provedba zajedničkih akcija za podršku raznolikosti turizma ulaganjem u manje poznate destinacije i različite oblike turizma (kulturni, seoski, agroturizam, aktivni turizam itd.);
- razvoj i implementacija inovativnih rješenja, stvaranje pametnih destinacija (npr. putem digitalizacije i kreativnih industrija) te novih usluga i proizvoda za određene ciljane segmente tržišta (starije osobe, mladi ljudi ili osobe s invaliditetom);
- razvoj i provedba mjera zaštite, razvoja i promicanja kulturne baštine i kulturnih usluga.

Razmatrajući predmetni zahtjev, a nakon provedene analize ovo Ministarstvo nalazi da s obzirom na općeniti karakter predmetnog Programa koji ne utvrđuje prostorni smještaj pojedinih elementa, Programom se ne planiraju konkretni zahvati u prostoru nego je Program usmjeren na jačanje društvenog, ekonomskog i teritorijalnog razvoja prekograničnog područja, poticanje i podrška prekograničnoj suradnji kako bi područje postalo otpornije na zajedničke izazove (ekonomska tranzicija, klimatske promjene, dugoročne socioekonomske posljedice uslijed pandemije COVID-19), uz pridržavanje važećih zakonskih propisa, može se isključiti mogućnost značajnih negativnih utjecaja Interreg IPA programa prekogranične suradnje Hrvatska-Srbija 2021.-2027. na ciljeve očuvanja i cjelovitost područja ekološke mreže i nije potrebno provesti postupak Glavne ocjene prihvatljivosti za ekološku mreže te je stoga riješeno kao u izreci.

Sukladno odredbama članka 26. stavka 2. Zakona za strategije, planove i programe, za koje je posebnim propisom kojim se uređuje zaštita okoliša određena obveza strateške procjene, prethodna ocjena obavlja se prije pokretanja postupka strateške procjene utjecaja strategije, plana i programa na okoliš.
Člankom 46. stavkom 1. Zakona propisano je da Ministarstvo provodi prethodnu ocjenu i glavnu ocjenu za strategije, planove i programe koji se pripremaju i/ili donose na državnoj i područnoj (regionalnoj) razini, kao i za one koji se pripremaju i/ili donose na državnoj i područnoj (regionalnoj) razini, a za koje je posebnim propisom kojim se uređuje zaštita okoliša određena obveza strateške procjene ili ocjene o potrebi strateške procjene.

3/4

Ako Ministarstvo isključi mogućnost značajnih negativnih utjecaja strategije, plana ili programa na ciljeve očuvanja i cjelovitost područja ekološke mreže, sukladno odredbama članka 48. stavka 5. Zakona donosi rješenje da je strategija, plan ili program prihvatljiv za ekološku mrežu.

U skladu s odredbom članka 51. stavka 2. Zakona ovo Rješenje objavljuje se na mrežnoj stranici Ministarstva.

UPUTA O PRAVNOM LIJEKU

Ovo je Rješenje izvršno u upravnom postupku te se protiv njega ne može izjaviti žalba, ali se može pokrenuti upravni spor pred upravnim sudom na području kojeg tužitelj ima prebivalište, odnosno sjedište. Upravni spor pokreće se tužbom koja se podnosi u roku od 30 dana od dana dostave ovog Rješenja.

Tužba se predaje nadležnom upravnom sudu neposredno u pisanom obliku, usmeno na zapisnik ili se šalje poštom, odnosno dostavlja elektronički.

VIŠA STRUČNA SAVJETNICA

REPUBLIKA HRVATSKA 5 ZAGREB MINISTARSTVO GOSPODARSTVA I DRŽAVNOG RAZVOJA

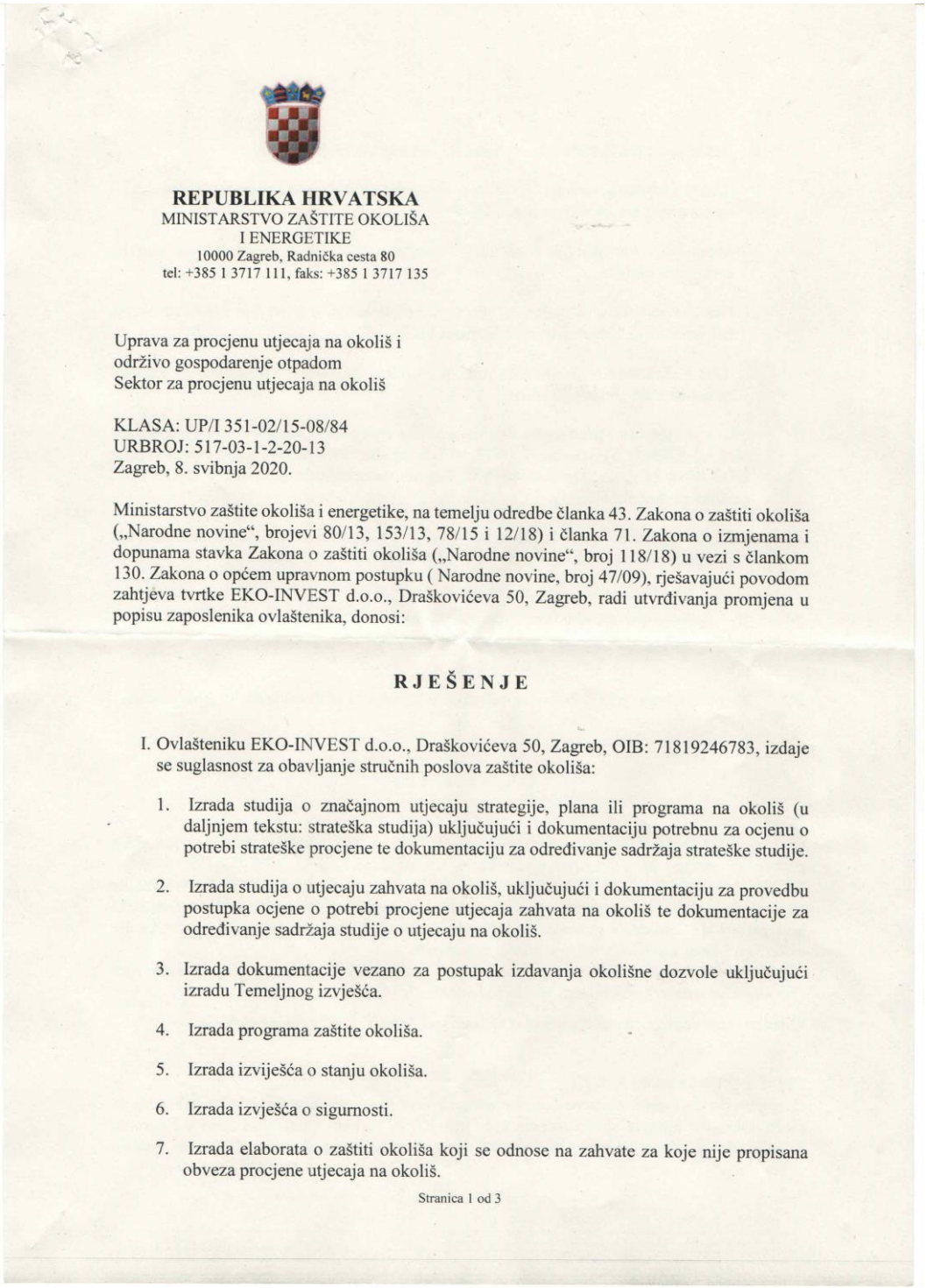
Natalija Čengić Zglavnik

Dostaviti:

1. **Ministarstvo regionalnoga razvoja i fondova Europske unije, Miramarska cesta 22, HR-10 000 Zagreb**
2. **U spis predmeta**

4/4

15.4 Consent for the performance of professional environmental tasks



REPUBLIKA HRVATSKA
MINISTARSTVO ZAŠTITE OKOLIŠA
I ENERGETIKE
10000 Zagreb, Radnička cesta 80
tel: +385 1 3717 111, faks: +385 1 3717 135

Uprava za procjenu utjecaja na okoliš i
održivo gospodarenje otpadom
Sektor za procjenu utjecaja na okoliš

KLASA: UP/I 351-02/15-08/84
URBROJ: 517-03-1-2-20-13
Zagreb, 8. svibnja 2020.

Ministarstvo zaštite okoliša i energetike, na temelju odredbe članka 43. Zakona o zaštiti okoliša („Narodne novine", brojevi 80/13, 153/13, 78/15 i 12/18) i članka 71. Zakona o izmjenama i dopunama stavka Zakona o zaštiti okoliša („Narodne novine", broj 118/18) u vezi s člankom 130. Zakona o općem upravnom postupku (Narodne novine, broj 47/09), rješavajući povodom zahtjeva tvrtke EKO-INVEST d.o.o., Draškovićeva 50, Zagreb, radi utvrđivanja promjena u popisu zaposlenika ovlaštenika, donosi:

R J E Š E N J E

I. Ovlašteniku EKO-INVEST d.o.o., Draškovićeva 50, Zagreb, OIB: 71819246783, izdaje se suglasnost za obavljanje stručnih poslova zaštite okoliša:

1. Izrada studija o značajnom utjecaju strategije, plana ili programa na okoliš (u daljnjem tekstu: strateška studija) uključujući i dokumentaciju potrebnu za ocjenu o potrebi strateške procjene te dokumentaciju za određivanje sadržaja strateške studije.
2. Izrada studija o utjecaju zahvata na okoliš, uključujući i dokumentaciju za provedbu postupka ocjene o potrebi procjene utjecaja zahvata na okoliš te dokumentacije za određivanje sadržaja studije o utjecaju na okoliš.
3. Izrada dokumentacije vezano za postupak izdavanja okolišne dozvole uključujući izradu Temeljnog izvješća.
4. Izrada programa zaštite okoliša.
5. Izrada izvješća o stanju okoliša.
6. Izrada izvješća o sigurnosti.
7. Izrada elaborata o zaštiti okoliša koji se odnose na zahvate za koje nije propisana obveza procjene utjecaja na okoliš.

Stranica 1 od 3

8. Izrada sanacijskih elaborata, programa i sanacijskih izvješća.

9. Izrada projekcija emisija, izvješća o provedbi politike i mjera smanjenja emisija i nacionalnog izvješća o promjeni klime.

10. Izradu i/ili verifikaciju posebnih elaborata, proračuna i projekcija za potrebe sastavnica okoliša.

11. Izrada elaborata o usklađenosti proizvoda s mjerilima u postupku ishođenja znaka zaštite okoliša "Prijatelj okoliša"i znaka EU Ecolabel.

12. Izrada elaborata o utvrđivanju mjerila za određenu skupinu proizvoda za dodjelu znaka okoliša „Prijatelj okoliša".

II. Ukida se rješenje Ministarstva zaštite okoliša i energetike: KLASA: UP/I 351-02/15-08/84, URBROJ: 517-06-2-1-1-19-11 od 1. listopada 2019. godine kojim je ovlašteniku EKO-INVEST d.o.o., Draškovićeva 50, Zagreb, dana suglasnost za obavljanje stručnih poslova zaštite okoliša.

III. Suglasnost iz točke I. ove izreke prestaje važiti u roku od godine dana od dana stupanja na snagu propisa iz članka 40. stavka 11. Zakona o zaštiti okoliša.

IV. Ovo rješenje upisuje se u očevidnik izdanih suglasnosti za obavljanje stručnih poslova zaštite okoliša koje vodi Ministarstvo zaštite okoliša i energetike.

V. Uz ovo rješenje prileži Popis zaposlenika ovlaštenika i sastavni je dio ovoga rješenja.

O b r a z l o ž e n j e

Ovlaštenik EKO-INVEST d.o.o., Draškovićeva 50, iz Zagreba (u daljnjem tekstu: ovlaštenik), podnio je zahtjev za izmjenom podataka u Rješenju: (KLASA: UP/I 351-02/15-08/84, URBROJ: 517-06-2-1-1-19-11 od 1. listopada 2019. godine izdanom od Ministarstva zaštite okoliša i energetike (u daljnjem tekstu Ministarstvo), a vezano za popis zaposlenika ovlaštenika koji prileži uz navedeno rješenje. Ovlaštenik je zatražio izmjenu popisa zaposlenika jer djelatnica Matea Kalčićek više nije njihov zaposlenik.
Zahtjev za obavljanje stručnih poslova zaštite okoliša iz točke I. izreke ovog rješenja je osnovan i iz popisa se izostavlja djelatnica Matea Kalčićek.

Slijedom navedenoga, utvrđeno je kao u točkama od I. do V. izreke ovoga rješenja.

UPUTA O PRAVNOM LIJEKU:
Ovo rješenje je izvršno u upravnom postupku i protiv njega se ne može izjaviti žalba, ali se može pokrenuti upravni spor. Upravni spor pokreće se tužbom Upravnom sudu u Zagrebu, Avenija Dubrovnik 6, u roku 30 dana od dana dostave ovog rješenja. Tužba se predaje

navedenom upravnom sudu neposredno u pisanom obliku, usmeno na zapisnik ili se šalje poštom, odnosno dostavlja elektronički.

Upravna pristojba na zahtjev i ovo rješenje naplaćena je državnim biljezima sukladno Zakonu o upravnim pristojbama („Narodne novine“, broj 115/16). i Uredbi o tarifi upravnih pristojbi („Narodne novine“, broj 8/17, 37/17, 129/17, 18/19 i 128/19).

VIŠA STRUČNA SAVJETNICA

Davorka Maljak

U prilogu: Popis zaposlenika ovlaštenika

DOSTAVITI:

1. EKO-INVEST d.o.o., Draškovićeva 50, Zagreb, (**R!, s povratnicom!**)
2. Očevidnik, ovdje

Stranica 3 od 3

POPIS **zaposlenika ovlaštenika: EKO-INVEST d.o.o., Draškovićeva 50, Zagreb, slijedom kojih je ovlaštenik ispunio propisane uvjete za izdavanje suglasnosti za obavljanje stručnih poslova zaštite okoliša sukladno rješenjima Ministarstva KLASA: UP/I 351-02/15-08/84; URBROJ: 517-03-1-2-20-13 od 8. svibnja 2020.**		
STRUČNI POSLOVI ZAŠTITE OKOLIŠA PREMA ČLANKU 40. STAVKU 2. ZAKONA	*VODITELJI STRUČNIH POSLOVA*	*STRUČNJAK*
1. Izrada studija o značajnom utjecaju strategije, plana ili programa na okoliš (strateška studija) uključujući i dokumentaciju potrebnu za ocjenu o potrebi strateške procjene te dokumentaciju za određivanje sadržaja strateške studije	dr.sc. Nenad Mikulić, dipl.ing.kem.teh. i dipl.ing.grad. Marina Stenek, dipl.ing.biol. Vesna Marčec Popović, prof.biol. i kem.	Martina Cvitković, mag.geogr.
2. Izrada studija o utjecaju zahvata na okoliš, uključujući i dokumentaciju za provedbu postupka ocjene o potrebi procjene utjecaja zahvata na okoliš te dokumentacije za određivanje sadržaja studije o utjecaju na okoliš	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
8. Izrada dokumentacije vezano za postupak izdavanja okolišne dozvole uključujući izradu Temeljnog izvješća	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
9. Izrada programa zaštite okoliša	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
10. Izrada izvješća o stanju okoliša	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
11. Izrada izvješća o sigurnosti	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
12. Izrada elaborata o zaštiti okoliša koji se odnose na zahvate za koje nije propisana obveza procjene utjecaja na okoliš	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
14. Izrada sanacijskih elaborata, programa i sanacijskih izvješća	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
15. Izrada projekcija emisija, izvješća o provedbi politike i mjerenja smanjenja emisija i nacionalnog izvješća o promjeni klime	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
20. Izradu i /ili verifikaciju posebnih elaborata, proračuna, i projekcija z apotrebe sastavnica okoliša	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
25. Izrada elaborata o usklađenosti proizvoda s mjerilima u postupku ishođenja znaka zaštite okoliša "Prijatelj okoliša" i znaka EU Ecolabel	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.
26. Izrada elaborata o utvrđivanju mjerila za određenu skupinu proizvoda za dodjelu znaka zaštite okoliša Prijatelj okoliša.	voditelji navedeni pod točkom 1.	stručnjak naveden pod točkom 1.

15.5 Consent to carry out professional nature protection tasks

REPUBLIKA HRVATSKA
MINISTARSTVO ZAŠTITE OKOLIŠA
I ENERGETIKE
10000 Zagreb, Radnička cesta 80
tel: +385 1 3717 111, faks: +385 1 3717 135

Uprava za procjenu utjecaja na okoliš i
održivo gospodarenje otpadom
Sektor za procjenu utjecaja na okoliš

KLASA: UP/I 351-02/15-08/82
URBROJ: 517-03-1-2-20-14
Zagreb, 8. svibnja 2020.

Ministarstvo zaštite okoliša i energetike, na temelju odredbe članka 43. Zakona o zaštiti okoliša („Narodne novine", brojevi 80/13, 153/13 78/15 i 12/18) i članka 71. Zakona o izmjenama i dopunama Zakona o zaštiti okoliša („Narodne novine", broj 118/18) u vezi s člankom 130. Zakona o općem upravnom postupku („Narodne novine", broj 47/09), rješavajući povodom zahtjeva ovlaštenika EKO INVEST d.o.o., Draškovićeva 50, Zagreb, radi utvrđivanja promjena u popisu zaposlenika ovlaštenika, donosi:

R J E Š E N J E

I. Ovlašteniku EKO INVEST d.o.o., Draškovićeva 50, Zagreb, OIB:71819246783, izdaje se suglasnost za obavljanje stručnih poslova zaštite prirode:

1. Izrada poglavlja i studija ocjene prihvatljivosti strategija, plana, programa ili zahvata za ekološku mrežu

II. Suglasnost iz točke I. ove izreke prestaje važiti u roku od godine dana od dana stupanja na snagu propisa iz članka 40. stavka 11. Zakona o zaštiti okoliša.

III. Ovo rješenje upisuje se u očevidnik izdanih suglasnosti za obavljanje stručnih poslova zaštite okoliša koje vodi Ministarstvo zaštite okoliša i energetike.

IV. Ukida se rješenje Ministarstva zaštite okoliša i energetike: KLASA: UP/I 351-02/15-08/82, URBROJ: 517-06-2-1-2-19-12 od 22. listopada 2019. godine kojim je ovlašteniku EKO INVEST d.o.o., Draškovićeva 50, Zagreb, dana suglasnost za obavljanje stručnih poslova iz područja zaštite prirode.

V. Uz ovo rješenje prileži Popis zaposlenika ovlaštenika i sastavni je dio ovoga rješenja.

Stranica 1 od 2

O b r a z l o ž e n j e

Tvrtka EKO INVEST d.o.o., Draškovićeva 50, iz Zagreba (u daljnjem tekstu: ovlaštenik), podnijela je zahtjev za izmjenom podataka u Rješenju: (KLASA: UP/I 351-02/15-08/82, URBROJ: 517-03-1-2-19-12 od 22. listopada 2019. godine izdanom od Ministarstva zaštite okoliša i energetike (u daljnjem tekstu Ministarstvo), a vezano za popis zaposlenika ovlaštenika koji prileži uz navedeno rješenje. Ovlaštenik je zatražio izmjenu popisa zaposlenika jer djelatnica Matea Kalčićek više nije njihov zaposlenik.
Zahtjev za obavljanje stručnih poslova zaštite okoliša iz točke I. izreke ovog rješenja je osnovan i iz popisa se izostavlja djelatnica Matea Kalčićek.

Slijedom navedenoga, utvrđeno je kao u točkama od I. do V. izreke ovoga rješenja.

UPUTA O PRAVNOM LIJEKU:
Ovo rješenje je izvršno u upravnom postupku i protiv njega se ne može izjaviti žalba, ali se može pokrenuti upravni spor. Upravni spor pokreće se tužbom Upravnom sudu u Zagrebu, Avenija Dubrovnik 6, u roku 30 dana od dana dostave ovog rješenja. Tužba se predaje navedenom upravnom sudu neposredno u pisanom obliku, usmeno na zapisnik ili se šalje poštom, odnosno dostavlja elektronički.

Upravna pristojba na zahtjev i ovo rješenje naplaćena je državnim biljezima sukladno Zakonu o upravnim pristojbama („Narodne novine“, broj 115/16)) i Uredbi o tarifi upravnih pristojbi . („Narodne novine“, broj 8/17, 37/17, 129/17, 18/19 i 128/19).

VIŠA STRUČNA SAVJETNICA

Davorka Maljak

U prilogu: Popis zaposlenika ovlaštenika

DOSTAVITI:
1. EKO INVEST d.o.o., Draškovićeva 50, Zagreb, (**R!, s povratnicom!**)
2. Evidencija, ovdje

Stranica 2 od 2

POPIS

zaposlenika ovlaštenika: EKO-INVEST d.o.o., Draškovićeva 50, Zagreb, slijedom kojih je ovlaštenik ispunio propisane uvjete za izdavanje suglasnosti za obavljanje stručnih poslova zaštite okoliša iz područja zaštite prirode sukladno rješenju Ministarstva KLASA: UP/I 351-02/15-08/82; URBROJ: 517-03-1-2-20-14 od 8. svibnja 2020. godine.

STRUČNI POSLOVI ZAŠTITE OKOLIŠA PREMA ČLANKU 40. STAVKU 2. ZAKONA	*VODITELJ STRUČNIH POSLOVA*	*STRUČNJACI*
3. Izrada poglavlja i studija ocjene prihvatljivosti strategija, plana, programa ili zahvata za ekološku mrežu	Marina Stenek, dipl.ing.biol. Vesna Marčec Popović, prof.biol. i kem.	dr.sc. Nenad Mikulić, dipl.ing.kem.teh. i dipl.ing.građ. Martina Cvitković, mag.geogr.