Elaboration of DNSH Report of the Interreg Programme for the Interreg VI-A Hungary-Croatia Programme for the programming period 2021-2027 (March 2024)

TABLE OF CONTENT

1.	BASIC INFORMATION ON THE PROGRAMME	1
2.	DNSH ASSESSMENT	7
3.	CONSLUSION	37
4.	APPENDIX	39

1. BASIC INFORMATION ON THE PROGRAMME

Cross Border Cooperation (CBC) is a key element of the EU policy towards its neighbours. It supports sustainable development along the EU's external borders, helps reducing differences in living standards and addressing common challenges across these borders. CBC promotes cooperation between EU countries and neighbourhood countries sharing a land border or sea crossing. The Interreg VI-A Hungary-Croatia Cooperation Programme (hereinafter Hungary-Croatia Programme) plans to organize development activities in the cross-border area of Hungary and Croatia in the period 2021-2027.

The cross-border area of the Hungary-Croatia Programme covers a territory of 31 085 km², including 11 counties (Figure 1). On Croatian side following 8 NUTS3 regions (so called 'županija') are included in the cross-border area: HR021 - Bjelovarsko-bilogorska županija, HR022 - Virovitičko-podravska županija, HR023 - Požeško-slavonska županija, HR025 - Osječko-baranjska županija, HR026 - Vukovarsko-srijemska županija, HR061 - Međimurska županija, HR062 - Varaždinska županija and HR063 - Koprivničko-križevačka županija. On Hungarian side following 3 NUTS3 regions (so called 'megye') are included in the cross-border area: HU223 - Zala, HU231 - Baranya and HU232 - Somogy.



Figure 1: The cross-border area of the Hungary-Croatia Programme

Hungary-Croatia Programme plans to organize the development activities along five priorities:

- 1. Competitive border region
- 2. Greener and low-carbon border region
- 3. Connected border region
- 4. Inclusive border region
- 5. Cooperating border region

Table 1 presents relationship between identified priorities, selected policy objectives / Interreg specific objectives and selected specific objectives.

Table 1: Priorities, selected policy objectives / Interreg specific objectives and specific objectives of the

Hungary-Croatia Programme

Priority	Policy objective / Interreg specific objective	Specific objectives
1. Competitive border region	PO 1 a smarter Europe by promoting innovative and smart economic transformation	(iii) enhancing sustainable growth and competitiveness of SMEs and job creation in SMEs, including by productive investments
	Estimated financial resources amou	nts to EUR 8 630 300.

Justification for selection: Fostering cross-border business cooperation

Economic performance of the border area has been characterised with stagnation, in some counties even decline, that resulted a continuous increase of territorial disparities. Despite relatively favourable situation on the western periphery of the Croatian side, majority of the border area is way below EU averages in terms of economic performance figures. Export-import performance of the border area is below the respective national averages with extremely low cross-border business activities among companies. Also, innovation performance of the border region is poor, which is shown by low figures of R&D expenditure compared to GDP. This is particularly true for R&D activity of businesses (BERD).

The large distances between border crossing facilities brings low economic performance, weak cross-border trade and poor presence on foreign markets. Therefore, complementary business cooperation of SMEs on two sides of the border should be strengthened with focus of joint appearance on each other's and third markets. SME business cooperation shall have a positive effect on competitiveness, generation of value added, and improvement of employment situation.

Due to poor entrepreneurial innovation performance, cooperation-based innovative product, service and technology development of SMEs operating in the border area should be promoted in which partner SMEs pay complementary role in the joint innovative development with clear division of tasks according to their professional competences.

Joint innovation and business cooperation of the SMEs in the Programme area needs to be supported by the involvement of relevant business support and R&D organisations mainly in cross-border project generation and development.

Priority	Policy objective / Interreg specific objective	Specific objectives
2. Greener and low- carbon border region	PO 2 a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management Estimated financial resources amount	(i) promoting energy efficiency and reducing greenhouse gas emissions

Justification for selection: Joint initiatives for a low-carbon border area.

Share of households and business in total energy consumption has been significantly increasing, which is caused by the outdated building stock and the low level of energy consciousness. Deep retrofit of buildings is of high importance for the programme area and is also emphasized by the new EU strategy that will boost this process – the renovation wave for Europe. The region relies mostly on fossil fuels for heating and cooling and old technologies should be retrofitted with new efficient and renewable systems at the building (nearly zero energy buildings), neighbourhood (nearly zero energy neighbourhoods) and also municipal level (RES integration in centralized heating systems, energy planning etc). On the supply side imported fossil sources are still in dominant position that contribute to greenhouse gas emission and deteriorate environmental conditions, which is the biggest asset of the border area. Growth in the share of renewable energies is a positive phenomenon, but further steps should be taken into this direction, based on local renewable potentials. In the area solar and geothermal energy have real potentials that may serve as basis for future projects.

Cooperation, knowledge and experience exchange in energy efficiency of building stock (public, enterprises, households) should be promoted, as well as promotion of renewable energy sources. Support should be provided to initiatives that contribute to awareness-raising about energy consciousness, energy poverty of the population and businesses. Cooperation activities may include joint territorial analysis for identifying and promoting of capitalisation on local best practices, elaboration of guidelines for optimal interventions, generation and implementation of joint low-carbon strategies and innovative initiatives of cross-border relevance, initiating various awareness raising and capitalisation actions and preparation of related small-scale pilot investments.

2. Greener and low-carbon border region

PO 2 a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management

(iv) promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches

Estimated financial resources amounts to EUR 8 000 000.

Justification for selection: Protection of natural assets

Natural endowments are similar on the two sides of the border, which is the greatest asset of the programme area. Climate change will likely significantly affect the border region that may increase temperature and drought days. This may have a negative impact on biodiversity, as well as on the built environment and on agriculture. Although the border area is in a relatively favourable position concerning environmental quality, with respect to the protected areas (Mura-Drava-Danube Transboundary UNESCO Biosphere Reserve), this should be treated as an asset to be safeguarded, in order to mitigate climate change impact.

Priority	Policy objective /	Specific objectives
•	Interreg specific objective	

Cooperation in projects of green and blue land use, improvement of the status of waterbodies, protection of the environment and nature, habitat connectivity, restoration of natural habitats (wetlands, oxbows, management of invasive species) application of nature-based solutions, natural water retention measures and management of invasive species should be promoted. Jointly developed actions aiming at understanding the future effects of flood protection interventions (ecological status survey, research, plans and environmental impact assessment), as well as implementing the interventions, which help reducing climate change impacts should be also supported.

Besides investment-related projects, cooperation initiatives of preparing joint sustainable energy and climate action plans, exchange on biodiversity, climate change mitigation, disaster management, awareness-raising about environmental issues (clean technologies, circular economy in the field of waste management, biodiversity, reduction of pollution should also be supported.

		(ii) developing and enhancing
	PO 3 a more connected Europe by enhancing mobility	sustainable, climate resilient,
		intelligent and intermodal
3. Connected border		national, regional and local
region		mobility, including improved
		access to TEN-T and cross-border
		mobility
	Estimated financial resources amounts to EUR 9 500 000.	

Justification for selection:

The border area is situated in the triangle of three TEN-T network elements (corridors Vb, X and Vc). Due to peripheral situation of these axes, middle of the border area is suffering from severe isolation and lack of cross-border infrastructure. Average distance between road border crossings is 72 km, making the Croatia-Hungary border the least permeable one in both countries. Creating the necessary transport connections between regions plays a vital role in ensuring economic prosperity and cohesion, aligning with the goals outlined in the Territorial Agenda 2030 of Just and Green Europe aiming to achieve balanced territorial development.

In the pre-Schengen period, the limited number of border-crossing points between Hungary and Croatia presented a significant obstacle to economic and social integration of the region, the distance between border-crossing points contributed to prolongation of travel time, increase in transportation costs and traffic pollution. Croatia's access to Schengen on the 1 January 2023 opens up new opportunities in cross border transport. Road connection should be supported to provide linkages in isolated peripheral areas, in order to connect neighbouring communities, providing improved and quicker access to TEN-T and other major road/rail infrastructure, generating time savings in cross-border mobility such as local roads on the sections Sarok-Kneževo-Popovac and Zákány-Gotalovo and preparation of building plans technical documentation for the construction of the Murakersztúr-Kotoriba bridge. These actions will facilitate the movement of people and goods across the border, boosting trade and economic growth consistent with the objectives outlined in the "Declaration of Intent to Foster Economic Cooperation and Transportation Links Between the Border Regions of Croatia and Hungary". On the other hand, shortening the travel time between the two countries will not only enhance social integration in the region, but will have a positive effect on travel costs and reduction of CO₂, aligning with the principles of the EU Green Deal.

Priority	Policy objective / Interreg specific objective	Specific objectives
4. Inclusive border region	PO 4 a more social and inclusive Europe implementing the European Pillar of Social Rights	(vi) enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation
	Estimated financial resources amount	ts to EUR 17 000 000.

Justification for selection: Development of sustainable nature and culture-oriented tourism of international relevance

The abundance of natural and cultural values presents an asset for local development in the field of tourism. The Mura-Drava-Danube Transboundary UNESCO Biosphere Reserve, the only protection area in the world spreading through 5 countries, is mainly located in the border region. Particular element of the region's cultural heritage is the crossover of various cultures rich in ethnographic, gastronomic and viticulture assets. Although tourism of the border area showed a growing tendency before 2020, most of the overnights were concentrated in some tourism-oriented areas, where accommodation capacities and attractive services are offered.

Due to the phenomenon of 'overtourism' less crowded 'close-to-nature' destinations will become more attractive. This tendency has been strengthened by the COVID-19 pandemic. In line with these trends tourism infrastructure and services should be developed in a coordinated way and respecting nature preservation aspects on basis of local natural and cultural heritage, focusing on development and promotion of tourism attractions, green mobility (cycling, hiking, kayak/canoe tours), improving physical connection of tourism attractions, developing tourism-related active and sport infrastructure as well as infrastructure related to cultural tourism, further strengthening the existing emerging brands (Mura-Drava-Danube Transboundary UNESCO Biosphere Reserve, EuroVelo 13, Amazon of Europe), for the sake of generating unique and competitive tourism products. This generates income for the local population contributing to their social inclusion and strengthening the local economy.

		(ii) improving access to inclusive
		and quality services in education,
	PO 4 a more social and inclusive	training and lifelong learning
4 Tu almaina handan nasian	Europe implementing the European	through developing accessible
4. Inclusive border region	Pillar of Social Rights	infrastructure, including by
		fostering resilience for distance
		and on-line education and training
	Estimated financial resources amount	ts to EUR 2 700 000.

Justification for selection: Labour productivity is lagging behind the EU average in the border area, there is a strong mismatch between skills and demand on the labour market. This is largely due to the shortcomings of the education system as there is disproportion between the labour market needs and educational system supply. Higher education capacities with wide range of disciplines exist in the border region, with a tendency of decreasing number of students, which has a negative effect on competitiveness. Therefore, it has to be better harmonised with market demand. Vocational education is also not adequately harmonised, should be better focused to the market demand. Also, there is rather low adult participation in education which is in contrary to the principle of lifelong learning. In order to promote competitiveness of education and lifelong learning all levels of education need to be enhanced through joint education projects of educational institutions on the two sides of the border. This includes development of joint curricula, launching of new training courses, exchange of good practices in educational programmes, supporting small-scale infrastructural investments and the use of distance/online learning tools.

Priority	Policy objective / Interreg specific objective	Specific objectives
5. Cooperating border region	ISO 1 a better cooperation governance	(b) enhance efficient public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to resolving legal and other obstacles in border regions
	Estimated financial resources amount	ts to EUR 1 600 000.

Justification for selection: Fostering governmental cooperation

Public administration and governance structures – despite long common history – show significant differences. Role of local governments is rather similar; however, the role of county-level institutions and the state shows a mixed picture. In both countries cities/towns with central functions play a key role in regional development.

Due to the low level of territorial integration between the two sides, thematic cooperation of territorial governance actors (public or private non-profit) is needed in various domains, with the aim of identifying obstacles (legal and administrative), exchange of experiences, providing solutions for existing gaps, fostering digitalisation, transfer of good practices and generation and preparation of future projects.

5. Cooperating border region	ISO 1 a better cooperation governance	(c) build up mutual trust, in particular by encouraging P2P actions
	Estimated financial resources amount	ts to EUR 1 540 825.

Justification for selection: Supporting civil cooperation

The border region is traditionally characterised by a positive and cooperative relationship between the partner countries. Local governments, civil and cultural organisations are traditionally active players in cooperation. This is particularly true for minority organisations that play a significant role in connecting the two sides. They are active in culture, education and sport as well.

In order to build mutual trust, the promotion of cultural exchange and dialogue support is essential to civil organisations, operating in the following fields: cultural organisations, sport and youth associations, minority organisations. This includes the organisation of joint events and realisation of joint initiatives.

2. DNSH ASSESSMENT

Tables below provides assessment of the Hungary-Croatia Programme compliance with 'do no significant harm' (DNSH) principle. DNSH assessment is done in line with the Technical guidance on the application of 'do no significant harm' under the Recovery and Resilience Facility Regulation (C/2023/111). In DNSH assessment, Hungary-Croatia Programme specific objectives within its priorities are considered as measures. Table 2 is related to PO 1 (iii). Table 3 is related to PO 2 (iv). Table 5 is related to PO 3 (ii). Table 6 is related to PO 4 (vi). Table 7 is related to PO 4 (ii). Table 8 is related to ISO 1 (b). Table 9 is related to ISO 1 (c).

Table 2: Priority 1, PO 1 (iii) assessment

	Does the PO have no or		Instiffraction if 'NIst has been calcuted
Environmental insignificant foreseeable		t foreseeable	
objective	impact on the objective?		Justification if 'No' has been selected
	Yes	No	

Priority 1. Competitive border region

PO 1 a smarter Europe by promoting innovative and smart economic transformation

(iii) enhancing sustainable growth and competitiveness of SMEs and job creation in SMEs, including by productive investments

Climate change mitigation		X	a. The measure i.e. PO 1 (iii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 1 (iii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Actions planned to be supported within PO 1 (iii) to large extend concentrate on market development, technology and service development and purchase of intangible fixed assets and similar, thus no significant increase of greenhouse gas (hereinafter: GHG) emissions is expected. Although infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings actions could increase GHG emission, through strictly following of energy efficiency standards, a decrease rather than an increase of GHG emission is expected. Ratio of estimated financial resources for PO 1 (iii) and planned number of supported actions indicates overall small-scale actions, thus no violation of DNSH principle is expected. Strategic environmental assessment (hereinafter: SEA) indicates that actions planned within PO 1 (iii) could lead to GHG emissions, but impact is insignificant on the global warming patterns considering overall small-scale actions. Nevertheless, SEA recommends including climate protection aspects into the project selection criteria and states that in cross-border area cooperation and development projects appropriate measures from national strategies related to climate change should be considered. It is also recommended to use Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01) for development of infrastructure projects.
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Environmental Does the PO have no or insignificant foreseeable impact on the objective?		t foreseeable	Justification if 'No' has been selected	
J	Yes	No		
Climate change adaptation X		X	a. The measure i.e. PO 1 (iii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 1 (iii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Actions planned to be supported within PO 1 (iii) to large extend concentrate on market development, technology and service development and purchase of intangible fixed assets and include infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings. Action of infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings could be endangered by climate change. However, SEA recommends that in cross-border area cooperation and development projects appropriate measures from national strategies related to climate change should be considered and recommends using Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01) for development of infrastructure projects. Use of Technical guidance (2021/C 373/01) implies analysis of adaptation to climate change and development of actions resistant to climate change, thus no violation of DNSH principle for this environmental objective is expected.	
Sustainable use and protection for water and marine resources		X	a. The measure i.e. PO 1 (iii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 1 (iii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Actions planned to be supported within PO 1 (iii) to large extend concentrate on market development, technology and service development and purchase of intangible fixed assets and include infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings. Actions such as market development, technology and service development and purchase of intangible fixed assets do not present risk for water resources. Infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings actions could have negative impact on quality of surface waters and groundwaters. However, as the regulations determine the treatment of waste water and as ratio of estimated financial resources for PO 1 (iii) and planned number of supported actions indicate overall small-scale actions, violation of DNSH principle for this environmental objective is not expected. SEA provides recommendations and protective measures to reduce risk of deterioration of water bodies status to the minimum possible extent.	

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Circular economy, including waste prevention and recycling	100	X	a. The measure i.e. PO 1 (iii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 1 (iii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Actions planned to be supported within PO 1 (iii) to large extend concentrate on market development, technology and service development and purchase of intangible fixed assets and include infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings. Ratio of estimated financial resources for PO 1 (iii) and planned number of supported actions indicates overall small-scale actions, thus no significant quantities of waste are expected. Principles of circular economy, including waste prevention and recycling are implemented in Hungarian and Croatian regulation. Implementation of actions within PO 1 (iii) in line with regulation will not violate DNSH principle for this environmental objective.
Pollution prevention and control to air, water, or land		X	a. The measure i.e. PO 1 (iii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 1 (iii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Actions planned to be supported within PO 1 (iii) to large extend concentrate on market development, technology and service development and purchase of intangible fixed assets and include infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings. Actions planned to be supported within PO 1 (iii) to large extend concentrate on market development, technology and service development and purchase of intangible fixed assets and include infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings. Actions such as market development, technology and service development and purchase of intangible fixed assets do not present risk of air, water or land pollution. Infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings actions could have negative impact on air, water or land. However, as ratio of estimated financial resources for PO 1 (iii) and planned number of supported actions indicate overall small-scale actions, no violation of DNSH principle for this environmental objective is expected. SEA provides recommendations and protective measures to reduce pollution of air, water and land to the minimum possible extent.

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. PO 1 (iii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 1 (iii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. The cross-border area has diverse and high biodiversity. Most valuable areas with high biodiversity are part of Natura 2000 ecological network and UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve. Actions planned to be supported within PO 1 (iii) to large extend concentrate on market development, technology and service development and purchase of intangible fixed assets and include infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings. Actions such as market development, technology and service development and purchase of intangible fixed assets do not have negative impact on biodiversity and ecosystems. Infrastructure development and construction, enlarging, restructuring, refurbishing or modernisation of buildings actions could have negative impact on biodiversity and ecosystems. Therefore, SEA provides recommendations and protective measures to reduce impact on biodiversity, Natura 2000 ecological network and other protected areas to the minimum possible extent, emphasizing in particular that planned actions should be planned and implemented in accordance with relevant regulations and with special attention and care in regard to protected areas such as UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve, Natura 2000 territories, national parks or forest reserves, nature parks, regional parks, special reserves, significant landscapes, park-forest, monuments of nature and monuments of park architecture. In December 2023 the Directorate of nature protection of the Croatian Ministry of economy and sustainable development issued a Decision that the Hungary-Croatia Programme is acceptable for the Natura 2000 ecological network ¹ , thus PO 1 (iii) is complian

Conclusion: Based already on simplified approach assessment, PO 1 (iii) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

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Table 3: Priority 2, PO 2 (i) assessment

	Does the PO have no or insignificant foreseeable		
Environmental			Justification if 'No' has been selected
objective	impact on the objective?		Justification if No has been selected
	Yes	No	

Priority 2. Greener and low-carbon border region

PO 2 a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management

(i) promoting energy efficiency and reducing greenhouse gas emissions

Climate change mitigation	X	a. The measure i.e. PO 2 (i) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (i) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 2 (i) contribute to reducing greenhouse gas emissions, thus PO 2 (i) is considered compliant with DNSH for this environmental objective.
Climate change adaptation	X	a. The measure i.e. PO 2 (i) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (i) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Most of projects and actions planned to be supported within PO 2 (i) are soft measures such as research, data collection, development of joint databases, innovative tools, methodologies and similar, that could not be endangered by climate change. Certain projects and actions planned to be supported within PO 2 (i) such as contribution to clean energy transition and affordable utilisation of renewable energy resources, decarbonisation of industries, e-mobility could be endangered by climate change. However, strategic environmental assessment (hereinafter: SEA) recommends that in cross-border area cooperation and development projects appropriate measures from national strategies related to climate change should be considered and recommends using Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01) for development of infrastructure projects. Use of Technical guidance (2021/C 373/01) implies analysis of adaptation to climate change and development of projects and actions resistant to climate change, thus no violation of DNSH principle for this environmental objective is expected.

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Sustainable use and protection for water and marine resources		X	a. The measure i.e. PO 2 (i) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (i) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. It is stated in the Hungary-Croatia Programme that in cross-border area solar and geothermal energy have real potential that may serve as basis for future projects. Although utilization of geothermal energy projects could impact water resources, Hungary-Croatia Programme sets in selection criteria for PO 2 (i) that utilisation of renewable energy resources will be sustainable. Also, estimated financial resources for PO 2 (i) indicate overall small-scale projects, thus violation of DNSH principle is not expected. However, SEA provides recommendations and protective measures to reduce risk of deterioration of water bodies status to the minimum possible extent.
Circular economy, including waste prevention and recycling		X	a. The measure i.e. PO 2 (i) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (i) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Principles of circular economy, including waste prevention and recycling are implemented in Hungarian and Croatian regulation. Development and operation of projects planned within PO 2 (i) in line with regulation will not violate DNSH principle for this environmental objective.
Pollution prevention and control to air, water, or land		X	a. The measure i.e. PO 2 (i) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (i) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Risk of air, water or land pollution is low as most of projects and actions planned to be supported within PO 2 (i) are soft measures such as research, data collection, development of joint databases, innovative tools, methodologies and similar. Certain projects and actions planned to be supported within PO 2 (i) such as contribution to clean energy transition and affordable utilisation of renewable energy resources, decarbonisation of industries, e-mobility prevents pollution of air, water and land, thus PO 2 (i) is compliant with DNSH principle for this environmental objective.

	Does the PO	have no or	
Environmental	insignifican	t foreseeable	Justification if 'No' has been selected
objective	impact on th	e objective?	Justification if No has been selected
	Yes	No	
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. PO 2 (i) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (i) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. The cross-border area has diverse and high biodiversity. Most valuable areas with high biodiversity are part of Natura 2000 ecological network and UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve. Most of projects and actions planned to be supported within PO 2 (i) are soft measures such as research, data collection, development of joint databases, innovative tools, methodologies and similar, that do not have negative impact on biodiversity and ecosystems. Certain projects and actions planned to be supported within PO 2 (i) such as contribution to clean energy transition and affordable utilisation of renewable energy resource could have negative impact on biodiversity and ecosystems. However, estimated financial resources for PO 2 (i) indicate overall small range projects and for which Hungary-Croatia Programme sets selection criteria principles that utilisation of renewable energy resources should be sustainable. Nevertheless, SEA provides recommendations and protective measures to reduce impact on biodiversity, Natura 2000 ecological network and other protected areas to the minimum possible extent, emphasizing in particular that planned projects and actions should be planned and implemented in accordance with relevant regulations and with special attention and care in regard to protected areas such as UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve, Natura 2000 territories, national parks or forest reserves, nature parks, regional parks, special reserves, significant landscapes, park-forest, monuments of nature and monuments of park architecture. In December 2023 the Directorate of nature protection of the Croatian Ministry of economy and sustainable development issued a Decision that the Hungary-Croatia Program

Conclusion: Based already on simplified approach assessment, PO 2 (i) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

Table 4: Priority 2, PO 2 (iv) assessment

	Does the PO have no o	
Environmental	insignificant foreseeabl	Instification if INIa! has been salested
objective	impact on the objective	Justification if 'No' has been selected
	Yes No	

Priority 2. Greener and low-carbon border region

PO 2 a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management

(iv) promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches

Climate change mitigation	X	a. The measure i.e. PO 2 (iv) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (iv) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 2 (iv) promotes climate change adaptation and disaster risk prevention, resilience, taking into account ecosystem based approach. The Hungary-Croatia Programme states that project and actions planned to be supported within PO 2 (iv) are expected to result in joint solutions and actions contributing to improvement and maintenance of biodiversity in the cross-border area, improvement of green and blue infrastructure including habitat connectivity and better quality of water bodies. Green infrastructure has important role in absorbing and storing carbon dioxide (carbon sequestration), a major greenhouse gas responsible for global warming, thus PO 2 (iv) is considered compliant with DNSH for this environmental objective.
Climate change adaptation	X	a. The measure i.e. PO 2 (iv) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (iv) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 2 (iv) promotes climate change adaptation and disaster risk prevention, resilience, taking into account ecosystem based approach, thus PO 2 (iv) is considered compliant with DNSH for this environmental objective.

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Sustainable use and protection for water and marine resources		X	a. The measure i.e. PO 2 (iv) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (iv) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 2 (iv) promotes climate change adaptation and disaster risk prevention, resilience, taking into account ecosystem based approach. The Hungary-Croatia Programme states that projects and actions planned to be supported within PO 2 (iv) are expected to result in joint solutions and actions contributing to improvement and maintenance of biodiversity in the cross-border area, improvement of green and blue infrastructure including habitat connectivity and better quality of water bodies, thus PO 2 (iv) is considered compliant with DNSH for this environmental objective.
Circular economy, including waste prevention and recycling		X	a. The measure i.e. PO 2 (iv) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (iv) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. According to the data stated in the Hungary-Croatia Programme, projects planned to be supported within PO 2 (iv) are pilot projects and no significant quantities of waste are expected, thus their implementation will not violate DNSH principle for this environmental objective. It should also be emphasized that PO 2 (iv) promotes, among other, clear technologies of waste management projects fostering in that way circular economy initiatives among local stakeholders.
Pollution prevention and control to air, water, or land		X	a. The measure i.e. PO 2 (iv) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (iv) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 2 (iv) promotes climate change adaptation and disaster risk prevention, resilience, taking into account ecosystem based approach. Hungary-Croatia Programme states that projects and actions planned to be supported within PO 2 (iv) are expected to result in joint solutions and actions contributing to improvement and maintenance of biodiversity in the cross-border area, improvement of green and blue infrastructure including habitat connectivity and better quality of water bodies. Projects and actions planned to be supported within contribute as well to preventing pollution of air, water or land, thus PO 2 (iv) is considered compliant with DNSH for this environmental objective.

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. PO 2 (iv) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 2 (iv) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 2 (iv) promotes climate change adaptation and disaster risk prevention, resilience, taking into account ecosystem based approach. The Hungary-Croatia Programme states that projects and actions planned to be supported within PO 2 (iv) are expected to result in joint solutions and actions contributing to improvement and maintenance of biodiversity in the cross-border area, improvement of green and blue infrastructure including habitat connectivity and better quality of water bodies, thus PO 2 (iv) is considered compliant with DNSH for this environmental objective. In December 2023 the Directorate of nature protection of the Croatian Ministry of economy and sustainable development issued a Decision that the Hungary-Croatia Programme is acceptable for the Natura 2000 ecological network, thus PO 2 (iv) compliant with DNSH principle for this environmental objective.

Conclusion: Based already on simplified approach assessment, PO 2 (iv) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

Table 5: Priority 3, PO 3 (ii) assessment

	Does the PO	have no or	
Environmental	insignificant	t foreseeable	Justification if INTelling have calcuted
objective	impact on the objective?		Justification if 'No' has been selected
	Yes	No	

Priority 3. Connected border region

PO 3 a more connected Europe by enhancing mobility

(ii) developing and enhancing sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility

1 and cross-border in	and cross-border mobility			
Climate change mitigation	X	a. The measure i.e. PO 3 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 3 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 3 (ii) emphasizes development of road connections which should support links between isolated peripheral areas, in order to connect neighbouring communities, to improve and to speed up access to TEN-T and other major road/rail infrastructure, generating time savings in cross-border mobility. Road transport is source of greenhouse gases (hereinafter: GHG) which are produced by fossil fuel combustion in vehicles engines. As the Hungary-Croatia Programme states, new local road connections in cross-border area aim to improve cross-border connections, to shorten time travel and to generate time savings in cross-border mobility. Shortening time travel will result in reduction of fossil fuel consumption, and thus reduction of GHG emission compared to existing situation, thus PO 3 (ii) is considered compliant with DNSH for this environmental objective.		
Climate change adaptation	X	a. The measure i.e. PO 3 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 3 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 3 (ii) emphasizes development of road connections which should support links between isolated peripheral areas. Road infrastructure could be endangered by climate change. However, strategic environmental assessment (hereinafter: SEA) recommends that in cross-border area cooperation and development projects appropriate measures from national strategies related to climate change should be considered and recommends using Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01) for development of infrastructure projects. Use of Technical guidance (2021/C 373/01) implies analysis of adaptation to climate change and development of projects and actions resistant to climate change, thus no violation of DNSH principle for this environmental objective is expected.		

Environmental objective	insignifican	O have no or t foreseeable ne objective?	Justification if 'No' has been selected
Sustainable use and protection for water and marine resources		X	a. The measure i.e. PO 3 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 3 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Three projects are announced within PO 3 (ii): (1) Preparing and building the missing road link between Sárok and Kneževo, (2) Preparing and building the missing road link between Zákány - Gotalovo and (3) Preparing the project documentation for the bridge between Kotoriba and Murakersztúr (herein after: Mura bridge). In general, road infrastructure projects could have impact on quality of groundwater primarily during construction if they are not managed properly. Therefore, SEA provides recommendations and protective measures to reduce impact on water resources to the minimum possible extent. Through implementation of SEA protective measures and recommendation, possible impact of road infrastructure planned within PO 3 (ii) is considered to be not significant. Regarding Mura bridge it can be added that during the meeting of the Mura Watershed Sub-Committee, operating as part of the Permanent Hungarian-Croatian Water Management Committee led by government delegates, held in the period 24 May – 26 May 2022, the following official, unified opinion was formed by the Hungarian and Croatian Parties following the discussion: "From flood protection and water management perspectives, they consider the proposed Mura Bridge location (at the existing railway bridge) acceptable". In line with all above, PO 3 (ii) is considered compliant with DNSH for this environmental objective.
Circular economy, including waste prevention and recycling		X	a. The measure i.e. PO 3 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 3 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Principles of circular economy, including waste prevention and recycling are implemented in Hungarian and Croatian regulation. Development and operation of projects within PO 3 (ii) in line with regulation will not violate DNSH principle for this environmental objective.

Environmental	Does the PO have no or insignificant foreseeable impact on the objective?		Justification if 'No' has been selected
objective	Yes	No	
Pollution prevention and control to air, water, or land		X	a. The measure i.e. PO 3 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 3 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. PO 3 (ii) emphasizes development of road connections which should support links between isolated peripheral areas, in order to connect neighbouring communities, to improve and to speed up access to TEN-T and other major road/rail infrastructure, generating time savings in cross-border mobility. Road transport is source of air pollutants which are produced by fossil fuel combustion in vehicles engines. As the Hungary-Croatia Programme states, new local road connections in cross-border area aim to improve cross-border connections, to shorten time travel and to generate time savings in cross-border mobility. Shortening time travel will result in a reduction in fossil fuel consumption and thus reduction of air pollutant emission compared to existing situation. In general, road infrastructure could have a negative impact on land and on quality of groundwater primarily during construction if they are not managed properly. Therefore, SEA provides recommendations and protective measures to reduce impact on land and on water resources to the minimum possible extent. Through implementation of SEA protective measures and recommendation, possible impact of road infrastructure planned within PO 3 (ii) on water and land is considered to be not significant. In line with all above, PO 3 (ii) is considered compliant with DNSH for this environmental objective.
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. PO 3 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 3 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. The cross-border area has diverse and high biodiversity. Most valuable areas with high biodiversity are part of Natura 2000 ecological network and UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve. PO 3 (ii) emphasizes development of road connections which should support links between isolated peripheral areas, in order to connect neighbouring communities, to improve and to speed up access to TEN-T and other major road/rail infrastructure, generating time savings in cross-border mobility. Three projects are highlighted within PO 3 (ii): (1) Preparing and building the missing road link between Sárok and Kneževo, (2) Preparing and building the missing road link between Zákány - Gotalovo and (3) Preparing the project documentation for the bridge between Kotoriba and Murakersztúr (hereinafter: Mura bridge).

Environmental		O have no or t foreseeable	
	impact on the objective?		Justification if 'No' has been selected
oojeen (e	•	1	
objective	impact on the Yes	ne objective? No	In general, construction of road infrastructure disrupts the habitats in the area of construction activities. Habitats within the road infrastructure routes undergo to complete transformation, while those within a few meters of it will degrade. Road infrastructure have a fragmentation and barrier effect. Road traffic is source of noise and light that disturb fauna and animals could be hurt or killed in collisions with road vehicles. Magnitude of impacts depends on final solution of road infrastructure, road infrastructure route and characteristics of area within road infrastructure is planned. Settlements Sarok and Kneževo are at a distance of about 2 km. Sarok-Kneževo area is in predominant anthropogenic area in agricultural use and Kneževo is located alongside European route E73 (corridor Vc). The Hungarian section of the road connecting Sárok and Kneževo was completed in 2015 and received the designation number 57135. The Hungarian section of the road is a paved asphalt road all the way to the Hungary-Croatia border. According to available information, the potentially connecting section on Croatian side is currently an unpaved road, which continues from the developed road on the Hungarian side and then connects to the local road network in Kneževo. Sarok - Kneževo area is not inside Natura 2000. Settlements Zákány and Gotalovo are at a distance of about 4 km. Zákány - Gotalovo area is in predominant anthropogenic area in agricultural use. It does not intersect with Natura 2000 on Hungarian side and on Croatian side it is inside Natura 2000: HR5000014 Gornji tok Drave (SCI) and HR1000014 Gornji tok Drave (SPA). HR5000014 covers 22981,54 ha and HR1000014 covers 22981,54 ha as well and they follow long course of the river Drava, from Medimurska county to Virovitičko-podravska county. Zákány - Gotalovo road link is planned as a local road. Within Hungary-Croatia Programme financing of preparation of project documentation for Mura bridge is planned. Financing of Mura bridge construction is not planned within H
			Considering short distance between settlements Sarok and Kneževo and existing anthropogenic features of Sarok - Kneževo area, previously mentioned, generally possible impacts of road infrastructure on biodiversity
			are considered to be not significant. Considering distance between settlements Zákány and Gotalovo, existing

Environmental objective	insignifican	O have no or t foreseeable ne objective?	Justification if 'No' has been selected
			anthropogenic features of the Zákány - Gotalovo area, planned development of link between them as local road, and short distance of settlements Zákány and Gotalovo in compare to the area of Natura 2000, previously mentioned, generally possible impacts of road infrastructure on biodiversity are considered to be not significant and impact on conservation objectives and the integrity of the Natura 2000 is considered to be not significant as well. Although at the level of strategic environment assessment (hereinafter: SEA) is considered that construction of road links between Sarok and Kneževo and between Zákány and Gotalovo will not have significant negative impact on biodiversity and Natura 2000, SEA provides recommendations and protective measures to reduce in general possible impact of road infrastructure on biodiversity, Natura 2000 ecological network and other protected areas to the minimum possible extent, emphasizing in particular that road infrastructure should be planned and implemented in accordance with relevant national and EU regulations and with special attention and care in regard to protected areas such as UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve, Natura 2000 territories, national parks or forest reserves, nature parks, regional parks, special reserves, significant landscapes, park-forest, monuments of nature and monuments of park architecture. Only preparation of project documentation for Mura bridge is planned to be financed within Hungary-Croatia Programme. Financing of construction of Mura bridge is not planned within Hungary-Croatia Programme. Just preparation of project documentation i.e. planning of the Mura Bridge included in current Hungary-Croatia Programme have no negative impact on biodiversity and on Natura 2000. According to the national and EU regulation, environmental impact assessment and appropriate assessment must be carried out to ascertain that the planned investment will not adversely affect biodiversity and conservation objectives and the integrity of the Nat

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective?		Justification if 'No' has been selected
	Yes	No	
			In December 2023 the Directorate of nature protection of the Croatian Ministry of economy and sustainable
			development issued a Decision that the Hungary-Croatia Programme is acceptable for the Natura 2000
			ecological network.
			In line with all above, PO 3 (ii) is compliant with DNSH principle for this environmental objective.

Conclusion: Based already on simplified approach assessment, PO 3 (ii) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

Table 6: Priority 4, PO 4 (vi) assessment

	Does the PO have no or		
Г			
Environmental	insignificant foreseeable		Justification if 'No' has been selected
objective	impact on th	e objective?	
	Yes	No	
Priority 4. Inclusive	border region		
PO 4 a more social ar	nd inclusive E	urope impleme	enting the European Pillar of Social Rights
(vi) enhancing the rol	e of culture an	d sustainable t	ourism in economic development, social inclusion and social innovation
			a. The measure i.e. PO 4 (vi) has no or insignificant foreseeable impact on the environmental objective related
			to the direct and primary indirect effects of the PO 4 (vi) across its life cycle, given its nature, and as such is
			considered compliant with DNSH for the relevant objective.
			Projects and actions planned to be supported within PO 4 (vi) are related to development and promotion of
			tourism attractions, green mobility, improving physical connection of tourism attractions, developing tourism-
			related active and sport infrastructure as well as infrastructure related to cultural tourism, strengthening the
			existing emerging brands and similar. Some of planned projects and actions could result in increasing of
Climata ahanga		greenhouse gas (hereinafter: GHG) emissions, as well as some of them could result in decreasing of GHG	
Climate change		X	emission. Hungary-Croatia Programme sets for PO 4 (vi) projects and actions selection criteria principles by
mitigation			which sustainability of their outputs and results should fulfil all three strands of sustainability (environmental,
			social and financial), thus no violation of DNSH principle is expected.
			Due to possible increase of GHG emissions associated with the increased number of tourists visits, strategic
			environmental assessment (hereinafter: SEA) recommends careful planning of tourism and culture
			development and states that in cross-border area cooperation and development projects appropriate measures
			from national strategies related to climate change should be considered. It is also recommended to use
			Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01) for

development of infrastructure projects.

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Climate change adaptation		X	a. The measure i.e. PO 4 (vi) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (vi) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (vi) are related to development and promotion of tourism attractions, green mobility, improving physical connection of tourism attractions, developing tourism-related active and sport infrastructure as well as infrastructure related to cultural tourism, strengthening the existing emerging brands and similar. Some of planned projects and actions could be endangered by climate change. However, SEA recommends that in cross-border area cooperation and development projects appropriate measures from national strategies related to climate change should be considered and recommends using Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01) for development of infrastructure projects. Use of Technical guidance (2021/C 373/01) implies analysis of adaptation to climate change and development of actions resistant to climate change, thus no violation of DNSH principle for this environmental objective is expected.
Sustainable use and protection for water and marine resources		X	a. The measure i.e. PO 4 (vi) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (vi) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (vi) are related to development and promotion of tourism attractions, green mobility, improving physical connection of tourism attractions, developing tourism-related active and sport infrastructure as well as infrastructure related to cultural tourism, strengthening the existing emerging brands and similar. Some of planned projects and actions could result in higher local water consumption but insignificant at national level of Hungary and Croatia. Risk of degradation of water quality due waste waters is low as estimated financial resources for PO 4 (vi) indicate no large-scale projects and actions. Nevertheless, SEA provides recommendations and protective measures to reduce risk of deterioration of water bodies status to the minimum possible extent, thus violation of DNSH principle for this environmental objective is not expected.

Environmental objective	insignifican	O have no or t foreseeable ne objective?	Justification if 'No' has been selected
Circular economy, including waste prevention and recycling		X	a. The measure i.e. PO 4 (vi) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (vi) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (vi) are related to development and promotion of tourism attractions, green mobility, improving physical connection of tourism attractions, developing tourism-related active and sport infrastructure as well as infrastructure related to cultural tourism, strengthening the existing emerging brands and similar. Some of planned projects and actions could result in waste generation. Principles of circular economy, including waste prevention and recycling are implemented in Hungarian and Croatian regulation. Development and operation of projects and actions within PO 4 (vi) in line with regulation will not violate DNSH principle for this environmental objective.
Pollution prevention and control to air, water, or land		X	a. The measure i.e. PO 4 (vi) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (vi) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (vi) are related to development and promotion of tourism attractions, green mobility, improving physical connection of tourism attractions, developing tourism-related active and sport infrastructure as well as infrastructure related to cultural tourism, strengthening the existing emerging brands and similar. Some of planned projects and actions could result in air pollutant emission, waste waters and emission to soil as well as some of them result in prevention of air, water and/or land pollution. Estimated financial resources for PO 4 (vi) indicate no large-scale projects and actions and as Hungary-Croatia Programme sets for PO 4 (vi) projects and actions selection criteria principles by which sustainability of project outputs and results should fulfil all three strands of sustainability (environmental, social and financial) risk of air, water or land pollution is considered to be insignificant. Nevertheless, SEA provides recommendations and protective measures to reduce pollution of air, water and land to the minimum possible extent, thus no violation of DNSH principle for this environmental objective is expected.

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. PO 4 (vi) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (vi) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. The cross-border area has diverse and high biodiversity. Most valuable areas with high biodiversity are part of Natura 2000 ecological network and UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve. Projects and actions planned to be supported within PO 4 (vi) are related to development and promotion of tourism attractions, green mobility, improving physical connection of tourism attractions, developing tourism-related active and sport infrastructure as well as infrastructure related to cultural tourism, strengthening the existing emerging brands and similar. Some of planned projects and actions could have negative impact on biodiversity and ecosystems. However, as estimated financial resources for PO 4 (vi) indicate no large-scale projects and actions and as Hungary-Croatia Programme sets for PO 4 (vi) projects and actions selection criteria principles by which sustainability of their outputs and results should fulfil all three strands of sustainability (environmental, social and financial), risk of significant harm on biodiversity and ecosystem is considered to be insignificant. In general, development of innovative solutions and support of alternative, less invasive forms of tourism is considered a sustainable activity that support biodiversity, Natura 2000 ecological network and other protected areas to the minimum possible extent, emphasizing in particular that planned projects should be planned and implemented in accordance with relevant regulations and with special attention and care in regard to protected areas such as UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve, Natura 2000 territories, national parks or forest reserves, nature parks, regional parks, special reserves, significant landscapes, park-fore

Conclusion: Based already on simplified approach assessment, PO 4 (vi) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

Table 7: Priority 4, PO 4 (ii) assessment

	Does the PO have no or		
Environmental	insignificant foreseeable		Instiff action if 'NI's has been calcuted
objective	impact on the objective?		Justification if 'No' has been selected
	Yes	No	

Priority 4. Inclusive border region

PO 4 a more social and inclusive Europe implementing the European Pillar of Social Rights

(ii) improving access to inclusive and quality services in education, training and lifelong learning through developing accessible infrastructure, including by fostering resilience for distance and on-line education and training

Tobtelling Testifeties 1	Tostering resimence for distance and on time education and training			
Climate change mitigation	X	a. The measure i.e. PO 4 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (ii) are related to development of joint curricula, launching of new training courses, exchange of good practices in educational programmes, supporting small-scale infrastructural investments and the use of distance / online learning tools. Small-scale infrastructural investments in the main imply upgrading of educational premises. Assuming that in such actions energy efficiency standards will be followed, GHG emission is expected to be insignificant. GHG emission during construction activities on realization of small-scale infrastructural investment is expected to be insignificant due to small-scale of construction activities. Thus, PO 4 (ii) is compliant with DNSH principle for this environmental objective.		
Climate change adaptation	X	a. The measure i.e. PO 4 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (ii) are related to development of joint curricula, launching of new training courses, exchange of good practices in educational programmes, supporting small-scale infrastructural investments and the use of distance / online learning tools. Small-scale infrastructural investments in the main imply upgrading of educational premises. It is not expected that projects and actions planned within PO 4 (ii) will be endangered by climate change. Thus, no violation of DNSH principle for this environmental objective is expected.		

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Sustainable use and protection for water and marine resources		X	a. The measure i.e. PO 4 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (ii) are related to development of joint curricula, launching of new training courses, exchange of good practices in educational programmes, supporting small-scale infrastructural investments and the use of distance / online learning tools. Small-scale infrastructural investments in the main imply upgrading of educational premises. Construction activities of small-scale infrastructural investments could be source of waste waters and waste. However, due to small-scale of construction activities, risk of degradation of water quality is insignificant. Thus, violation of DNSH principle for this environmental objective is not expected. Nevertheless, strategic environmental assessment (SEA) provides recommendations and protective measures to reduce risk of deterioration of water bodies status to the minimum possible extent.
Circular economy, including waste prevention and recycling		X	a. The measure i.e. PO 4 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (ii) are related to development of joint curricula, launching of new training courses, exchange of good practices in educational programmes, supporting small-scale infrastructural investments and the use of distance / online learning tools. No significant quantities of waste are expected. Principles of circular economy, including waste prevention and recycling are implemented in Hungarian and Croatian regulation. Development and operation of projects and actions within PO 4 (ii) in line with regulation will not violate DNSH principle for this environmental objective.

Environmental objective	Does the PO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Pollution prevention and control to air, water, or land		X	a. The measure i.e. PO 4 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (ii) are related to development of joint curricula, launching of new training courses, exchange of good practices in educational programmes, supporting small-scale infrastructural investments and the use of distance / online learning tools. Small-scale infrastructural investments in the main imply upgrading of educational premises. Construction activities of small-scale infrastructural investments could be source of air pollutants, waste waters and waste. However due to small-scale of construction activities, risk of air, water and/or land pollution is insignificant. Thus, PO 4 (ii) is compliant with DNSH principle for this environmental objective. Nevertheless, strategic environmental assessment (SEA) provides recommendations and protective measures to reduce risk of deterioration of water bodies status to the minimum possible extent.
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. PO 4 (ii) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the PO 4 (ii) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within PO 4 (ii) are related to development of joint curricula, launching of new training courses, exchange of good practices in educational programmes, supporting small-scale infrastructural investments and the use of distance / online learning tools. Small-scale infrastructural investments in the main imply upgrading of educational premises. Projects and actions planned to be supported within PO 4 (ii) do not have negative impact on biodiversity and ecosystems, thus violation of DNSH principle for this environmental objective is not expected. In December 2023 the Directorate of nature protection of the Croatian Ministry of economy and sustainable development issued a Decision that the Hungary-Croatia Programme is acceptable for the Natura 2000 ecological network, thus PO 4 (ii) is compliant with DNSH principle for this environmental objective.

Conclusion: Based already on simplified approach assessment, PO 4 (ii) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

Table 8: Priority 5, ISO 1 (b) assessment

	Does the IS	O have no or	
Environmental	insignifican	t foreseeable	Justification if 'No' has been selected
objective	impact on th	ne objective?	Justification if two has been selected
	Yes	No	

Priority 5. Cooperating border region

ISO 1 a better cooperation governance

(b) enhance efficient public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to resolving legal and other obstacles in border regions

, I	<u> </u>	
Climate change mitigation	X	a. The measure i.e. ISO 1 (b) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (b) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within ISO 1 (b) are related to thematic cooperation of territorial governance actors (public or private non-profit) in various domains, with the aim of identifying obstacles (legal and administrative), exchange of experiences, providing solutions for existing gaps, fostering digitalisation, transfer of good practices and generation and preparation of future projects. Due to nature of projects and actions planned within ISO 1 (b), GHG emission is expected to be insignificant. Thus, ISO 1 (b) is compliant with DNSH principle for this environmental objective.
Climate change adaptation	X	a. The measure i.e. ISO 1 (b) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (b) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within ISO 1 (b) are related to thematic cooperation of territorial governance actors (public or private non-profit) in various domains, with the aim of identifying obstacles (legal and administrative), exchange of experiences, providing solutions for existing gaps, fostering digitalisation, transfer of good practices and generation and preparation of future projects. It is not expected that projects and actions planned within ISO 1 (b) will be endangered by climate change. Thus, no violation of DNSH principle for this environmental objective is expected.

	Does the ISO have no or		Justification if 'No' has been selected
Environmental objective	insignificant foreseeable		
	impact on the objective? Yes No		
Sustainable use and protection for water and marine resources	Tes	X	a. The measure i.e. ISO 1 (b) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (b) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within ISO 1 (b) are related to thematic cooperation of territorial governance actors (public or private non-profit) in various domains, with the aim of identifying obstacles (legal and administrative), exchange of experiences, providing solutions for existing gaps, fostering digitalisation, transfer of good practices and generation and preparation of future projects. Due to nature of projects and actions planned within ISO 1 (b), impact on water resources is not expected. Thus, ISO 1 (b) is compliant with DNSH principle for this environmental objective.
Circular economy, including waste prevention and recycling		X	a. The measure i.e. ISO 1 (b) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (b) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within ISO 1 (b) are related to thematic cooperation of territorial governance actors (public or private non-profit) in various domains, with the aim of identifying obstacles (legal and administrative), exchange of experiences, providing solutions for existing gaps, fostering digitalisation, transfer of good practices and generation and preparation of future projects. Due to nature of projects and actions planned within ISO 1 (b), no significant quantities of waste are expected. Thus, no violation of DNSH principle for this environmental objective is expected.
Pollution prevention and control to air, water, or land		X	a. The measure i.e. ISO 1 (b) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (b) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within ISO 1 (b) are related to thematic cooperation of territorial governance actors (public or private non-profit) in various domains, with the aim of identifying obstacles (legal and administrative), exchange of experiences, providing solutions for existing gaps, fostering digitalisation, transfer of good practices and generation and preparation of future projects. Due to nature of projects and actions planned within ISO 1 (b), pollution of air, water and/or land is not expected. Thus, ISO 1 (b) is compliant with DNSH principle for this environmental objective.

Environmental objective	Does the ISO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. ISO 1 (b) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (b) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions planned to be supported within ISO 1 (b) are related to thematic cooperation of territorial governance actors (public or private non-profit) in various domains, with the aim of identifying obstacles (legal and administrative), exchange of experiences, providing solutions for existing gaps, fostering digitalisation, transfer of good practices and generation and preparation of future projects. Projects and actions planned to be supported within ISO 1 (b) do not have negative impact on biodiversity and ecosystems, thus violation of DNSH principle for this environmental objective is not expected. In December 2023 the Directorate of nature protection of the Croatian Ministry of economy and sustainable development issued a Decision that the Hungary-Croatia Programme is acceptable for the Natura 2000 ecological network, thus ISO 1 (b) is compliant with DNSH principle for this environmental objective.

Conclusion: Based already on simplified approach assessment, ISO 1 (b) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

Table 9: Priority 5, ISO 1 (c) assessment

resources

, ,	(1)				
	Does the ISO have no or		Justification if 'No' has been selected		
Environmental insignifica		t foreseeable			
objective	impact on th	ne objective?	Justification if two has been selected		
	Yes	No			
Priority 5. Cooperati	ng border regi	on			
ISO 1 a better cooper	ISO 1 a better cooperation governance				
(c) build up mutual tr	ust, in particul	lar by encourag	ging P2P actions		
P2P = People to Peop	ole				
Climate change mitigation		X	a. The measure i.e. ISO 1 (c) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (c) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective.		
			Projects and actions of promotion of cultural exchange and dialogue support between cultural organisations, sport and youth associations and minority organisations are planned within ISO 1 (c). This also includes organisation of joint events and realisation of joint initiatives. Joint events (tournaments, festivals) result in occasional GHG emission, which is expected to be insignificant. Thus ISO 1 (c) is compliant with DNSH principle for this environmental objective.		
Climate change adaptation		X	a. The measure i.e. ISO 1 (c) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (c) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions of promotion of cultural exchange and dialogue support between cultural organisations, sport and youth associations and minority organisations are planned within ISO 1 (c). This also includes organisation of joint events (tournaments, festivals) and realisation of joint initiatives. For the most of projects and actions planned within ISO 1 (c) is not expected to be endangered by climate change, it is only possible to occasionally cancel an individual event on open space due to unfavorable weather events. Thus, no violation of DNSH principle for this environmental objective is expected.		
Sustainable use and protection for water and marine		X	a. The measure i.e. ISO 1 (c) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (c) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective.		

Environmental objective	Does the ISO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Sustainable use and protection for water and marine resources		X	Projects and actions of promotion of cultural exchange and dialogue support between cultural organisations, sport and youth associations and minority organisations are planned within ISO 1 (c). This also includes organisation of joint events and realisation of joint initiatives. Joint events (tournaments, festivals) could be source of waste waters and waste. However, as joint events are only occasional, risk of degradation of water quality is insignificant. Nevertheless, strategic environmental assessment (hereinafter: SEA) provides recommendations and protective measures to reduce pollution of air, water and land to the minimum possible extent, thus no violation of DNSH principle for this environmental objective is expected.
Circular economy, including waste prevention and recycling		X	a. The measure i.e. ISO 1 (c) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (c) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions of promotion of cultural exchange and dialogue support between cultural organisations, sport and youth associations and minority organisations are planned within ISO 1 (c). This also includes organisation of joint events and realisation of joint initiatives. Some of planned projects and actions are source of waste. Principles of circular economy, including waste prevention and recycling are implemented in Hungarian and Croatian regulation. Thus, no violation of DNSH principle for this environmental objective is expected.
Pollution prevention and control to air, water, or land		X	a. The measure i.e. ISO 1 (c) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (c) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions of promotion of cultural exchange and dialogue support between cultural organisations, sport and youth associations and minority organisations are planned within ISO 1 (c). This also includes organisation of joint events and realisation of joint initiatives. Joint events (tournaments, festivals) could be source of air pollutants, waste waters and waste. However, as joint events are only occasional, risk of air, water and/or land pollution is insignificant. Nevertheless, SEA provides recommendations and protective measures to reduce pollution of air, water and land to the minimum possible extent, thus no violation of DNSH principle for this environmental objective is expected.

Environmental objective	Does the ISO have no or insignificant foreseeable impact on the objective? Yes No		Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems		X	a. The measure i.e. ISO 1 (c) has no or insignificant foreseeable impact on the environmental objective related to the direct and primary indirect effects of the ISO 1 (c) across its life cycle, given its nature, and as such is considered compliant with DNSH for the relevant objective. Projects and actions of promotion of cultural exchange and dialogue support between cultural organisations, sport and youth associations and minority organisations are planned within ISO 1 (c). This also includes organisation of joint events and realisation of joint initiatives. Joint events (tournaments, festivals) on open space could disturb fauna and damage flora species. However, as joint events on open space are only occasional and as they usual are organized at anthropogenic areas, risk of significant harm on biodiversity and ecosystem is considered to be insignificant. SEA provides recommendations and protective measures to reduce impact on biodiversity, Natura 2000 ecological network and other protected areas to the minimum possible extent, emphasizing in particular that planned projects and actions should be planned and implemented in accordance with relevant regulations and with special attention and care in regard to protected areas such as UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve, Natura 2000 territories, national parks or forest reserves, nature parks, regional parks, special reserves, significant landscapes, park-forest, monuments of nature and monuments of park architecture. In December 2023 the Directorate of nature protection of the Croatian Ministry of economy and sustainable development issued a Decision that the Hungary-Croatia Programme is acceptable for the Natura 2000 ecological network, thus ISO 1 (c) is compliant with DNSH principle for this environmental objective.

Conclusion: Based already on simplified approach assessment, ISO 1 (c) of the Hungary-Croatia Programme is considered compliant with DNSH principle for all environmental objectives. There is no need for substantive assessment.

3. CONCLUSION

Hungary-Croatia Programme plans to organize the development activities in the Hungarian and Croatian cross-border area along five priorities, within which policy objectives (PO) / Interreg specific objectives (ISO) and specific objectives are selected:

Priority 1. Competitive border region:

PO 1 a smarter Europe by promoting innovative and smart economic transformation

(iii) enhancing sustainable growth and competitiveness of SMEs and job creation in SMEs, including by productive investments

Priority 2. Greener and low-carbon border region:

PO 2 a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management

- (i) promoting energy efficiency and reducing greenhouse gas emissions
- (iv) promoting climate change adaptation and disaster risk prevention, resilience, taking into account eco-system based approaches

Priority 3. Connected border region:

PO 3 a more connected Europe by enhancing mobility

(ii) developing and enhancing sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility

Priority 4. Inclusive border region:

PO 4 a more social and inclusive Europe implementing the European Pillar of Social Rights

- (vi) enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation
- (ii) improving access to inclusive and quality services in education, training and lifelong learning through developing accessible infrastructure, including by fostering resilience for distance and on-line education and training

Priority 5. Cooperating border region:

ISO 1 a better cooperation governance

- (b) enhance efficient public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to resolving legal and other obstacles in border regions
- (c) build up mutual trust, in particular by encouraging P2P actions

Assessment of compliance of the Hungary-Croatia Programme, i.e., its specific objectives with 'do no significant harm' (DNSH) principle is done in line with the Technical guidance on the application of 'do no significant harm' under the Recovery and Resilience Facility Regulation (C/2023/111). DNSH assessment is done in relation to following six environmental objectives:

- Climate change mitigation,
- Climate change adaptation,
- Sustainable use and protection for water and marine resources
- Circular economy, including waste prevention and recycling
- Protection and restoration of biodiversity and ecosystems
- Protection and restoration of biodiversity and ecosystems

Already in simplified approach assessment is concluded that all specific objectives of the Hungary-Croatia Programme are compliant with DNSH principle for all environmental objectives, so there is no need for substantive assessment.

Likelihood of adverse impact occurrence is insignificant and may be mitigated or avoided through application of environmental protection provisions set by Hungarian, Croatian and EU regulation and protective measures and recommendation from strategic environmental assessment (hereinafter: SEA).

Partner countries are responsible for implementation of environmental conditions set by regulation, SEA and DNSH principle. Therefore, partner countries should conduct further, detailed assessment at level of some call for projects, activities and/or actions in order to select for implementation only sustainable projects, activities and/or actions that fully satisfy conditions set by regulation, SEA and DNSH principle. Environmental impact assessment will be carried out for certain projects, activities and/or actions in accordance with the EU directives and national legislation, as well as Appropriate assessment in compliance with the provisions of the EU Biodiversity Strategy, Birds and Habitats Directives and applicable national legislation for sites at or near Natura 2000.

APPENDIX: Protective measures determined by strategic environmental assessment²

 2 Elaboration of Strategic Environmental Assessment of the Interreg Programme for the programming period of 2021-2027, concerning the programming area of Hungary-Croatia – Environmental Report (15 March 2024) prepared by EX ANTE Consulting Ltd & EKONERG Ltd.

Soil

Agricultural activity in the cross-border area plays a vital role, the protection of soil or the minimisation of erosion, deflation and pollution is more than important. Infrastructural activities, constructions are suggested not to be planned on fertile soils especially in counties where the local economy greatly depends on agricultural production.

Joint activities on widespread use and transition to sustainable land use practices, ranging from agroecological, regenerative farming (no till, reduced tillage etc.) to organic agroforestry practices are advised, all of which focus on soil health. Among many activities education of agri-food SMEs is also vital and should focus on learning and sharing best practices, which result in having a more sustainable agriculture that relies its dependence on biodiversity and ecosystem services. Not forgetting the broader society, local citizens and other stakeholders should also learn about alternative ways of consumer behaviour such as 'Farm to Fork' initiatives, local agri-food products and other ways of adaptation to climate change that improve the overall well-being while boosting local economies. Actors of the agricultural sector are currently absent from the Hungary-Croatia Programme as they are not included in the main target groups, which is totally unacceptable if the Hungary-Croatia Programme plans to carry out activities concerning land use.

Increased popularity resulting in crowded areas are challenging local waste management systems and threaten soil health. In order to minimize impacts from mismanagement of waste in terms of tourism joint activities are recommended in form of education and training of businesses, local residents, and other parties that have an impact on the prevention of waste generation. Visitors should be informed of the rules before their arrival and during their stay (digital applications, online promotional materials etc.), while also promoting the usage of environmentally sustainable products.

To natural sites crowds and vehicle traffic pose a serious threat, therefore events can only be organised if traffic is limited and kept away as much as possible from the site and precautions have been made to prevent waste pollution.

Air

Between the two countries joint actions for the creation of common guidelines for SMEs (e.g., handbooks) about best practices at construction sites and other related activities are recommended in order to minimise environmental damage and pollution in respect of national regulations.

To save valuable resources and to prevent unnecessary pollution during developments in terms of SMEs repurposing of underutilised buildings must be considered since it does not require physical construction, nor large-scale land clearing.

Ecosystem based approaches are recommended in various fields of design, paying special attention to the interior and exterior of buildings where green surfaces improve air quality. If enlivened, parks and other green areas also affect air quality through absorbing pollutants from the air. In terms of climate adaptation, cities (esp. Pécs) and even small settlements benefit in terms of climate adaptation from green infrastructure investments by providing nature-based solutions and lessening polluting factors.

Connected border region is promoted through development and improvement of sustainable and climate resilient mobility including development of transport infrastructure i.e. road connections. New road connections should support links between isolated peripheral areas, in order to connect neighbouring communities, to improve and to speed up access to TEN-T and other major road/rail infrastructure, generating time savings in cross-border mobility. Although road traffic is source of air pollution, shortening of travel time in cross-border area will result in a reduction in fossil fuel consumption in relation to a "no project" scenario, and thus reduction of air pollutants emission.

To reduce direct air pollution during construction phase in the vicinity of the road infrastructure planned within PO3 (ii) protective measures must be taken during the construction works to minimize dust emission and dispersion.

Surface waters and groundwaters

Harmonising regulations related to erosion and sediment control plan together with a handbook of best practices are recommended preventing runoffs at construction sites, thus decreasing risk of water pollution.

Large scale water management problems can be solved by involving agricultural fields in water retention. These matters are best solved by joint activities that develop harmonized cross-border water retention and storage strategies together with best practices for and provided by farmers with the support of nature conservation and flood prevention experts. In these issues education is vital where stakeholders should realise that regenerative, agroecological practices improve soil structure therefore making it able to limit surface runoff. Furthermore, reconstruction of natural ponds and small reservoirs, construction of weirs for storage in rivers canals and adequate irrigation-drainage systems also should be known to regulate outflow.

River management also calls for cross-border cooperation where reconstruction of deteriorated river sections and floodplains should be carried out with an ecosystem-based approach. In order to achieve expected outcomes in water management, both countries have to guarantee that no hydropower plant is planned nor will be granted to be constructed in the future on Mura and Drava rivers until further progress has been made to improve existing hydropower systems/technologies to be more environmentally friendly and to decrease the damage to aquatic ecosystems.

Harmonized regulations are expected to be made regarding wastewater discharge (supporting the development of physical and/or biological treatment of wastewater at touristic facilities across both countries.

While putting a greater emphasis on the development of infrastructure related to water tourism, elaboration of joint strategies and plans for environmentally conscious water-based touristic activities should not be forgotten, as well as raising visitors' awareness on local ecosystems before and during activities like trekking routes on water, observing aquatic birds, boat trips which besides can play a vital role in the preservation of natural sites.

To reduce water pollution resulting from the planned road constructions within PO3 (ii) protective measures must be taken to ensure proper drainage of surface waters and the prevention of fuel leakage

from construction equipment. To avoid accidental pollution, regular maintenance, washing, and refueling of construction machinery should be carried out at appropriately designated sites, preferably the nearest material sources or asphalt mixing plants.

To protect surface waters, it is recommended to establish assembly areas, temporary storage areas, and deposition sites on the protected side of the Mura, ensuring that potential pollutants do not enter the water bodies (Gyurgyánci Creek and Berek Creek). In the hydrogeological "B" protection zone of the Molnári-Mura waterbase, it is necessary to create a paved (waterproof) precipitation drainage ditch.

Biodiversity, flora, and fauna

Planned developments should only occur in accordance with relevant national environmental regulations and with special attention and care in regard to protected natural areas like UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve, Natura 2000 territories, national parks or forest reserves, nature parks, regional parks, special reserves, significant landscapes, park-forest, monuments of nature and monuments of park architecture.

For non-protected natural areas, it is essential to develop and harmonise biodiversity compensation plans for activities related to building infrastructure with involvement of conservations experts. One of the most significant wetland areas of Europe is the Mura-Drava-Danube Transboundary Biosphere Reserve. The cross-border area contains significant parts of this reserve at the border region of the two countries, however there was very little mentioned about this site in the planned projects and activities not acknowledging the substantial support behind the Transboundary Biosphere Reserve. It is strongly recommended to include specific actions dedicated solely to this Biosphere Reserve, not only because its unique biodiversity, but because it stretches along the border of both countries thus signifying the importance of cross border cooperation and relations which is the ultimate purpose of Hungary-Croatia Programme.

Education and information of agricultural stakeholders about the environmentally friendly, organic or agroecological practices is advised. Usage of shelter belts, preserving landscape features, agroforestry practices, avoidance of synthetic fertilizers, desiccants, chemical pesticides (especially neonicotinoids) are all crucial aspects in the protection of nature which are all closely linked to agriculture. In addition, pollinators should be monitored with a harmonised sampling cross-border network which is beneficial both environmentally and economically.

Evaluation of regional ecosystem services, and creation of data sharing services that realise intersectoral cooperation with all the relevant stakeholders (agriculture, wildlife management etc.) are also needed.

Tourism may result in overuse of natural sites. Thus, it is recommended to add joint actions to develop harmonized codes of practices or guides on how biodiversity can be preserved through touristic services. Environmental management practices (following circularity principles) to prevent waste generation, to treat, to select or dispose waste in touristic facilities is must in terms of nature protection, while not forgetting sustainable purchasing schemes that ensure the procurement of environmentally friendly products. The adoption of tour group or visitor control measures are also suggested to minimise disturbance and degradation. Furthermore, in case of greenfield and built area projects environmental impact assessments must be implemented by Beneficiaries of the relevant projects.

Regarding road infrastructure projects planned within PO3 (ii) which affect natural habitats, it is important to preserve these habitats as much as possible by avoiding or minimizing ancillary activities related to the planned constructions (such as material deposition and machinery parking). During the preparation and implementation of the road infrastructural projects, efforts should be made to keep construction activities close to the route, minimizing the area of disturbance.

Natura 2000 territories and other nature protected areas

The cross-border area is especially rich in Natura 2000 protected areas, not only the Mura-Drava-Danube TBR, but the Mecsek near Pécs, north and south Zselic, Forest of Szenta or Biogora Kilnicko gorje etc. are just as important and impacted by and exposed to the negative effects of climate change. Therefore, it is suggested that the joint conservation actions planned in the Hungary-Croatia Programme should integrate and mention the development of harmonized dedicated conservation plans with clear targets for Natura 2000 areas in both countries, otherwise the current state of grasslands and forests continues to be unsatisfactory. In addition, co-operatively established monitoring systems for regional pollinator mapping with cross-border sampling networks are highly needed.

Joint actions aiming at raising investments, harmonising funds cross-border (e.g. co-financing LIFE programme) or at making use of other EU funds (Horizon Europe projects, Biodiversa+ Partnership) to build capacity or conduct relevant research are always lacking behind.

Mapping and assessing the socio-economic benefits of Natura 2000 areas together with wide range of stakeholders could raise awareness and assign greater value to these territories such as carbon storage capacity, synergies of biodiversity with climate change mitigation and adaptation etc.

Cross-border programmes that support the education of local touristic companies, nature parks, public institutions responsible for the management of nature protected areas and natural values (on the national and regional level) as well as other stakeholders on the general content and implications of Natura 2000 directives, and national conservation plans are vital in the socio-economic judgement of these territories. Besides it is also recommended to have joint actions to educate and train visitors and local residents on the ideal desired state of Natura 2000 sites in order to ensure their protection.

The future calls of the Hungary-Croatia Programme must impose obligation on the implementation of necessary ecological surveys and Natura 2000 impact assessments by the Beneficiaries during the preparation and implementation of the planned projects within PO 3 (ii). The planning of the proposed road connections within PO 3 (ii) must be implemented in line with the countries' national environmental legislation and the Habitats Directive⁷ aimed at elimination of potential negative effects on environmental factors.

The planning of the Mura bridge included in current programme will have no negative effects on Natura 2000 areas. According to the Habitats Directive appropriate assessment must be carried out during project implementation to ascertain that the planned investment will not adversely affect the integrity of the site concerned and to obtain the opinion of the relevant authorities and the public.

During preparation of project documentation for Mura Bridge, a survey should be conducted in consultation with the National Park Directorate, Međimurje Nature - Public Institution for Nature

Protection and wildlife experts to assess whether there are any overwintering small mammals or nesting activities. In developing of project documentation for Mura Bridge, timing of the project and calculation of its duration should consider that planned construction activities affecting the riverbed should occur during the fish's resting period (between December 1 and May 1). Tree and shrub clearance should be carried out outside the nesting season (from late July to early March).

Climate

Sustainability and climate-positive expectations from SMEs in accordance with the targets of national climate change strategies are recommended to be included in the selection, therefore, contributing to local adaptations in agriculture, industry or service sector to climate change and the products are produced in ways that do not contribute to GHG emissions.

Since the energy efficiency of retrofitted buildings and the resilience of urban areas are essential to combating climate change (local microclimate, long-term well-being) actions ameliorating their current state is just as important as achieving net-zero buildings.

Besides number of trees, the application of biophilic design and many other solutions should be incorporated into the renovation of the building and in the establishment of sustainable mobility as they decrease energy consumption through vegetative climatic effects, they also have many beneficial effects on the natural and built environment. Preventive measures should take place to mitigate rebound effect in terms of living in sustainable buildings: residents might end up using more energy due to the false notion that they do not contribute to GHG emissions. Besides decreasing dependence on single energy sources, prioritisation of solar and geothermal energy solutions is of high importance. Cross-border actions are needed in order to monitor changes in emissions which aids in limiting the number of vehicles (esp. those running on fossil fuels) and visitors. This can be achieved by joint educational actions of visitors together with local residents, service providers and other stakeholders.

Regionally produced food waste also demands joint actions to develop common food waste standards and incentives to procure organic products while raising awareness amongst consumers (both visitors and locals) about local organic and sustainable farms.

In order to meet the principles of the selection criteria and to ensure the consistency of POs environmental education should be integrative in terms of marginalised groups.

During planning, preparation, construction and/or implementation of cross-border area cooperation and development projects appropriate measures from national strategies related to climate change should be considered. For development of the infrastructure projects, it is recommended to use technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01).

Built environment, settlement surroundings, cultural- and archaeological heritage

Scaling efficiency for SMEs by building infrastructure potentially could negatively alter the overall image of settlements and culturally traditional landscapes. During any kind of building or renovation, even repurposing of underutilised buildings for SMEs (as earlier suggested) regulations are recommended to be harmonised on a cross-border basis in order to protect cultural heritage settlements and archaeologically important sites.

Interventions for creating jobs elevate living standards which can increase demand for living space that is likely to quickly change the whole landscape. Local authorities together with locals have to establish a strong regulation-based morality for preserving heritage sites even by prohibiting further urbanisation. In addition, municipalities gaining a surplus income from economic improvement should allocate a sufficient amount of their budget for public spaces, heritage sites, and the surroundings of the settlement.

In less developed areas expenditure of households does not allow citizens to properly renovate their homes resulting in degraded homes and public institutions with no or sub-optimal insulation. Actions of the Hungary-Croatia Programme regarding energy efficiency should consider this as a first priority especially in case of remote and/or rural regions. Also, in order to avoid distortion of the landscape smaller, less visible off-grid solutions are suggested when shifting to renewable energy sources at cultural- and archaeological heritage sites.

Overuse caused by tourism not only degrades natural sites, but also burdens the surrounding infrastructure. By controlling the flow of visitors and awareness raising this negative effect must be mitigated (as earlier suggested). Traditions related to vernacular technologies may simply vanish if demand for modern buildings (being cheaper) is uncontrolled not speaking of illegal tourism related constructions. Therefore, authorities have to harmonise cross-border rules of construction in form of joint action.

In order to mitigate the negative effects of light pollution, unnatural excess of blue light should be evaded as it is harmful to both humans and insects by choosing the right colour temperature for the luminaries at tourist attractions, and for buildings that do not have any function at night. Care must be taken to position the luminaires correctly and to direct light. The usage of high luminous flux sources should be avoided in all cases, while also paying attention to timely lighting, e.g. the duration of illumination of the exterior shall be limited to avoid any unnecessary pollution throughout the night. Horizontally polar lights have a particularly significant effect on insects, since excessive appearance of insects in an area can upset the ecological balance. Thus, the placement of glass buildings near the waterfront should be avoided. The surface of car parks should not be paved with black asphalt, while tourist facilities should not be covered with light-reflecting materials (bright white, red, glass, etc.) – matte building materials are recommended to be used instead.

The long-term and dynamic development of the cross-border area is evident through its rich cultural and historical heritage. During planning, preparation, construction and/or implementation of cross-border area cooperation and development projects the protection and/or promotion of cultural heritage should be taken into consideration wherever necessary.

Human health and lifestyle

Urbanisation driven by economic upturn, tourism and infrastructure and mobility investments besides lifting living standards also cause pollution (soil, air, noise, water) which eventually can harm human health. Smart growth suggests that urbanisation has to be planned accordingly with international and national regulations and agreements in order to mitigate sudden shifts in everyday life without transition. Therefore, cross-border actions are needed with the scope of preserving recreational sites and the quality of environmental services that ensure the basis for human health even for coming generations.

Also, there is a greater risk of floods, bushfires, landslides etc. that directly threat human life and livelihood. Investments and regulations harmonized on international level must take action in building resilience as earlier suggested (esp. soil and water management).

Environmental consciousness

Research and innovation initiatives promoting sustainable joint production, technology and service development can enhance environmental consciousness in the Hungary-Croatia Programme area by targeted trainings and awareness-raising campaigns to promote the use of renewable energy sources. Soft actions focusing on SMEs to improve their knowledge green solutions could provide ideas for further development. Appling air quality control plan and waste disposal measures regarding inclusion of climate-positive and sustainability expectations is very well recommended in the selection criteria in terms of raising awareness of stakeholders. Any other regulation or provision compelling and/or driving SMEs to decrease GHG emissions have an overall local social effect if well communicated.

Environmental consciousness is suggested to be further raised by the joint education, awareness raising and knowledge sharing forming the attitude of the general public about climate change, the circular economy and environmentally conscious solutions.

Tourism besides having positive economic effects can serve as a gateway to having a great impact on the conscience of visitors by promoting green tourism, while having positive effect on service providers. In order to address younger generations cross-border actions are needed for providing first in hand experiences in education (transfer of good practices and the exchange of knowledge), which helps widening the horizon of pupils and members of the local community.

NOTE: In addition to protective measures, strategic environmental assessment provides in chapter 3.5. and 9. recommendations for the Hungary-Croatia Programme as well.