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The responsibility of the correctness of data in this document lies with the experts preparing the document.

## List of Abbreviations

<b>AWB</b>	<b>Artificial water body</b>
<b>CLLD</b>	Community led local development
<b>CNG</b>	Compressed natural gas
<b>ECTS</b>	European Trains Control System
<b>ERTM</b>	European Rail Traffic Management System
<b>EV</b>	Electric vehicles
<b>HE</b>	Hydroelectric power station
<b>HMWB</b>	Heavily modified water bodies
<b>ITI</b>	integrated territorial investments
<b>LNG</b>	Liquefied natural gas
<b>LPG</b>	Liquefied petroleum gas
<b>NECP</b>	National energy and climate plans
<b>NGO</b>	A non-governmental organization
<b>PE</b>	Population equivalent
<b>pp</b>	Percentage points
<b>P2P</b>	People to people
<b>RES</b>	Renewable energy sources
<b>SDG</b>	Sustainable Development Goals
<b>SECAP</b>	Sustainable energy and climate action plan
<b>TEN-T</b>	Trans-European Transport Network Mobility
<b>TSI</b>	Technical specifications interoperability
<b>CSO</b>	Civil society organisations
<b>CB</b>	Cross-border
<b>EU</b>	European Union
<b>CLLD</b>	Community led local development
<b>ESF</b>	European Social Fund
<b>MRS</b>	Macroregional strategies
<b>GDP</b>	Gross domestic product
<b>ICT</b>	Information and communication technology
<b>SI</b>	Slovenia
<b>HR</b>	Croatia
<b>NUTS</b>	Nomenclature of territorial units of statistic
<b>R&amp;D</b>	Research and innovation
<b>EUR</b>	Euro
<b>SME</b>	Small and medium sized enterprises
<b>SWOT</b>	Strengths, weaknesses, opportunities, threats
<b>TEN-T</b>	Trans-European transport network
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>PO</b>	Policy objective
<b>SO</b>	Specific objective
<b>ISO</b>	Interreg specific objective
<b>ITI</b>	Integrated territorial investments

## Overall conclusions and preliminary recommendations

The territorial and socio-economic analysis of the Slovenia – Croatia cross-border territory has been elaborated as a part of the input documents in the process of elaboration of the Interreg programme Slovenia – Croatia 2021 – 2027. It includes available secondary data and documents, guiding messages from relevant EU strategies and it is based on the online survey results (309 respondents) and 48 interviews performed with representative stakeholders active in or competent for the cross-border territory.

The aim of this document is to provide a sound basis of knowledge on the territory, to present the main territorial potentials and challenges that are affecting the programme area as a functional area, the needs of stakeholders and target groups, as well as the corresponding strategic relevant fields of actions for cross-border cooperation. Emphasis is put on the issues where cross-border cooperation has a high potential to promote better integration across the regions and which are of strategic relevance for regional development.

The first part (Chapter 2) is dedicated to the ***description of the territory*** and provides an overview of its main characteristics, potentials and restrictions.

The cross-border territory jointly comprises 17 NUTS III regions (statistical regions in Slovenia and counties in Croatia). The area covers **31.728 km<sup>2</sup> and is home to 3,8 million inhabitants**. The landscape is characterized by high geographical diversity, from coastal area, vast forests and hills, connected by several rivers (the main international rivers: Drava, Sava, Mura) and some cross-border rivers (Kolpa/Kupa, Sotla/Sutla, Dragonja, Bregana).

**Demography: population in the cross-border area is decreasing** due to natural decrease and emigration flows. Immediate border settlements are the most underdeveloped (Krapinsko-zagorska county) and depopulated (Primorsko-goranska and Karlovačka county in the Croatian part and Pomurska and Savinjska region in the Slovenian part of the programme area). The cross-border territory is quite **unified in median age of the population (44 years)** and **population ageing trend** (in 2019, 20,5 % of inhabitants were above 65 in Croatia, and 19,8 % in Slovenia). The ageing society calls for new locally accessible social and health services, promoting active and independent ageing. There is a worrying trend of **emigration of young people** with the highest number of emigrants between the ages 25-29. This will have a negative impact on the labour market, particularly in the health, digital, and tourist sectors.

The average **human development index** of the cross-border area is 0,862, and is defined as *very high*, except for Krapinsko-zagorska county where is defined as *high* with HDI below 8. **Disparities in the GDP are significant** in the cross-border territory, as they vary from 7.919 (Krapinsko-zagorska county), to 32.620 million EUR in Osrednjeslovenska region. Some **traditional industries** thrive (in wood industry, food processing), but **important industries** remain the automotive industry, transport, and pharmaceutical industry, along with a fast growth of energy, ICT, food and beverage, and tourism and hospitality industry. Within the territory, **SMEs are an important creator of added value**.

**Tourism** is traditionally an important sector of the regions, particularly coastal areas (Primorsko-notranjska, Istarska and Primorsko-goranska counties). In the **continental part of the area**, tourism has been taking off in recent years, and has furthermore, it has much to offer, and **is recovering** in inter-

Covid crisis periods. Tourist products based on thermal resources enable gastronomic and oenological tourism, heritage tourism and rural tourism. Business and city tourism is developing in urban areas, supported by cultural heritage sites and gastronomy. **Cycling tourism** has a big cross-border potential (Karlovačka and Varaždinska counties, and Pomurje, Podravje, Posavje; Istra with Primorsko-notranjska regions in particular). **Agrotourism** is becoming appreciated in the Covid crisis, by domestic visitors in particular. However, rural areas lack local cooperation and diversified tourist product development knowledge, sustainable destination management, networking and all-year-seasonality, research and development of tourism trends and needs, link to creative industries and exploitation of potential of social entrepreneurship. Despite the exceptional abundance of these natural, historical and cultural attractions, only a small number of them have been **valorised and included in the overall destination offer**.

**Natural and cultural resources and protected areas** are one of the key potentials for further development of the cross-border territory. **Natura 2000** is covering almost 40 % of the cross-border area, including several transboundary sites. In the whole programme area, there are 20 larger **protected areas of national importance** that offer significant ecosystem services, support joint cross-border identity (biosphere area Kozjansko) and economic development (sustainable tourism and **biobased products and services from circular economy**).

The **spatial structure of the territory** consists of small urban centres, transport corridors and green infrastructure. The concept of spatial development follows the principles of **polycentric development**. It provides an opportunity to **develop the remote areas** (not so far) away from centres, encourages local communities to cooperate and thrive. The cross-border area is a **part of the main road/rail connections, the Baltic and Mediterranean TEN-T corridors**. Zagreb, Ljubljana, Maribor and Rijeka are the main urban areas lying on the Mediterranean corridor. **Connectivity within the cross-border territory**, between urban and rural areas, however, remains significantly **underdeveloped**.

Most of the major **traditional energy production plants** are located in the territory, namely thermal power and hydropower plants, and a co-managed nuclear power plant in Krško, making the **energy sector** one of the most impactful ones. The structure of energy supply petroleum products prevailed with as much as 33 % / 32 % in Slovenia/Croatia. **Renewable energy sources** have significant potential for future energy production in the territory, particularly **solar, geothermal and wind energy**. The cross-border area has extraordinary potential and commitment towards the European renovation wave initiative<sup>1</sup>, to improve and accelerate deep energy renovation of buildings which is why **energy efficiency improvements** become unavoidable and the main tool in implementing overarching 'Energy Efficiency First' principle<sup>2</sup>.

***The main challenges and cooperation potentials*** in the cross-border area are elaborated in Chapter 3 - Analysis of regional development potentials of harmonious, green and inclusive regional development by thematic Policy Objectives and Interreg-Specific Objective 1 in line with the applicable EU Regulations.

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<sup>1</sup> [https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave\\_en](https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en)

<sup>2</sup> [https://ec.europa.eu/info/news/energy-efficiency-first-accelerating-towards-2030-objective-2019-sep-25\\_en](https://ec.europa.eu/info/news/energy-efficiency-first-accelerating-towards-2030-objective-2019-sep-25_en)

In **“A more competitive and smarter Europe” (PO 1)**, the following joint development opportunities should be tackled: **lack of skilled labour in the region which particularly affects SMEs** in the region. High youth unemployment and low number of businesses are to be tackled, together with poorer accessibility and lack of services. **Digital transformation** of the area could stimulate innovation and significantly facilitate internationalization. Capacity building measures for digital literacy and digital skills for the use of new technologies would foster new business models and opportunities.

- *As digitalisation is a priority of the national Recovery Plans and smart specialisation strategies, major investments and systemic activities are expected to be performed on the national level. Existing SMEs and innovative support organisations provide promotion and networking services for future partnering in cross-border industries. Future business opportunities can be supported through the specific topics, particularly in circular economy, sustainable energy, green tourism. Digital transition can be addressed as a part of ISO 1) or as a horizontal priority in terms of digital skills and solutions.*

**“A greener, low carbon Europe” (PO 2)** is dominated by **availability of renewable energy sources** and energy efficiency improvements. Scattered settlements offer development of strategies and business models for **energy sustainability**.

Emerging **climate change pressures** should foster the mobilisation of forces in local civil protection preparedness and response protocols.

**Circular economy** is in the early stage with some good practices and many pending opportunities. They can be advanced in holistic management of resources of the territory aiming at developing sustainable consumption and self-sufficiency and supporting local business models and skills.

The integrative component of the cross-border area is a **well-preserved natural environment** with **40 % of Natura 2000 and other protected areas**. Awareness-raising is required for increased habitat and species protection, but also for inhabitants’ perception of nature as an opportunity. **Green infrastructure** for climate resilience and nature habitat connectivity can be further agreed upon, planned and prepared.

- *PO 2 shows a big cross-border potential for supporting many important improvements that could be realized through joint and cross-border community-based initiatives. Survey and interview respondents placed energy transition, resource management, climate adaptation and joint risk management, environmental protection and awareness raising high on the agenda of the territory. For sustainability of services and solutions for the inhabitants in the cross-border territory, mobilisation of both private sector and public stakeholders must be supported.*

**“A more connected Europe” (PO 3)** further describes the **transport and mobility deficiencies** of the area, but also, its coming opportunities in the upgrading of **intermodality solutions**, mainly with train routes (planned to be developed by the states). The challenges remain with **low accessibility of public transport in the area, slow investment pace** in the non-road transport infrastructure, and **clogged border crossings** in the high tourist season. Six international airports in the region provide a solid international connectedness that needs to be adapted and developed to the needs of incoming (tourism, business) and outgoing (business) passengers.

- *PO 3 is equally to PO 1 linked to national investment strategies in the infrastructure to improve the identified needs of the territory. Improved accessibility of sustainable public mobility modes can be addressed through specific topics related to enhancing and concentrating everyday*

*services for inhabitants, especially in the rural areas in connection to urban areas, which was pointed out in the interviews. The needed harmonisation of existing mobility systems for better connectivity can be addressed in ISO 1.*

**“A more social and inclusive Europe” (PO 4)** elaborates on several problem points and solutions that would prove beneficial to the people in the cross-border area. The positive trend in increased **employment** figures was achieved, however, the **trend discontinued due to the Covid-19 pandemic**. Cross-border employment opportunities are still greater in Slovenia, where wages are higher. Covid-19 restrictions caused clogging of the border crossings that caused difficulties to commuting workers.

The **female employment rate** is increasing; however, it is still lower than the male employment rate. Another problem of the labour market is **long-term unemployment**, which is particularly high among the unemployed without secondary education, the elderly (up to age 65 and older) and the unemployed without previous work experience. **Young people are particularly disadvantaged** in the labour market with the unemployment rate of 31,5 % for the age group 15 - 34. The level of **lifelong learning** in the territory is below the EU average (9,2 % but remains 8,4 % in Slovenia and 3,2 % in Croatia). Cooperation of **higher education institutions** is very good, as well as higher education options for the students.

**The network of health centres is relatively well distributed** throughout the programme area, however, people living by the border cannot use emergency services of the nearest emergency centres across the border (the exception is Izola Hospital thanks to an Interreg project). In the cross-border area, some negative health trends occurred and were worsened by Covid (child obesity 10 % of children is obese in urban areas, negative consequences for people's psycho-physical health and increase in domestic violence).

**Ageing society** is becoming a reality and it will require more investments and skills to support an active and independent ageing. **Civil society organizations** play a key role in delivering social, sports and humanitarian activities in the local communities and could be exploited more in delivering **different social services**. **Social innovation** is not sufficiently recognized in policy-making and implementation.

➤ *PO 4 is highly relevant for developing important joint solutions and support to inhabitants in the cross-border region, including post Covid recovery needs. Social and health institutions, civil society organisations could deliver solutions for specific target groups like the elderly, the youth, minorities, etc. Digitalisation of services and knowledge/best practices sharing are required. Tourism as a relevant economic sector in the territory building on common natural values and cultural heritage could be further jointly developed towards providing green products, strengthening resilience against Covid and related threats, as well as promoting circular solutions.*

**“A Europe close to citizens” (PO 5)** tackles integrated territorial development needs. They are fostered by **local multi-sectoral strategies developed** jointly via CLLD and ITI mechanisms for specific cross-border functional areas. **Functional areas having such strategies on the Slovene-Croatian border do not exist yet**; however, there is an awareness of the potential of sustainable and inclusive development with territorial multisectoral strategies. The **identified potential is the finalisation of the establishment of an EGTC for the purpose of revitalisation of Dolenjska railway** connecting both capital cities via smaller towns of the region. It is perceived as a multisectoral development opportunity to provide benefits for several issues of abovementioned PO topics. **Other multisectoral strategies**

**could be territorially defined** (e.g. Istrian peninsula, closely connected areas, e.g. Posotelje-Zagorje), or following development opportunities (e.g. tourism) or management of a natural area. Such strategies in the cross-border area are needed, but should be carefully planned, potentially supported by ISO 1.

- *Jointly developed integrated territorial strategies in the cross-border territory do not exist yet, however, there are some indicators of this potential. Strategy development for some territories would be welcomed but can be elaborated through ISO 1.*

An additional topic of “**Better cooperation governance**” (ISO1) was explored. The area is governed at three levels: national, regional and local level. Besides 17 regions, inhabitants are further divided into 332 municipalities where there’s a lack of **intermunicipal cooperation**. The countries display various institutional capacities most of them **lacking the strategic and operational capacity to respond to new challenges**.

There are significant **dividing effects of the border** caused by administrative and legal obstacles, poor communication infrastructure (mobile connectedness and internet) in the narrow cross-border area, holiday traffic clogs at the border crossings, and unexplored possibilities of cross-border resource sharing. A barbed wire does not support unhindered border crossing for local inhabitants. **A lack of cross-border cooperation platforms for enterprises** prevents further cooperation.

**People-to-people projects could be carried out** in a wide range of fields such as culture (e.g. learning the neighbouring language), sport, tourism, education and vocational training, economy, science, environmental protection and ecology, healthcare, transport (cross-border gaps), administrative cooperation, promotional activities, etc.

- *There are significant dividing effects of the border caused by administrative and legal obstacles that could be addressed through ISO 1. Joint solutions could be sought in the area of digitalisation, connectivity, strategy and spatial development, labour market, as well as people-to-people cooperation fostering links among people and civil society organisations across the border.*

## 1. Introduction

### 1.1. Purpose and objectives of the analysis

The purpose of this territorial and socio-economic analysis of the Slovenia-Croatia area is to provide a sound basis of knowledge on the territory, presenting the main territorial potentials and challenges that are affecting the programme area as a functional area, the needs of stakeholders and target groups as well as the corresponding strategic relevant fields of actions for cross-border cooperation. The analysis aims to identify the main joint challenges, needs and potentials of the area as well as strategically relevant fields of actions for cooperation with the potential to overcome border obstacles and territorial disparities, taking into account economic, social, environmental and other relevant aspects.

The document will provide a foundation for further strategy and programme building process.

### 1.2. Methodology

The analysis was based on two methods: desk research (descriptive analysis, statistics, studies, findings of projects) and direct (primary) data collection (online questionnaire survey, interviews).

Descriptive analysis was elaborated through desk research. Data sources include European and national statistics and secondary data taken from various thematic research outputs and studies (European Commission, ESPON, national governments, etc.). All data and information sources used are equipped with proper references as a footnote or in an annex (with links to the documents used). The Border Orientation Paper (BOP) issued by European Commission is also treated as an important input to the analysis, including the source provided therein.

The descriptive analysis was meant to be done preferably on the NUTS level 3, being the level applied in the definition of the programme's target area. In cases where NUTS level 3 data was not available, information on the NUTS 2 or higher level has been taken into consideration.

During the elaboration phase, online questionnaire surveys and interviews were carried out with various stakeholders that also provided valuable input to the analysis, particularly in cases where statistics or studies were not available. Interviews enabled the provision of a territorial insight, provided by NUTS 3 stakeholders, for example, regional development agencies and county representatives.

The survey was completed by 309 respondents (HR-141, SI-168) from more than 14 different types of organizations located on the territory of 17 NUTS 3 regions along the Slovene - Croatian border, while 21 interviews in Croatia and 27 in Slovenia were performed, a total of 48 interviews.

The data gathered for the territorial and socio-economic analysis are formed in a way that correspond to the territorial objectives at the EU level and will show a clear link to the criteria for choosing the priority thematic directions/priority objectives and future steps in the programming process.

## 2. Regional background

In the following chapter, the main characteristics of the Interreg Programme Area between Slovenia and Croatia are outlined. The basic description is drawn from the characteristics relevant for describing the territorial, natural and economic background of the regional potential and its challenges.

### 2.1. Programme area

The programme area covers 31,728 km<sup>2</sup> of surface (2013). The area encompasses a significant share of Slovene territory (73%) and almost one third of the territory of Croatia (30%)<sup>3</sup>. It encompasses seventeen NUTS 3 regions, nine in Slovenia (Podravska, Pomurska, Savinjska, Zasavska, Posavska, Jugovzhodna Slovenija, Obalno-kraška, Osrednjeslovenska and Primorsko-notranjska region) and eight counties in Croatia (Primorsko-goranska, Istarska, Zagrebačka, Krapinsko-zagorska, Varaždinska, Međimurska and Karlovačka county and City of Zagreb). Not all regions are “border” regions<sup>4</sup>. The approximate length of the land border between Slovenia and Croatia is 657 km<sup>5</sup>.



Figure 1: Slovenia-Croatia cross-border programme area. Source: Own edition, based on open-source data.

3 Cooperation Programme INTERREG V-A Slovenia – Croatia, 2015

4 Border Orientation paper Slovenia Croatia

5 Situation Analysis and SWOT – Cooperation Programme INTERREG V-A Slovenia Croatia

## 2.2. General territorial characteristics

About 3,8 million inhabitants live in the programme area, with 1,7 million on the Slovene side and 2,1 million on the Croatian side. The land border between Slovenia and Croatia is characterized by mountains, hills and several rivers (the main international rivers: Drava, Sava, Mura). The border separating the two countries is currently still a Schengen border.

Due to its rich natural resources and heritage, the cross-border area reaches a high standard of living. The main economic impact and high attractiveness are undoubtedly linked to both capital cities (Zagreb and Ljubljana), where over a million inhabitants are concentrated.

Urbanization has a long history in the region, due to favourable transport routes since ancient times, but post 2<sup>nd</sup> World War development stimulated urbanisation further, by industrialization, and tourism development at the coast. Apart from bigger cities in the territory (21 over 10.000 inhabitants), there are several small towns that support its rural hinterland with health, social, education, cultural, infrastructure and other services. There is a network of additional 62 small towns in the area that pose further development potential of the cross-border region in the coming programming period, particularly in digitalisation (smart communities), energy efficiency and mobility.

### 2.2.1. Relief and physiographic regions

The relief structure of the Interreg Programme Slovenia - Croatia

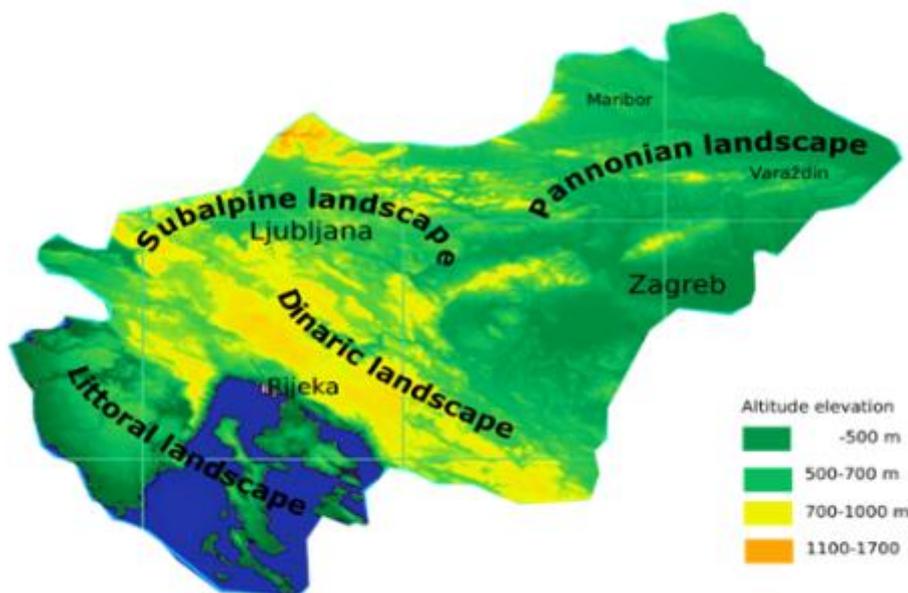


Figure 2: Altitude elevation of the Interreg programme area.<sup>6</sup>

**Four types of landscapes can be distinguished in the cross-border programme area: Subalpine landscape, Dinaric landscapes, Mediterranean landscape, and Pannonian landscape.**

**The territory is very varied which represents one of its main opportunities.** The following physiographic regions can be found in the territory: Subalpine range, Karst-Dinaric region, Sub-Pannonia and Littoral area of the Adriatic.

<sup>6</sup> Source: Generated with earth data. Nasa: [https://urs.earthdata.nasa.gov/users/uurska.o/accepted\\_eulas](https://urs.earthdata.nasa.gov/users/uurska.o/accepted_eulas).

### 2.2.2. Water

The Programme area is rich with transboundary river basins, which pass through the Danube River Basin District or the Adriatic Sea Basin. Water is, therefore, an important natural resource. Important transboundary river basins are Kolpa/Kupa, Sotla/Sutla, Drava, Sava, Mura, Dragonja, and Bregana (Table 1). The Kolpa/Kupa River is the largest tributary of the Sava River in Croatia. The Sotla/Sutla basin is characterised by large, vegetated meanders, which create important habitat for several species of fish and crustaceans. The Drava River connects the Alpine and Pannonian regions and has a fluvial-glacial water regime. It is one of the most energetically exploited rivers in the region. Mura River also flows along the Croatian-Hungarian border. Due to past regulation and hydropower plants in the upper stretches, flood oak-ash-elm forests are threatened by the reduction in the level of groundwater and shortened duration of floods. Dragonja River flows through the northern part of the Istrian peninsula and provides an important drinking water source. All mentioned river basins have problems with flood safety. In the previous programming period (2014-2020) important steps towards improving flood risk management have been carried out by strategic projects FRISCO.

Table 1: River basin surface and length of main transboundary rivers in the programme area

River	River basin surface (km <sup>2</sup> )		Length (km)		Border (km)
	Slovenia	Croatia	Slovenia	Croatia	
<b>Kolpa/Kupa</b>	1824	8412	113	177	117.4
<b>Sotla/Sutla</b>	451	149	86	89	86
<b>Sava</b>	11735	25374	221	446	4
<b>Drava</b>	145	7015	117	323	25
<b>Mura</b>	1375	473	28	79	67
<b>Dragonja</b>	40	55.6	18	12	-
<b>Bregana</b>		92	-	15,2	11
<b>Čabranka</b>					17,5

Rivers, lakes and other water bodies also require a wider approach to governance based on regional and international cooperation. In the programme area, there are 27 larger lakes or man-made reservoirs **Napaka! Vira sklicevanja ni bilo mogoče najti..**

Table 2: Main lakes in the programme area

(AWB: Artificial water body; HMWB: Heavily modified water bodies) Sources: SI: DRSV, HR: Hrvatske vode

SI programme area	HR programme area
Cerkniško lake	Proščansko lake
Ormoško lake (transboundary)	
AWB Velenjsko lake	Vransko lake (Cres)
HMWB reservoir Ptujsko lake	Crniševo lake
HMWB reservoir Šmartinsko lake	Reservoir Varaždin
HMWB reservoir Slivniško lake	Reservoir Čakovec
HMWB reservoir Perniško lake	Reservoir Donja Dubrava
HMWB reservoir Gajševsko lake	Butoniga lake
HMWB reservoir Ledavsko lake	AWB Lokvarsko lake
HMWB reservoir Klivnik	Ormoško lake (transboundary)
HMWB reservoir Mola	HE Lešće
	Lake Bajer
	HE Dubrava
	HE Gojak

HE Čakovec
HE Varaždin
Lepenica lake
Lake Sabljaci

Most of the programme area is characterized by karst phenomena, except from the north-eastern part. Karst is formed everywhere where carbonate rocks are present. Karst area covers 43% of the Slovene and around 52% of the Croatian land surface and offers beautiful sights for visitors but is also vulnerable to degradation and pollution. Furthermore, karst springs are being used for drinking water, thus a variety of human activities pose a risk to health.

### 2.2.3. Soil

The territory is diverse also in the soil types, of which some influence also the economic activities and development of the territory. Terra rossa is a popular soil type for wine and olive production.

In the Pannonian region, large flat areas are characterized by the deposit of sand, silt and mineral-rich loess. Its rich soil with humus (e.g. black soils) has been ideal for the development of agriculture. Thus, a significant proportion of the natural vegetation area has been converted to productive agricultural land in the past.

Preserving soils is high on the agricultural agenda. The programme area has limited areas of agricultural land for food production as most fertile soils are located in the areas of interest for urbanization, tourism, industrialization, flood-risk management, nature conservation and construction of infrastructure. Better institutional and cross-sectoral cooperation as part of the effective spatial instruments should prevent the loss of the most fertile land.

Other threats to soil are primarily related to anthropogenic pressures resulting in accelerated soil erosion, soil compaction, and soil contamination. Non-structural (e.g. buffer stripes and hedges, soil conservation practices) and structural (e.g. basin and ponds) natural water retention measures can mitigate all listed problems and help to preserve the soils. Such measures are greatly supported by the EU, but poorly implemented in the programme area.

### 2.2.4. Climate

The programme area belongs to the Alpine, Continental and Mediterranean Biogeographical region<sup>7</sup>.



Figure 3: Biogeographical region. Source: Own edition, based on open-source data.

Amongst and within all three biogeographical regions there are diversity patterns in climate, soil, vegetation, species, and habitats.

However, extreme events also constitute an integral part of the climate. Although the programme area is relatively small, the differences in the magnitude and frequency of extreme values of weather variables in respective parts of the programme area are noticeable and cause significant damage on land and property.

There is a Continental climate in the northeast, Alpine climate in the high mountain regions, and a sub-Mediterranean climate in the coastal region. Strong interaction between these three Biogeographical regions is reflected in high climatic variability. In the future, climate change will cause increased temperatures (heat waves) and altered rain distribution patterns in the programme area resulting in damages on crops and property.

### 2.2.5. Plant and animal life

The programme area is characterized by rich biodiversity, including many endemic species, and relatively large unspoiled ecosystems. In the whole programme area, there are 21 larger protected areas of national importance (Table 3) that prove the awareness of importance of safeguarding nature in the cross-border territory. Such positive approach towards nature conservation needs to be further

<sup>7</sup> [https://www.eea.europa.eu/publications/report\\_2002\\_0524\\_154909/biogeographical-regions-in-europe](https://www.eea.europa.eu/publications/report_2002_0524_154909/biogeographical-regions-in-europe)

developed in the effort to tackle the threats of biodiversity loss, which ultimately affects the societies and their economies.

Table 3: Protected areas of national and regional (local) importance in the programme area<sup>8,9</sup>.

SI programme area	HR programme area
Kozjanski regional park	National park Risnjak
Regional park Škocjan caves	National park Brijuni
Landscape park Goricko	National park Plitvice Lakes (partly in SI-HR programme area)
Landscape park Robanov kot	Regional park Mura - Drava
Landscape park Radensko polje	Nature park Učka
Landscape park Ljubljansko barje	Nature park Medvednica
Landscape park Kolpa	Nature park Žumberak – Samoborsko gorje
Landscape park Rakov Škocjan	Strict nature reserve Bijele i Samarske stijene
Landscape park Mašun	
Landscape park Secoveljske soline	
Landscape park Strunjan	
Nature reserve Notranjski Snežnik	
Nature reserve Škocjanski zatok	

All three biogeographical regions (Alpine, Continental, and Mediterranean) have distinctive characteristics. The territory is one of the richest regions in biodiversity that hosts large carnivores and birds<sup>10</sup>. The Drava-Mura-Danube biosphere reserve and Sečovelje Salina form an important migratory area and important habitats for birds<sup>11</sup>. Among the plant species, the diversity is also rich. Designated marine protected areas such as Akvatorij zapadne Istre and Cres – Lošinj are protecting the bottlenosed dolphin (*Tursiops truncatus*)<sup>12</sup>. In the northeast of the programme area, the presence of otter (*Lutra lutra*) indicates the good quality of water habitats of Drava, Kolpa/Kupa, and Mura<sup>13</sup>. Due to species' migrations, joint monitoring of species and joint management of protected areas offers an opportunity for habitat and species protection.

Natura 2000 sites are the corner stones of biodiversity protection. In 2019, the share of protected terrestrial areas in Slovenia (38%) and Croatia (37%) was the highest in Europe, much above the EU-27 average (18%)<sup>14</sup>. In fact, among 20 regions with the highest share of their area designated as Natura 2000, are Primorsko-goranska county (72%), Obalno-kraška (58%), Primorsko-notranjska (57%), and Jugovzhodna Slovenija (50%)<sup>15</sup>.

Table 4: Share of Natura 2000 area in NUTS 3 regions of the cross-border territory (Source: Eurostat 201616)

<sup>8</sup> [http://gis.arso.gov.si/atlasokolja/profile.aspx?id=Atlas\\_Okolja\\_AXL@Arso](http://gis.arso.gov.si/atlasokolja/profile.aspx?id=Atlas_Okolja_AXL@Arso)

<sup>9</sup> <http://www.bioportal.hr/gis/>

<sup>10</sup> <https://eunis.eea.europa.eu/species/1070#protected>

<sup>11</sup> <https://www.naravniparkislovenije.si/en/nature-parks/secovlje-salina-nature-park>

<sup>12</sup> <https://eunis.eea.europa.eu/species/1567#protected>

<sup>13</sup> <https://eunis.eea.europa.eu/species/1435>

<sup>14</sup> [https://ec.europa.eu/eurostat/databrowser/view/env\\_bio1/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/env_bio1/default/table?lang=en) and % <https://mingor.gov.hr/o-ministarstvu-1065/djelokrug/uprava-za-zastitu-prirode-1180/ekoloska-mreza-natura-2000/ekoloska-mreza-natura-2000-u-republici-hrvatskoj/1211>

<sup>15</sup> Eurostat regional yearbook 2021, p. 184

<sup>16</sup> [Statistics | Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat/eurostat), online data code: reg\_area3 and [https://ec.europa.eu/environment/nature/natura2000/data/index\\_en.htm](https://ec.europa.eu/environment/nature/natura2000/data/index_en.htm)

Source: Eurostat 2016	Total surface (km <sup>2</sup> )	Area of Natura 2000 (%)	Area of NATURA 2000 (km <sup>2</sup> )
<b>Croatia</b>	<b>56.594</b>	<b>37</b>	<b>20.716</b>
Primorsko-goranska county	3.588	75	2.696
Istarska county	2.813	19	531
City of Zagreb (NUTS 2016)	641	13	83
Zagrebacka county (NUTS 2016)	3.060	23	695
Krapinsko-zagorska county (NUTS 2016)	1.229	10	118
Varazdinska county (NUTS 2016)	1.262	17	215
Medimurska county (NUTS 2016)	729	18	135
Karlovacka county (NUTS 2016)	3.626	32	1.153
<b>Total cross-border area</b>	<b>16.948</b>	<b>33</b>	<b>5.625</b>
<b>Slovenia</b>	<b>20.273</b>	<b>38</b>	<b>7.672</b>
Pomurska	1.338	46	611
Podravska	2.170	28	597
Savinjska	2.301	17	382
Zasavska	485	13	65
Posavska	968	22	215
Jugovzhodna Slovenija	2.675	50	1.338
Primorsko-notranjska	1.456	58	843
Osrednjeslovenska	2.334	27	623
Obalno-kraska	1.044	59	618
<b>Total cross-border area</b>	<b>14.771</b>	<b>36</b>	<b>5.291</b>

The established framework of biodiversity protection in the territory contributes to regional development and could support the economic development of local communities. However, the general public still does not see protected areas as an opportunity for development, but rather as an obstacle. More emphasis is needed on involving local communities in the management planning process together with awareness-raising activities, regular communication, and provision of information.

Recent data from the EU reporting on the conservation status of species and habitat types (2013-2018) show that 20,8% of habitats and 22,01% of species in Croatia and 30,34% of habitats and 14,16% of species in Slovenia have poor conservation status<sup>17</sup>.

Pressures to habitats and species in the territory remain high and are expected to further impact habitat quality and ecosystem conditions, particularly by agriculture, urban sprawl/leisure activities, unsustainable forestry activities, or changes in water regimes.

Management approaches inspired by nature should contribute to restoring habitats/species and to improving their conservation status. The establishment of ecological (blue-green) corridors is

<sup>17</sup> [https://www.eea.europa.eu/data-and-maps/daviz/conservation-status-of-species-at-1#tab-chart\\_1](https://www.eea.europa.eu/data-and-maps/daviz/conservation-status-of-species-at-1#tab-chart_1)

recognized as a measure which could improve the connectivity of Natura 2000 and strengthen biodiversity conservation in fragmented or isolated areas.

### 2.2.6. Spatial and settlement structure

The spatial structure of the territory consists of small urban centres, transport corridors and green infrastructure. The concept of spatial development follows the principles of polycentric development and rational organisation of activities promoting a polycentric urban system. It provides an opportunity to develop the remote areas away from centres, encourages local communities to cooperate and thrive. The territory supports functionally connected areas, mainly formed by natural and historic preconditions. Transport corridors are connecting the territory with Austria, Hungary, Italy and Balkan countries through the main cities/centres, of which both capitals play an important role. Green infrastructure is based on the well-preserved natural features of the territory and offers not just high living quality, but also supports development in the services sectors. Green infrastructure plays a significant role in safeguarding the area with high biodiversity and -provides attractive place for living. However, the territory's rural area is characterised by population decline. To avert this trend, internal regional connections and connection with the capitals are being strengthened. In the future, the territory aims to strengthen connections of border towns and other urban settlements, creating wider urban areas, particularly Krško - Brežice - Samobor - Zagreb and Ilirska Bistrica - Rijeka.



Figure 4: Polycentric urban system, transport infrastructure and green infrastructure in the concept of spatial development in Slovenia (SPRS,2020).

The territory is characterised by distinctive regional differences, particularly coastal cities are urbanised above-average macro-regions, while rural areas, especially border areas, are lagging behind. From the interviews we recognised that generally regional disparities are significant particularly in areas along the border (Bela Krajina, Kostel, Osilnica, Haloze, Međimurje) against the attractive regional centres (Novo mesto, Kočevje, Maribor, Karlovac, Varaždin), not to mention the attractiveness of both capital cities. Immediate border settlements are most underdeveloped and depopulated. The Zagreb and Ljubljana macro-regions are the largest in the territory, their population size and position of the capital offer development opportunities to a wider part of the territory.

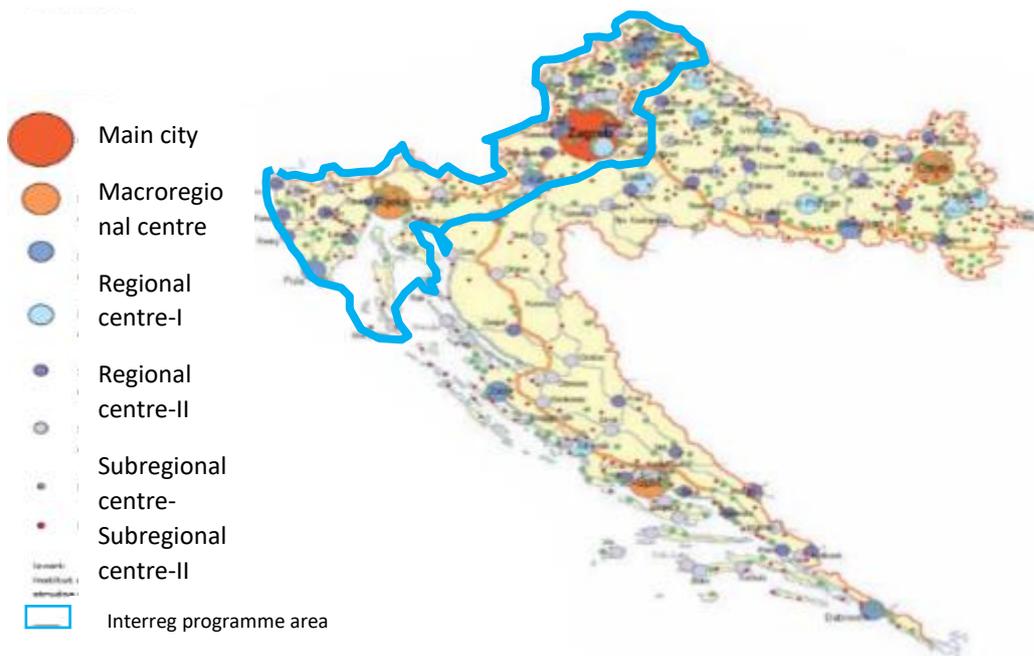


Figure 5: The settlement system in Croatia (SPRH, 2017).

## 2.3. Demography

### 2.3.1. Demographic structure and trends

Croatia's and Slovenia's population is declining due to natural decrease and emigration flows. In 2018, the population of Croatia was 4,1 million, projected to fall to 3,4 million by 2050<sup>18</sup>. The natural increase rate (25) has been negative since 2009, as the number of births fell by 17% in ten years.

In the 2013-2019 period, the population decreased by 12.049 inhabitants in the territory, mainly due to a significant decrease on the Croatian side of the border. Slovene regions registered a slight increase in population, by 15.299 inhabitants in 2019.

Both countries had the same median age of the population - 44 years, which is an increase of almost 2 years for both countries since 2011<sup>19</sup>. The share of people over the age of 65 continues to grow. In 2011, 18,7% of the population was over the age of 65 in Croatia and 16,5% in Slovenia and in 2019, this ratio increased to 20,5% in Croatia and 19,8% in Slovenia<sup>20</sup>.

In the last seven years there has been a noticeable trend of increased emigration from Croatia. There is an increased emigration of young people with the highest number of emigrants between the ages 25-29 (12,7%)<sup>21</sup>. On the other hand, 26.029 people, mostly from Bosnia and Herzegovina (7.932) were immigrants in Croatia in 2018<sup>22</sup>. City of Zagreb was the most popular destination among immigrants. The net migration of Croatia is increasingly negative. In Slovenia, Pomurska was the only region with negative net-migration (-0,3 per 1000 inhabitants)<sup>23</sup>. In total, in 2019 there were 15.106 Slovene citizens who emigrated from Slovenia and 31.319 immigrants from abroad living in Slovenia<sup>24</sup>.

Slovenia achieved a human development index of 0,902 in 2018 while Croatia was lagging with 0,838. The average HDI of the programme area is 0,862, thus, in accordance with UNDP it is defined as *very high human development area*, except Krapinsko-zagorska county where is defined as *high development area* with HDI below 8. The level of human development in the area can be compared to Slovakia and Portugal (0,860 and 0,864 respectively).

In Slovenia Italian and Hungarian national minorities are living in the PA. The Roma ethnic community is estimated to exceed the registered data. Constitution of Croatia protects 22 ethnic minorities, including the Slovenian. A well established Slovenian community lives in the Croatian section of the PA as well as a numerous Croatian community lives in Slovene section of the PA. CB programme represents an important opportunity for the cross-border cooperation (CBC) of the members of minorities/autochthonous communities in neighboring country.

<sup>18</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0510&from=EN>

<sup>19</sup> [https://ec.europa.eu/eurostat/databrowser/view/demo\\_pjanind/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/demo_pjanind/default/table?lang=en)

<sup>20</sup> [https://ec.europa.eu/eurostat/databrowser/view/DEMO\\_PJANBROAD\\_\\_custom\\_1066851/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/DEMO_PJANBROAD__custom_1066851/default/table?lang=en)

<sup>21</sup> DZS, priopćenje Migracija stanovništva RH u 2020.

<sup>22</sup> DZS, priopćenje Migracija stanovništva RH u 2018.

<sup>23</sup> <https://pxweb.stat.si/SiStatData/pxweb/en/Data/Data/2640005S.px/>

<sup>24</sup> <https://www.stat.si/StatWeb/Field/Index/17/98>

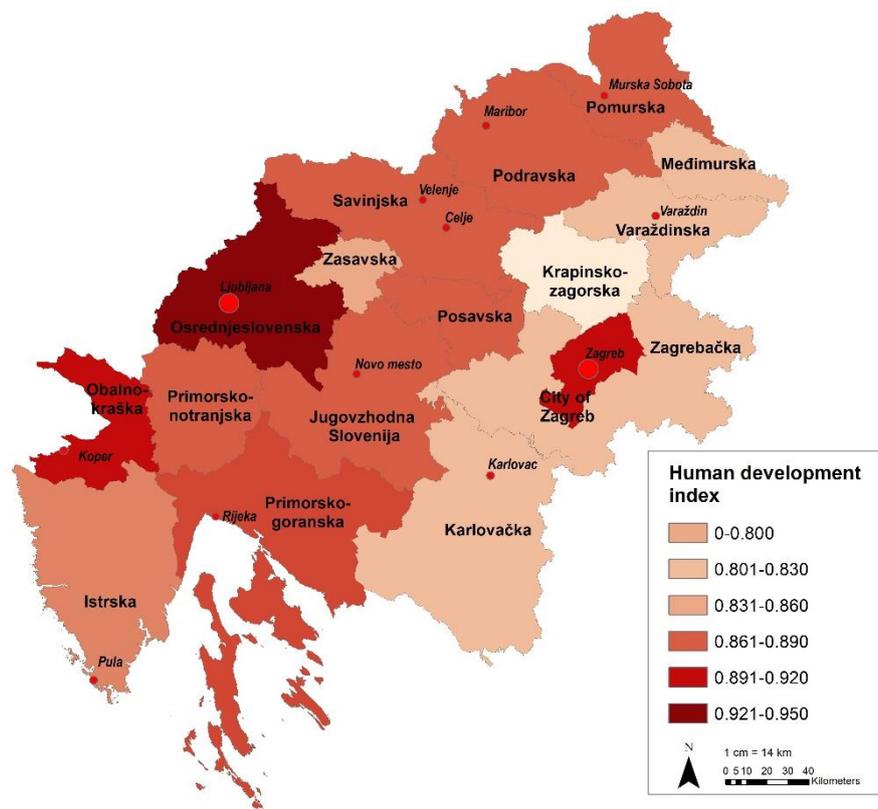


Figure 6: Human development index of the area. Source: Own edition, based on United Nations dat.

Table 4: Croatian and Slovene population by region<sup>25</sup>

	Population, 2019	Men,2019	Women,2019	Population change since 2013	Population density,2019
Pomurska	114.287	56.413	57.874	-3.735	86,1
Podravska	324.104	162.310	161.794	866	151,6
Savinjska	256.359	129.378	126.981	-1.942	112,3
Zasavska	56.962	28.220	28.742	-1.557	118,4
Posavska	75.559	38.232	37.237	-452	78,8
Jugovzhodna Slovenija	144.032	73.148	70.884	1.523	54,3
Osrednjeslovenska	549.171	270.293	278.878	22.470	237,2
Primorsko-notranjska	52.544	26.666	25.878	162	36,8
Obalno-kraška	115.016	57.181	57.835	3.080	110,7
SI programme area	1.688.034	841.841	846.103	24.299	109,6
Primorsko-goranska	283.406	137.051	146.354	-11.661	79,3
Istarska	209.020	102.709	106.311	1.412	74,8
City of Zagreb	806.341	379.194	427.147	12.240	1 274,1
Zagrebačka	309.306	150.458	158.848	-9.396	102,0
Krapinsko-zagorska	124.786	60.758	64.028	-6.606	101,4
Varaždinska	166.658	81.134	85.524	-8.196	134,6
Međimurska	109.537	53.582	55.955	4.008	156,4
Karlovačka	116.166	56.687	59.479	-10.133	32,2
HR programme area	2.125.220	1.021.573	1.103.646	-36.348	244,35
<b>Total, SI-HR area</b>	<b>3.313.254</b>				

<sup>25</sup> [https://ec.europa.eu/eurostat/databrowser/view/demo\\_r\\_pjanaggr3/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/demo_r_pjanaggr3/default/table?lang=en)

### 2.3.2. Labour market

Following tables show unemployment rate related data for Slovenia and Croatia.

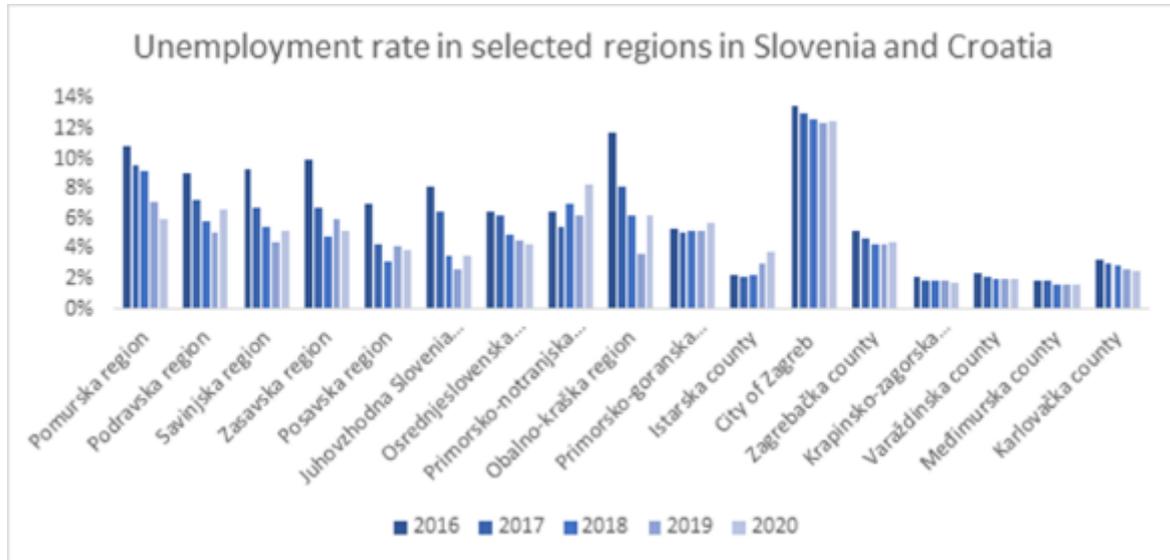


Figure 7: Unemployment rate in selected regions in Slovenia and Croatia. Source: Eurostat.

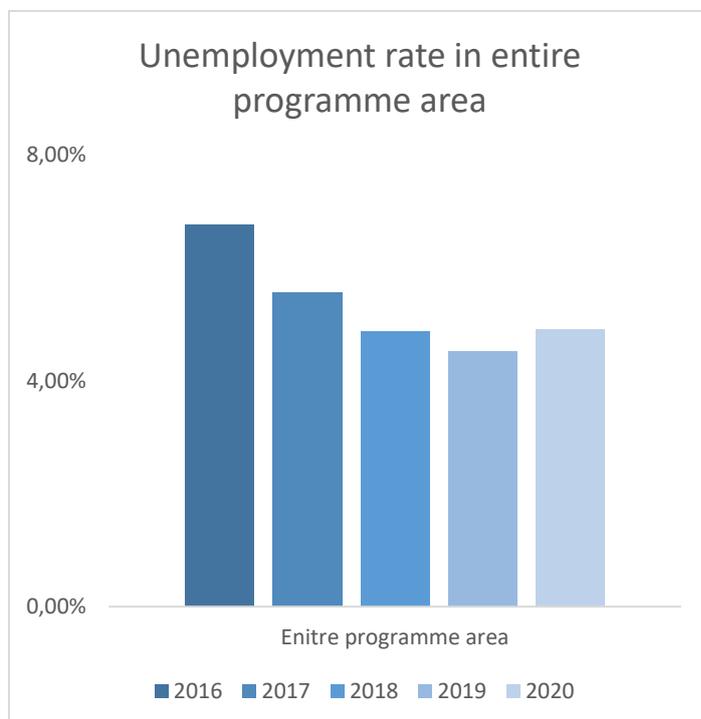


Figure 8: Unemployment rate in entire programme area. Source: Eurostat.

Following deterioration of 2020, labour market conditions in the territory are expected to improve gradually, but in the next years the average number of unemployed will remain higher than in 2019. Based on the forecasts made, programme area could face a serious problem of labour shortage in the

short term, derived from the negative birth rate trend and mobility (emigration) of population. Reforming policies to turn this trend should be carefully designed: demographic, migration, labour, employment, pension and education policy.

#### 2.4. Economy, competitiveness, entrepreneurship

In the last five years, the income of the population in Slovenia has been increasing in average by 16,8% annually in nominal terms and 13,8% in real terms. Average gross and net income per capita were (2014-2018) the lowest in the Pomurska statistical region<sup>26</sup>. Based on the first annual data sources, gross domestic product in Slovenia for 2019 was estimated at EUR 48,393 million. This was a 5,5% nominal increase over 2018.

In 2018, GDP per capita in Croatia, compared to the EU average was at the same level as ten years ago. After five years of recovery, Croatia had finally achieved a higher real economic output than before the crisis in 2008. It is estimated that real GDP in 2019 grew by 2,9%, decreased by 8,0% in 2020 as a result of the Covid-19 situation and grew again in 2021 by 5,4%<sup>27</sup>. The real GDP is expected to grow by 6,6% in 2022, and in 2023 by 4,14%<sup>28</sup>. Despite the increase recorded in previous years, potential growth remained relatively weak and slowed down real dynamics convergence with the EU.

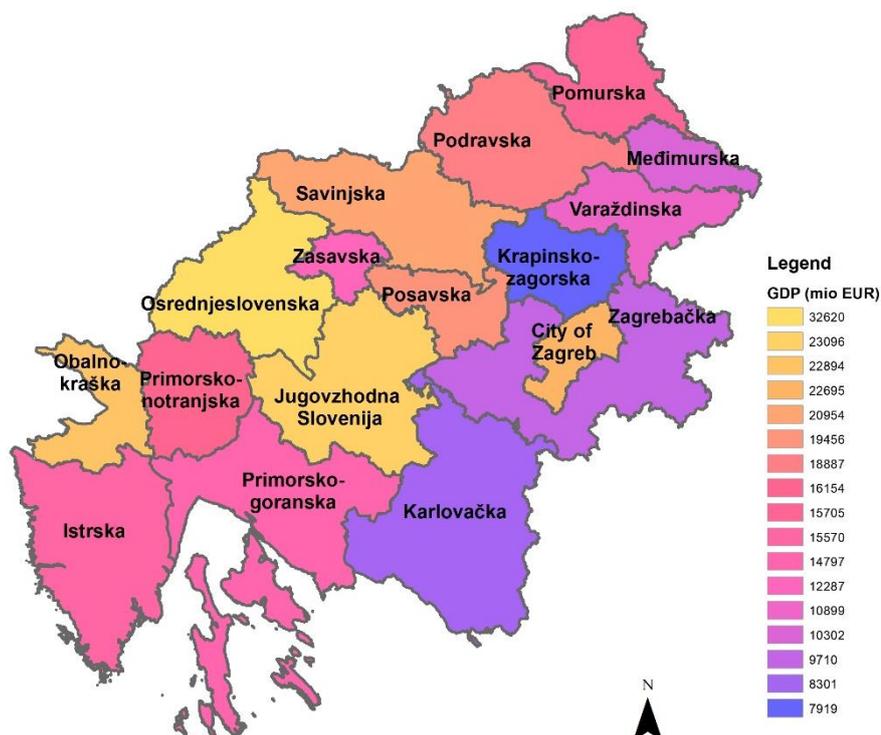


Figure 9: GDP per region in the programme area. Source: Own edition, based on open source data.

<sup>26</sup> Gross and net income of the population the highest in Osrednjeslovenska and the lowest in Pomurska: <https://www.stat.si/StatWeb/en/News/Index/9178>

<sup>27</sup> [https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-performance-country/croatia/economic-forecast-croatia\\_en](https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-performance-country/croatia/economic-forecast-croatia_en)

<sup>28</sup> [https://ec.europa.eu/info/sites/default/files/2021-croatia-convergence-programme\\_hr.pdf](https://ec.europa.eu/info/sites/default/files/2021-croatia-convergence-programme_hr.pdf)

### 2.4.1. Manufacturing and SMEs

In the period of recovery after the 2008/9 financial crisis, Slovene economy underwent many structural changes. The important industries currently are still the automotive industry, transport, and pharmaceutical industry, along with a fast growth of energy, ICT, tourism and hospitality industry.

The main factor in this industry is the Port of Koper (Luka Koper), a growing cargo and passenger port. The wood industry is one of the oldest and traditionally among the most important industries in Slovenia. For almost twenty years, the industry has been in stagnation, but the government lately started to support the build-up of a complete wood chain, which will also impact the territory in question. The manufacturing industry in Croatia has a tradition in wood industry, food processing, shipbuilding, footwear and leather processing, and textile production among others. Presently, manufacturing in Croatia is largely based on food and beverage, which account for 24% of the total manufacturing revenue in the country. Agriculture in Croatia is carried out in less than 25% of the country's land area, and it accounts for less than 10% of the country's GDP.<sup>29</sup>

Within the territory, SMEs are an important creator of added value. In 2020, Slovene SMEs employed 72% of the workforce in the business economy and produced 64% of the value added (around 13 billion EUR). Micro firms accounted for more than one third of all employment in the business economy. SMEs dominated mostly the service sector in terms of employment, particularly in the ICT sector and in machinery manufacturing.<sup>30</sup> In Croatia, SMEs account for 59,4% of value added and 68,9% of employment. In 2018, Croatian SMEs remained the largest employer (72,2%), had the largest share in the total number of enterprises (99,7%), significantly contributed to the total income (58%) and export activities of the country (53%).<sup>31</sup>

The lack of a qualified workforce continues to be a dominant theme requiring priority attention in the entire territory. One factor is a mismatch between the skills young people acquire from their education and those sought by employers. There is a need for a more strategic approach and cooperation between business, academia, research, development & innovation (RD&I) institutions and the government. SMEs in Croatia are moderate innovators, with the main challenges identified including the tax regime, the lack of early-stage financing, and the business environment.

In its SME policy, the tackled territory should prioritise cutting administrative burden and regulatory restrictions more quickly aiming to create a more stable and predictable business environment. Further development of equity markets should be supported.

Digitalisation in SMEs should also be a key focus, as slow digital transformation is limiting productivity growth.<sup>32</sup> Moreover, more needs to be done to become an SME friendly business environment.

Supporting services for start-ups, public research organisations, transfer knowledge offices and various clusters support networking among businesses and other organizations in the territory.<sup>33</sup>

<sup>29</sup> World Atlas, The Biggest Industries In Croatia: <https://www.worldatlas.com/articles/what-are-the-biggest-industries-in-croatia.html>

<sup>30</sup> <https://www.oecd-ilibrary.org/sites/986e4c82-en/index.html?itemId=/content/component/986e4c82-en#section-d1e174170>

<sup>31</sup> <http://www.cepor.hr/wp-content/uploads/2015/03/SME-REPORT-2019-EN-WEB.pdf>

<sup>32</sup> European Commission, 2019 SBA Fact Sheet Slovenia:

<https://ec.europa.eu/docsroom/documents/38662/attachments/26/translations/en/renditions/native>

<sup>33</sup> Regional mapping report – Slovenia: <http://www.interreg-danube.eu/Smart-Factory-Hub>

### 2.4.2. Agriculture

The territory is not self-sufficient in food production due to several reasons, namely the terrain, land availability, poor soil etc. The self-sufficiency of agricultural products of the countries was the main topic during the Covid-19 pandemic. In the future regional development, the self-sufficiency with food and nutritionally rich food should be included in the climate adaptation and mitigation projects and projects dealing with health issues. Agrotourism has developed as an additional tourist offer in the programme area. Also, some examples of researches on the development of new sea food and other innovative food products are known and planned to be researched more.

In the national climate and energy comprehensive plans concerning the agriculture, a 1% reduction of GHG emissions till 2030 is projected in Slovenia, while in Croatia and around 7% reduction till 2030 in Croatia, comparing to the year 2005. Both countries also have problems with nitrate pollution, especially in the aquifers (CNEPNS, 2020<sup>34</sup>, INEKH, 2019<sup>35</sup>).

Agriculture and forestry in Croatia consume account for 2% (together with households 30%) of the whole energy consumption, comparing to Slovenia, where 34% of energy was used for households, agriculture, and forestry in 2017. The reduction of energy till 2030 is planned for both countries in this sector and aims to become one of the pillars of local self-sustainability (along the connectivity issues).

### 2.5. Resources and energy

Most of the major traditional energy production plants of both countries are located in the territory, namely hydropower plants, a nuclear power plant in Krško, co-owned and co-managed by both countries and thermal power plants.

Energy dependency increased by 2% in the EU-28, by almost 9% in Croatia and by almost 3% in Slovenia over the period 2011-2019<sup>36</sup>.

In 2019, considering energy import and export, 283,0 PJ were available for energy supply in Slovenia. In the structure of energy supply, petroleum products prevailed with 33%; the share of nuclear energy was 22%, the share of energy from renewable sources (including hydro energy) was 18%, the share of coal was 16% and the share of natural gas was 11%<sup>37</sup>. In Croatia, the total primary energy supply was 405,72 PJ. In the structure of energy supply, liquid fuels prevailed with 32,8%; the share of natural gas was 24,9%, the share of biomass 13,4%, the share of hydro power 12,7%, the share of renewables 5,5%, the share of electricity 5,4%, the share of coal and coke 5,1% and the share of heat 0,1%<sup>38</sup>.

<sup>34</sup> [http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/nepn/dokumenti/nepn\\_5.0\\_final\\_feb-2020.pdf](http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/nepn/dokumenti/nepn_5.0_final_feb-2020.pdf)

<sup>35</sup> [https://mingor.gov.hr/UserDocImages/UPRAVA%20ZA%20ENERGETIKU/Strategije,%20planovi%20i%20programi/hr%20necp/Integrirani%20nacionalni%20energetski%20i%20klimatski%20plan%20Republike%20Hrvatske%20%20\\_final.pdf](https://mingor.gov.hr/UserDocImages/UPRAVA%20ZA%20ENERGETIKU/Strategije,%20planovi%20i%20programi/hr%20necp/Integrirani%20nacionalni%20energetski%20i%20klimatski%20plan%20Republike%20Hrvatske%20%20_final.pdf)

<sup>36</sup> [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=t2020\\_rd320&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=t2020_rd320&lang=en)

<sup>37</sup> <https://www.stat.si/StatWeb/en/News/Index/9109>

<sup>38</sup> [https://mingor.gov.hr/UserDocImages/UPRAVA%20ZA%20ENERGETIKU/Energija\\_u\\_Hrvatskoj/Energija\\_u\\_Hrvatskoj\\_2019-2.pdf](https://mingor.gov.hr/UserDocImages/UPRAVA%20ZA%20ENERGETIKU/Energija_u_Hrvatskoj/Energija_u_Hrvatskoj_2019-2.pdf)

Solar and wind farms have the most potential for future energy production in the territory. In Slovenia, 5% of the total electricity produced derives from solar source, while in Croatia this share is only 0,4%. The installed capacity of solar power plants is 100 MW, and the plan is to increase it to 1 GW<sup>39</sup>. The share of wind farms in production was 10% at the end of 2019<sup>40</sup>.

Micro-supply networks are important (for smaller settlements or individual farms), creating local energy storage facilities and contributing to climate resilience, rural development, and attractiveness of local communities for new settlers, particularly young people. Meaningful use of renewable energy sources, especially wind, solar, marine or geothermal energy (small scale pilot investments) can support self-sustainability. The use of by-products for electricity or heating (methane, fermentation, e.g. for greenhouse heating) can be explored on the farms.

In 2019, the total primary energy supply intensity, showing total primary energy supply per unit of gross domestic product, of both Slovenia and Croatia was more than 15% higher than the EU28 average<sup>41</sup>. Since the energy intensity is the highest in the energy inefficient building sector<sup>42</sup>, promoting **energy efficiency measures** in urban areas of the cross-border territory is therefore crucial and can deliver clear economic benefits.

The cross-border area has significant potential to improve and accelerate the deep energy renovation of existing inefficient buildings which in addition to application of standard energy efficiency measures implies the integration of renewable energy sources, energy storage facilities, charging stations for electric vehicles as well as comprehensive digitalization and automatization of buildings technical systems. This way the potential of smart technologies in the building sector will be utilised and smart readiness concept and indicator (SRI)<sup>43</sup>, introduced in the 2018 revision of the European Energy Performance of Buildings Directive (EPBD), will be demonstrated.

Within the programme area, buildings are responsible for about 40% of the total energy consumption and for 36% of its greenhouse gas emissions from energy. Currently, the weighted annual energy renovation rate is lower than 1% and only 0.2% of the building stock are deeply retrofitted annually. Cutting carbon emissions from the building sector to net-zero would require centuries at such pace, therefore, it is crucial to boost the promotion of energy efficiency measures by implementing pilot actions in various parts of the programme area (e.g., sea energy in the coastal area and shallow geothermal in continental parts). Public investments, supported by this CBC programme, in deep renovation and digital transformation of buildings, neighbourhoods and cities could trigger the future green energy investments of the private sector, directly improving our quality of life.

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<sup>39</sup> <https://balkangreenenergynews.com/croatias-solar-energy-potential-estimated-at-6-8-gw/>

<sup>40</sup> <https://balkangreenenergynews.com/croatia-sets-new-record-in-renewable-energy-production/>

<sup>41</sup> Energy in Croatia 2019 (page 46, Figure 2.1.5 Total primary energy supply Intensity - PPP) [http://www.eihp.hr/wp-content/uploads/2021/01/1\\_Energija\\_u\\_Hrvatskoj\\_2019-2\\_compressed-1.pdf](http://www.eihp.hr/wp-content/uploads/2021/01/1_Energija_u_Hrvatskoj_2019-2_compressed-1.pdf)

<sup>42</sup> Large share of today's EU building stock was built without any energy performance requirement: one third (35%) of the EU building stock is over 50 years old, more than 40% of the building stock was built before 1960. Almost 75% of it is energy inefficient according to current building standards. Source: JRC report "Achieving the cost-effective energy transformation of Europe's buildings"

<sup>43</sup> [https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/smart-readiness-indicator/smart-technologies-buildings\\_en](https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/smart-readiness-indicator/smart-technologies-buildings_en)

### 3. Analysis of regional development potentials of harmonious, green and inclusive regional development by thematic POs and ISO 1

#### 3.1. Policy Objective 1 – A more competitive and smarter Europe

Croatia's accession to the EU in 2013 has opened new funding options to facilitate cooperation between the countries. Increased cooperation is especially evident in the field of commerce and business. In the domain of traded goods, both exports and imports, Croatia is Slovenia's fourth largest trading partner. At the same time, Slovenia is Croatia's third largest trading partner. Italy and Germany are the largest trading partners of both countries and where Austria is Slovenia's third largest trading partner, it is Croatia's fourth largest trading partner.

Tourism, evidently, is a major factor in the story of services traded. Between 2011 and the September quarter of 2018 travel (this includes business travel, but essentially comes down to holiday tourism) earnings, Croatia earned EUR 4.8 bn from Slovene tourists. Over this same period, Slovenia was the fourth most popular destination for Croats. Almost EUR 720 mn in revenue was generated in Slovenia from Croats.<sup>44</sup>

Yet, the most interesting services' data (2011- 2018) is in other economic activities, which underline the importance familiarity with culture, language and shared experiences can have in fostering cooperation. Almost EUR 100 million in construction services' trade between the two countries places Slovenia as Croatia's fifth largest export market and third largest source of imports. There is almost EUR 60 million in trade in insurance, where one third is exported by Croatia to Slovenia making Slovenia Croatia's number two export market, while Slovenia exports twice as many insurance services the other way. In the telecommunications, computers and information services sub-category, trade between the two countries amounted to EUR 550 million. In this field, Slovenia is Croatia's number one export destination and third largest source of imports. The degree of trade between the two countries in IT services and consulting services speaks to a good neighbourly understanding and ease of communication<sup>45</sup>.

##### 3.1.1. R&D and innovation

Regarding R&D and innovation, one of the important territorial aims is to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. With this respect, one of the indicators is the number of patents application.

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<sup>44</sup> Šaravanja, G. (2020), Croatia and Slovenia: Two natural allies, Imelum

<sup>45</sup> Šaravanja, G. (2020), Croatia and Slovenia: Two natural allies, Imelum

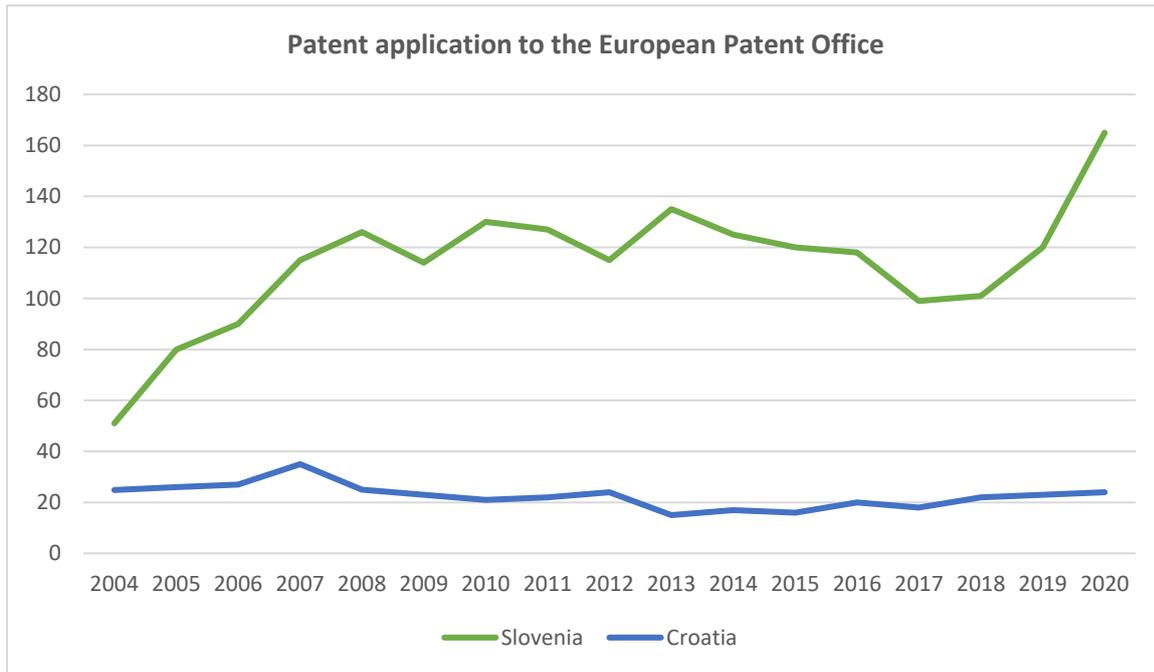


Figure 6: Patent applications to the European Patent Office through time for Slovenia and Croatia.<sup>46</sup>

In Slovenia, the procedures for national patent applications and supplementary protection certificates (SPC) applications are transparent, relatively simple and carried out within reasonable deadlines. The major deficiency of the national patent application procedure is that SIPO does not perform substantive examinations, which is due to insufficient personnel and inadequate organizational conditions. The average procedure starting from the patent application date to the date of the application publication decision takes 175 days.

In Croatia, the protection procedure begins with the filing of a patent application with the State Intellectual Property Office and is carried out in accordance with the Patent Act and the Patent Ordinance. The protection of inventions by patents in the Republic of Croatia can be achieved nationally, in which case the decision on recognition is made by the Office, or regionally, when the decision on recognition is made by the European Patent Office, which is equal to a patent obtained by national means.

The Court of Audit's recommendations to SIPO and the Ministry of Economic Development and Technology include systematic collection of patent-related data, preparation of a national IP strategy, and organization and promotion of educational events concerning IP protection<sup>47</sup>.

Implemented interviews and survey with relevant stakeholders revealed some positive elements regarding R&D. In the programme area there is an increased efficiency with innovative and intensive use of ICT and the Internet as a horizontal strategic orientation in all development activities as well as there are some new business models emerging that are based on innovative ICT and Internet development opportunities (i.e. sharing economy). There is also a lot of potential that could be exploited, e.g. the use of cloud computing solutions, IoT platforms, mobile technologies, data analytics

<sup>46</sup> [https://ec.europa.eu/eurostat/databrowser/view/sdg\\_09\\_40/default/line?lang=en](https://ec.europa.eu/eurostat/databrowser/view/sdg_09_40/default/line?lang=en).

<sup>47</sup> Petošević (2019): Slovene court of audit reports on patent protection in Slovenia, <https://www.petošević.com/resources/news/2019/12/4213>

etc., especially to boost local resource management. On the other hand, there is insufficient political support to provide resources to implement the innovative concepts and approaches, stagnation and/or decrease in R&D capacities due to global competitors and poor collaboration among educational, private and public institutions in programme area. Thus, the potential of digitalization in terms of R&D should be given more attention.

### 3.1.2. SMEs and smart specialization

The share of persons employed was the largest in manufacturing (23,4%), followed by enterprises in trade, maintenance, and repair of motor vehicles (13,0%) and enterprises in education (8,1%). In 2019, 56,5% of enterprises in Slovenia were natural persons and 43,5% were legal persons. Companies generated the most turnover (85,9%), followed by other legal persons (8,2%) and natural persons (5,9%). Most enterprises were registered in the Osrednjeslovenska region (34%), which also had the most persons employed (39,1%) and recorded the highest turnover (45,8%). Next, in the Podravska region 13,2% enterprises were registered with 13,7% persons employed and 10,4% turnover. Savinjska region followed by 10,9% registered enterprises, 11,2% persons employed and 9,4% turnover. All three shares were the lowest in the Zasavska region (1,9% of registered enterprises, 1,5% of employed persons and 1% turnover)<sup>48</sup>.

In 2019, 1.179 high-growth enterprises measured in employment were recorded in industry, construction and business services in Slovenia, which is 2,8% more than in the previous year. These enterprises employed 78.046 persons, 0,1% fewer than in 2018. In 2019 – 1.179 high-growth enterprises measured in employment were recorded among enterprises with at least 10 employees in industry, construction and business services. Compared to 2018, the number of high-growth enterprises went up by 2,8%. Enterprises engaged in construction and wholesale and retail trade, repair of motor vehicles and motorcycles contributed the most to the higher number of high-growth enterprises.

The structure of the Croatian economy is extremely stable. As in most countries, the SME sector has by far the largest share in the number of enterprises (99,7%). In the period from 2014 to 2018, growth in the total number of enterprises was recorded (9,2% in 2018 compared to the previous year). Micro, small and medium enterprises employ almost three quarters (72,2%) of all employees in business entities in Croatia in 2018, and this share is unchanged compared to 2017. The number of employees in micro enterprises in 2018 increased by 5,3% compared to 2017, by 3,8% in small enterprises, by 6,1% in medium enterprises, and by 10,5% in large enterprises. In 2018, the SME sector accounted for 58% of total income generated at the level of Croatia. Compared to 2017, the total income of micro enterprises in 2018 increased by 8,2%, of small enterprises by 7,1%, of medium enterprises by 8,7%, and of large enterprises by 14,8%. The average number of employees in SME records a continuous slight decrease trend in the period from 2014, when it averaged 4,1 employees to an average of 3,8

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48 <https://www.stat.si/StatWeb/en/News/Index/9042>;  
<https://pxweb.stat.si/SiStatData/pxweb/en/Data/Data/1418806S.px/>

employees in 2018. At the same time, total income per employee in SME is continuously increasing, with a total increase of 2,8% in 2018, compared to 2017, and 8,8% compared to 2014<sup>49</sup>.

Table 5: High growth enterprises in selected regions in Slovenia and Croatia<sup>50</sup>

	2015	2016	2017	2018	2019
<b>SLOVENIA</b>					
Pomurska	19	28	34	35	28
Podravska	109	131	144	171	167
Savinjska	68	95	131	134	154
Zasavska	13	11	17	20	21
Posavska	15	22	20	35	32
Jugovzhodna Slovenija	46	55	68	85	80
Primorsko-notranjska	10	22	24	26	20
Osrednjeslovenska	204	259	315	391	423
Obalno-kraška	42	47	57	68	65
<b>CROATIA</b>					
Primorsko-goranska county	123	114	129	102	/
Istarska county	69	79	93	102	/
City of Zagreb	500	536	549	565	/
Zagrebačka county	105	123	130	137	/
Krapinsko-zagorska county	51	52	47	42	/
Varaždinska county	80	83	76	87	/
Međimurska county	49	57	59	60	/
Karlovačka county	31	37	42	43	/

One of the key goals of the European Commission in the next period is Smart Europe. Smart Europe aims for innovative and smart economic transformation focused on innovation, digitalisation, economic transformation and support for small and medium-sized enterprises.

With respect to smart specialization Slovenia has implemented a smart specialization strategy (S4), which is an operational plan facilitating the shift to a high-productivity economy through boosting innovation potential, by fostering structural transformation and industrial diversification, and by supporting growth of new and fast-growing companies. The S4 key contribution was in setting three priority pillars (Industry 4.0, Circular and Digital) with corresponding nine areas of application.<sup>51</sup> Croatia also implements Cluster Development Strategy 2011-2020, which aim is to improve the management of Croatian cluster policy, strengthen clusters and cluster associations, to promote innovation and transfer of new technologies, to conquer new markets and internationalisation of clusters, and strengthen the knowledge and skills for cluster development.<sup>52</sup>

<sup>49</sup> Small and Medium Enterprises Report Croatia – 2019: <http://www.cepor.hr/wp-content/uploads/2015/03/SME-REPORT-2019-EN-WEB.pdf>

<sup>50</sup> <https://pxweb.stat.si/SiStatData/pxweb/en/Data/Data/1430911S.px>, Eurostat - Data Explorer (europa.eu)

<sup>51</sup> Wostner, P. (2017). From projects to transformations: Why do only some countries and regions advance? The case of the Slovenian S4. European Structural and Investment Funds Journal, 5(1), 84-96.

<sup>52</sup> CEPOR: Small and Medium Enterprise Report Croatia – 2019: <http://www.cepor.hr/wp-content/uploads/2015/03/SME-REPORT-2019-EN-WEB.pdf>

The recommendation for countries with the same level of development as the Republic of Croatia is a minimum of 25% of the allocation of the European Regional Development Fund, for thematic objective 1 Smart Europe. The total proposed budget from the ERDF at the level of the European Union amounts to EUR 217 billion, with the Republic of Croatia having as much as EUR 5,3 billion at its disposal from the ERDF. Regarding entrepreneurship and innovation, the activation of funds to increase the competitiveness and industrial transition of European economies is expected in the coming period. Projects related to digitalization and digital transformation, research and development (R&D) and energy will be most generously co-financed.

The experience of Croatia reveals that the conceptualization of Smart Specialization Strategy 2016 - 2020 (S3) and key enabling technologies (KET) at the national level are faced with challenges of translation of S3 as a policy concept arising from mostly academic ideas which are framed in rather abstract implementation guidelines into a practical process of “self-discovering” and identification of the national assets in business, technologies and research. However, despite the conceptual progress, a brief assessment of the key factors that could influence implementation of KETs and supported by analytical data reveals that development of KETs in Croatia faces difficulties for many reasons. The following can be sorted out as the most important: technological backwardness, lack of technological and research specialisation, diversified economic structure, lack of harmonisation with other national strategies, serious under investments in both R&D and advanced technologies, difficulties in institutionalisation of KETs into S3 and lack of coevolution process among the main actors of S3.

The narrow concept of smart specialisation is perceived as inferior to the concept of smart specialisation which emphasises technology specialisation since it tends to leave the regions/countries captured in uncompetitive industries with low profit and weak employment abilities.

Interviews and survey with relevant stakeholders showed that in the programme area, there is a clear political support for developmental efforts to develop innovative digitalized approaches towards intersectional solutions boosting SME competitiveness, as well as several new internet-based start-ups emerging in the area boosting digital entrepreneurship and production. Moreover, investments into ICT sector have been rising in the last years. On the contrary, there is poor implementation of complementary approaches and promotion of synergies on cross-border and cross-sectoral level resulting in low added values of SMEs. SMEs also do not fully exploit the national and EU funding due to liquidity problems. Thus, incubators and co-working centres are needed to foster innovative and ICT based entrepreneurship.

### **3.1.3. Digitalization**

Slovenia’s strategical aim is to digitalize several industrial and public sectors. Success stories have already emerged in all fields of business and in the public administration of sectors like health, education and welfare. The pioneers in the digitalization of the economy and public sector organisations encourage a positive feedback loop amongst followers and developers of new, increasingly innovative ideas. This helps to boost the overall competitiveness of Slovenia which aims to become an international leader in the field of digitalisation, providing a reference point for innovative individuals and businesses. The focus of this single objective means that all national

stakeholders contribute to a unified strategy for development and digitalisation. Slovenia ranks 16<sup>th</sup> out of 28 EU Member States in the Digital Economy and Society Index (DESI) 2020.<sup>53</sup>

By establishing smart cities and communities<sup>54</sup>, Slovenia creates comprehensive links between the economy, the public sector, and educational institutions, enabling the move towards a smart society<sup>55</sup>.

The true potential of the technology is reflected by the recent arrival and exceptional success of the blockchain technology supporting various platforms on the global level (e.g. Ethereum platform), which in addition to financial transactions allows smart contracts, which will bring significant savings to companies and simplify the implementation of most of mandatory processes. Given the development activities abroad, it is clear that the programme area will experience a large disruption in this field, for which it will have to be prepared, from the point of view of both users and creators of new solutions. Slovene start-ups are also exceptionally active in this area from projects such as platforms for marketing of electrical energy and creation of other energy services to solutions in traditional industries (e.g. in the forest-wood chain in Slovenia), which enable the stakeholders to connect in these branches. As a part of the stand of the Slovene economy in the “green, creative, and smart”, Slovenia strives to become one of the leading countries in introducing block-chain technologies<sup>56</sup>.

Croatia ranks 21<sup>st</sup> out of 28 EU Member States in the Digital Economy and Society Index (DESI) 2020. Croatia ranks highest in integration of digital technology by enterprises and SMEs with the seventh highest score in selling online cross-border to other EU Member States.<sup>57</sup> Croatian enterprises are progressively integrating digital technologies into their business. With 23% of enterprises at a high or very high level of digital intensity, Croatia is slightly below the EU average of 26%.

It is essential to speed up approved and EU-funded programmes of access and backhaul networks deployment, as well as ensuring other prerequisites for 5G network deployment that is all in the competencies of the Croatian Government. Some of those prerequisites are ensuring radio frequencies at sustainable cost-based model, enabling faster process of planning and constructing of network (physical planning and civil works) and providing educational information regarding electromagnetic fields (EMF) to the public<sup>58</sup>.

The Croatian Digital Index, which represents the results of the analysis of digital transformation of the Croatian economy, indicates that companies in Croatia are not familiar enough with the term digital

<sup>53</sup> <https://digital-strategy.ec.europa.eu/en/policies/desi-slovenia>

<sup>54</sup> To foster digital transformation, The Government of the Republic of Slovenia has adopted the following strategic documents relating to the development of information society to 2020:

- Public Administration Development Strategy 2015 -2020 (SJU 2020)
- Information Society Development Strategy to 2020 –DIGITAL SLOVENIA 2020
- Next-Generation Broadband Network Development Plan to 2020
- Cyber Security Strategy

<sup>55</sup> Digital Slovenia: <https://www.digitallytransformyourregion.eu/good-practices/digital-slovenia>

<sup>56</sup> Republic of Slovenia - Ministry of Public Administration, Digital Transformation of Slovenia:

[http://www.tirana.embassy.si/fileadmin/user\\_upload/dkp\\_55\\_vti/docs/Digital\\_transformation\\_of\\_Slovenia.pdf](http://www.tirana.embassy.si/fileadmin/user_upload/dkp_55_vti/docs/Digital_transformation_of_Slovenia.pdf)

<sup>57</sup> <https://digital-strategy.ec.europa.eu/en/policies/desi-croatia>

<sup>58</sup> State of Play of Digitization in Croatia and Development of Artificial Intelligence, AmCham (2018):

[https://www.amcham.hr/storage/upload/doc\\_library/state\\_of\\_play\\_of\\_digitization\\_in\\_croatia\\_and\\_development\\_of\\_artificial\\_intelligence\\_9376.pdf](https://www.amcham.hr/storage/upload/doc_library/state_of_play_of_digitization_in_croatia_and_development_of_artificial_intelligence_9376.pdf)

transformation. In fact, very few companies report that they have developed a strategy for digital transformation. More than half of the respondents believe that the digital transformation process will not impact the overall number of jobs in companies. The number of respondents who consider that digital transformation will have an impact on the revenue and those who consider that it will not are almost equal. The EU members that ranked lower than Croatia are Hungary, Poland, Italy, Bulgaria, Greece and Romania.

The potential is based on three available factors: a great number of students with a degree in ICT in Croatia, a competitive advantage on the macroeconomic level and competitive labour costs in the ICT sector, and success stories from the private and public sector recognised on the international level. Additional efforts are necessary to support digital growth that should focus on four areas: the education system, ICT infrastructure, digital skills, and entrepreneurial environment.<sup>59</sup>

The Croatian government estimates that the development of broadband access in Croatia so far has not been fast enough and has not resulted in high-speed availability, which ranks Croatia 25<sup>th</sup> out of 27 EU member states according to the Index of Economic and Social Digitization (DESI 2020). Thus, several large projects are being implemented in Croatia through which optical internet will be provided to all residents, including those in rural areas and on islands. Recently, the government adopted the National Plan for the Development of Broadband Access for the Period from 2021 to 2027, which is in line with the EC goals for the European Gigabit Society and for 5G, which encourage the development of broadband access and very high-capacity networks. The total estimated funds needed by Croatia to overcome the digital gap and implement the planned activities from the National Plan from 2021 to 2027 amount to about EUR 750 million. Of that, about EUR 500 million are foreseen from various EU funds, while the remaining EUR 250 million will be gathered through investments of electronic communications operators and other investors<sup>60</sup>.

The analysis of the programme area based on the implemented interviews and survey with relevant stakeholders showed that there are some good practices in terms of digitalization. Many entities are involved in international projects enabling start-ups creating new digitally driven business models. Also, several international leading IT companies are present in the area. Anyhow, to achieve greater synergies, consolidation and centralization of state digitalization administration using cloud computing technology and big data should be considered despite the fact that there are already some sufficient e-government solutions and networks. However, one of the major drawbacks, especially in the rural areas, is the absence of powerful broadband connections as both mobile network and broadband infrastructure are not established in the remote areas due to high investment cost. Also, decentralized digitalization of the public administration has led to dispersion and disconnection of IT systems and high costs of development and maintenance. Moreover, many areas are lacking knowledge for smart specialization and industrial transition to green and digital and entrepreneurship, while political support for efforts to develop the digital society (general digitization, the digital economy, etc.) is insufficient, hence the concepts of “smart” and “digital” should be included in the developmental strategies. Though, there are some positive exceptions as some areas are already applying strategies towards development of digitalized and smart society (e.g. Zagreb, Opatija...). Still, geographical, age,

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59 Jurčević, M., Lulić, L., & Mostarac, V. (2020). The Digital Transformation of Croatian Economy compared with EU Member Countries. *Ekonomski Vjesnik*, 33(1), 151-164.

60 U idućih ŠEST godina Hrvatska ulaže 5,6 milijardi kuna u širokopolasni internet i 5G mrežu: <https://lider.media/poslovnascena/hrvatska/u-iducih-sest-godina-hrvatska-ulaze-5-6-milijardi-kuna-u-sirokopolasni-internet-i-5g-mrezu-135761>

and other types of digital discrepancies in the supply and use of communication and information services across cross border area, remain the main challenges.

### 3.1.4. Conclusions

The majority of counties in the programme area currently face unfavourable demographic trends and lower levels of education. As a result, the mobility of people is limited and there is a lack of skilled labour in most programme area counties (except Osrednjeslovenska and Zagreb County). Negative employment trends and a lack of jobs lead to long-term unemployment and widen the gap between the requirements of SMEs and the skills that unemployed people can offer. The programme area is compounded by poor transport links, the closure of retail and bank branches and the elimination of general and business services. High youth unemployment and the low number of businesses in the programme area counties (except for Osrednjeslovenska and Zagreb County) further contribute to lower development in the programme area. Therefore, one of the major challenges is to maintain the settlement and population that could bring the development and vitality curve of the programme area back up.

The regions in the programme area are extremely important from the point of view of state cohesion and economic development, so it is necessary to create a comprehensive programme to promote the development of all counties and regions in the programme area, thereby ensuring their economic development and greater competitiveness, social cohesion and sustainable development. Further development of the programme area will depend on maintaining the vitality of these areas. The remoteness, poorer accessibility and lack of services of general interest can be improved by a modern information and communication infrastructure that, using teleworking, can partially compensate for the lack of jobs. Currently, there is very poor broadband coverage in some areas, which is a major barrier to further development. Moreover, there is no private or market interest in developing such infrastructure.

It would be beneficial to form regional development partnerships across the programme area, working with regional development agencies to deliver positive externalities. In this way, individual areas should focus on drawing up joint strategies and joint development programmes in order to implement joint measures and projects<sup>61</sup>.

Many entrepreneurial potentials can be found on both sides of the border, so SMEs in all regions should seek cooperation and synergies to jointly participate in domestic and foreign markets. For example, there is a huge potential for the development of common actions in several branches (e.g. wine culture, health and rural tourism development) through joint projects of different stakeholders in the regions in the programme area, which is characterized by the presence of similar tourism infrastructure. Through the implementation of joint projects of the programme area and the promotion of the development of SMEs, concrete activities to support entrepreneurs should be implemented, which would create the conditions for achieving tangible results for the population of the programme cooperation area.

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61 Draft Program of development Incentives for border problematic areas for the period 2021–2024, Government of Slovenia

Several projects should seek the digital transformation of the entire programme area. The economic benefits of digital transformation could be realized through two channels. Firstly, digital transformation could stimulate innovation and significantly facilitate internationalization through accelerated adaptability. Secondly, more efficient processes and technologies could reduce transaction and production costs as well as barriers to entry. To achieve this, entrepreneurs need to be empowered through capacity building measures in the form of improving digital literacy and digital skills to use new technologies to build new business models or modify existing business models towards a digitally oriented and smart society. To be successful, companies need to take a "two-handed" approach and tackle digital transformation strategically (by establishing a common goal and vision among their employees), with sufficient technical and business skills, while building a shared consensus between management and employees to drive the necessary changes and achieve short- and long-term benefits.

## 3.2. Policy Objective 2 - A greener, low carbon Europe

### 3.2.1. Energy efficiency and renewable energies

Both energy efficiency and increased use of renewable energy sources are on the stakeholders' agenda in the cross-border area and are to follow the trends and goals set on the national levels. Aim of local energy agencies is harmonisation of business sector for energy transition and "Fit for 55" programme. Between 2015 and 2019, the primary and final **energy consumption in Slovenia (+0,18 TOE) as well in Croatia (+0,25 TOE) increased**<sup>62</sup>. This trend is also observed in other countries of Central Europe. Energy efficiency/saving measures together with the replacement of solid fossil fuels with renewables could be a way forwards to downward this trend.

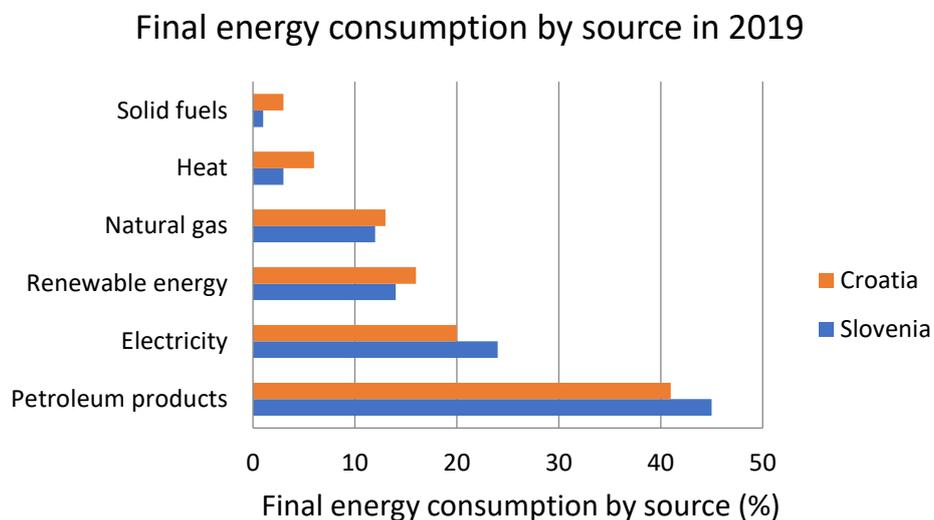


Figure 11: Final energy consumption by source (%) in Slovenia and Croatia in 2019.<sup>63</sup>

In 2019, the production of energy from renewable sources (RES) in Croatia (28,47%) and Slovenia (21,98%) was above the renewable energy consumed in the EU-27 (19,73%)<sup>64</sup>. Both countries **achieved the EU 2020 target of 20% share of their gross final energy consumption from renewable sources**. However, the Slovene national target (25% from renewable energy) was not achieved. **Neither Slovenia (7,89%) nor Croatia (5,86%)<sup>65</sup> achieved a common target of 10% for the share of renewable energy used in transport** but registered a remarkable increase compared with 2018 (Croatia: +3,3 pp and Slovenia: +2,5 pp)<sup>66</sup>.

<sup>62</sup> [https://ec.europa.eu/eurostat/databrowser/view/nrg\\_ind\\_eff/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nrg_ind_eff/default/table?lang=en)

<sup>63</sup> [https://mingor.gov.hr/UserDocImages/UPRAVA%20ZA%20ENERGETIKU/Energija\\_u\\_Hrvatskoj/Energija\\_u\\_Hrvatskoj\\_2019-2.pdf](https://mingor.gov.hr/UserDocImages/UPRAVA%20ZA%20ENERGETIKU/Energija_u_Hrvatskoj/Energija_u_Hrvatskoj_2019-2.pdf), [https://ec.europa.eu/eurostat/databrowser/view/NRG\\_IND\\_REN\\_custom\\_884304/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/NRG_IND_REN_custom_884304/default/table?lang=en)

<sup>64</sup> [https://ec.europa.eu/eurostat/databrowser/view/NRG\\_IND\\_REN\\_custom\\_884304/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/NRG_IND_REN_custom_884304/default/table?lang=en)

<sup>65</sup> [https://ec.europa.eu/eurostat/databrowser/view/NRG\\_IND\\_REN\\_custom\\_884304/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/NRG_IND_REN_custom_884304/default/table?lang=en)

<sup>66</sup> [https://ec.europa.eu/eurostat/statistics-](https://ec.europa.eu/eurostat/statistics-explained/inde.g.php/Renewable_energy_statistics#Wind_and_water_provide_most_renewable_electricity.3B_solar_is_the_fastest-growing_energy_source)

[explained/inde.g.php/Renewable\\_energy\\_statistics#Wind\\_and\\_water\\_provide\\_most\\_renewable\\_electricity.3B\\_solar\\_is\\_the\\_fastest-growing\\_energy\\_source](https://ec.europa.eu/eurostat/statistics-explained/inde.g.php/Renewable_energy_statistics#Wind_and_water_provide_most_renewable_electricity.3B_solar_is_the_fastest-growing_energy_source)

## Share of energy from RES (%)

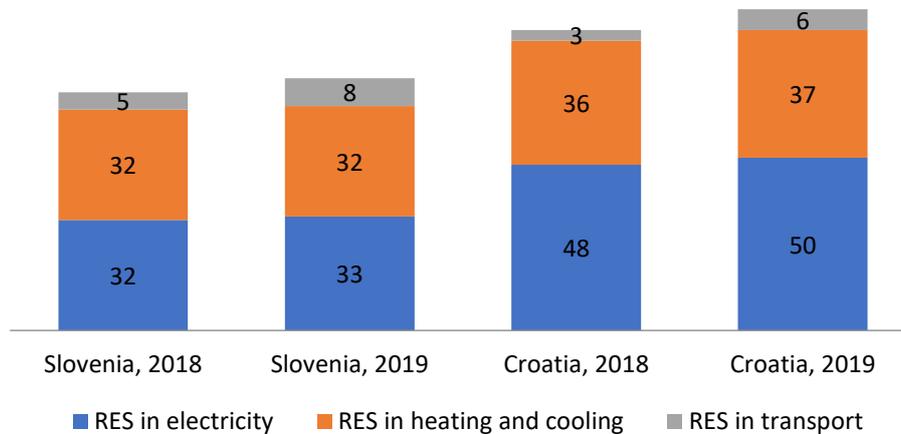


Figure 7: Share of energy from renewable sources (%) in Slovenia and Croatia in 2019.<sup>67</sup>

In Croatia, the share of hydropower plants in production was about 53%, thermal power plants on coal and gas and nuclear power plant Krško accounted for about 35%, and wind farms had 10% at the end of 2019<sup>68</sup>. In Slovenia, the share of nuclear power plants in the total net electricity generation was 43%, thermal power plants 31%, hydropower plants 30% and solar power plants 2%<sup>69</sup>.

Apart from hydropower plants (2,478 MW) that alter the natural environment, **other renewable sources are applied (particular solar, geothermal, biomass) and pose an opportunity for community shared projects, in combination with digitalisation, smart community building, and circular economy.**

Croatia and Slovenia have supported raising the EU's common goal of reducing greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels, as well as the 2050 climate neutrality target<sup>70</sup>. According to Eurostat, energy sourced emissions decreased in 2019 in the area (Slovenia (-4,9%) and Croatia (-0,2%)<sup>71</sup>), displaying a positive trend towards lower emission rates and increased capacity in RES and efficient energy consumption.

**Stimulating renewable energy application is a priority of the region and its production is increasing. However, more could be done in fostering energy autonomy in decentralised areas,** as demonstrated in some energy strategies of islands in the programme area (Cres–Lošinj, Unije, Krk). Awareness raising with expert counselling could further support inhabitants and communities for further investments and circular solutions with other resources (e.g., water).

RD institutes in the region (Energy Institute Hrvoje Požar, National Institute of Chemistry and Jožef Stefan Institute) are stimulated to cooperate further on **the digital transformation of buildings, neighbourhoods and cities.** This is done by promoting deep retrofit of public buildings and integration

<sup>67</sup> [https://ec.europa.eu/eurostat/databrowser/view/nrg\\_ind\\_ren/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nrg_ind_ren/default/table?lang=en)

<sup>68</sup> <https://balkangreenenergynews.com/croatia-sets-new-record-in-renewable-production/>

<sup>69</sup> <https://pxweb.stat.si/SiStatData/pxweb/si/Data/-/1817602S.px>

<sup>70</sup> [https://ec.europa.eu/clima/policies/strategies/2030\\_en](https://ec.europa.eu/clima/policies/strategies/2030_en)

<sup>71</sup> <https://ec.europa.eu/eurostat/documents/2995521/10820684/8-06052020-BP-EN.pdf/e1dd6cf1-09b5-d7ee-b769-ffe63e94561e>

of smart building technologies through concrete pilot actions that would offer the vision of the future of buildings, where data-driven innovations offer more for building owners and users by reducing energy consumption and improving the quality of life.

### 3.2.2. Climate change adaptation

The main **identified effects of climate change in the region are temperature rise and higher heat load, storms, droughts, floods, sea-level rise, less snowfall.** The climate change **effect differs across region's biogeographical areas** (coast, river basins, forests, and hills).

The region is included in the 10-year integrated national energies and climate plan (NECP) to 2030<sup>72</sup>. Within the territory, some efforts have been made to adapt to climate change at the regional and local levels. By 2023 regional development plans and regional spatial plans in Slovenia should include climate vulnerability assessments. Climate adaptation considerations, including green infrastructure, should now form an integral part of spatial, urban, and land-use planning processes at all levels. **Some municipalities in the cross-border areas did elaborate Sustainable energy climate adaptation plans (SECAP) that need concrete actions and plans for implementation** (Figure 13).

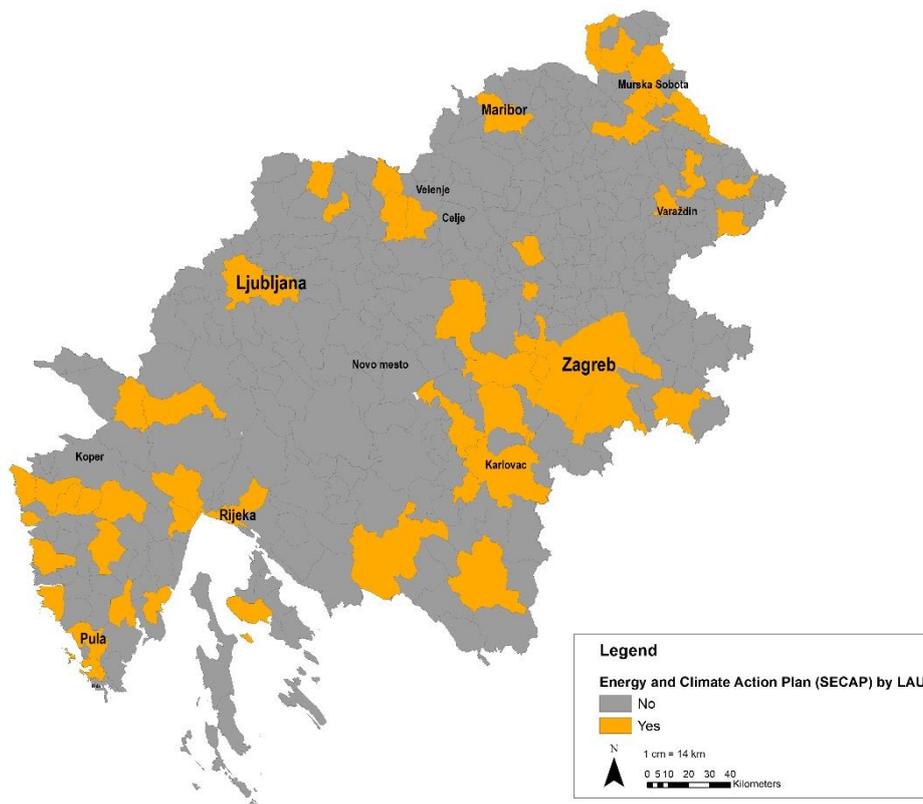


Figure 8: Distribution of SECAP in municipalities in the programme area. Source: Own edition based on open source.

<sup>72</sup> [https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans\\_en](https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans_en)

They particularly focus on resource (energy, water) management, biodiversity conservation, green infrastructure and spatial planning as possible climate adaptation focus areas. Some are focused on urban areas, also not all affected sectors and target groups are taken into consideration<sup>73</sup>.

Influenced by climate change and impacts of human activities, the Slovenia-Croatia border **area is estimated to suffer from extreme events or disasters, such as forest fires, floods, earthquakes, droughts, and storms (extreme weather events)**. Climate change adaptation capacity building need to be developed. Adaptation efforts lack concrete measures on regional and local level. Climate change affects biodiversity and potentially new aspects should be considered in management plans and practices (e.g. bark beetle outbreak in forests of the region in post-2014 ice storm).

**Disaster management (civil protection) in Slovenia and Croatia is organised as an integrated system.**

It addresses prevention, preparedness, response to disasters, and recovery activities, with an emphasis on response activities over other phases of disaster risk management. The organisation is vertically organised for every local community but differs in the quality and local capacity<sup>74,75</sup>. **Joint response to events of importance is needed** through strengthening the institutional capacity for cooperation between public authorities and key actors in the field of civil protection for effective emergency management.

The **frequency and intensity of flood events vary throughout the programme area**. In the past decade's floods caused severe damage to nature and property. The geographical and topographical features of the territory expose the inhabitants to high flood risk. Jointly harmonised measures for the reduction of flood risk have already been undertaken in all 6 cross-border basins (awareness raising, early warning systems), but future climate change effects could further impact the region due to high intensity precipitation in short time periods and less snowfall.

To reduce the flood risk in the river basins of Dragonja, Kolpa/Kupa, Sotla/Sutla, and Bregana, as well as in parts of the Drava and Mura River basins, strategic projects FRISCO1 and FRISCO2 were carried out within the framework of Cooperation Programme INTERREG V-A Slovenia–Croatia 2014-2020.<sup>76</sup> The FRISCO1 Project has achieved the set objectives, including improved databases, hydraulic and forecasting models for the river basins, flood hazard and risk maps for the purpose of a more efficient flood risk management, prepared feasibility studies, maps and technical documents for the implementation of structural measures, and raising public awareness about flood risks. The structural measures implemented under the FRISCO 2 projects were delivered on selected river basins, namely: Mura (the reconstruction of the Sveti Martin embankment, and the construction of the high-water embankment near Benica); Drava (reconstruction of the Virje Otok – Brezje dike and construction of a distributary channel of the river Drava on the right bank of Mala vas); Sotla (the modernization and upgrading of the Vonarje Dam); Kolpa/Kupa (putting up flood protective walls for settlements of Hrvatsko and Kuželj).

<sup>73</sup> <https://prilagodba-klimi.hr/>

<sup>74</sup> [https://ec.europa.eu/echo/what/civil-protection/disaster-management/slovenia\\_en](https://ec.europa.eu/echo/what/civil-protection/disaster-management/slovenia_en)

<sup>75</sup> <http://www.dppi.info/members/croatia>

<sup>76</sup> <http://www.si-hr.eu/en2/projects/approved-projects-2/>

In the future programming period, emphasis should be put on further inter-municipal cooperation and maintenance of flood protection infrastructure. In addition to traditional grey engineering approaches, nature-based solutions for flood protection should be explored.

**Fires have been reported in the area before. The most endangered areas are in the Karst and the sub-Mediterranean part of the region** (Obalno-kraška, Primorsko-notranjska region, Istarska and Primorsko-goranska county)<sup>77</sup>. The forest in the Karst is at fire risk due to dry and warm sub-Mediterranean climate, degraded habitats, and scattered population pattern.

### 3.2.3. Circular economy

The circular economy is an approach where **resource management is a vital component of regional development strategies, daily operation of businesses and consumer practices**. It hence benefits businesses, society, and the environment. Slovenia imports 71% of all production sources, Croatia 80%, hence orientation towards the wood industry and value chain development in the region is a potential. According to World competitiveness yearbook (2019), the productivity in Slovenia was EUR 65.717 per person employed in wood industry, while in Croatia it was EUR 51.716<sup>78</sup>.

The circular economy requires changes at the systemic level, and Slovenia and Croatia have identified circular economy as a strategic priority. It offers sustainable and resilient development. The baseline of development could be the **abundant bio-based resources. The circular economy impact in the cross-border area could target the sectors of manufacturing, food production, mobility, and energy (efficiency and self-sustainability)**. These are major identified areas that could have a positive effect on resource management, territorial planning, local capacity building and job creation.

In the region, there is an **existing network of hubs for implementing circular economy initiatives**, like zero waste promoting associations with reuse stores (Brežice, Krško, Novo mesto, Prelog, Čakovec) and capacities in cooperative economy. A network of utility services has the potential for the development of circular- driven investments and impactful delivery of local change.

**Waste management as such is a highly regulated market that strictly follows national legislation and follows the consumption patterns.** The trend of generation of municipal waste is increasing, but so is waste separation. In 2019, the generation of municipal waste was below the EU-27 average (502 kg per capita) in Croatia (445 kg per capita) and above in Slovenia (504 kg per capita)<sup>79</sup>. In 2019, 73% of municipal waste generated was separately collected, creating the first step towards reuse<sup>80</sup>. In Croatia, 37% of the total amount of waste generated was separately collected<sup>81</sup>. In 2019, compared to an EU average of 47,7%, the recycling rates of municipal waste were high in Slovenia (59,2%) and low in Croatia (30,2%)<sup>82</sup>. The recycling rates can improve as the circularity rates (data for 2019) of material

<sup>77</sup> [http://www.zgs.si/delovna\\_podrocja/varstvo\\_gozdov/varstvo\\_gozdov\\_pred\\_pozari/inde.g.html](http://www.zgs.si/delovna_podrocja/varstvo_gozdov/varstvo_gozdov_pred_pozari/inde.g.html)

<sup>78</sup> <https://www.investslovenia.org/industries/wood-processing>

<sup>79</sup> [https://ec.europa.eu/eurostat/statistics-explained/inde.g.php?title=Municipal\\_waste\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/inde.g.php?title=Municipal_waste_statistics)

<sup>80</sup> <https://www.stat.si/StatWeb/en/News/Index/9253>

<sup>81</sup> [http://www.haop.hr/sites/default/files/uploads/inline-files/OTP\\_Izvie%C5%A1%C4%87e%20o%20komunalnom%20otpadu%20za%202019\\_5.pdf](http://www.haop.hr/sites/default/files/uploads/inline-files/OTP_Izvie%C5%A1%C4%87e%20o%20komunalnom%20otpadu%20za%202019_5.pdf)

<sup>82</sup> [https://ec.europa.eu/eurostat/databrowser/view/t2020\\_rt120/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/t2020_rt120/default/table?lang=en)

use in Croatia (4,9%) and Slovenia (10,4%) were below the rate of circularity of material use in the EU-27 (11,9%)<sup>83</sup>.

### Separate waste collection in programme area (%) in 2019

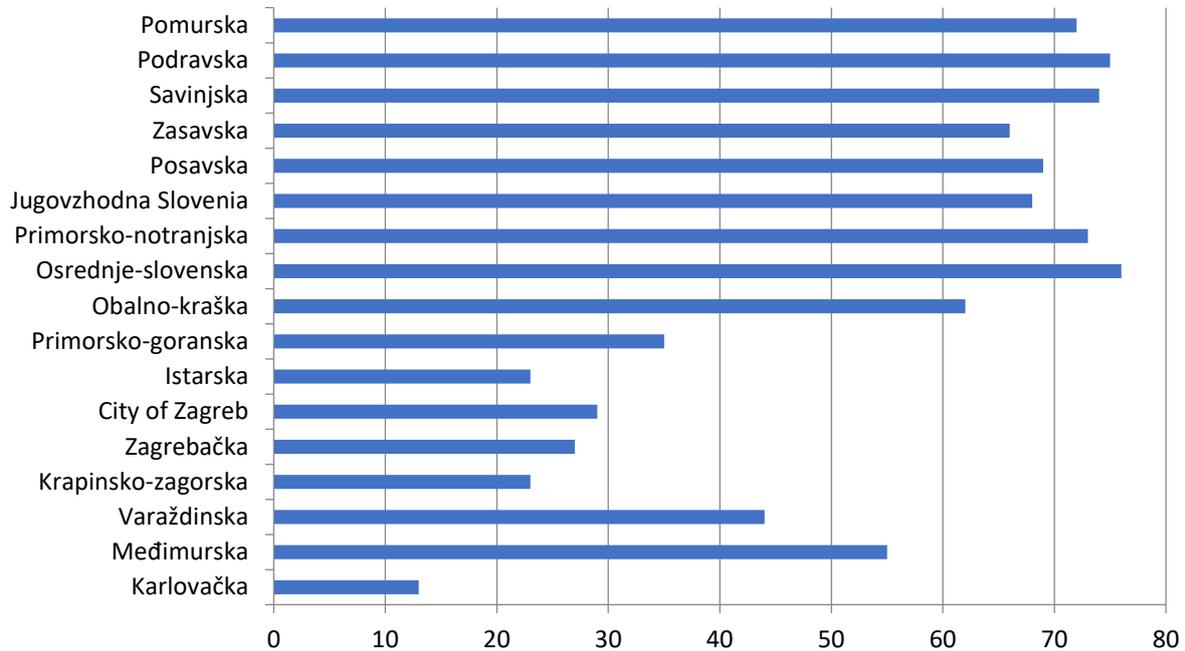


Figure 14: Separate waste collection in the programme area in 2019. Source: Ministry of Economy and Sustainable Development, Statistical office of Slovenia.

As the indicators have shown, the area is following the basic aspects of the circular economy in the waste sector. However, more awareness-raising is welcomed for waste reduction and transformative practices in general. Changes can be achieved through connecting all stakeholders, and especially by promoting innovation, and new creative solutions in the economy. The share of employees in the circular economy sectors in the area was 2 – 2,5 % in 2018<sup>84</sup>. The programme area is suitable for applying the concept of the circular economy because of its rural character and availability of good quality local products and protected green areas, and it is the “urban hinterland” that can provide the users, promotion and support for these products and circular economy concepts.

Other resources of the region where the circular approach has the potential to be applied is not just waste management, but also energy efficiency, water consumption and reuse, nutrient reuse, bio-based sources; territorial planning, management of degraded areas including old buildings in the context of multipurpose use and benefits to local inhabitants, and landscape/environment preservation.

<sup>83</sup> [https://ec.europa.eu/eurostat/statistics-explained/inde.g.php?title=File:Circular\\_material\\_use\\_rate\\_2010-2019.png](https://ec.europa.eu/eurostat/statistics-explained/inde.g.php?title=File:Circular_material_use_rate_2010-2019.png)

<sup>84</sup> Eurostat, [https://ec.europa.eu/eurostat/databrowser/view/cei\\_cie010/settings\\_1/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/cei_cie010/settings_1/table?lang=en)

### 3.2.4. Promoting sustainable water management

The territory is generally rich in **water resources, but its quality differs**. In Slovenia, 55% of total surface water bodies have good ecological status while in Croatia 23%<sup>85</sup>.

In Slovenia, 69,2% of wastewater was treated in 2019, while in Croatia, central sewer systems are constructed currently for urban areas. **In 2018, 54,6% of the Croatian and 71,5% of the Slovene population was connected to the sewage systems**<sup>86</sup>. The wastewater treatment systems still have to be installed in app. 40-60% of the agglomerations. While an improvement of wastewater treatment infrastructure in the area is noted, dispersed settlement pattern is the main reason why rural wastewater management lacks behind achieving the goals set.

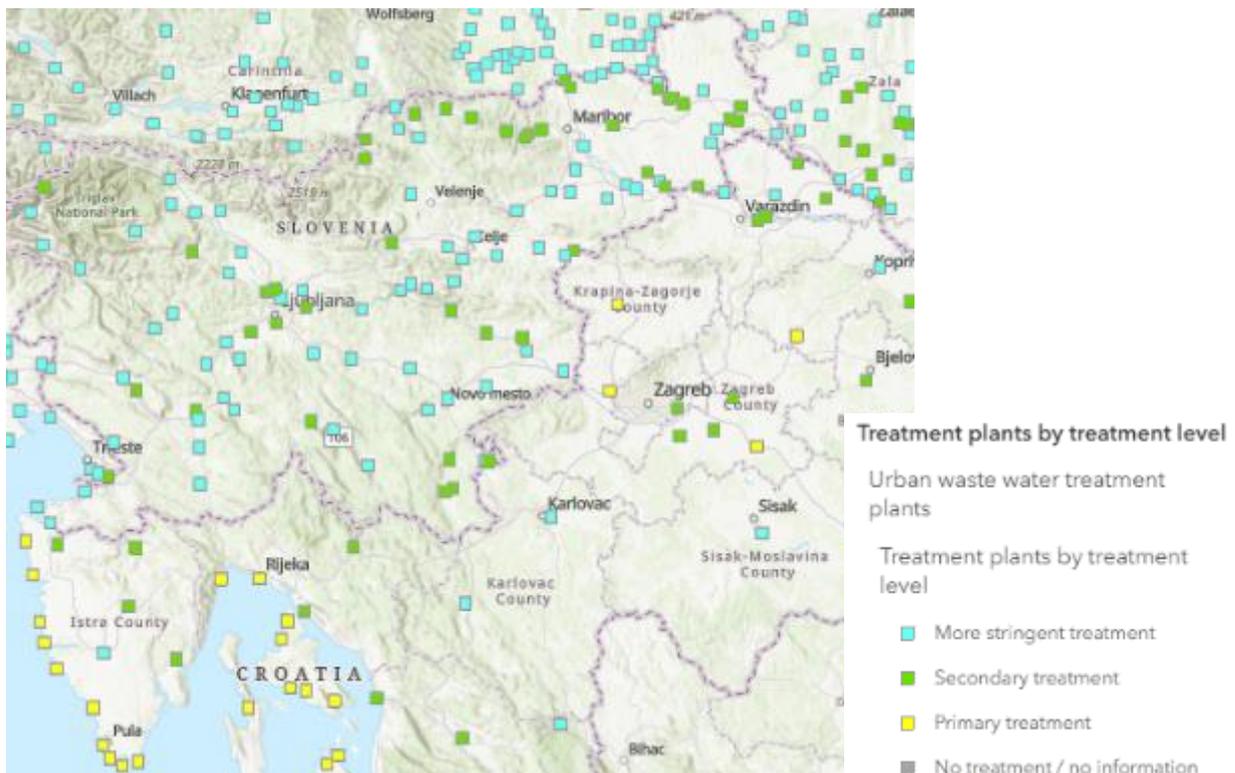


Figure 9: Urban waste water treatment plants for agglomerations ≥ 2.000 PE (Source: EEA).

Main **water consumption in the region remains with the households**. The water of the region is abstracted mainly from underground water sources; therefore, protection of these sources is vital. Additional cause of concern remains in the southern part of the region in Karstic-Dinaric environment, where surface pollution is affecting underground water sources. Losses in the public water supply system remain significant.

**Water reuse actions could be encouraged** according to the new EU legislation, but the awareness of its potential remains low, which could change particularly on the coast, where water pressures are bigger. Main actions towards reduced water consumption and water reuse are to be found **in industry, while the potential is also evident in agriculture**. The biggest amount of water is used in Primorsko-

<sup>85</sup> <https://www.eea.europa.eu/themes/water/european-waters/water-quality-and-water-assessment/water-assessments/ecological-status-of-surface-water-bodies>

<sup>86</sup> <https://data.europa.eu/data/datasets/qtzum328rnja1fynlflw?locale=en>

goranska and Istarska Counties, and Obalno-kraška region, due to Mediterranean climate and tourism development in the next years. Mostly public water supply for households is to increase.

There are **over 70 lakes and man-made reservoirs in the programme area that cause concern because their situation seems to be worsening due to excess nutrient loads from the catchment area** (threat of eutrophication under the climate change effect), accumulation of sediments, and lack of proper management where conflicting interests could be aligned to support local development (green infrastructure application for tourism and recreation et al).

**Integrated river basin management** is regulated and designed in catchment areas in the region, but further improvements are to be made on local level.

### 3.2.5. Biodiversity and green infrastructure for reduced environmental pollution

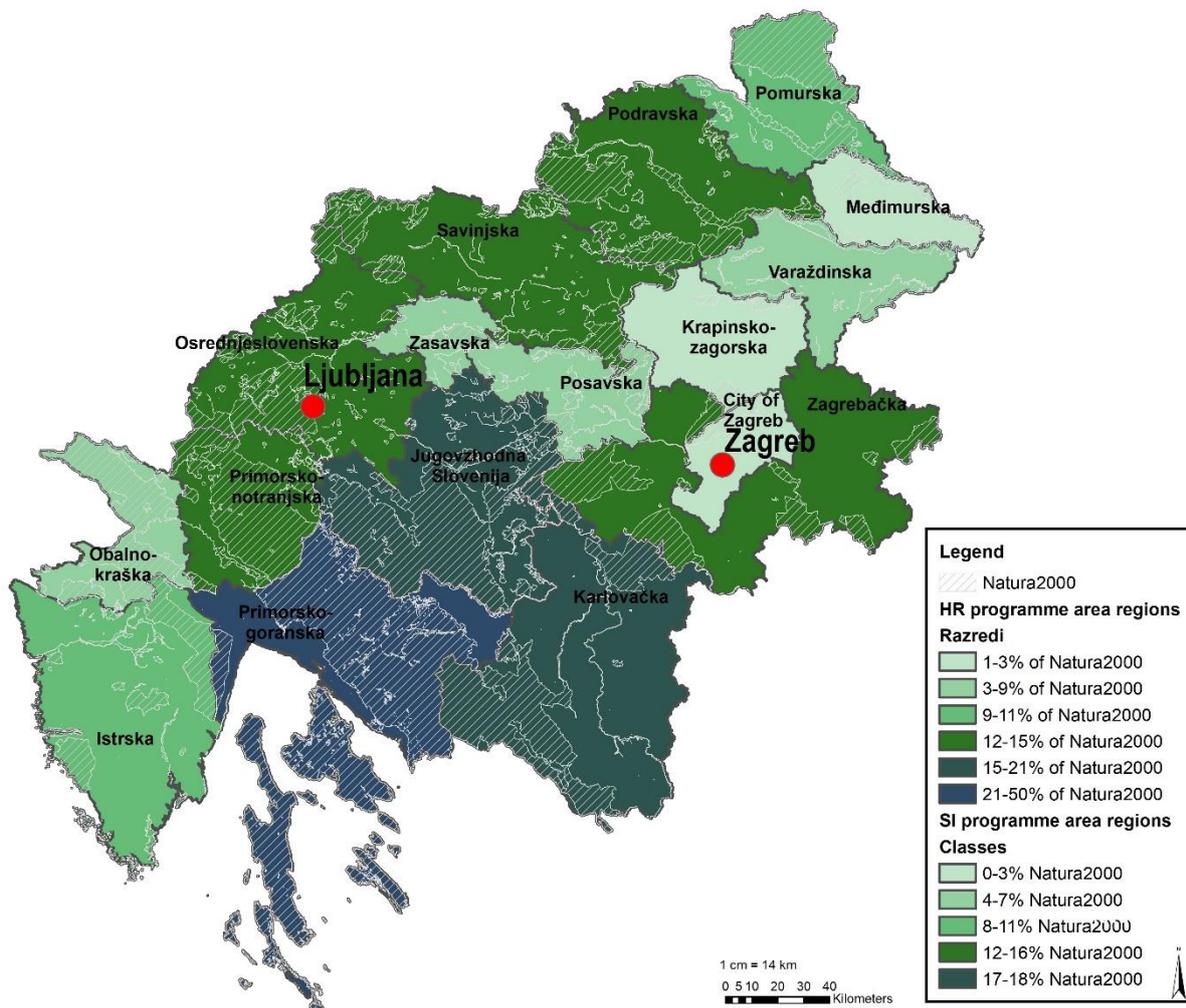


Figure 10: Natura 2000 sites in the programme area (Source: Own edition, based on open source data from European Environmental Agency).

The main characteristics of the cross-border area are its rich nature and biodiversity. The highest terrestrial overall coverage of Natura 2000 sites in the EU is reported by Slovenia (38%) and Croatia (37%). Natura 2000 is covering almost 40% of the cross-border area, including several transboundary

sites and many nationally designated areas of protection or natural importance with the highest shares in Primorsko-notranjska region and Primorsko-goranska county.

Besides Natura 2000 network, there is a network of national and landscape parks, regional parks, reserves and other areas protected as 'areas of ecological importance'. Some of them in the cross-border area are Sutinske toplice, Kalnik mountain, Pićan area, Vražji prolaz i Zeleni vir<sup>87</sup> in Croatia, and Cerknjiško polje, Krakovski gozd, Posrtev, Kočevski Rog<sup>88</sup> in Slovenia. There are five coastal and marine protected areas along the Slovene coast. Two nature parks - Sečovlje Salina Nature Park and Strunjan Nature Park, which embrace two nature reserves - Stjuža and Strunjan, two natural monuments - Debeli rtič and Rt Madona and, last but not least, the Škocjan Inlet Natural Reserve<sup>89</sup>. Marine Protected Areas in Croatia (3 national and 2 nature parks) can mostly be described as terrestrial parks that also include surrounding marine areas. Out of that, **1 national park** (Brijuni) is in the programme area<sup>90</sup>.

However, favourable **conservation status is secured for just 29% of the species and 43% of habitats of Community interest and requires further conservation efforts.**<sup>91</sup> Slovenia reported a deteriorating trend for more than half of their habitat assessments, while in Croatia 20% of habitats are classified as decreasing conservation status<sup>92</sup>. The marine regions have many assessments with unknown conservation status, reflecting the general lack of marine species data where appropriate coordinated monitoring schemes within and between the Member States are needed.

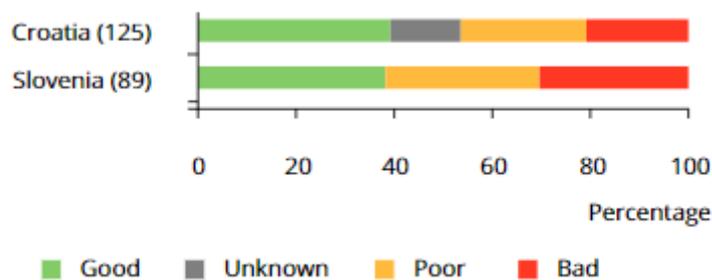


Figure 11: Conservation status of habitats in Slovenia and Croatia.<sup>93</sup>

The main cause of the poor status of species in the region is habitat loss due to human activity (fish, reptiles, and some arthropods are of greatest concern), and fragmentation (particularly in the NE parts). Invasive alien species, pollution, urbanization and climate change are also among the threats. The cross-border area is home to big carnivores that thrive in the region. Their presence is essential for maintaining a natural dynamic equilibrium among species, and the communication of their importance for successful cohabitation with people is essential.

<sup>87</sup> <http://www.bioportal.hr/gis/>

<sup>88</sup> <https://www.naravovarstveni-atlas.si/web/profile.aspx?id=EPO@ZRSVNJ&AspxAutoDetectCookieSupport=1>

<sup>89</sup> [https://zrsvn-varstvonarave.si/wp-content/uploads/2019/09/Vidmar\\_Turk\\_2538.pdf](https://zrsvn-varstvonarave.si/wp-content/uploads/2019/09/Vidmar_Turk_2538.pdf)

<sup>90</sup> [https://wwfint.awsassets.panda.org/downloads/komunikacijski\\_prijelom3.pdf](https://wwfint.awsassets.panda.org/downloads/komunikacijski_prijelom3.pdf)

<sup>91</sup> [https://ec.europa.eu/environment/nature/ecosystems/pdf/Green%20Infrastructure/GI\\_SL.pdf](https://ec.europa.eu/environment/nature/ecosystems/pdf/Green%20Infrastructure/GI_SL.pdf)

<sup>92</sup> <https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends> (Member state have to be selected from dropdown menu each time: SI and HR)

<sup>93</sup> <https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020>

Some of the greatest **threats to biodiversity in marine and coastal ecosystems are combined activities of high anthropogenic pressure (pollution), climate change, degradation and loss of habitats, invasive species, excessive fishing, trawling, the absence of no-take zones and ineffective supervision**<sup>94</sup>. According to the latest EU Environmental agency report, most affected habitats of the area are freshwater habitats and grasslands. The share of protected marine areas in the region (3% for Adriatic) is low and far from the key commitment of the **EU Biodiversity Strategy for 2030 (legally protect a minimum of 30% of the EU's sea area and integrate ecological corridors**, as part of a true Trans-European Nature Network). Enlarging protected areas is also an economic imperative. Studies on marine systems estimate that every euro invested in marine protected areas would generate a return of at least EUR 3<sup>95</sup>. Management approaches of protected marine areas in the region could benefit from cooperation towards e.g. “no take” zones and the development of new nature interpretation solutions.

The management of protected areas and areas of the Natura 2000 ecological network should be improved, including the improvement or establishment of visitor infrastructure, to achieve tourist valorisation of natural heritage and considering the establishment of an adequate visitor management system<sup>96</sup>. **Awareness-raising of all target groups on importance of achieving nature restoration targets defined in the EU Biodiversity Strategy for 2030 is crucial for future sustainable management of the protected areas and environment in general.**

The EU **Natura 2000 network is at the core of the EU's Green Infrastructure**. State-established large-scale protected areas have designated competent managing authorities responsible for the area<sup>97</sup>, and their cooperation of particularly joint protected areas could improve.

Both Slovenia and Croatia share a long tradition of **sustainable forest management resulting in relatively well-preserved natural structure and biodiversity of forests**. Forests cover 71% of the Natura 2000 network in Slovenia<sup>98</sup> and 38% in Croatia<sup>99</sup>. Forest ownership impacts forest management and policy making. In the cross-border area, the ownership of majority of forests in Kočevsko is centralised, which is not the case in Gorski Kotar. Krapinsko Zagorska and Varaždinska County are also impacted by private ownership (55%)<sup>100</sup> which affects forest management practices. There are many forests educational trails in the programme area serving to raise public awareness and improve understanding of the forest and help the public develop a more responsible attitude to it. Interpretation of forest and nature is gaining importance. Capacity building for multi-purpose forest management with focus on promotion and preserving of biodiversity should be supported. **A forest biosphere regional park of international significance can be developed in the cross-border area to include regions of Primorsko-notranjska and Primorsko-goranska**. Integrated management and stakeholder cooperation are primary needs of this Karstic-Dinaric area where high environmental

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<sup>94</sup> <https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020>

<sup>95</sup> <https://www.eea.europa.eu/policy-documents/eu-biodiversity-strategy-for-2030-1>

<sup>96</sup> <https://hrvatska2030.hr/wp-content/uploads/2021/02/Nacionalna-razvojna-strategija-RH-do-2030.-godine.pdf>

<sup>97</sup> [http://www.natura2000.si/fileadmin/user\\_upload/Dokumenti/LIFE\\_IP\\_NATURA\\_SI/Rezultati/C.3.4\\_IP\\_PAF\\_Slovenia\\_2021-2027\\_finalV2.pdf](http://www.natura2000.si/fileadmin/user_upload/Dokumenti/LIFE_IP_NATURA_SI/Rezultati/C.3.4_IP_PAF_Slovenia_2021-2027_finalV2.pdf)

<sup>98</sup> [http://www.natura2000.si/fileadmin/user\\_upload/Dokumenti/LIFE\\_IP\\_NATURA\\_SI/Rezultati/C.3.4\\_IP\\_PAF\\_Slovenia\\_2021-2027\\_finalV2.pdf](http://www.natura2000.si/fileadmin/user_upload/Dokumenti/LIFE_IP_NATURA_SI/Rezultati/C.3.4_IP_PAF_Slovenia_2021-2027_finalV2.pdf)

<sup>99</sup> [https://www.researchgate.net/publication/310678495\\_Integration\\_of\\_Nature\\_Protection\\_in\\_Forest\\_Policy\\_in\\_Croatia](https://www.researchgate.net/publication/310678495_Integration_of_Nature_Protection_in_Forest_Policy_in_Croatia)

<sup>100</sup> <https://www.hsups.hr/privatno-sumarstvo/>

quality is a result of traditional multipurpose management, to be spilled over to the entire biosphere area.

Nature knows no borders. **Transboundary cooperation is a key factor for biodiversity and habitat conservation and restoration.** Natura 2000 network on the Slovene and Croatian side is not yet aligned as diverse species and habitats are often protected only on one side of the international border; the discrepancy is especially noted on riverbanks of transboundary rivers (e.g. Bregana, Kolpa/Kupa). Thus, it is necessary to align the priorities and strengthen the **joint conservation planning and actions on the regional and transboundary levels.**

Slovenian wire fence has a negative impact on wildlife and could affect the implementation of certain types of cross-border projects.

**Green infrastructure is an efficient response to climatic challenges by nature-based solutions application and can help meet the 2030 sustainable development goals (SDGs).** Mostly applied to Natura 2000 network, green infrastructure supports territorial green corridors (species connectivity), biodiversity and ecosystem services.

**Green surfaces in urban areas** can provide multipurpose benefits, as they address water management, reduce effects of heat waves, improve air quality, and contributes to life quality in general. Multipurpose green infrastructure in urban areas could be stimulated to improve climate resilience against flood risks (water retention measures), urban water management (water harvesting, storm management), and air quality.

Air quality in the entire cross-border area is good, particularly due to the abundant natural areas. However, the **air quality in urban areas remains an environmental and health problem.** Measurements show that many Croatian and Slovene cities fail to approach the limit values defined by European legislation with regard to the quality of ambient air. In addition to be the main source of NO<sub>2</sub> emissions, transport is usually the prevailing source of particulates (PM<sub>10</sub>) in cities<sup>101</sup>. The issue of air pollution is largely linked to particles (PM<sub>10</sub>) and, in summer, to ozone. Air pollution generally increases in the wintertime as a result of increased emissions from heating. Analysis of PM<sub>10</sub> sources indicates that the cause of this pollution is largely road transport, especially in urban centres with heavy traffic and in poorly ventilated basins, emissions from heating appliances and industrial sources. Greater attention should be devoted to education, notification and awareness-raising<sup>102</sup>.

### 3.2.6. Sustainable urban mobility

According to the EC, mobility within cities is increasingly difficult and inefficient. Urban mobility is still heavily reliant on the use of conventionally-fuelled private cars. Only slow progress is being made in shifting towards more sustainable modes of urban mobility<sup>103</sup>.

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<sup>101</sup> <http://kazalci.arso.gov.si/en/content/impacts-transport-air-quality-urban-areas>

<sup>102</sup> [https://www.arso.gov.si/en/soer/air\\_pollution.html](https://www.arso.gov.si/en/soer/air_pollution.html)

<sup>103</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52013DC0913>

Activities in the field of sustainable mobility aim to ensure access to public transport or ensure **conditions for sustainable mobility, which includes walking and cycling. To improve public passenger transport**, the development of comprehensive sustainable and accessible mobility in cities must be established and some cities/municipalities in the region already started (Zagreb, Ljubljana, Ljutomer, Murska Sobota, Piran, Umag, Novigrad etc). Further efforts must be made to prepare **local mobility strategies taking into account local needs** and be supported with significant awareness-raising actions. Smaller and lighter specialised vehicles for passengers should be available in urban areas, which will be powered by alternative fuels, and will use new technologies. EU plans towards green transition additionally stimulate the process through the National development strategies that promote the **use of alternative fuels, establishment of the electric charging stations network**, intermodality of passenger transport, and expansions of zones for pedestrians and cyclists/scooters.

The main challenge of cycling is the **development of cycling infrastructure**. A network of interconnected, safe and comfortable cycling routes needs to be developed. Cycling routes are essential to increase the number of daily journeys – for example to work or to school. Furthermore, the development of a cycling infrastructure is important for the development of tourism and recreation.

Even so, urban scheduled **public transport use decreased** slightly in 2019 (1-2%) instead of achieving a positive trend. According to the European Alternative Fuels Observatory, in 2018, Slovenia had 5 public charging points per plug-in electric vehicle while Croatia had only 2 (EU average is 8)<sup>104</sup>. At the end of 2018, in Slovenia there were 328 electric vehicles (EV) charging stations, 1 hydrogen fuelling station, 115 liquefied petroleum gas (LPG) fuelling stations, 2 liquefied natural gas (LNG) fuelling stations<sup>105</sup> and 5 compressed natural gas (CNG) fuelling stations (4 in programme area - 2 in Ljubljana, 1 in Celje and 1 in Maribor)<sup>106</sup>. In 2019, 1 hydrogen refuelling station was in Croatia<sup>107</sup>. There are approximately 800 connectors for charging electric vehicles located at approximately 300 public EV charging stations<sup>108</sup>. Croatia has 536 LPG fuelling stations<sup>109</sup> and 3 CNG fuelling stations (which are in the programme area)<sup>110</sup>. The first liquefied natural gas (LNG) filling station has opened in Croatia in December 2019. These numbers indicate the beginning of sustainable urban mobility in the region.

Today's bottleneck in the programme area is deploying charging infrastructure to service the projected density of electric vehicles. It is therefore vital to promote the **integration of electric vehicle charging into existing buildings** (e.g., destination charging, etc.) **and grid infrastructure**. The location of charging points will continue to expand beyond single family households and will affect the integration within a wider range of building types and/or public spaces. Implementing concrete pilot actions that would integrate the nexus of three different sectors (digital transformation of transportation, buildings, and electric power), both Slovenia and Croatia, could clearly shape the electric vehicle charging strategy and boost the progress of the energy transition.

<sup>104</sup> <https://ec.europa.eu/transport/sites/transport/files/2019-transport-in-the-eu-current-trends-and-issues.pdf>

<sup>105</sup> <https://www.energetika-portal.si/dokumenti/strateski-razvojni-dokumenti/strategija-za-alternativna-goriva/>

<sup>106</sup> <https://www.ngva.eu/stations-map/>

<sup>107</sup> [https://www.fch.europa.eu/sites/default/files/file\\_attach/Brochure%20FCH%20Croatia%20%28ID%209473034%29.pdf](https://www.fch.europa.eu/sites/default/files/file_attach/Brochure%20FCH%20Croatia%20%28ID%209473034%29.pdf)

<sup>108</sup> <https://www.expatincroatia.com/electric-vehicle-ev-charging-stations/>

<sup>109</sup> <https://www.mylpg.eu/stations/croatia/list/>

<sup>110</sup> <https://www.ngva.eu/stations-map/>

**Travel times in public transport are quite long.** In Slovenia and Croatia, a considerable step forward in sustainable mobility has been made in recent years by presenting a public network of shared bicycles, while efficient public transport that would efficiently cope with daily migrations remains a challenge, in particular in rural areas. Cycling has become a very popular sport and means of transport in Slovenia and Croatia.

### 3.2.7. Conclusions

The area is dominated by **availability of renewable energy sources, significant energy efficiency improvement potential in both private and public sector** (particularly in public buildings and cultural heritage). The scattered settlements offer development of strategies and business models for energy sustainability. **Intergovernmental cooperation and grid availability** support such ambitions, the challenges remain the digitalisation (data gathering and exploitation) for smart community development, and the increase of knowledge and capacity for energy transition.

The digital transformation of buildings, neighbourhoods and cities is key for achieving the European climate goals, while directly improving the quality of life. Pioneering pilot actions within the programme area would provide evidence on possible solutions for the challenges of the European renovation wave requirements. Pilot actions would provide guidance to the communities on which topics need to be considered and linked by the digital transformation.

The main **climate change pressures are expected in uneven precipitation patterns and increased temperatures**. Expected flood events (including sea level rise), fires and risk of earthquakes and environmental disasters put additional pressure on improvement of local civil protection and relief forces, their preparedness, and joint cross-border communication and response protocols.

Circular economy on the regional level is established only on some levels of waste collection and reuse; however, **all resources of the territory should be managed efficiently aiming to develop sustainable consumption and self-sufficiency, support local reuse practices, new business models and skills**.

Water as one of the key resources is relevant not just as a resource, but mostly as an important habitat and attraction of the region. One of the key territorial features are river basins, as well as forests that protects the water sources. **Pollution mitigation and joint river basin management are to be tackled further**.

The integrative component of the cross-border area is a **well-preserved natural environment with 40% Natura 2000**. It should not be regarded as an obstacle, but rather represent a major boost for **social-economic development (tourism, local bio economies), cooperation and further investments in nature interpretation and controlled accessibility**. Protected areas in the cross-border area are not actually managed across the border as protection level does not apply (Kočevsko Snežnik - Gorski Kotar; Kozjansko-Zagorje, Gorjanci-Žumberačko Zagorje, Kras-Čičarija; transboundary river basins). Additionally, joint species and habitats are not equally monitored. Awareness-raising on the environmental protection of different target groups (inhabitants, visitors) should continue. Green infrastructure for climate resilience and nature connectivity can be further agreed upon, planned and prepared.

**Identification of local mobility needs** in nature rich and predominantly rural settlements of the region calls for **better connectivity solutions and sustainable mobility demonstrative cases** in urban areas.

Cycling infrastructure supports tourism development and is to become linked, both territorially as well as intermodally.

### 3.3. Policy Objective 3 - A more connected Europe

The Interreg Programme area Slovenia-Croatia is characterised by dynamic transit and the mobility flows in the direction northwest - southeast, especially between the two capitals Ljubljana - Zagreb. The area between the Alps, the Dinarides and the Adriatic Sea is located on the junction of transport routes of European importance.

#### 3.3.1. Transport characteristics in the area

The border crossings between countries and main road/rail connections, which define the Baltic Adriatic (Graz – Maribor – Ljubljana – Koper/ Trieste) and the Mediterranean (Ljubljana / Rijeka – Zagreb – Budapest, Ravenna/Trieste/Koper- Ljubljana – Budapest) TEN-T corridors are shown on the map. Zagreb, Ljubljana, Maribor and Rijeka are the main urban areas lying on the corridors. Main maritime ports and airports are also shown on the map.

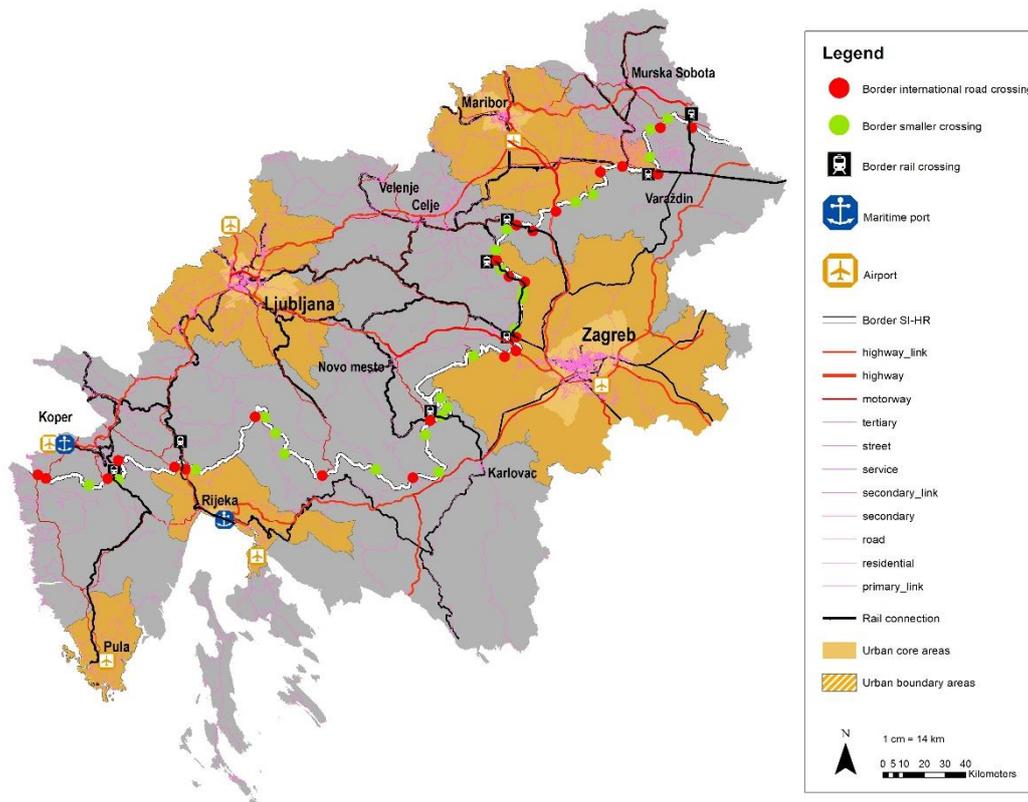


Figure 12: Infrastructure map of the programme area. Source: Own edition, based on open-source data.

### 3.3.1.1. Road infrastructure

In the Slovene part of the programme area, the road network is larger, and the road density is higher than in the Croatian part (Figure 19). **Slovenia as a country has one of the highest road densities in Europe (2,3 km/km<sup>2</sup>)<sup>111</sup>** while Croatia has significantly lower road density than the European average<sup>112</sup>. In the programme area, **the road density (1,7 km/km<sup>2</sup>) is higher than the European average (1,0 km/km<sup>2</sup>)** while **the motorisation rate<sup>113</sup> in the programme area is lower than the EU average** (Figure 20), mainly because of the relatively lower motorisation rate in the Croatian part. Higher road density is probably the result of a dispersed settlement system and the geographical characteristics. This results in higher maintenance costs which can be a huge financial burden in national and local budgets.

Motorisation rate is high in Slovenia due to high road accessibility, lack of efficient public transport and expansion of suburban areas to the rural area. In the whole programme area, the motorisation rate is lower than the EU average, which provides the opportunity for the development of public transport and use of other sustainable modes of transport.<sup>114</sup>

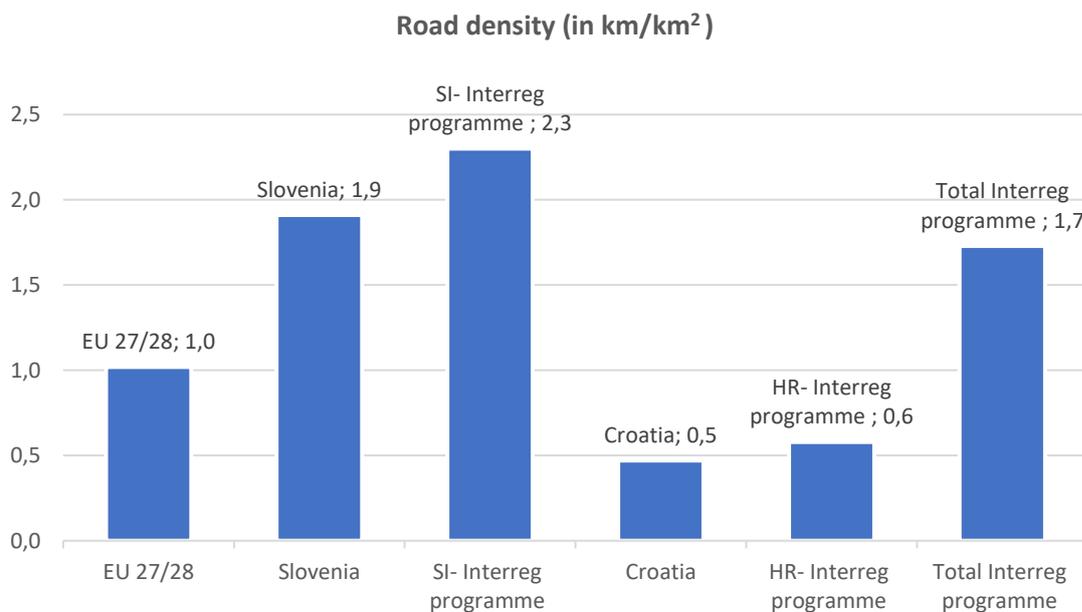


Figure 13: Road density in the Cross-border Programme area. Source: Own edition, based on SISTAT, 2019; DZSHR, 2019 data.

<sup>111</sup> SISTAT, 2019

<sup>112</sup> DZSHR, 2019

<sup>113</sup> SISTAT, 2019; DZSHR, 2019

<sup>114</sup> SISTAT, 2019; DZSHR, 2019

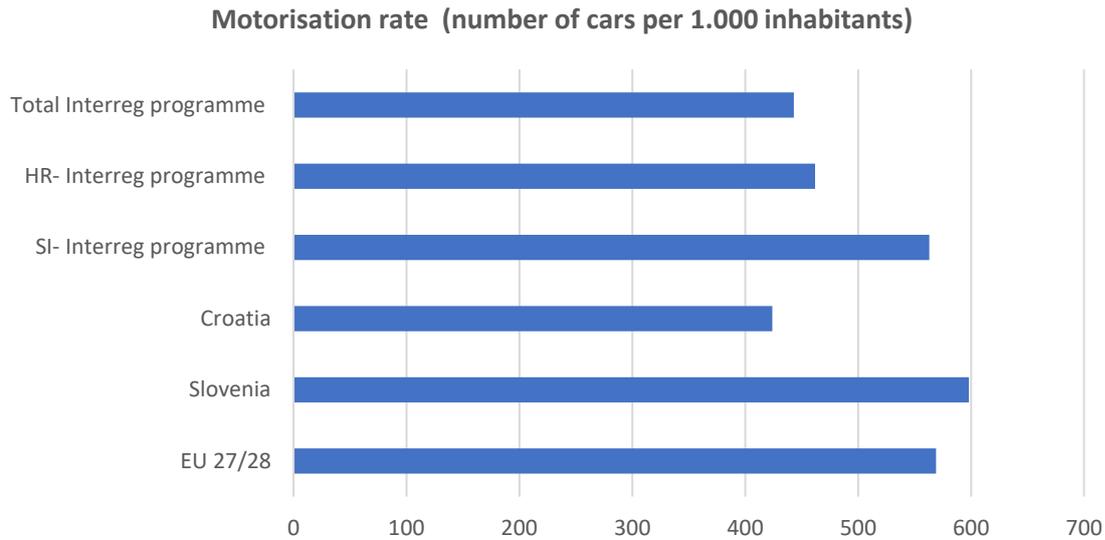


Figure 20: Motorisation rate (number of cars per 1.000 inhabitants) in the Cross-border Programme area . Source: Own edition, based on SISTAT,2019; DZSHR, 2019 data.

### 3.3.1.2. Cycling

There are 10 national major cycling routes in Croatia and 8 in Slovenia, 7 of them crossing the programme area. Two of the cycling routes are running along the Slovenia and Croatia border: Spa bike route is running mainly on the Slovene side (Murska Sobota – Metlika – Karlovac – Plitvička jezera – Neretva) and Zagorska Karolina route on the Croatian side (Dobrovnik – Lendava – Čakovec – Varaždin – Zagreb - Karlovac – Vrbovsko – Hreljin – Trsat - Rupa). Sava route, Drava route, Mura route, Soško-Kraško-Jadranska route (connecting to Zagorsko Karolina route) and Adriatic route are all crossing the border in the North-West/South East direction.

Indicated routes correspond to three EuroVelo routes running through the programme area: Mediterranean route (number 8), Baltic-Adriatic (number 9) and Iron curtain route (number 13)<sup>115</sup>.

Both countries have the main national cycling routes in their national legislations defined, but not many of them are offering cycling infrastructure that would meet the quality standards needed for safe and comfortable cycling. Even though there has been recent investment in cycling infrastructure, also with the support of EU funds, there is still a big gap in quality in comparison with more cycling friendly European countries.

115 <https://en.eurovelo.com/slovenia>

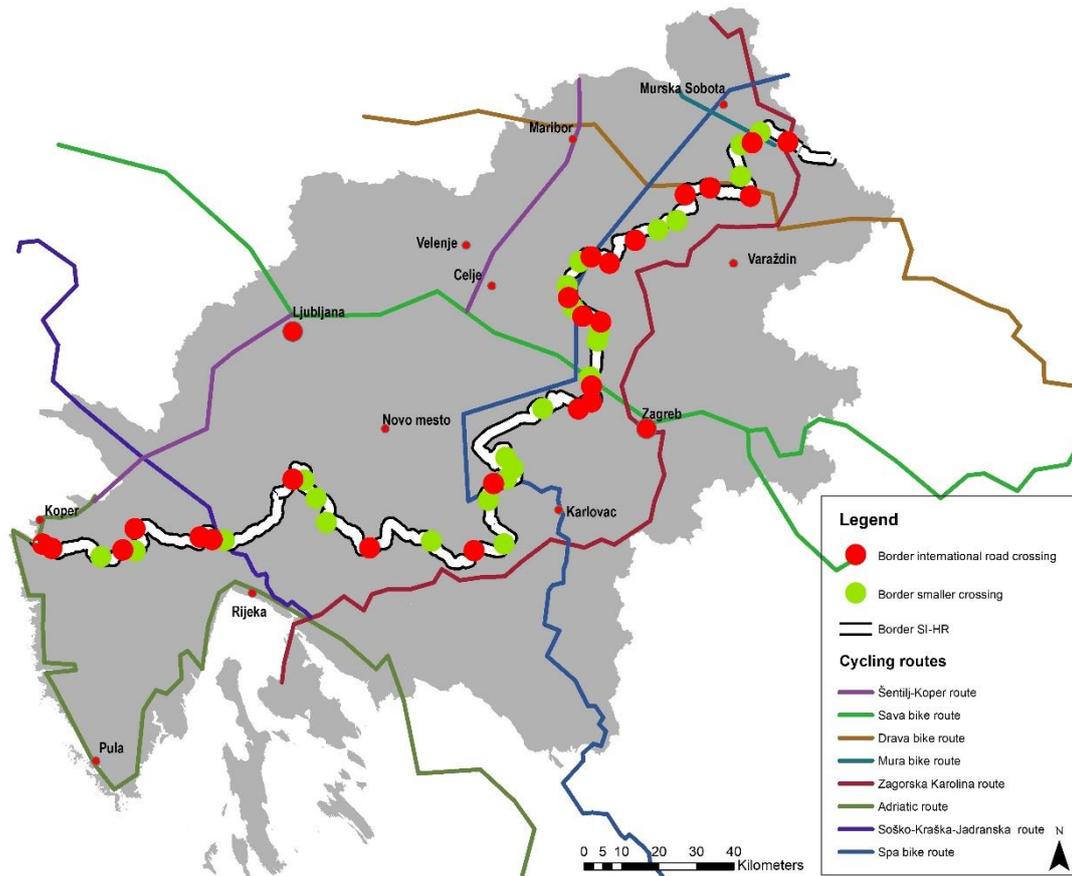


Figure 14: Main cycling routes in the programme area.

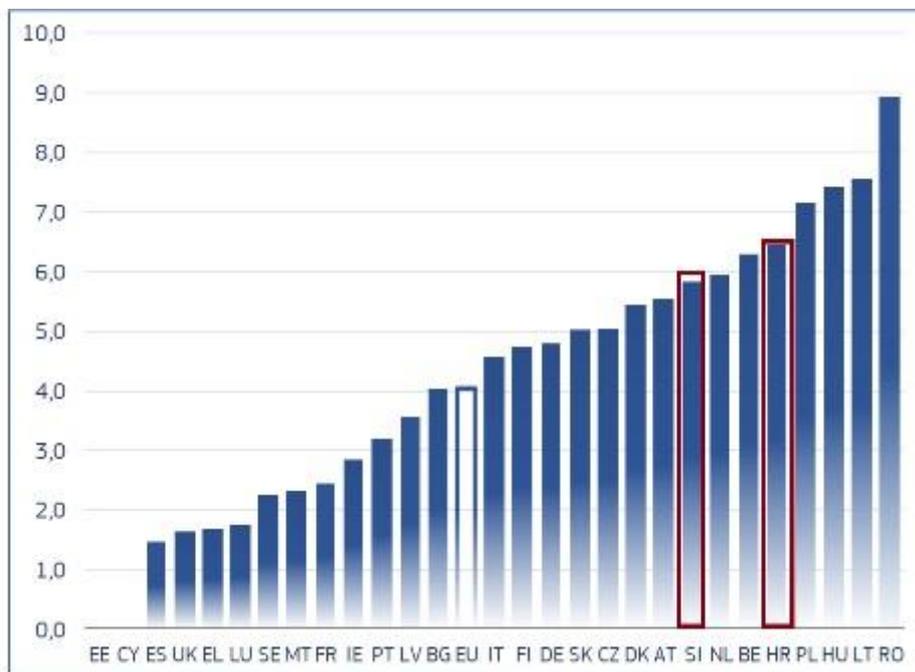


Figure 22: Cyclists fatality rates per million population by country, 2016 or latest available year.<sup>116</sup>

<sup>116</sup> Source: CARE database EUROSTAT for population data.

As a result, both countries demonstrate high percentage of cyclist fatalities of all road fatalities compared to the EU average.

In Slovenia, the planning of cycling paths is currently being carried out mainly during negotiations with the municipalities which are the main bearers of the financial burden, often leading to being less attractive and suitable for daily and tourist mobility. They are also lacking the cycling rest areas, signposts and cycling tourist offer<sup>117</sup>.

North-west part of Croatia is a good practice when dealing with the construction of cycling paths and lanes within public roads. More than 50% of cycling infrastructure was built on county and local roads in Međimurje county (119 of 183 km)<sup>118</sup>.

The Republic of Croatia, through relevant ministries, financially encourages local and regional authorities with an emphasis on underdeveloped continental areas to build, adapt and improve public tourism infrastructure.

Examples of good practice are the "Parenzana project" in Istria County through the Program for the development of public tourism infrastructure in the function of active tourism and the project "Construction of a lookout with a rest area for cyclists" in the municipality of Sveta Marija in Međimurska County through the Cyclotourism Development Program.

Monitoring of quality and suitability of cycling paths in both countries is mainly in the domain of cyclist NGOs (members of Slovenska kolesarska mreža in Slovenia and Sindikat biciklista in Croatia).

However, there is an increasing interest in cycling in both countries, therefore, is expected more activities to support this type of transport, whether for recreational, commuting, or tourism purposes. Quite some effort to promote cycling in both metropolitans was made in the last few years, positioning Ljubljana among one of the top 20 best cities for cyclists (according to Copenhagenize Index in 2019<sup>119</sup>), while Zagreb is developing high quality cycling path towards Bregana (border with Slovenia).

Although the cycling tourist destination marketing is more developed in Croatia than in Slovenia (as opposed to the developed cycling infrastructure), there are some attempts to position Slovenia as a mountain biking destination, mainly as a result of bottom-up initiatives. Kočevje for example is organising one-week mountain bike festival Flat-out days each year with many international guests.

Cyclists are currently using cross-border crossings located on the main roads which are not adjusted for their needs, but only for the car traffic. Croatia not being part of the Schengen Zone also adds to this issue. The goal is to redirect the cyclist from the main roads.

### 3.3.1.3. Railway infrastructure

**The quality of railway infrastructure in both countries of the programme area significantly lags behind the EU average. Completion of the TEN-T Core Rail Network in both countries stands at 5-6%, compared to the EU average of 60%. There is no TEN-T High Speed Rail Core Network in either country**

<sup>117</sup> Izdelava modela povezanosti celotne Slovenije s kolesarskimi potmi, 2017

<sup>118</sup> Dani cikloturizma, Operativni plan razvoja cikloturizma Međimurske županije

<sup>119</sup> <https://copenhagenizeinde.g.eu/cities/ljubljana>

and railway infrastructure is in need of modernization and improved performance of rail services, as well as enhanced multimodality.

Slovene core TEN-T network has electrified network but the ERTM's still needs to be developed in Zidani Most - Dobova, Pragersko - Maribor and Maribor - Šentilj. Axle load needs to be improved in some sections, the average speed to 100 km/h needs to be enabled and the length of train needs to be extended by 740 m. In the comprehensive network the ERTM's (ETC) European rail management control needs to be implemented<sup>120</sup>.

Municipalities of Jugovzhodna Slovenija region have established an initiative to revitalize the Dolenjska rail line, which can become a good example of how local communities can drive the development of rail infrastructure<sup>121</sup>.

Croatia is planning its railway development according to the European strategies and requirements (TEN-T, ERTMS, TSIs, environmental protection, climate protection, etc.). Electrification of the railway network is needed in some sections.

The outdated and limited railway infrastructure results in low competitiveness, low quality of service and a general preference for other transport modes (Strategija, 2017)<sup>122</sup>.

Ljubljana-Zagreb rail line is planned to be improved, the speed from 60 to 100 km/h will be reached and other standards for ERTMS will be implemented. From Connecting Europe Facility (CEF) Transport co-funding, Croatia has several ongoing projects in rail infrastructure: preparation for the construction of the second track, upgrade and modernisation on the railway line section Škrljevo-Rijeka-Jurdani and upgrading of the railway section Oštarije – Škrljevo (CEF, 2014)<sup>123</sup>.

#### 3.3.1.4. Maritime transport

In the programme area, there are two main ports, Koper and Rijeka. Koper port is part of the Baltic-Adriatic TEN-t corridor and Rijeka port is part of the Mediterranean TEN-T network (Ljubljana/Rijeka – Zagreb – Budapest – border with Ukraine). Both ports are connected with overseas destinations as well as with Central and Eastern Europe with the transport of all types of cargo, and the quality of service can be compared to the northern Adriatic ports<sup>124</sup>. Koper port has the highest share in maritime cargo transport among the known data for cargo ports (Table 6).

<sup>120</sup> <https://www.gov.si/assets/ministrstva/MzI/Dokumenti/Strategija-razvoja-prometa-v-Republiki-Sloveniji-do-leta-2030.pdf>

<sup>121</sup> [https://www.dolenjskilist.si/2019/06/20/221235/novice/dolenjska/Obcine\\_storile\\_prvi\\_operativni\\_korak\\_za\\_revitalizacijo\\_dolenjske\\_zeleznice/](https://www.dolenjskilist.si/2019/06/20/221235/novice/dolenjska/Obcine_storile_prvi_operativni_korak_za_revitalizacijo_dolenjske_zeleznice/)

<sup>122</sup> <https://mmpi.gov.hr/UserDocImages/arhiva/MMPI%20Strategija%20prometnog%20razvoja%20RH%202017.-2030.-final.pdf>

<sup>123</sup> [https://ec.europa.eu/inea/sites/default/files/cefpub/eu\\_investment\\_in\\_transport\\_in\\_croatia.pdf](https://ec.europa.eu/inea/sites/default/files/cefpub/eu_investment_in_transport_in_croatia.pdf)

<sup>124</sup> <https://www.gov.si/assets/ministrstva/MzI/Dokumenti/Strategija-razvoja-prometa-v-Republiki-Sloveniji-do-leta-2030.pdf>

Table 6: Maritime cargo transport. Source: Eurostat, 2019.<sup>125</sup>

Ports	Cargo transport (2019, tonnes 1000)	%
Koper	22,114	86
Rijeka	3,355	13
<b>Total Interreg programme</b>	<b>25,469</b>	<b>100</b>

In the programme area, there are also passenger ports, which are Koper, Izola and Piran (SI) and Rijeka, Brestova, Porozina, Valbiska, Merag, Cres, Martinšćica, Lopar, Rab, Prizna, Žigljen, Novalja, Unije, Srakane Vele, Susak, Ilovik, Mali Lošinj (HR). Maritime transport is essential for accessing Croatian islands. Unsufficient connections between the islands as well as between the mainland and islands, seasonality of traffic, insufficient public transport and unharmonized schedule between different types of public transport are resulting in unequal and lower accessibility of the islands<sup>126</sup>.

**The majority (98%) of passenger transport is taking place in the Croatian part** of the programme area due to the larger share of sea surface and touristic nature of the area (SISTAT, 2019; DZSHR, 2019).

### Air transport

There are 6 international airports (Rijeka, Zagreb, Pula in Croatian part, Ljubljana, Maribor and Portorož in Slovene part) in the region.

Air transport concerning the traffic of goods is comparable between both parts of the programme, but air passenger transport in the Croatian part accounts for **72 %** of all passenger traffic of the programme area. Passenger air traffic in Zagreb alone accounts for 56% of all passenger air traffic of the programme area.

### 3.3.2. Challenges of improving the transport infrastructure and implementing sustainability

#### 3.3.2.1 Completion and characteristics of the TEN-T corridor in the programme area

The TEN-T Regulation proposes two levels of network planning, namely: comprehensive network and core network. In the programme area, both networks are still lagging behind in terms of standard for TEN-T Regulation but the listed project should be improved till 2050<sup>127</sup>.

<sup>125</sup> [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar\\_go\\_am\\_si&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_go_am_si&lang=en),  
[https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar\\_go\\_am\\_hr&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_go_am_hr&lang=en)

<sup>126</sup> <https://mmpi.gov.hr/UserDocImages/arhiva/MMPI%20Strategija%20prometnog%20razvoja%20RH%202017.-2030.-final.pdf>

<sup>127</sup> <https://www.gov.si/assets/organi-v-sestavi/DRSI/Dokumenti-DRSI/Sektor-za-zeleznice/Smernice-za-zelezniske-strukturne-in-funkcionalne-podsisteme.pdf>



Figure 15: TEN-T corridor in the Cross-border Programme area Slovenia-Croatia. Source: Own edition.

The Interreg Programme Slovenia-Croatia is crossed by two TEN-t corridors: the southern part of the Baltic-Adriatic corridor and the Mediterranean corridor. The **Baltic-Adriatic TEN-t corridor represents the main transit line through the area from west to east.**<sup>128</sup> On the southern part of the Baltic-Adriatic corridor a major investment in railway network is underway. New railway line is being built between Koper and Divača, thus coping with increasing cargo that is handled in the port of Koper, which is of significant importance not only for the Slovene economy and transport sector, but also for landlocked countries in the region. 60% of goods from the Port of Koper are transported by rail.

The following passenger railway transport projects on the Baltic-Adriatic corridor are almost completed: upgrade of the railway lines Zidani Most - Celje, Poljčane - Slovenska Bistrica, the station and railway hub Pragersko and the upgrade of the railway line Maribor - Šentilj.<sup>129</sup>

Apart from the western-eastern transit route on the northern side of the Interreg Programme Slovenia-Croatia, the Mediterranean corridor to the south connects the following highways: Zagreb – Ljubljana, Budapest-Zagreb, Budapest-Maribor and Zagreb-Rijeka. The railway transit connects in the northern part Budapest-Maribor-Zidani Most-Zagreb and in the southern part Budapest-Zagreb, where both railway lines merge at the junction, towards Rijeka, another important port in the programme area (look Infrastructure map above, page 50-51). If the following projects will be finished in time, more sustainable measures concerning improved energy efficiency and reduced CO<sub>2</sub> emissions in the transit with the use of railway public and transport infrastructure could be implemented.

### 3.3.2.2. Low accessibility of public transport

In the Slovene and Croatian part of the programme area there are still areas with poor accessibility (more than 5 km to reach the railway network or other public transport mode). This especially hinders the regional development of the border area (e.g. Jugovzhodna Slovenia region)<sup>130</sup>. The fact that Kočevska got the railway transport in 2020 could exert a positive influence on the development of the

<sup>128</sup> <https://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/map/maps.html>

<sup>129</sup> <https://www.zelenaslovenija.si/EOL/Clanek/2428/clanki-okolje/4-zeleni-forum-prednost-zelezniska-infrastruktura-in-javni-potniski-promet>

<sup>130</sup> <https://www.gov.si/assets/ministrstva/MzI/Dokumenti/Strategija-razvoja-prometa-v-Republiki-Sloveniji-do-leta-2030.pdf>

region. On the Croatian side, less developed in this aspect are border areas, the southern part of Karlovačka county and the islands of Cres and Rab<sup>131</sup>.

Inhabitants with good accessibility to any public station (less than 500 m from their home) with a satisfactory frequency of the services are mostly located along the rail network in Slovenia. **The majority of areas with people located more than 500 m from the station are located in the regions of Pomurje, Podravje, Savinjska, Zasavje and Posavje, especially in the areas next to the border**<sup>132</sup>.

Accessibility of the public transport in the Croatian part of the programme area is much better in agglomerations and along main transit routes than in less populated areas<sup>133</sup>.

International public coach system is not regulated nor subsidized, but its provision is left to the open market. As a result, only commercial lines connecting some main cities operate, while local public road transport practically does not exist.

International commercial lines are not allowed to collect local passengers along the line. According to the data of Slovene and Croatian international public road transport, there are 23 bus lines (in Osrednjeslovenska and Podravska region) in Slovenia and 33 bus lines in Croatia (in Istarska county, Varaždinska, Primorsko-goranska county and City of Zagreb). One-third of border crossings (19 out of 58) are available for bus transport throughout the whole year. Especially in the high tourist season, there is a need for the crossings to be available to the local population since there can be long waiting times because of tourist flows travelling to the Adriatic coast. This would be a prerequisite for any type of common service (health, social, cultural, business).<sup>134</sup>

There are six daily rail connections on the line Ljubljana-Zagreb, two connections on the line Ljubljana-Rijeka/Ljubljana-Opatija and one connection on the line Maribor-Ljubljana-Divača-Pula. On Ormož-Središče ob Dravi-Čakovec there are currently two connections. But there is no direct connection between Metlika and Karlovac.<sup>135</sup>

The accessibility of public transport, especially of railway stations, should be the main element of spatial development in the programme area, including increased population density in the area 500 m to the public station, increased number of stations, frequency of services and effectiveness of transport in the remote parts of Pomurje, Podravje, Savinjska, Zasavje, Posavje, Jugovzhodna Slovenia, Karlovac County, Cres, Rab and in the corridor of 80 km from the border area.

### 3.3.2.3. Low usage of sustainable transport modes

Regarding passenger transport, the modal split for Croatia and Slovenia for 2018 shows that both countries record high usage of passenger cars and car travel (SI 86%, HR 83%) which are both above the EU average. Concerning railway passenger transport, Slovenia and Croatia are well below the EU average. However, the use of buses and coaches in both countries is higher than the EU average.

<sup>131</sup> <https://mmpi.gov.hr/UserDocImages/arhiva/MMPI%20Strategija%20prometnog%20razvoja%20RH%202017.-2030.-final.pdf>

<sup>132</sup> [https://www.care4climate.si/\\_files/196/Izrocek-ZRC-SAZU.pdf](https://www.care4climate.si/_files/196/Izrocek-ZRC-SAZU.pdf)

<sup>133</sup> Strategija pametnog razvoja Republike Hrvatske 2017.-2030.

<sup>134</sup> Picogramme icons are downloaded from [https://www.flaticon.com/free-icon/train\\_177892](https://www.flaticon.com/free-icon/train_177892).

<sup>135</sup> <https://reiseauskunft.bahn.de/bin/query.exe/en?/newrequest=yes>

Slovenia does not have a tram or metro. Croatia is using a tram and its usage is above the EU average.

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In Slovenia (2012), in terms of passenger transport, just 8% of people were using public transport, 5% bicycles and 18% walking transport mode.

The road transport covers two thirds of land freight transport in both countries which is less than the EU average (73%). The rail freight transport represents one third in modal split in Slovenia, which is significantly above the EU average (17%). In Croatia, 6% of freight transport is transported via inland waterways transport.<sup>137</sup>

On the cross-border rail transport, a negative trend of number of passengers carried by railways and daily rail connections is shown at the 7 border crossings (Buzet/Rakitovec, Ilirska Bistrica/Šapjane, Metlika/Kamanje, Dobova/Savski Marof, Imeno/Kumrovec, Rogatec/Đurmanec, Čakovec/Središče ob Dravi) (Table 7).

Table 7: Rail transport statistic, change in passenger transport from 2014 to 2019<sup>138</sup>

Destination	Border Crossing	Number of passengers carried by railways /year, Border crossing: (2014)	Number of passengers carried by railways /year, Border crossing: (2019)	Change 2014-2019 %	Domestic, 2019 %	EU and others, 2019 %
Ljubljana–Zagreb	Dobova	422.811	249.268	-26	23	77
Ljubljana–Rijeka	Illir.Bistr.	31.143	38.726	11	17	83
Ljubljana-Opatija						
Maribor-Ljubljana-Divača-Pula	Rakitovec	12.807	5.771	-38	46	54
Ormož – Središče ob Dravi - Čakovec	Sred. ob Dr.-žel	1.996	5.351	46	49	59
Metlika/Črnomelj – Karlovac	Metlika	1.736	1.201	-18	41	59
	<b>Together passengers</b>	<b>470.493</b>	<b>300.317</b>	<b>-22</b>		

Statistical data for the railway sections in the border areas show that there **were only 240.000 passengers (approx. 657 daily) crossing the border by railway** on the main route between Ljubljana and Zagreb in 2019<sup>139</sup>. The commuting on other local rail lines is even lower. The Transport development strategy in Slovenia till 2030 forecasts the growth of rail passengers by five times in

<sup>136</sup> <https://ec.europa.eu/transport/sites/transport/files/2019-transport-in-the-eu-current-trends-and-issues.pdf>

<sup>137</sup> <https://ec.europa.eu/transport/sites/transport/files/2019-transport-in-the-eu-current-trends-and-issues.pdf>

<sup>138</sup> <https://www.policija.si/o-slovenski-policiji/statistika/mejna-problematika/stevilo-potnikov-na-mejnih-prehodih>

<sup>139</sup> DZS, Transport ii komunikacije, željeznički granični promet putnika prema graničnim prijelazima

comparison to 2011 on the main route Ljubljana-Zagreb. The trend is that passenger traffic in the border crossings Dobova has decreased since 2014 by 26%. A negative trend is present also at other local rail connections for border crossings Rakitovec and Metlika. At the crossing of Ilirska Bistrica the passenger traffic increased by 11%, and in Središče ob Dravi has increased by 46% number of passengers from 2014 to 2019.

In 2019, 82 million people passed the Croatia – Slovenia border<sup>140</sup>. On average 240.819 buses and 2.491.548 trucks crossed the borders. Exit transport from the Croatian to the Slovene border is higher than entry to Croatia (from Slovenia). That means that the transport is greater in direction to the north. From the tables above we can conclude that foreign freight and passenger transport and passengers predominates in comparison to domestic transport/passengers.

**Car passengers account for 99% of the share in the total cross-border passenger transport.** The majority of border crossings are taking place in the months of June and August, due to the summer tourism season in Croatia.

**Foreigners are traveling through all railway border crossings, mostly Dobova and Ilirska Bistrica. 98% of road passengers use the main route Ljubljana-Zagreb.** We can conclude, in terms of public transport usage in this area, we are not even close to the target values, set for year 2030. In the Transport development strategy of the Republic of Slovenia, a **500% increase** is anticipated for this section. **As we can see from the data above the trend of rail transport passenger transport has decreased at the main route Ljubljana-Zagreb from 2014-2019.**

In the cross-border programme area, the Slovene Ministry of infrastructure (SI) and the Ministry of the Sea, Transport and Infrastructure (HR) are planning major transport investments. Local roads, cycling paths and pedestrian infrastructure are in the domain of the municipalities, in some cases with an agreement with regional agencies/counties.

Both countries have adopted national strategies for the development of transport, following a similar path with measures like increasing intermodality in the passenger transport and development of intermodal passenger transport hubs, and energy traffic efficiency system, adjustment of the legal framework and guidelines according to the requirements of the European Union, reduction of the negative environmental impacts of transport and adaptation to climate changes and their mitigation and reduction of CO<sub>2</sub> (Strategija, 2017)<sup>141</sup>.

The investments and measures in transport are planned by the Transport development strategy (SI) adopted in July 2015 and the National programme for development of Transport by 2030 adopted in November 2015. However, more efforts will be needed to address the investment backlog in rail infrastructure which dates back several decades. **The national programme envisages EUR 9 billion in**

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[https://www.dzs.hr/PXWeb/Table.aspx?layout=tableViewLayout1&px\\_tableid=T1.px&px\\_path=Transport%20i%20komunikacije\\_\\_Grani%c4%8dni%20promet&px\\_language=hr&px\\_db=Transport%20i%20komunikacije&rxid=d32323b2-3296-4e4d-a340-36d170e23dd4](https://www.dzs.hr/PXWeb/Table.aspx?layout=tableViewLayout1&px_tableid=T1.px&px_path=Transport%20i%20komunikacije__Grani%c4%8dni%20promet&px_language=hr&px_db=Transport%20i%20komunikacije&rxid=d32323b2-3296-4e4d-a340-36d170e23dd4)

<sup>141</sup> <https://www.gov.si/assets/ministrstva/MzI/Dokumenti/Strategija-razvoja-prometa-v-Republiki-Sloveniji-do-leta-2030.pdf>

**infrastructure investments for the period 2016-2022, and an additional EUR 7.9 billion to be invested by 2030.** The main focus of investments in the past was on the motorway network (Transport, 2019).<sup>142</sup>

Croatian Transport Development Strategy 2017-2030, adopted in 2017, is planning concrete investments into the further transport development with a less negative impact on the environment. As much as 3 billion EUR will be invested in the railway from the EU fund, like the renovation of the corridor to Hungary. Other funds (approx. 3 billion EUR) will go to the modernization of airports and road network construction (Vecernji list, 2020).<sup>143</sup>

National Integrated Energy and Climate Plan anticipates 76 million EUR from 2021-2030 and 445 million EUR from 2031-2050 for the integration of alternative sources of energy into the traffic (Integrated, 2029).<sup>144</sup>

We can conclude that both national documents have a vision in favour for sustainable transport but a lot of the budget is allocated for the new road network in parallel, which actually works in the opposite direction. The cross-border Interreg programme Slovenia - Croatia could support the project of cross-border public transport and use of intermodal transport.

### 3.3.3. Conclusions

The sustainable mobility options between both countries are quite poor. The public transport in general is underdeveloped as the public transport connections between the countries are rare. The Schengen border makes it even more difficult for daily mobility as well as different public transport systems (technical, legislative, operational, communication) on both sides of the border. The accessibility of public transport stations is mostly above 500 m in the rural areas. Especially in remote areas there is a lack of any sustainable modes of transport and with the continuation of the reduction of rail lines and bus lines, the process of emigration of inhabitants from the strictly cross-border area might continue rapidly.

The road density and motorisation rate are very high in the programme area in comparison to the EU average, resulting in high usage of passenger cars. The cycling infrastructure does not follow the needs in the programme area but there is an increase of investments in this sector in the last years, also as a result of EU funding opportunities.

The cross-border mobility is quite intense due to daily commuting (Ljubljana-Zagreb, Koper-Pula, Maribor-Zagreb, Ljubljana-Rijeka) and tourist flows to the Croatian seaside. On that matter, the development of cross-border sustainable mobility should be adequately promoted.

The advantage of the programme area is intense maritime transport. Two major investments in the infrastructure are taking place at the moment (Koper-Divača second rail track and upgrading of the construction of Rijeka port).

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<sup>142</sup> <https://ec.europa.eu/transport/sites/transport/files/2019-transport-in-the-eu-current-trends-and-issues.pdf>

<sup>143</sup> <https://www.vecernji.hr/vijesti/investicije-u-infrastrukturu-teske-40-mlrd-1433181>

<sup>144</sup> [https://mingor.gov.hr/UserDocsImages/UPRAVA%20ZA%20ENERGETIKU/Strategije,%20planovi%20i%20programi/hr%20necp/Integrated%20Nacional%20Energy%20and%20Climate%20Plan%20for%20the%20Republic%20of\\_Croatia.pdf](https://mingor.gov.hr/UserDocsImages/UPRAVA%20ZA%20ENERGETIKU/Strategije,%20planovi%20i%20programi/hr%20necp/Integrated%20Nacional%20Energy%20and%20Climate%20Plan%20for%20the%20Republic%20of_Croatia.pdf)

Challenges in the development of sustainable mobility solutions remain, especially in rural remote areas and linked to tourism travels such as rail tourism etc. Sustainable mobility should be developed as a common service together with health, basic needs, education services on the whole programme area. Demand responsive transport with support of digitalization and e-mobility (e.g. mobility as a service) could be the solution for those areas. The promotion of the public passenger and freight rail transport could reverse the trend. At the same time, the improvement of rail infrastructure is necessary in order the transport times are shortened. The national budget investments in the connection (infrastructure) sector should be complemented with local initiatives (like the efforts for revitalization of Dolenjska railroad) to increase sustainable public modes in the rural areas.

### 3.4. Policy Objective 4 – A more social and inclusive Europe

#### 3.4.1. Labour market

The Croatian Employment Service and the Employment Service of Slovenia are central public institutions dealing with employment mediation and are aimed at solving problems related to employment and unemployment in the broadest sense.

In addition, there are two *Job clubs* in Karlovac and Donja Voća established to provide employment services and increase the competitiveness of the labour force at the local level. Mobility of workers in the area is supported by EURES, cooperation network of employment services.

EURES network is available in both countries, aiming to help workers to overcome international employment obstacles (such as different national practices, social security systems, taxation rules and legal systems) by providing financial support to partnerships, under the umbrella of EaSI, the EU programme for employment and social innovation. EURES network is an opportunity for increasing mobility of workers in the cross-border area. **Due to disparities in salaries, there are more Croatians workers working in Slovenia than vice-versa. Covid-19 restrictions and holiday season clogs at the border crossings are causing difficulties to commuting workers.**

The Croatian Employment Service states that in the year 2019 there have been favourable trends in the labour market which are reflected in a significant increase in the number of employed people, the employment rate and a further reduction of the number of unemployed can be observed according to survey data sources. In relation to 2018, the most significant decrease in the average number of unemployed was recorded in Karlovačka County (24,7%) however, in Istarska County, the average number of unemployed increased (8,7%).

**The positive trend of decreasing unemployment figures, however, was discontinued in 2020 due to the Covid-19 pandemic.** The Slovene Employment Service conveyed that the number of unemployed was increasing as early as March 2020, while in April 2020 the unemployment increased for 35,5% compared to 2019 in Ptuj (Podravska). The labour market on the Croatian side is also severely affected by the pandemic. Compared to the same month last year, in April 2020 the largest increase in the number of unemployed was recorded in Istarska county (by 122,4%) and Primorsko-goranska County (by 44,9%)<sup>145</sup>. Varaždinska County and Međimurska County maintained one of the lowest unemployment rates even in the pandemic conditions.

**The female employment rate is increasing, however, it is still lower than the male employment rate.** In 2018, the employment rate for women (aged between 20 and 64) in the European Union (EU) was 67% and for men 78%. In all Member States, the male employment rate was higher than the female employment rate. In Croatia, the rate of employed women was 60%, men 70%, while in Slovenia the rate of employed women was 72% and men 79%<sup>146</sup>.

Looking at a review of statistical gender pay gaps in the EU, women's gross hourly wage averages 14,1% lower than men's earnings<sup>147</sup>. The unmatched gender pay gap is defined as the difference between the

<sup>145</sup> [https://statistika.hzz.hr/Statistika.aspx?tiplzvjestaja=1,https://www.ess.gov.si/trg\\_dela/trg\\_dela\\_v\\_stevilkah/registirirana\\_brezposelnost](https://statistika.hzz.hr/Statistika.aspx?tiplzvjestaja=1,https://www.ess.gov.si/trg_dela/trg_dela_v_stevilkah/registirirana_brezposelnost)

<sup>146</sup> [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Employment\\_statistics/hr&oldid=488149#Stope\\_zaposlenosti\\_prema\\_spolu.2C\\_dobi\\_i\\_razini\\_ste.C4.8Denog\\_obrazovanja](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Employment_statistics/hr&oldid=488149#Stope_zaposlenosti_prema_spolu.2C_dobi_i_razini_ste.C4.8Denog_obrazovanja)

<sup>147</sup> <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20200306-1>

average gross hourly wages of men and women expressed as a percentage of the average gross hourly wages of men. **Both in Slovenia and Croatia, the gap is below the EU average, accounting to 7,9% and 11,5% respectively.**

Table 8: Unemployment of man and women in the cross-border region<sup>148</sup>

COUNTY	Total number of unemployed, 2019	Number of unemployed men, 2019	Share of unemployed men, 2019 (%)	Number of unemployed women, 2019	Share of unemployed women, 2019 (%)
Primorsko-goranska county	6.704	2.928	43,7	3.777	56,3
Istarska county	3.819	2.059	53,9	1.760	46,1
City of Zagreb	15.957	7.739	48,5	8.218	51,5
Zagrebačka County	5.582	2.615	46,8	2.967	53,2
Krapinsko-zagorska County	2.322	1.126	48,5	1.196	51,5
Varaždinska County	2.542	1.241	48,8	1.301	51,2
Međimurska County	2.111	896	42,4	1.215	57,6
Karlovačka County	3.342	1.372	41,0	1.970	59,0
Pomurska region	6.249	3.048	48,78	3.201	51,22
Podravska region	12.919	6.286	48,66	6.633	51,34
Savinjska region	10.633	5.221	49,10	5.412	50,90
Zasavska region	2.255	1.181	52,37	1.074	47,63
Posavska region	3.265	1.706	52,25	1.559	47,75
Jugovzhodna Slovenija region	5.144	2.620	50,93	2.524	49,07
Osrednjeslovenska region	18.157	9.719	53,53	8.438	46,47
Primorsko-notranjska region	1.552	763	49,16	789	50,84
Obalno-kraška region	3.919	2.017	51,47	1.902	48,53

Another problem of the labour market is long-term unemployment, which is particularly high among the unemployed without secondary education, the elderly (of the age 65 and older) and the unemployed without previous work experience. In Slovenia, the rate of long-term unemployment was around 40% in 2019 with the highest rates recorded in Pomurska (48%) and Osrednjeslovenska (47%). Long-term unemployment rate in Croatia is a bit lower with the unemployment rate of 35,8% recorded in 2019. The largest share of the long-term unemployed (56,3%) was among people with lower levels of education. The long-term unemployment rate in Slovenia in the same period was higher and amounted to 43 %. The EU average was 40,4 %, which indicates a good ranking of Croatia in the EU -28.

In order to tackle the problem of long-term unemployment, Croatian government set aside ESF investments through Operational Programme Efficient Human Resources 2014.-2020. that were to be used for the purpose of providing training and prequalification of the vulnerable groups in order to increase their employability. The long-term unemployment decreased from 38 % in 2018 to 35,8 % in 2019.

<sup>148</sup> <https://www.hzz.hr/content/stats/HZZ-Godisnjak-2019-v2.pdf>,  
[https://www.ess.gov.si/files/12011/2019\\_BP\\_statregije\\_trajanje.xls](https://www.ess.gov.si/files/12011/2019_BP_statregije_trajanje.xls)

In Croatia, the share of working age population in work or job search is still among the lowest in the EU in all age categories, especially in the category of elderly workers (55-64). This is largely related to the increase of ageing population, early retirement and low skills as well as care responsibilities in the case of women.

The employment rate of older workers in the age group 55 to 64 at the EU level was 59,2%, in 2019<sup>149</sup> while both **Croatia and Slovenia are far below the EU average with 43,9% and 48,6% of employed elderly people respectively. Croatsians, on average, exit the labour force at the age of 60,6, while the citizens of EU /27 countries retire at 61,6.**

**Young people are particularly disadvantaged in the labour market with the unemployment rate of 31,5% for the age group 15 - 34. The rate of young people who were not employed, not in education or training (NEET) was 15% (the EU average is 13,6%) in Croatia.** In Slovenia, the youth unemployment rate of the people between the ages 15-39 in 2019 was 41,35%. The highest rate of 44% was recorded in Maribor (Podravska), followed by Velenje (Savinjska) with 43% and the lowest rate of 32% was achieved in Ptuj (Podravska). **However, regarding the NEET rate, with 9% of youth, Slovenia was above the EU average.**

**Unemployment of youth and marginalized groups could be effectively tackled by social entrepreneurship<sup>150</sup>.** Social entrepreneurship is encouraged and realized through social enterprises, cooperatives, disability companies, employment centres, non-governmental organizations (societies, institutes, institutions / foundations), which act for the benefit of members and produce, commercial and non-commercial products, thereby solving social problems. There are about 250 social enterprises operating in the Slovene statistical regions, which accounts for more than 90% of the total number registered in the country.

### 3.4.2. Education and training

Early childhood education and care refers to any regulated arrangement that provides education and care for children from birth to compulsory primary school age, which may vary across the EU. Early and pre-school education in Croatia and Slovenia is an integral part of the system of education and care for children, it is the initial level of the educational system and, except for the preschool programme, it is not mandatory for preschool children. Children are admitted to kindergarten from the age of 6 months until they start school.

The current **enrolment of children in early and preschool education programmes** in Croatia (82,8%) and Slovenia (82,8%<sup>151</sup>) **is low and far below the EU average (95,4%)<sup>152</sup>.**

At the end of the 2018/2019 school year in primary education, there were 2.027 active basic schools on the territory of Croatia. The highest number of schools was found in City of Zagreb (132), followed by Zagrebačka county (126), while Međimurska county had the fewest active primary schools (58)<sup>153</sup>. On the Slovene side of the programme area, a total of 153 primary schools are located in Osrednjeslovenska, followed by Podravska (113) and Savinjska (115) while the lowest number of

<sup>149</sup> <https://ec.europa.eu/eurostat/databrowser/view/tesem050/default/table?lang=en>

<sup>150</sup> <https://vlada.gov.hr/UserDocImages/ZPPI/Strategije/Strategija%20borbe%20protiv%20siroma%C5%A1tva.pdf>

<sup>151</sup> <https://www.stat.si/StatWeb/Field/Index/9/83>

<sup>152</sup> [https://www.unicef.hr/wp-content/uploads/2018/12/S\\_one\\_strane\\_inkluzije\\_FINAL.pdf](https://www.unicef.hr/wp-content/uploads/2018/12/S_one_strane_inkluzije_FINAL.pdf)

<sup>153</sup> DZS, Osnovne škole kraj šk.g. 2018./2019. I početak šk.g. 2019./2020.

primary schools was found in Zaslavka (28)<sup>154</sup>. Schooling is accessible for Croatian and Slovene pupils living in the cross-border area, although the number of per school children is extremely low in rural parts and on some islands so the possibility of schools closing down exists.

The ratio of the number of teachers and students in regular education is 1: 9 in Croatia<sup>155</sup>, while in Slovenia, the ratio is 1: 10,2<sup>156</sup>. Although the number of students is decreasing significantly, the number of teachers is continuously growing. Croatia had one of the lowest student-teacher ratios in the Europe, but educational outcomes measured by PISA tests are below average, indicating the inefficiencies of the education system<sup>157</sup>. Students in Slovenia achieved a higher score in reading, mathematics and science than the OECD average<sup>158</sup>.

The total number of students in upper secondary education in Croatia in 2018 was 148.466, and of those 64,7% of students were acquiring vocational and technical education. In Slovenia, the problem of secondary education is related to low level of enrolment in vocational education. Only 6,2% of students were involved in secondary technical and vocational education. However, 18% of all students were in short-term vocational education.

In Croatia, in 2018/2019 46.451 or 31,5% of students enrolled in grammar schools, and of that 6,6% were female students. However, in industrial and crafts schools the percentage of female students was only 32,1%. In Slovenia, the share of female students in short-term vocational, vocational and technical secondary education was 41,7%.

In tertiary education in Croatia in 2018 there were 158.016 students and of that 75.991 students or 48,6 % were from the programme area which is understandable considering the fact that there were 34.374 students from the City of Zagreb alone. Per 1000 population, in City of Zagreb there were 43 students and thus it is the only region above the national average (39). The lowest rates were achieved in Karlovačka (29) and Istarska (29). In Slovenia, the highest rates of students per 1000 population were found in Jugovzhodna Slovenia (35), Zaslavka (35) and Osrednjeslovenska (36), however, it is worth noting that in the Slovene programme regions, the number of students was below the national average (37). The EU average of the number of students per 1000 population in 2018 was 34, thus both Croatia and Slovenia were placed above EU average.

In Slovenia, out of 16.000 total graduates in 2019, 17% were graduates of Engineering, manufacturing and construction followed by 12% of healthcare and welfare graduates. Only 9,3% were Social sciences, journalism and information graduates<sup>159</sup>. Regarding scientific and artistic fields of high education, preferred choice of Croatian students were Social sciences (43%) followed by Engineering (26%). The disparity between supply and demand of jobs in the social sciences may be the reason why Croatia is at the very bottom of the EU in terms of the employment rate of newly graduated students. The European Commission's 2019 survey on the employment of young people who have recently

<sup>154</sup> <https://arnes.splet.arnes.si/files/2017/06/SEZNAM-VIZ-26062017.pdf>

<sup>155</sup> [https://www.dzs.hr/Hrv\\_Eng/publication/2021/08-01-02\\_01\\_2021.htm](https://www.dzs.hr/Hrv_Eng/publication/2021/08-01-02_01_2021.htm)

<sup>156</sup> <https://www.stat.si/StatWeb/Field/Index/9/71>

<sup>157</sup> [https://www.oecd.org/pisa/publications/PISA2018\\_CN\\_HRV.pdf](https://www.oecd.org/pisa/publications/PISA2018_CN_HRV.pdf)

<sup>158</sup> [https://www.oecd.org/pisa/publications/PISA2018\\_CN\\_SVN.pdf](https://www.oecd.org/pisa/publications/PISA2018_CN_SVN.pdf)

<sup>159</sup> <https://pxweb.stat.si/SiStatData/pxweb/en/Data/-/0955445S.px>

completed their education, states that the employment rate among graduates in the country was 79 percent, which is the fourth lowest rate in the EU. The average rate of employment of those who recently finished high education in the EU was 85 %, thus with 89% Slovenia, is placed on a far better position than Croatia.

Erasmus+ is the European Union's largest programme for education, training, youth and sport. The 2021-2027 programme focuses strongly on social inclusion, green and digital transition, and promoting youth participation in democratic life. In the programme area, universities are included in the ERASMUS + programme. The University of Zagreb has its international contacts with the universities abroad through mutually coordinated and signed agreements and includes the following forms of cooperation: work on jointly agreed topics, exchange of teaching staff, student exchange, joint publishing, exchange of information of common interest, other activities to promote academic cooperation. The University of Zagreb has international agreements with the University of Maribor, the University of Ljubljana, the University of Primorska and the Euro-Mediterranean University. The programme area has a well-established network of high education institutions both on the Slovene and Croatian side.

There are numerous higher education institutions that are performing studies in **more than 100 programmes in foreign languages** and are enabling mobility of students in the cross-border area. The qualifications attained in higher education in Slovenia and Croatia are fairly recognized in both countries due to harmonized educational systems.

In the programming period of the Erasmus + programme 2014 - 2020, there were **4.279 international mobilities of students<sup>160</sup> from Croatia to Slovenia and 2.560 mobilities from Slovenia to Croatia** in the field of Education, Vocational Education and Training, Higher Education, Adult and Youth Education.

In Croatia, the City of Zagreb is the strongest high educational centre within a total of two public and one private university. It was in the University of Zagreb where 39,3% of all the students were enrolled (for comparison, 11,8% were enrolled in University of Rijeka which is the second largest university). In the programme area, moreover, there are universities in Rijeka (Primorsko-goranska county) and Pula (Istarska county) with 10% and 2% of enrolled students. Polytechnics are located in Čakovec (Međimurska), City of Zagreb (3), Krapina (Krapinsko-zagorska county), Karlovac (Karlovačka county), Rijeka (Primorsko-goranska county) and Velika Gorica (Zagrebačka county). Schools of professional higher education are situated in Zagreb (14), Zaprešić, Ivanić Grad (Zagrebačka county), Pula and Rijeka.

Regarding high education institutions in Slovenia, University of Ljubljana, University of Maribor, University of Primorska and the Faculty for information studies Novo mesto are public institutions which offer a wide range of studies (science, engineering, manufacturing, construction, logistics, tourism, business, agriculture and forestry). In addition, private high education institutions are situated in Novo mesto, Maribor, Ljubljana, Portorož, Piran, Celje and Velenje.

All learning activities undertaken throughout life with the goal of improving knowledge, skills and competences, within personal, civic, social or employment-related perspectives are considered as

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<sup>160</sup> those students who received their education in another country and are not residents of their current country of study

lifelong learning. One of the goals under the strategic framework for European cooperation in education and training (ET 2020) was an average of **at least 15% of adults at the European level who participate in lifelong learning**<sup>161</sup>. On average, 9,2% of adults participated in learning in 2020 in the European union, however, **both Slovenia (11,2%) and Croatia (3,5%) were below the EU targets**<sup>162</sup>.

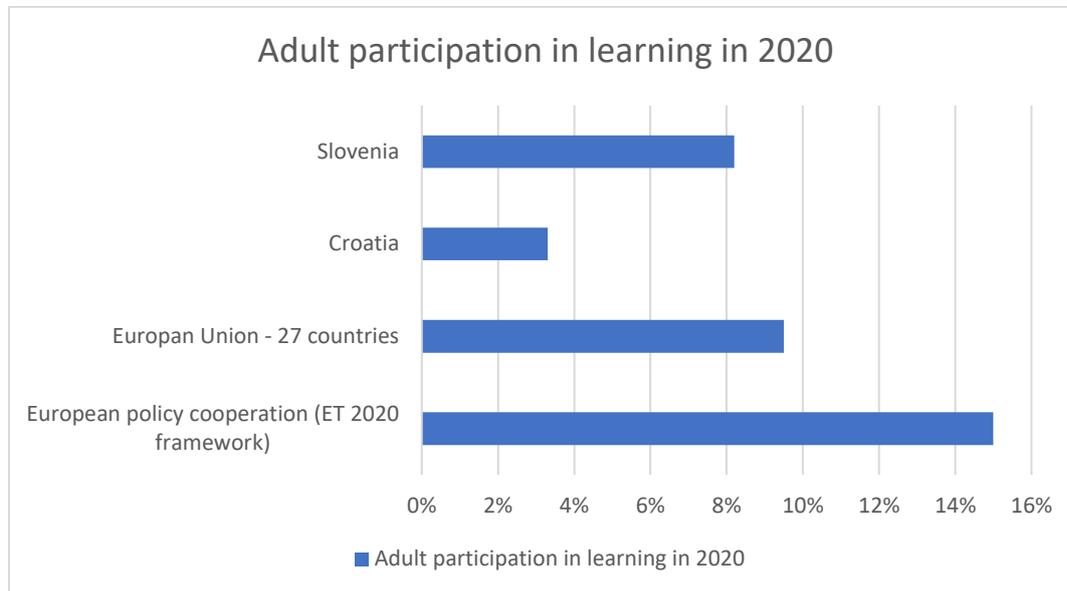


Figure 164: Adult participation in learning in 2020. Source: Eurostat

The key challenges for adult education persist. Adult education financing is not comprehensive, nor part of the mainstream education system, and is in the lowest third in the EU. Unemployed young people and low-skilled adults do not rely on education and training that would give them a better chance in the labour market. At the same time, education alone is not aimed at improving the workforce and integrating adult learning plans for economic development and innovation.

### 3.4.3. Socioeconomic integration of marginalised groups

The at-risk-of-poverty rate is the share of people who are at risk of poverty after social transfers, severely materially deprived or living in households with very low work intensity. 23,3% of the population in Croatia and 14,4% in Slovenia were at the **risk of poverty or social exclusion** in 2019, while the EU-28 share was 21,3%. Compared to 2015, **this share decreased both in Croatia (29,1%)<sup>163</sup> and in Slovenia (19,2%)<sup>164</sup>.**

Looking at the statistical data for Slovenia on the NUTS 3 level, the at-risk-of-poverty or social exclusion rate was the highest in the Zasavska statistical region (21,4%), and Podravska (18,6%), and the lowest in Osrednjeslovenska and Posavska (11,6% in both). The share of people at risk of poverty or social exclusion per NUTS 3 regions in Croatia was higher in the Continental Croatia (23,9%) than in the

<sup>161</sup> [https://ec.europa.eu/education/policy/strategic-framework/et-monitor\\_en](https://ec.europa.eu/education/policy/strategic-framework/et-monitor_en)

<sup>162</sup> <https://op.europa.eu/webpub/eac/education-and-training-monitor-2020/countries/slovenia.html>,  
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2020/countries/croatia.html>

<sup>163</sup> [https://www.dzs.hr/Hrv\\_Eng/publication/2016/14-01-01\\_01\\_2016.htm](https://www.dzs.hr/Hrv_Eng/publication/2016/14-01-01_01_2016.htm)

<sup>164</sup> <https://www.stat.si/StatWeb/en/News/Index/6991>, <https://beskucnici.info/>, <http://www.kraljiulice.org/kam-po-moc/>,  
<https://mrosp.gov.hr/adresari/11829>

Adriatic Croatia (22%)<sup>165</sup>. **In Slovenia and Croatia, the risk of poverty and social inclusion increases with age.** Ageing society needs additional capacities and innovative measures to fight poverty and exclusion of elderly. One of the most required service is day care for elderly that are in need of daily assistance, while institutionalisation of elderly is against the EU recommendations and policies. Elderly should be fairly involved in social and cultural activities and live in their homes as long as possible by using community services and day care centres. **The community services and day care centres are missing in the cross-border area, as well as for people with disabilities (including children).** The rate of the facilities for the elderly which include day care is low in Slovenia (0,1), however, Zasavska stands out with 0,3 of such facilities, even though there are only 3 facilities in the whole region. The number of facilities for people with mental disabilities is even lower, only 20. The highest number is located in Osrednjeslovenska (9), nevertheless, the rate is the highest in Primorsko-notranjska region (0,2).

Table 9: Facilities for elderly and people with disabilities in the cross-border region<sup>166</sup>

	Population of the age 65 and over, 2019	Number of facilities for the elderly, total	Number of facilities for the elderly, per 1000 population of and over the age of 65	Number of facilities for the elderly which incl. day care	Number of facilities for the elderly which incl. day care, per 10000 population of and over the age of 65	Number of facilities for people with mental disabilities	Number of facilities for people with mental disabilities, per 1000 population of and over the age of 65
Slovenia	413.054	86	0,2	45	0,1	20	0,0
Pomurska	25.355	9	0,4	3	0,1	2	0,1
Podravska	66.634	15	0,2	6	0,1	3	0,0
Savinjska	49.363	12	0,2	7	0,1	1	0,0
Zasavska	11.806	4	0,3	3	0,3		
Posavska	15.452	5	0,3	2	0,1	1	0,1
Jugovzhodna Slovenija	26.555	6	0,2	4	0,2	1	0,0
Osrednjeslovenska	100.956	26	0,3	16	0,2	9	0,1
Primorsko-notranjska	10.910	2	0,2	2	0,2	2	0,2
Obalno-kraška	24.307	7	0,3	2	0,1	1	0,0
Croatia	838.599	707	0,8	71	0,1	59	0,1
Primorsko-goranska	66.712	38	0,6	2	0,0	2	0,0
Istarska	45.873	24	0,5	5	0,1	3	0,1
City of Zagreb	154.886	74	0,5	6	0,0	2	0,0
Zagrebačka	60.097	100	1,7	6	0,1	12	0,2

<sup>165</sup> <https://ec.europa.eu/eurostat/databrowser/view/tespm010/default/table?lang=en>,  
<https://www.stat.si/StatWeb/en/news/index/8895>

<sup>166</sup> [https://ec.europa.eu/eurostat/databrowser/view/DEMO\\_R\\_PJANAGGR3\\_custom\\_1202665/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/DEMO_R_PJANAGGR3_custom_1202665/default/table?lang=en)  
<https://www.gov.si teme/domovi-za-starejse/>  
<https://varnastarost.si/varna-starost-d70/info-linki-za-upokojenje-d41/dnevni-centri/seznam-dnevnih-centrov/>  
<https://paka3.mss.edus.si/registriweb/SeznamZavodPP.aspx>, <https://www.sz-slo.si/splosno-o-domovih-in-posebnih-zavodih/mapa-posebni-zavodi/>

Krapinsko-zagorska	24.557	22	0,9	0	0,0	3	0,1
Varaždinska	32.253	31	1,0	1	0,0	6	0,2
Međimurska	20.267	23	1,1	2	0,1	4	0,2
Karlovačka	26.315	45	1,7	0	0,0	1	0,0

There is a general lack of institutions for the care of children with special needs in Croatia, and the biggest problem is that certain institutions do not separate adults from children due to the lack of human and financial capacities.

The *Croatian Homeless Network* estimates that, according to the UN definition, there are about 2.000 absolute homeless people or people who do not have a 'roof over their heads' and live in public and non-residential places. In Croatia, accommodation services are currently provided by 13 shelters and overnight stays. **The total accommodation capacities of those shelters are suitable for 450 people and thus insufficient to take in all those in need.** The most shelters are located in the City of Zagreb (4), followed by Primorsko-goranska (2). In Krapinsko-zagorska and Međimurska there are no shelters and overnight stays for homeless people.

Statistical office of the Republic of Slovenia states that the estimated number of homeless people on the territory of Slovenia is between 3.000 and 6.700. There are 13 homeless shelters in Slovenia and one day-centre for the homeless and socially disadvantaged located in Koper (Obalno-kraška). There are three located in Ljubljana, two shelters located in Maribor (Podravska) and one in each Pomurska, Savinjska and Jugovzhodna Slovenia.

The Council of Europe estimates that around 30-40.000 Roma (1% of the population) live in Croatia<sup>167</sup>, and 10.000 -12.000 in Slovenia. Roma's integration is supported by Slovenia's National Roma Strategy 2017-2020 and Croatian National Strategy for Roma integration by 2020. As an excluded group in most of the countries in which they live, Roma face limited access to education, difficulties in entering the labour market, the level of their income is significantly lower than of the majority population, and associated, the health of population is poor which results in a higher mortality rate and lower expectations related to life expectancy. **Socio-economic marginalization of Roma** is associated with their low socio-economic status, low level of education, inclination towards certain professions and low-level involvement in formal forms of work. This status is closely related to their (non) participation in the education system. Many Roma remain outside the labour market and do not have the opportunity to compete for more social position due to distance from educational institutions. Most Roma communities belongs to the poorer sections of the population with low incomes and living standards, higher unemployment rates and difficult access to health and education services.

The issues of immigration and integration have been politically sensitive across Europe, particularly in the aftermath of increase in the flows of refugees over the last few years. From 2015 to the end of 2020, Croatia granted 699 asylums and 78 subsidiary protections. At the moment, according to the

<sup>167</sup> [https://ec.europa.eu/info/policies/justice-and-fundamental-rights/combating-discrimination/roma-eu/roma-inclusion-eu-country/roma-inclusion-croatia\\_en](https://ec.europa.eu/info/policies/justice-and-fundamental-rights/combating-discrimination/roma-eu/roma-inclusion-eu-country/roma-inclusion-croatia_en)

data we received from the Ministry of the Interior (MUP), there are 436 applicants for international protection<sup>168</sup>.

In 2015, there were a total of 227 of asylum applicants in Slovenia and 46 of them were granted asylum. In the following years, the number of applicants started to soar reaching a total number of 3 821 applicants for asylum in 2019. From 2015 until 2019, Slovenia granted a total of 455 international protections.

Data on economic immigrants are not available for the cross-border area, but interviewees indicated that there are **many Kosovars (in Slovenia) and Nepalese (in Varaždinska county) people living in the cross-border area**<sup>169</sup>. Legal support is needed, as well as social service to prevent social exclusion and marginalization.

**Lesbian, gay, bisexual, transgender and intersex persons, or LGBTI, are among minorities facing the most widespread discrimination.** In a 2019 survey, the European Union Agency for Fundamental Rights (FRA) found that discrimination on grounds of sexual orientation, gender identity/expression and sex characteristics was increasing in the EU - 43% of LGBT people stated that they felt discriminated against in 2019, compared to 37% in 2012. 38% in Croatia and 34% in Slovenia say they were harassed the year before the survey. Additionally, 13% of Croatian and 10% of Slovene LGBTI respondents declare that they had been attacked in the 5 years before the survey. What is more, only 12% of Croatian and 34% of Slovene LGBTI respondents think that the country they live in effectively combats prejudice and intolerance against LGBTI.

In view of general public's opinions about the LGBTI minority, 44% of Croatians and 64% of Slovenes agree with the statement that gay, lesbian, and bisexual people should have the same rights as heterosexual people which is below the EU-28 average (76%). Similar rates are found when looking at share of people who agree/disagree that same sex marriages should be allowed throughout Europe<sup>170</sup>.

#### 3.4.4. Safe living

While families across Europe are locked in their homes to curb the spread of the COVID-19 epidemic, domestic violence is increasing. The situation is not harmless, because in addition to health risks, it potentially leads to child abuse and neglect. In Croatia, there are 308<sup>171</sup> places available to women who are victims of domestic violence, and during their stay in safe houses and shelters they are entitled to 50 % of the minimum allowance in preparation for their independent living and integration into the community. Victims of domestic violence have access to at least one shelter or safe house in each region of the programme area. The highest number of safe houses and shelters are located in City of Zagreb (3), followed by Primorsko–goranska county (2). Moreover, psychosocial assistance is available to victims in each region of the programme area.

<sup>168</sup> <https://mup.gov.hr/pristup-informacijama-16/statistika-228/statistika-trazitelji-medjunarodne-zastite/283234>

<sup>169</sup> Interview findings

<sup>170</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0698&from=EN>

<sup>171</sup> <https://mrosp.gov.hr/strategije-planovi-programi-izvjesca-statistika/4165>

On the territory of the Slovene programme area, there are two safe houses and shelters in Ljubljana, two in Podravska region in Maribor and Ptuj. There is one safe house or shelter in each Pomurska, Savinjska, Posavska, Jugovzhodna Slovenia and Obalno-kraška region.

#### 3.4.5. Health care

The health care system is based on compulsory, universal social insurance and operates on the principles of solidarity and reciprocity, and thus, health care is one of the key components of social policy. **Life expectancy in Croatia (78 years in 2021) is improving but continues to lag behind Slovenia and the EU average (81 years).** Social inequalities in life expectancy appear to be less pronounced in Croatia than in many other EU countries. A mandatory health insurance system provides a broad range of benefits to the whole population, some of which are subject to cost-sharing. **The network of health centres is relatively well distributed throughout the programme area.** Although general hospitals are well accessible in almost every region in the programme area, **people living by the border cannot use emergency services of the nearest emergency centres across the border.** Administrative barriers should be tackled by improving the cooperation between the institutions and developing a permanent cross-border system that would serve the ones in need, no matter of which side of the border the person has health insurance.

On the Croatian side, City of Zagreb is considered the health centre of Croatia with the most developed network of health institutions. In Zagreb, there are two clinical hospital centres (KBC's), three clinics, three clinical hospitals Zagreb<sup>172</sup>. One clinical centre is located in Rijeka, and 5 general hospitals in Čakovec, Varaždin, Karlovac, Pula and Zabok. There is no general hospital in Zagrebačka County because the region strongly gravitates towards City of Zagreb.

In all major administrative centres of the border counties on the Croatian side there are general hospitals and health centres, and in this programme area there are 14 special hospitals, mainly for medical rehabilitation, psychiatric hospitals and children's hospitals, then five clinics (children's diseases, infectious diseases, orthopaedics, psychiatry and cardiovascular disease) and two spa hospitals. The prevalence of specialist surgeries also seems satisfactory, but except from City of Zagreb, not all regional offices have enough specialist contracted surgeries.

The geographical distribution of health infrastructures and human resources varies considerably. Central Croatia (mainly Zagrebačka County and City of Zagreb) has the largest number of institutions and health workers, while in other areas there are fewer institutions and health workers.

In the Slovene programme area, health care institutions are more evenly distributed. Clinical centres are located in Ljubljana and Maribor (Podravska), and there is a total of two specialized hospitals in each Obalno-kraška and Savinjska region. There are also specialized hospitals, specializing in children's diseases, psychiatry and gynaecology in Podravska, Osrednjeslovenska and Primorsko-notranjska regions.

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<sup>172</sup> Clinical hospital Mercur, Clinical hospital Dubrava and Clinical hospital Sv. Duh. <https://www.zagreb.hr/klinicke-bolnice/475>

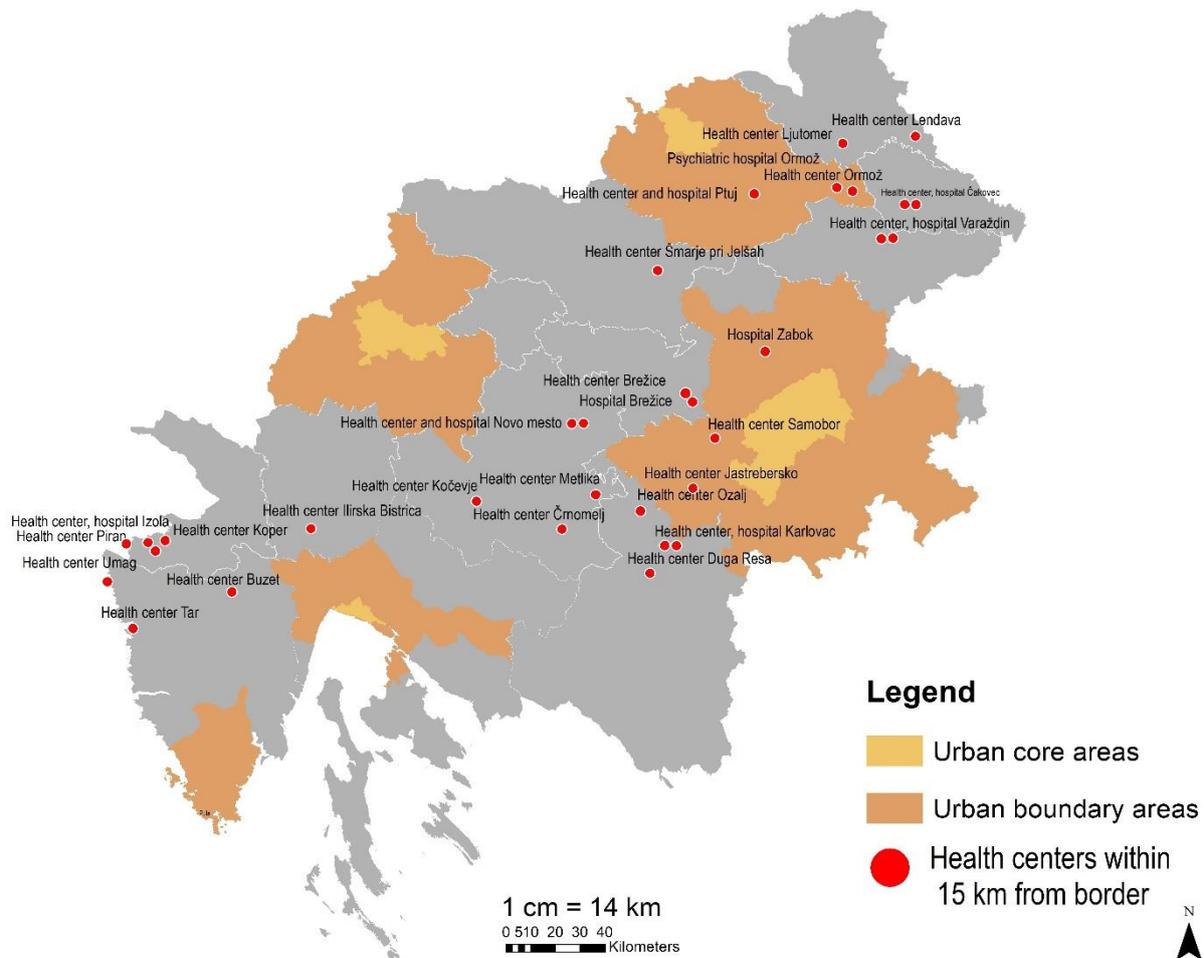


Figure 17: Health centres and hospitals within 15 km from the border. Source: Own edition based on open source data.

The network of doctors shows a relatively even distribution on the Croatian and Slovene sides, but the **disparity is visible in the fact that Slovenia has more doctors than Croatia, which has a larger population.** The European average is 350/100000. All regions, except from Podravska, Osrednjeslovenska, the City of Zagreb and Krapinsko-zagorska, were below the national averages. The weakest network of doctors existed in Međimurska with 147 and in Zagrebačka with 120 available doctors per 100.000 inhabitants. In Slovenia, the fewest doctors (136) are available in the Primorsko-notranjska region.

The activity of dental medicine as a public service is performed within or outside the network of the public health service. The network of dentists shows a relatively even distribution on the Slovene side of the programme area, however, the lowest number of dentists per 100.000 inhabitants was available in Savinjska (52) and Primorsko-notranjska (58). In Croatia, most dentists were located in City of Zagreb, Istarska and Primorsko-goranska, and these three regions were significantly above the national average (91). In Primorsko-goranska, 158 dentists per 100.000 inhabitants were available, 111 in Istria and 138 in the City of Zagreb. Although the distribution of primary care dentists by programme area seems relatively even, it is evident that more developed and larger centres show a greater prevalence of the dental network, than the rest of the territory where there are not enough dental surgeons.

In the area in the context of dental health care, in recent years there has been an increasing fluctuation of the Slovene population in Croatia for health dental needs. The reason for using health services is not inadequate health care in the home country, but more affordable private health practice in Croatia.

Access to health care can be limited for several reasons, such as costs, distance, or transportation to the nearest health facility and waiting times (particularly in post COVID era). In Slovenia, 2,9% of the population had unmet needs for medical examination, and 2,9% of the population had unmet needs for dental examination. On the other hand, Croatia was below the EU-28 average (3,1%) with 1,4% of reported unmet needs for medical examinations and 1,0% of declared unmet needs for dental examinations.

Practical health workers or carers include health care assistants in institutions, but not personal staff that can provide home assistance. Healthcare professionals provide direct personal care and assistance in day-to-day activities to patients and residents of healthcare facilities, and they generally work under the direct supervision of other healthcare professionals, such as doctors and nurses. In 2018, there were a total of 568 health care assistants in Croatia, or 13.9 health care assistants per 100.000 inhabitants.

In the same year, there were 280 medical assistants in Slovenia, which is 13.5 medical assistants per 100.000 inhabitants. According to the data, both Slovenia and Croatia are at the very bottom of the EU. However, while the number of health care assistants in Croatia has increased since 2013 (from 9.9 health care assistants per 100.000 population to 13.9), figures show that the number of health care assistants in Slovenia has decreased since 2013 (from 24.9 to 13, 5 health assistants per 100.000 inhabitants).

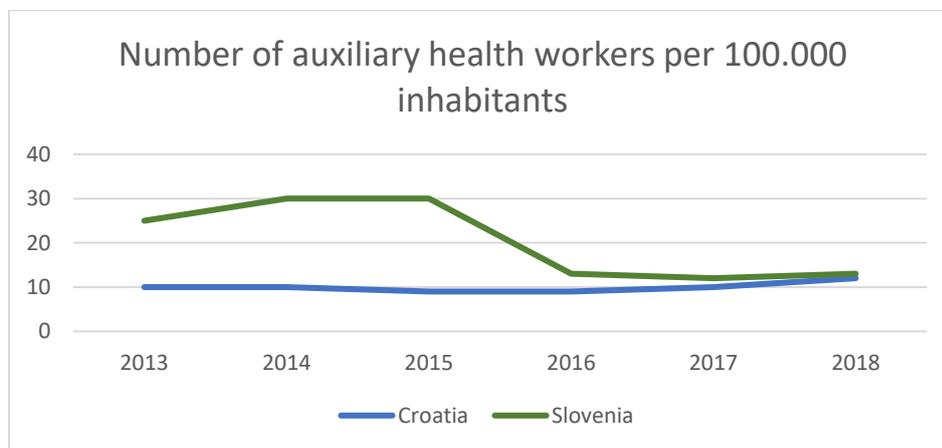


Figure 26: Number of auxiliary health worker per 100.000 inhabitants.

Nursing professionals in practice provide basic care and personal care to people suffering from the effects of ageing, illness, injury, or other physical or mental impairment, and can also provide health advice to patients and families. In 2018, in relation to the size of the population, there were 499 professional care associates per 100.000 inhabitants in Croatia, and 672 in Slovenia. It is not possible to compare the countries with the EU average because some EU countries do not recognize this type of profession, however, in relation to the available data, both Croatia and Slovenia have an above-average rate of care associates per 100.000 inhabitants. Moreover, the rate in both countries has been growing steadily for at least a decade - in 2010 the rate was 607 in Slovenia and 454 in Croatia.

### 3.4.5.1. Preventive services

Preventive health care deals with disease prevention and early detection of disease in order to reduce the burden of disease. Vaccination is the preventable measure of many diseases, including some types of cancer. In 2018, only 12,9% of people aged 65 and over were vaccinated against influenza in Slovenia. In order to increase incentive vaccinations, Slovenia has been offering free flu vaccinations to the elderly, pregnant women and overweight people since 2019. In Croatia, the percentage of vaccinated elderly was higher (29%), but still below the EU average of 41,4%. In 2019, vaccination in Croatia was free for a wider range of people than in Slovenia, for those with chronic diseases, people over 65, children and adolescents who used long-term therapy with certain drugs, all health workers and pregnant women.

From the beginning of the pandemic until September 2021, Croatia had 8.405<sup>173</sup> deaths from the COVID-19 virus, while Slovenia had 4.462 deaths<sup>174</sup>. The rate of people vaccinated against COVID-19 per 100 inhabitants in September 2021 in Croatia was 43%, while in Slovenia it was 49%<sup>175</sup>.

For women, breast cancer prevention screenings are recommended for women over the age of 38. In Croatia, there is a National Program for Early Detection of Breast Cancer and all women aged 50 to 69 can undergo a free breast cancer examination every two years. The goal of the programme is to reduce breast cancer mortality by 30%. In 2018, 64% of women aged 50 to 69 had a breast x-ray in the previous two years, an increase of 4% since 2012. In Slovenia, preventive breast cancer screening is free for women aged 50 to 69 and 77% of women have had a breast X-ray in the previous two years. Most of the preventive screenings in Slovenia have been undertaken within Dora preventive programme.

Regarding the screening of blood sugar and blood cholesterol, both in Croatia and in Slovenia, the share of those who had examinations at least once in their lives is below the EU average. 13,1% of Croats and 14% of Slovenes over the age of 15 reported newer measuring their blood cholesterol, while the EU average was 16,9%.

Mortality caused by diabetes, chronic obstructive pulmonary disease and some cancers is on the rise in the area. Statistics show that diseases of the vascular system and malignant neoplasms in the area, but also at the EU level, are the leading causes of mortality. Circularly diseases are the most common cause of death for Croats and Slovenes. Among cancer diseases, lung cancer is the most common cause of death that has not decreased since 2000. Moreover, mortality rates from lung cancer, breast cancer and colon cancer in Croatia and Slovenia are higher than in the rest of the EU. The major causes of death also include suicides, with rates significantly higher than the EU average.

### 3.4.5.2. Childhood obesity

Almost every fifth adult in Croatia in 2017 was obese. In Slovenia, a survey was conducted on children and young people aged 6 to 19, and according to the survey, in 2014, 25,7% of boys and 21,9% of girls were overweight or obese. Obesity is a growing problem in children. In 2015, 31% of girls and 38,7% of boys were overweight or obese.

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<sup>173</sup> <https://www.worldometers.info/coronavirus/country/croatia/>

<sup>174</sup> <https://www.worldometers.info/coronavirus/country/slovenia/>

<sup>175</sup> <https://ourworldindata.org/covid-vaccinations>

At the NUTS 2 level, the largest share of girls was from the Continental Croatia, 35,6%, while the largest share of boys was from the Adriatic Croatia, 42,2%. In Slovenia in 2017, at the level of NUTS 3, Zasavska had the largest share of overweight or obese children - 30% of boys and 28,3% of girls.

According to the degree of urbanization of the place of residence, research shows that the share of children with obesity was the lowest in large cities, slightly higher in smaller cities, and the highest in rural areas. **In large cities, approximately one in ten children was obese, while in rural areas this problem was present in almost one in five children.**

Every third child goes to school by bus or is driven by their parents in their own car. Also, more than a third of children do not participate in sports or dance activities. More than half of children, 56,1%, spend two or more hours a day on weekdays watching TV or using electronic devices. More than a third of children eat snacks or "fast food" 1-3 days a week.

### 3.4.6. Tourism, culture, and social innovation

#### 3.4.6.1. Cultural Heritage

The cultural and historical heritage of the territory was created within the cultural context that is common to the whole of continental and costal Europe and is primarily manifested through a linear change of common historical and stylistic, that is artistic, periods. However, there is also a special connection of areas through a common past political context.

On the Croatian side of the border, there are 2.255 immovable cultural assets and 933 movable cultural assets (individual movable cultural assets and collections) entered in the Register of Cultural Property of the Republic of Croatia<sup>176</sup>. There are 18 assets in the records of assets of local significance.<sup>177</sup> The number of protected cultural assets, if we consider all levels of protection, is significantly higher than stated because Croatian legislation stipulates that each unit of local and regional self-government can protect assets in its area and at the local level (protection of goods of local importance). Therefore, in Croatia, the local heritage is not included in the national register of cultural heritage assets as it is the case in Slovenia. In the Register of Slovene Cultural Heritage<sup>178</sup>, there are 21.940 protected assets in the area covered by the programme. On the Slovene side of the border, there are 30.541 immovable cultural heritage units and 1.604 holders of intangible cultural heritage and 91 intangible cultural heritage units on the national level, entered in the Register of Cultural Heritage of the Republic of Slovenia.<sup>179</sup>

There are 8 UNESCO world heritage sites in the programme are: Cultural Episcopal Complex of the Euphrasian Basilica in the Historic Centre of Poreč (1997), Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe (2007,2011,2017,2021), Plitvice Lakes National Park (1979,2000) in Croatia, and Heritage of Mercury. Almadén and Idrija (2012), Prehistoric Pile Dwellings around the Alps (2011) The works of Jože Plečnik in Ljubljana – Human Centred Urban

<sup>176</sup> <https://min-kulture.gov.hr/izdvojeno/kulturna-bastina/registar-kulturnih-dobara-16371/16371>

<sup>177</sup> <https://min-kulture.gov.hr/izdvojeno/kulturna-bastina/registar-kulturnih-dobara-16371/16371>

<sup>178</sup> <https://gisportal.gov.si/portal/apps/webappviewer/inde.g.html?id=df5b0c8a300145fda417eda6b0c2b52b>

<sup>179</sup> <https://data-mk-indok.opendata.arccgis.com/>

Design (2021), Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe (2007,2011,2017,2021) and Škocjan Caves (1986) in Slovenia.<sup>180</sup>

The cross-border area is abundant in **intangible cultural heritage** that includes various forms and phenomena of spiritual creativity that are transmitted by tradition or otherwise: language, dialects, speech and toponymy, oral literature of all kinds, folklore in music, dance, tradition, games, rituals, customs, as well as other traditional folk values and traditional arts and crafts.

Within 8 Croatian programme counties, 85 intangible cultural assets are entered in the Register of Cultural Property of the Republic of Croatia. The entire programme area includes the list of 13 such intangible assets: Lacemaking in Croatia, Two-part Singing and Playing in the Istrian Scale, Annual Carnival Bell Ringers Pageant from the Kastav Area, Traditional Manufacturing of Children's Wooden Toys in Hrvatsko Zagorje, Gingerbread craft from Northern Croatia, Međimurska popevka, Folks songs from Međimurje, The art of dry-stone walling, The custom of Door-to-door rounds of Kurenti, Slovene lace, Lepoglava lace, The art of making Rovinj batana and Klapa singing. The abundance of such intangible goods largely determines the identity of the space itself and speaks of its authenticity.

However, to preserve, the tradition, it must be passed on by the people who maintain it. Often these skills require long-term training, and the tourist interpretation of cultural heritage is a good way to sustainability. **Despite the exceptional abundance of these natural, historical and cultural attractions, only a small number of them have been valorised and included in the overall destination offer.** Such approach also requires significant investments for which there are often no resources as the entire process requires the cooperation of various stakeholders from research and education to branding, marketing and placement on the tourism market. In addition to institutions such as museums and galleries, civil society frequently has an important role in the preservation of cultural heritage by acting through various cultural and artistic associations. Since similar heritage is in question on both sides of the border, cooperation is necessary as well. Also, adequate training and education is needed for further development of cultural tourism destinations, cultural tourism routes, and cultural tourism product development taking into account high quality interpretation of cultural values for tourism purposes.

Gastronomy is a significant part of the heritage of the territory, and it is also associated with the production of indigenous foods. **Out of a total of 31 Croatian agricultural and food products whose name is registered in the European Union as a protected designation of origin or a protected geographical indication or a guaranteed traditional specialty, 12 or 38,7%<sup>181</sup> are protected in the programme area. In Slovenia, there are 26 protected agricultural Products and foodstuffs out of which 12 (46%) are registered in the programme area.** The examples of agricultural and food products whose name is registered in the European Union demonstrate that the gastronomy-related branding process in the area is progressing well. Such products are one of the most important segments of sustainable development. Product branding requires a lengthy process that frequently begins with the first step - research.

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<sup>180</sup> [UNESCO World Heritage Centre - World Heritage List](#)

<sup>181</sup> <https://poljoprivreda.gov.hr/istaknute-teme/hrana-111/oznake-kvalitete/zoi-zozp-zts-poljoprivrednih-i-prehrambenih-proizvoda/228>

Once again, this indicates that money and cooperation are necessary to save many other products from oblivion and for them to become a part of the brand of the area.

### 3.4.6.2. Tourism

Tourism is traditionally an important part of the economy of the regions which are located by the sea. In the continental part of the area, tourism has been taking off in recent years (before the 2020 crisis) and progressively better results indicate that it is on the right track. Considering that, regardless of the political boundaries, areas are connected by common natural and cultural characteristics, these characteristics have also influenced the development of similar tourism products. Tourism builds on the product of the sun and sea, gastronomic and oenological tourism and heritage tourism in the Slovene regions belonging to the tourist area of the Mediterranean and Karst Slovenia, and in Istarska and Primorsko-goranska counties on the Croatian side of the border. Beaches, coastal towns, caves, rural households and health resorts are recognized as important tourist sites. Counties located in the northern Croatia, and Slovene regions which are included in the tourist area of thermal Pannonian Slovenia concentrate their tourist products on thermal springs with spas, gastronomic and oenological tourism, heritage tourism and rural tourism. The tourist area of Ljubljana and central Slovenia, which includes programme regions, and Zagreb on the Croatian side, are forming their tourist offer on business and city tourism, heritage tourism and gastronomy while Karlovačka county is focusing on adventure and sports tourism. There is a risk of losing sustainability of tourism, due to undirected and inadequate spatial development (expansion of settlements, tourist capacities, locational or formally unsuitable construction, destruction of cultural heritage and natural resources).

Tourism is one of the pillar services sectors in the territory, however very unevenly spread (Table 12. below).

County	Number of Arrivals 2019	Number of Overnight stays 2019	Number of Arrivals 2020	Overnight stays 2019-2020	Number of arrivals change 2019/2020 in %	Overnight stays change 2019-2020 in %
Primorsko-goranska county	2.966.489	15.314.671	1.323.560	7.824.289	-55,38	-48,91
Istarska county	4.481.698	26.388.645	1.736.315	11.452.784	-61,26	-56,60
Primorsko-notranjska region	146.276	225.188	44.044	83.655	-69,89	-62,85
City of Zagreb	1.454.019	2.638.962	342.472	780.077	-76,45	-70,44
Zagrebačka county	139.913	225.561	42.206	82.323	-69,83	-63,50
Karlovačka county	364.517	626.231	101.861	179.963	-72,06	-71,26
Krapinsko-zagorska county	177.835	386.985	89.836	200.684	-49,48	-48,14
Varaždinska county	81.284	184.409	45.180	85.036	-44,42	-53,89
Međimurska county	81.924	196.922	39.384	95.673	-51,93	-51,42
Podravska region	385.143	827.591	164.858	445.440	-57,20	-46,18
Pomurska region	347.645	1.078.273	221.961	739.772	-36,15	-31,39
Savinjska region	541.663	1.763.949	368.361	1.215.011	-31,99	-31,12
Zasavska region	4.584	12.785	2.993	8.408	-34,71	-34,24
Posavska region	214.745	714.140	124.777	424.335	-41,90	-40,58
Obalno-kraška region	1.074.161	3.194.019	657.586	2.309.984	-38,78	-27,68

Jugovzhodna Slovenija region	173.271	506.836	117.171	406.251	-32,38	-19,85
Osrednjeslovenska region	1.280.511	2.528.826	308.369	675.684	-75,92	-73,28

Table 10: Overnight stays by county/region, 2019 and 2020<sup>182</sup>

According to these data, it is evident that the most successful tourist regions are regions located by the sea, followed by Zagreb and the Osrednjeslovenska region. Compared to 2019, there was a significant decrease in the number of tourist arrivals and overnight stays in 2020 in the entire area. Tourism is influenced by various factors as it is demonstrated by these data and in the last year, these factors have been COVID-19 pandemic and devastating earthquake which affected two Croatian border counties.

Furthermore, it is evident that the tourist region of thermal Pannonian Slovenia is taking more advantage of its potentials, whereas touristification in the northern Croatian border counties, although progressing, is not yet satisfactory; despite its rich heritage and natural resources, there is a lack of interpretation of cultural and natural heritage for tourism purposes. These problems, which are also challenges, will have to be addressed in the future by the regions. **As it is evident from the data, tourism in the area has the characteristics of seasonality, which is especially pronounced in areas located by the sea.**

In this market segment, therefore, it is apparent that there is a possibility of complementing tourism products with content that will not be so dependent on seasonal conditions. **A growing demand for active tourism, tourism of emotions, slow tourism, experiential tourism, experiences, and stories should be considered as well as development of various types of tourism led by the principle of green and sustainable tourism.** The cross-border area is characterized by the existence of similar tourist infrastructure starting from health facilities for tourism and health purposes, tourist facilities in rural tourism, cultural heritage and a large number of vineyards and winemakers on both sides of the border. Local stakeholders are missing digital and marketing skills, knowledge for improving infrastructure and services in line with green transition (fostering sustainable/green touristic destinations), cooperation skills and events etc. Furthermore, **linkages with other sectors like agriculture, culture, creative industries and fisheries are missing**, as well as cooperation of local tourist agencies and boards as opportunity for boosting tourism services in the regions<sup>183</sup>.

Opinions, experiences and satisfaction rates of tourists are not being collected by stakeholders, cultural institutions nor tourist agencies/boards. **The key stakeholders should consider data collection** that would enable demonstration and measurement of current needs at the local level.

Knowledge on development of innovative tourist products exists (such are products developed by creative industries), but those should be better integrated in the overall tourist offer.

**Hospitality** is the most emphasized strength of the cross-border area, as identified in public consultations. Other strengths include well developed winter tourism in Slovenia (while Croatia lacks experience and infrastructure) and extremely successful cycling tourism in Istria (while Slovenia lacks

182 <https://pxweb.stat.si/SiStatData/pxweb/si/Data/-/2640005S.PX/>  
[https://www.dzs.hr/Hrv\\_Eng/publication/2019/04-03-02\\_01\\_2019.htm](https://www.dzs.hr/Hrv_Eng/publication/2019/04-03-02_01_2019.htm),  
[https://www.dzs.hr/Hrv\\_Eng/publication/2020/04-03-02\\_01\\_2020.htm](https://www.dzs.hr/Hrv_Eng/publication/2020/04-03-02_01_2020.htm)

183 Interview findings

experience). Learning and know-how programmes and projects could ensure knowledge exchange among the stakeholders and foster development of specific types of tourism in the region.

In Croatia, there are evident workforce shortages in tourism which can be tackled by cross-border employment of youth and elderly, and self-employment in agri-tourism and eno-tourism in the rural areas of the cross-border programme where the unemployment of youth is rather critical. In 2021 the Croatian coast employed 20.000 seasonal workers.

**Tourism and cultural heritage have been the subject of previous cooperation projects** which allowed the expansion of the tourist offer precisely through innovative interpretation of cultural heritage.

### 3.4.6. Culture

The cultural offering of the area includes a programme organized by various publicly funded institutions, private institutions and associations (independent cultural scene) which are subsidised from various funds. **Zagreb, Ljubljana, Maribor and Rijeka are strong cultural centres with key cultural infrastructure**, which means that these cities provide the largest cultural offering. There are also smaller centres which include individual rural areas with specific offerings of individual festivals and museums. However, these smaller centres require significant improvement and rounding off offerings into complete tourist products. Cultural interaction across the borders is set to minimum due the COVID restrictions. The programme should offer opportunities for re-connecting people and fostering cultural interactions, learning about SI/HR culture and languages. Creative industries and social innovators play a great role in re-connecting people, by offering joint handicraft projects, events and joint learning possibilities.

In the area, national / folk theatres (Zagreb, Rijeka, Varaždin, Maribor, Ptuj, Ljubljana, Celje ...) are the bearers of theatrical art. Additionally, a number of other professional and amateur theatres exist within the programme area, as well as numerous and varied thematic theatre festivals (puppet, fairy tale festival, children's, drama, chamber theatre and others). Nonetheless, this type of cultural offering currently does not provide enough networked and complete products for the tourist market.

Some of the most visited museums in both countries are located in the area: the most visited museum in Croatia in 2019 and in 2020 was the Archaeological Museum of Istria, whereas the Museum of Hrvatsko Zagorje (Krapina Neanderthal Museum) and Klovićevi dvori Gallery continuously appear at the top of the list of the most visited museums in Croatia, and in 2020 the Museum of Modern and Contemporary Art Rijeka was added on the list.<sup>184</sup> In the Slovene area, the most visited museums are the Provincial Museum Ptuj-Ormož, the Natural History Museum of Slovenia and the National Museum of Slovenia.<sup>185</sup>

Museums prepare numerous programmes, among which is the Museum Night, celebrated by a large number of visitors every year.

Music is part of the cultural offer and a number of internationally known festivals take place in the area (Ljubljana Jazz Festival, Varaždin Baroque Evenings etc.).

Some festivals are making efforts to expand spatially and programmatically within the area (e.g. Varaždin Baroque Evenings), but then again there is much more room for improvement. Film art takes

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<sup>184</sup> <https://mdc.hr/hr/muzeji/muzejska-statistika/statistika-hrvatskih-muzeja/>

<sup>185</sup> <https://www.potnik.si/top-10-muzejev-v-sloveniji/>

its place in the area mainly through thematic festivals (Pula, Motovun, Tabor, Varaždin, Maribor, Ljubljana etc.)<sup>186</sup>. In addition, there are book fairs (Pula, Ljubljana, Zagreb)<sup>187</sup> which provide numerous programmes for the reading public.

Part of the cultural offering is produced by cultural centres and public colleges<sup>188</sup> that offer various programmes of different levels of quality. Such cultural infrastructure has elements of visual arts, performing arts, various skills, workshops and has a pronounced social background. However, they are faced with a number of problems - from irregular financial revenues, difficult networking, lack of or unarranged space to lack of technical and human resources.

The European Capitals of Culture were the cities of Rijeka (2020) and Maribor (2012).

## Social innovation

**Unlike the concept of social entrepreneurship<sup>189</sup>, social innovation is not sufficiently recognized in policy-making and implementation<sup>190</sup>.** In general, civil society is recognized primarily as a means for meeting the needs that the state or local / regional self-government has failed to address, although good examples of social innovation in the public sector exist as well<sup>191</sup>. Social innovation mostly comes as a solution for unmet needs, and not as a result of good governance as it should be. Civil society perceives the public sector as quite inflexible and thinks that the public sector excessively administratively burdens innovative organizations. Moreover, urban areas are more strongly networked with social innovations than rural areas. **There are no systematic analyses of existing social innovations or methodologies for measuring social innovations, which makes it difficult to talk about their impact on improving the quality of life of citizens.** Good examples of social innovations in Croatia is coming from the private sector are the associations Roda and Kamensko, Her Second Chance, Wonderful Gardens in Varaždin and ACT Group (which founded two social enterprises) whereas innovations funded from the public sector are Social mentoring for employment difficult employable and marginalized groups, the Program of public-rented apartments in Zagreb, the Non-Profit Housing Organization in Varaždin, the Program of Public Works in Varaždin and the Zagreb Entrepreneurship Incubator.

In Slovenia, social innovation is significant in many areas, especially in employment, social inclusion, demographic change, health, education, finance, political structures and social integration. In the area, the organizations Slovene Philanthropy, the Institute for Intergenerational Cooperation Ypsilon and Nefiks stand out. The Ministry of Labour, Family and Social Affairs is the holder of the Family-Friendly Company certificate<sup>192</sup>, moreover, social entrepreneurship is encouraged and realized through social enterprises, cooperatives, disability companies, employment centres, non-governmental organizations (societies, institutes, institutions / foundations), which act for the benefit of members and produce commercial and non-commercial products, thereby solving social problems.

<sup>186</sup> <https://www.film-center.si/sl/film-v-sloveniji/festivali-v-sloveniji/>

<https://www.havc.hr/hrvatski-film/festivali-u-hrvatskoj>

<sup>187</sup> <https://znk.hr/sajmovi-knjiga/>

<sup>188</sup> <https://www.culturenet.hr/default.aspx?id=8&katid=13>

<sup>189</sup> <https://hrcak.srce.hr/223934>

<sup>190</sup> [https://hrcak.srce.hr/inde.g.php?show=clanak&id\\_clanak\\_jezik=223118](https://hrcak.srce.hr/inde.g.php?show=clanak&id_clanak_jezik=223118)

<sup>191</sup> [https://hrcak.srce.hr/inde.g.php?show=clanak&id\\_clanak\\_jezik=229202](https://hrcak.srce.hr/inde.g.php?show=clanak&id_clanak_jezik=229202)

<sup>192</sup> <https://www.gov.si/teme/socialno-podjetnistvo/>

There are several dimensions that require further efforts and investments in order to develop social innovation: a new generation of strategic planning documents should recognize and support innovation in public structures and connect business and non-profit organizations, further information and education activities should be carried out in the areas that are open to the joint creation of innovative structures and products in the regions. Moreover, more experienced civil society organizations implementing similar innovative programmes should be supported in their activities, focusing in particular on areas of interest to local communities. Social innovation in local communities can be facilitated through donor support, whereas non-profits, which are recognized as drivers of social innovation, should have faster access to funds in order to test new ideas and innovation programmes. There is a lack of analysis / research on the current situation, development potentials and the social impact of social innovations.

### 3.4.7. Conclusions

The COVID-19 pandemic has had a number of negative consequences on education, employment, inclusion and cross-border cooperation, thus it is more important than ever to support a more social Europe. Although information, educational activities and other services for the unemployed are available to all unemployed people in the cross-border area locally, unemployment has increased significantly compared to 2020 due to the private sector's poor resilience to crisis situations. Unemployment of the elderly and young people in rural areas is particularly high, they lack motivation and entrepreneurial skills for self-employment, while on the other hand there is a shortage of labour force due to emerging needs in line with the digital and energy transition and fast-growing tourist demand. The imbalance of labour supplies and demand indicates the need to reform the national education system and calls for the introduction of a culture of lifelong learning starting from preschool education. Current enrolment of children in early and preschool education programmes in Croatia and Slovenia is low and below the EU average. The challenge seeks solutions in enabling learning mobility across the border and fostering new mechanisms for engaging more children in early education programmes. Even though schooling in remote areas is accessible, the number of pupils is continuously decreasing (e.g. Unije island) with continuously decreasing population. Cross-border cooperation of higher education institutions is one of the best cooperation practices of the cross-border area that enabled more than 6.700 SI/HR international students' mobilities via Erasmus+ programme, although there are disparities in exchange ratio between the countries. There are numerous higher education institutions that are performing studies in more than 100 programmes in foreign languages and are enabling the mobility of students in the cross-border area.

Poverty rates in the cross-border regions are decreasing. Human development index indicates a very high level of development of almost all regions in the cross-border area except Krapinsko-zagorska county which has a high level of development (HDI classification). The cross-border area is facing negative demographic trends due to natural decrease and emigration flows. Ageing society requires building capacities and introduction of new locally accessible social and health services which support deinstitutionalization and active and independent ageing. Similar services are also missing for children with disabilities who tend to be socially excluded due to lack of locally based day activities supported by experts (cultural, sports activities). Discrimination and marginalization of Roma and LGBT people is increasing due to prejudice. While Roma groups are supported by numerous ESF projects, LGBT people are not a part of regional or national de-marginalization and awareness-raising campaigns. Volunteering should be treated as a form of employment.

There is a serious lack of efforts to integrate economic migrants that settle in the territory (e.g. Kosovars in Slovenia, Nepalese in Varaždinska county). They have no opportunities of being integrated into society, particularly women. Minorities in the territory have all necessary rights. Further support to their cultural cooperation contributes towards better life quality and tolerance.

Health care is affordable and health centres are accessible in the cross-border area, except in the narrow bordering area where locals in need are forced to travel to domestic hospitals instead of using the nearest health services across the border. Health centres in Buzet, Ilirska Bistrica and Lendava could consider opening their services for the people living nearby, no matter whose health insurance they possess. Number and coverage of disease prevention activities and early detection of disease should cover all areas, including rural areas and isolated islands. Suicide rates, mortality rates from lung cancer, breast cancer and colon cancer, as well as children obesity are higher than in the rest of the EU, however, life expectancy was increasing before COVID-19. Home-schooling and home-working during the pandemic forced people to adopt a less active life-style accompanied by significant psychological burden for children and the elderly. Moreover, domestic violence has drastically increased. These new challenges call for new innovative initiatives for resocialization and healthier living in times of “new normal”.

The cross-border area is characterized by various types of tourism (maritime, alpine, thermal, cultural, health, religious, recreational, rural, nautical etc.), thus is rich in diverse competences, skills, knowledge and experiences that could be shared among the stakeholders. The tourism in the region is recovering after the critical decline in 2020 due to the COVID-19 pandemic and destructive earthquakes and is expected to flourish in the incoming years. Resilience of tourism as a whole could be increased by development driven by demand, including implementation of green steps towards sustainable tourism, joint promotion and joint interpretation and outreach programs, relying on innovative digital tools. Regions in the narrow cross-border area are mostly rural regions with numerous touristic potentials, rich cultural heritage, extraordinary eno- and gastro-offer, but on other side lacking linkages with other destinations, poor local cooperation among stakeholders, few or zero tourist services, lacking knowledge, experience and motivation for building capacities and stronger involvement into sustainable tourism development. The paradox of workforce shortages in tourism and high unemployment rates should be tackled by seasonal staff exchange (SI-winter, HR-summer), appropriate lifelong learning and master programmes, supporting self-employment initiatives in tourism, creative industries and social entrepreneurship linked to touristic demand. Cross-border regions (especially Osrednjeslovenska - Grad Zagreb and Istarska - Obalno-kraška) should be more accessible to tourists by different means of transport, followed by frequent connections between Slovene and Croatian touristic destinations. Merging Slovene and Croatian tourist regions, creation of joint visitors' cards and digitalization of services should be considered and supported.

Opinions on visitors' experiences should be collected by stakeholders and tourist boards, ensuring that needs could be demonstrated and measures undertaken accordingly, otherwise the challenges and development potentials will stay hidden and no actions would be taken to improve the conditions. The problem could be tackled by ISO1.

### 3.5. Policy Objective 5 - A Europe closer to citizens

#### 3.5.1. Existing cooperation potentials for locally-led initiatives in the region

Territorial cohesion is a fundamental objective of the European Union, enshrined in the Lisbon Treaty. It plays an important role in adapting to demographic change and reversing inter-regional imbalances in development and can contribute significantly to the achievement of economic, social and territorial cohesion, the creation of quality local jobs and sustainable development. The new generation of cohesion policy encourages the use of integrated and place-based approaches in order to foster economic, social and territorial cohesion while also promoting territorial governance. Integrated and place-based approaches are intended to improve the performance and efficiency of public interventions by meeting the specific requirements of the territories and helping to make them more attractive.

Effective place-based development in the cross-border region is supported by mainly two integrating tools that can be used to implement territorial strategies on the ground, linking the thematic objectives identified in the Partnership Agreements and Operational Programmes and the territorial dimension:

- CLLD – community led local development<sup>193</sup> is based on the experience of implementing LEADER, URBAN and EQUAL in previous funding periods, and builds mainly on the LEADER approach, which has led to an exponential increase in Local Action Groups (LAGs) since its inception in 1991 and contributed significantly to improving the quality of life of the population, particularly in rural areas. CLLD takes a bottom-up approach with the aim of setting up objects and financing projects linked to the local needs of the community rather than imposing objectives at the national level
- ITI – integrated territorial investments<sup>194</sup> can be used to deliver integrated actions for sustainable development<sup>195</sup>. Any geographical area with particular territorial features can be the subject of an ITI, ranging from specific urban neighbourhoods with multiple deprivations to the urban, metropolitan, urban-rural, sub-regional, or inter-regional levels. An ITI can also deliver integrated actions in detached geographical units with similar characteristics within a region (e.g. a network of small or medium-sized cities)<sup>196</sup>

These two territorial tools can play an important role in adapting to demographic change and reversing inter-regional imbalances in development balancing the differences among Slovenia and Croatia in the terms of governance structures and experience in bottom-up development initiatives. Bottom-up approach is essential for the success of these tools. The tools can effectively tackle the following emerging needs identified in the cross-border area:

- Environmental protection, energy efficiency and biodiversity degradation; natural catastrophes call for urgent interventions in the terms of raising awareness in local communities, identification of local points of environmental risks and implementing measures for environmental pollution and degradation. Special attention should be given to waste separation and recycling at the western Croatian part of the Croatian territory. Urban resilience on climate changes and upcoming natural catastrophes should be tackled by appropriate infrastructural adaptations as soon as possible.
- Social services for vulnerable groups; the cross-border area is facing negative demographic changes that should be tackled locally by adaptation of social and mobility infrastructures, the creation of specific goods and services aimed at an aging

<sup>193</sup> Article 32-35 of the Common Provisions Regulation

<sup>194</sup> Article 36 of the Common Provisions Regulation

<sup>195</sup> Article 7 of Regulation (EU) No 1301/2013

<sup>196</sup> [https://ec.europa.eu/regional\\_policy/sources/docgener/informat/2014/iti\\_en.pdf](https://ec.europa.eu/regional_policy/sources/docgener/informat/2014/iti_en.pdf)

population and people with disabilities (including children), fighting prejudices and marginalization of Roma in Međimurska county, support for job opportunities for older people, women and migrants that contribute to social inclusion, development of youth centres, implementing preventive measures for early identification of diseases, healthy nutrition programmes in kindergartens and families etc. Social innovations should be fostered and supported.

- Youth employment in line with local needs to avoid possible emigrations and brain drain; youth unemployment and migration of youth to urban settlements are the most common challenges of the continental rural, underdeveloped municipalities in the cross-border region. On the other side, there is a vision of increasing the number of green touristic destinations located in the inland of the area and agricultural development (in synergy with tourism) whose development is slowed down by a lack of various competencies. Rural areas should locally support the education and motivation of youth in the first place then entrepreneurial trainings should be introduced.
- Tourism development; due to specific local potentials, different tourism development strategies should be created. A multi-sectoral approach should be considered to ensure strong synergies with other sectors such as agriculture, creative and cultural industries, IT.
- Digitalization and smart communities; Energy efficiency in the urban suburbs could be effectively tackled by introducing digital energy saving systems for buildings and households. Such a system could drastically reduce the energy consumption at large. Elderly people and people with disabilities living both in urban and rural areas lack digital skills, particularly to stay connected with their families during the pandemic. Enhancing digital skills can tackle the challenge of long-term unemployment of elderly and people with disabilities, as well as enabling and fosters the participation and interaction of the citizens of the more isolated regions with various administrative, social and political services of authorities at all levels (local, regional, national and European).

### 3.5.2. The availability and activity of cooperation organizations (EGTCs)

The European Grouping of Territorial Cooperation (EGTC) is a platform which aims to facilitate the exchange of experience between the members and to promote territorial cohesion<sup>197</sup>. European Committee of the Regions published a List of European Groupings of Territorial Cooperation in July 2021 where no EGTCs from SI/HR cooperation area is listed<sup>198</sup>.

Pannon EGTC was established in the cross-border area of Slovenia-Hungary-Croatia with a goal to improve cross-border cooperation along the Croatian-Slovene-Hungarian border and to support economic cooperation in the region. It has been active since 2010 and after Croatia's accession to the EU, Croatian municipalities joined their Slovene and Hungarian counterparts. Through various projects Pannon EGTC facilitates and strengthens collaboration between the three countries. Moreover, it encourages economic and social cohesion in the region. Pannon EGTC currently has 65 members: 62 municipalities and 3 regional organisations. On the territory of the programme area, it operates across Međimurska county in Croatia and Pomurska region in Slovenia. However, currently three out of four active projects are focused at Croatia-Hungary border, and one project, the "SHARE" project,

<sup>197</sup> 5 Regulation (EU) No 1082/2006.

<sup>198</sup> [https://portal.cor.europa.eu/egtc/CoRAactivities/Documents/Official\\_List\\_of\\_the\\_EGTCs.pdf?Web=0](https://portal.cor.europa.eu/egtc/CoRAactivities/Documents/Official_List_of_the_EGTCs.pdf?Web=0)

encompasses all three members of the EGTC and it relates to sustainable cultural heritage protection programmes and the search for good practices<sup>199</sup>.

Potential EGTC is Dolenjska railway whose future members (10 municipalities) signed an agreement on cooperation for the revitalization of the Dolenjska railway (Ljubljana - Grosuplje - Trebnje - Novo mesto - Metlika - Karlovac – Zagreb), with the aim of achieving the modernization of the railway line, higher cruising speed, strengthening of line capacity, arrangement of stops and elimination of level crossings. The establishments of EGTC is in strong interest of organisations from both sides of the border and it is close to the realisation. The first activity will be elaboration of cross-border strategy for that purpose.

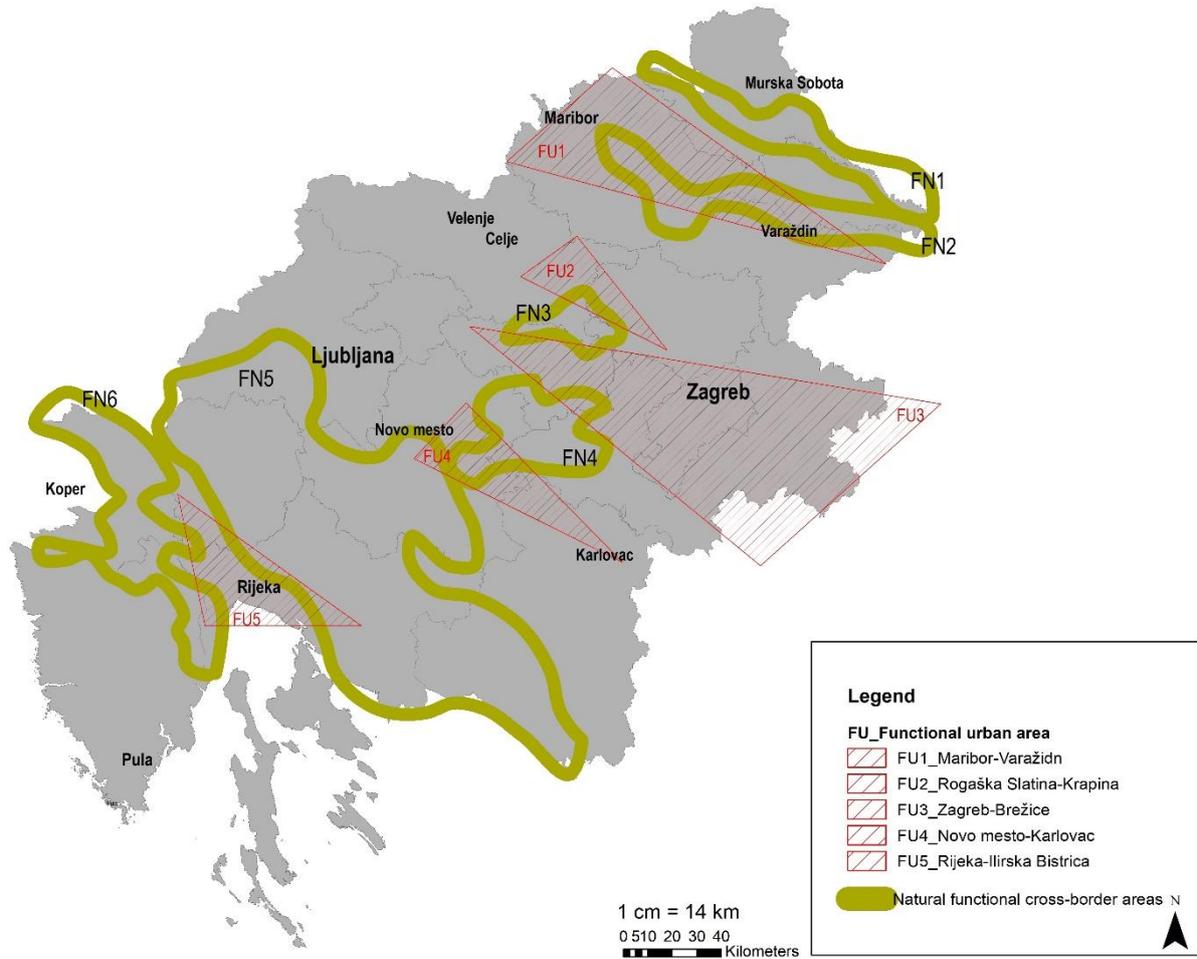


Figure 27: Functional cross-border areas based on geographical features of the programme area. Source: own edition based on open source data.

### 3.5.3. Functional cross-border areas and multisectoral strategies

Rapidly changing conditions of development in the cross-border area heightened the urgency to implement development approaches that are sustainable and address inclusive development. Challenges as environmental protection, negative demographic changes, and health-related challenges cannot be effectively tackled by one sector's inputs but should be more effectively addressed through territorial approaches that use cross-sector coordination to address solutions in

<sup>199</sup> <https://www.pannonegtc.eu/>

integrated ways. Whatever the entry points (geographic, thematic, etc.), the core principles for territorial planning are place-based, people-centred, multi-actor, multi-level, and cross-sectoral<sup>200</sup>.

At the moment, there are no local or regional formal functional areas (cities, towns, or municipalities) located strictly on the Slovene-Croatian border, and no multi-sectoral territorial strategies in the cross-border area, except strategies of ITI territories covering integrated territory at one side of the border.

However, there are good examples<sup>201</sup> and development potentials of intersectoral actions in the cross-border area that could be replicated to the wider cross-border area;

- In 2014, the Croatian Ministry of Health established an intersectoral committee for environment and health, which covers the dimensions of health and well-being particularly concerning issues related to the environment, in line with ample evidence of the effect of environmental factors and conditions on health and well-being
- In 2016, the Slovene Government has adopted and with some success implemented the Active and Healthy Ageing Strategy, a holistic policy response to demographic change in Slovenia. The project has increased the awareness and understanding of healthy and active ageing principles and addressed the challenges posed by financial constraints, existing systems, and regulatory frameworks. Active ageing can only be tackled by multisectoral strategies.
- Alps-Adriatic Alliance is an international organization for project-oriented cooperation in the field of tourism, environmental protection, culture, science, politics, economy and European integration on the territory of the Alps-Adriatic area. Both Slovenia and Croatia are represented in the organization. Croatian programme area counties involved are Istarska county, Krapinsko-zagorska, Međimurska, Primorsko-goranska and Varaždinska, while Slovenia is represented by Skupnost Občin Slovenije (SOS) - the Association of Cities and Towns of Slovenia.
- Multisectoral strategy of Istrian peninsula, covering three countries could be developed in line with joint needs and territorial similarities<sup>202</sup>

The development of multisectoral strategies is highly requiring in the terms of various competencies needed to be engaged in the planning and implementation process. The development process should be led by a bottom-up participatory approach engaging different stakeholders and final beneficiaries, which is also time-consuming so the lead institutions should be supported with additional resources. Effective progress on territorial approaches requires political commitment, budgeting, and investing in multi-level participation and capacity development from territorial to national levels. Implementation at the territorial level in Slovenia could be challenging since the governance consists of national and local levels (municipalities).

#### 3.5.4. Urban-rural linkages

Urban-rural linkages across the borders are essential way of enabling additional health, social and educational services for local inhabitants, that are forced to travel to the domestic service providers instead to the nearest centres. The linkages are currently limited by the Schengen border and administrative differences between the national systems, although there are examples of projects proving that urban-rural linkages in the terms of emergency help across the borders are feasible. The projects' narrowed the gap in the accessibility to optimum emergency service between the countryside and urban centres.

<sup>200</sup> Territorial approaches to territorial development, GIZ

<sup>201</sup> [https://www.euro.who.int/data/assets/pdf\\_file/0005/371435/multisectoral-report-h1720-eng.pdf](https://www.euro.who.int/data/assets/pdf_file/0005/371435/multisectoral-report-h1720-eng.pdf)

<sup>202</sup> Public consultation findings

### 3.5.5. Conclusions

Integrated territorial development addresses the developmental needs of the area concerned, which is more needed than ever before, due to the new environmental and social challenges that appear locally and can be resolved only by the direct involvement of local beneficiaries. Integrated territorial development in the cross-border area is fostered by local strategies, developed by municipalities and CLLD and ITI mechanisms. Functional areas on the Slovene-Croatian border do not exist, however, there is an opportunity to effectively tackle challenges to sustainable and inclusive development of the cross-border region by implementing territorial multisectoral strategies. The potential for PO5 is in establishment of an EGTC for the purpose of revitalisation of Dolenjska railway which is close to its realization. As it is seen as a backbone of cross-sectoral flows and economic, social and cultural cross-connectivity its character is strongly multisectoral.

Multisectoral strategies could be territorially defined (e.g. Istrian peninsula), or thematically in the case of cross-cutting challenges, as are in the cross-border region: emigration, biodiversity loss, climate change impact, youth employment, digitalization skills of elderly, specific types of tourism, social services available locally etc. Such strategies in the cross-border area are needed, but implementation should be carefully planned, and its feasibility investigated in the early phase of development. Development and planning of the multisectoral cross-border strategies can be supported by ISO1. Development of urban-rural linkages in the narrow bordering area is encouraged and recommended. Cooperation of social, health and educational institutions can ensure joint usage of services which leads towards the increased quality of living by the border and reduced migrations of local inhabitants. Only one EGTC exists in the cross-border area, although the Pannon EGTC covers the territory of Hungary, Croatia and Slovenia. Formation of permanent cross-border structures help create a wider partnership of all relevant actors in the border region, while the establishment of new ETCGs in the Slovene-Croatian cross border region, preferably with multisectoral joint strategies, would ensure a holistic approach towards resolving key challenges.

### 3.6. Interreg-specific objective (ISO 1): A better cooperation governance

#### 3.6.1. Territorial governance structures



Figure 18: Management levels units in Slovene and Croatian site of the programme area. Source: Own edition based on open source data.

The area is governed at three levels: national, regional level and local level. In Croatia, regional level has 20 regional administrative units called “županija”, and City of Zagreb which is also considered as regional administrative unit (NUTS3). Each county is further divided into municipalities and cities (local level). Local level includes 428 municipalities and 128 towns (LAU level 2). The City of Zagreb was united with Zagrebačka in 1995, and in 1997 the City of Zagreb was given the position of a county. Only 17 local administrative units have a special status of a large town, whereas the city of Zagreb is defined as a town and a county. In its self-governing scope, county performs activities related to education,

health, spatial and urban planning, economic development, transport and traffic infrastructure, maintenance of public roads, planning and development of a network of educational, health, social and cultural institutions, issuing construction and location permits, other acts related to construction and implementation of spatial planning documents for the area of the county outside the big city area and other jobs in accordance with special laws.

Since February 2011, Slovenia is divided into 12 regions, 212 municipalities, 11 of which have the status of a city municipality, and although it is not legally regulated, Slovenia is also divided into provinces (in the geographical sense), called regions. There are also 58 state local-administrative units. Due to the small size of each unit, carrying out the decentralization of decision-making and supervisory functions is not possible at this level. Moreover, administrative units were formed in a rather unusual way, i.e. as joint territorial branches of several ministries rather than general decentralized units of the State, such as e.g. administrative districts. Thus, even if the head of the administrative unit is appointed by the government, the administrative unit is subordinated to individual ministries.<sup>203</sup> Despite its small size, Slovenia is considered a good example of the potential of regional development policy. Its internal diversity, openness and experience of rapid structural change all reinforce the need for efficient resources relocation while underscoring the need to take account of the potential positive and negative externalities associated with the shifting structure of economic activity.<sup>204</sup>

The countries display various institutional capacities most of them **lacking the strategic and operational capacity to respond to new challenges**, the involvement of civil society and other stakeholders in the decision-making processes is still limited.

In cooperation obstacles investigated within the public consultations, beneficiaries stressed disinterest of public sector as an important cooperation obstacle. Solutions proposed include developing different types of exchanges and intercultural projects of various shapes and sizes, cross-border awareness raising and information initiatives promoting life on the other side of the border, resource sharing solutions and building capacities of public institutions and stakeholders for the cross-border cooperation.

Regional development centres play a key role in the economic restructuring of the whole programming area and better co-operation between private and public sectors.

There are<sup>205</sup> strategies that address<sup>206</sup>:

- SavaParks Network is a network of protected areas of the Sava River Basin that gathers 22 institutions and organizations from the territory of Slovenia, Croatia, Bosnia and Herzegovina and Serbia. The network is focused on the exchange of experience in the protection of the Sava River and its floodplains through cross-sectoral and cross-border cooperation.
- **ISKRA – Istria and Karst NGO's hub** - Istria and Karst NGO's hub addresses the identified social potential for non-governmental organizations through tackling the obstacles presently facing the non-governmental sector in the region. The planned activities focus on strengthening the professional and sustainable NGO sector in the region, enhancing its role as a partner in public policy-making and its embedment in the international environment, along with a strengthened and sustainable NGO hub.
- Alps Adria Green, an international non-governmental organization, operates in the fields of nature protection, environmental protection, energy sector, transport and sustainable

<sup>203</sup> Public administration characteristics and performance in EU28: Slovenia

<sup>204</sup> OECD Territorial Reviews: Slovenia; [www.oecd-ilibrary.org](http://www.oecd-ilibrary.org)

<sup>205</sup> Sectorial development only, the informal structures are not based on multi-sectorial strategies (PO5)

<sup>206</sup> Survey findings

development in the south-west Europe and its main focus is solving common ecological problems in the area.

- Association Moja Mura is a non-governmental organization whose main goals are in the field of environmental protection, more specifically the protection of the Mura river. It aims to stop the planning of hydroelectric power plants on the Mura river, permanently protect the river and to make it an example of sustainable tourism and ecologically oriented development as well as make sure that the Mura revitalization plan is carried out in cooperation with neighbouring countries. As of now, the organization operates on the territory of Slovenia, however, here lies a great potential for cross-border cooperation between Croatia and Slovenia.

### Legal and administrative obstacles

The Interreg programme aims to remove the border obstacles, so the living in the cross-border area is with zero limitations. Limitations for those living at the Schengen borders significantly affect lives of the inhabitants living by the border. The results of the online public consultation on overcoming obstacles in border regions reveal that the most frequently mentioned obstacle is **legal and administrative barriers**, considered relevant by more than half of all respondents (53%)<sup>207</sup>. Some of the following limitations could be tackled by supporting cooperation of national authorities:

- **Barbed wire** raised in the past years by Slovenia in order to stop the illegal migration flows is heavily criticized at the local level where it is perceived to hinder open border opportunities, and daily communication.
- **Communication infrastructure** (internet and mobile communication infrastructure) is poor in the bordering municipalities causing difficulties in business and education. Pupils and students living in the area attend online classes with difficulties, while home workers work with low effectiveness due to network disturbances.
- Lack of **cross border mobility connections** is a cooperation barrier for local inhabitants and other people that are visiting the region (tourists).
- **Holiday traffic clogs** at border crossings hinder daily commuting of local inhabitants. During the peak season the waiting at the border takes up to 6 hours.
- Unexplored possibilities of communal **infrastructure sharing** in the cross-border area (for instance waste water infrastructure).

### Capacity building challenges and needs

The Interreg specific objective is suitable for unlocking development potentials of the cross-border area, boosting and supporting implementation of other Policy objectives by building capacities of public institutions and stakeholders. The following cross-border capacity building challenges and needs could be tackled by ISO1:

- **Poor knowledge and experiences of public stakeholders** (mainly leaders of regional and local administrative units) to support digital and green transition. Terms like development of smart cities, smart villages, sustainable development, circular economy, climate change adaptation should be understood while building local and regional strategies and implementing national and microregional strategies. Most respondents in survey investigation believe that knowledge, exchange of good practices and mutual learning are the most important activities for achieving the goals of smarter Europe (171 or 55,34%), greener Europe (158 or 51,13%),

<sup>207</sup> [Overcoming obstacles\\_en.pdf \(europa.eu\)](#)

more social Europe (176 or 56,96%), and better cooperation governance (175 or 56,63%). Study visits and exchange programmes involving local leaders are recommended as the most effective way of learning, raising awareness and motivation for immediate action.

- **Lack of operational capacities of public stakeholders and NGO's.** Public consultation findings indicate lack of operational capacities, for instance expertise for implementing specific sectorial projects for implementing various services (legal clinics, health, social and humanitarian services) in the local communities, urban and rural areas. Capacities could be enhanced by engaging volunteers for certain actions, while volunteerism should be seen as employment engagement. Home working is also an opportunity for building capacities that enables hiring talented people from remote areas. Raising awareness on strategic development (using strategies!) and training for leadership is needed to foster the visionary approach among local and regional leaders.
- Cooperation of national stakeholders in the border area is of high quality, while **intermunicipal cooperation is lacking**. Knowledge transfer, common goals definition and joint solution for the benefit of people are particularly missed in the northern parts of the cross-border regions (Podravje, Pomurje - Međimurje). Interviewees emphasized the **lack of cross-border cooperation platforms for enterprises** and cooperation events for connecting potential partners for interventions within and out of the Programme.
- **Lack of statistic data evidence** at NUTS3 level is a barrier for sustainable development. National, regional and local authorities should agree on specific data collection<sup>208</sup> that would enable demonstration and measurement of current needs at the local level. For instance, statistic data about energy poverty, number of migrants by origin, pupils and students from Slovenia attending the high school in Croatia and vice-versa are missing.
- **Lack of research and feasibility studies**, for instance in green infrastructure development, renewable energy system used for local settlements and buildings (e.g. geothermal energy production), cooperation towards renovation of cultural heritage under the EU New Bauhaus initiative and other preparatory actions that would foster sustainable development.
- **Poor capacities of stakeholders in the field of tourism.** The cross-border area is characterized by the existence of similar tourist infrastructure starting from health facilities for tourism and health purposes, tourist facilities in rural tourism and a large number of vineyards and winemakers on both sides of the border. Targeted investments in digital and marketing skills of stakeholders, improving services, education for sustainable touristic development and building less infrastructure can significantly raise the level of available supply, which will result in greater competitiveness of the entire cross-border area. Opinions, experiences and satisfaction rates of tourists are not being collected by stakeholders, cultural institutions nor tourist agencies/boards. The capacity building scheme can be supported by Small project fund under the ISO1.

### 3.6.2. Rural development structures

The majority of the programme area is rural; however, rural areas differ in terms of their current level of development, as well as their potential for further development. Rural areas surrounding the main routes or in proximity to the large urban centres are more likely to develop further, unlike the faraway rural areas which are suffering from depopulation caused by lack of infrastructure provision, inadequate access to public service, poorer skills of inhabitants, lower income generation (higher risk of poverty) and fewer job opportunities. The developmental disproportion between the rural areas was to be aided by the adoption of the Rural Development Program of the Republic of Croatia. The programme is aimed, among other things, to improve living and working conditions in rural areas in the country.

The measures of the programme focus on updating plans for the development of municipalities and villages in rural areas, as well as protection and management plans of Natura 2000 sites and other areas of high natural value, investing in the construction, improvement or expansion of all types of small infrastructure, including investments in renewable energy sources and energy savings, and investing in launching, improving or expanding local basic services for the rural population, including leisure and cultural activities and related infrastructure.

The concept of “smart villages”<sup>209</sup> included in the programme concentrates on the use of modern technologies that will facilitate the creation of an environment that will provide the same opportunities to rural residents in terms of economy, social life, education and healthcare. The digitalization of villages through digital and telecommunications technologies, innovation and better use of knowledge presenting new services contributes to a better balance of economic and social capital, and thus to the quality of life of people in rural areas. Likewise, emphasis is placed on overcoming the traffic isolation of rural areas (especially islands) using modern technologies (digital applications, "car-sharing" services, etc.), as well as upgrading of the infrastructure and public transport which helps to create attractive conditions in the redistribution of living space in Croatia.

### 3.6.3. People-to-people actions for increased trust

Under cross-border cooperation programme, people-to-people (P2P) and small-scale projects are an important and successful instrument, with a high European added value, for eliminating border and cross-border obstacles, fostering contacts between people locally and bringing border regions and their citizens closer together. P2P projects are carried out in a wide range of fields such as culture (e.g. learning the neighbouring language), sport, tourism, education and vocational training, economy, science, environmental protection and ecology, healthcare, transport and promotional activities, etc.<sup>210</sup>The implementation of such actions could be done as projects of limited financial volume. Projects of limited financial volume according to the Article 24 of the draft ETC Regulation.

People-to-people actions became more important in pandemic since people were seeking for interaction, activity, and resocialization. People living in remote areas, elderly and people with disabilities became even more isolated and socially excluded, while wealthy families stopped traveling and exploring different places and cultures.

The motivation and will for people-to-people cooperation is highly emphasized among the elderly, cultural and sport associations. In the period 2014-2020 several people-to-people project were successfully implemented within the Europe for citizens' programme. The projects had a great impact on citizens, which ensured strong visibility at the national level and made people motivated to participate. Since demand exceeded the capacities of the Programme, additional mechanisms funded by the EU should be introduced. Benefits of such projects could be learning about the culture of neighbouring areas, promoting intercultural skills among the citizens of border regions, promoting the ability of people to study, work and do business across borders, facilitating communication between people, overcoming the language barrier by stimulating language learning, developing interpersonal contacts and building up partnerships.

### 3.6.4. Conclusions

There are significant dividing effects of the border caused by administrative and legal obstacles, poor communication infrastructure (mobile connectedness and internet) in the narrow cross-border area, holiday traffic clogs at the border crossings, and unexplored possibilities of cross-border resource

<sup>209</sup> <https://ruralnirazvoj.hr/3-hrvatski-ruralni-parlament-koncept-pametnih-sela/>

<sup>210</sup> [https://cor.europa.eu/en/our-work/Documents/CORLEAP/Pavel\\_Branda\\_People\\_to\\_People\\_Contacts\\_final\\_EN.pdf](https://cor.europa.eu/en/our-work/Documents/CORLEAP/Pavel_Branda_People_to_People_Contacts_final_EN.pdf)

sharing. Local and regional leaders lack understanding of digital and green transition goals and motivation for undertaking recommended measures for reaching the goals. Other cooperation challenges include poor inter-municipal cooperation, lack of operational capacities for implementing specific services at the local level (health, social, legal support), lack of cooperation platforms for enterprises in the cross-border area, lack of statistical data at the NUTS3 level and lack of feasibility and research studies for the implementation of sustainable and resilient infrastructure. Development in the cross-border region is supported by the implementation of macro-regional strategies and EU funding programmes. Implementation of other PO's and reaching the EU targets in the field of sustainable development could be supported by knowledge exchange actions across the borders within people-to-people actions. People-to-people actions should certainly cover health issues identified in PO4 by demonstrating active living habits (ex. diet exchange programme) and attractive sport/recreational outdoor activities (ex. joint sports events) and infrastructure, nature protection, civil engagement into disaster risk management plans, cultural exchange programmes, language learning and social interaction. The list of the actions should stay open for upcoming challenges and needs identified in the time of proposal development.

ISO1 can tackle the most important cooperation obstacles identified in the Territorial analysis, work towards setting grounds for implementing joint cross-border actions (i.e. removing administrative barriers), enhancing cooperation between stakeholder and building mutual trust between the citizens. Therefore, ISO1 is justified and needed mechanism for that boosts cooperation and balanced regional development.

#### **4. Interconnectedness of the border region**

In the past 30 years (1991 – 2021), the programme area experienced a major change in its socio-economic and demographic characteristics, due to the fact that the area was divided between two countries, that emerged from disintegration process of the former Yugoslavia in 1991. Establishing the national border led to reduced daily migration within the area, consequently leading to less economic cooperation between different stakeholders in the area and also leading to several land and sea territories disputes that additionally burdened the challenge of re-establishing functional cooperation in civic and economic cooperation of the stakeholders in the area.

The once free movement of goods, finance and people decreased and became subject of legal and strategic orientations of respective neighbouring countries. This meant that this area, historically connected in functional economic cooperation, was now divided and began to develop as neighbouring regions, under different policy governance of respective countries of Slovenia and Croatia. Due to the political situation and overall positioning of Slovenia in the framework of former Yugoslavia, the Slovene part of the area, started to gain an advantage in terms of overall development, mainly due to Slovenia's fast and in many ways efficient implementation of the EU accession process, that was supported by the EU accession financial help. This was also the time when this area benefited from EU finances on one hand, and also was able to begin the process of re-integration of once functional area, on the other hand. Albeit not in political terms, as national borders remained, but in terms of the EU cohesion development policy of reducing development disparities within EU countries and extending the development cooperation also to outside borders of its member countries.

When Slovenia became a member of the EU in 2004, Croatia was also heading towards EU membership, meaning that now, Croatia had access to the financial support it needed for its stakeholders, from municipalities, public sector stakeholders and private sector, including agriculture, to re-integrate on development potentials area has. Though there are still administrative barriers in

place, e.g. Schengen regime, the main challenges remain in the form of sector(s) red tape, for overcoming of which, cross border programmes and various other EU financial sources are designed for.

As Croatia joined the EU in 2013, this area, for the first time, could fully capitalise on the EU financial development support, in terms of several EU financing programmes, supporting several macro and micro regional strategies, that this area is included in. In the forthcoming financial period of 2021-2027, Slovenia and Croatia are already experienced in utilisation of the EU funds, meaning understanding the purpose, objectives and combination of different funds/programmes to tackle different issues.

For the financial period of 2021-2027, the EU has set 5 policy objectives, that will seek operationalisation in different fields, sectors and regions, through various fundings at national and the EU level:

1. more competitive and smarter Europe,
2. greener, low carbon transition towards a net zero carbon economy,
3. more connected Europe,
4. more social and inclusive Europe,
5. Europe closer to citizens.

Achieving these objectives will be in large part dependent on the efficiency and effectiveness of the implementation of various development programmes and strategies, one of them is also the SI-HR programme which is part of functional areas and is also included in the following strategies:

### **1) EU Strategy for the Danube Region (EUSDR):**

The European Union Strategy for the Danube Region (EUSDR) intends to develop coordinated policies and actions in the area of the Danube River basin, reinforcing the commitments of the Europe 2020 strategy towards smart, sustainable and inclusive growth.

The Danube region covers parts of 9 EU countries (Germany, Austria, Hungary, the Czech Republic, the Slovak Republic, Slovenia, Bulgaria, Romania and Croatia) and 5 non-EU countries (Serbia, Bosnia and Herzegovina, Montenegro, Ukraine and Moldova).

The Danube region, one of the largest macro-regions, is facing several challenges:

- environmental threats (water pollution and soil, habitat fragmentation, biodiversity loss, floods, climate change)
- untapped shipping potential and lack of modern road and rail transport connections
- insufficient energy connections
- uneven socio-economic development
- uncoordinated education, research and innovation systems
- shortcomings in safety and security

Better coordination and cooperation between the countries and regions is needed to address these challenges.

EUSDR Strategy lists 11 priority axes in four main pillars (Connecting the Danube Region; Protecting the Environment; Building prosperity; and Strengthening the Danube Region), thereof several may be relevant for the new Interreg programme as well.<sup>211</sup>

Each comprises Priority Areas, distinct fields of action. These are:

#### 1. Connecting the Danube Region

- To improve mobility and multimodality (a) Inland Waterways (b) Road, rail and air links,
- To encourage more sustainable energy,
- To promote culture and tourism, people to people contacts.

#### 2. Protecting the Environment in the Danube Region

- To restore and maintain quality of waters,
- To manage environmental risks,
- To preserve biodiversity, landscapes and the quality of air and soils.

#### 3. Building Prosperity in the Danube Region

- To develop a knowledge society through research, education and information technologies,
- To support the competitiveness of enterprises, including cluster development,
- To invest in people and skills.

#### 4. Strengthening the Danube Region

- To step up institutional capacity and cooperation,
- To work together to promote security and tackle organized and serious crime.

The macro-regional strategy helps to formulate joint policy objectives and supports better coherence of the EU policies in the Danube Region. The governance system of the Strategy is based on the Priority Area Coordinators, which are ensuring the implementation of priority areas through planning and providing technical assistance for achieving the assumed targets.

### **2) EU Strategy for the Adriatic-Ionian Region (EUSAIR)<sup>212</sup>:**

The general objective of the EUSAIR is to promote economic and social prosperity and growth in the region by improving its attractiveness, competitiveness, and connectivity with focus on maritime and coastal area.

With four EU members (Croatia, Greece, Italy, Slovenia) and five non-EU countries (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia), the strategy will contribute to further integration of the Western Balkans.

The participating countries of the EUSAIR agreed on the areas of mutual interest with high relevance for the Adriatic-Ionian countries, being it common challenges or opportunities. The countries are aiming to create synergies and foster coordination among all territories in the Adriatic-Ionian Region in the four thematic areas/ pillars: Blue growth, Connecting the region, Environmental Quality, Sustainable tourism.<sup>213</sup>

<sup>211</sup> Source: <http://www.interreg-danube.eu/about-dtp/eu-strategy-for-the-danube-region>

<sup>212</sup> <https://www.adriatic-ionic.eu/about-eusair/>

<sup>213</sup> <https://www.adriatic-ionic.eu/>

The specific objectives for **Blue growth** are:

- To promote research, innovation and business opportunities in blue economy sectors, by facilitating brain circulation between research and business communities and increasing their networking and clustering capacity.
- To adapt to sustainable seafood production and consumption, by developing common standards and approaches for strengthening these two sectors and providing a level playing field in the macro-region.
- To improve sea basin governance, by enhancing administrative and institutional capacities in the area of maritime governance and services.

The specific objectives for **Connecting the region** are:

- To strengthen maritime safety and security and develop a competitive regional intermodal port system.
- To develop reliable transport networks and intermodal connections with the hinterland, both for freight and passenger transport.
- To achieve a well-interconnected and well-functioning internal energy market supporting the three energy policy objectives of the EU – competitiveness, security of supply and sustainability.

The specific objectives for **Environmental quality** are:

- To ensure the good environmental and ecological status of the marine and coastal environment by 2020 in line with the relevant EU acquis and the ecosystem approach of the Barcelona Convention.
- To contribute to the goal of the EU Biodiversity Strategy to halt the loss of biodiversity and the degradation of ecosystem services and restore them in so far as feasible.
- To improve waste management by reducing waste flows to the sea and to reduce nutrient flows and other pollutants to the rivers and the sea.

The specific objectives for **Sustainable tourism** are:

- Diversification of the macro-region's tourism products and services along with tackling seasonality of inland, coastal and maritime tourism demand.
- Sustainable and responsible tourism management improving the quality and innovation of the tourist offer and enhancing sustainable and responsible tourist capacities of the tourist actors across the macro-region.

**3) Overlapping with other Cross Border programmes:** Slovenia – Hungary, Slovenia – Austria and Slovenia – Italy, Croatia – Hungary and Italy – Croatia.

**4) Overlapping with several transnational programmes: Mediterranean Transnational programme, Danube Transnational Programme, Adriatic-Ionian Transnational programme Central Europe Transnational Programme, Alpine Space Transnational programme.**

**5) EU Strategy for the Alpine Regions (EUSALPS)**

EUSALPS general objective is to capitalise on the region's high competitiveness, making it accessible and inclusive environment for all.

## 5. SWOT analysis

	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
<b>PO 1: Smarter Europe</b>				
<b>Research and Innovation</b>	<p>Increased efficiency with innovative and intensive use of ICT and the Internet as a horizontal strategic orientation in all development activities</p> <p>New and disrupted business models based on innovative ICT and Internet development opportunities (i.e. industry 4.0, sharing economy, AI, AR...)</p>	<p>Insufficient political support to provide resources to implement innovative concepts and approaches</p> <p>Stagnation and/or decrease in R&amp;D capacities due to global competitors</p> <p>Poor collaboration among educational, private and public institutions in the programme area</p>	<p>Use of cloud computing and Internet of Things</p> <p>Rising awareness through mobile technologies</p> <p>Innovative digital solutions based on real-time data</p> <p>Universities, Institutes of economics, Chambers of commerce and industry, Regional development agencies can become drivers of development</p> <p>New business opportunities in circular economy (new business models; approaches - circular design, cradle-to-cradle, biomimicry)</p> <p>Local resource management (e.g., sustainable material for plastics substitution)</p> <p>Improvement of SMEs performance and growth-diversification through research and development in tourism</p>	<p>Currently behind state of the art</p> <p>Lack of developmental resources</p> <p>Low awareness about potential of digitalization</p>
<b>SME competitiveness</b>	<p>Digitization of entrepreneurship and production, and promoting internet entrepreneurship and internet-based start-ups</p> <p>Support in value chain creation and bio-based (cooperation with agriculture) products and brands</p>	<p>Low investments into digitalized society development</p> <p>Poor implementation of complementary approach and promotion of synergies on cross border and cross-sectoral level</p>	<p>Clear political support for developmental efforts to develop innovative digitalized approaches towards intersectional solutions.</p> <p>The legislative framework for access to public information</p>	<p>Insufficient sources of financing the development of digitalization of society</p> <p>The poor legislative framework for implementation of innovative digitalized business models</p>

Digitalization of society		Low level of entrepreneurial activities related to digital transformation	Higher investments into the ICT sector	Not enough incubators and co-working centres
		Low added value of SMEs	Participation in small and short national and EU funded projects for digitalization of production processes (i.e., in agriculture)	
		Low automatization in production processes	Exchange of experiences and opinions on innovations - an opportunity for networking and development of new innovations	
		SMEs are export oriented		
		Liquidity problems when applying for EU-funded projects		
		No targeted employment and the development of new innovative companies		
	Exploitation potential of globally successful IT benchmark solutions	Lack of stakeholder participation in the design and implementation of measures to promote the development of the digital society	Greater technological orientation towards SMEs development	Development lag of rural and suburban areas due to inadequate digital infrastructure
	Involvement in international cooperation on projects and integration into a common European educational and research network	High cost of building a powerful broadband infrastructure in remote areas	Involving digital society development stakeholders in preparation of development and legislative documents through digital coalitions.	Insufficient political support for efforts to develop the digital society: general digitization, digital economy, etc.
	IT based start-ups creating new and disrupting existing business models	Decentralized digitalization of the public administration has led to dispersion and disconnection of IT systems and high costs of development and maintenance	Fostering digitalization in all possible areas	Not sufficiently recognized in strategy papers as a driver of overall development and economic growth.
	Sufficient E-government solutions	Insufficient stakeholder interest in taking advantage of digitization	Consolidation and centralization of state digitalization administration using cloud computing technology and big data, to achieve synergies	Unstable development environment
HKOM national network, data centre, SIGOV-CA and other issuers of qualified digital certificates, Arnes e-infrastructure		Possibility to use electronic infrastructure and other e-infrastructure for e-services	Poor infrastructural network coverage	
Interoperability of cross border e-services		The competitive market of e-communications/solutions		

<b>Skills for smart specialization, digital connectivity</b>	In some areas access to digital services is excellent (5G networks, Wi-Fi in towns...)	In some areas access to digital services is very poor (slow broadband speed...)	Local self-government units can be drivers of green and digital society, and the same will be achieved by the exchange of knowledge, experience and examples of good practice	
		Lack of knowledge for smart specialization, industrial green and digital transition, and entrepreneurship	Diversification of the tourist offer, based on the digitalization of heritage in the total spectrum	
	Wide range of formal and informal education in order to increase digital skills and e-literacy	Geographical, age, and other types of digital discrepancies in the supply and use of communication and information services across the cross-border area	Cross-sectoral cooperation for complementary development approach and search for synergies	Lack of understanding of the development opportunities of the digital society
	Good practices of intergenerational cooperation and e-literacy		Research, development and establishment of open platforms, based on interoperability and standards, for easier and faster development of quality, innovative, safe and trusted solutions	Influence of partial interests and unwillingness to cooperate
	Higher investments into ICT sector	Small number of high-tech SMEs and lack of focus on global markets		Deterioration of the competitiveness of the economy
	Some areas are applying strategies towards development of smart cities (e.g., Zagreb, Opatija...)	Low digital literacy, deficient e-skills and use of available advanced e-services and ICT solutions	Inclusion of the "smart" concept in strategic documents	Poor awareness of citizens about the concept of smart and green development
	Insufficient knowledge (and education) of smart managements concepts	Developing skills for digital interpretation of heritage and destination management, establishing a model for flexible smart integrated destination management, for attractive and resilient destinations		
	Markets are relatively poorly developed			

## PO 2: Greener, carbon-free Europe

<b>Promoting energy efficiency measures</b>	Experience from the cross-border energy project planning; good intergovernmental cooperation	Lack of cross-border initiatives regarding planning, deploying and successfully implementing	Renovation wave for Europe initiative (in 2020 the European Commission	Limited knowledge of the professionals dealing with buildings (AEC industry) on
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<p><b>Promoting renewable energy &amp; Developing smart energy systems, grids and storage at local level</b></p>	<p>Cooperation of local energy agencies and national research institutions on the territory (12) towards energy self-sufficiency</p>	<p>projects related to digital transformation of buildings, neighbourhoods, and cities as well as thorough building energy retrofits.</p>	<p>published a new strategy to boost deep renovation of buildings)</p>	<p>how to develop nearly zero energy building projects as well as how to plan nearly zero neighbourhoods</p>
	<p>Experience in Strategic planning of energy self-sufficiency of remote areas (e.g. islands)</p>	<p>Low population concentration (small cities, disperse settlements); lack of awareness of the importance of EE potentials</p>	<p>New opportunities for small businesses that can boost the digital building transformation</p>	<p>Rather a challenge: how to deliver knowledge (tech part) as well as be able to set up local businesses that capitalize on the RES implementation or EE measures undertaken</p>
	<p>Local energy agencies' availability for pilot projects in EE and RES</p>	<p>Traditional orientation to energy self-sufficiency = behavioural change is a challenge</p>	<p>Installation of RES as a part of national development initiative, e.g., delivering energy (smart) communities</p>	<p>New business opportunities in energy service company (ESCO), energy contracting, focusing especially on housing and regional mobility</p>
		<p>Lack of regional one-stop-shops for EE (promotion; market expansion); private sector and citizens not sufficiently included in energy self-sufficiency initiatives</p>	<p>Cross-border cooperation in rural areas; implementation of innovative energy solutions for energy self-sufficiency (reducing the pressure on low voltage energy infrastructure); demonstration projects</p>	
		<p>Lack of digitalisation, particularly data gathering (IoT, a database for applications' development and smart community building; also, e-mobility) aiming towards energy community, reducing energy poverty</p>	<p>To capitalize on Western Balkan sustainability and energy market</p>	<p>Fit for 55 (EU emissions reduction target of net 55 % compared to 1990 levels)</p>
		<p>Lack of EE in public buildings and cultural heritage sites</p>		
	<p>Growth in RES installations; available natural resources (geothermal; biomass, sun, wind) and knowledge to deliver</p>	<p>Lack of strategies for RES introduction on territorial level</p>	<p>Opportunity to learn from best practices in the neighbouring countries</p>	

Promoting climate change (CC) adaptation, risk prevention and disaster resilience	integrated energy systems; support smart communities	Unsustainable resource exploitation (biomass)	New career development to be designed: RES manager, RES one-stop-shop consultant	
	Competitive knowledge & expertise base for further uptake and mainstreaming of RES concepts at the individual, private level (industry and SME), as well as planning for integrated energy systems in RTD and business sense Good stakeholder cooperation (ELES; HEP) Grid availability	Lack of fair business models (closed energy loops) and PPPs		
	Identified pressures that are likely to occur in the territory due to CC (models and data available)	Lack of knowledge and actions to mitigate climate change damages (develop climate resilient infrastructure, preparedness units)	Different EU funding available for climate mitigation	Sea level rise, global warming beyond expectations
	Available institutional and cooperation capacities; cross-border cooperation and planning for protection in disasters (existing in disaster protocols, civil protection, and warning; data exchange)	Need for more effective climate change adaptation plans Need for a coordinated approach to tackling climate change adaptation The need for urgent revision of planning documents to include climate change risks	Sustainable Energy and Climate Action Plan (SECAP) methodology available (EU Covenant of mayor's initiative)  Cross-border cooperation through the exchange of knowledge and experience and examples of good practice.	Alignment of local CC adaptation plans with regional, national strategies (need for vertical alignment) for realisation of mitigation measures
	Good local firefighting units' network; young people attracted	The need to identify climate change risks and take solutions to strengthen resilience to climate change The need for educational campaigns and communication activities to raise public awareness in order to adapt to climate change	International support for integrated river basin management (IRBM)  Development of an earthquake information system for the area	
		Poor introduction of Sustainable Energy and Climate Action Plan		

<b>Promoting sustainable water management</b>		(SECAP) in municipalities (small and understaffed)		
		The territory is affected by emerging threats, depopulation; joint local (microregional) reaction protocols and relief forces required (renewed communication protocols, capacity building, equipment)		
		Adapted (integrated) local spatial planning; based on deep understanding of CC impacts		
		Holistic water management on basin scale to be more applied		
	Water source abundance	Water losses in piping systems	New EUWWTD to support small communities in organising sustainable sanitation	Sewage sludge markets and final deposition options uncertain (Phosphorus being a critical resource)
	Water sources legally protected; increasing awareness on their importance	Rural sanitation not organised (WWTP), in spite of the high share of Natura 2000 areas; water pollution is major threat in Karstic areas; high increase of nutrients (agricultural source) into underground waters		
	Transboundary body for integrated basin management (Sava Commission good practice)			
		A significant share of water bodies with less than good ecological status (non-point pollution)		
		Water reuse not applied; zero reduction of water abstraction		
		Need for local integrated water resource management		
<b>Promoting the transition to a circular economy</b>	Significant natural resources available (wood, water, space, RES, clean air)	Unsustainable management of space/landscapes; a need for better planning (capacity	Sustainable resource consumption and management initiatives	Global value chains abortion (pandemics & threats)

	Opportunities for bioeconomy development	building for the local public sector)	Creating value that goes beyond standard monetised practices (ecosystem services)	Climate change effects
	Local resource loops and decreased resource consumption (degrowth) easier on local level	Lack of self-sustainability, local cooperation; sustainable services and practices		
	Some good practices and partners available (reuse centres; local availability and use of resources)	Limited reuse of all resources (space, water, energy, buildings etc.); the need for the closing of local resource loops; development of sustainable business models (social entrepreneurship potential; cooperatives, PPP)		
	Traditional knowledge on resource savings available; local opportunities in crafts, tourism			
<b>Enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution</b>	Well-promoted good practices in the industry; to be spread to all target public (degrowth)	Circular integrative resource management (energy – transport – planning; nature, mobility etc.); the need for awareness raising and facilitation (capacity development) for bottom-up initiatives		
		Poor awareness and application of circular in the business sector, particularly SMEs		
	Significant Natura 2000 areas; free access to nature; development potential and further preservation (establishment of biosphere areas); well preserved nature	Lack of cooperation between Natura 2000 areas and operators (on migratory species management, joint indicators for habitat management); solutions-based management, monitoring system	Funding available for restoration and capitalisation of natural areas/green infrastructure; fostering nature-based solutions; Green deal	Lack of bottom-up initiatives, lack of sustainability in restoration / conservation efforts
	A network of stakeholders available for nature, preserved areas protection, management	Need for increased capacities of protected areas' managers (holistic management, reduction	Common agricultural policy to support green infrastructure in the future	Spread of invasive species
		EU support (EU Green Deal, Biodiversity strategy 2030, EU Strategy on green infrastructure, EU Farm to fork Strategy, etc.); strengthening of	Loss of biodiversity due to climate change; to understand threats and adapt behaviour is key for resilience	

<b>Promoting sustainable multimodal urban mobility, as part of transition to a net zero carbon economy</b>	Large areas of natural green infrastructure - coast, forests, river basins (supporting rich habitats, corridors)	of pressures and award for good practices); Lack of nature interpretation infrastructure	stakeholder cooperation for bigger territory management (Dinaric; Danube etc.)	
	Good air quality and beneficial health effects; high life quality  Urban green infrastructure present	Poor awareness of preserved nature benefits to the local population; bottom-up initiatives lacking; the need for behavioural change  Lack of awareness of multipurpose benefits of green infrastructure (incl. health, resilience); modest applications of nature-based solutions (greenhouse gas reduction)  Failed coordination of bottom – up initiatives with national strategies  Nature conservation is not aligned for cross-border nature areas (e.g. Kolpa/Kupa; the sea)	New LIFE programme (2021 – 2027) support for habitat and species protection	
	National strategies for integral development and delivery of sustainable mobility and efficient public transport	Lack of regional integration of existing cycling paths and their connectedness to rail (intermodally)	Euro Velo network  EU initiatives and support (Green Deal), Covenant of Mayors etc.	Slow investments in public transport, particularly rail
	Good network of cycling routes in the territory, rising mobility opportunities  Existing urban mobility plans and initial actions (promotion of working from home, car sharing etc.)	Poor rail network in CB connectedness, lack of connecting peripheral urban and rural areas to main public transport corridors  Need to address mobility poverty (solutions sought)		

	<p>Necessary awareness raising actions towards sustainable use of citizens for sustainable mobility; identification of bottom-up initiatives (incl. capacity building of facilitators)</p> <p>Poor e-mobility, use of other alternative fuels in urban and peri-urban areas; lack of small infrastructure (charging stations)</p>
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PO 3: More connected Europe				
<b>Developing a sustainable, climate resilient, intelligent, secure and intermodal TEN-T</b>	<p>The programme area is well situated connecting Central, Northern and Mediterranean Europe</p> <p>TEN-T road corridor is almost complete in both countries</p> <p>Basic infrastructure for market competitive freight transport in the Slovene part</p> <p>Two important ports Koper and Rijeka, especially for cargo transport on its way to Europe</p> <p>Renovated Zagreb airport</p> <p>Existing strategic documents at the national level prioritizing sustainable mobility</p>	<p>TEN-T railway infrastructure in the Interreg programme area lags significantly behind the EU average</p> <p>Poor cross-border rail service in some sections and low train speeds</p>	<p>Completed TEN-T railway network and improved intermodal transport combinations e.g. train-maritime cargo transport and train/bus transport-airports</p> <p>Increased freight and passenger transport on TEN-T rail infrastructure</p> <p>Increase of competitiveness in sustainable modes of transport driven by the tourism needs</p>	<p>Slow revitalization as a result of low financial support for the railway infrastructure in comparison to the road network</p> <p>Low travel times for car users as a result of high accessibility of roads will continue to put sustainable transport modes into comparatively inferior position</p> <p>Big infrastructure projects for maritime TEN-T network will threaten the sea landscape value</p>

<p><b>Developing and enhancing a sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility</b></p>	<p>Many sustainable mobility options at the local level in Ljubljana, Zagreb and majority of touristic popular cities in the programme area</p>	<p>Low competitiveness of cross-border public transport</p>	<p>Improved climate-resilient and sustainable transport infrastructure</p>	<p>Slow revitalization as a result of low financial support for the railway infrastructure in comparison to the road network</p>	
	<p>Increasing popularity of cycling for the commuting and the cycle tourism purposes in the programme area as well as increased recent and planned investments in cycling infrastructure</p>	<p>Low accessibility of public transport stations in peripheral cross-border areas</p>	<p>Establishment of European Groupings of Territorial Cooperation by the municipality from Ljubljana to Karlovac with the aim to revitalize the cross-border railway</p>	<p>Low travel times for car users as a result of high accessibility of roads will continue to put sustainable transport modes into comparatively inferior position</p>	
	<p>The increasing popularity of railway tourism</p>	<p>Slow implementation of multimodal transport in smaller cities (less than 10.000 inhabitants)</p>	<p>The good road network makes it possible to redesign and use them for sustainable transport modes (cycling, walking) including the possibility for railway tourism</p>		
	<p>Great need to improve the cross-border sustainable mobility (including e-mobility) options is recognized by the stakeholders</p>	<p>Dispersed settlement's structure makes it difficult to follow the standards for sustainable mobility</p>	<p>Increased settlements density around already accessible public stations</p>		
	<p>Cross-border mobility solutions are recognized as one of the most important elements for supporting social and green cohesion</p>	<p>Lack of cross-border cycling infrastructure, services and signposted cycling routes as well as unsuitable border-crossings for the cyclists, non-functionality of the defined network of bicycle routes</p>	<p>Introducing new public transport possibilities in remote areas (Introducing cross-border demand responsive transport - Mobility as a service (MAAS) could be the solution for remote and sparsely populated cross-border areas)</p>		
		<p>The mobility flows and connections were reduced after the border was established Slovene part of the programme area has a high motorisation rate</p>	<p>Establishment of new and more frequent cross-border public transport services</p>		
		<p>Lack of mobility options for disadvantaged groups and poorly developed public transport in the border area (40 km from the border), resulting in mobility poverty</p>	<p>Encourage active mobility and build suitable infrastructure (green infrastructure) for pedestrians and cyclists</p>		
		<p>Different public transport system systems (technical,</p>	<p>Harmonized timetables and smart ticketing in public passenger transport and other soft measures to promote cross-border intermodal mobility</p>		

	<p>legislative, operational, communication) on both sides of the border</p> <p>Unharmonized timetables of different public transport modes, lack of cross-border route planner</p> <p>Low usage of rail and other sustainable mobility modes for daily cross-border mobility and high number of commuters travelling by car at the border crossings.</p>
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PO 4: More social Europe				
<b>Effective and inclusive workforce</b>	<p>Accessible employment services in the cross-border area</p> <p>Low unemployment rates before the COVID-19 pandemic</p> <p>Support for employment of marginalized groups established within Job clubs in Varaždinska and Karlovačka region</p>	<p>The increased unemployment rate in the area due to the COVID-19 pandemic, the highest rates of unemployment among long term unemployed, women, youth and elderly</p> <p>Gender pay gap below the EU average</p> <p>Unexplored opportunities of self-employment in tourism and social entrepreneurship, lack of entrepreneurial skills in rural areas<sup>214</sup></p>	<p>New market needs emerged during the COVID-19 pandemic can create new jobs and employment possibilities in the area</p> <p>Numerous self-employment opportunities in social entrepreneurship, tourism and creative industries for people living in the rural areas</p> <p>Educational reform, adjusting the educational system and learning outputs to labour market needs</p>	<p>Further loss of jobs due to COVID-19 and other negative psycho-social effects of the coronavirus pandemic</p> <p>Passive ageing, low motivation for labour market participation of elderly, early retirement</p>

<sup>214</sup> entrepreneurship and entrepreneurial skills, harnessed in a bottom-up model of development, could have a huge impact on rural and agri-tourist micro-economies

Equal access to education	One way commuting due to disparities in salaries in SI and HR	Increasing life expectancy and working age of elderly		
	Border crossing restrictions due to COVID 19, also for commuting workers	Increasing participation in lifelong learning	EURES programme (European Cooperation Network of Employment Services) encourages the mobility of workers	
		Home working as an employment opportunity for people living in remote areas		
		European Social Fund + : the main EU instrument for investing in people tackling the socio-economic consequences of the COVID-19 pandemic, promoting high employment levels, building social protection and developing a skilled and resilient workforce ready for the transition to a green and digital economy.		
	Accessible schooling in the area, although the accessibility is endangered by the possibility of closing down the schools in rural areas and islands	Participation in lifelong learning programmes below the EU average	Distance learning enables the participation of remote and physically impaired students	Further schooling restrictions due to coronavirus pandemic
	Numerous study programs available in foreign languages (fostering mobility of students)	The low number of pupils in isolated areas (e.g., islands)	Exchange of good practices across the borders and learning/teaching mobility	
	Network of HEI's in the area	Disparities in students'/teachers' mobility between SI and HR side of the border	Increase participation in pre-school education by informing the public on the importance of early childhood education	
			Accessible broadband network	

<b>Inclusion of marginalized and disadvantaged groups, inc. Integration of migrants</b>	Fair recognition of qualifications on both sides of the borders due to harmonized educational systems	Enrolment of children in early and preschool education below the EU average		
	Decreasing poverty rates in the area	Poor social integration of marginalized groups and elderly in rural parts of the cross-border area	Digitalization and ability to provide distance psychological and advisory and social support for marginalized groups	More negative social consequences of COVID-19 pandemic will be appearing continuously in the future
	Ongoing EU projects supporting social non-institutional care	Insufficient capacities of shelters for homeless people	Identifying and removing administrative and legal cross-border obstacles in delivering urgent help for those in need	
	High level of solidarity among people in the cross-border area	LGBTI and Roma prejudices and intolerance	Better involvement and building capacities of NGO's in implementing non-institutional community services for the inclusion of marginalized groups and migrants	
	National minorities are exercising the same rights as nationals	Lack of social communities, day care centres, sport and cultural activities for elderly people in urban and rural areas	Transfer of knowledge and best practices	
<b>Health</b>		Missing inclusive legal and cultural services/activities for economic migrants (e.g. Kosovars and Nepalese)		
		Domestic violence is increasing		
	Improving life expectancy (before COVID-19), but continues lagging behind the EU average	Lack of common health services accessible to Croatian and Slovene inhabitants (Lendava, Ilirska Bistrica, Buzet...)	Improving national regulations by removing formal border restrictions for urgent medical assistance and humanitarian aid	Increasing trend of desocialization of children in COVID pandemic
	Affordable healthcare	Lack of health care assistance and doctors, disparities in the number of doctors	COVID vaccination in line with the EU targets	Ageing population increases pressures and increases costs of healthcare
	Accessible healthcare centres within each country	Suicide rates significantly above the EU average	Health assistance by using online tools (e.g. E-diagnostics, online healing support, online psychological support)	Lack of skilled workforce, health sector is not resilient to health crisis
Unmet health needs below the EU average		Joint cross-border projects for post-Covid resocialization of children,	Invasive allergen weeds, invasive insect that are	
Various preventive programs implemented by national				

<b>Resilient and sustainable tourism, culture and social innovations</b>	authorities, mainly in hospitals (not accessible in local communities)	Increasing child and adult obesity due to unhealthy nutrition and lack of psychical activities	healthier school nutrition <sup>215</sup> and active childhood	spreading diseases in the region
		Lack of attractive infrastructure that encourages active living in urban and rural areas		Nutrition and active living actions (incl. infrastructure that encourages active living) are not supported by national and EU funding programmes
		Chronical diseases and cancer are leading cause of death in the cross-border region		
		Unfavourable attitude towards vaccination		
		Mental health endangered in COVID-19 pandemic, as well as increased family violence		
	Rich cultural and historical heritage	Tourism in coastal regions is extremely seasonal	Growing demand for active tourism, tourism of emotions, experiences, and stories	Mass tourism in the coastal area with negative effects on the environment
	Sun&sea as a competitive advantage	Lack of cooperation among tourist providers	Growing demand for nautical, spa tourism, agro, gastro and eno tourism lead by the principle of green tourism	Endangerment of cultural and natural heritage due to climate change
	Hospitality	Workforce shortages	Standardized regional e-services in tourism	Covid 19, earthquakes, floods and other disasters
	Extraordinary cultural, eno-gastronomic offer in the coastal and rural part of the area	Poor sectorial framework and low level of stakeholders' involvement (local population, visitors)	Increased touristic connectivity between regions by using modern vehicle-sharing mechanisms	Schengen border
	Well-developed thermal and ski tourism in SI regions and cycling tourism in Istria	Lack of innovative touristic services and products that could		Environmental pollution, especially water and air pollution

<sup>215</sup> Obesity, diabetes and even preliminary high blood pressure and eventual heart problems can begin with poor nutrition in **schools**

	A great number of gastronomy-related brands	contribute towards resilient and sustainable tourism	Digitalization of tourism for research, information sharing, surveillance, joint development, and adaptation to COVID-19 challenges	Climate changes and global warming could jeopardize summer and winter (Ski) tourism
	Various cultural offer in the regions	Underdeveloped thermal tourism in HR regions, underdeveloped cycling tourism in SI regions and some HR counties	Digitization of cultural heritage with the aim of transmitting information and creating new high – quality products and content, with aim to bring the remote cultural sites in the region closer to costumers/visitors	Risk of losing sustainability of tourism, due to undirected and inadequate spatial development (expansion of settlements, tourist capacities, locationally or formally unsuitable construction, destruction of cultural heritage and natural resources)
	Knowledge on innovative tourism products and services (e.g., in the field of creative and cultural industries)	Unexplored opportunities related to local self-sustainability	Growing demand for cultural tourism, authenticity, diversified destinations through development of thematic products, cultural routes and well interpreted cultural resources and attractions, using innovative methods and tools, such as storytelling, AT, VR, smart interpretation centres	
	Rich cultural and organizational experience of European Capitals of Culture - Rijeka (2020) and Maribor (2012).	Many heritage sites in the cross-border area are still not adequately revitalized nor valorised	Favourable geographical position and climate conditions	
	Experience in cross-border project management gained in the previous programming period	Lack of interpretation of cultural and natural heritage for tourism purposes	Fostering cultural heritage for diversification of products; supporting: the development of creative and cultural industry and SMEs, synergies between creative and cultural industries and the hospitality sector and sustainable touristic valorization of coastal and underwater archaeological heritage	
		Lack of cross sectorial linkages	Implementation of risk management plans in the field of tourism and	
		Underdeveloped social tourism, inaccessible destinations for people with disabilities		
		Social innovation is not sufficiently recognized in policy-making and implementation		

	<p>cultural heritage, also for cultural CB regions</p> <p>Combining tourism with creative and cultural industries, sports activities, culture and gastronomy.</p> <p>Developing network of sustainable tourism businesses and clusters - supporting networks (e.g. platforms for cooperation and synergies between cultural, tourism and other relevant economic stakeholders), and tourism clusters promoting and sharing best practices in environmental quality management</p> <p>Development of education and training and skills in the field of tourism businesses</p> <p>Implementation of Pillar 4 of EUSAIR contributes towards development of sustainable tourism in the cross-border area.</p>
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PO 5: Europe closer to citizens				
	<p>Excellent informal cooperation across the border (e.g. Dolenjska železnica, Alpe-Adria., energy agencies)</p> <p>Place-based development in the cross-border region is supported by ITI and CLLD</p>	<p>Missing functional cross-border areas and no multisectoral strategies of functional cross-border area</p> <p>No SI/HR ETCG's</p> <p>Unbalanced development of urban and rural areas</p>	<p>Bottom-up approach is embedded into national policies</p>	<p>Further restrictions due to Schengen border, COVID-19 and other crisis</p>

	<p>Motivation and need for development and implementation of multisectoral strategies (e.g., Istrian peninsula)</p> <p>Successful intersectoral actions existing in the cross-border area Regional development supported by regional development agencies in each region of the cross-border programme</p>	<p>Unexplored possibilities of multisectoral strategies for development of tourism, fighting poverty, climate change and social exclusion</p>		
<b>ISO 1: A better cooperation governance</b>				
<b>Efficient public administration</b>	<p>Informal networks of stakeholders</p> <p>Systematic approach towards strategic development is supported by Development plans/strategies at local and regional level</p>	<p>Border wire and fences indicating physical, social and psychological separation</p> <p>Missing intermunicipal cooperation and cooperation platforms (with active management) that would be used also for cooperation initiatives out of the Programme</p>	<p>Development supported by Macro-regional strategies and EU funding programmes</p>	<p>COVID-19 restrictions, including learning and cooperation obstacles that are slowing down sustainable development of the area</p> <p>Interreg funding is not sufficient to tackle infrastructural changes</p> <p>Border as an obstacle (Schengen, wire, Covid restrictions) that negatively affects communication, future cooperation, and sustainable development</p>
<b>Enhancing institutional capacities</b>	<p>Local development supported by LAG's/FLAG's and public development agencies</p>	<p>Lack of systematic training of executives on strategy development and quality management systems in public administration</p> <p>Active citizenship and volunteerism are not recognized</p>	<p>Exchange of knowledge and experience in the cross-border area and within the EU</p>	<p>COVID-19 restrictions, including learning and cooperation obstacles that are slowing down sustainable development of the area</p>

People-to-people actions		as tools/mechanisms for enhancing the capacities of stakeholders and individuals in the cross-border area		
		Lack of understanding of basic green and digital terms and trends is a major obstacle to green and digital transition		
		Lack of research data at the regional and local level (insufficient inputs for problem solving, decision making, planning and impact assessment) Insufficient capacities of stakeholders for development of resilient and sustainable tourism		
	Existing experience, will and demand for participation in people-to-people actions	Obsolete cooperation of people in the cross-border area  Different languages are a cooperation obstacle for younger inhabitants  Missing joint cross-border events	Europe for Citizens Programme as a tool for implementing people-to-people actions and building networks of municipalities and counties	People-to-people actions disabled due to COVID-19 pandemic

Note on the methodology: The “strengths” and “weaknesses” sections are oriented towards the experience and data in the territory; while “opportunities” and “threats” sections take into account the external factors to the territory. Where appropriate, the “opportunities” section is divided between “inner” and “external” opportunities, where both territorial and global impacts are addressed.

## 6. The cross-border challenges and needs

PO/ISO	Challenges	Investment needs	Specific objective
PO1/ISO1	<p>Lack of knowledge for smart specialization, smart management concepts, industrial green and digital transition, and entrepreneurship.</p> <p>Low level of entrepreneurial activities related to digital transformation and low automatization in production processes.</p>	<p>Entrepreneurs need to be empowered through capacity building measures in the form of improving digital literacy and digital skills to use new technologies to build new business models or modify existing business models towards a digitally oriented and smart society. Investment in ICT infrastructure and equipment, which would boost the development and expansion of entrepreneurship and innovative ICT related business models is needed. Entrepreneurs could deliver joint digitalisation plans and consider sharing expensive equipment where possible. As well, study visits should be supported as means of effective learning. The suggested activities could be supported by ISO1.</p> <p>Development and establishment of joint open platforms, based on interoperability and standards, for easier and faster development of quality, innovative, safe and trusted solutions.</p>	ISO1, efficient public administration
	<p>In some areas access to digital services is very poor (slow broadband speed...) which is a major barrier to further development.</p>	<p>Political support for providing modern information and communication infrastructure with emphasis on access to broadband internet connection and digital services to all, even in the most remote areas. Providing the possibility for using electronic infrastructure and other e-infrastructure for e-services. The challenge could be tackled by enhancing cooperation between governments and operators.</p>	ISO1, efficient public administration, people to people actions

	Low digital literacy, deficient e-skills and use of available advanced e-services and ICT solutions.	Promoting digital literacy among all population groups and raising awareness about potential of digitalization. Additional trainings on digital skills in the local communities should be offered by CSO', whose capacities should be improved for implementing such actions Intergenerational cooperation whereas younger citizens would teach elderly could be supported by Projects of limited financial volume /ISO1.	ISO1, People-to-people actions, efficient public administration
PO2	The dispersed settlements and small cities still predominantly hold on to traditional energy sources and particularly geothermal (and sea energy in the coastal area) remains unexploited; strategic orientations towards integrated indigenous and renewable energy systems are needed.	Strategic orientations towards integrated energy systems are needed. Cooperation of public and private sector across the borders should increase the sustainability of solutions and business models (including new professions) that work for closing the energy loops.	PO2, Renewable energy
	Poor energy self-sufficiency. Large majority of public buildings are still open to energy efficiency improvements especially regarding their digital transformation, integration of renewable energy systems and e-mobility. This also involves the ones under cultural heritage protection.	The digital transformation of buildings as part of the inevitable deep energy retrofit of buildings remains an opportunity for smart community development in energy self-sufficiency. Awareness on RES and EE potential must be increased via campaigns, consultancy and advocacy of bottom-up initiatives towards (community) self-sufficiency. Digital building transformation (incl. pilot actions) for energy savings in buildings could be supported by PO2. When developed, the digital infrastructures could be used at the various locations in Slovene and Croatian cross-border area and disseminated beyond the programme area. Energy poverty should be detected by ISO1 and addressed by PO2.	PO2, Energy efficiency
	Poor resilience for existing and emerging natural risks and lack of the local resilience on systemic level.	Recent earthquakes displayed high level of solidarity, but also needs for awareness raising and educational campaigns on climate change adaptation behaviour and practice.	PO2, Climate change adaptation, risk prevention and disaster resilience

	<p>Strengthened cross-border civil protection units can be formed for improving the preparedness and relief response in the cross-border area, according to the regional threats expected (earthquakes, floods – NE area, storms – SE area, and fires – southern part of the border). The preparatory actions, cooperation and awareness raising activities could be supported by PO2.</p> <p>Communities need to prepare/ revise effective climate change adaptation plans and coordinate their responses. Exchange of knowledge and experience can stimulate examples of good practice for the future.</p>	
Unrecognized potentials of sustainable bioeconomy development and lack of local drivers for this change.	Awareness raising, capacity building and good practice development are key in sustainable management of territorial/local resources (from visitor and traffic routing; building reuse and new purposing, sustainable planning, local food production chains). SMEs are to be motivated to participate in new product/service development based on circularity and resource sharing/consumer participation.	PO2, Circular economy
Lack of good practices in water reuse, pollution prevention (levels of nutrients, wastewaters in karstic terrain).	Further inputs are to be invested into wastewater treatment infrastructure, water reuse possibilities, and prevention of water losses. Flood prevention infrastructure should consider upstream nature-based water retention measures.	PO2, Sustainable water management
Nature and biodiversity degradation. Higher efficiency of monitoring systems on terrestrial/marine habitats and species and human activities impact. Green infrastructure could be better understood and restored (climate change resilience, nature-based solutions to support its multifunctionality) and applied in urban and outside urban areas.	Further preservation measures of joint natural areas including conservation and restoration activities (e.g. Natura 2000), awareness raising of the local inhabitants and visitors on the importance of habitats and species, aiming for positive behavioural change and improved understanding of opportunities of nature protection. Enhanced cooperation of protected area managers, particularly cross-border ones, with knowledge transfer in holistic management of pressures	PO2, Nature protection

		<p>and target public cooperation (problem based: pollution, invasive species, communication, habitat fragmentation).</p> <p>Further investment in nature interpretation facilities for certain habitats, territories and species, including their access infrastructure (ex. e-mobility). Data and good practice gathering and testing on sustainable destination management (including impact on air and water/sea quality) should be improved.</p> <p>Further monitoring of relevant species, particularly in cross-border areas (joint indicators, reference species and data for joint management) including pressure impact. Research on sensitivity, threat status and resilience of coastal and marine ecosystems on climate change (data exchange mechanism or information system), data on ecosystem services in the field of cross-border cooperation.</p>	
	<p>Poor identification of needs and solutions for connecting personal mobility options to public transport routes.</p>	<p>Facilitated local bottom-up initiatives could be supported. Poor rail and bus connections across the borders the hinder development of multimodality opportunities. E-mobility infrastructure is also in the early stage. Best practices are needed for sharing community development to reduce mobility poverty. Pilot actions could be supported by PO2.</p>	<p>PO2, Zero carbon mobility</p>
<p>PO3</p>	<p>Incomplete TEN-T corridor in the programme area, especially rail and cycling infrastructure is the result of prioritizing the highways over railroads in terms of national investments in the past three decades. As this trend has started to change slightly recently the realisation of the investment fund in the non-road transport infrastructure is still an issue.</p>	<p>Supporting improved sustainable mobility infrastructure at different levels, namely through public awareness raising, including the people's rights to demand high quality rail, cycling and pedestrian infrastructure, and through supporting initiatives in favour of sustainable mobility infrastructure (e.g. efforts for establishment of EGTC for Dolenjska railway) from decision makers at different levels on both sides of the border. Strong political will for prioritizing investment in sustainable mobility at the local, regional and national</p>	<p>PO3, Developing a sustainable, climate resilient, intelligent, secure and intermodal TEN-T</p>

	level is crucial for improving services and can be stimulated by insight into good practices implemented elsewhere (within the cross-border and wider EU territory).	
Low accessibility of public transport is a major issue in the hilly peripheral areas near the border, far away from the decision-makers' centres, leaving many people, especially members of vulnerable groups, in mobility poverty.	Improving accessibility of multimodal transport, focusing on peripheral cross-border areas (e.g. flexible mobility modes, Mobility as a service) through connecting different service providers to offer the people of all ages living in dispersed settlements the possibility to reach basic services and main transport and population axis.	PO3, Developing and enhancing a sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility
Poor cross-border public transport services as a result of different systems and lack of efforts to connect people on both sides of the border.	Introducing new and more frequent cross-border public transport services as a result of joint activities on both sides of the border.	PO3, Developing and enhancing a sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility
Low usage of sustainable mobility modes as a result of lack of sustainable mobility options and its promotion.	Promotion of sustainable mobility modes (e.g. cross-border route planner, harmonizing timetables, smart ticketing) is seen as one of the soft measures possible to address through the cross-border programme, with the support of the digitalization tools. Supporting cycling facilities for commuting and cycle tourism, which includes the possibilities for transport of bicycles by train, suitability of border-crossings, bike racks and other services (shops, stop-overs, bike-friendly cafés and accommodation etc.)	PO3, Developing and enhancing a sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility
Different public transport systems (technical, legislative, operational, communication) on both sides of the border are seen as major obstacle to connect areas on both sides of the	Harmonizing the national public transport system (technical, legislative, operational, communication) in the cross-border area can be addressed through pilot actions of establishing cross-border services.	PO3, Developing and enhancing a sustainable, climate resilient, intelligent and intermodal national, regional and local

	border. As good practices on how to tackle this challenge in other cross-border programmes do exist it seems that the pilot cases to try harmonizing both systems are needed.		mobility, including improved access to TEN-T and cross-border mobility
PO4	The increased unemployment rate in the area due to the COVID-19 pandemic, the highest rates of unemployment among long term unemployed, women, youth and elderly	New market needs emerged during COVID-19 pandemic can create new jobs and employment possibilities in the area, numerous self-employment opportunities in social entrepreneurship, tourism and creative industries for people living in the rural areas. Entrepreneurship should be trained and home working should be promoted among disabled people and people living in remote areas.	PO4, Effective and inclusive workforce
	Poor social integration of marginalized groups and elderly in rural parts of the cross-border area	The cross-border area is facing negative demographic changes that should be tackled locally by adaptation of social and mobility infrastructures the creation of specific goods and services aimed at an aging population and people with disabilities (including children!), fighting prejudices and marginalization of Roma , support for job opportunities for older people, women and migrants that contribute to social inclusion, development of youth centres, implementing preventive measures for early identification of diseases. Social innovations should be fostered and supported. Various mechanisms for fighting the joint challenges could be developed within PO4.	PO4, Inclusion of marginalized and disadvantages groups
	Missing community based services/activities for economic migrants	New community/based services should be developed in line with migrant's needs, in particular cultural training and training on legal requirements is essential. Migrants from distanced countries are experiencing difficulties in everyday activities due to enormous differences in legal, educational, cultural and social systems (for instance, driving courses should be repeated in the hosting environment). Various mechanisms for fighting the joint challenges could be developed within PO4.	PO4, Integration of minorities

	Lack of common health services accessible to Croatian and Slovene inhabitants	Permanent cross-border mechanisms should be established for enabling emergency health services for those in need, living by the border (e.g. Buzet, Ilirska Bistrica, Lendava).	PO4, Equal access to health care and fostering resilience of health systems
	Increasing child and adult obesity due to unhealthy nutrition and lack of physical activities	Lack of community based services, attractive infrastructure and contents (e.g. water sports) that encourages active living in urban and rural areas, healthy nutrition and active living actions, new nutrition programs for kindergartens and schools should be supported, parents should be educated, sport should be popularized by conducting joint sports events for children. Early identification of diseases and preventive programs should be enabled in local communities. Vaccination should be popularized, and people should be more informed about its benefits.	PO4, Equal access to health care and fostering resilience of health systems
	Inclusion of elderly and people with disabilities	Ageing society requires building capacities and introducing new locally accessible social and health services supporting deinstitutionalization and active and independent ageing. Similar services are missing also for children with disabilities, that tend to be socially excluded in the absence of locally based day activities supported by experts (cultural, sports activities Various mechanisms for fighting the joint challenges could be developed within PO4.	PO4, Inclusion of marginalized and disadvantaged groups
	Tourism – lacking cross/border linkages, linkages between the destinations, poor local cooperation among stakeholders, missing joint tourist services, lacking knowledge, experience and motivation for building capacities and stronger involvement into sustainable tourism development. Lacking knowledge on cultural regions and cultural heritage for increasing sustainability of tourism in the CB area.	Digital platforms and different tools for cross-border cooperation of tourist stakeholders could be established. Functional tourist areas located in the cross/border area could be considered and joint tourist cards developed. Exchange of knowledge and targeted investments in digital and marketing skills of stakeholders, knowledge on delivering green services, education for sustainable touristic development and investing less in new infrastructure and more in renovation and revitalization of existing public infrastructure (such	PO4, Resilient and sustainable tourism

		<p>as cultural heritage) will significantly contribute to sustainable tourism. Sustainable tourism and tourism of experiences and stories should be supported. Rising awareness of data collection in tourism is important. Opinions, experiences, and satisfaction rates of tourists should be systematically collected by stakeholders, cultural institutions and tourist agencies/boards. Tailor-made digital systems for more efficient communication, research and collaboration could accelerate the sustainable development and ensure overall quality of services. Technology should be used for collecting and analysing opinions of tourists and visitors (to find out what is missing and what should be improved), surveillance of valuable nature and heritage sites, information sharing between stakeholders and tourists, international promotion etc.</p>	
	<p>Lack of promotion of preventive programs for health tourism and wellness, certification of services, destination branding, and development of additional facilities</p>	<p>Investment in the development of prevention programs for domestic and foreign guests in order to prevent health problems. Investment in the implementation of certification standards for services. Investment in branding of health tourism products. Investment in additional facilities and infrastructure.</p>	<p>PO4, Resilient and sustainable tourism</p>
	<p>Workforce shortages in tourism</p>	<p>Workforce shortages in tourism could be tackled by cross – border employment of youth and elderly, staff – exchange and self – employment in agri-tourism and eno-tourism in the rural areas where unemployment of youth is critical. Due to the Covid 19 pandemic circumstances forcing digitization and extensive usage of ICT tools enables new employment opportunities with brand new job profiles for CCI and tourism sector attractive for young people, especially from remote areas of CB region. Recent shift to the concept of sustainable tourism moves away from mass tourism toward various</p>	<p>PO4, Resilient and sustainable tourism</p>

		types of special interest tourism (e.g., cultural thematic routes) led by participatory approach, (involving multitude of local partners and civil society) providing job opportunities also for local people, youth and elderly.	
	Poor environmental sustainability of tourism, unexplored opportunities related to local self – sustainability, green tourism	Tourism causes devastation of natural resources, natural habitat loss, discharges into the sea, pollution and waste problems, while the environmental pressures increase with number of tourists. There is a danger of losing sustainability of tourism, due to undirected and inadequate spatial development (expansion of settlements, tourist capacities, locationally or formally unsuitable construction, destruction of cultural heritage and natural resources). The mass tourism should be avoided as it leaves negative consequences on environment. Green interventions (interventions with minimum impact on environment, inc. circular economy) could minimize negative impacts and contribute towards reaching the ambitious <i>Green deal</i> targets. The Programme should provide support for networking of experts and institutions in the development of instruments for the management of cultural landscapes with the aim of preserving recognizable areas for quality living and sustainable tourism.	PO4, Resilient and sustainable tourism
	Many heritage sites in the cross – border area are still not adequately revitalized nor valorised	Revitalization is, above all important for preserving cultural heritage for the next generations and thus it could be supported by the programme, but limited financially. Valorisation goes together with revitalization. Valorisation can be seen as an experiment which, if developed in line with visitor's needs is successful, but in other hand if the heritage sites are not valorised in line with high demands of the modern visitors, the valorisation project will fail in the terms of expectations, relevance and impact. Stakeholders/owners are advised to develop a feasibility study or similar analysis that proves the relevance, benefits and market	PO4, Resilient and sustainable tourism

		need for such revitalization and valorisation.	
	Digitalization of tourism for joint research, information sharing, surveillance, joint development, and adaptation to COVID-19 challenges	Tailor-made digital systems for more efficient communication, research and collaboration could accelerate the sustainable development and ensure overall quality of services. Technology should be used for collecting and analysing opinions of tourists and visitors (to find out what is missing and what should be improved), surveillance of valuable nature and heritage sites, information sharing between stakeholders and tourists, international promotion etc.	PO4, Resilient and sustainable tourism
PO5	Functional areas on the Slovene-Croatian border does not exist	There is an opportunity to effectively tackle challenges to sustainable and inclusive development of the cross-border region by the implementation of the territorial multisectoral strategies.	PO5
	No SI/HR ETCG's in the cross-border area	Formation of permanent cross-border structures help create a wider partnership of all relevant actors in the border region, while the establishment of new ETCG's in the Slovene-Croatian cross border region, preferably with multisectoral joint strategies would ensure a holistic approach towards resolving key challenges	PO5
ISO1	<p>Legal and administrative barriers</p> <ul style="list-style-type: none"> <li>- Barbed wire, fences</li> <li>- Communication infrastructure (internet and mobile communication infrastructure) is poor in the bordering municipalities</li> <li>- Lack of cross border mobility connections are a cooperation barrier for local inhabitants and other people that are visiting the region (tourists).</li> <li>- Holiday traffic clogs at border crossings limit daily commuting of local inhabitants. During the peak season the waiting at the border takes up to 6 hours.</li> <li>- Unexplored possibilities of communal infrastructure sharing in the cross-border area (for instance waste water infrastructure)</li> </ul>	To tackle legal and administrative barriers at the national levels, firstly impact assessments should be undertaken by involving appropriate expertise, as well identifying legal and administrative obstacles, and other impediments to cooperation is important at this stage. Negotiation procedures should be undertaken by preferably, NGO's and governance structures should get involved by establishing and sustaining mechanisms for cooperation and alleviation of the obstacles.	ISO1, Enhancing institutional capacities

<p>Missing knowledge and experiences of public stakeholders (mainly leaders of regional and local administrative units) to support digital and green transition.</p>	<p>Terms like development of smart cities, smart villages, sustainable development, circular economy, climate change adaptation should be understood while building local and regional strategies and implementing national and MRS. Study visits and exchange programmes across the borders, involving local leaders is recommended as the most effective way of learning, raising awareness and motivation for immediate action.</p>	<p>ISO1, efficient public administration</p>
<p>Lack of operational capacities of public stakeholders and NGO's. Public consultation findings indicate lack of operational capacities, for instance expertise for implementing specific sectorial projects for implementing various services (legal clinics, health, social and humanitarian services) in the local communities, urban and rural.</p>	<p>Raising awareness on strategic development (using strategies!) and training for leadership is needed to foster the visionary approach among local and regional leaders. NGO's help in delivering the local services should be accepted, while volunteerism and active citizenship should be fully supported and appreciated. The capacities could be enhanced by engaging volunteers for certain actions, while volunteerism should be seen as employment engagement. Home working is also an opportunity for building capacities that enables hiring talented people from remote areas.</p>	<p>ISO1, efficient public administration People-to-people actions</p>
<p>Lack of cultural interaction across the border social inclusion through culture and creative industries</p>	<p>Cultural interaction across the borders is set to minimum due the COVID restrictions. The programme should offer opportunities for re-connecting people and fostering cultural interactions, learning about SI/HR culture and languages. Creative industries and social innovators play a great role in re-connecting people, by offering joint handicraft projects and joint learning possibilities. Residential programs could be considered.</p>	<p>ISO1 People-to-people actions</p>
<p>Cooperation of national stakeholders in the border area is of high quality, while intermunicipal cooperation is lacking.</p>	<p>Knowledge transfer, common goals definition and joint solution for the benefit of people are particularly missed in the northern parts of the cross-border regions (Podravje, Pomurje - Međimurje). Cross-border cooperation platforms for enterprises and cooperation events for connecting potential partners for interventions within and out of the Programme.</p>	<p>ISO1, efficient public administration</p>

	<p>Lack of statistical data evidence at the NUTS3 level is a barrier to sustainable development. For instance, statistic data about energy poverty, number of migrants by origin, pupils and students from Slovenia attending the high school in Croatia and vice-versa are missing.</p>	<p>National, regional and local authorities should agree on specific data collection that would enable demonstration and measurement of current needs at the local level. The data should be available for the next programming period.</p>	<p>ISO1, enhancing institutional capacities</p>
	<p>Poor capacities of stakeholders in the field of tourism. The cross-border area is characterized by the existence of similar tourist infrastructure starting from health facilities for tourism and health purposes, tourist facilities in rural tourism and a large number of vineyards and winemakers on both sides of the border. Local stakeholders are missing digital and marketing skills, knowledge for improving infrastructure and services in line with green transition (fostering sustainable/green touristic destinations), cooperation skills and events etc.</p>	<p>Targeted investments in digital and marketing skills of stakeholders, knowledge on delivering green services, education for sustainable touristic development and building less infrastructure can significantly raise the level of available supply, which will result in greater competitiveness of the entire cross-border area. Rising awareness of data collection in tourism is important. Opinions, experiences, and satisfaction rates of tourists should be systematically collected by stakeholders, cultural institutions and tourist agencies/boards. The capacity building scheme can be supported by Small project fund under the ISO1.</p>	<p>ISO1, enhancing institutional capacities</p>
	<p>Missing social interaction, cultural experiences and language learning possibilities in the cross-border region</p>	<p>Building cooperation and trust across the borders by implementing various joint events (sports, cultural and learning events) learning programmes etc.</p>	<p>ISO1, people-to-people actions</p>

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