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EUROPEAN RESEARCH PROJECT //

Collecting and analysing data for the post-27 INTERREG (Core-IB)

Italy-Croatia

Border profile

March 2026

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1 Introduction

1.1 Context and objective of the border profile

The ESPON Core-IB project (Collecting and analysing data for the post-27 INTERREG) provides evidence-based, non-binding analytical work to support the next generation of Interreg programmes post-2027. By collecting and analysing harmonised territorial data, the project highlights key socio-economic characteristics, cross-border interactions, and governance structures. Its spatial focus covers 48 cross-border cooperation areas (40 land and 8 maritime), including all EU internal border regions and those bordering Liechtenstein, Switzerland, and Norway. The findings are analytical and informative; they do not create regulatory or policy obligations for Member States, the European Commission, or programme authorities. Each border profile serves as a comparable knowledge base for policymakers at EU, national, and regional levels, supporting dialogue and reflection rather than prescribing policy choices. The profiles aim to provide consistent, data-driven territorial evidence that can inform strategic discussions about future cross-border cooperation and contribute to the preparation of Interreg programmes post-2027.

The Core-IB border profiles are designed to support the upcoming steps in the Interreg programming process with analyses based on data that is available at the European scale, including ESPON, Eurostat, DG REGIO, JRC, and Interreg databases. Their main purpose is to ensure comparability of data analyses and to provide programme areas with access to recent harmonised data at high geographical resolution (NUTS3 level or finer). Member States may hold additional or more detailed data which can further enrich or contextualise the findings beyond the Core-IB project. These national sources are essential for refining and validating territorial evidence in policymaking processes, including additional regional, fine-scale information and insights from political processes related to prioritisation and objective setting. All border profiles follow a systematic and methodologically robust approach. They provide territorial evidence, structured along 6 thematic dimensions, offering insights into the geographic, economic, environmental, socio-economic, border security and governance characteristics of the border region. Quantitative data and qualitative analyses are combined to ensure meaningful insights into all 48 border areas. Due to methodological constraints and limited resources, local studies and national datasets falling outside the European data framework could not be included. Visualisations, such as maps and charts based on descriptive statistics, facilitate understanding and support evidence-based policymaking. The profiles analyse the border region as a whole at NUTS3 (2021) level (corresponding to the current Interreg VI-A programme area)[1] and position it within a broader European context. For comparative purposes, several reference categories are applied:

- European averages (EU27 + Norway, Switzerland and Liechtenstein, depending on data availability)
- National averages
- National border region averages
- Aggregated border region averages

To complement the quantitative evidence, the profiles also draw on strategic and qualitative sources, including:

- Strategic documents from the Interreg Programme 2021-2027
- Border Orientation Papers from the 2021-2027 programming period
- Information from the keep.eu database on cross-border cooperation activities
- Information from the Cohesion Open Data platform
- Information from the b-solutions initiative
- Information from recent ESPON Projects (i.e., CROSSGOV, House4All, PROFECY Update, CPS 2.0)

[1] As defined by Annex 1, Commission Implementing Decision (EU) 2022/74 of 17 January 2022, as amended by Commission Implementing Decision (EU) 2023/1638 of 14 August 2023 (OJ L204, 17.8.2023, p. 9): https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng

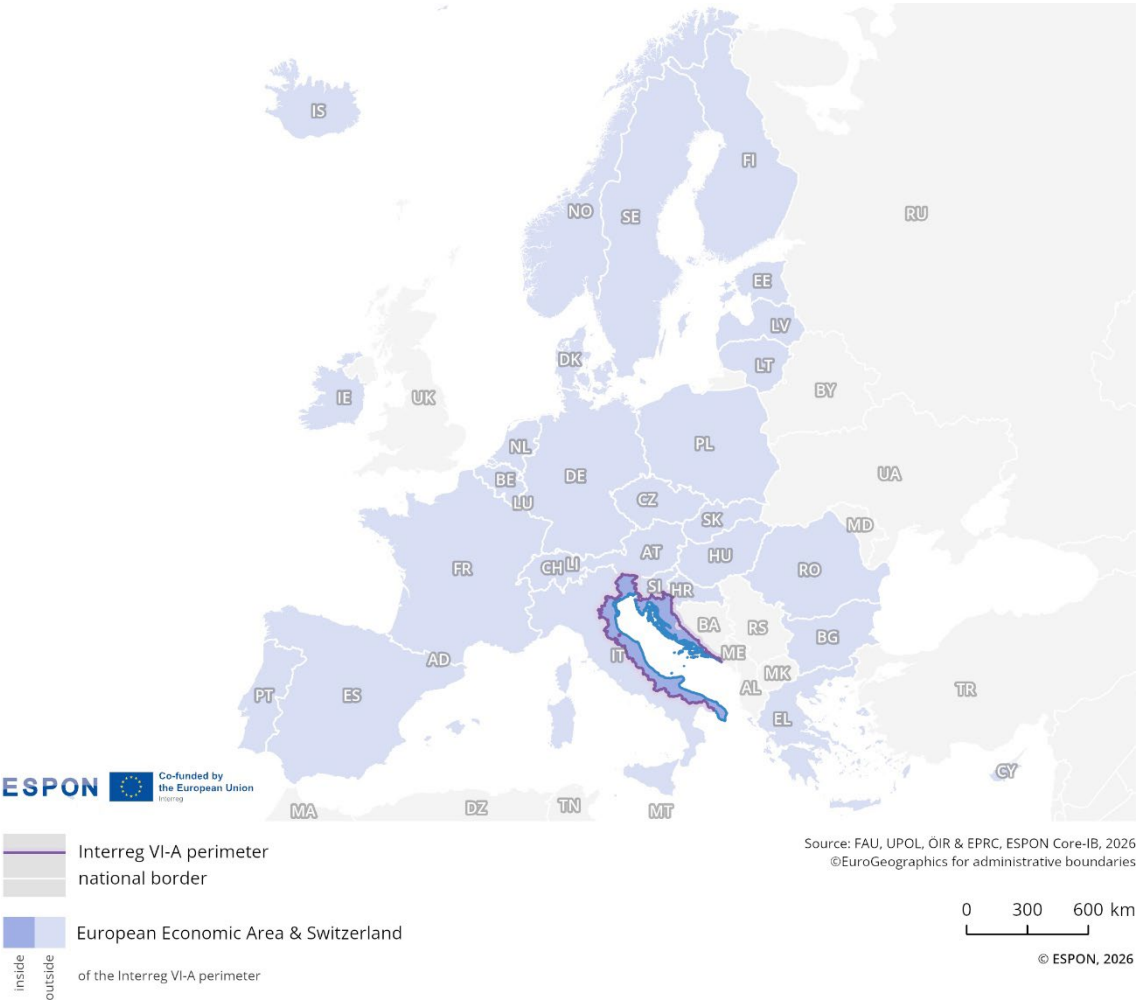
Within the ESPON framework, the CROSSGOV project (Governance mechanisms for cross-border functional areas) has been implemented in parallel to Core-IB. The CROSSGOV hub[2] provides a comprehensive platform for interactive data exploration, and selected data have been incorporated into this study.

Additional project-related information can be explored separately in the Core-IB **Final Report**. Further technical information on this border profile can be found in a separate **Technical Annex** providing an overview of data and methods.

1.2 Presentation of the border area

The Interreg VI-A border region 'Italy–Croatia' covers the area between eastern Italy and western Croatia (see Figure 1.1).

Figure 1.1: Overview map



In Italy, the programme area includes a total of 25 NUTS3 regions located in north-eastern, southern, and central Italy (Pordenone, Udine, Gorizia, Trieste, Venezia, Padova, Rovigo, Ferrara, Ravenna, Forlì-Cesena, Rimini, Pesaro e Urbino, Ancona, Macerata, Ascoli Piceno, Fermo, Teramo, Pescara, Chieti, Campobasso, Foggia, Bari, Barletta-Andria-Trani, Brindisi, Lecce). In Croatia, it covers the regions of Adriatic Croatia and part of Pannonian Croatia, encompassing a total of 8 NUTS3 regions (Karlovačka

[2] ESPON CROSSGOV Hub: https://gis-portal.espon.eu/arcgis/apps/experiencebuilder/experience/?id=27e3b86ef44441b08793a2239c370607

županija, Primorsko-goranska županija, Ličko-senjska županija, Zadarska županija, Šibensko-kninska županija, Splitsko-dalmatinska županija, Istarska županija, Dubrovačko-neretvanska županija).

Figure 1.2 illustrates the region's geomorphological features and the boundaries of the current Interreg VI-A programme area. Spanning approximately 85,562 km², this border region exhibits a high degree of geographical heterogeneity, shaped by complex natural conditions. The programme area extends along the Italian and Croatian Adriatic coastlines, including parts of the hinterland.

Figure 1.2: Geographical features and characteristics[3]

On the Italian side, the landscape is primarily characterised by low-lying coastal plains and lagoon landscapes, such as the Venetian Lagoon. These landscapes have been shaped by fluvial and marine sedimentation processes. The terrain is predominantly flat, particularly in the Po Valley, and contains significant wetland ecosystems. Key coastal cities here include Venezia, which is renowned for its lagoon morphology, and Trieste, which is situated at the point where the Karst Plateau meets the Adriatic Sea. Inland, cities such as Udine, Gorizia and Pordenone are located in gently sloping foothill

[3] The selection of displayed settlements is based on factors such as size, administrative or cultural importance, transport links, regional coverage and cartographic clarity. This is part of a standard cartographic generalisation process with no pre-set thresholds, and the main aim is to provide orientation.

regions. Further south along the Adriatic coast the landscape becomes more varied, combining coastal plains with hilly hinterlands and sections of the Apennines. Important urban centres in this central and southern part of the programme area include Ancona and Pescara, as well as Bari, one of the main economic and port hubs in southern Italy.

In contrast, the Croatian coastline features a rugged karst landscape with steep cliffs, numerous islands and pronounced coastal indentation. This complex relief is the result of the interplay between tectonic uplift and erosion processes. The northern part of the programme area includes the Istrian Peninsula, while further south the Dalmatian coast is characterised by a dense system of islands running parallel to the mainland. Notable coastal features include the Kvarner Gulf and the extensive island systems that shape much of the central and southern Croatian Adriatic coastline. Several coastal mountain ranges also run through the Croatian side, including the Velebit and Biokovo ranges, which rise sharply from the sea and form a natural barrier between the narrow coastal strip and the hinterland areas. In addition to the coastal and island territories, the programme area also includes Karlovac County (Karlovačka županija), an inland region characterised by river landscapes shaped by the Kupa, Korana, Mrežnica and Dobra rivers, and displaying distinct functional and socio-economic patterns compared to the Adriatic coastal zones.

Important Croatian cities include Rijeka, a key Adriatic port located where mountainous terrain meets the coast and Pula, situated on the Istrian Peninsula in a coastal lowland setting. Further south along the Dalmatian coast, Zadar, Šibenik, Split and Dubrovnik represent important coastal urban centres, some of which are constrained by steep coastal relief and limited connectivity to the hinterland due to the surrounding mountains. In addition, the inland city of Karlovac forms an important urban node in the northern part of the Croatian programme area.

Overall, the topography of the programme area encompasses a diverse Adriatic landscape, ranging from lagoon systems, coastal plains and foothill zones along the Italian Adriatic to karst plateaus, mountainous hinterlands and highly indented island-rich coastlines along the Croatian shore. This natural diversity plays a decisive role in shaping the area's environmental systems, accessibility and distribution of natural resources.

2 Cross-border analysis

2.1 Territorial dimension

The territorial dimension refers to the spatial characteristics and dynamics of a border region. It specifically depicts how factors such as population density, demographic trends, changes in settlement areas and accessibility influence and reflect cross-border integration.

2.1.1 Population and settlements

This sub-dimension illustrates the population characteristics and land use dynamics of the border region, based on analysed indicators. It examines population density, population development by age groups, and changes in settlement areas. The analysis highlights whether the border functions as a catalyst for integration or as a barrier. Comparisons with the respective countries and the EU average provide context for understanding the region's dynamics.

2.1.1.1 Population density

Indicator description

Population density refers to the number of residents per km². This indicator shows the number of inhabitants per square kilometre in a 1x1 km grid. It therefore provides information on the distribution and concentration of population across the region and allows to identify agglomerations of high density. In particular agglomerations at or close to the border area of key interest.

- **Source**: Eurostat
- **Temporal coverage**: 2021
- **Unit**: Inhabitants/km^2

Please refer to the technical annex for more information.

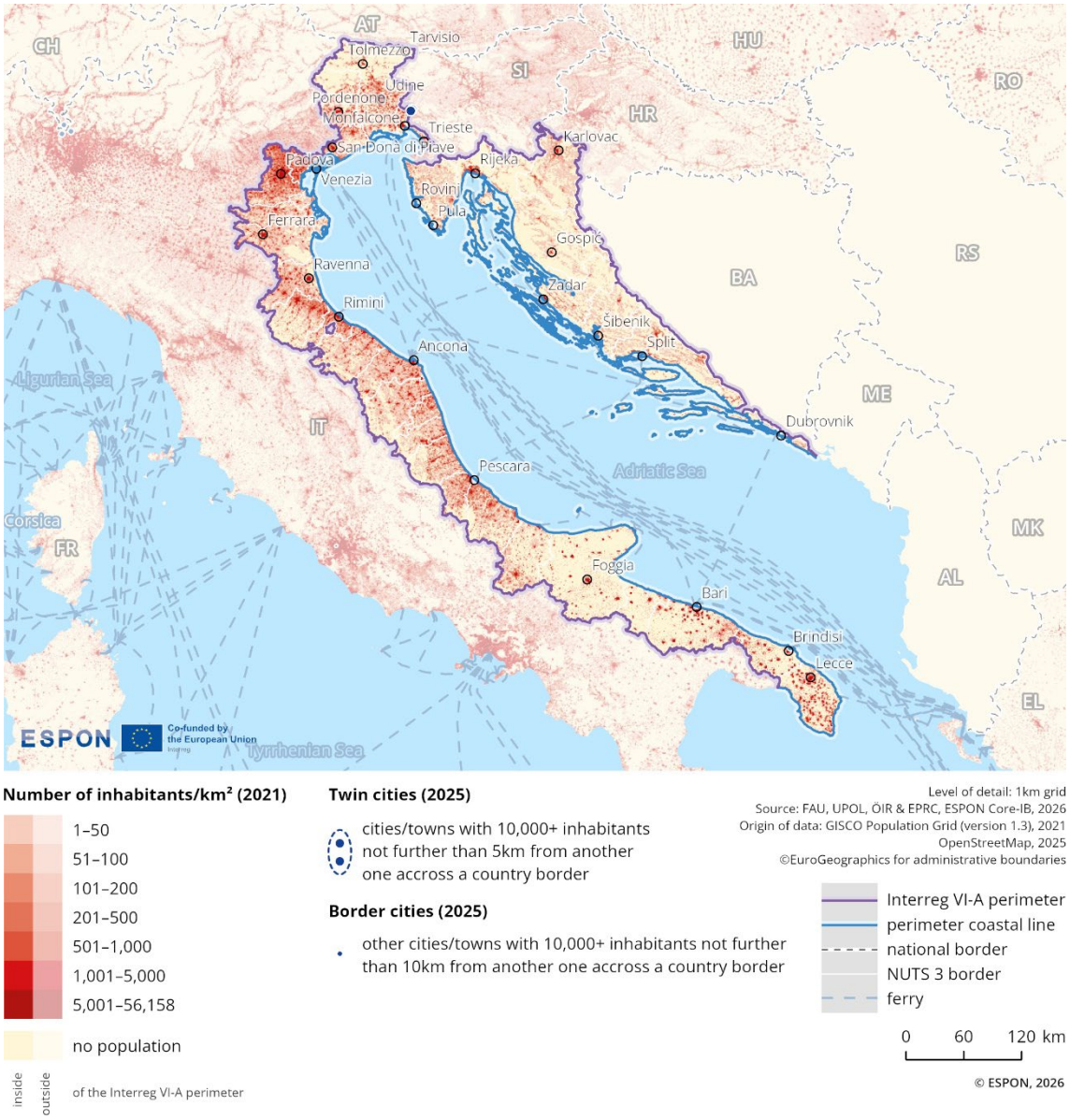
The border region includes 20 urban centres with a population of over 30.000 inhabitants. Figure 2.1 shows that population density is higher in the Italian part than in the Croatian part. In Italy, the populations is largely concentrated along the Adriatic coastal corridor, particularly in the northern section where several urban centres and their surrounding areas form a relatively continuous settlement belt, including cities such as Trieste, Venezia, Padova and Rimini. Further south, significant cities such as Ancona, Foggia, and Bari structure the settlement pattern along the coast. Population density gradually decreases from the Adriatic coastal belt towards the inland areas of the Apennine range. In southern Italy, while density remains relatively high around major coastal cities such as Bari and Brindisi, lower densities can be observed in parts of northern Puglia, particularly in the Gargano peninsula and some inland areas. In the Croatian part of the programme area, population is concentrated in a limited number of urban centres. Major coastal cities include Rijeka, Zadar, Šibenik, Split and Dubrovnik, while Karlovac represents the most relevant inland city. The spatial distribution of population differs across Croatian regions: Istria and the Kvarner area show relatively higher densities and more continuous settlement patterns, particularly around Rijeka and the coastal towns, whereas central and southern Dalmatia display a more fragmented pattern, with population concentrated in urban clusters along the coast and on larger islands, separated by sparsely populated mountainous hinterlands.

Overall, the distribution of population density differs within the Interreg region: in the Croatian part, it is more concentrated in isolated clusters around urban centres, whereas in the Italian part it is more evenly distributed, particularly along the coast.

The population density in this whole border region is 135 inhabitants/km², which exceeds the EU average of 109 inhabitants/km² (according to EUROSTAT), and it also exceeds the aggregated average of all EU evaluated border regions, which is 125 inhabitants/km².

The part of the border region in Croatia has an average population density of around 45 inhabitants/km². It is therefore lower than the national average population density in Croatia (64 inhabitants/km²). The part of the border region in Italy has an average population density of around 183 inhabitants/km². It is therefore lower than the national average population density in Italy (193 inhabitants/km²).

Figure 2.1: Spatial patterns of population distribution



2.1.1.2 Population development (by age groups)

Indicator description

Population development refers to the percentage change in population at regional level between 2014 and 2024. The data reflects on the total population, as well as on the age groups 0-14, 15-64 and 65+.

- **Source**: Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2014-2024
- **Unit**: Change in %

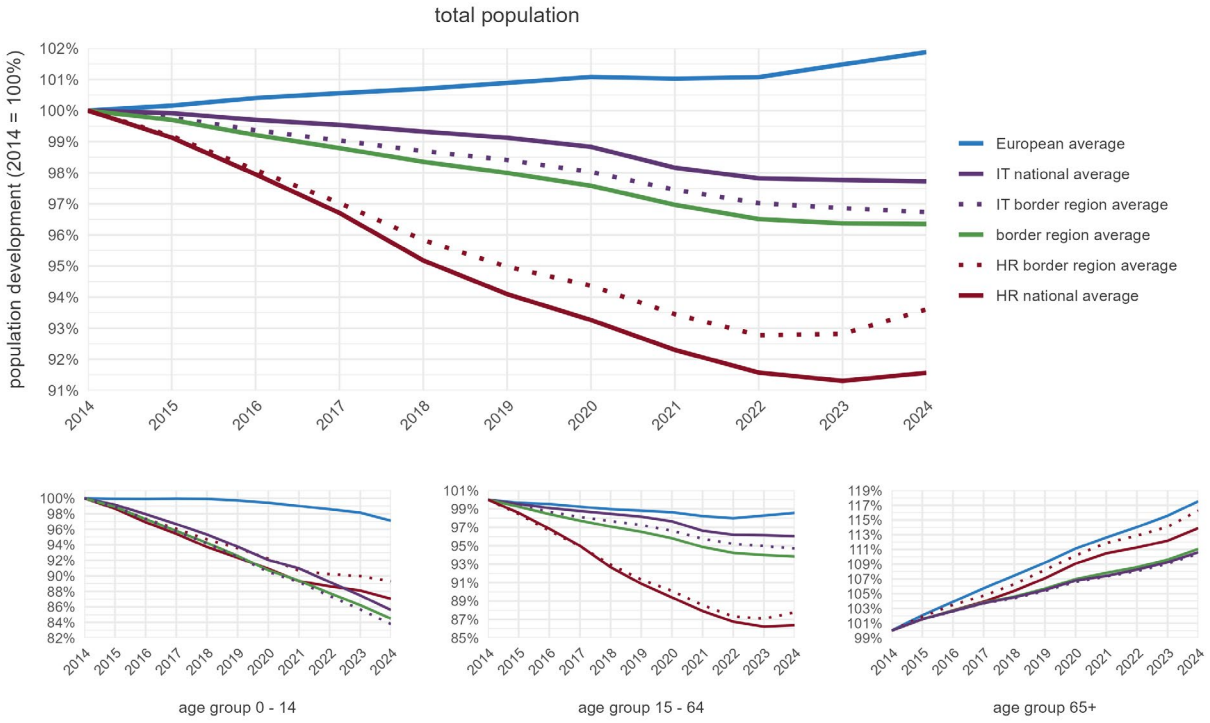
Please refer to the technical annex for more information.

Population in the Italy–Croatia cross-border region in 2024 (Eurostat): 12.1 million inhabitants, of which:

- 88.2% in the Italian border territory (10.7 million inhabitants);
- 11.8% in the Croatian border territory (1.4 million inhabitants);
- Region within the border region with the highest population change since 2014: Ličko-senjska županija (HR032) at -12.4%.

Figure 2.2 shows the population change in the Italy–Croatia cross-border region between 2014 and 2024. During this period, the cross-border region has experienced a moderate decline of -3.6%, with the most pronounced decrease observed on the Croatian side.

Figure 2.2: Population development (2014=100)



Population development across the cross-border region is substantially below the European average (-3.6% vs. 1.9%) and also substantially below the average development in all border regions (-3.6% vs 1.5%). In both Croatian and Italian parts, a decrease in population is observed (in Croatia, -6.4% for the border area and -8.4% in the national average, in Italy, -3.3% for the border area and -2.3% in the national average).

In terms of the development of individual age groups in the region, the population aged 0–14 experienced a sharp decrease of -15.5%, while the working-age population (15–64) showed a marked decrease of -6.2%. The population aged 65 and over underwent a notable increase of 11.1%.

2.1.1.3 Change in settlement areas

Indicator description

The indicator shows the relative change in settlement areas per LAU in the border region. It considers changes in land cover, from non-artificial areas (such as agricultural, forest and seminatural areas, wetlands and water bodies) to artificial areas (such as urban, industrial, construction sites) between 2012 and 2018. This indicator has to be viewed alongside population development in particular.

- **Source/method of retrieval**: The indicator is retrieved via processing of raster data from CORINE Land cover. The raster information is crossed with Local Administrative Units (LAU) to calculate a change in %.
- **Temporal coverage**: 2012-2018
- **Unit**: Change in %

Please refer to the technical annex for more information.

Figure 2.3 illustrates the change in settlement areas at municipal level between 2012 and 2018. Overall, the map shows similar patterns of change in settlement areas on both sides of the Italian-Croatian border, with settlement expansion mainly concentrated around several urban centres on both sides of the Adriatic. Changes are evident in particular around the urban centres of Pordenone, Venezia, Padova, Ferrara, Ravenna, Foggia, Bari, Rijeka, Karlovac, Split, Zadar and Šibenik. Udine, Trieste, Ancona, Pula and Dubrovnik show no significant changes during the observed time period. High growth in settlement areas is particularly evident around the Croatian city of Karlovac as well as in the Italian cities of Venezia and Bari. The map also reflects the topographical characteristics of the border region, with significant changes in settlement areas visible along the Adriatic coast.

Figure 2.3: Settlement area dynamics

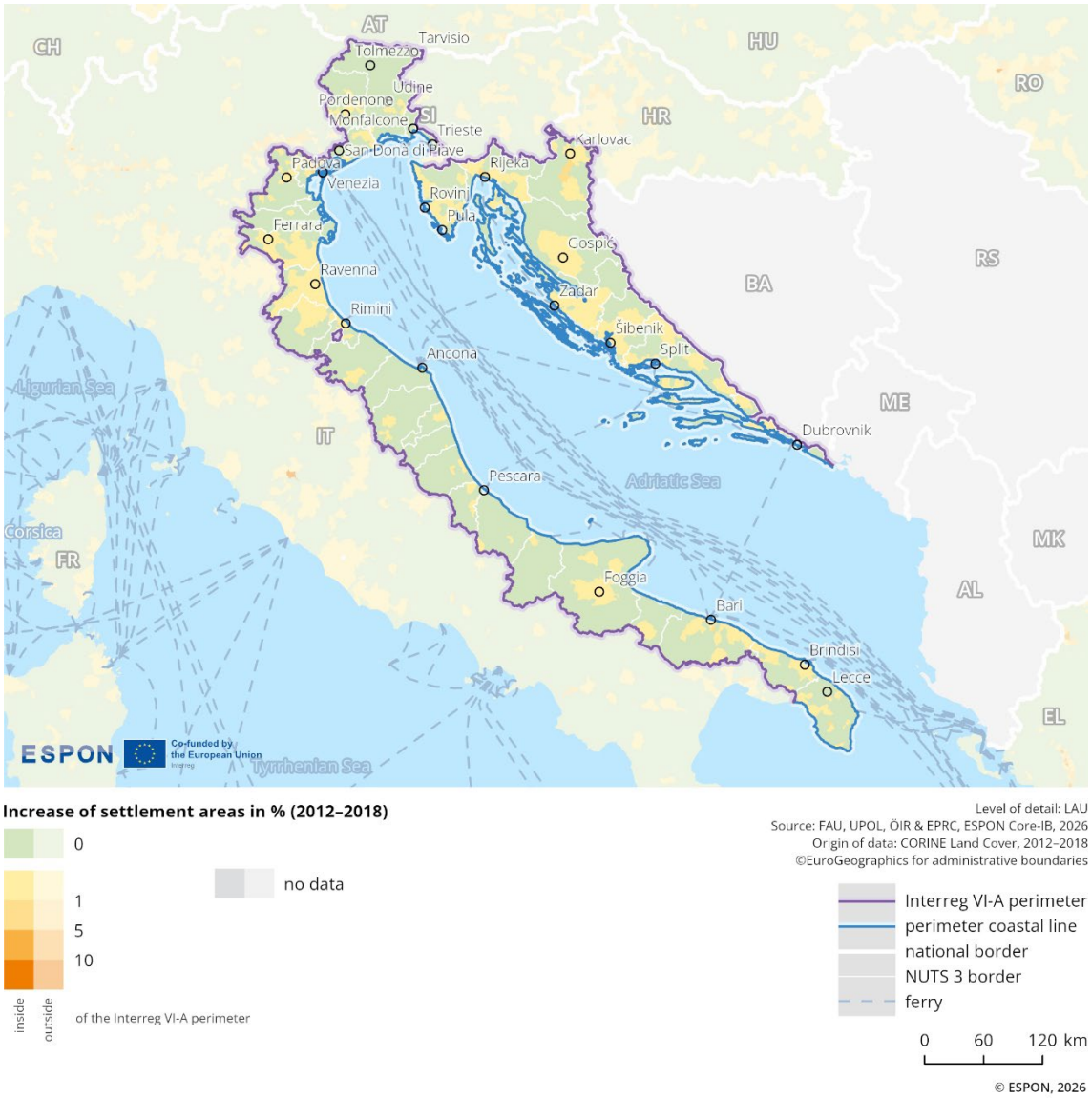
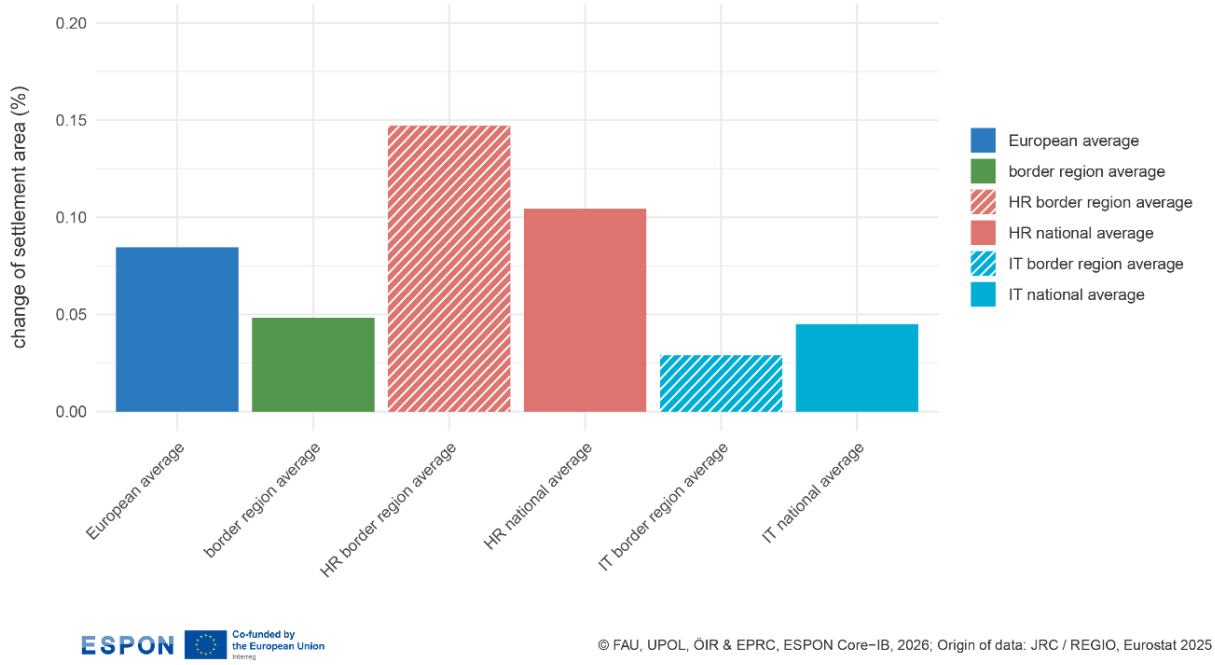


Figure 2.4 presents the change in settlement areas from a comparative perspective. The average for the Italy-Croatia programme area is half the overall European average (0.04% vs. 0.08%), which includes the EU member states and the EFTA countries Switzerland, Liechtenstein, and Norway. Croatian values are higher than the Italian ones, which applies for both, the national average as well as the border regions. The Croatian border-regional average lies above the national Croatian average (0.15% vs. 0.1%), whereas the Italian border-regional average is lower than the national Italian average (0.03% vs. 0.05%).

In general, the programme area shows a relatively dynamic settlement development. The need for an integrated approach to spatial development is obvious. Spatial development has to balance the various demands on land use (e.g., residential, commercial, tourism, transport, agriculture, and nature conservation), and this requires ongoing coordination and exchange, also across the border.

Figure 2.4: Change in settlement areas (2012-2018) (comparison)



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2.1.2 Accessibility of the border area

This sub-dimension illustrates the functional travel connections that already exist in the border region. It examines average cross-border travel times for different modes of transport and cross-border catchment areas based on mobility flows. It also considers travel times to and from border crossings. The analysis shows whether mobility flows are integrated between border regions or if the border hampers mobility.

2.1.2.1 Comparative quality of selected cross-border connections

Indicator description

The indicator presents a comparative perspective for different modes of transport (public and private) and their average travel speed (so-called space-time-lines). As such it helps to understand and interpret accessibility patterns along the border and highlights the comparative quality of selected cross-border connections.

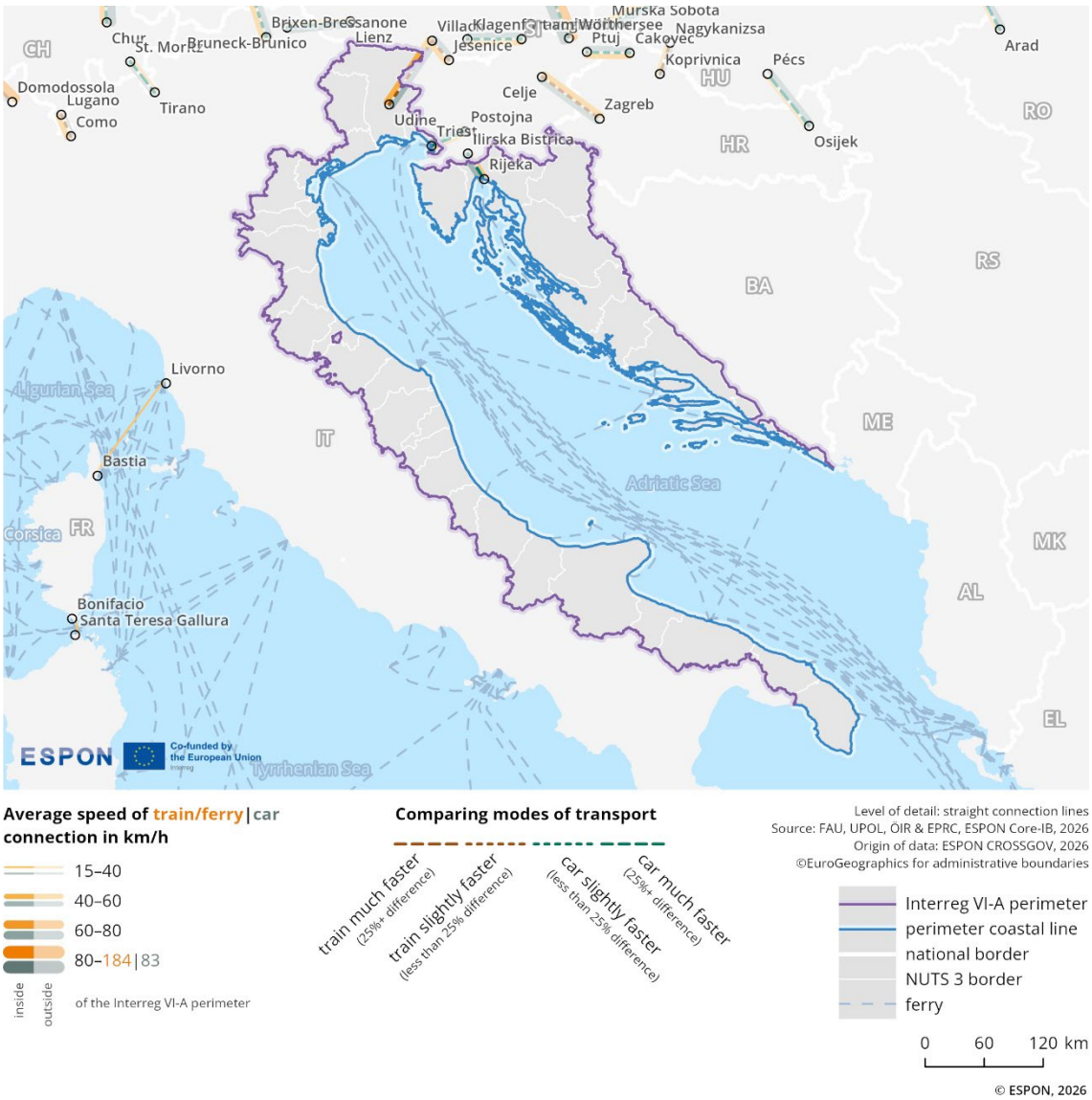
- **Source/method of retrieval**: Average number and speed of rail connections/ferries, average speed of car connections between selected cities and towns in border regions using Rail Travel Sites, Google Maps, luftlinie.org, Direct Ferries, local ferry companies
- **Temporal coverage**: 2025 (first quarter)
- **Unit**: km/h

Please refer to the technical annex for more information.

Cross-border accessibility shapes cross-border interactions. Figure 2.5 illustrates this using a 'space-time-line' map, which shows parts of a European overview of car, train, and ferry travel times. The selection of cities and connections covered is based on a set of criteria applied throughout Europe

within the ESPON CROSSGOV project[4]. These criteria include the presence of a railway station, population size, distance to the border, node hub and functionality. Within this border area, no cross-border car, train, or ferry connections meet the relevant travel time thresholds. Therefore, no space-time-lines are visualised for this specific area. However, the indicated ferry links provide an overview of the mobility options available in this maritime cross-border area[5].

Figure 2.5: Cross-border transport connections



[4] ESPON CROSSGOV Atlas, see Storymap on 'Space-time-lines': https://gis-portal.espon.eu/arcgis/apps/storymaps/collections/345c978adf784ad-fac30c16b90219d35?item=4

[5] See this online map for more information on European ferry routes: https://maritime-forum.ec.europa.eu/contents/map-week-ferry-routes_en

2.1.2.2 Cross-border catchment area based on mobility flows

Indicator description

This indicator measures the movement of people across borders. The density of cross-border movements by Twitter/X users is displayed on a grid cell covering an area of 20x20 km. The indicator does not differentiate between reasons for movement.

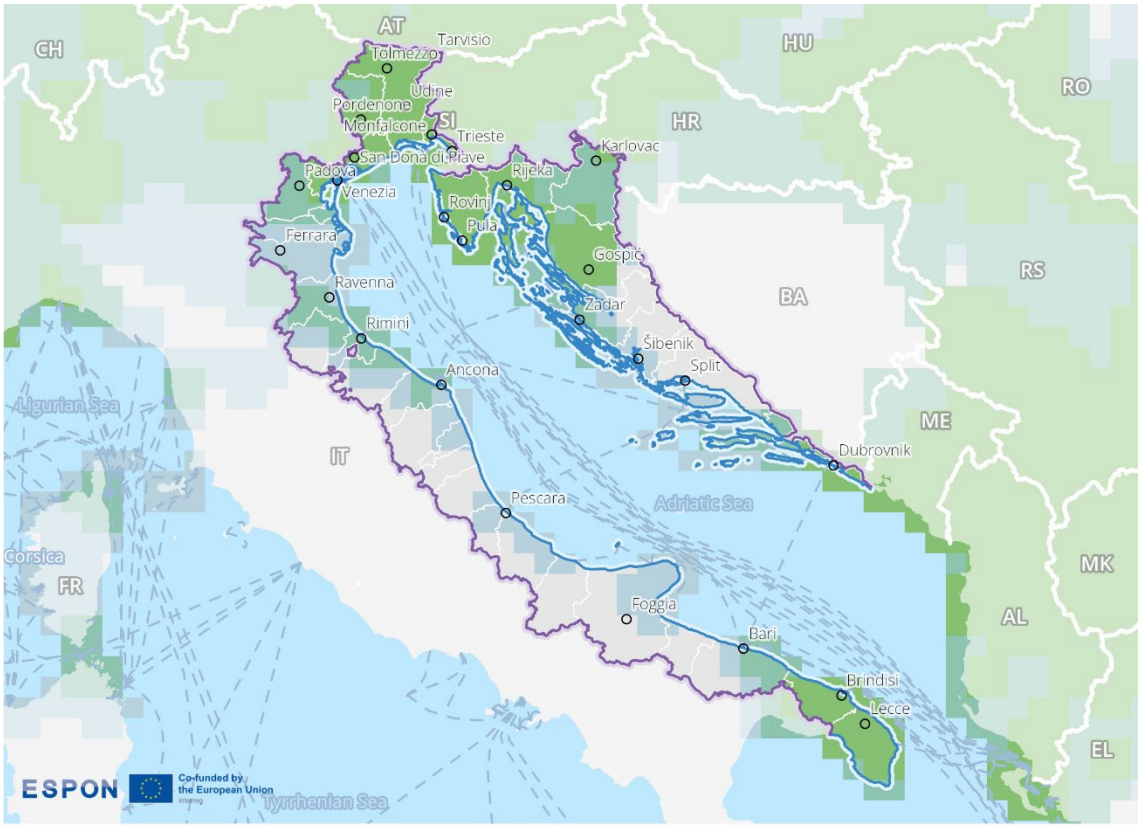
- **Source/method of retrieval**: The indicator is calculated based on Twitter (currently X) data. The digital footprint of individual users provides information about physical mobility flows and is used to calculate cross-border catchment areas of different intensity.
- **Temporal coverage**: 2013-2023
- **Unit**: n/a

Please refer to the technical annex for more information.

Figure 2.6 shows the cross-border catchment area between Italy and Croatia based on mobility flows from 2013 to 2023, highlighting estimated cross-border mobility intensity across 3 different quartiles. The first quartile represents the 25% highest mobility intensity shown in dark green, the second quartile represents 25-50% coloured in green-blue, and the third quartile represents 50-75% in light blue.

The intensity of cross-border mobility of people within this cross-border region is variable. The highest mobility intensity is observed in several distinct areas of the region. These include an area in the northern part of the region around the cities of Venezia, Pordenone, Trieste, Pula, and Rijeka; a second high-intensity area near the city of Dubrovnik and further south along the coast; and a third area in the southern part of the Italian section of the region in the proximity of Brindisi and Lecce. Moderate mobility intensity (25–50%) is recorded around cities such as Padova, Ancona, Bari, and Karlovac. Low cross-border mobility intensity is found in areas near Ferrara, Foggia, Šibenik, and Split. Additionally, there are areas, particularly on the Italian side, where no intensity is observed or data are unavailable.

Figure 2.6: Cross-border mobility intensity



Estimated cross-border mobility intensity (2013-2023)

high
moderate
low

inside / outside of the Interreg VI-A perimeter

Level of detail: 20km aggregated grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON CROSSGOV, 2026
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
perimeter coastal line
national border
NUTS 3 border
ferry

0 60 120 km

2.1.2.3 Cross-border travel-time accessibility

Indicator description

The indicator shows the time it takes to travel from any location within a region to the next border crossing, using grid data and subsequent categorisations into accessibility groups of 30, 60 and 90 minutes. It reflects the accessibility in cross-border areas, considering road transport. The indicator can describe the quality and speed of road connections and thus spatial reach of the cross-border services.

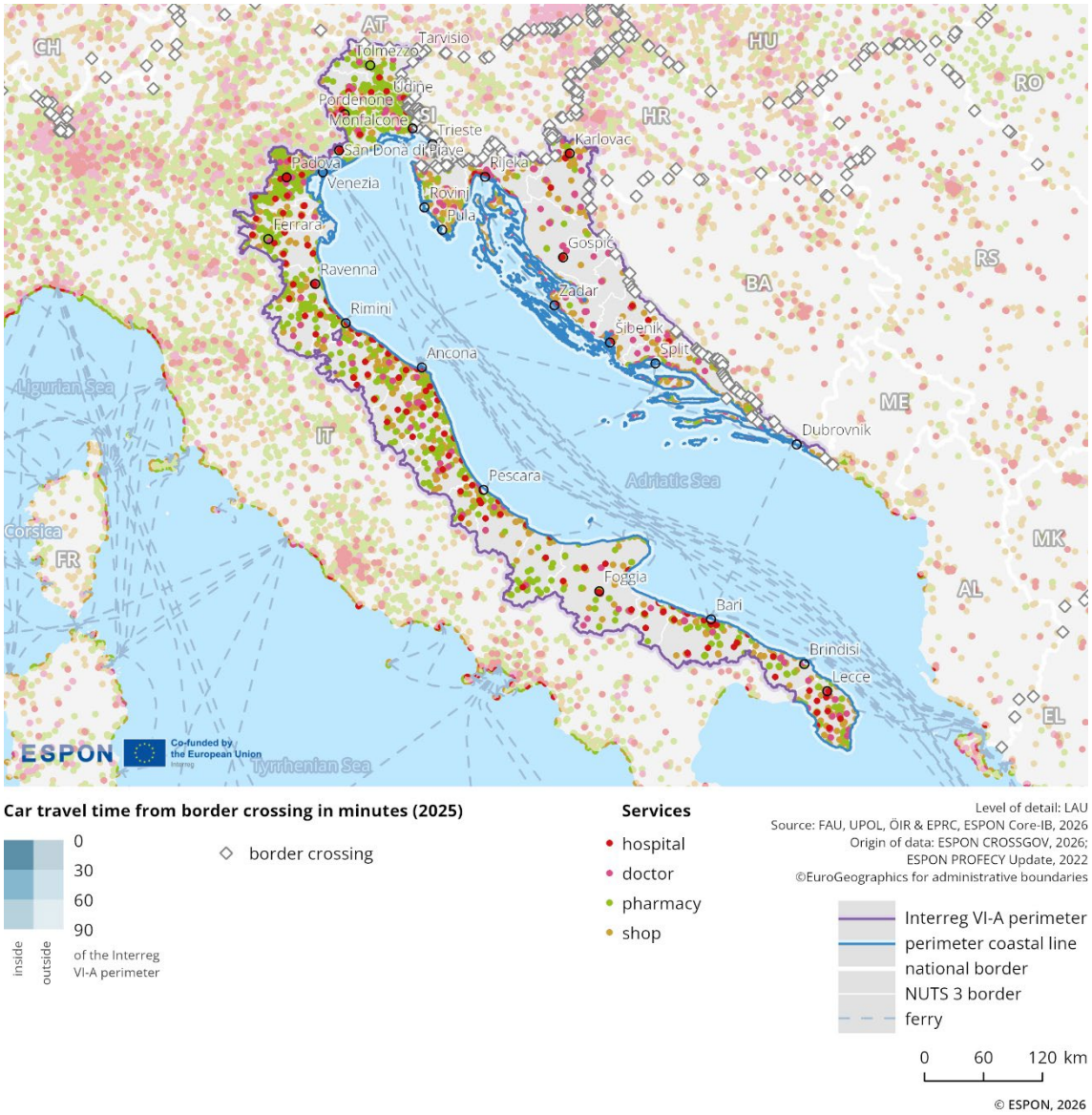
- **Source/method of retrieval**: Based on the OpenStreetMap road network, the travel time to the border is calculated for a grid of the border area. Based on this, areas are calculated within which border crossings can be reached below thresholds of 30, 60 and 90 minutes. As additional visual element, key services pharmacies, doctors, hospitals and shops (retrieved from the ESPON PROFECY project) are displayed and categorised into the accessibility groups.
- **Temporal coverage**: 2025 (first quarter, for accessibility data), 2021 (for service facility data)
- **Unit**: Minutes

Please refer to the technical annex for more information.

Figure 2.7 illustrates cross-border travel time accessibility in the Interreg area, showing the time distance from the national border in 2025. The legend indicates 3 travel time categories in minutes (30, 60, 90) represented by different shades of blue. In addition, it marks the location of services, including hospitals, doctors (general practitioners), pharmacies, and shops (supermarkets and conventient stores), with distinct coloured symbols. The map indicates that this maritime cross-border region lacks road connections. Due to the maritime nature of the area and the absence of direct road connections between the 2 countries, cross-border travel time zones could not be calculated for this region.

Services such as shops, hospitals, doctors, and pharmacies are more frequent in the north of Italy, with several concentrations of services – notably in the areas around Udine, Venezia and Padova. In southern Italy, service density is generally lower, although larger coastal cities such as Bari still show important service clusters. In the Croatian part of the programme area, services are primarily concentrated in the main coastal urban centres, including Rijeka, Zadar, Split and Dubrovnik. Outside these cities, particularly in rural hinterlands and on many islands, service availability becomes significantly more limited. Overall, the density of services remains higher in the Italian part of the programme area, while in Croatia services are more spatially concentrated in a smaller number of urban centres.

Figure 2.7: Travel-time accessibility from border crossings



2.1.3 Key messages on the territorial dimension

Topographic conditions strongly influence the territorial structure of the Italy-Croatia cross-border region. The cross-border region exhibits a high degree of geographical heterogeneity, which is reflected in settlement and population patterns: the majority of the population lives in the Italian part of the programme area (around 88%), where population density is also higher, particularly in the main cities and surrounding coastal zones of the north. In Croatia, the population is concentrated in larger cities, but settlement patterns are less continuous. These differences are also visible in the dynamics of settlement development, which would benefit from a more integrated approach to spatial planning. Service accessibility (shops, hospitals, doctors, and pharmacies) follows a similar pattern: services are more frequent in northern Italy, while their density decreases towards the south, Overall availability in Croatia remains lower than in Italy.

The highest intensity of cross-border mobility is observed along the northern coastal arc, stretching from Venezia to Rijeka. Other areas of significant movement include the surrounding of the city of Dubrovnik and the southern part of the Italian coast.

Although not captured by the analysed indicators, some important aspects regarding transport connectivity should be noted. Road traffic between Italy and Croatia passes through Slovenia, but there are no highway connections between the 2 countries. Direct trains between Trieste and the Croatian coastal cities are likewise absent. A limited number of seasonal direct flights connect the Italian and Croatian sides of the Programme area, while around 25 maritime passenger routes (ferry and fast passenger services) operate between ports on the 2 coasts, predominantly on a seasonal basis. There is potential for further development of integrated road and maritime mobility of goods and passengers.

2.2 Economic dimension

The economic dimension includes analyses of gross domestic product, labour market conditions, competitiveness, and key infrastructure and housing indicators. The aim is to illustrate the impact of the border on economic performance, whether it acts as a barrier or a bridge, and the extent to which integration is supported by labour mobility, remote working, and infrastructure connectivity.

2.2.1 Gross Domestic Product

This sub-dimension illustrates the economic situation of the border region by analysing gross domestic product (GDP). It shows economic development within the border region and how this has changed over time. Comparisons with the respective countries and the EU average provide important context for understanding the region's dynamics.

2.2.1.1 Gross domestic product per capita at current market prices

Indicator description

The indicator shows the regional GDP/capita in current prices and its development over the past years. It highlights structural differences and similarities between the border region and the respective national figures as well as the European average. Furthermore, it highlights patterns within the border region, although has to be interpreted with care in the case of a strong presence of commuters.

- **Source**: Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2010-2023
- **Unit**: Euro per capita

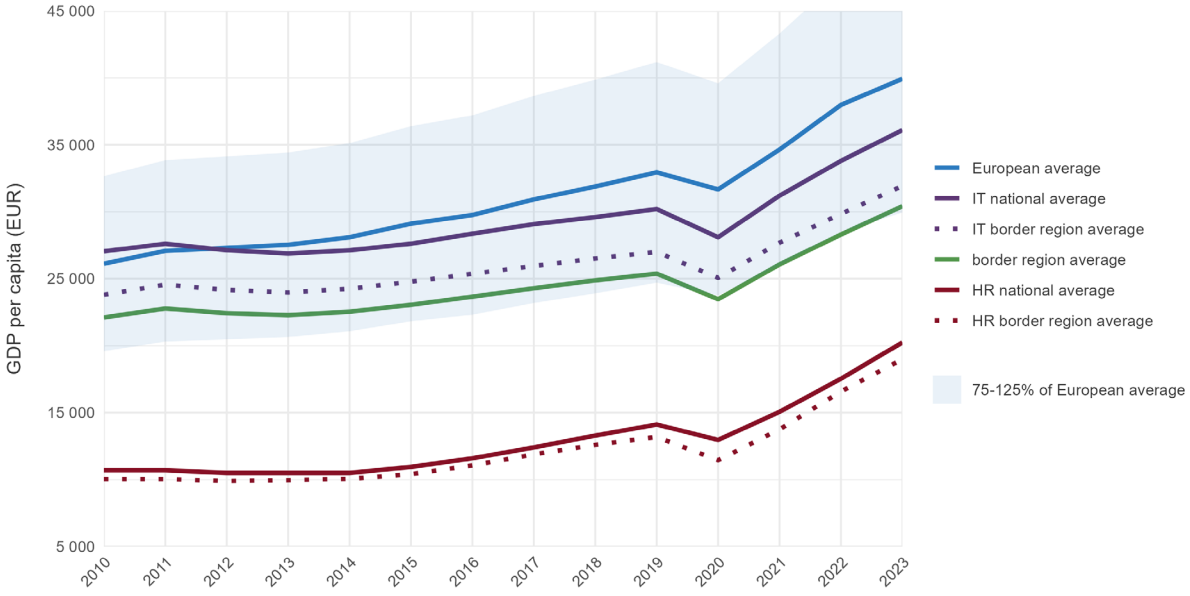
Please refer to the technical annex for more information.

Figure 2.8 illustrates the development of GDP per capita in Euros between 2010 and 2023, comparing border regions and national averages of Italy and Croatia with the European average. The cross-border region shows a GDP/capita value of 78.1% of the EU average in 2022 and 79.3% of the average in European border regions in general. The cross-border region marks a 26.2% increase of GDP per capita between 2014 and 2022[6]. This corresponds to a 9.5 percentage points lower increase of GDP per capita in the cross-border region compared to the EU average. Furthermore, this corresponds to 9 percentage points lower increase of GDP per capita in the cross-border region compared to the aggregated averages of border regions. Per country, both the GDP per capita growth across the Italian and the

[6] Percentage changes are calculated using Eurostat data to ensure harmonised statistics from official sources. The latest year for which full coverage of all European regions is available on Eurostat is 2022. For visualisation purposes, ARDECO data has been used to enable longer time series to be visualised by filling the official dataset's existing gaps with model-based estimates. Therefore, slight deviations between the calculation and visualisation are possible.

Croatian border regions have been lower than the EU. GDP levels in the 2 border regions follow the national trends, however in both cases the border regions trail the national averages. On average, GDP per capita in the Italian border regions is almost 50% higher than in the Croatian border regions.

Figure 2.8: Gross domestic product at current market prices (per capita)



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2.2.2 Labour market and commuting

This sub-dimension highlights the existing and potential functional links within the labour market of the border region. It examines the employment situation and commuting patterns, as well as the role of telework agreements, and considers developments over time based on analysed indicators. The analysis identifies factors that facilitate or hamper cross-border labour market integration.

2.2.2.1 Share of employment

Indicator description

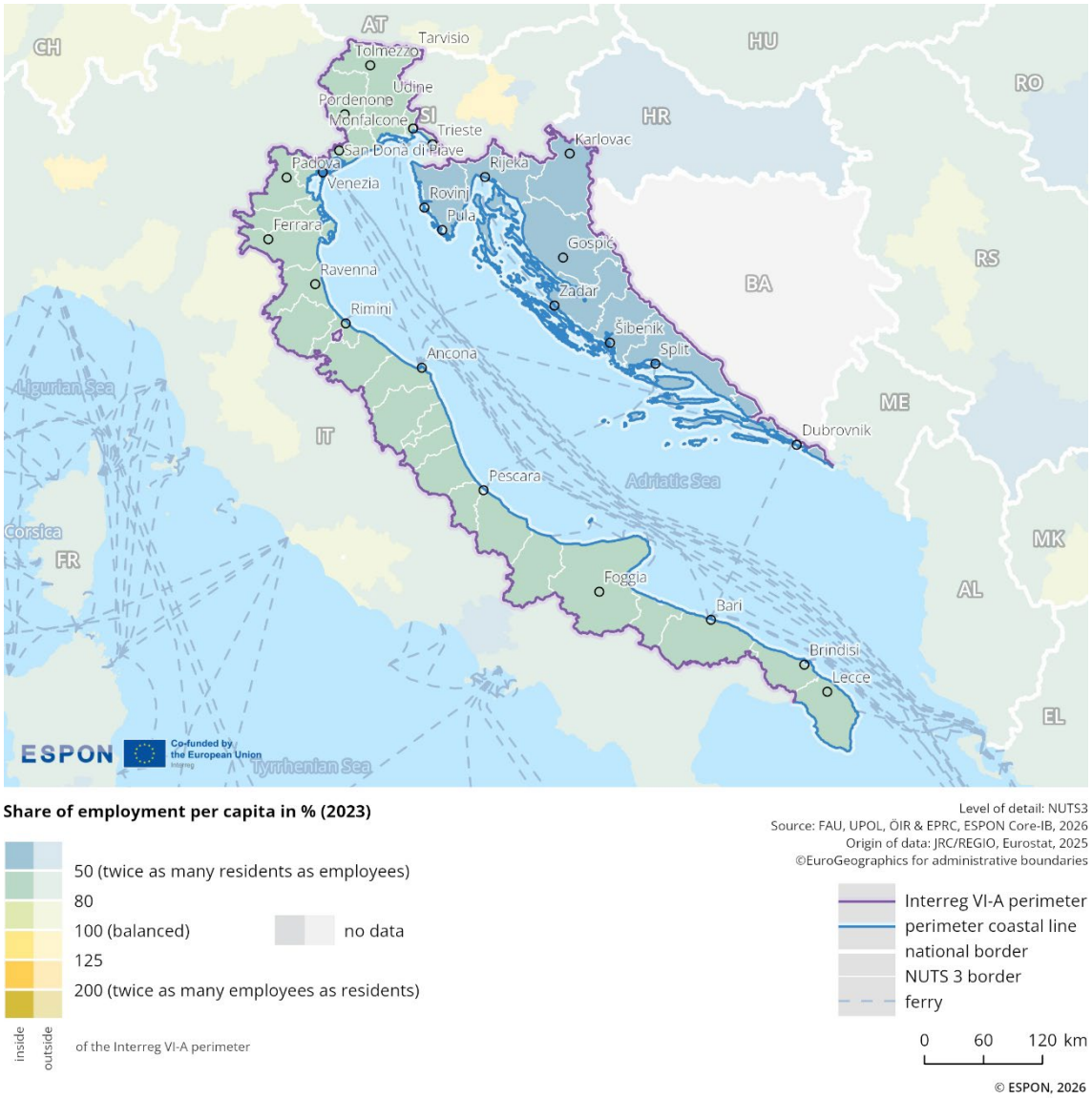
This indicator shows the share of employees in the population aged 15 to 64. Although it does not fully capture entrepreneurs, marginal employees, or civil servants, this is an important statistic for understanding general labour market patterns. It covers 2 aspects: first, high values can result from a high proportion of the resident population being employed. Second, high values can result from a high number of incoming commuters (from other NUTS3 regions within the country or from neighbouring countries). The same arguments apply to low values: they may indicate low levels of employment, or they may result from high shares of outgoing commuters. Values of more than 100% are possible, since the number of incoming commuters can exceed the number of inhabitants aged 15 to 64 (including both domestic and cross-border commuters).

- **Source**: Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2014-2023
- **Unit**: Share in %

Please refer to the technical annex for more information.

Figure 2.9 illustrates the share of employment per capita in the population aged 15 to 64 in 2023. The data are categorised into ranges from below 50% (twice as many residents aged 15 to 64 as employees) to above 200% (twice as many employees as residents aged 15 to 64), with 100% representing a balanced ratio. Blue or green-coloured regions indicate more residents aged 15 to 64 than employees, while yellow regions indicate more employees than residents aged 15 to 64.

Figure 2.9: Employment share[7]



The share of employment in this border region is stable, with the regional average at 68.8% in 2023, which represents an increase of 9 percentage points since 2014. Due to differing indicator values, differences between the individual countries are noticeable. In the Italian part, the share of employment ranges between 50% and 80% in all areas, while in the Croatian part of the region, values are below 50% in all areas. This indicator is workplace-based and therefore reflects the number of jobs located in a region rather than the employment status of its residents, which should be considered when interpreting regional labour market patterns.

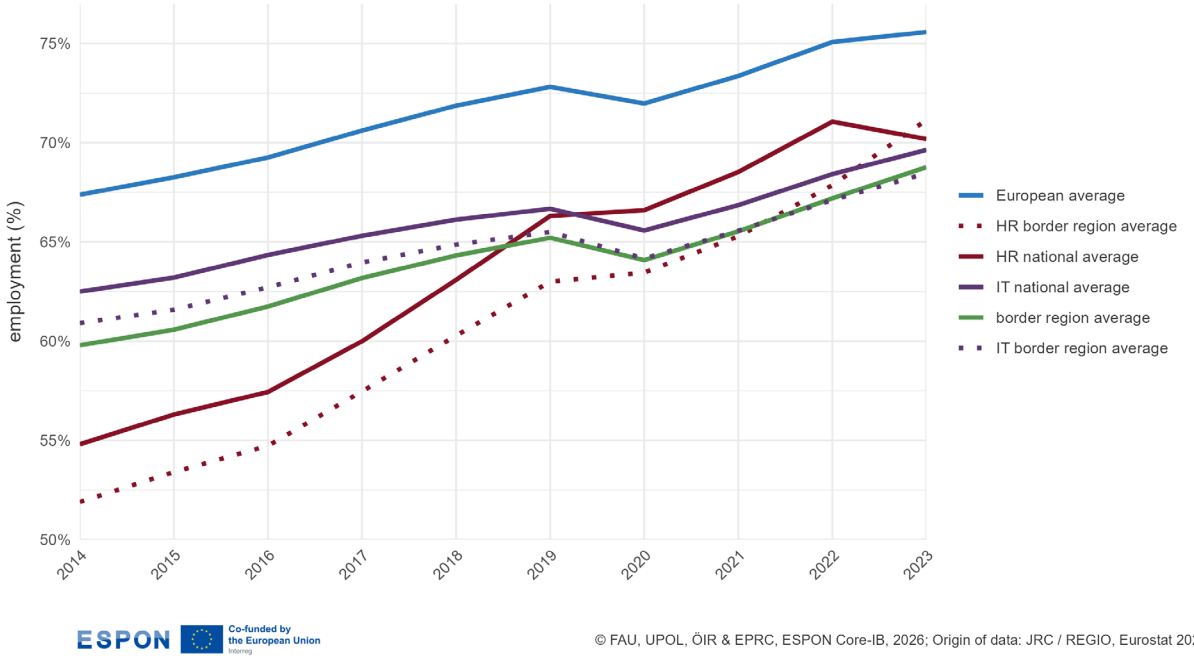
A comparison of the share of employment (see Figure 2.10) in this cross-border region shows the following:

- Compared to the European average, values in the cross-border region are lower by 6.8 percentage points; in 2014, the difference was 7.6 percentage points.
- Compared to the Italian average, values in the cross-border region are lower by 0.9 percentage points; in 2014, they were lower by 2.7 percentage points.

[7] Note: In this map, 'residents' refers to the population aged 15 to 64.

- Compared to the Croatian average, values in the cross-border region are lower by 1.4 percentage points; however, in 2014, they were higher by 5 percentage points.
- The Croatian border area reaches values 1 percentage point higher than the Croatian national average, while the Italian border area is 1.2 percentage points lower than the Italian national average.
- Compared to the average of all cross-border regions, values are lower by 5.7 percentage points, whereas in 2014 they were lower by 6.5 percentage points.

Figure 2.10: Employment share over time (comparison)



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2.2.2.2 Share of working-age population

Indicator description

This indicator shows the share of people aged 15 to 64 in the total population, reflecting the potential working-age population. The population counted includes all residents who live in the country permanently, excluding foreign students and military personnel. Using the 15–64 age range is a standard European statistical proxy, since differences in retirement age or labour participation across countries cannot be captured systematically. It allows for regional differentiation of potential workforce throughout the border region.

- **Source**: Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2014-2023
- **Unit**: Share in %

Please refer to the technical annex for more information.

Figure 2.11 illustrates the evolution of the share of the working-age population in the Italy–Croatia cross-border region between 2014 and 2023. In 2023, the region shows an average working-age

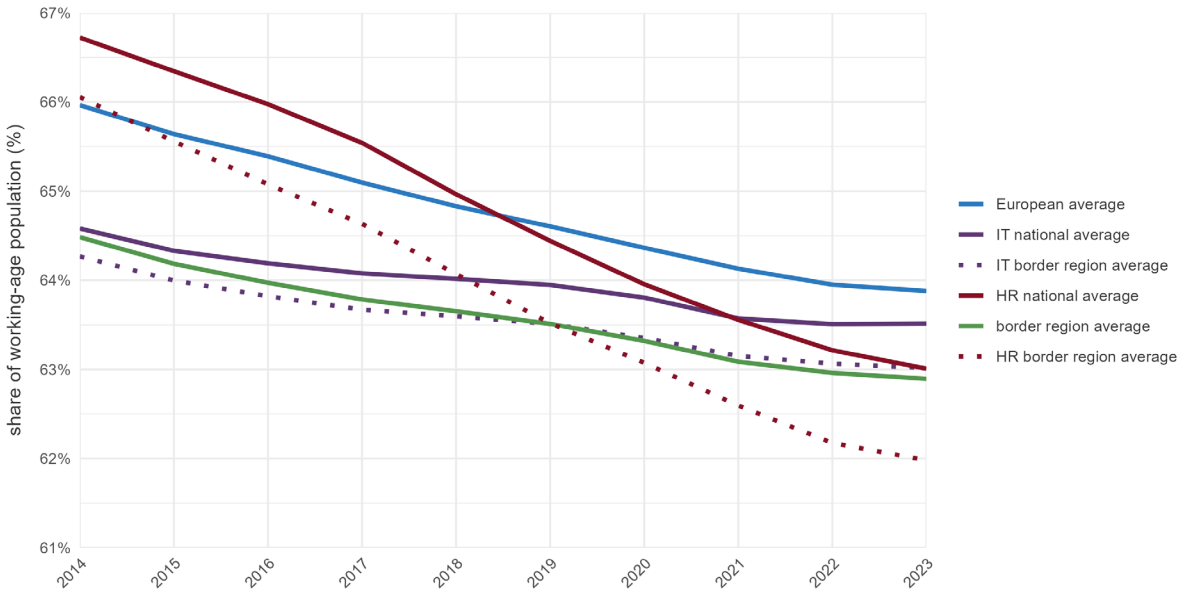
population share of 62.9%, compared to the European average of 63.9% and 63.7% for the average of all cross-border regions.

The share of the working-age population in the whole cross-border region is very similar to both the Italian border region average (63.0%) and the Croatian national average (63.0%), and slightly lower than the Italian national average (63.5%). In contrast, it is slightly higher than the Croatian border region average (62%).

The border region experienced a moderate 1.6 percentage point decrease in the share of working-age population between 2014 (64.5%) and 2023 (62.9%). This decline is somewhat slower than the European average, which dropped by 2.1 percentage points in the same period. While all areas in the region show a declining trend, the rate of decline has been more pronounced in the Croatian parts (-4.1 percentage points at the border and -3.7 percentage points at the national level) than in the Italian parts (-1.3 percentage points at the border and -1.1 percentage points at the national level).

The Italy–Croatia cross-border region experienced a moderate overall decline in the share of the working-age population between 2014 and 2023. In 2023, the region remained slightly below both the European and cross-border averages, with a steeper decline on the Croatian side.

Figure 2.11: Share of working-age population over time (comparison)



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2.2.2.3 Employment by sector

Indicator description

The indicator differentiates the number of jobs in a region by sector. This indicator focuses on workplace-based employment, providing insight into the employment landscape of a region. The dataset can be disaggregated according to "10-sector" NACE (Nomenclature statistique des activités économiques dans la Communauté européenne) classifications, allowing for detailed analysis of employment distribution across various industries.

- **Source**: Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2014-2023
- **Unit**: Share in %

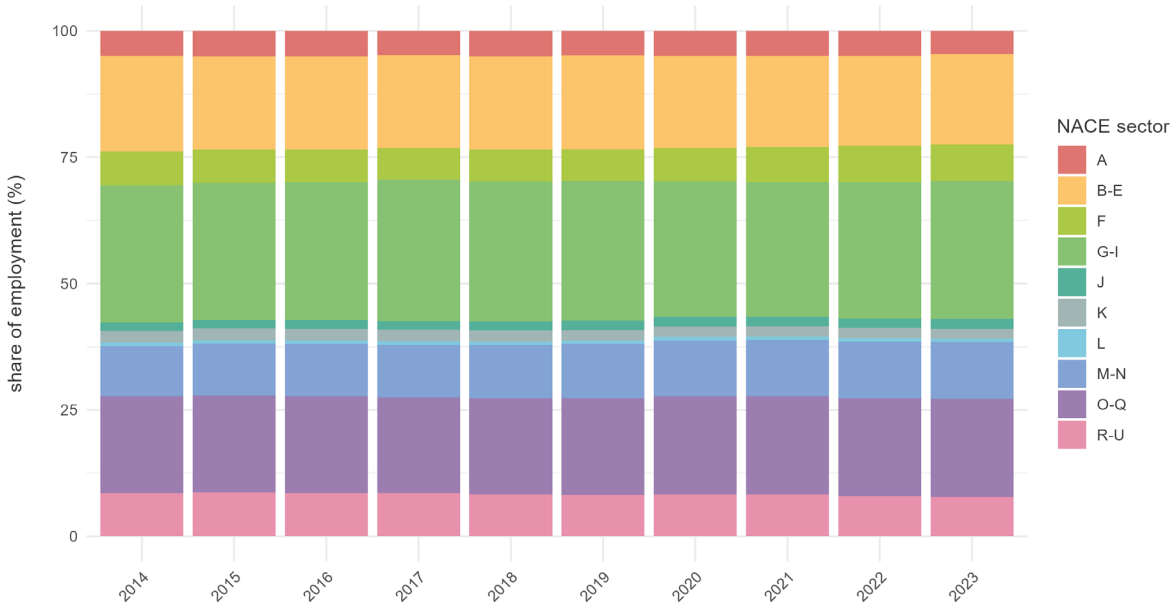
Please refer to the technical annex for more information.

Figure 2.12 illustrates the relative number of jobs in the border area differentiated by sectors. It shows where jobs are located (not where employed persons live). This workplace-based indicator offers insight into the employment structure of a region.

The dataset uses a '10-sector' classification based on NACE categories. The sectoral breakdown is as follows:

- A: Agriculture, forestry and fishing
- B-E: Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Water supply; sewerage, waste management and remediation activities (E)
- F: Construction
- G-I: Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I)
- J: Information and communication
- K: Financial and insurance activities
- L: Real estate activities
- M-N: Professional, scientific and technical activities (M), Administrative and support service activities (N)
- O-Q: Education (O), Human health and social work activities (Q)
- R-U: Arts, entertainment and recreation R), Other service activities (S), Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (T), Activities of extraterritorial organisations and bodies (U)

Figure 2.12: Employment by sector (comparison)



A: Agriculture, forestry and fishing
B-E: Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Water supply; sewerage, waste management and remediation activities (E)
F: Construction
G-I: Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I)
J: Information and communication
K: Financial and insurance activities
L: Real estate activities
M-N: Professional, scientific and technical activities (M), Administrative and support service activities (N)
O-Q: Education (O), Human health and social work activities (Q)
R-U: Arts, entertainment and recreation (R), Other service activities (S), Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (T), Activities of extraterritorial organisations and bodies (U)

Between 2014 and 2023, the relative number of jobs in the different sectors remains fairly stable. There is a slight decline in the share of employment in Arts, entertainment and recreation (R), Other service activities (S), Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (T) and Activities of extraterritorial organisations and bodies (U). Conversely, there is a modest increase in the number of jobs in Education (O) and Human health and social work activities (Q).

Over the entire period, the sectors with the highest share of jobs are 'B-E' (mining, quarrying, manufacturing, electricity, gas, steam and air conditioning supply, water supply; sewerage, waste management and remediation activities), 'G-I' (wholesale and retail trade; repair of motor vehicles and motorcycles, transportation and storage, accommodation and food service activities) and 'O-Q' (education, human health and social work activities). Furthermore, the relatively high proportion of jobs in the fishing sector (A) in this area, compared to other European border areas, highlights its specific maritime character.

2.2.2.4 Outgoing cross-border commuters

Indicator description

The indicator shows outgoing cross-border commuting dynamics at NUTS3 level. Even though no origin-destination information can be provided, it is assumed that commuters primarily travel across the nearest border. Spatial, economic and population arguments are combined to calculate the number of outgoing cross-border commuters.

- **Source/method of retrieval**: Eurostat/LFS data on outgoing commuters currently available on NUTS2 level has been regionalised for NUTS3 by means of weighting by border length, NUTS3 population-weighted centroid distance to border, population per NUTS3 region (15–64 years old) and real compensation per employee
- **Temporal coverage**: 2015-2023
- **Unit**: Share in %

Please refer to the technical annex for more information.

Commuting is one of the most relevant cross-border flows to identify functional linkages. Figure 2.13 illustrates the share of outgoing commuters per capita for each NUTS3 region (more concretely speaking the share of outgoing commuters among the residential population of the age group 15-64 years old, resembling the potential labour force). Origin-destination information cannot be provided, but the share of outgoing commuters in regions close to the border indicates the relevance of commuting. It highlights functional relations in the labour market within the cross-border region.

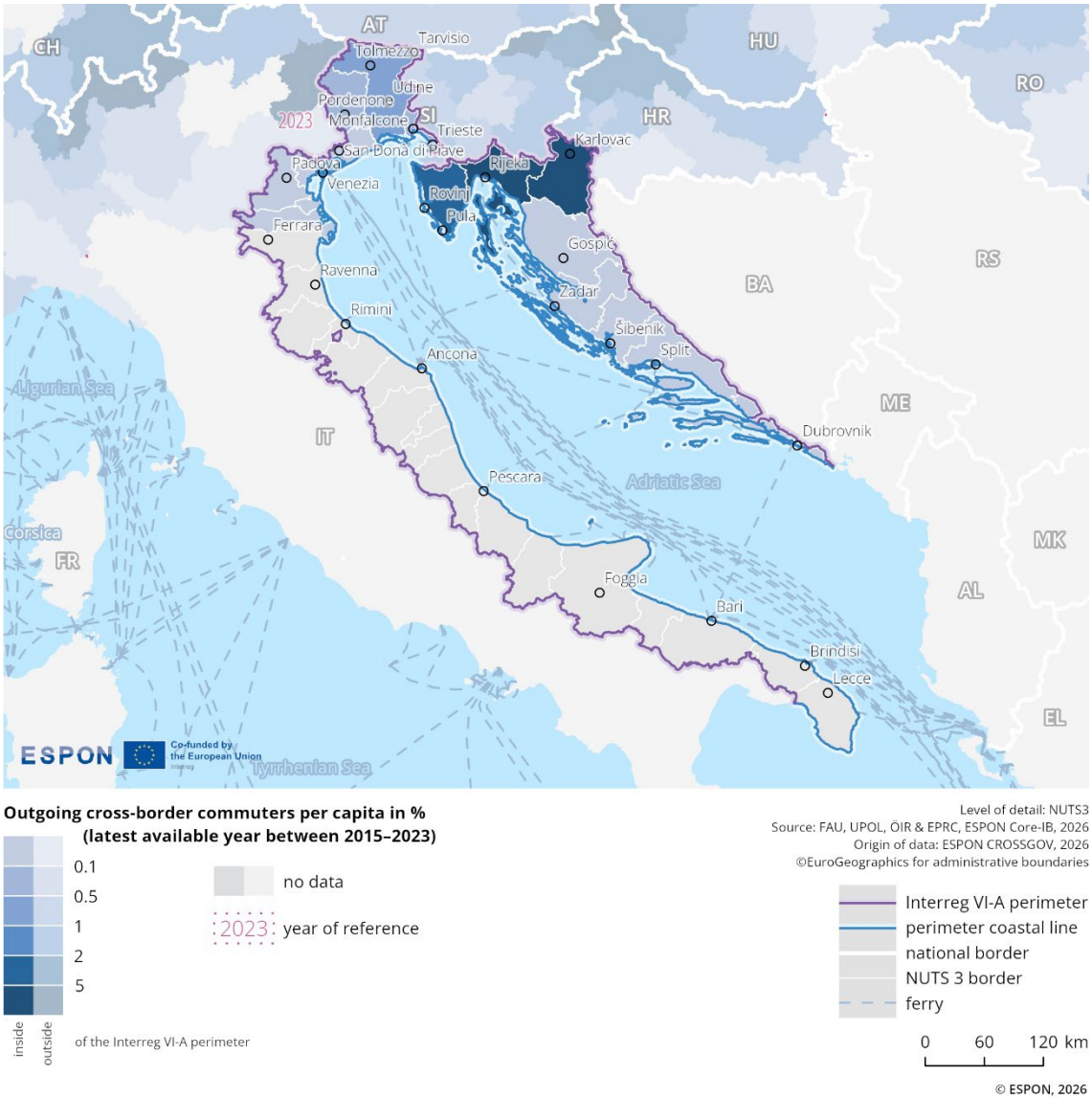
The map illustrates the share of cross-border commuters, based on the most recent available year of data. It shows relatively strong cross-border commuting activity on the Croatian side[8] in the northern regions which are closer to Italy. For several Italian regions, no data is available.

The northern Croatian part of the programme area stands out in particular, with high levels of outgoing commuters in Istarska županija, Primorsko-goranska županija, and Karlovačka županija[9]. The higher shares of outgoing commuters in the northern Croatian part can be explained by the possibility of reaching Italy via road connection. Nevertheless, it has to be considered that no origin-destination information can be provided, therefore some of these outgoing commuters could go to Slovenia. In the case of maritime borders, such short-term exchanges are rendered more complex by the geography of the region. Transport by plane or cruising ships are more common and commuting more seasonal than on a daily basis.

[8] For more information on the cross-border labour market between Italy and Croatia see: European Commission: Directorate-General for Regional and Urban Policy, AEBR, HÉTFA, Nordregio and ÖIR, *Cross-border regional labour market analysis – Case study – Region Trieste/Gorizia – Gorizia/Coastal-Karst – Istria/Primorje-Gorski Kotar (Italy –Slovenia – Croatia)*, Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2776/9725413

[9] See Eurostat Statistical Atlas for NUTS3 (2021) regions: https://ec.europa.eu/statistical-atlas/viewer/?config=typologies.json&ch=NUTS&mids=BKGCNT,NUTS2021L3,CNTOVL&o=1,1,0.7&center=49.69576,14.3332,4&lcis=NUTS2021L3&

Figure 2.13: Outgoing cross-border commuting patterns



2.2.2.5 Cross-border telework agreements

Indicator description

The indicator shows what kind of legal framework for cross-border telework is enacted.

- **Source/method of retrieval**: The indicator is based on information about the legal framework for social security regarding cross-border teleworking, categorised by border pair.
- **Temporal coverage**: Status as of March 2025
- **Unit**: n/a

Please refer to the technical annex for more information.

The 2 countries involved in the programme are signatories of the 2023 Framework Agreement on Cross-Border Telework. Under this agreement, cross-border workers can telework from their country of residence for up to 50% of their total working time without affecting their social security affiliation.

2.2.3 Competitiveness

This sub-dimension illustrates the competitiveness of the border region by analysing the main industry sectors that contribute to its economic development. It assesses gross value added (GVA) at basic prices by sector, as well as nominal compensation per hour worked, in order to understand productivity levels and sectoral strengths.

2.2.3.1 Gross value added at basic prices by sector

Indicator description

The indicator shows the gross value added (GVA), which is a measure of the contribution of a country or region to the economy. Regional GVA represents the value generated by all units involved in the production of goods and services within a specific area. This indicator can be disaggregated by industry and service sector, allowing for a detailed analysis of economic contributions across different fields. Additionally, the sum of GVA across all industries or sectors, combined with taxes on products and minus subsidies on products, yields the gross domestic product (GDP) of the region. The dataset is available in "10-sector" NACE classifications, facilitating comprehensive evaluations of the regional economy.

- **Source**: Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2014-2023
- **Unit**: Million purchasing power standards (PPS)

Please refer to the technical annex for more information.

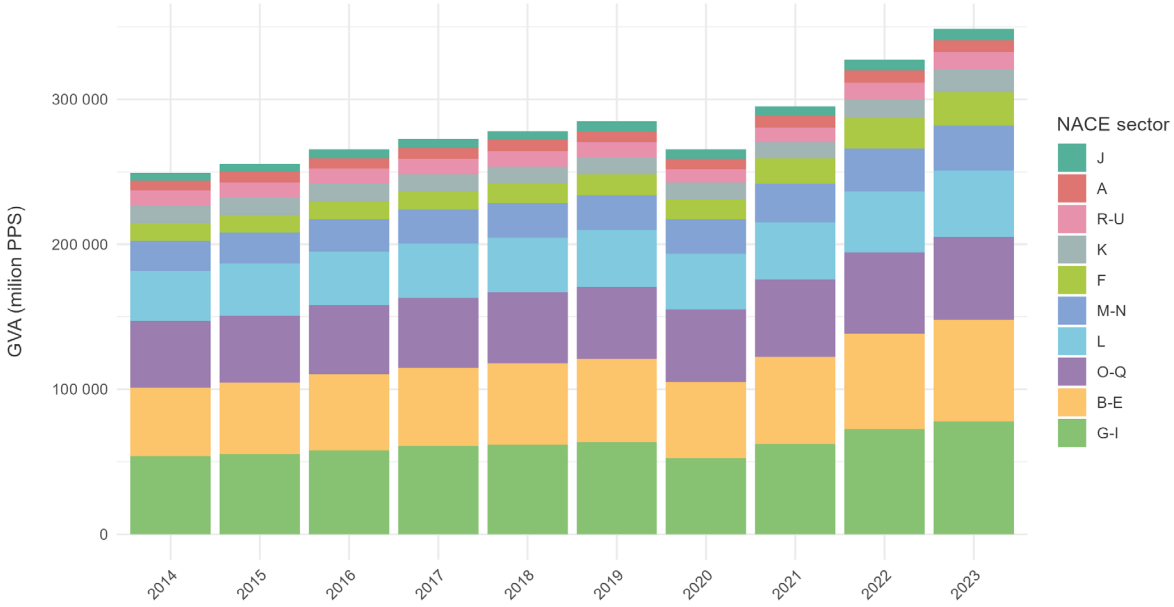
Figure 2.14 visualises gross value added (GVA), which is an important indicator of economic activity. GVA measures the value created by all economic activities involved in producing goods and services in a specific area. It is differentiated by sectors to provide detailed insights into the economic contributions of different fields.

The dataset uses a '10-sector' classification based on NACE categories. The sectoral breakdown is as follows:

- A: Agriculture, forestry and fishing
- B-E: Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Water supply; sewerage, waste management and remediation activities (E)
- F: Construction
- G-I: Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I)
- J: Information and communication
- K: Financial and insurance activities
- L: Real estate activities
- M-N: Professional, scientific and technical activities (M), Administrative and support service activities (N)
- O-Q: Education (O), Human health and social work activities (Q)
- R-U: Arts, entertainment and recreation R), Other service activities (S), Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (T), Activities of extraterritorial organisations and bodies (U)

Between 2014 and 2023, the GVA in the cross-border area of Italy-Croatia increased from 249,457 million purchasing power standards (PPS) to 348,567 million PPS — a growth of 40%. Sector groups B–E, G–I, and O–Q together make up over half of the total GVA, highlighting their significant contribution to the regional green and blue economies within the border area. The sector groups G–I contributed the largest share, with a total of 77,925 million PPS in 2023. This underlines the significance of sectors such as Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I) in the maritime Italy-Croatia border region. The comparatively large share of Information and communication (J) highlights the relevance of digital growth within the green and blue economies in this maritime border area.

Figure 2.14: Gross value added at basic prices by sector (comparison)



A: Agriculture, forestry and fishing
B-E: Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Water supply; sewerage, waste management and remediation activities (E)
F: Construction
G-I: Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I)
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R-U: Arts, entertainment and recreation (R), Other service activities (S), Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (T), Activities of extraterritorial organisations and bodies (U)

2.2.3.2 Nominal compensation per hour worked

Indicator description

The indicator shows the average income paid for each hour worked, known as compensation per hour worked. This measure is calculated by dividing the "compensation of employees at current prices" by the total number of "hours worked (employees)." Employees, in this context, are defined as individuals engaged by contract in productive activities for a resident unit, receiving remuneration irrespective of their place of residence. The total hours worked is considered the most appropriate measure of labour input, representing the aggregate number of hours actually worked by employees. This indicator provides valuable insights into labour productivity and wage dynamics within the economy.

- **Source**: Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2023 (missing data from 2023 in Switzerland were supplemented by values from 2022)
- **Unit**: Euro

Please refer to the technical annex for more information.

Figure 2.15 shows the average values for the 'compensation per hour worked'. This indicator is calculated by dividing the total compensation of employees (at current prices) by the total number of hours worked by those employees. In this context, 'employees' are defined as individuals engaged by contract in productive activities. The data is available for the place of work, regardless of the place of residence. Total hours worked represent the actual number of hours worked by employees and are considered the most accurate measure of labour input.

In 2023, the average nominal compensation per hour worked at national level is €24.70 in Italy and €11.3 in Croatia. In the Italy–Croatia cross-border region, the average nominal compensation per hour appears to be quite unevenly distributed. In the Italian areas, the average hourly income ranges between €20 and €30, with no region reporting values significantly above this range and in line with the national average. In the Croatian areas, the average hourly income ranges between €10 and €15, with several NUTS3 regions in this cross-border region showing values above the respective national average (Primorsko-goranska, Istarska, Ličko-senjska, Šibensko-kninska, Splitsko-dalmatinska and Zadarska with €12.50).

Cross-border wage differences can encourage labour migration from lower-wage areas to more economically prosperous neighbouring regions, creating both opportunities and challenges for local labour markets and social systems.

Figure 2.15: Average income per hour

Average income per hour worked in euros (2023)

5
10
15
20
30
40
50
60
no data
inside
outside
of the Interreg VI-A perimeter

Level of detail: NUTS3
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ARDECO database, JRC / REGIO, 2006–2023
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
perimeter coastal line
national border
NUTS 3 border
ferry

0 60 120 km

2.2.4 Infrastructure and housing

This sub-dimension shows the impact of the border on infrastructure and housing in the region. It assesses housing prices and average internet speed in order to identify cross-border effects, including potential price spillovers and disparities. The analysis reveals whether infrastructure and housing markets facilitate integration or expose structural challenges that are specific to the border area.

2.2.4.1 Advertised sales prices

Indicator description

The indicator shows the advertised sales price per square meter for houses/appartements as retrieved from commercial real estate websites at national level. In the cross-border region, local differences between average sales prices are highlighted and the "cutting" effect of the border and its influence on price levels is visualised.

- **Source/method of retrieval**: Processed ESPON House4all data. The original data is collected via web-scraping of national listing websites over a one-year period.
- **Temporal coverage**: 2024/2025
- **Unit**: Average price per square meter (€/m^2)

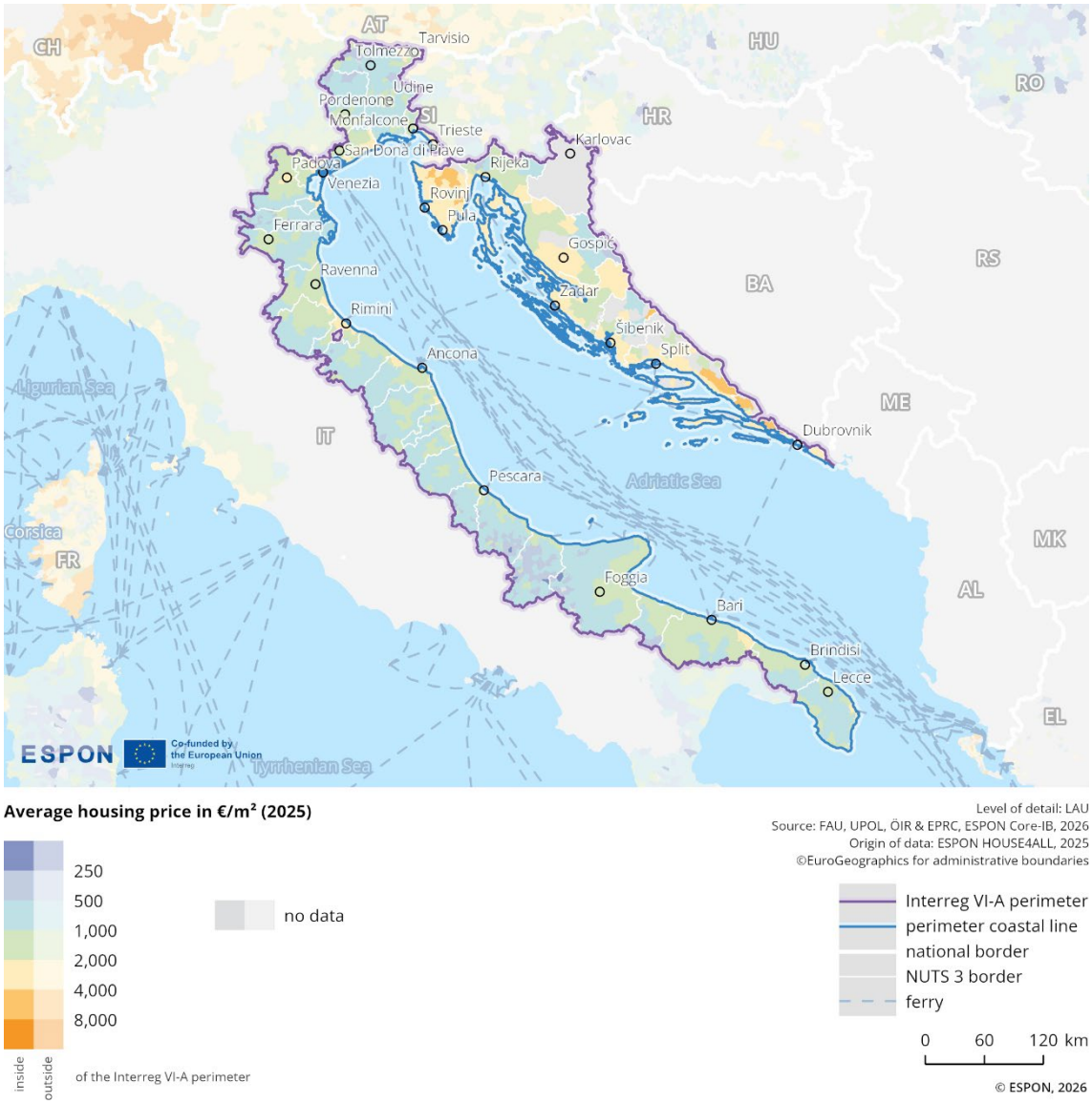
Please refer to the technical annex for more information.

Figure 2.16 illustrates the advertised sales price of housing in 2025 across the Italian-Croatian border region. The data are categorised into ranges of average housing price per square metre, from below 250 €/m² up to more than 8,000 €/m², shown in colours ranging from purple and blue to green, yellow and orange.

The map indicates that the average prices range from 250 to a maximum of 2,000 €/m² in the Italian part of the cross-border area. In the Italian part of the Interreg region, the price generally rises from inland to the coast. In small areas around the cities of Padova and Venezia, the price rises to the 4,000 €/m² limit.

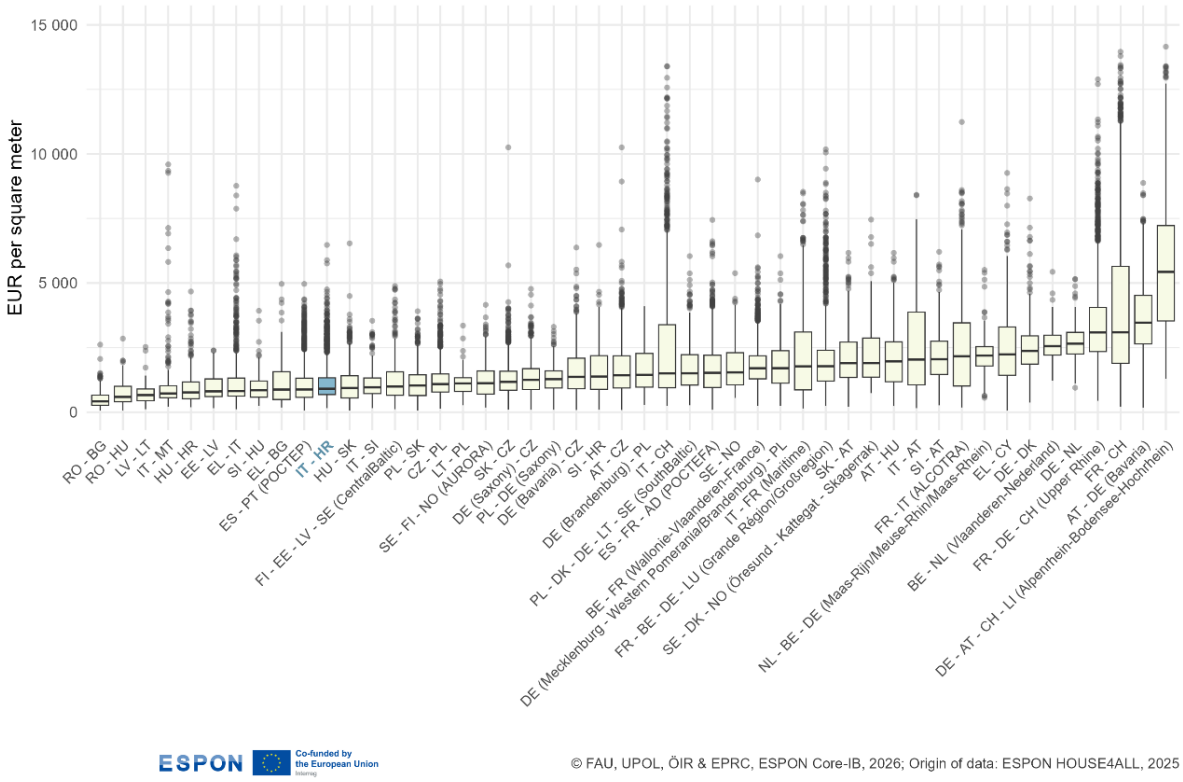
The Croatian part shows greater price variability. The highest prices are found on the Istrian peninsula, where they reach up to 8,000 €/m² in some places. The second most expensive area is the Makarska Riviera in the southern part. In contrast, some inland areas range in price from € 500 to € 2,000/m². In Italy, prices are significantly lower than in Croatia. Overall, within the cross-border area, there are significant differences in terms of the advertised average sales price per square meter.

Figure 2.16: Advertised housing prices



The Italian part of the border region records an average advertised residential sales price of approximately €948 per square metre, while the Croatian part reports a substantially higher average price of about €2,735 per square metre. According to Figure 2.17, the average advertised sales price across the entire cross-border region is estimated at €1,163 per square metre. This value is below the average for all EU-evaluated border regions (€1,900 per square metre) and remains well below the European average of approximately €5,600 per square metre.

Figure 2.17: Advertised housing prices (comparison)



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2.2.4.2 Average internet speed

Indicator description

The indicator shows the population weighted average internet speed available at municipal level. It highlights differences in the "digital preparedness". In border regions, this indicator is particularly relevant for identifying digital infrastructure gaps that may hamper balanced development and cross-border integration.

- **Source/method of retrieval**: Processing of data provided by Speedtest by Ookla Global Fixed and Mobile Network Performance Maps, based on Ookla's analysis of Speedtest Intelligence data.
- **Temporal coverage**: 2022
- **Unit**: Download speed in Mbps

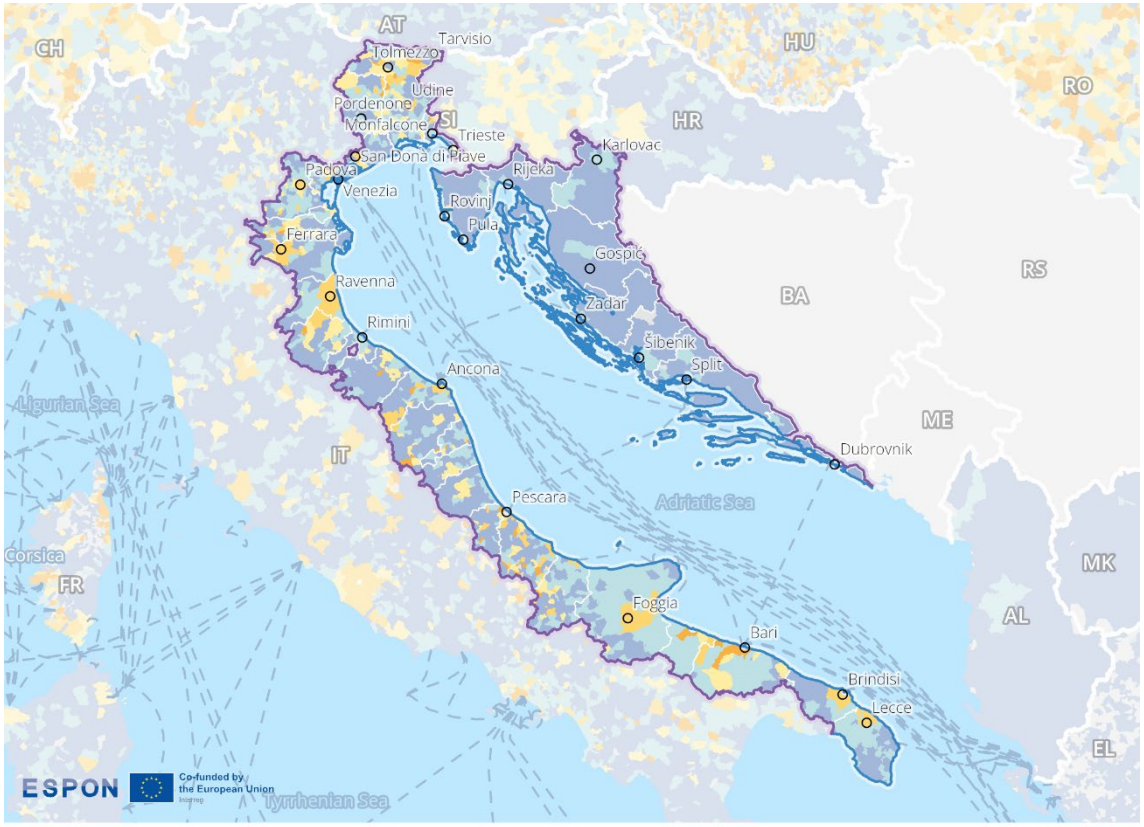
Please refer to the technical annex for more information.

Digitalisation is a highly relevant issue in European border regions, with the overarching objective of ensuring appropriate digital access. It is widely recognised as a key precondition for successful regional and economic development. A major challenge in this process is preventing 'digital divides', i.e., avoiding significant disparities in economic, social, and spatial terms. Average internet speed is a telling indicator of such disparities, highlighting differences in 'digital preparedness' at the local level. Figure 2.18 shows the average download speed at the municipality level. The colour scheme ranges from dark blue (very slow speeds) to orange (very fast speeds). The data, prepared by OBC Transeuropa for EDJNet, is based on Speedtest Intelligence data from Speedtest/Ookla's Global Fixed and Mobile

Network Performance Maps for the first quarter of 2022. The average download speeds are expressed in megabits per second (Mbps), not to be confused with megabytes per second (MBps).

The map reveals significant differences between urban and rural areas, with values ranging from under 50 Mbps to over 200 Mbps. Cities such as Udine, Padova, Trieste, Ferrara, Ancona, Foggia, and Bari report relatively high average speeds, while surrounding areas tend to have significantly lower values. This may be due to the greater return on investment typically associated with digital infrastructure projects in urban areas compared to rural ones. However, not all urban areas in this border region have high download speeds, for example, Pordenone, Ancona, and all Croatian cities do not stand out in this regard. In Italy, the average internet speed is significantly higher than in Croatia. Croatia's mountainous terrain clearly poses a challenge in providing high-speed internet. In the case of islands and remote coastal areas, digital disparities need to be understood within the specific context of maritime geography. These territories often face structural disadvantages in connectivity compared to the mainland, resulting from their physical isolation, limited infrastructure, and higher costs of network deployment and maintenance.

Figure 2.18: Average internet download speed



2.2.5 Key messages on the economic dimension

When analysing the economic aspects of the Italy–Croatia cross-border region, both similarities and differences emerge. On average, GDP per capita in the Italian border regions is almost 50% higher than in the Croatian ones. Employment rates also differ significantly: in the Italian part they range between 50% and 80% across all areas, whereas in the Croatian part values are below 50%.

The main sectors driving the economy of the border region are “wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, as well as “accommodation and food services”, which are also the sectors in which more jobs are available. The “blue economy” sectors represent an important element of the economy in this programme area. Coastal tourism activities, port activities, shipbuildig and repair and maritime transport represent important sectors for both Italy and Croatia.

Salaries in the programme area are somewhat uneven, with higher wages in the Italian border regions. Together with higher GDP per capita and employment rates, these differences create incentives for cross-border commuting. Data shows relatively strong cross-border commuting activity in areas directly adjacent to the land border, particularly on the Croatian side. The Framework Agreement on Cross-Border Telework provides additional support to commuters whose jobs allow remote work. By reducing travel time, it enhances the attractiveness of cross-border employment.

Spatial patterns in the housing market further illustrate how topography and economy shape economic dynamics. Prices are considerably higher along the coast and in touristic cities on both sides of the border. Property prices in Croatia are on average higher, particularly on the Istrian peninsula and in the area of Makarska Riviera. This suggests that proximity to recreational areas and high levels of tourism also play an important economic role.

2.3 Green dimension

The green dimension highlights the environmental characteristics, vulnerabilities and sustainability-related interactions within the border region. The analysis provides insight into the environmental interdependence of border regions. Additionally, the spatial distribution of renewable and conventional energy infrastructure, alongside indicators of resources and the circular economy, reveals whether the border facilitates collaborative transitions towards sustainability.

2.3.1 Nature protection and pollution

This sub-dimension investigates cross-border functional links in protected areas and areas affected by air and water pollution. It analyses the presence of protected areas in order to identify cross-border ecological links and conservation efforts. It also highlights the extent to which air and water pollution affects people living in border regions.

2.3.1.1 Protected areas

Indicator description

The indicator shows the presence and territorial coverage of protected areas based on the combination of 3 data sources, i.e., Nationally designated areas, Natura 2000 Network and Emerald Network.

- **Source/method of retrieval**: The indicator represents a combination of nationally designated areas, Natura 2000 and Emerald network provided by EEA (European Environment Agency) Geospatial data catalogue.
- **Temporal coverage**: 2024
- **Unit**: n/a

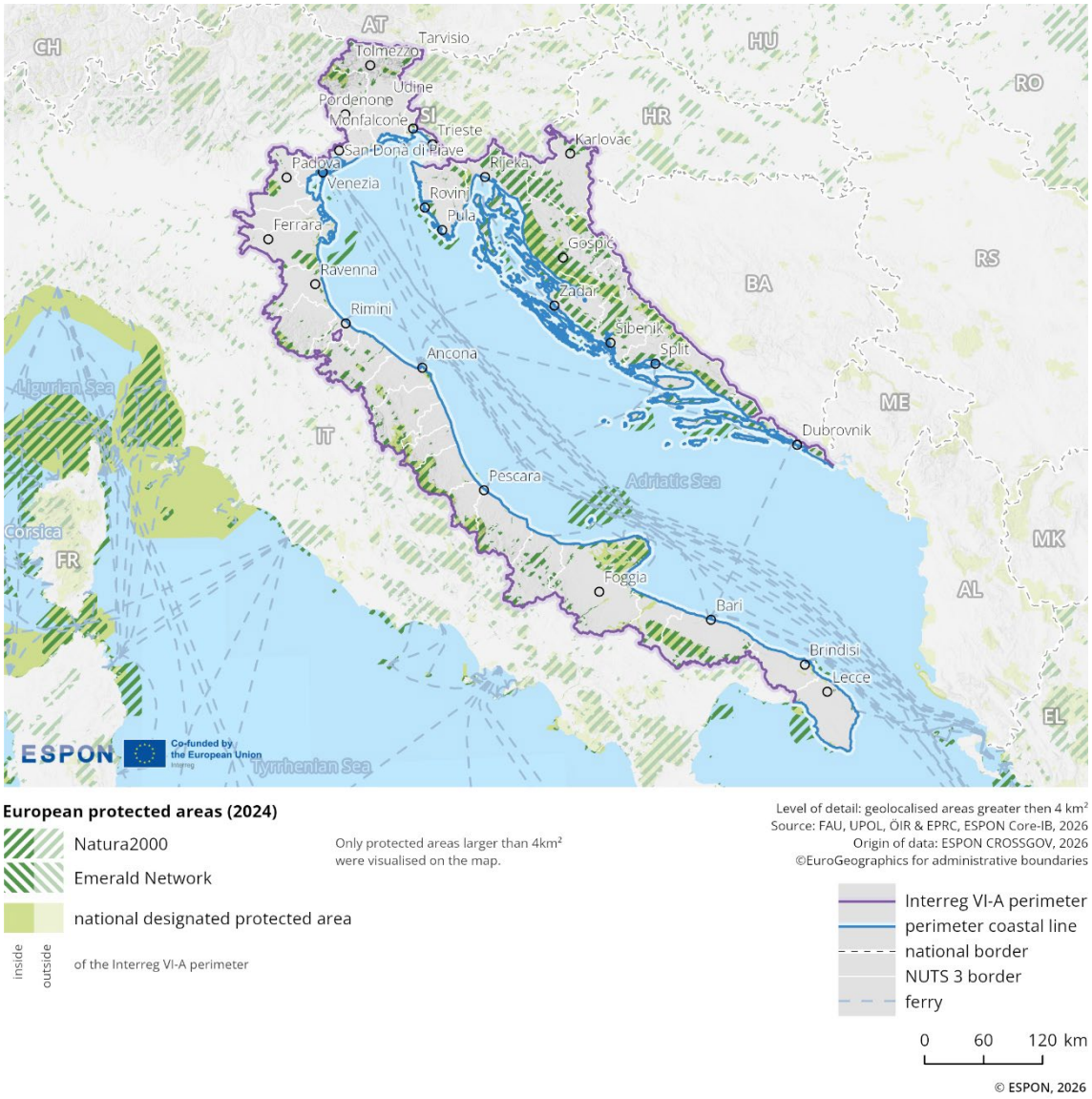
Please refer to the technical annex for more information.

Figure 2.19 illustrates the distribution of protected areas in 2024 across the Italian-Croatian border region. The data differentiate between Natura 2000 sites, the Emerald Network, and nationally designated protected areas, with only protected areas larger than 4 km² displayed.

National designated protected areas (NDPAs) in the border region are partially concentrated in the northern part of the Interreg region. The largest contiguous protected area in this region is part of the Natura 2000 network and is located in the Croatian regions of the programme area.

Due to the absence of a land border between Italy and Croatia, no direct cross-border protected areas are identified. In the northern part of the Interreg region, several protected areas either have a cross-border counterpart with Slovenia or are located outside of the Interreg region.

Figure 2.19: Nature protected areas



European protected areas (2024)

- Natura2000
- Emerald Network
- national designated protected area

inside / outside of the Interreg VI-A perimeter

Only protected areas larger than 4km² were visualised on the map.

Level of detail: geolocalised areas greater then 4 km²
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON CROSSGOV, 2026
©EuroGeographics for administrative boundaries

- Interreg VI-A perimeter
- perimeter coastal line
- national border
- NUTS 3 border
- ferry

0 60 120 km

© ESPON, 2026

2.3.1.2 Air pollution

Indicator description

The indicator shows the air pollution from fine particulates (PM2.5) at NUTS3 level. The data shows the population-weighted average air pollution level (µg/m³), providing an indication of the extent to which the regional population is affected by air pollution.

- **Source/method of retrieval**: Processing and analysis of European Environment Agency data
- **Temporal coverage**: 2022
- **Unit**: Population weighted average of µg/m³

Please refer to the technical annex for more information.

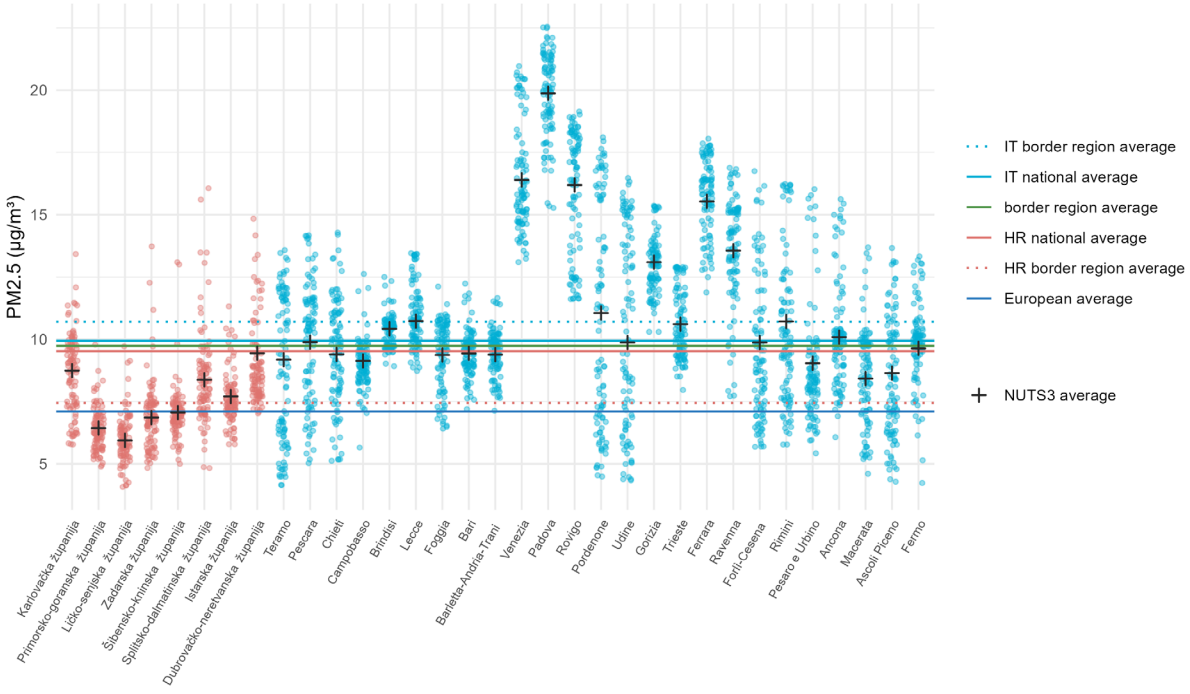
Figure 2.20 illustrates PM2.5 concentrations (in µg/m³) across NUTS3 regions in Italy and Croatia. Each small dot represents an individual measurement, while the black crosses indicate the average PM2.5 concentration for each NUTS3 region[10]. The regions are aligned along the x-axis, with Croatian regions on the left (in red) and Italian regions on the right (in blue).

PM2.5 values in both countries span a wide range. Overall, Italian regions show higher individual peaks in PM2.5 concentrations than Croatian regions. Croatian NUTS3 averages cluster below 10 µg/m³ with only few measurements exceeding 10 µg/m³. Italian NUTS3 averages display considerably more variability and several exceed 10 µg/m³. In general, Italian regions exhibit higher individual peaks than Croatian regions.

The Italian border region in general has a higher average PM2.5 concentration than the Italian national average. In contrast, the Croatian border average is notably lower than the Croatian national average. Both Italian averages, national and border, are higher than their Croatian counterparts. As a result, the cross-border (CB) average lies between the Croatian and Italian national and border averages.

However, all national and border averages, except for the Croatian border region, are considerably above the European average. The Croatian border region averages only slightly exceed the EU average.

Figure 2.20: Air pollution



[10] See Eurostat Statistical Atlas for NUTS3 (2021) regions: https://ec.europa.eu/statistical-atlas/viewer/?config=typologies.json&ch=NUTS&mids=BKGCNT,NUTS2021L3,CNTOVL&o=1,1,0.7&center=49.69576,14.3332,4&lcis=NUTS2021L3&

2.3.1.3 Water pollution

Indicator description

The indicator shows the ecological status or potential for coastal and river water bodies. It is based on an assessment of biological, hydro-morphological, chemical and physico-chemical quality elements.

- **Source/method of retrieval**: Processing and analysis of European Environment Agency data
- **Temporal coverage**: 2022 (supplemented by 2016 data)
- **Unit**: n/a

Please refer to the technical annex for more information.

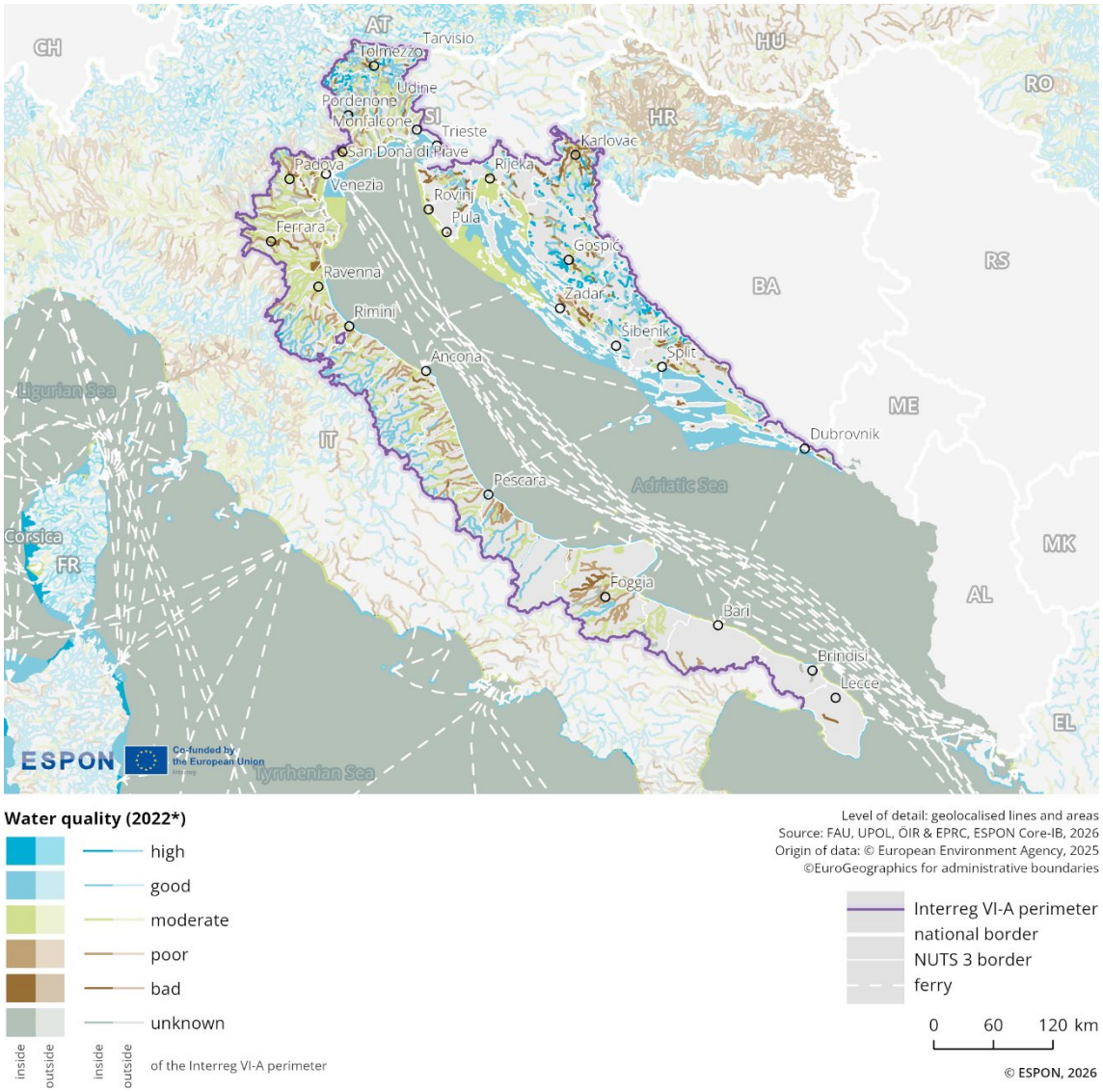
The map in Figure 2.21 illustrates water pollution levels in Italy and Croatia along the Adriatic Sea within their Interreg region in 2022. Water quality is represented using 6 colour-coded categories, ranging from bad to high, including an 'unknown' category[11].

In the Italian part of the Interreg region, water quality levels are rather mixed. Generally, it can be observed that water quality improves further inland, while water bodies close to coastal areas are mostly rated as having poor to bad water quality. In addition, the northern part of the Italian part of the programme area tends to have predominantly moderate to good water quality. Coastal waters themselves are mostly categorised as moderate to high for Italy.

In contrast, water quality in the Croatian part of the Interreg region generally rated higher: most coastal areas are rated as having moderate to high water quality and only a few inland rivers show poor water quality. Coastal waters themselves furthermore are mostly categorised as high, with a few patches of moderate water quality.

[11] For more information see the Water Framework Directive Reporting Guidance (2022): https://cdr.eionet.europa.eu/help/WFD/WFD_715_2022

Figure 2.21: Water quality patterns



2.3.2 Climate risks and resilience

This sub-dimension examines cross-border functional links relating to climate risks and resilience. It analyses exposure to natural hazards such as landslides, earthquakes, droughts and floods in order to identify vulnerabilities and risks.[12]

2.3.2.1 Natural hazard risks

Indicator description

The indicator shows the risk the border region is facing in relation to natural hazards (floods, droughts, landslides and earthquakes). The map highlights potential cross-border affectedness and allows to judge the relative relevance of each risk for the cross-border region.

- **Source/method of retrieval**: The indicator is based on geodata from the Disaster Management Risk Knowledge Centre/JRC. It provides the likelihood of specific natural hazard events at grid level.
- **Temporal coverage**: 2024
- **Unit**: n/a

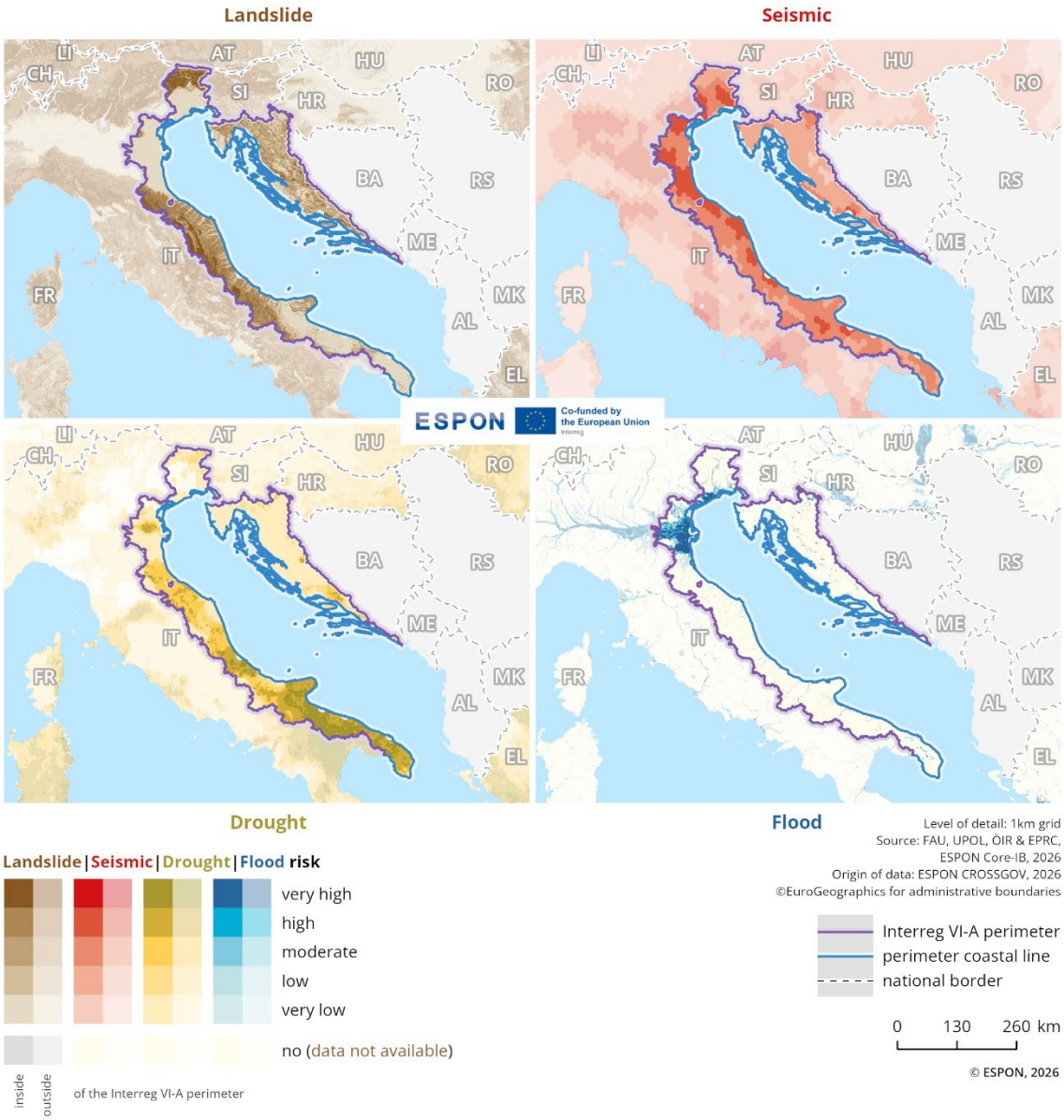
Please refer to the technical annex for more information.

Figure 2.22 illustrates the spatial distribution of natural hazards in the Italy-Croatia cross-border region, highlighting areas where risks are shared across national boundaries and where risks are not necessarily cross-border relevant.

The risk of landslides is (very) high on the Italian side, especially along the Apennine and Alpine mountain ranges, while in Croatia it remains generally moderate to high. Seismic risk affects much of the Adriatic basin, with moderate to high levels along the Italian Adriatic coast and also along the Croatian coastal belt. Flood risks are mainly concentrated in the northern Adriatic area, particularly in the Po River delta and parts of the northern Italian coastal plain, while inland river basins in Croatia also show some exposure. Drought risk is most pronounced in southern Italy, especially in Puglia, but also affects parts of the Croatian coastal and island areas in Dalmatia.

[12] See also: European Commission 2024: Strengthening the Resilience of EU Border Regions, https://ec.europa.eu/regional_policy/sources/studies/KN-02-24-586-2A-N.pdf

Figure 2.22: Natural hazard risks



2.3.3 (Renewable) Energy and energy infrastructure

This sub-dimension assesses cross-border functional links in energy supply and infrastructure, focusing on existing connections and missing links. The distribution of power lines, energy infrastructure and power stations is analysed to identify supply patterns and potential integration gaps. The analysis reveals whether the border facilitates energy cooperation and connectivity, or if infrastructural differences create barriers.

2.3.3.1 Power lines and energy infrastructure

Indicator description

The indicator shows the distribution of power lines and energy infrastructures in the cross-border region. The geodata highlights the existing links and gaps in the cross-border interconnections of the energy transmission network.

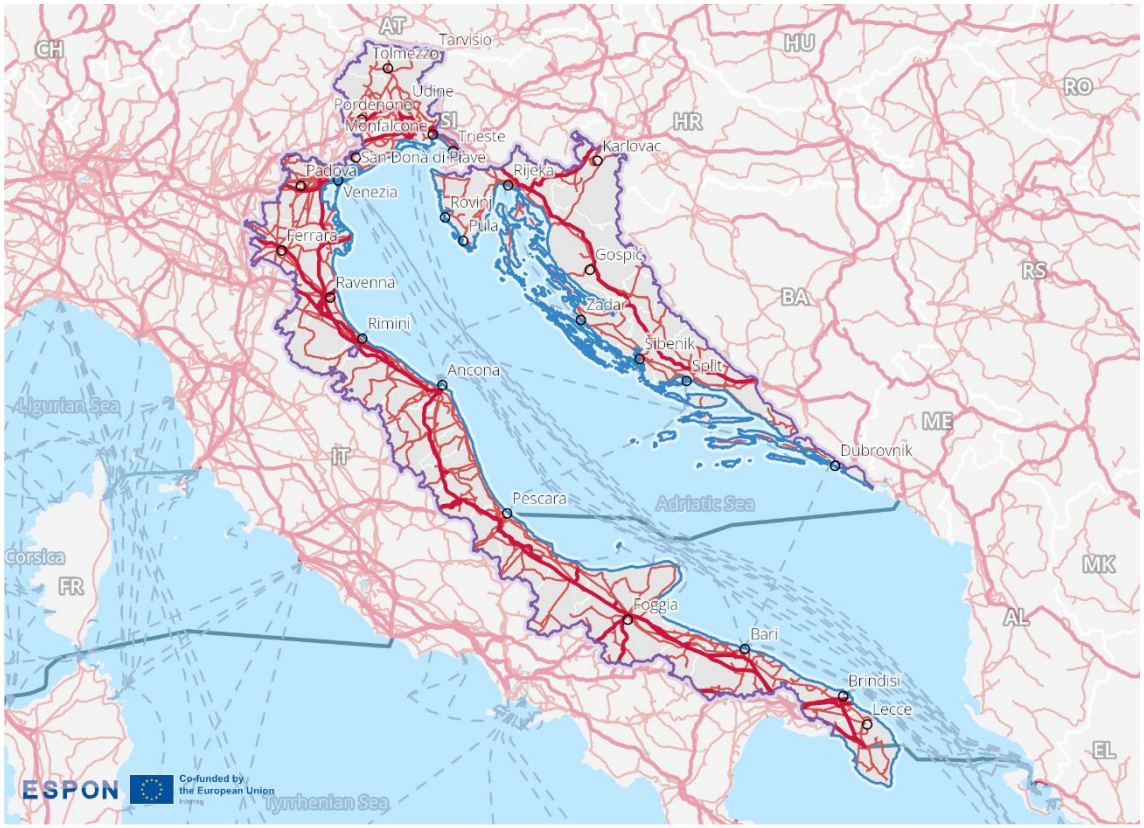
- **Source/method of retrieval**: Geodata on high-voltage energy infrastructure (100 kV and above) has been collected and processed from OpenStreetMap.
- **Temporal coverage**: 2025
- **Unit**: kV

Please refer to the technical annex for more information.

Figure 2.23 illustrates the distribution of power lines and cables in 2025 across the Italian-Croatian cross-border region. The data distinguish between overhead and underground power lines, further classified into high-voltage (100-230 kV), extra high-voltage (230-1,000 kV), and ultra-high voltage (above 1,000 kV).

The cross-border region of Italy-Croatia features an extensive high-voltage transmission infrastructure. For both countries, the main infrastructure is represented by one extra high-voltage line and (partially) one high-voltage line oriented North-West to South-East following the coastline. No direct connection between the 2 countries is currently in place, however both in the northern part (one extra high-voltage and one high-voltage link through Slovenia) as well as in the southern part (one extra high-voltage undersea cable through Montenegro) the region is linked together.

Figure 2.23: High-voltage transmission infrastructure



Overhead power lines (2025)

- High Voltage (100–230 kV)
- Extra High Voltage (230–1.000 kV)
- Ultra High Voltage (1.000 kV+)

Underground power cables (2025)

- High Voltage (100–230 kV)
- Extra High Voltage (230–1.000 kV)
- Ultra High Voltage (1.000 kV+)

inside / outside of the Interreg VI-A perimeter

ANSI Standard C84.1 was used for classification of power lines.

Level of detail: geolocated lines
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON CROSSGOV, 2026
©EuroGeographics for administrative boundaries

- Interreg VI-A perimeter
- perimeter coastal line
- national border
- NUTS 3 border
- ferry

0 60 120 km

© ESPON, 2026

2.3.3.2 Power stations

Indicator description

The indicator shows the location of power stations by type and energy production levels (coal, gas and oil, nuclear, hydro). It can indicate differences and complementarities in the national energy supply systems as well as highlight potential supply-demand links when viewed in conjunction with power lines infrastructure.

- **Source**: OpenStreetMap, Global Energy Monitor, JRC Hydro-power plants database
- **Temporal coverage**: 2025
- **Unit**: MW

Please refer to the technical annex for more information.

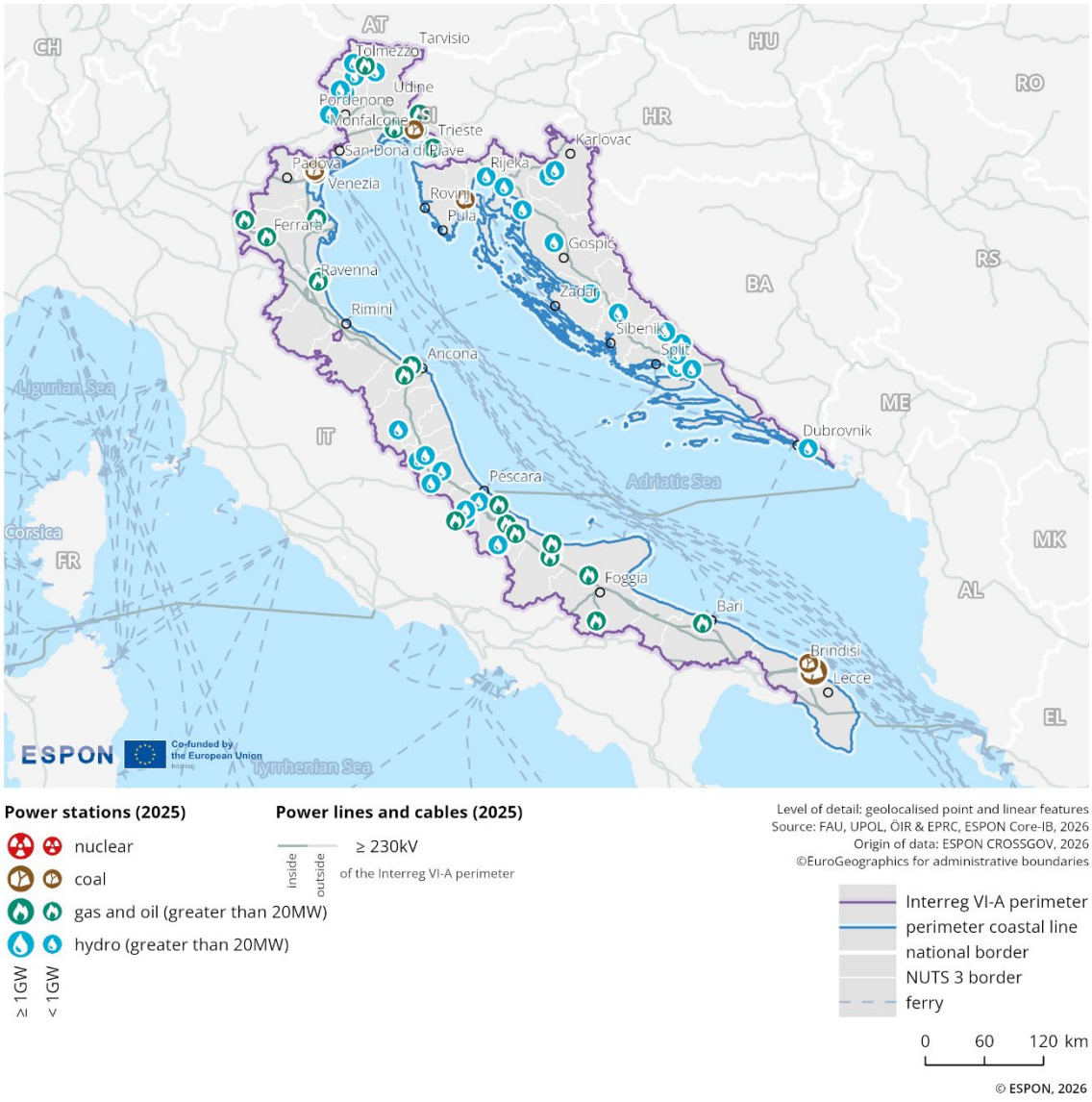
As shown in Table 1, in the Italy-Croatia cross-border region, there are a total of 60 power station locations, while the most frequent location is represented by hydroelectric power stations (a total of 30).

Table 1: Number and type of power stations

Power stations/plants	Less than 1GW	1GW and up
Nuclear	/	/
Coal	5	1
Gas and oil	24	/
Hydro	30	/

According to Figure 2.24, there are 30 hydroelectric power stations in the programme area. 16 of them area located in Italy in the foothills of the Alps in the north and along the central Apennines area between Ancona and Foggia. In Croatia, this energy source is exclusive except for one coal-fired power plant, and hydroelectric power stations are evenly distributed throughout the country. All of 24 oil and gas power stations are situated in Italy, with some of them running multiple operations. Apart from the one coal-fired power plant already mentioned, all 5 others are located in Italy – 3 in the northern part of the programme area and 2 in the far south (including one high-capacity plant). No nuclear power plant is present in the whole region.

Figure 2.24: Power stations infrastructure



Power stations (2025)

- nuclear
- coal
- gas and oil (greater than 20MW)
- hydro (greater than 20MW)

≥ 1GW < 1GW

Power lines and cables (2025)

inside / outside ≥ 230kV of the Interreg VI-A perimeter

Level of detail: geolocalised point and linear features
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON CROSSGOV, 2026
©EuroGeographics for administrative boundaries

- Interreg VI-A perimeter
- perimeter coastal line
- national border
- NUTS 3 border
- ferry

0 60 120 km

2.3.4 Resources and circular economy

This sub-dimension focuses on resource use patterns in the border region and their implications for circular economy practices. It analyses resource productivity and waste generation in order to evaluate the efficiency and sustainability of resource utilisation across the border.

2.3.4.1 Resource productivity

Indicator description

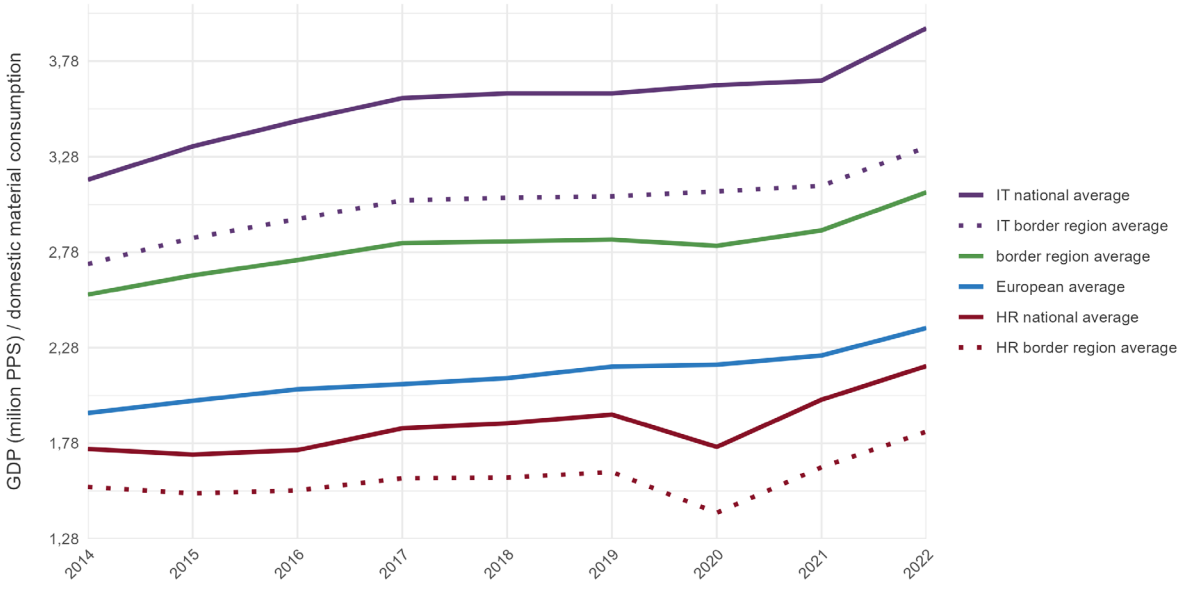
The indicator shows the economic value generated per unit of material consumed for each region within the cross-border area. Developments over time provide insights if the decoupling of productivity from resource use is progressing on regional level.

- **Source/method of retrieval**: Processing of Eurostat and ESPON CIRCTER (Circular Economy and Territorial Consequences) Update data
- **Temporal coverage**: 2014-2022
- **Unit**: PPS/tons

Please refer to the technical annex for more information.

Figure 2.25 illustrates the development of GDP per unit of domestic material consumption in million PPS/DMC (purchasing power standards per domestic material consumption) between 2014 and 2022. The data compare the Italian and Croatian national averages, the averages of their respective border regions, and the overall border regional average with the European average.

Figure 2.25: Resource productivity



ESPON Co-funded by the European Union Interreg

Throughout the period, except for the year 2020, both the Italian and Croatian border regions in line with national and EU averages have improved resource productivity, with approximately 25% in the border region itself. This is exceeding other border regions which sit at 22%, however trails the EU average sitting at 33%. Italy exhibits consistently higher levels of resource productivity than Croatia,

both at the national and cross-border levels. The Italian national average remains the highest, significantly exceeding the Italian border region average, though both are above the European average. In contrast, Croatia records lower values, with both its national and border region averages below those of Italy and the EU. The Croatian border region furthermore shows the lowest resource productivity levels among all observed entities and remains consistently below Croatia's national average.

The border regional average, representing the average of both countries' border regions, lies between the Italian and Croatian border values. However, notable disparities exist within the border area itself. Despite this, the cross-border region still performs above the EU average.

2.3.4.2 Generation of waste per GDP

Indicator description

The indicator shows the regional distribution of waste creation in relation to the GDP development. Comparing waste generated to GDP reflects the waste intensity of the economy and provides a measure of "eco-efficiency". Observation of its change from year to year permits to assess whether the economy is able to produce more wealth while at same time generating less waste.

- **Source/method of retrieval**: Processing of Eurostat and ESPON CIRCTER Update data
- **Temporal coverage**: 2014-2022
- **Unit**: Tons/PPS

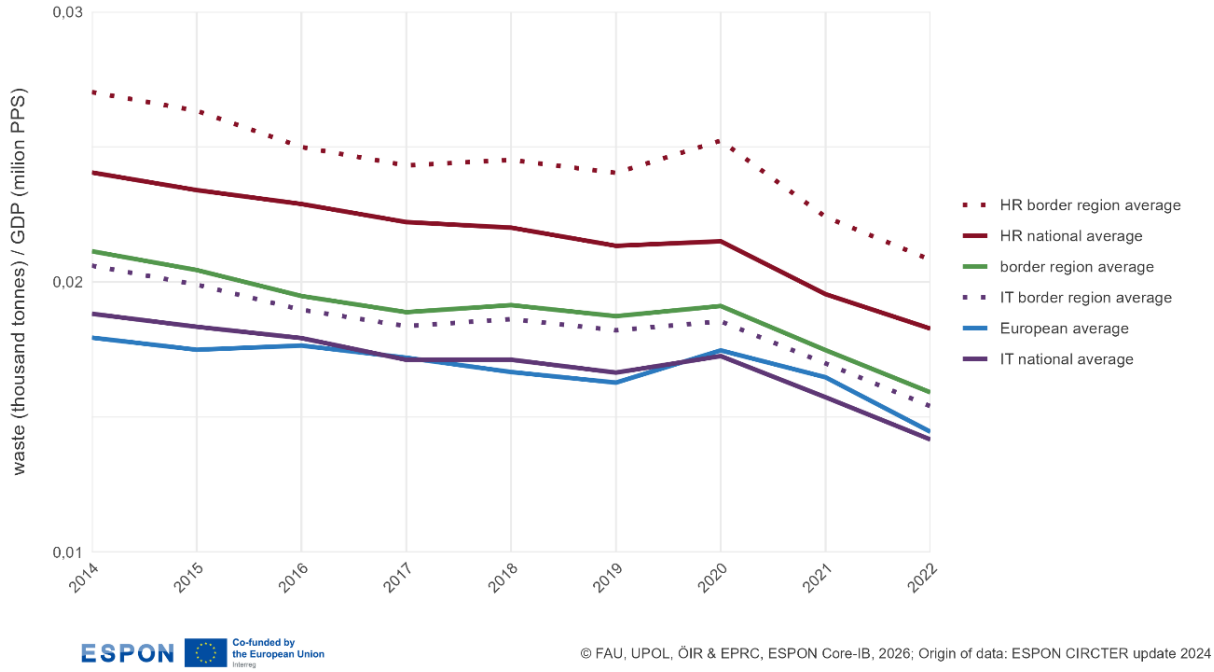
Please refer to the technical annex for more information.

Figure 2.26 illustrates the trend in waste generation relative to economic output, measured in tonnes of waste per million PPS (Purchasing Power Standard) of GDP from 2014 to 2022 in Italy, Croatia and their Interreg border region. The analysed Interreg border area in line with the national average of both involved countries show a general reduction in waste intensity per GDP over time, although at different levels and with some fluctuations.

Croatia's national and border region average is consistently higher than Italy's, with the average of the border region significantly exceeding the national average. A similar trend appears in Italy, where the national figures are consistently lower than the average of the border region. However, the difference between the national and the border region is smaller than in Croatia.

Compared to the European average, both the national and border region values for Croatia are considerably higher. Italy's border region average is also above the European average, while its national average remains close to the EU level. Overall, the regions in the programme area develop roughly in line with the EU trajectory and are on a generally positive downward trend.

Figure 2.26: Waste generation per GDP



ESPON Co-funded by the European Union

2.3.5 Key messages on the green dimension

The Italy-Croatia cross-border region is characterised by national designated protected areas, partially concentrated in the northern part of the Interreg region. The largest contiguous protected area is part of the Natura 2000 network and is located in the Croatian regions of the programme area. No direct cross-border protected areas exist.

Air quality indicators show marked asymmetries. Pollution levels are lower on the Croatian side, partly due to its reliance on hydropower and limited industrialisation. In contrast, the Italian north-east (Veneto, Emilia-Romagna, and Friuli–Venezia Giulia) is heavily industrialised and records the highest PM2.5 concentrations (in µg/m³) in the region.

In Croatia, coastal waters have generally high quality, with inland rivers presenting in few cases poor quality. In Italy, water quality is more mixed: it can be observed that water quality improves further inland, while water bodies close to coastal areas often present polluted water. Coastal waters themselves have generally good to high quality. In terms of energy use, hydropower is the main renewable source across the cross-border region. Fossil fuel plants are concentrated in Italy, whereas Croatia relies almost entirely on hydropower, aside from a single coal-fired plant.

The cross-border region features an extensive high-voltage transmission infrastructure. Both countries rely on one extra high-voltage line and one high-voltage line running northwest–southeast along the coast. There is currently no direct electricity interconnection between Italy and Croatia, but links exist via Slovenia in the north (one extra high-voltage and one high-voltage line) and via Montenegro in the south (an undersea extra high-voltage cable).

Exposure to natural hazards is significant across the programme area, though particularly pronounced on the Italian side. Landslide risk is very high in the Alpine and Apennine mountain ranges, while seismic activity affects much of the Adriatic basin, including the Croatian coast. Droughts are increasingly frequent in southern Italy, especially in Puglia, and also affect parts of the Croatian coastal and island areas, while flood risks are significant along the northern Adriatic coast and in the Po River delta.

Environmental resource use also shows cross-border disparities. The Italian side demonstrates higher resource productivity, well above the EU average, while Croatian border regions performance is lower than the European average. Waste generation per unit of GDP follows a stable downward trend on both sides, though values remain consistently higher in Croatia.

2.4 Socio-economic dimension

The socio-economic dimension examines patterns of social integration, tourism, and access to public services in the border region. It identifies how socio-cultural links, visitor flows and essential services influence development in the cross-border area. By examining interpersonal interactions via social media, language similarities, tourism intensity, and the accessibility of facilities such as secondary schools, grocery shops, hospitals, doctors, pharmacies and cinemas this dimension highlights both functional integration and potential socio-spatial differences.

2.4.1 Social integration

This sub-dimension evaluates the level of social integration in the border region by identifying areas with low or high cross-border interactions. It analyses cross-border connectivity in social media and language similarities across and along national borders to evaluate the potential for cultural and social integration.

2.4.1.1 Cross-border connectivity in social media

Indicator description

The indicator refers to the existing connections between users of META social media (in particular Facebook) across the border. It aims at giving an overview of the degree of personal connectivity between inhabitants of the border area. Even though not all these internet connections will relate to real communication exchanges but sometimes just “following” content from other users, they give an overview of interpersonal and cultural knowledge of the social media landscape from across the border.

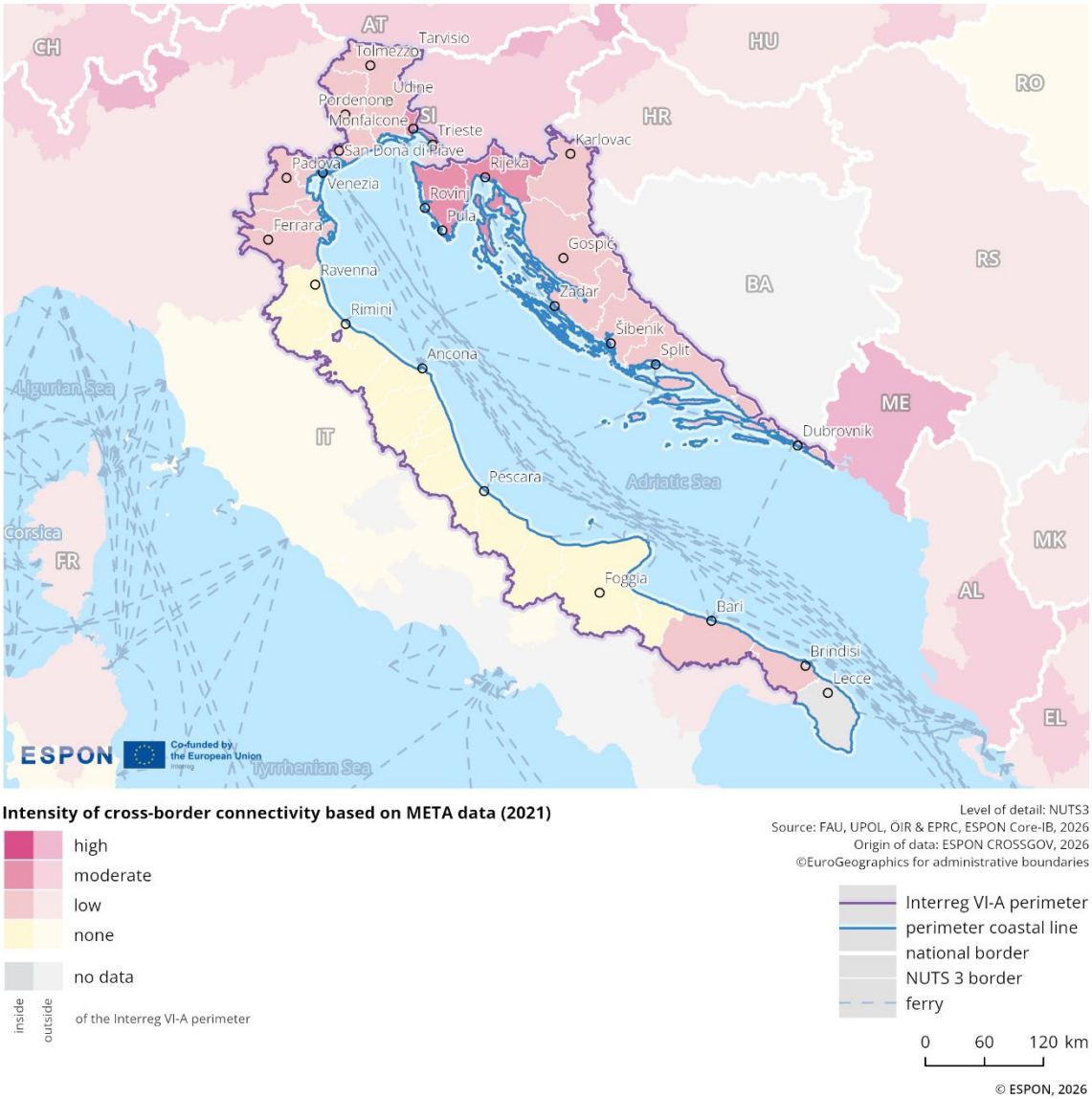
- **Source/method of retrieval**: Processing Facebook data on existing connections across the border (data for Good Meta)
- **Temporal coverage**: 2021
- **Unit**: n/a

Please refer to the technical annex for more information.

Figure 2.27 illustrates the spatial distribution of cross-border connectivity based on Facebook information in the border area. The different shades of pink indicate varying intensities of connectivity, ranging from low to high, with darker tones representing stronger intensity of cross-border connectivity in social media.

The intensity of cross-border connectivity among residents of this border region is rather heterogeneous. Moderate cross-border connectivity is observed around the Italian city of Trieste and the Croatian cities of Pula and Rijeka, which are geographically closest to each other. In the remaining Croatian part of the programme area, cross-border connectivity is low (including cities such as Karlovac, Šibenik, Split, and Dubrovnik). In the rest of the Italian part of the region, the situation is more heterogeneous: in the northern areas (around Ferrara, Padova, Venezia, Udine) and the southern areas (around Bari and Brindisi), cross-border connectivity is low, whereas in the part between Ravenna and Foggia no cross-border connectivity is recorded.

Figure 2.27: Cross-border connectivity in social media



2.4.1.2 Language similarities along national borders

Indicator description

The indicator specifies whether the language is the same across the border, whether the respective national languages have commonalities, whether while different, there are local linguistic commonalities, and whether the language is different.

- **Source/method of retrieval**: ESPON cross-border public services (CPS) 2.0 database along border segments
- **Temporal coverage**: 2022
- **Unit**: n/a

Please refer to the technical annex for more information.

2 different languages characterise the border region, with no similarities and no widespread knowledge of the neighbouring regions language recorded. Nevertheless, minority communities of Italians are officially recognised in the Istria County and present in some parts of Dalmatia County. Bilingualism is widespread among ethnically Italian Croatians. Conversely, Croatian minority communities are also present in parts of Italy, where Croatian linguistic and cultural traditions have been preserved.

2.4.2 Tourism

This sub-dimension identifies key tourism hotspots in the border region to highlight tourism dynamics. It analyses the number of nights spent in tourist accommodation establishments in order to evaluate the attractiveness of, and developments in, the tourism sector. Comparisons with the respective countries and the EU average provide context for understanding the region's dynamics.

2.4.2.1 Nights spent at tourist accommodation establishments

Indicator description

The indicator shows the number of nights a guest or tourist actually spends in a tourist accommodation establishment or non-rented accommodation (overnight stays). This may reveal the tourism attractiveness of a region and shed light on the role of tourism in the local economy, i.e., tourists/guests staying overnight may spend more in the region than one-day visitors.

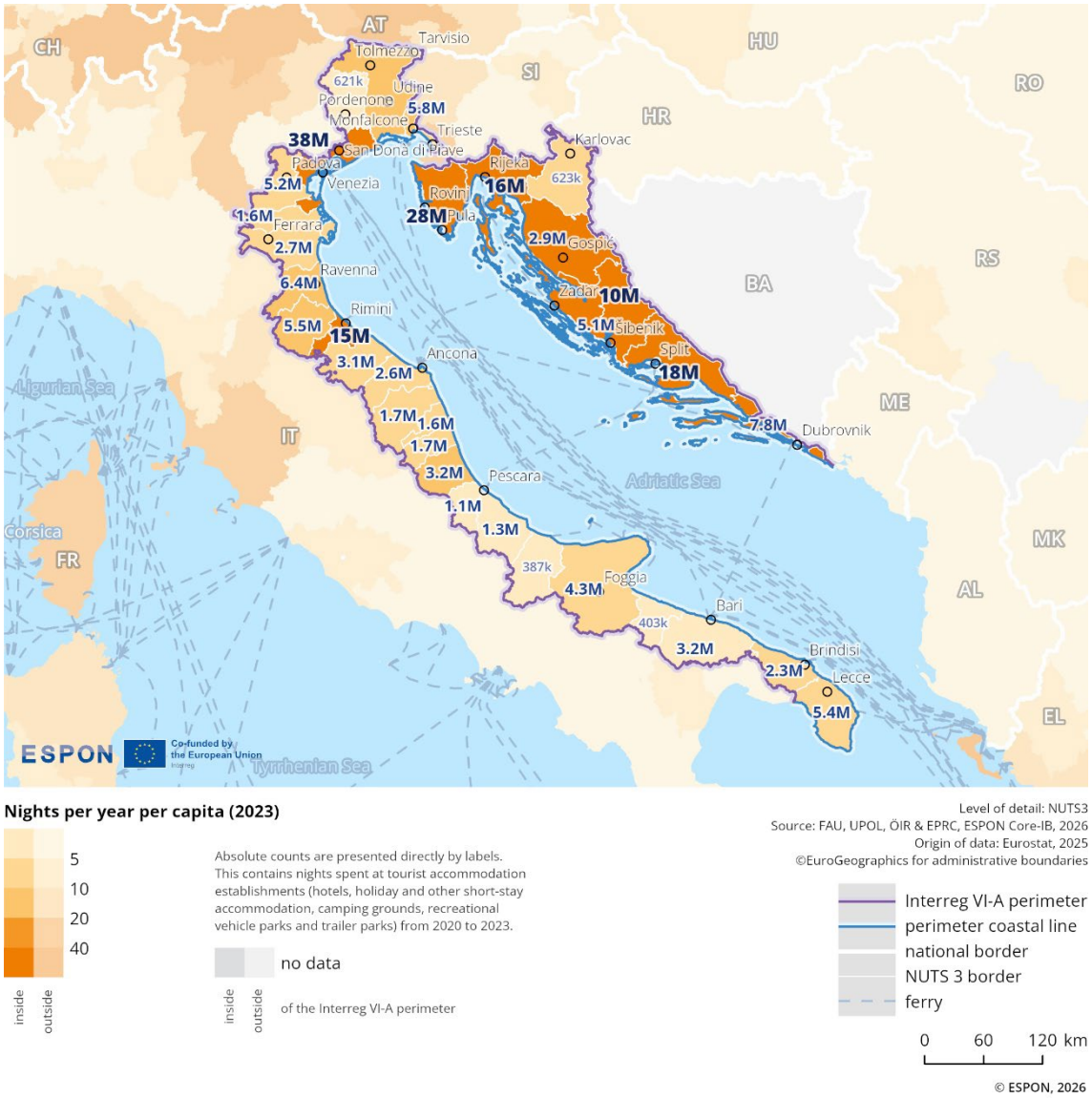
- **Source**: Eurostat
- **Temporal coverage**: 2020-2023
- **Unit**: Nights per capita

Please refer to the technical annex for more information.

The spatial distribution of overnight stays highlights the importance of key tourist destinations in border areas. Tourism contributes significantly to regional income, infrastructure development and employment, and thereby supports regional prosperity. At the same time, it affects environmental and living conditions, which may reduce local acceptance despite its economic benefits. This is in particular the case in places of overtourism, seasonal pressures, and increasing land-use conflicts.

Figure 2.28 shows the number of overnight stays per capita at tourist accommodation establishments in 2023. It includes hotels, holiday and other short-stay accommodation, as well as campsites, caravan and trailer parks. The map uses a colour gradient, with darker shades indicating a higher number of nights spent per capita in 2023. It also shows the cumulative number of overnight stays from 2020 to 2023.

Figure 2.28: Overnight stays in tourism



There is a particularly high intensity of overnight stays in the coastal NUTS3 regions of Italy and Croatia, where some popular UNESCO heritage sites are located, such as Venezia and its Lagoon (IT), the Early Christian Monuments of Ravenna (IT), Castel del Monte (IT), Plitvice Lakes National Park (HR), the Cathedral of St. James in Šibenik (HR) and the Old City of Dubrovnik (HR). In 2023, a particularly high intensity of overnight stays is evident on the Croatian side. Several NUTS3 regions exceed 40 nights per capita, including Istarska županija, Primorsko-goranska županija, Ličko-senjska županija, Zadarska županija, Šibensko-kninska županija, Splitsko-dalmatinska županija, and Dubrovačko-neretvanska županija[13]. In comparison, the Italian per capita figures are lower, with the exception of Venezia and Rimini.

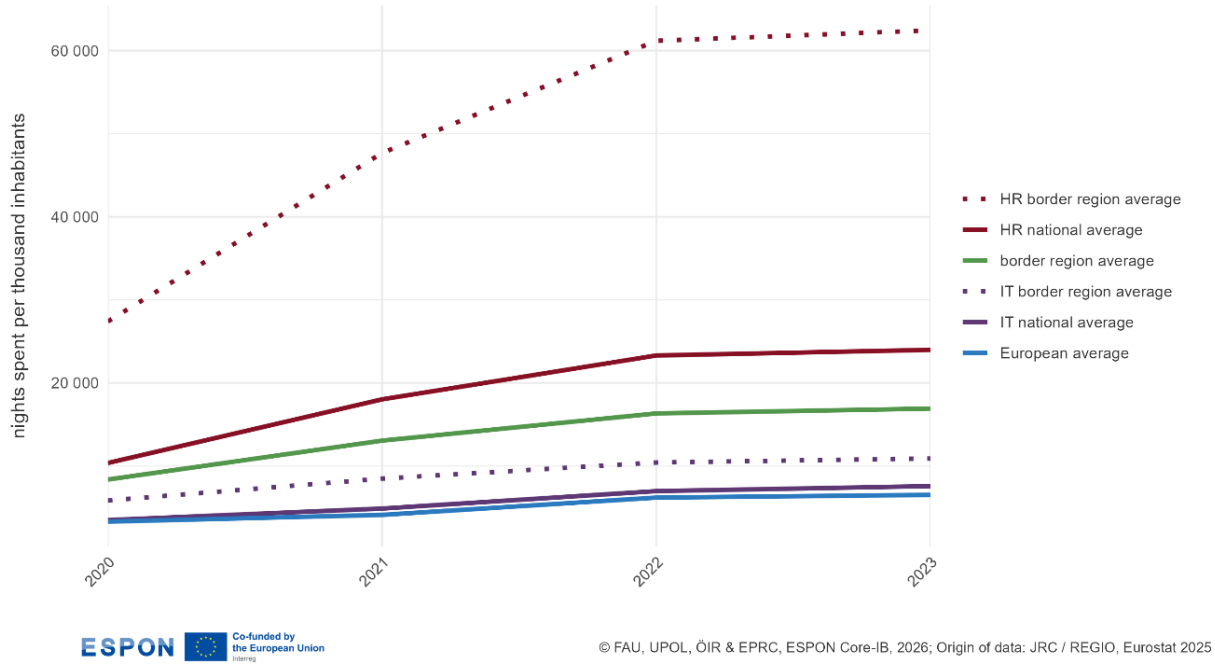
In terms of total overnight stays over the 3-year period, the leading tourism regions are located in Venezia (approx. 38 million), Istarska županija (approx. 28 million), Splitsko-dalmatinska županija (approx. 18 million), Primorsko-goranska županija (approx. 16 million), Rimini (approx. 15 million), Zadarska županija (approx. 10 million) and Dubrovačko-neretvanska županija (approx. 7.8 million).

[13] See Eurostat Statistical Atlas for NUTS3 (2021) regions: https://ec.europa.eu/statistical-atlas/viewer/?config=typologies.json&ch=NUTS&mids=BKGCNT,NUTS2021L3,CNTOVL&o=1,1,0.7&center=49.69576,14.3332,4&lcis=NUTS2021L3&

Figure 2.29 illustrates the development of nights spent at tourist establishments per thousand inhabitants from 2020 to 2023. Over the entire period, the average for the Italy-Croatia programme area is higher than the overall European average, which includes EU member states and the EFTA countries Iceland, Liechtenstein, Switzerland and Norway. In all 4 years, the border regional averages of both countries are higher than their respective national averages. Additionally, the regional average for the Croatian border area is significantly higher than that for the Italian throughout the given period.

Touristic patterns have a series of implications for spatial development on either side of the border. Transport infrastructure has to consider peak volumes and balancing recreating activities with socio-cultural as well as environmental heritage can be a challenge.

Figure 2.29: Overnight stays in tourism (comparison)



ESPON Co-funded by the European Union Interreg

2.4.3 Services of general interest

This sub-dimension looks at how accessible services of general interest (SGIs) are in the border region, identifying areas that are well-served and those that are more difficult to access. It analyses access to essential services such as secondary schools, grocery shops, hospitals, doctors, pharmacies and cinemas.

2.4.3.1 Accessibility to services of general interest

Indicator description

The indicator shows, for the below listed facilities and services, the average driving time to the nearest facility of a series of services of general interest.

- **Source/method of retrieval**: Processing and analysis of standardised travel-time accessibility to secondary schools, grocery shops, hospitals, doctors, pharmacies and cinemas available in the ESPON PROFECY Update (2022)
- **Temporal coverage**: 2021
- **Unit**: Minutes (in 2.5 x 2.5 km grid)

Please refer to the technical annex for more information.

Figures 2.30 to 2.35 visualise average car travel times to services of general interest within the programme area. The maps display accessibility to:

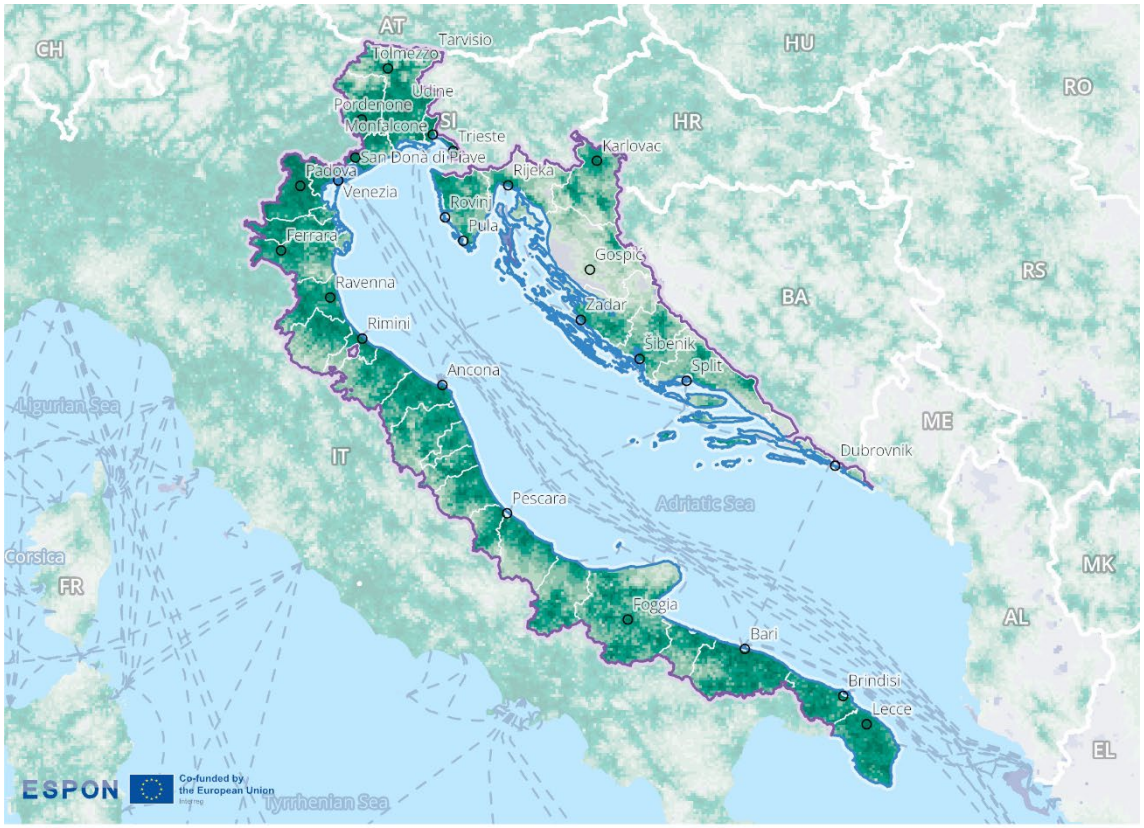
- Secondary schools (Figure 2.30)
- Grocery shops (Figure 2.31)
- Hospitals (Figure 2.32)
- Doctors (Figure 2.33)
- Pharmacies (Figure 2.34)
- Cinemas (Figure 2.35)

These indicators show how long, on average, it takes to reach the nearest facility by car. The data comes from the ESPON PROFECY Update project (2022) and is visualised based on a 2.5-kilometer grid.

In the Italy–Croatia cross-border area, essential services such as hospitals, doctors, pharmacies, schools, and grocery shops are mostly evenly distributed across most areas in Italy. In Croatia, accessibility is good in the northern and southern parts, while longer travel times are observed in the areas in between. This results in travel times of less than one hour in Italy and sometimes more in Croatia.

Travel times to hospitals, schools, and pharmacies appear to be somewhat longer in Croatia than in Italy. As a medical service, hospitals are mainly located in cities and more densely populated areas. This common challenge in Italian and Croatian border areas creates an urban–rural gradient, with shorter travel times in and near urban centres and longer travel times in rural or remote regions. The same applies to cinemas as cultural institutions.

Figure 2.30: Travel time to secondary schools



Car travel time to the nearest secondary school (2021)

5min
10min
15min
20min
30min
45min
1h
2h
3h
4h
6h
12h

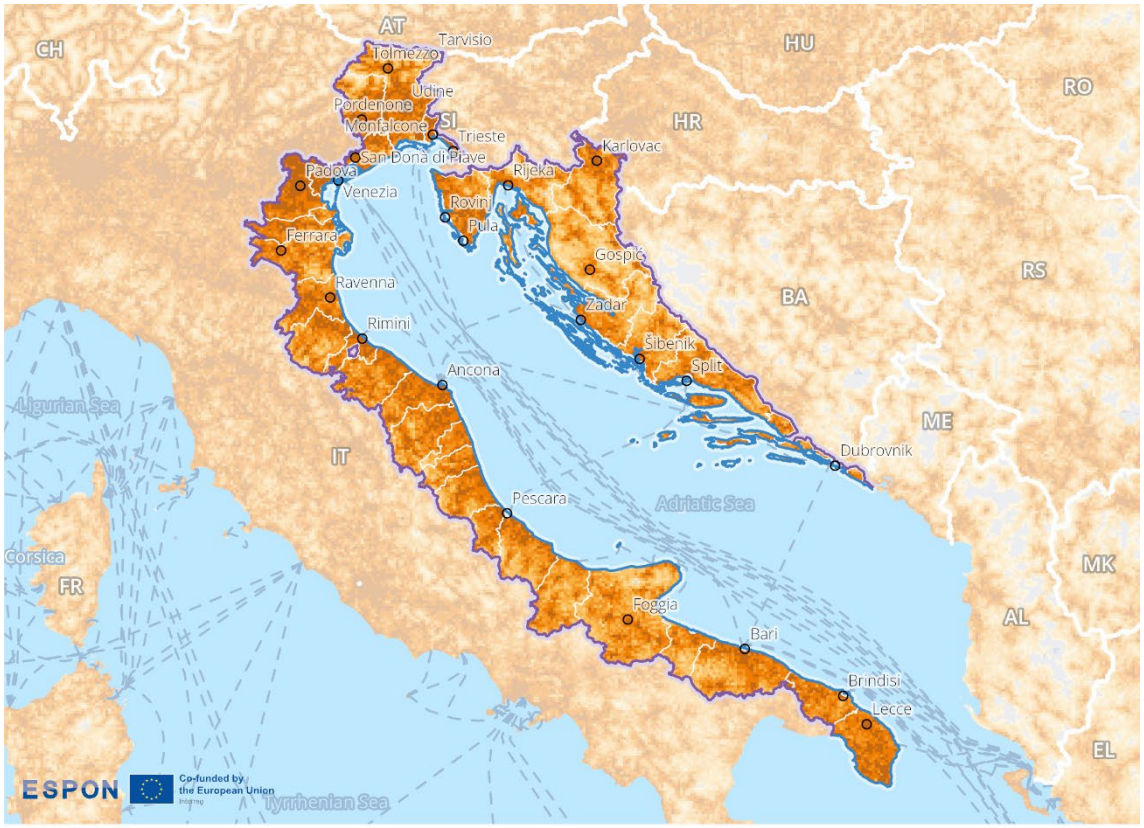
inside outside of the Interreg VI-A perimeter

Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
perimeter coastal line
national border
NUTS 3 border
ferry

0 60 120 km

Figure 2.31: Travel time to grocery shops



Car travel time to the nearest shop (2021)

5min
10min
15min
20min
30min
45min
1h
2h
3h
4h
6h
12h

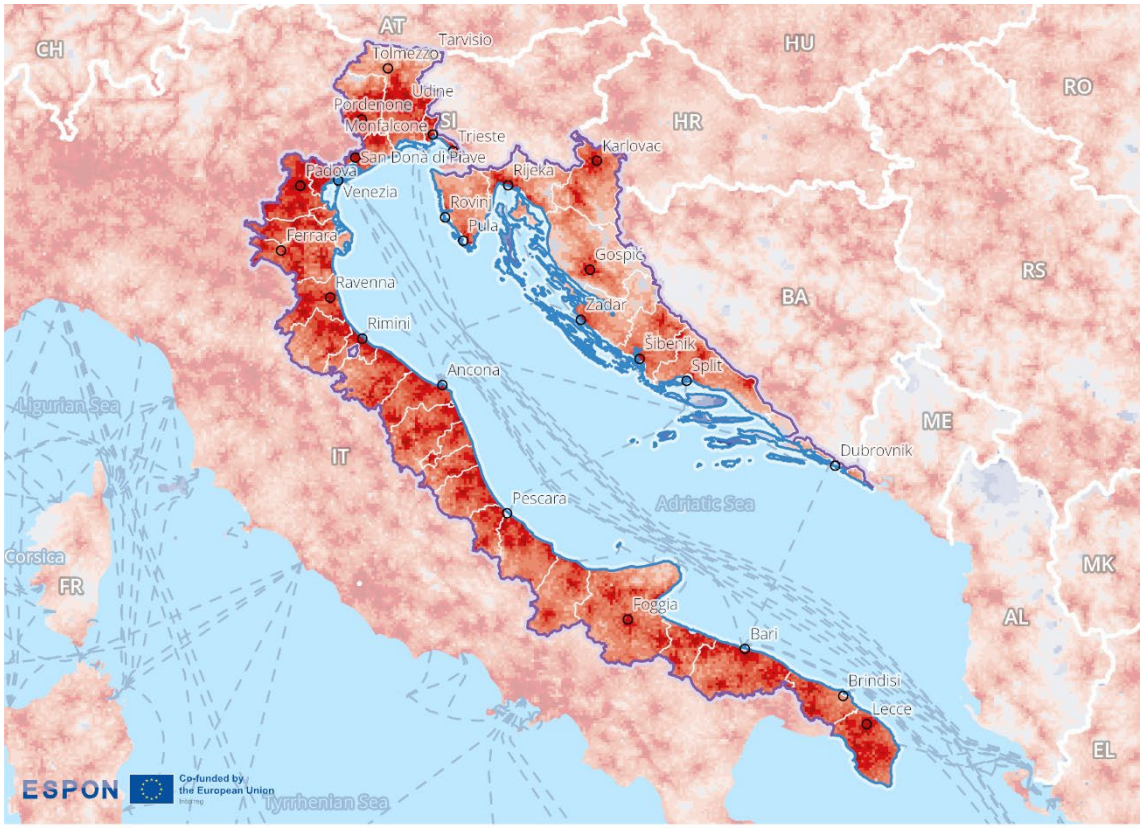
inside outside of the Interreg VI-A perimeter

Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
perimeter coastal line
national border
NUTS 3 border
ferry

0 60 120 km

Figure 2.32: Travel time to hospitals



Car travel time to the nearest hospital (2021)

5min
10min
15min
20min
30min
45min
1h
2h
3h
4h
6h
12h

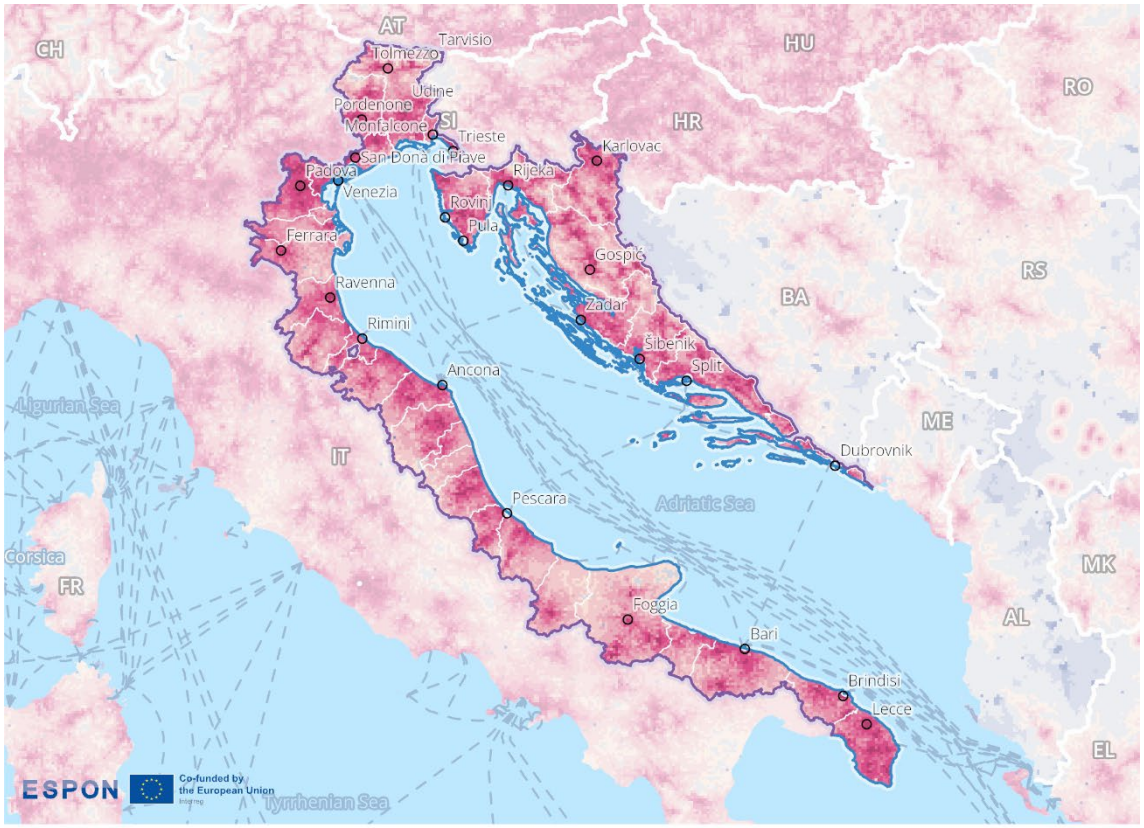
inside outside of the Interreg VI-A perimeter

Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
perimeter coastal line
national border
NUTS 3 border
ferry

0 60 120 km

Figure 2.33: Travel time to doctors



Car travel time to the nearest doctor (2021)

5min
10min
15min
20min
30min
45min
1h
2h
3h
4h
6h
12h

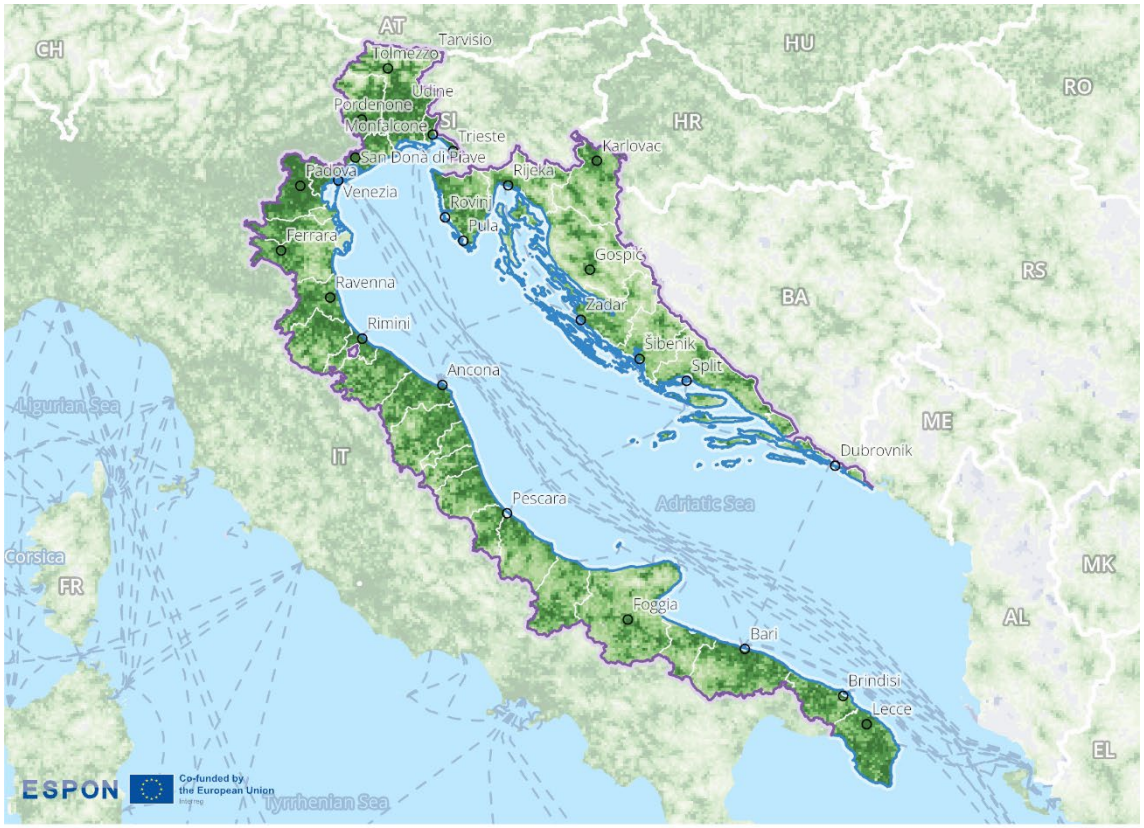
inside outside of the Interreg VI-A perimeter

Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
perimeter coastal line
national border
NUTS 3 border
ferry

0 60 120 km

Figure 2.34: Travel time to pharmacies



Car travel time to the nearest pharmacy (2021)

5min
10min
15min
20min
30min
45min
1h
2h
3h
4h
6h
12h

inside outside of the Interreg VI-A perimeter

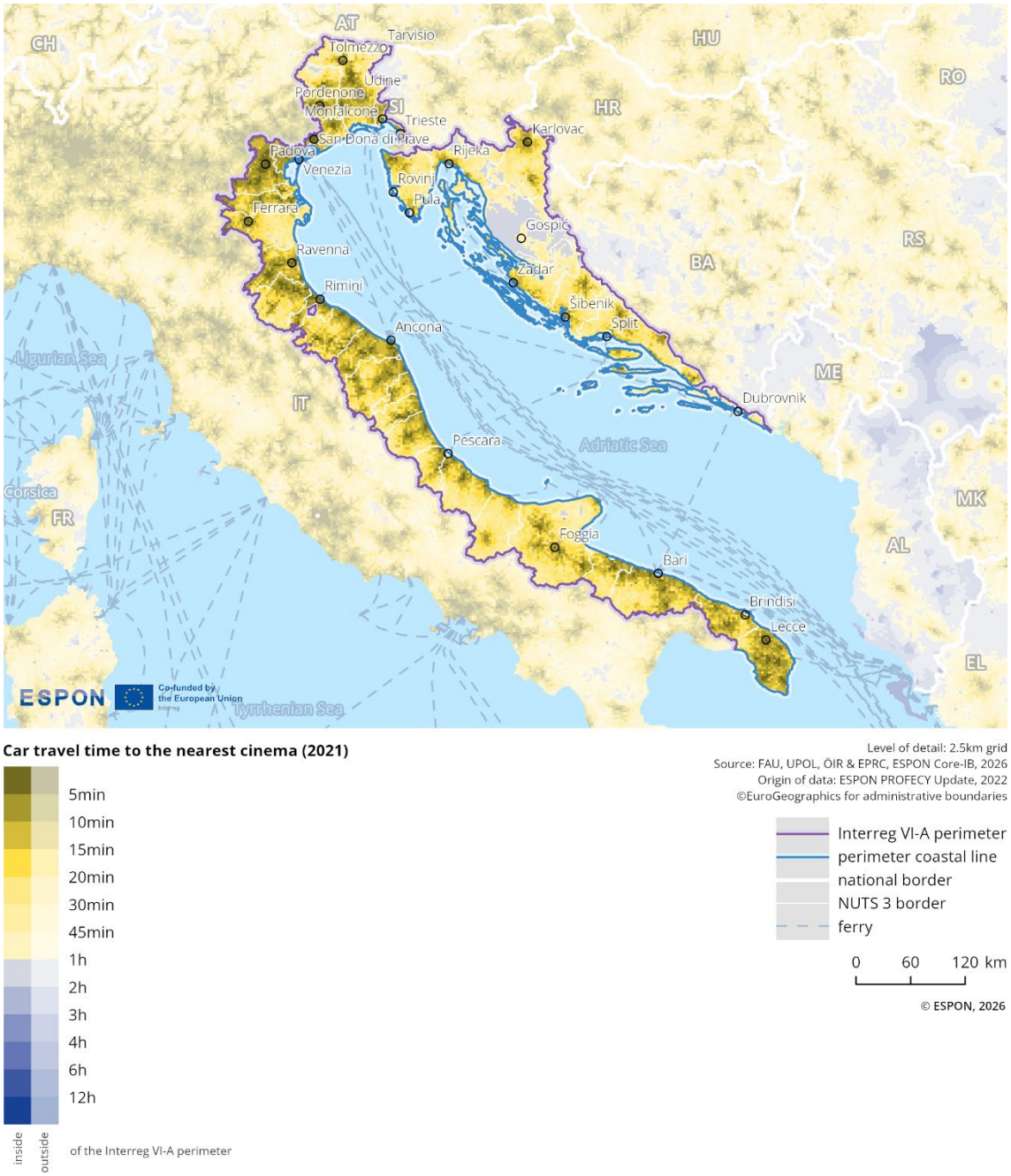
Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
perimeter coastal line
national border
NUTS 3 border
ferry

0 60 120 km

© ESPON, 2026

Figure 2.35: Travel time to cinemas



2.4.4 Key messages on the socio-economic dimension

The cross-border region shows asymmetries in social interaction, language, tourism, and access to services. Cross-border connectivity in social media differs along the territory and is mainly concentrated around the Italian city of Trieste and the Croatian cities of Pula and Rijeka, which are located in close proximity. Although Italian and Croatian are linguistically unrelated, Italian minority communities are officially recognised in the Istria County and are also present in some parts of Dalmatia County. Bilingualism outside these minority areas is uneven and varies by geography and age groups, but knowledge of Italian remains widespread among ethnically Italian Croatians. Croatian minorities are also present in some Italian regions.

Tourism is a shared economic asset but shows distinct regional contrasts. On the Croatian side, the number of overnights stays per capita is very high across the region, with the exception of the inland

area of Karlovac. In Italy, overnight stays per capita are generally lower, except for the major tourism hubs of Venezia and Rimini.

Between 2020 and 2023, the average number of nights spent in tourist establishments per thousand inhabitants in the Interreg programme area exceed the overall European average, with Croatian border regions recording significantly higher values. Intensive coastal tourism represents both a challenge and an opportunity, particularly for the development of transport connections, integrated tourism packages, and more sustainable coastal models.

Essential services such as hospitals, schools, pharmacies, and shops are generally well distributed on the Italian side, with only limited accessibility gaps in areas closed to the Alps and Apennines. In Croatia, accessibility is good in the northern and southern parts, but travel times are longer in the areas in between. Across the border region, hospitals are concentrated in cities and more densely populated areas, creating an urban–rural divide with shorter travel times in urban centres and longer ones in rural or remote regions.

2.5 Border security and safety

This dimension shows the security and safety conditions in border regions. It analyses the number of days on which border control is temporarily reintroduced at internal borders, using this as an indicator of security concerns and restrictions on cross-border movement.

2.5.1 Temporary reintroduction of border controls at internal borders

Indicator description

The indicator shows the number of days of temporary reintroduction of border control at internal borders, including the official reasons behind. The reintroduction of border control at the internal borders must be applied as a last resort measure, in exceptional situations, and must respect the principle of proportionality. The scope and duration of reintroduced border control should be restricted to the bare minimum needed to respond to the threat in question.

- **Source/method of retrieval**: Processing and analysis data of European Commission information pursuant to Article 25 and 28 et seq. of the Schengen Borders Code
- **Temporal coverage**: 2006-2025 (cut-off: 08 May 2025, in order to allow data treatment before work package completion)
- **Unit**: Days per year

Please refer to the technical annex for more information.

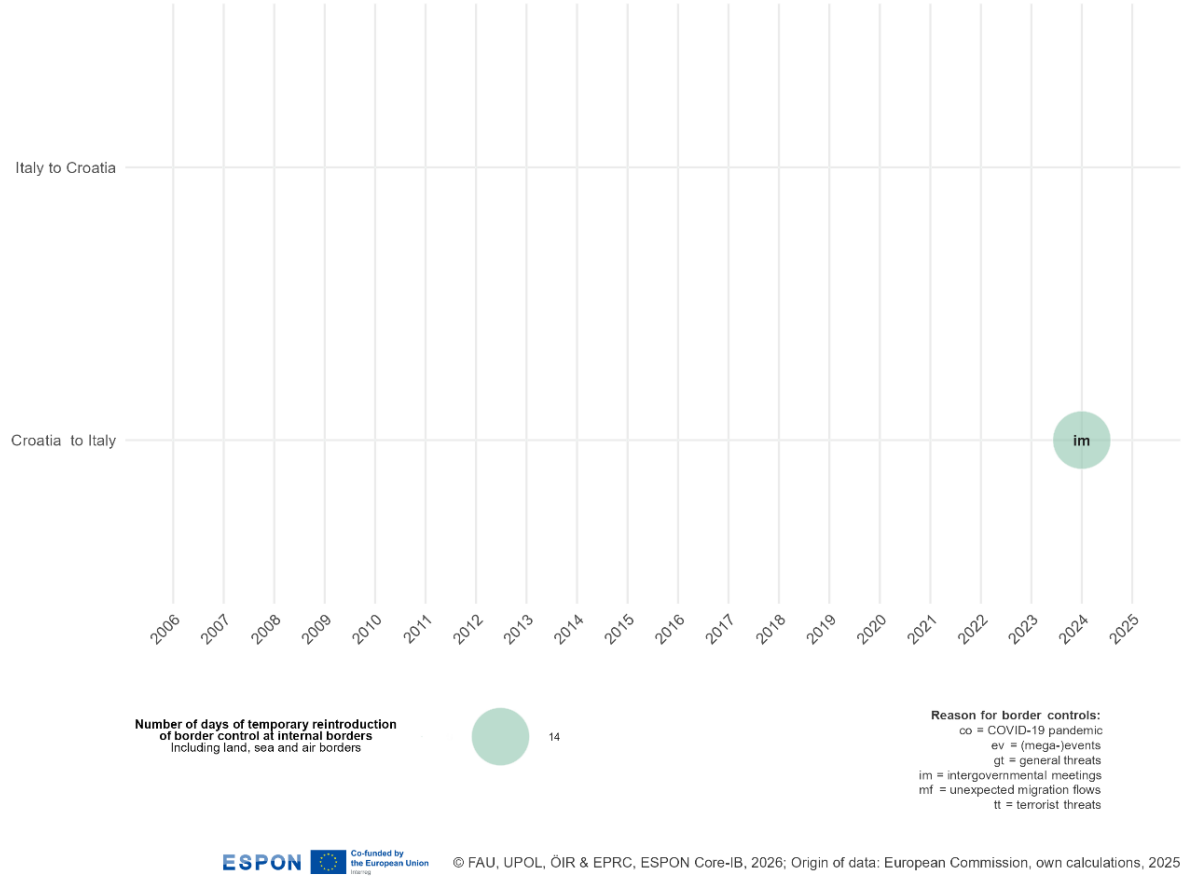
Figure 2.36 illustrates the number of days during which temporary border controls were reintroduced at internal borders within the Schengen Area. Each bubble represents a specific year with bubble sizes indicating the number of days the respective border was under control. The categories of reasons for reintroducing controls include:

- co – COVID-19 pandemic
- ev – (Mega-)events
- gt – General threats
- im – Intergovernmental meetings
- mf – Unexpected migration flows
- tt – Terrorist threats

The data spans from 2006 to 2025 (cut-off: 08 May 2025) and is based on notifications from the European Commission information pursuant to Article 25 and 28 et seq. of the Schengen Borders Code. In line with Schengen rules, the reintroduction of controls is to be used only as a last resort, for exceptional circumstances, and with strict adherence to the principle of proportionality—both in duration and scope.

Since Italy had already been part of the Schengen Area by 2006, while Croatia joined in 2023, only the year between 2023 and 2025 have been considered.

Figure 2.36: Temporary reintroduction of border controls



The Italy-Croatia border area is characterised by a somewhat asymmetric pattern:

- Crossing the border from Italy to Croatia: Between 2023 and 2025, Croatia did not reintroduce any temporary border controls to Italy.
- Crossing the border from Croatia to Italy: Temporary border control occurred in 1 out of 20 years, driven by an intergovernmental meeting (G7 summit in 2024).

From a comparative perspective, Italy has implemented controls for more days than Croatia, indicating an unequal impact on cross-border movement in one direction.

These controls tend to have a tangible effect on the smooth functioning of cross-border flows, especially commuting and logistics, as they introduce delays and unpredictability.

2.5.2 Key messages on the border security dimension

The analysis of temporary reintroductions of border controls between Italy and Croatia must consider that Croatia only joined the Schengen area in 2023. Since then, Italy has reintroduce controls at all

internal borders (land, air, and sea) on the occasion of the G7 summit in Brindisi, alleging for risk of terrorism, violent activity, and threats to public order and security.

This maritime border does not appear to be particularly vulnerable to temporary closures. Nevertheless, if controls were to become more frequent or prolonged, they could negatively affect socio-economic interaction between the 2 regions, especially during the peak touristic season.

2.6 Governance dimension

This section covers the cross-border governance profile of the Italy-Croatia Interreg Programme area. Territories in the area have an increasingly strong level of territorial cooperation, particularly linked to the Northern Adriatic. The programme area is part of the Adriatic Euroregion (now Adriatic Ionian Euroregion) since 2006 and has been involved in territorial cooperation even before Croatia joined the EU. Cooperation and links have further intensified linked to Croatia's accession to the Schengen Area and the Eurozone on January 1st 2023. The area is also covered by Macro-Regional Strategies, in particular the Adriatic and Ionian (EUSAIR).

2.6.1 Cross-border cooperation

This sub-dimension identifies the extent of cross-border cooperation in the border region. It illustrates areas of high cooperation intensity and identifies functional links in governance structures across borders. It also identifies areas with high awareness of obstacles and the willingness and support services to overcome them, as well as areas where Interreg cooperation intensity is already strong.

2.6.1.1 Cross-border governance structures

Indicator description

The indicator shows active institutionalised cooperation that act as cross-border entities. It includes cooperation formats such as Eurocities, Euroregions, EGTC, cross-border associations, cross-border councils, etc.

- **Source/method of retrieval**: Localisation and categorising of cross-border cooperation formats (Eurocities, Euroregions, EGTC, cross-border associations, cross-border councils, conferences, working communities), based on desktop research.
- **Temporal coverage**: Status as of October 2025
- **Unit**: n/a

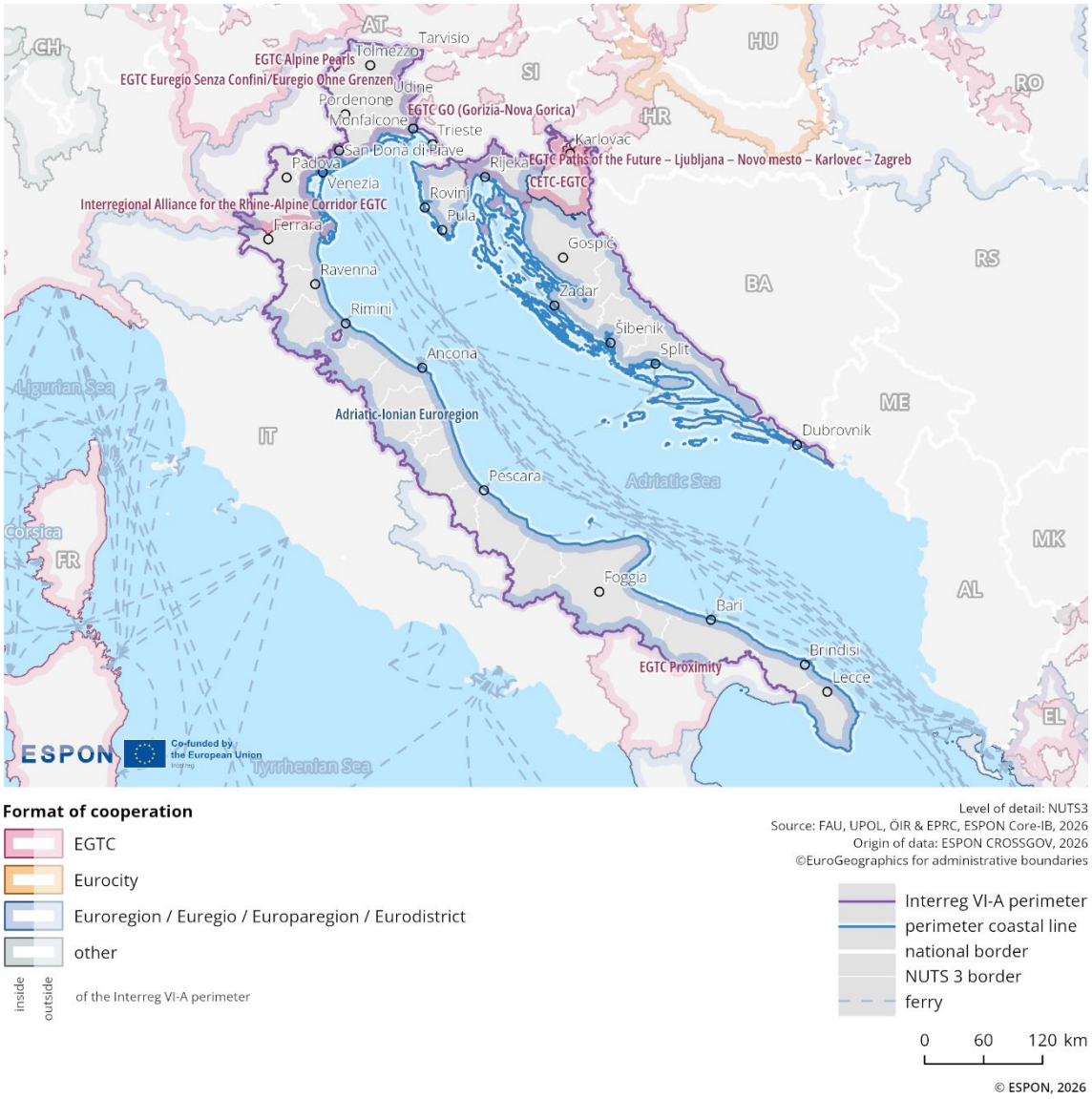
Please refer to the technical annex for more information.

Figure 2.37 shows the different types of institutionalised cooperation. These governance structures either function as cross-border entities or bring together stakeholders from the cross-border region around shared topics. The governance structures covered include Eurocities, Euroregions, European Groupings of Territorial Cooperation (EGTCs), cross-border associations and councils. Project-based cooperation is not included.

The coloured markings on the map indicate different types of institutionalisation: EGTCs are shown in red, Eurocities in yellow, Euroregions/Euregios/Europaregions/Eurodistricts in blue, and other formats in grey.

The multi-level governance structure in this programme area shows broad spatial coverage along the borders. Overall, the region exhibits a high level of institutionalised cooperation along its national borders, with a relatively large perimeter at the Euroregional level (Adriatic-Ionian Euroregion).

Figure 2.37: Cross-border governance structures



2.6.1.2 Cross-border public services

Indicator description

The indicator shows different services specialised on cross-border challenges and development potential, including their domain of operation. As a specific form of services of general interest, cross-border public services (CPS) address joint problems or development potentials of border regions that are located on different sides of one or more national borders.

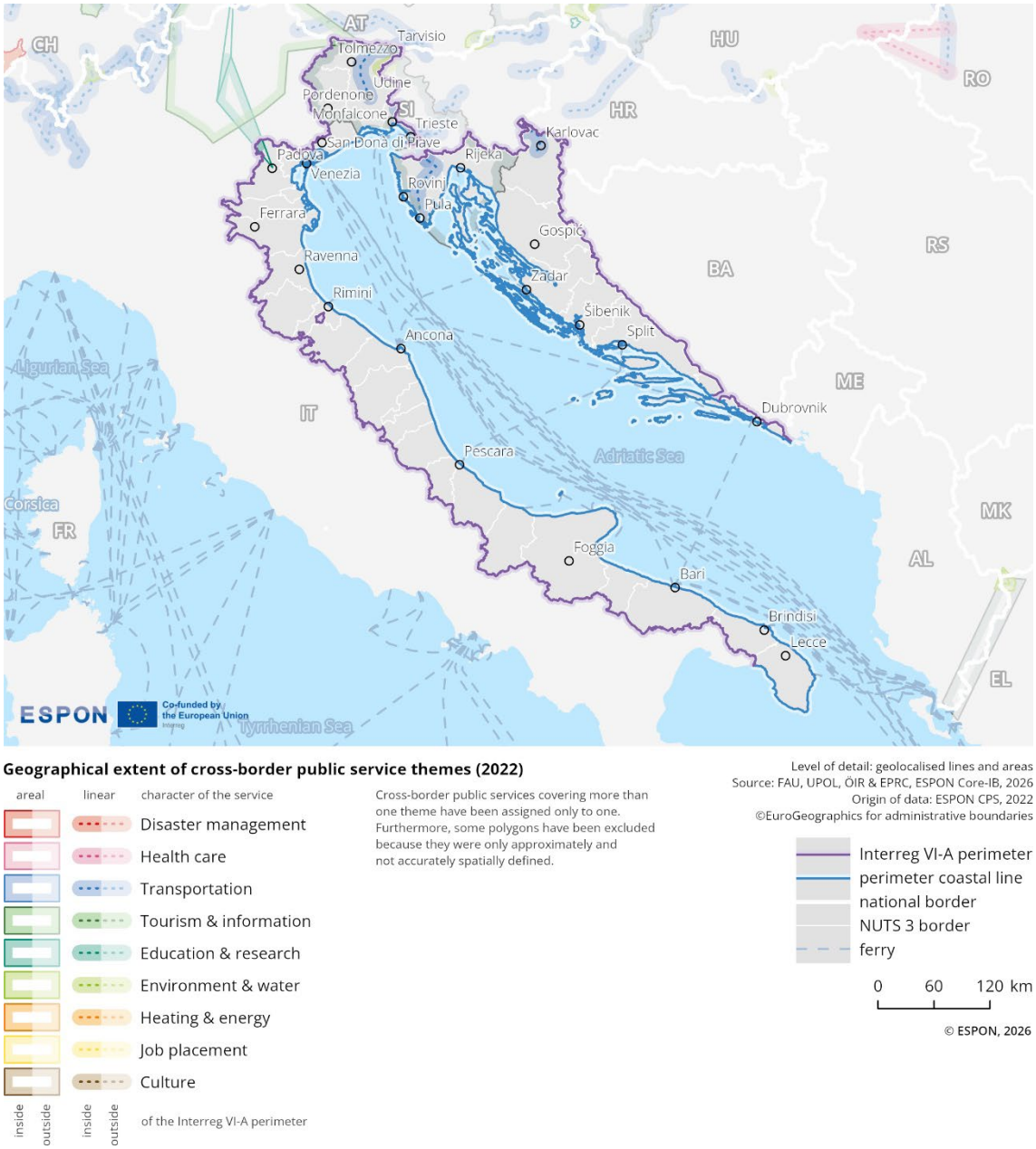
- **Source**: ESPON cross-border public services (CPS) 2.0 database
- **Temporal coverage**: 2022
- **Unit**: n/a

Please refer to the technical annex for more information.

Figure 2.38 depicts the geographical extent of cross-border public services in the Italy–Croatia Interreg region in 2022. Different thematic areas are represented by distinct symbols and colours, indicating services such as disaster management[14], health care, transportation, education, environment, energy, job placement, and culture. The visualisation highlights where these services operate across the national boundary.

Cross-border public services in the Italy–Croatia Interreg region are concentrated in the northern part of the programme area, with only few transport links. The most relevant is the transport link between the cities of Trieste and Pula. Overall, the range of services available in this Interreg area is rather limited.

Figure 2.38: Cross-border public services



Geographical extent of cross-border public service themes (2022)

areal linear character of the service

- Disaster management
- Health care
- Transportation
- Tourism & information
- Education & research
- Environment & water
- Heating & energy
- Job placement
- Culture

inside outside inside outside of the Interreg VI-A perimeter

Cross-border public services covering more than one theme have been assigned only to one. Furthermore, some polygons have been excluded because they were only approximately and not accurately spatially defined.

Level of detail: geolocalised lines and areas
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON CPS, 2022
©EuroGeographics for administrative boundaries

- Interreg VI-A perimeter
- perimeter coastal line
- national border
- NUTS 3 border
- ferry

0 60 120 km

[14] For more information on cross-border disaster and risk management between Italy and Croatia see: European Commission: Directorate-General for Regional and Urban Policy, Technopolis Group, CMCC, Nordregio, *Strengthening the Resilience of EU Border Regions – Mapping Risks & Crisis Management Tools and Identifying Gaps*, 2024, https://data.europa.eu/doi/10.2776/832103

2.6.1.3 Perceived cross-border obstacles in b-solutions

Indicator description

The indicator shows cases of legal or administrative obstacles selected in the framework of the b-solutions initiative. This indicator lists the number, location and nature of suggested solution of cases in the b-solutions initiative, including the topic and parties involved.

- **Source/method of retrieval**: Processing and analysis of the b-solutions initiative data
- **Temporal coverage**: 2018-2025 (first quarter)
- **Unit**: n/a

Please refer to the technical annex for more information.

The b-solutions initiative is a European Union project that supports the resolution of legal, operational and administrative cross-border obstacles. It offers funding for pilot actions and legal expert advice in border regions. A high level of cross-border integration often reveals strong barriers of cross-border functioning. In order to exploit the cross-border potentials, these obstacles have to be overcome or at least addressed. Both the number of reported obstacles and the general interest in solutions serve as important indicators of cross-border interaction.

As part of the ESPON CROSSGOV project, all b-solutions initiatives were analysed to deepen the understanding of the thematic focus of the perceived cross-border obstacles across different border regions and the suggested solution. For the case of the Italy-Croatia programme area, no participation in b-solutions projects has been reported yet.

2.6.1.4 Institutionalised advice centres for cross-border issues

Indicator description

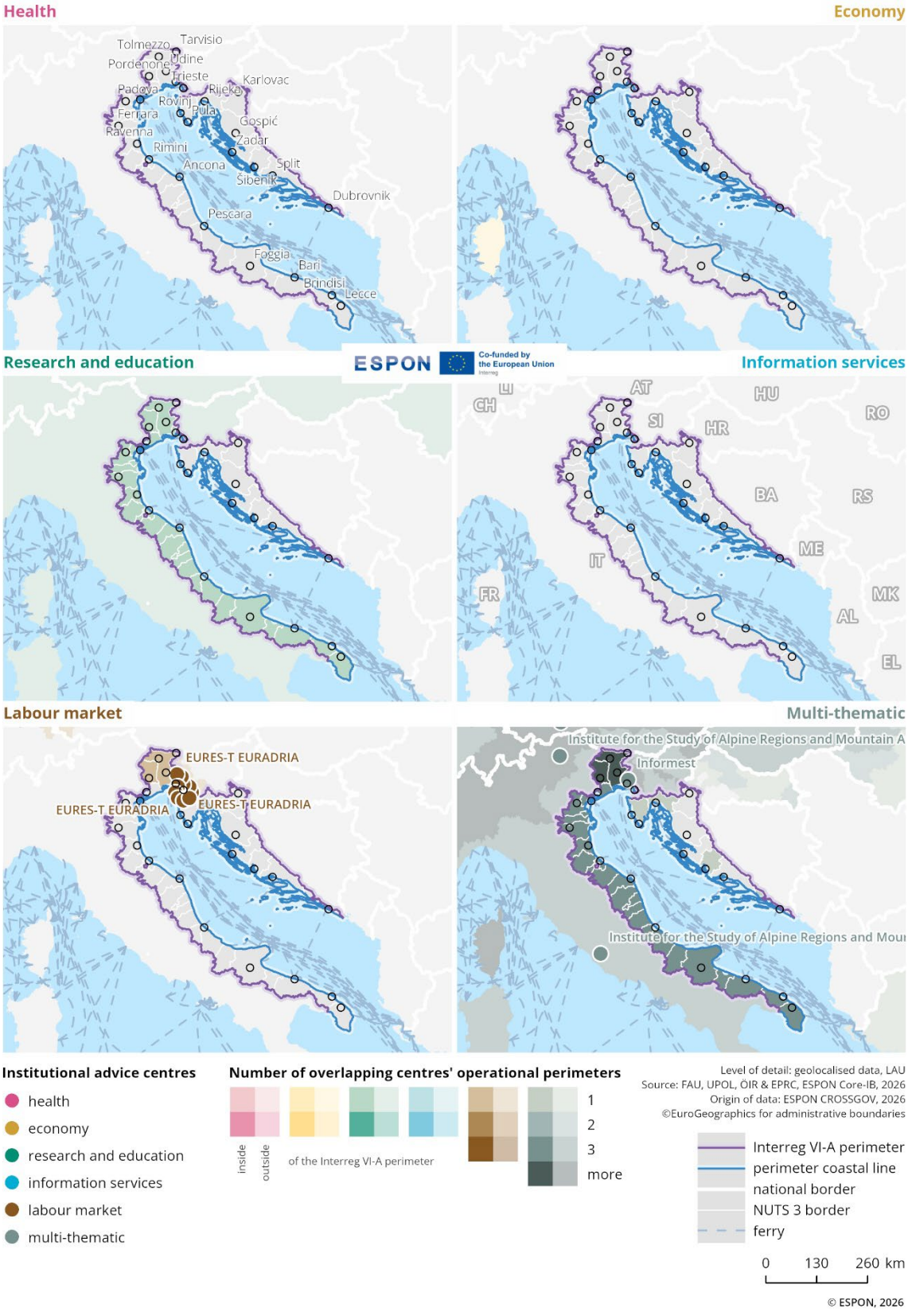
The indicator shows where institutionalised advice centres on cross-border issues are located, including their thematic focus and geographical perimeter.

- **Source/method of retrieval**: Localisation and thematic focus of advice centres for cross-border issues are identified via desktop research.
- **Temporal coverage**: Status as of February 2025
- **Unit**: n/a

Please refer to the technical annex for more information.

The map in Figure 2.39 shows the locations and types of institutionalised advice centres, along with their operational domains, in the cross-border Interreg region between Croatia and Italy. These centres throughout Europe provide support in various fields such as health, economy, research & education, information services, the labour market, and multi-thematic issues. The operational domains of these centres are also indicated by coloured shading on the map. The more intense the colour, the stronger the influence of that specific domain in the corresponding area.

Figure 2.39: Institutionalised cross-border advice centres



Institutionalised advice centres are concentrated only in the northern part of the Interreg region. Several labour market institutionalised advice centres, all part of EURES-T EURADRIA, are located there.

Centres with multi-thematic, as well as research and education operational domains, are represented in the Italian part of the Interreg area. In the Croatian part of the Interreg region, there are almost no operational domains shown on the map, only some multi-thematic operational domains around the 2 cities of Pula and Šibenik. Additionally, there are also some labour market operational domains in the northern Italian part of the Interreg region.

2.6.2 Outline of Interreg activities

The following section outlines the key Interreg activities in the 2021-2027 programming period. The aspects included concern the development opportunities and challenges identified (see Table 2), the budget available and split of allocation (Figure 2.40), overlapping Interreg programmes and the key aspects drawn from the programme. Beyond its own Interreg activities, the Italy-Croatia Interreg Programme benefits from being part of MedLab[15] and the Mediterranean Multi-Programme Mechanism (MMM)[16], gaining access to shared knowledge, stronger cooperation, and more efficient use of EU resources in the Mediterranean region.

Table 2: Interreg VI (2021-2027): Opportunities and challenges

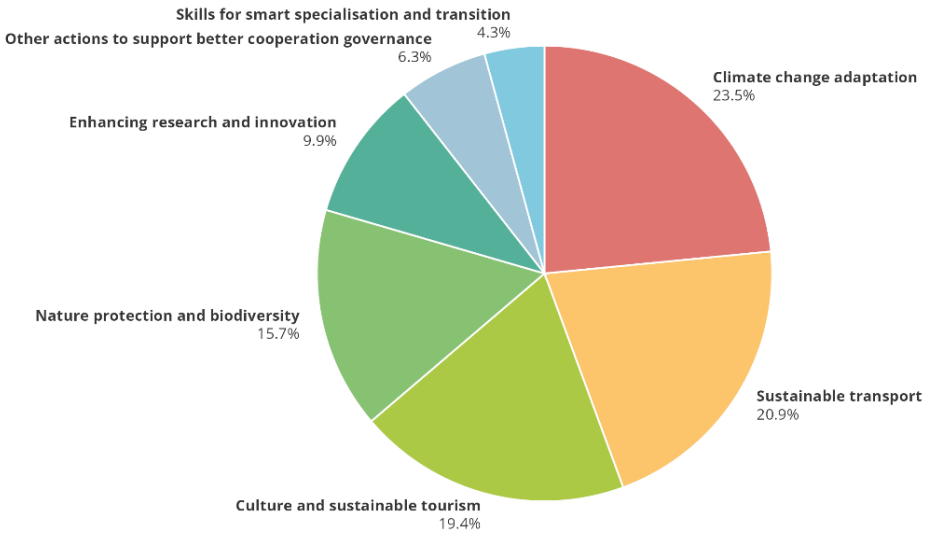
Topic	Key development opportunities and challenges identified for Interreg 2021-27
Economy	▪ Diversification of employment; ▪ Tourism and circular economy.
Environment	▪ Action on monitoring systems and data, protection and management of ecosystems and biodiversity, water management and energy efficiency.
Education	▪ Close gap between educational attainment and labour market; ▪ Integration of key groups into labour market and education.
Transport	▪ Digital connectivity and new solutions for sustainable transport;
Digitalisation	▪ Digitalisation opportunities across all sectors.
Coordination	▪ Value of inter programme coordination.

Total Budget: EUR 222.724.299,00

[15] MedLab: https://www.interact.eu/synergies-and-cooperation/geographic/medlab-1

[16] Mediterranean Multi-Programme Mechanism (MMM): https://interreg-euro-med.eu/en/mediterranean-multi-programme-mechanism/

Figure 2.40: Split of Interreg allocation



ESPON Co-funded by the European Union

Table 3 shows the number of Interreg 2021-2027 cross-border and transnational programmes which share at least one NUTS3 region with the border area. Each programme has its own distinct rationale, value and territorial focus. However, for the purposes of, for example, planning and capitalisation activities it is potentially helpful for programmes and programme stakeholders to be aware of and connected to other Interreg programmes with which they share a direct territorial link.[17] The 4 Interreg C programmes Interreg ESPON, Interact, Interreg Europe and URBACT cover the whole EU territory and provide a range of joint services and initiatives.

Table 3: Shared geographies with other cross-border and transnational programmes

Interreg A (cross-border)	Interreg B (transnational)
3	6

Key aspects

- Prioritisation of green and sustainable development, in practice this has resulted in projects clustered around the following themes, tourism, cultural heritage and coastal management and maritime issues over the 2014-20 and 2021-27 periods.
- Distinctive focus for Interreg cooperation on blue growth and sustainable tourism.
- Relatively balanced participation, with strong concentrations of project partners in Jadranska Hrvatska, Veneto and Emilia Romagna.

[17] It is noted that synergies and links with a wide range of other territorial cooperation and sectoral programmes and initiatives are also valuable and this is reflected in the wider analyses presented in this border profile, but not specifically covered in this table.

- Potential for synergies across programmes: the programme area includes areas from 3 other Interreg A programmes: Slovenia-Croatia, Greece-Italy, and Italy-Slovenia.
- Parts of the programme area also lie within the Central Europe, Alpine Space, Danube Region, Euro Mediterranean, NEXT Mediterranean Sea Basin and IPA ADRION Interreg B programme area.

2.6.2.1 Interreg cooperation

Indicator description

Based on the keep.eu database, this indicator illustrates the network density of Interreg V-A (2014–2020). It is derived from the geographical location of all partners within a project consortium and reflects the intensity of cooperation between them. For the analysis, project networks were visualised by drawing lines between the locations of partners within a consortium. These connections were subsequently aggregated and spatially abstracted by calculating line density using GIS software. Dark red areas indicate a high density of connections between project partners, while yellow areas represent a lower density of cooperation links.

An additional element in this section is the development of project partner numbers between Interreg IV-A (2007–2013) and Interreg V-A (2014–2020), based on data from the keep.eu database. The datasets were cleaned to remove duplicates, using the partner names as reported in keep.eu. For both programming periods, keep.eu indicates a high level of data completeness[18]. Nevertheless, this development should be interpreted as indicative, as variations in partner name reporting and general limitations regarding the representativeness of the dataset affect the robustness of the results.

- **Source/method of retrieval**: Processing and analysis of the keep.eu database
- **Temporal coverage**: 2007-2013 (Interreg IV-A), 2014-2020 (Interreg V-A)
- **Unit**: n/a

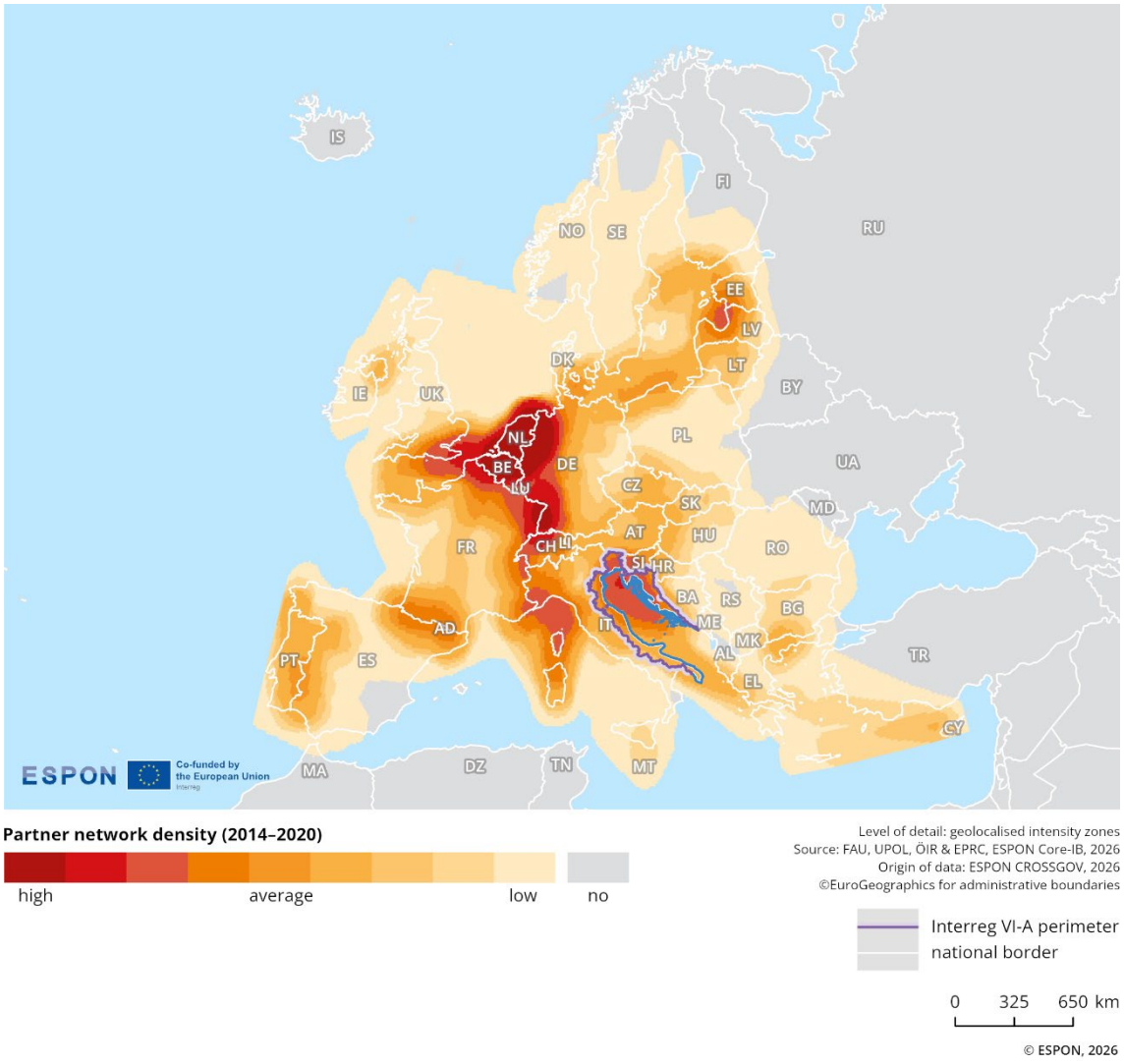
Please refer to the technical annex for more information.

Cooperation activities and networks are among the most meaningful types of information for delineating cross-border functional areas. As such, the indicator on cooperation through Interreg can help to identify networks among cross-border actors and highlight the density of cooperation in specific border segments.

Figure 2.41 shows the density of Interreg V-A (2014–2020) partner networks. The indicator includes the location of, and links between, Interreg project partners within a project consortium. From a European perspective, partner network density in the Italy-Croatia border area appears to be somewhat unevenly distributed. It is particularly high in northern parts of the programme area, while regions further south show more average levels of partner network density. Overall, the partner network density in this border area is higher than the European average. During the Interreg V-A period, the programme area had a partner network comprising 394 partners.

[18] see Keep.eu representativeness: Interreg, Interreg-IPA and ENI cross-border

Figure 2.41: Interreg V-A partner network density



2.6.3 Key messages on the governance dimension

The Italy-Croatia cross-border region shows a relatively high degree of institutionalised cross-border cooperation along the national borders, supported by a large perimeter at the Euroregional level through the Adriatic-Ionian Euroregion. Cross-border public services, however, remain very limited, are concentrated in the northern part of the area and concern only transport.

Interreg activities in the region cover a wide range of themes, including tourism, nature protection and biodiversity, climate change adaptation and sustainable transport. Based on information of the keep-eu database, the partner network density in Interreg cooperation is relatively uneven distributed: the density is particularly dense in the northern parts of the programme area, while regions further south show more average levels of partner network density. Overall, the partner network density in this border area is higher than the European average, with 394 partners involved during the Interreg V-A period.

An area of untapped potential concerns institutionalised advice centres for cross-border issues, which remain scarce and are concentrated in the northern part of the Interreg region. Moreover, most of these centres focus on the labour market, limiting support for citizens and institutions dealing with other cross-border challenges.

3 Summary and key observations

To support the strategic dialogue on cross-border cooperation beyond 2027, this territorial analysis provides harmonised and comparable information. Its data-driven evidence helps to inform the future direction of cross-border cooperation by facilitating alignment with EU priorities and the evolving regulatory framework. The Core-IB border profiles adopt a harmonised methodology and provide programme areas with access to recent European data. As this approach comes along with limitations, member states may hold additional or more detailed data which can further enrich or contextualise the findings beyond the Core-IB project (see final report and technical annex of this project). These national sources are essential for refining and validating territorial evidence in policymaking processes, including: a) regional, fine-scale data and b) insights from political processes related to prioritisation and objective setting. The study's findings are analytical and are intended to support reflection and discussion. They do not create regulatory or policy obligations for Member States, the European Commission, or programme authorities.

Table 4 provides 2 types of information. Firstly, it summarises the key analytical findings for the border region, as discussed earlier in this profile. Secondly, it suggests policy options based on the analytical findings. These options are intended to provide a practical and informative basis for the strategic dialogue among programme bodies, managing authorities and the European Commission.

Generally speaking, the aim of cohesion policy is to promote harmonious territorial development (also) across borders. The objective is to mitigate the impact of borders and achieve 360° functionality, thereby enhancing the quality of life and fostering prosperous development on both sides of the border. The upcoming Interreg period offers an opportunity to address these objectives and potentials through targeted cooperation projects.

Table 4: Evidence-based conclusions

Territorial dimension	
Key analytical findings	• The border region is geographically diverse, with 88% of the population in the Italian programme area; population density is higher in northern Italy, while Croatia shows a more fragmented settlement pattern; • Accessibility of services mirrors these differences: northern Italy has the highest service density, while southern Italy and especially Croatia offer fewer facilities; • Cross-border mobility is most intense along the northern coastal arc from Venezia to Rijeka, with additional hotspots near Dubrovnik and southern Italy; • Connectivity remains limited: no direct highways or rail links exist, while flights and ferries are seasonal, constraining regular cross-border exchanges. Potential for further development of integrated road and maritime mobility of goods and passengers.

Territorial dimension	
Policy options	**Population and settlement related aspects** • A relevant policy option is to address demographic change, and population ageing in particular, through cross-border strategies that prevent the exacerbation of spatial disparities between dynamic urban areas and shrinking rural regions. **Accessibility related aspects** • The integration of ports, ferry services and airports into a coherent cross-border accessibility strategy can be improved, extending its scope beyond seasonal tourism flows; • Strengthened cross-border transport strategies can enhance connections between inland areas, such as Karlovac and Ferrara, and coastal gateways and ports; • Targeted investments can support stronger east–west maritime and multimodal connectivity, particularly between the northern part of the Italian coast and Croatian urban centres such as Rijeka and Pula. **Cross-cutting aspects** • The integration of demographic decline, low population density and limited cross-border accessibility can contribute to more coherent territorial development strategies for a maritime border region; • Integrated land–sea spatial planning approaches offer potential to support more sustainable territorial development in a region shaped by strong coastal dynamics and seasonal mobility.

Economic dimension	
Key analytical findings	• Economic disparities are significant: GDP per capita in Italian border regions is about 50% higher, employment rates exceed 50% (up to 80%), while Croatian areas remain below 50%; • The “blue economy” is a key sector on both sides, including activities such as coastal tourism activities, port activities, shipbuildig and repair and maritime transport; • Housing markets show strong tourism influence, with higher property prices along the coast; in Croatia, values peak in the Istrian peninsula and Makarska Riviera.

Economic dimension	
Policy options	**Competitiveness and labour market related aspects** • Maritime-specific economic activities, including fishing, ports, coastal tourism and the blue economy, can be leveraged more strategically to strengthen competitiveness on both sides of the border; • Investments in digital infrastructure can support the development of green and blue economy activities in remote coastal and island regions; • Coordinated approaches to digital workspaces and shared service platforms can foster remote working and expand employment opportunities in peripheral and island areas. **Cross-cutting aspects** • Cross-border cooperation can help transform seasonal tourism connectivity into more stable functional linkages that support territorial cohesion; • Demographic decline, limited accessibility and digital constraints can be jointly integrated into coherent cross-border economic development strategies.

Green dimension	
Key analytical findings	• Protected areas are unevenly distributed, with the largest contiguous site located in Croatia under the Natura 2000 network; • Air quality shows strong contrasts: Croatia records lower pollution levels due to reliance on hydropower and limited industrialisation, while north-eastern Italy is heavily industrialised and reports the highest PM2.5 concentrations; • Water quality is generally better along the Croatian coast, while Italy faces greater coastal pollution but shows improvements inland; • Electricity transmission infrastructure is extensive but lacks a direct Italy–Croatia connection; • Natural hazards are more severe in Italy, with high risks of landslides, earthquakes, droughts, and floods; • Environmental resource use also differs: Italy shows higher resource productivity, whereas Croatia generates more waste per unit of GDP.

Green dimension	
Policy options	**Climate risks and resilience related aspects** • Responses to natural hazard risks can be improved through coordinated monitoring systems and enhanced cross-border data exchange; • Joint strategies on water management and ecosystem resilience can help mitigate the combined impacts of drought, heat stress and land degradation; • Differing potentials for solar and wind energy production across coastal, island and inland areas can be leveraged to develop complementary and coordinated renewable energy strategies between Italy and Croatia. **Cross-cutting aspects** • Enhanced cooperation on coastal and marine resource management could strengthen environmental resilience while supporting sustainable blue-economy activities such as fisheries, maritime transport and coastal tourism; • Energy interconnections, ports and maritime infrastructure can support the decarbonisation of blue-economy sectors while safeguarding sensitive coastal and marine ecosystems.

Socio-economic dimension	
Key analytical findings	• Cross-border connectivity in social media is concentrated around Trieste, Pula, and Rijeka; Italian minorities are recognised in Istria and present in parts of Dalmatia, though bilingualism outside minority areas is not common; Croatian minorities are also present in some Italian regions; • Tourism is a key economic asset: Croatia records very high overnight stays across most of the region, while Italy shows lower levels except in Venezia and Rimini; • Between 2020 and 2023, tourism intensity in the programme area exceeded the EU average, driven mainly by Croatian coastal destinations, creating both opportunities and sustainability challenges; • Essential services are generally well distributed in Italy, while in Croatia accessibility is uneven, with good coverage in the north and south but gaps in central areas; hospitals are concentrated in cities, reinforcing an urban–rural divide.

Socio-economic dimension	
Policy options	**Socio-economic related aspects** • Recognised Italian minority communities and existing bilingual practices in Istria and parts of Dalmatia could be better leveraged to foster tourism development, including through joint branding initiatives between Italian and Croatian destinations along the Northern Adriatic coast; • Targeted cultural, educational and youth exchange initiatives can contribute to overcoming linguistic barriers and increasing interaction between Italian and Croatian communities; • Joint tourism strategies can support the reduction of seasonality, improved management of visitor pressure and a wider territorial distribution of tourism benefits, including to inland and less-visited areas. **Cross-cutting aspects** • Stronger alignment between tourism development, social integration and service provision could enhance territorial attractiveness and long-term liveability across the programme area; • Common challenges related to ageing, depopulation and service accessibility can serve as a basis for coordinated cross-border socio-economic strategies.

Border security and safety dimension	
Key analytical findings	• Croatia joined the Schengen area only in 2023, so temporary border controls are a recent phenomenon in the Italy–Croatia context; • Italy reintroduced controls at all internal borders (land, air, and sea) during the 2024 G7 summit in Brindisi; • While the maritime border is generally less vulnerable, frequent or prolonged controls could disrupt socio-economic interaction, particularly during the tourist season.

Border security and safety dimension	
Policy options	**Cross-cutting aspects** • The impacts of border controls could be mitigated through coordinated approaches and coordinated cross-border policy dialogue aimed at reducing disruptions to cross-border logistics, particularly during the touristic season; • The mitigation of border control effects can form part of cross-border cooperation projects in various sectors. Economic networks, transport infrastructure initiatives and tourism-related actions can incorporate considerations related to the impacts of border controls.

Governance dimension	
Key analytical findings	• Cross-border cooperation is relatively well institutionalised, framed by the Adriatic–Ionian Euroregion, but cross-border public services remain limited and consist in few transport links concentrated in the north; • Interreg activities address diverse themes such as tourism, biodiversity, climate change adaptation, and sustainable transport; • Cooperation networks are unevenly distributed, with particularly strong density in northern areas; • Institutionalised advice centres are few, concentrated in the north, and mainly focused on labour market issues, leaving other cross-border challenges insufficiently addressed.
Policy options	**Cross-cutting aspects** • Existing institutionalised cooperation frameworks can be further leveraged to strengthen functional cross-border integration in a predominantly maritime context; • Targeted pilot actions could be used to test new forms of cross-border service provision, including in maritime transport and environmental management; • Improved governance coordination could help align economic development, environmental protection and social inclusion strategies across the Italy–Croatia maritime border.

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