

**EUROPEAN RESEARCH PROJECT //**

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

Romania-Hungary

**Border profile**

March 2026



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**Disclaimer**

This document is a final report.

The information contained herein is subject to change and does not commit the ESPON EGTC and the countries participating in the ESPON 2030 Cooperation Programme.

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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)<sup>1</sup> 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)

<sup>1</sup> 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](https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng)

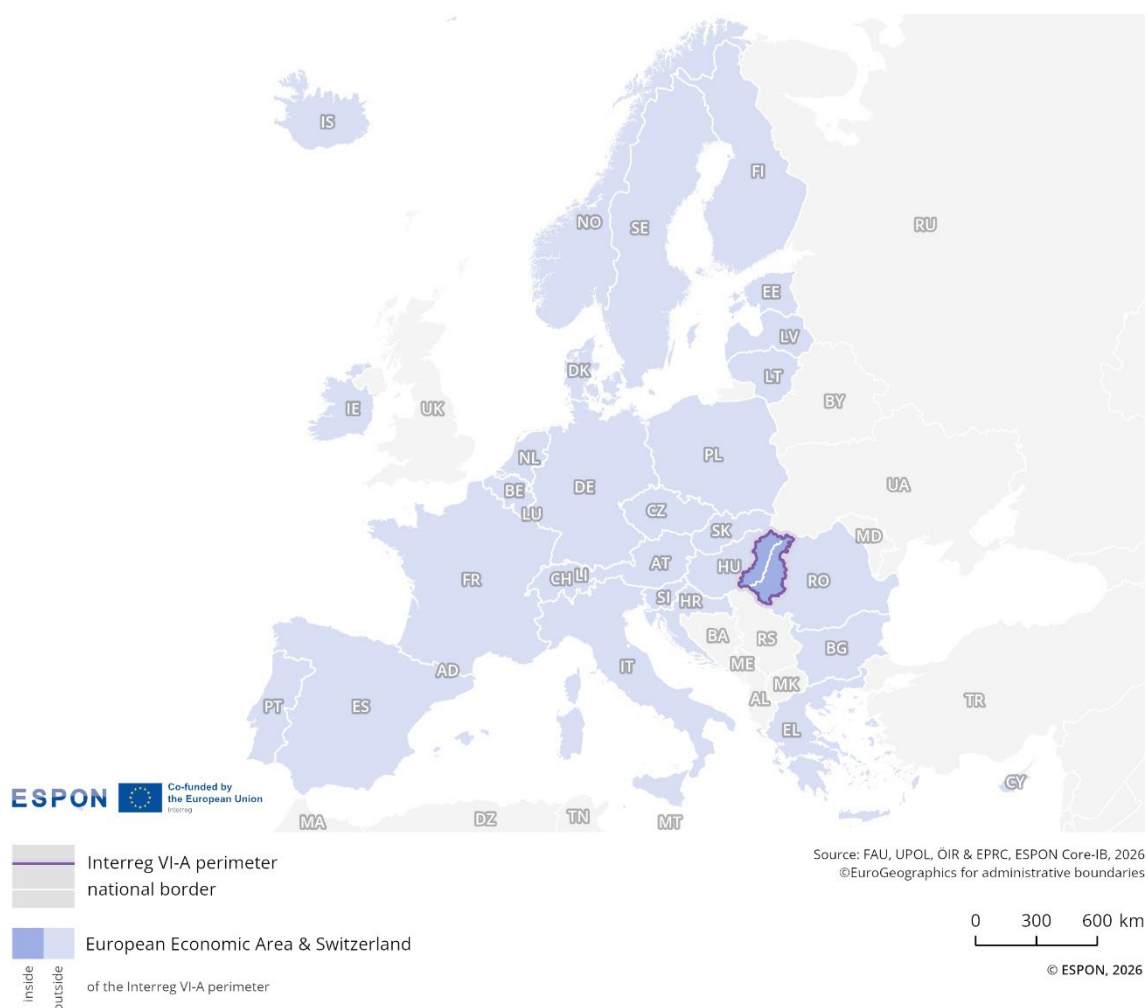
Within the ESPON framework, the CROSSGOV project (Governance mechanisms for cross-border functional areas) has been implemented in parallel to Core-IB. The CROSSGOV hub<sup>2</sup> provides a comprehensive platform for interactive data exploration, and selected data have been incorporated into this study.

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 ‘Romania-Hungary’ covers the area between western Romania and south-eastern Hungary (see Figure 1.1). In Romania, the programme area includes the West and North-West regions in Macroregion 4 and Macroregion One, comprising a total of 4 NUTS3 regions (Arad, Bihor, Satu Mare, Timiș). In Hungary, it covers parts of the Southern Great Plain and Northern Great Plain in the Great Plain and North region, encompassing a total of 4 NUTS3 regions (Békés, Csongrád-Csanád, Hajdú-Bihar, Szabolcs-Szatmár-Bereg).

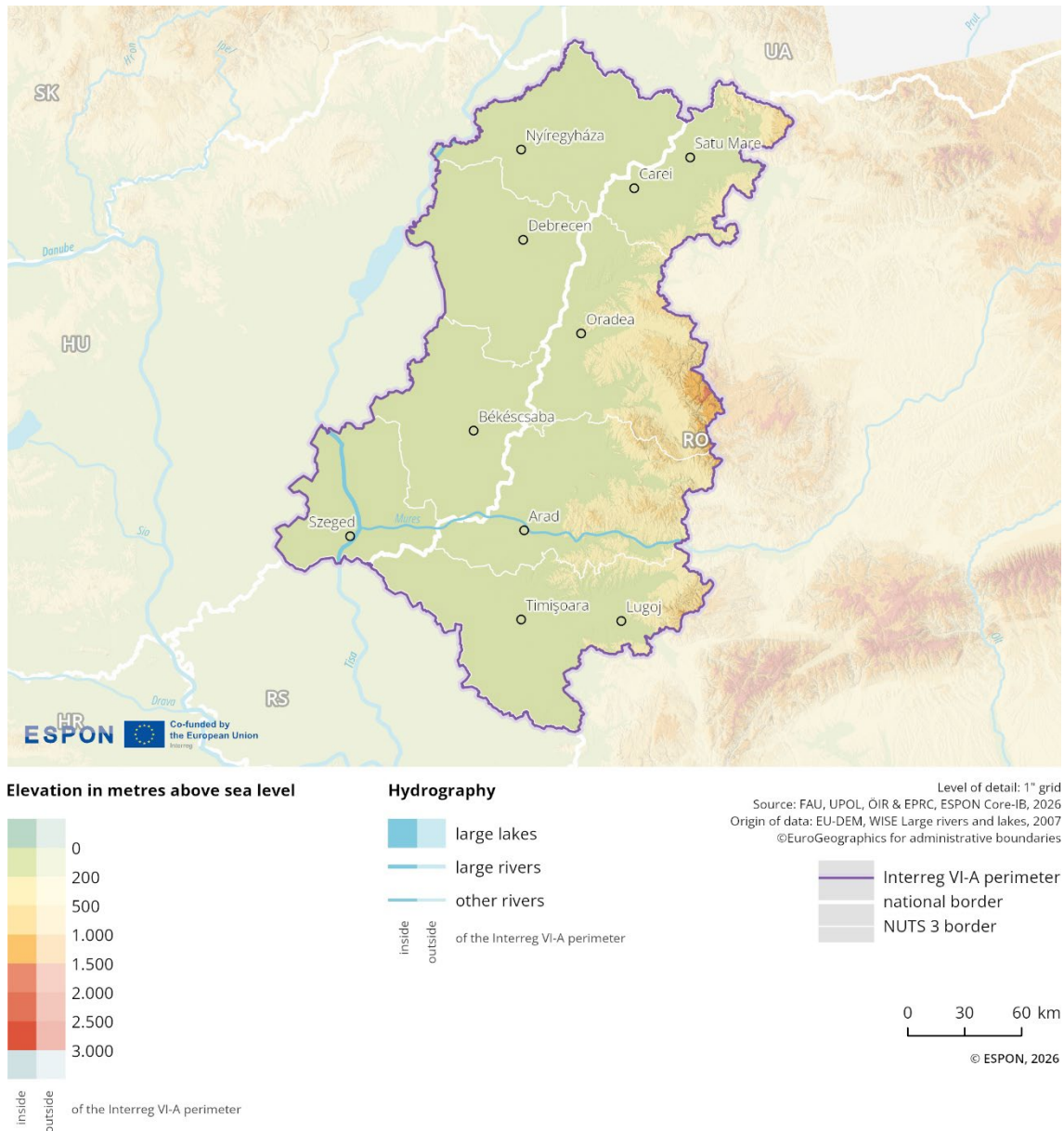
**Figure 1.1: Overview map**



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

Figure 1.2 illustrates the region's geomorphological features and the perimeter of the current Interreg VI A programme area. The border region, which covers an area of approximately 50,435 km<sup>2</sup>, extends along the entire 450-kilometre length of the Romanian–Hungarian border. It lies between the areas of Satu Mare and Szeged. The border runs from north to south through predominantly flat terrain, forming part of the Great Hungarian Plain (Alföld) and the western edge of the Romanian Plain.

**Figure 1.2: Geographical features and characteristics<sup>3</sup>**



The cross-border region is characterised by extensive agricultural use of productive lowlands and significant canal systems. Several rivers, including the Criș/Körös and the Mureș/Maros, flow westwards across the border, serving as important natural corridors and water sources. These river basins provide support for both agriculture and biodiversity.

The programme area includes several medium-sized urban centres, such as Oradea, Arad, Debrecen, Timișoara, Satu Mare, Carei and Szeged, as well as a dispersed network of smaller towns and rural

<sup>3</sup> 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.

settlements. Topography and hydrology strongly influence land use patterns, with large-scale crop production dominating the landscape. Ecologically, the area comprises several Natura 2000 sites and protected natural reserves.

## 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 km<sup>2</sup>. 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<sup>2</sup>

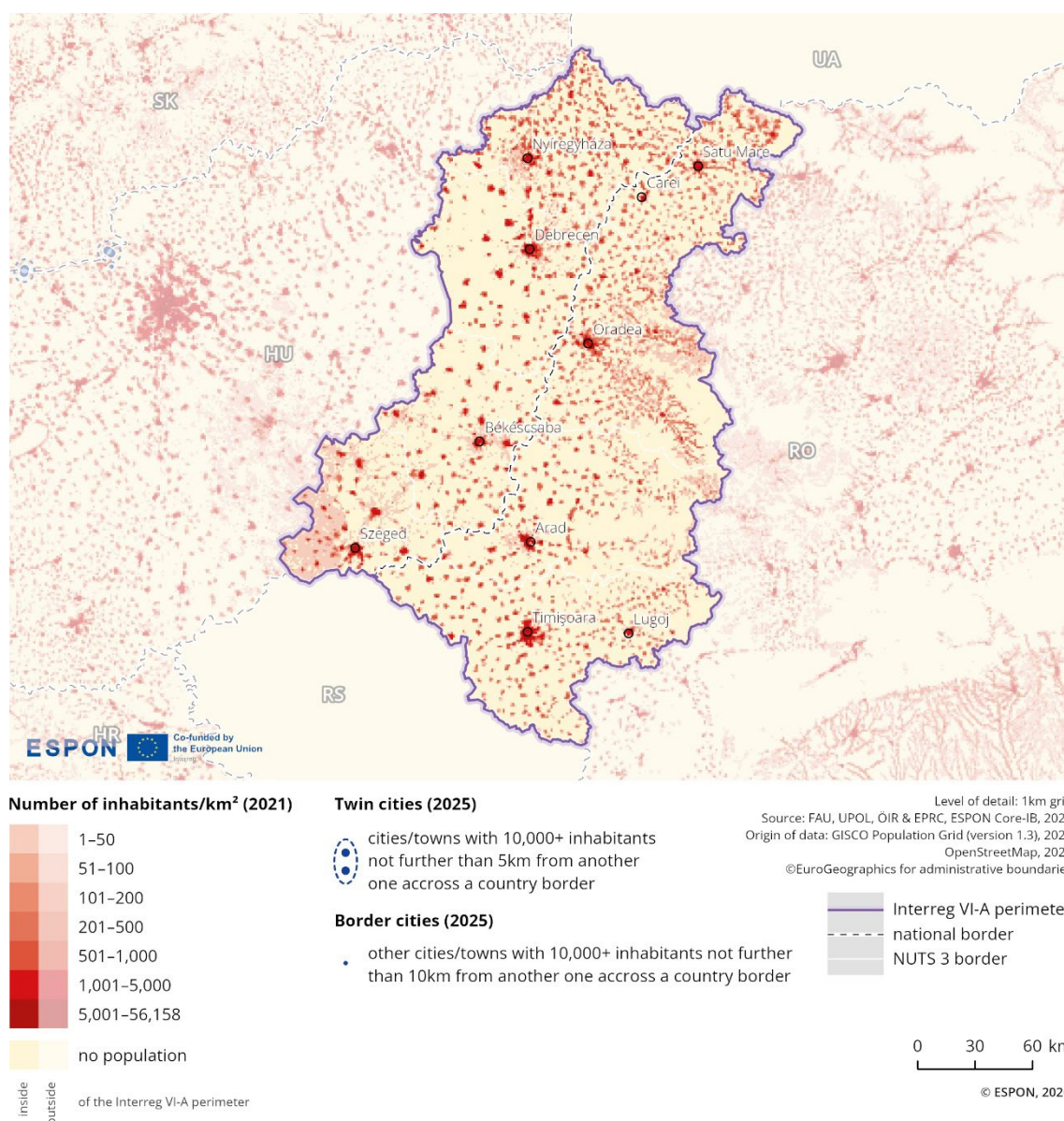
Please refer to the technical annex for more information.

Figure 2.1 shows that the entire territory has a similar population distribution pattern when the population is concentrated in towns. Towns are not surrounded by significant suburban settlements, and population density quickly transitions to areas with low population density. The Romanian part has a more subtle settlement pattern with a higher number of smaller settlements. The Romanian part shows slightly more continuous settlement west of the city of Oradea (around 200,000 inhabitants). Other significant Romanian cities with larger populations include Timișoara (over 300,000 inhabitants), Satu Mare, Arad and Lugoj. In the Hungarian part, the major cities are Szeged (over 160,000 inhabitants) and Debrecen (over 200,000). The border region includes 10 urban centres with a population of over 30,000 inhabitants.

The average population density across the entire cross-border region is 72 inhabitants per square kilometre, which is lower than both the EU average of 109 inhabitants per square kilometre (according to Eurostat) and the aggregated average of all EU-evaluated border regions (125 inhabitants per square kilometre).

Within the border region, the Hungarian part records an average population density of approximately 78 inhabitants per square kilometre, which is below the national average in Hungary (103 inhabitants per square kilometre). Similarly, the Romanian part has an average population density of around 67 inhabitants per square kilometre, also lower than the national average in Romania (80 inhabitants per square kilometre).

**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 %

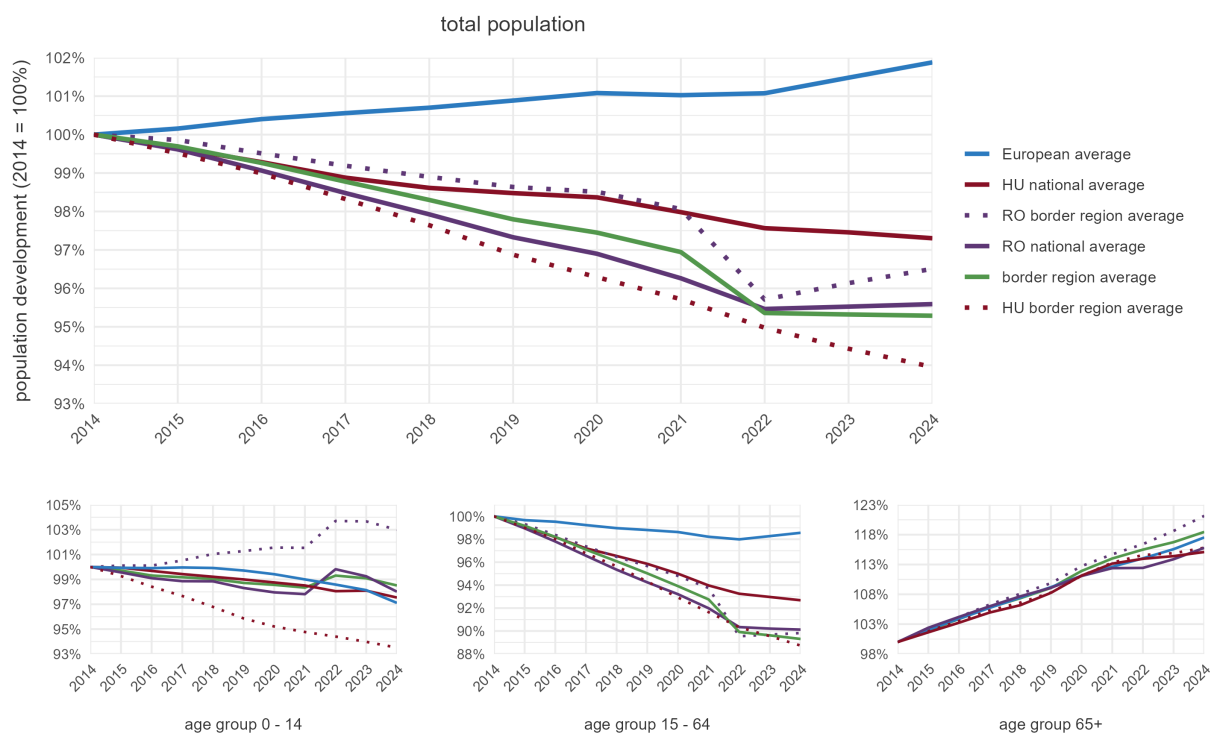
Please refer to the technical annex for more information.

Population in the Romania–Hungary cross-border region in 2024 (Eurostat): 3.71 million inhabitants, of which:

- › 52.9% in the Romanian border territory (1.96 million inhabitants)
- › 47.1% in the Hungarian border territory (1.75 million inhabitants)
- › Region within the border region with the highest population change since 2014: Békés (HU332) with a decrease of 12.0%

Figure 2.2 shows the population change in the Romania–Hungary region between 2014 and 2024. During this period, the region has experienced a moderate population decline of -4.7%, with the strongest decline observed on the Hungarian side.

**Figure 2.2: Population development (2014=100)**



Population growth across the Romania–Hungary cross-border region is well below the European average (-4.7% vs. 1.9%) and also below the average development in all border regions (-4.7% vs 1.5%). On the Romanian side, the border region exhibits a similar trend to the national average (-3.5% vs. -4.4%), whereas the Hungarian border region has shown a substantially higher decrease than the national level (-6.0% vs. -2.7%).

In terms of the development of individual age groups in the region, the population aged 0–14 experienced a slight decrease of -1.5%, while the working-age population (15–64) showed a sharp decline of -10.7%. The population aged 65 and over underwent a substantial increase of 18.5%.

### 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 almost similar patterns of change in settlement areas on both sides of the Romanian-Hungarian border. Changes are evident in particular around the urban centres of Satu Mare, Oradea, Arad, Lugoj, Szeged, Békéscsaba, Debrecen and Nyíregyháza. Carei is an exception, with no significant change during the observed time period. High growth in settlement areas is particularly evident in the around Debrecen and Oradea as well as between Arad, Timișoara and Lugoj. In close proximity to the national borders, the settlement area increases mainly between Arad and Szeged as well as around the cities Oradea, Satu Mare and Debrecen.

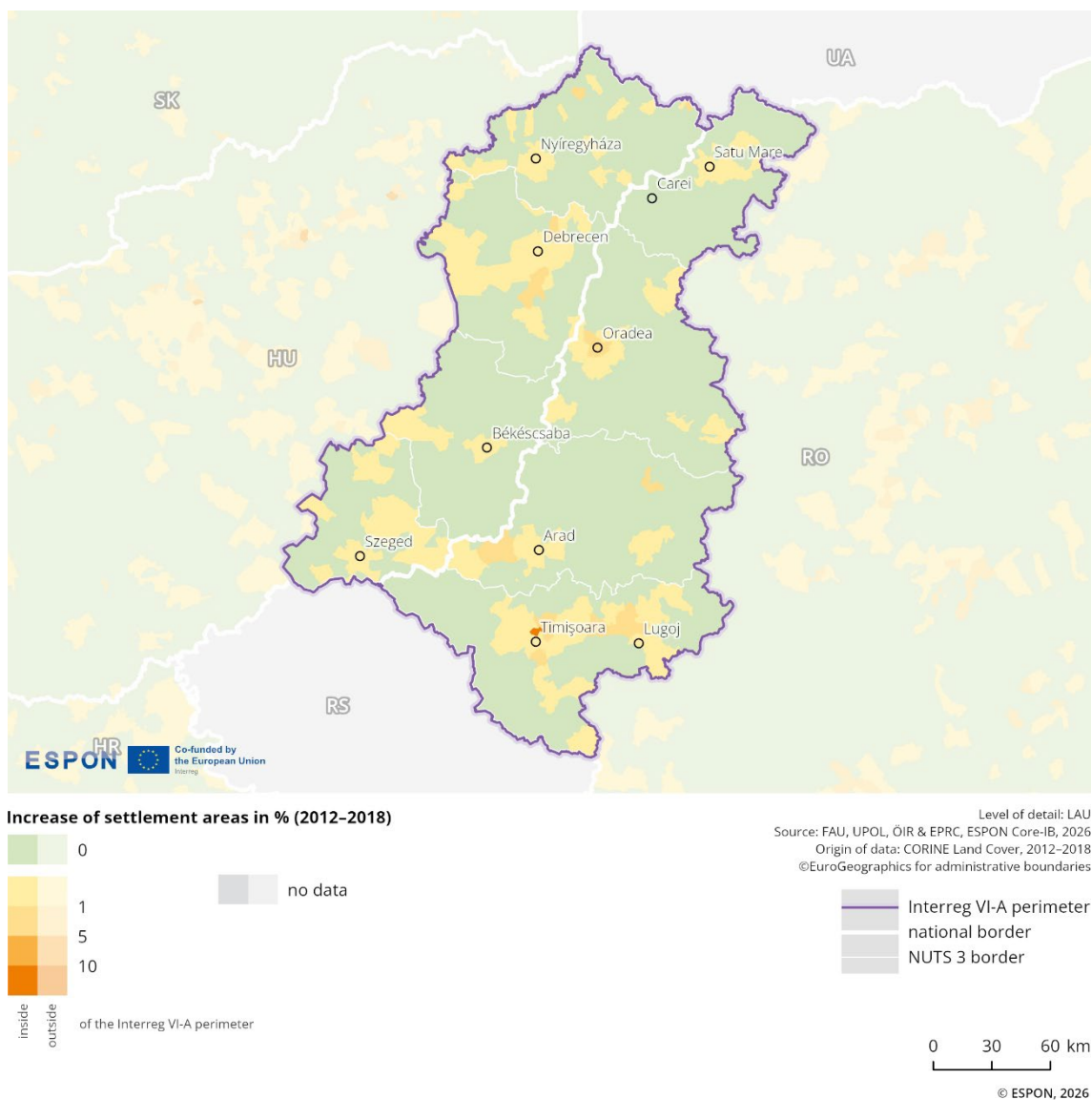
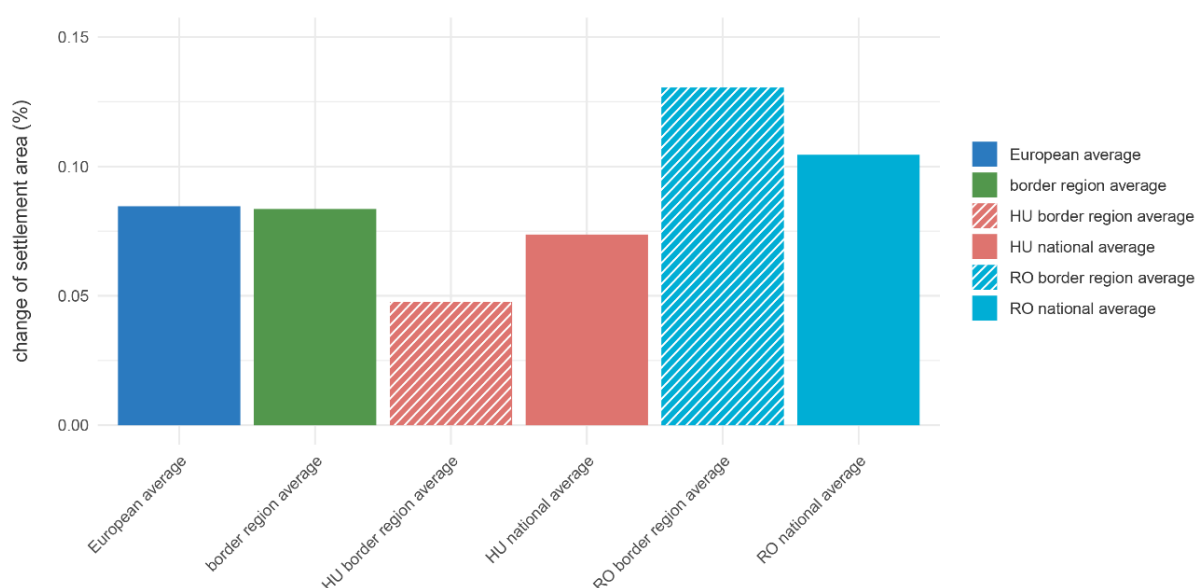
**Figure 2.3: Settlement area dynamics**

Figure 2.4 presents the change in settlement areas from a comparative perspective. The average for the Romania-Hungary programme area is similar to the overall European average, which includes both EU member states and the EFTA (European Free Trade Association) countries Switzerland, Liechtenstein, and Norway. Romanian values are higher than Hungarian ones, both for the national averages and the border-regional averages. Notably, the Romanian border-regional average is higher than the Romanian national average, whereas the Hungarian border-regional average is lower than the Hungarian national average.

In general, the programme area shows a 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)**

## 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

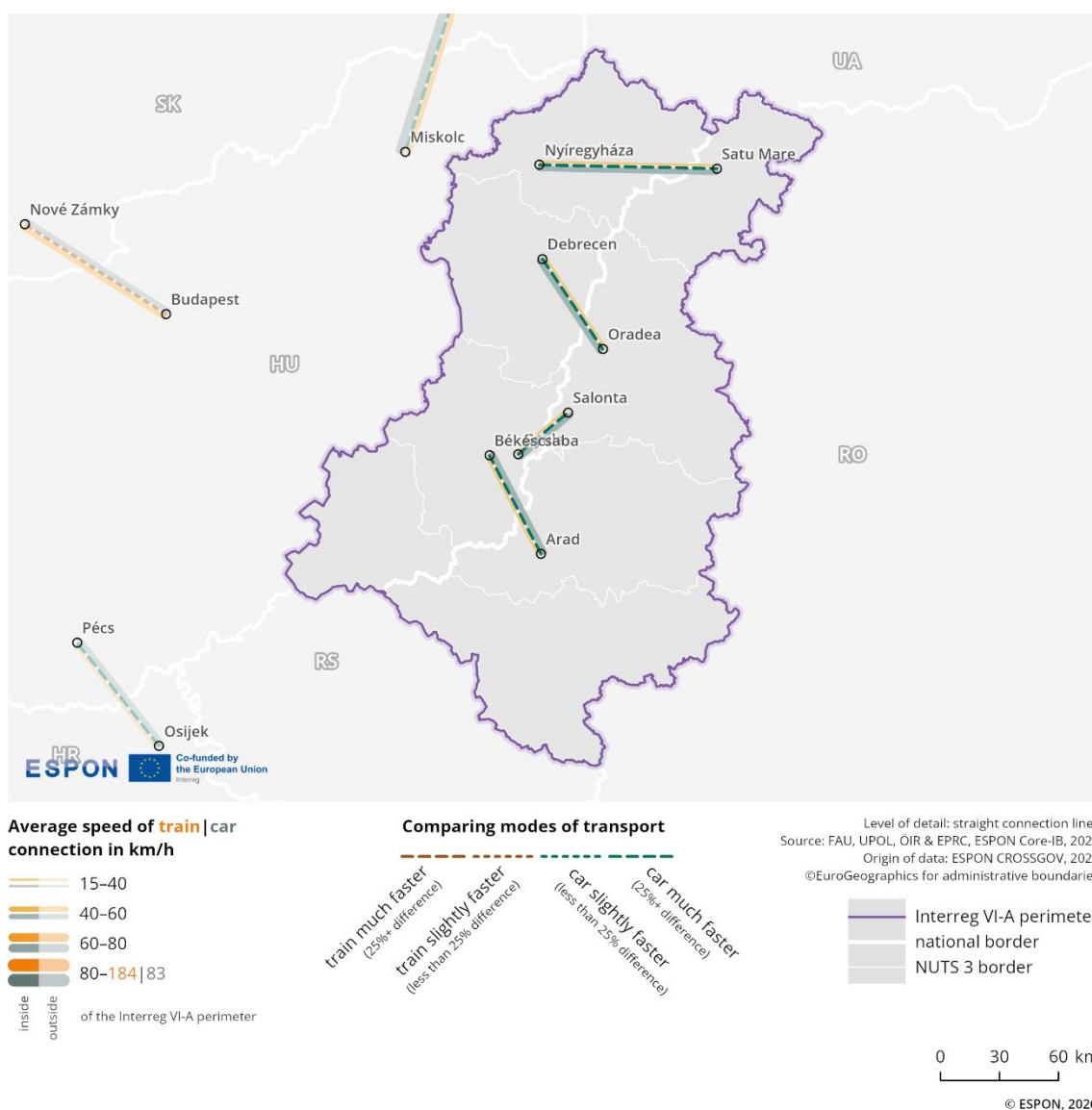
#### Indicator description

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 and train travel times in the Romania-Hungary border region. This visualisation enables an assessment of transport quality by highlighting differences between public (train) and private (car) transport modes.

**Figure 2.5: Comparative quality of selected cross-border connections**

The selection of cities and connections covered is based on a set of criteria applied throughout Europe within the ESPON CROSSGOV project<sup>4</sup>. These criteria include the presence of a railway station, population size, distance to the border, node hub and functionality. The thickness of the lines (orange for trains, grey for cars) indicates the average speed of connections in km/h, with thicker lines representing faster connections. Dotted lines in-between reflect the indexed ratio between train and car speeds. A brown colour scale (values below 100) denotes that trains are faster than cars along the specific route, while a green scale (values above 100) indicates the opposite.

The selected connections within the programme area include Nyíregyháza-Satu Mare, Debrecen-Oradea, Gyula-Salonta, and Békéscsaba-Arad. For all of these routes, car travel outperforms train connections in terms of speed. Notably, all connections offer only relatively slow train options.

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

### 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.

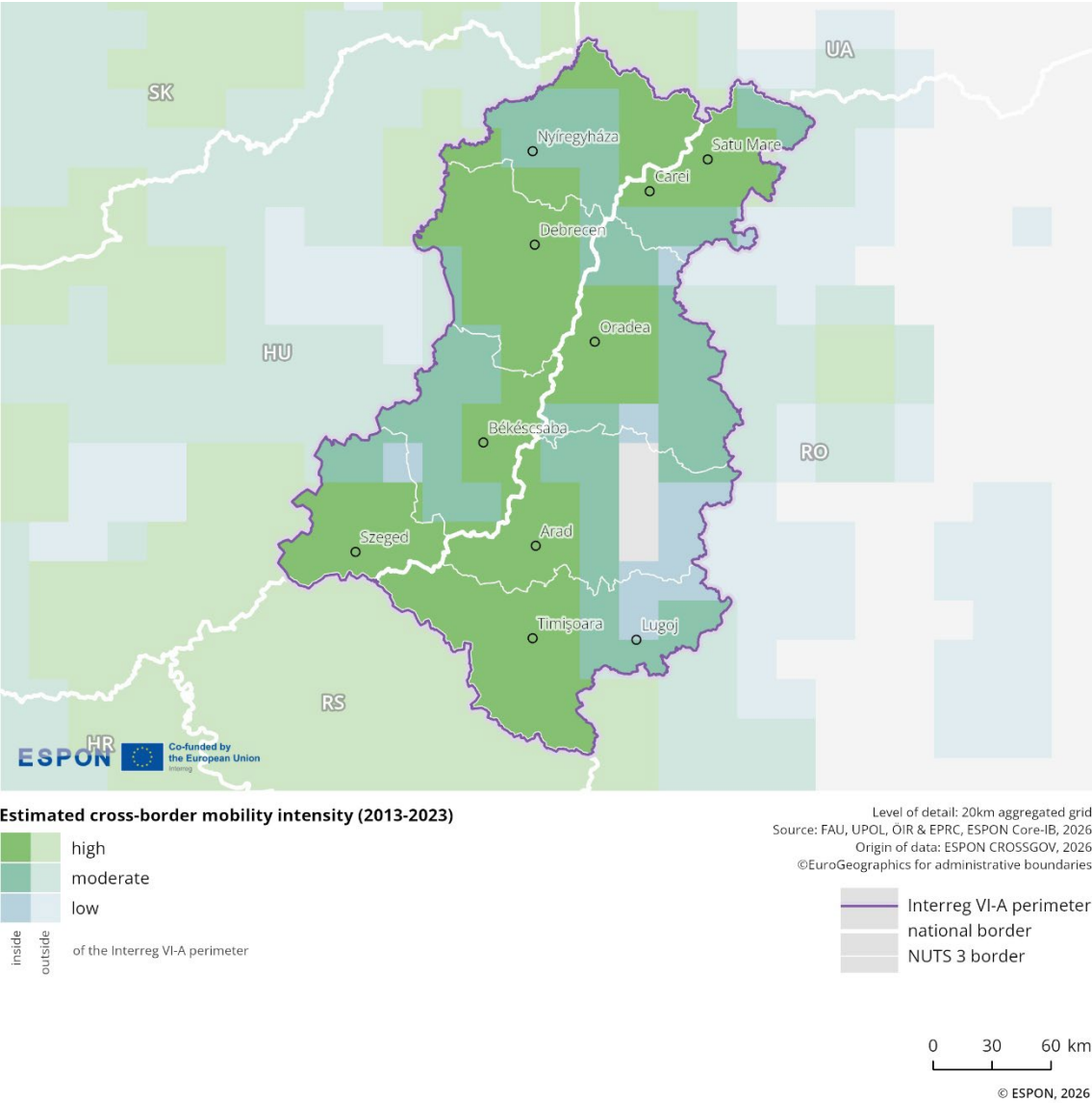
- **Source/method of retrieval:** The indicator is calculated based on Twitter (currently X) data. The digital footprint of individual users provides information about physical mobility flows and is used to calculate cross-border catchment areas of different intensity.
- **Temporal coverage:** 2013-2023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

Please refer to the technical annex for more information.

Figure 2.6 shows the cross-border catchment area in the border region 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. High mobility intensity values are primarily recorded around major cities throughout the region, including Szeged, Arad, Oradea, Debrecen, Carei, and Satu Mare. At greater distances from these cities, mobility intensity is moderate, with additional moderate values observed near Nyíregyháza and Lugoj. In the peripheral parts of the region, especially in the southeast, mobility intensity is low.

Figure 2.6: Cross-border mobility intensity



### 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.

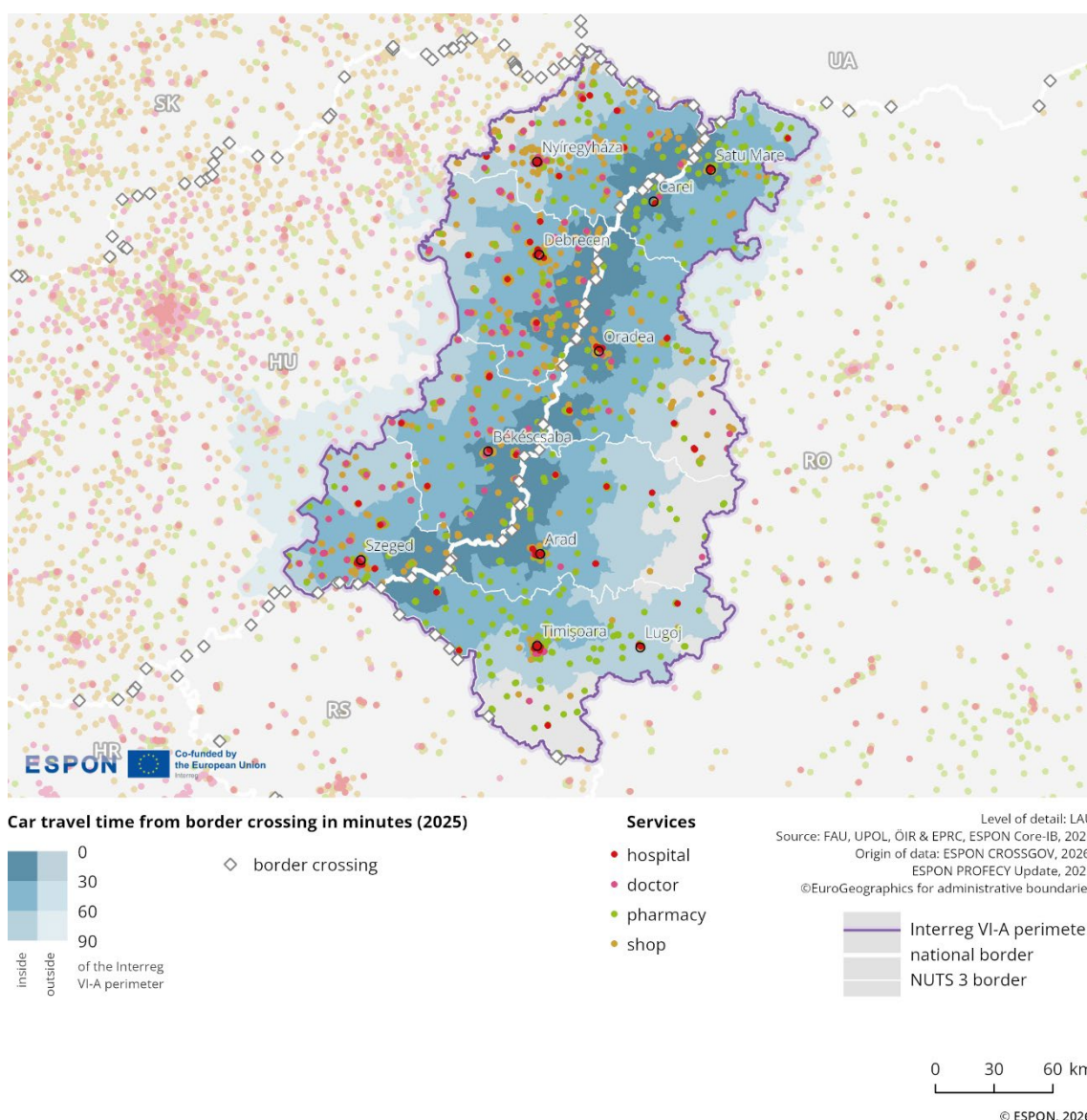
- **Source/method of retrieval:** Based on the OpenStreetMap road network, the travel time to the border is calculated for a grid of the border area. Based on this, areas are calculated within which border crossings can be reached below thresholds of 30, 60 and 90 minutes. As additional visual element, 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 convenient stores), with distinct coloured symbols.

The map shows that the border is surrounded by a strip with several areas that can be reached within 30 minutes from both sides of the border. This zone is interrupted in the middle, where the border is instead surrounded by travel times of up to 60 minutes. The 30-minute category is followed by a band with travel times of up to 60 minutes. Together with the 90-minute category, the 60-minute zone covers almost the entire territory of Hungary. A similar pattern can be obtained in Romania, except for more distant areas in the east and south, where travel times exceed 90 minutes.

Services such as shops, hospitals, doctors' offices, and pharmacies are distributed unevenly across the area. More services are located in the Hungarian region than in the Romanian region. The largest concentration of services is in Oradea, Arad, and Satu Mare (Romania), which are located within a 30-minute travel time zone. The bigger concentration of services is in Szeged and Debrecen (Hungary), which are located in the 60-minute zone of travel time.

**Figure 2.7: Travel-time accessibility from border crossings**

### 2.1.3 Key messages on the territorial dimension

The Romania–Hungary cross-border region is characterised by its predominantly flat, agricultural landscape and a nodal settlement structure. Population is concentrated in medium-sized urban centres such as Oradea, Arad, Debrecen and Szeged, while large stretches of the territory remain sparsely populated. The Romanian side exhibits a finer settlement pattern with many small municipalities, producing “islands” of demand within a vast rural backdrop. Overall population density is low (at around 72 inhabitants per km<sup>2</sup>, i.e. below the EU and national averages on both sides), which might affect services and the efficiency of transport systems. These settlement and demographic characteristics shape service provision patterns and the efficiency of transport systems across the border region.

Demographic development accentuates these challenges. Between 2014 and 2024, the region lost nearly 5% of its population, with sharper decline in Hungary. The working-age group contracted significantly while the share of elderly increased markedly, pointing to rapid ageing and a shrinking labour base. At the same time, despite population loss, settlement areas have expanded, especially around key cities such as Debrecen and Oradea, as well as along the Arad–Timișoara–Lugoj and Arad–

Szeged axes. This divergence between demographic decline and land-use expansion might call for coordinated cross-border spatial planning.

Accessibility and mobility patterns further refine the region's territorial dynamics. While car accessibility to the border is generally good — with most areas within 30 minutes and few exceeding 60–90 minutes — rail connections are slower and infrequent, making road transport the dominant mode. Service availability is denser and more balanced in Hungary, whereas in Romania it clusters in major cities. Cross-border mobility flows concentrate around main urban hubs (Szeged, Békéscsaba, Debrecen, Arad, Oradea, Satu Mare, and Timișoara), but fade towards peripheral areas, resulting in a patchy integration pattern. Overall, the region combines good car accessibility and dynamic settlement growth with demographic decline and weak rail infrastructure, pointing to future potentials: strengthening sustainable cross-border transport, guiding urban expansion, and improving service provision in sparsely populated areas.

## 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

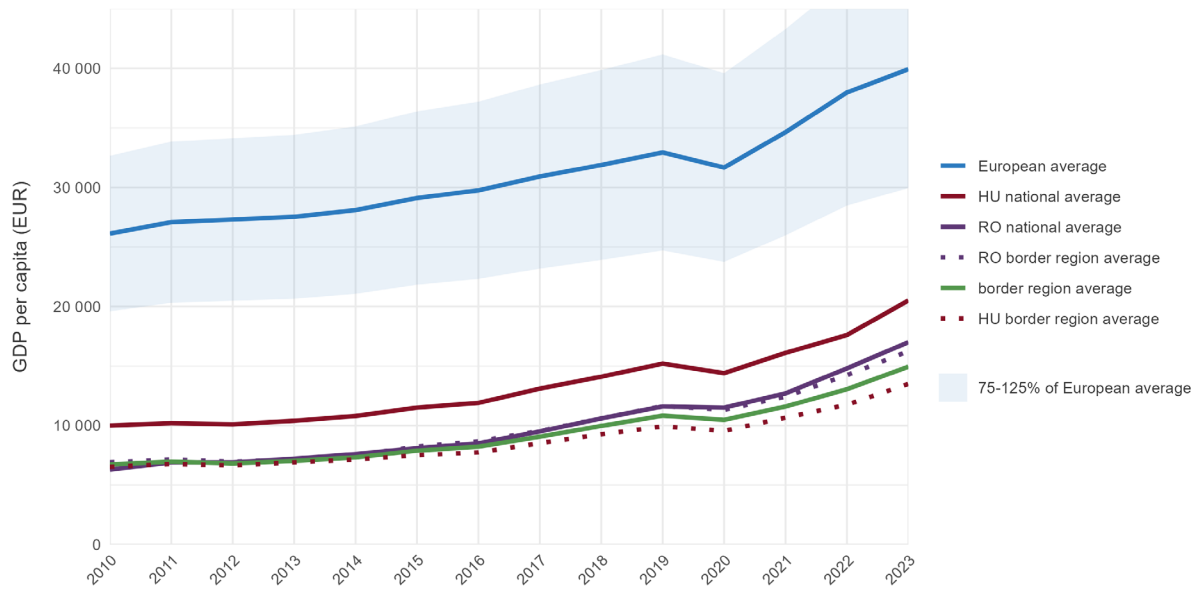
Please refer to the technical annex for more information.

Figure 2.8 illustrates gross domestic product at current market prices (per capita) in the Romania-Hungary cross-border region. The programme area shows a GDP/capita value of 36.1% of the EU average in 2022 and 36.6% of the average in other European border regions in general. The region marks a 78.7% increase of GDP per capita in the border region between 2014 and 2022.<sup>5</sup> This

<sup>5</sup> 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.

corresponds to a 43.1 percentage points higher increase of GDP per capita in the border region compared to the EU average. Furthermore, this corresponds to 43.5 percentage points higher increase of GDP per capita in the border region compared to the average of European border regions. Even though Hungary has a higher GDP per capita than Romania, the Hungarian border region trails behind the Romanian border region in terms of GDP per capita. Both border regions grow at a pace above the EU average. The Romanian border region's GDP per capita grew by 90.9% since 2014 and the Hungarian by 64.9%.

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



## 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. More information on cross-border labour market is available in the analytical report from Directorate-General for Regional and Urban Policy.<sup>6</sup>

### 2.2.2.1 Share of employment

#### Indicator description

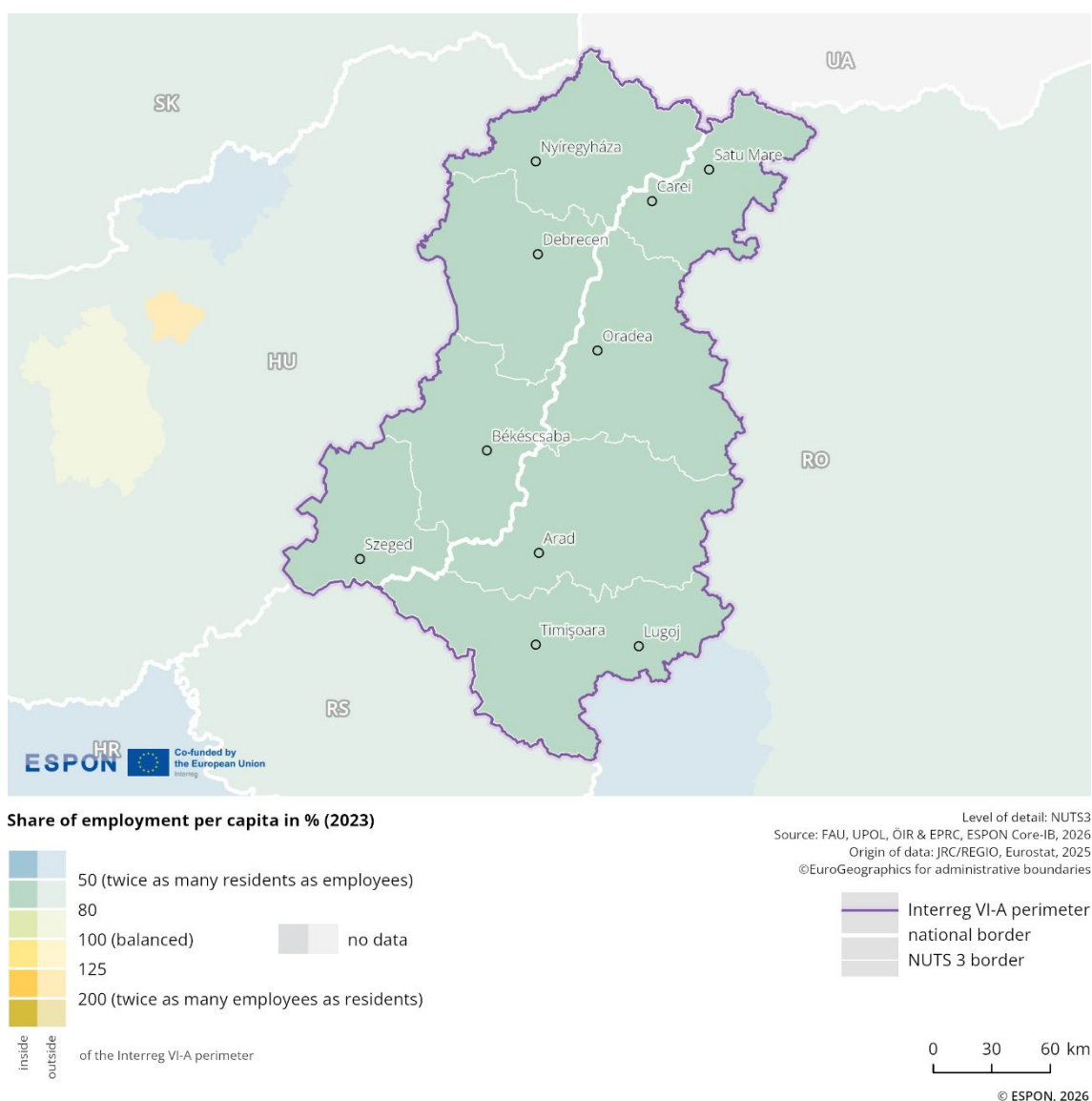
This indicator shows the share of employees in the population aged 15 to 64. Although it does not fully capture entrepreneurs, marginal employees, or civil servants, this is an important statistic for understanding general labour market patterns. It covers 2 aspects: first, high values can result from 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.

<sup>6</sup> See [Cross-border regional labour market analysis - Publications Office of the EU](#).

**Figure 2.9: Employment share<sup>7</sup>**

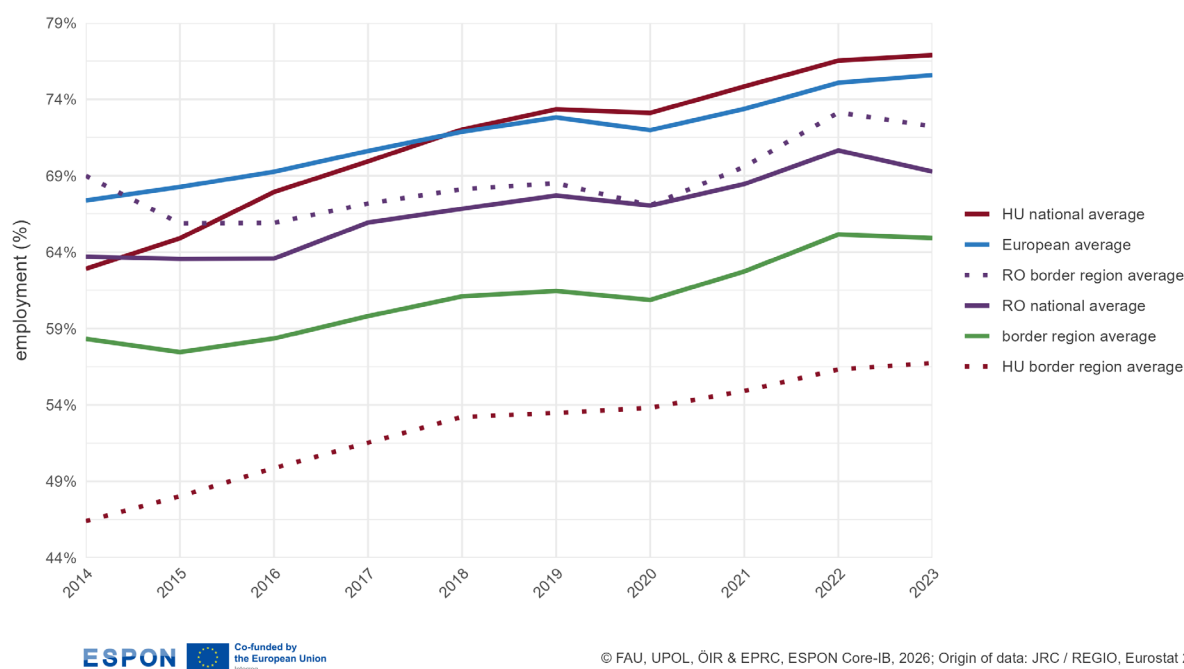
The share of employment in this border region has remained stable (Figure 2.9), with the regional average reaching 64.9% in 2023, representing an increase of 6.6 percentage points since 2014. In all areas of the region, the indicator values range between 50% and 80%. When comparing the share of employment in this border region with different averages, the following can be observed (see Figure 2.10):

- › Compared to the European average, the values in the cross-border region are lower by 10.7 percentage points; in 2014, the difference was 9.1 percentage points.
- › In comparison to the national average of Romania, the cross-border region is 4.4 percentage points lower, whereas in 2014, the difference was 5.4 percentage points.
- › Compared to the national average of Hungary, the values are more than 11 percentage points lower; in 2014, the difference was 4.6 percentage points.
- › The Romanian part of the border region exceeds the Romanian national average by 3 percentage points, while the Hungarian part lags behind the Hungarian national average by 20.2 percentage points.

<sup>7</sup> Note: In this map, 'residents' refers to the population aged 15 to 64.

- Compared to the average of all cross-border regions, this region's share of employment is lower by approximately 9.5 percentage points; in 2014, the difference was 8 percentage points.

**Figure 2.10: Employment share over time (comparison)**



## 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 Romania–Hungary cross-border region between 2014 and 2023. In 2023, the programme area shows an average working-age population share of 65.1%, compared to the European average of 63.9% and 63.7% for the average of all cross-border regions.

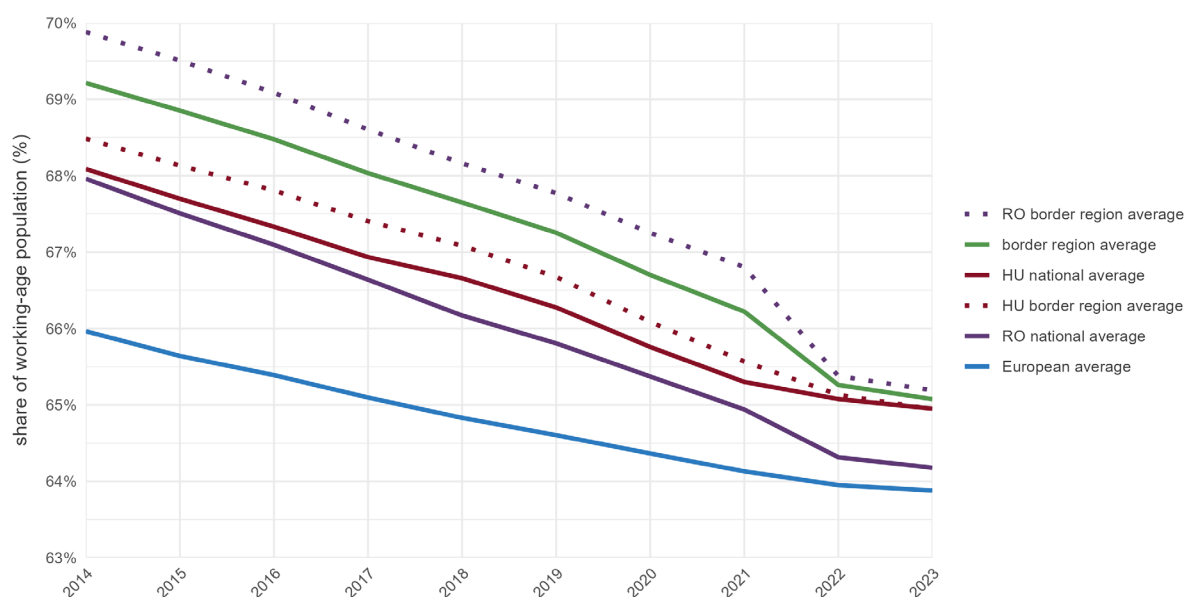
The share of the working-age population in the whole cross-border region is very similar to both the Hungarian border average (64.9%) and the Romanian border average (65.2%). Compared to national

averages, the regional value is almost equal to the Hungarian national average (65.0%) and moderately higher than the Romanian national average (64.2%).

The region experienced a noticeable 4.1 percentage point decrease in the share of working-age population between 2014 (69.2%) and 2023 (65.1%). This decline is substantially stronger than the European average, which dropped by 2.1 percentage points over the same period. Both countries recorded a declining trend, with the decrease being slightly more pronounced on the Romanian side (-4.7 percentage points at the border and -3.8 percentage points at the national level) compared to the Hungarian side (-3.6 percentage points at the border and -3.1 percentage points at the national level).

The Romania-Hungary 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 above the EU and cross-border averages, with a comparable declining trend on both sides of the border.

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



### 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.

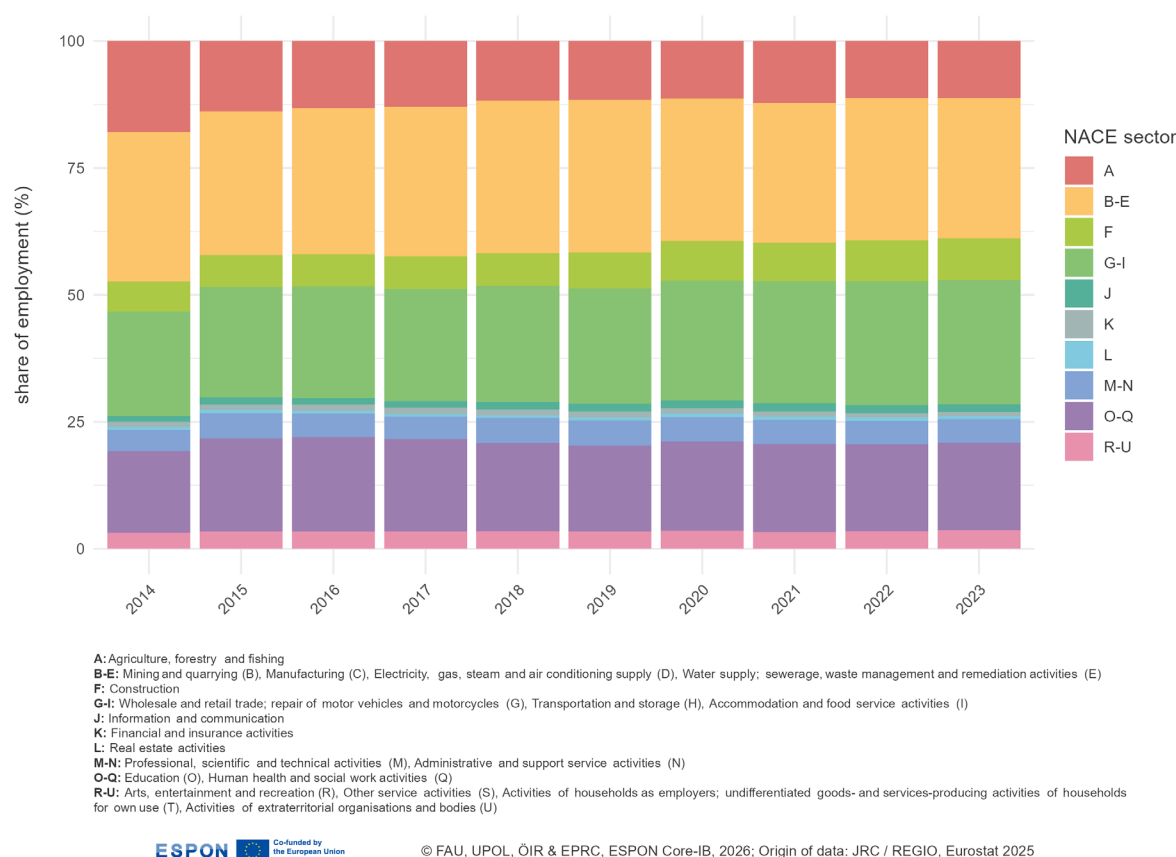
- **Source:** Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage:** 2014-2023
- **Unit:** Share in %

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 (statistical classification of economic activities) 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)**

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 agriculture, forestry and fishing (A). Conversely, there is a modest increase in the number of jobs in Construction (F), wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I), Information and communication (J), 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).

## 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.

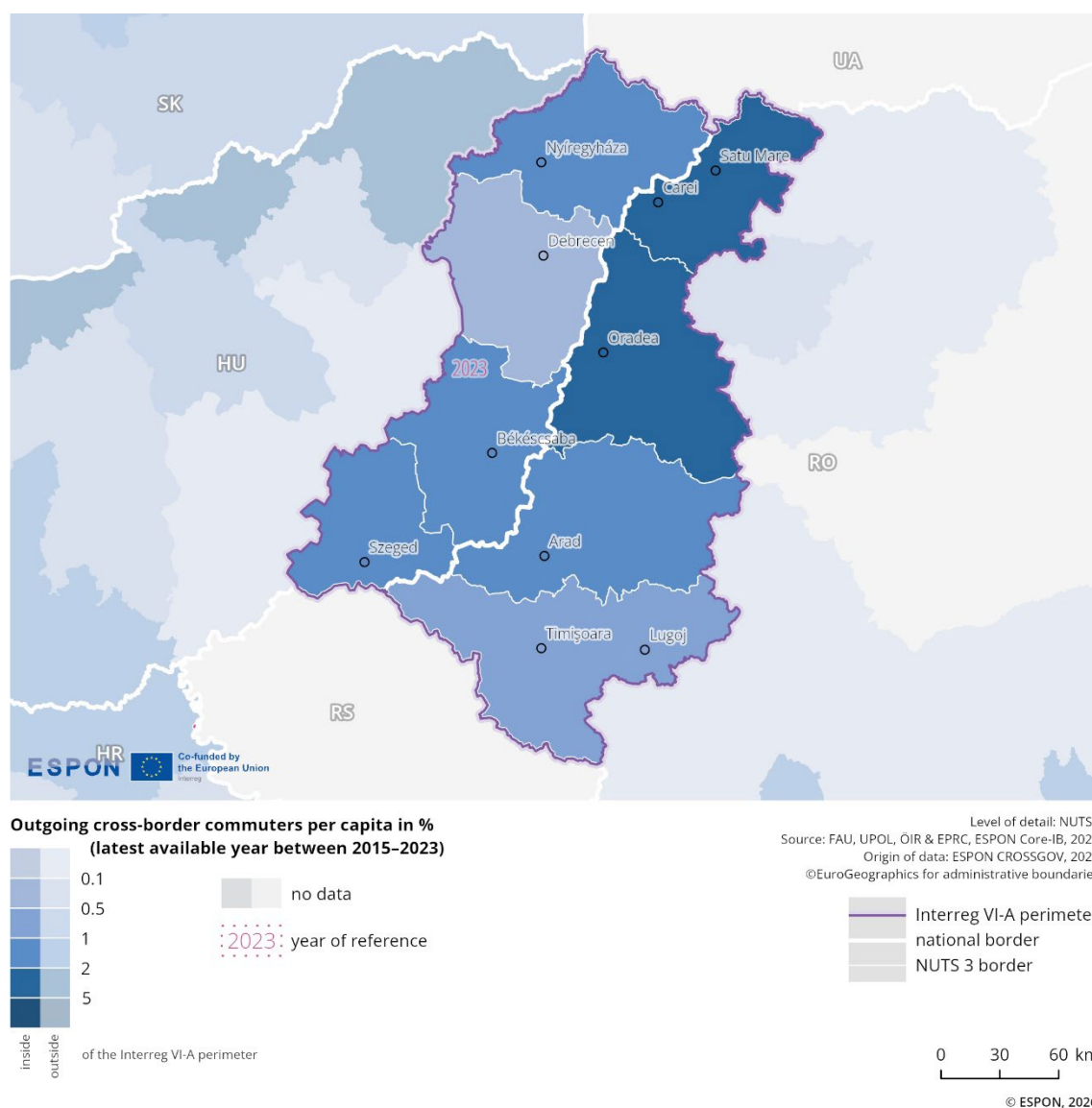
Commuting is one of the most relevant cross-border flows to identify functional linkages. Figure 2.13 illustrates the share of outgoing commuters per capita for each NUTS3 region (more concretely speaking the share of outgoing commuters among the residential population of the age group 15-64 years old, 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. Please note that thematic maps and findings based on NUTS3 data may not fully reflect local realities due to internal disparities within these territorial units.

The map illustrates the share of cross-border commuters, based on the most recent available year of data. It shows relatively strong and evenly distributed cross-border commuting activity in areas directly adjacent to the border on both the Romanian and Hungarian sides (commuting patterns might be even stronger at LUA level closer to the border).

The northern part of the programme area stands out in particular, with high levels of outgoing commuters in Szabolcs-Szatmár-Bereg (Hungary) and Satu Mare and Bihor (Romania)<sup>8</sup>. Map indicator higher relative values of outgoing commuters from Romania to Hungary than the other direction. Other 'hotspots' include Békés and Csongrád in Hungary and Arad in Romania. These NUTS3 regions also show elevated shares of outgoing cross-border commuters per capita.

<sup>8</sup> 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=49.69576,14.33324&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.

Both countries did not sign the 2023 Framework Agreement on Cross-Border Telework. Therefore, the 2 countries apply the standard rules under Article 13 of Regulation (EC) No. 883/2004. This means that cross-border telework is generally limited to 25% of the total working time, beyond which social security affiliation may shift to the country of residence.

### 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.

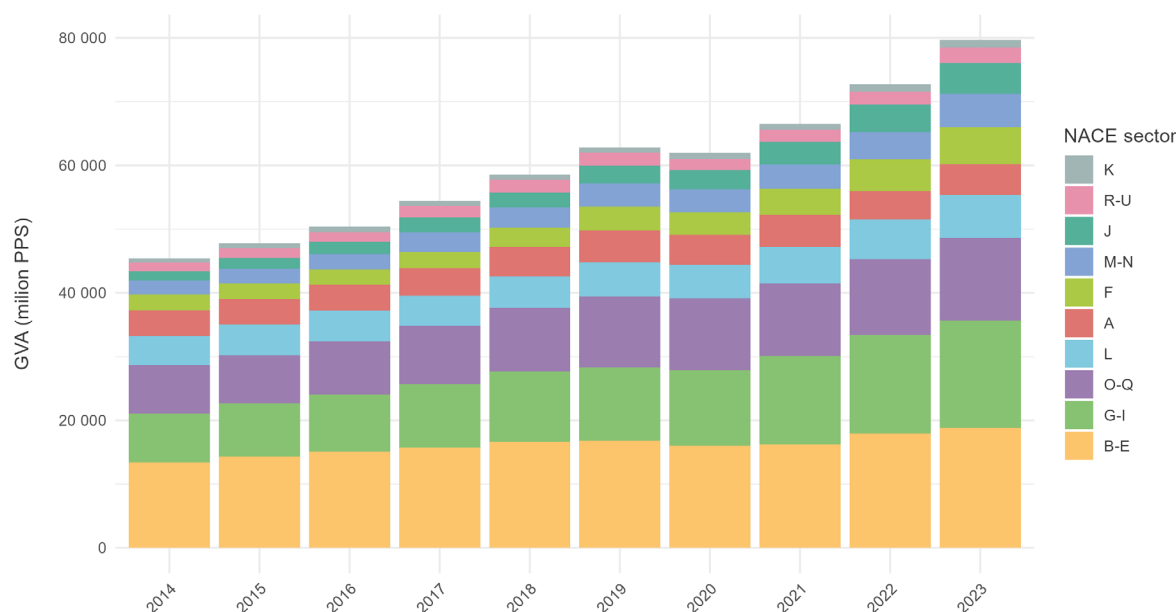
The dataset uses a '10-sector' classification based on NACE categories. The sectoral breakdown is as follows:

- › 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 border area of Romania-Hungary increased from 45,413 million purchasing power standards (PPS) to 79,667 million PPS — a growth of 75%. 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 economy within the border area. The sector groups B–E contributed the largest share, with a total of 18,784 million PPS in 2023. This underlines the significance of sectors such as Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Water supply; sewerage, waste management and remediation activities (E) in the Romania-Hungary border region.

**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)  
 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)

### 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.

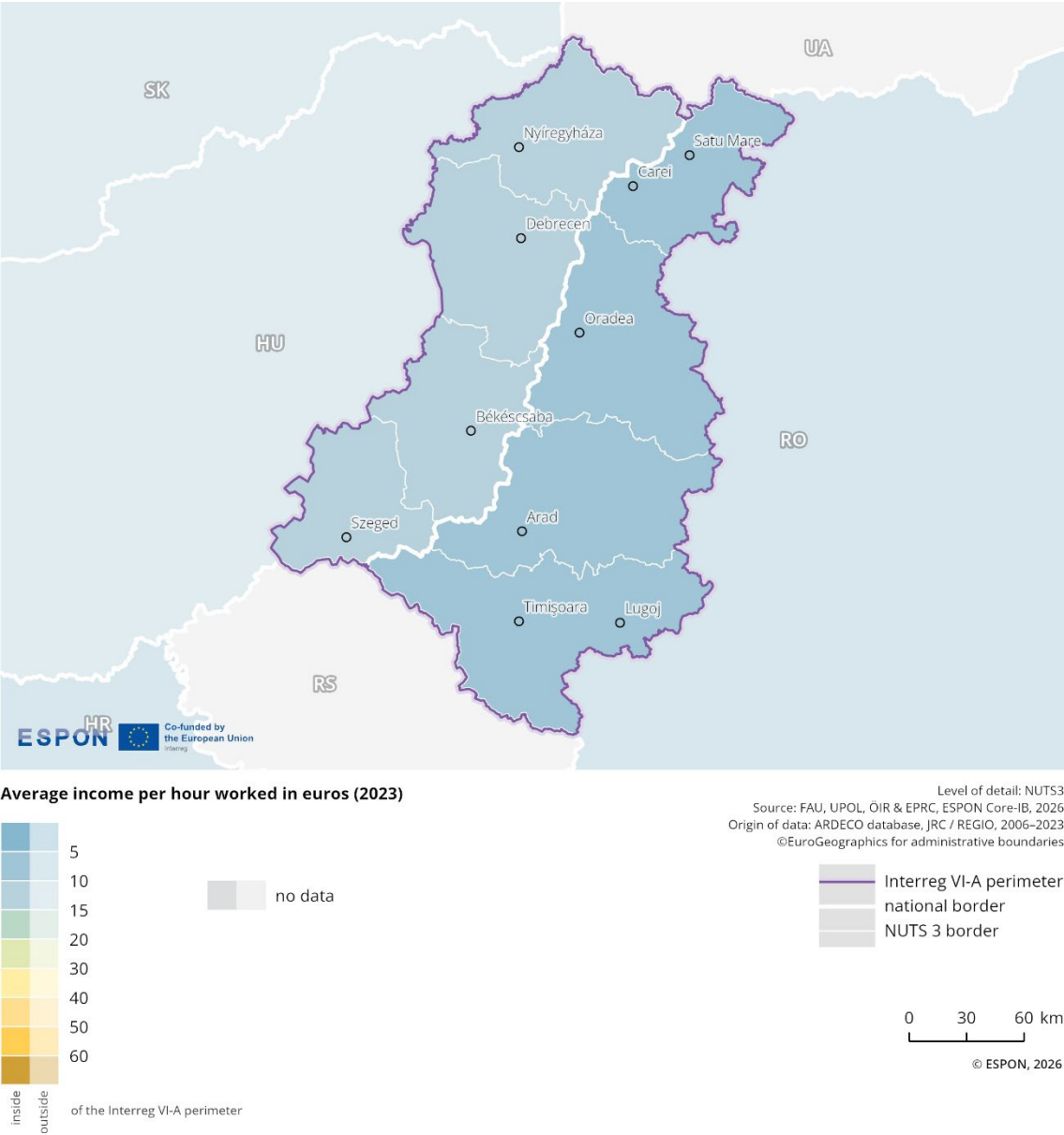
Figure 2.15 shows the average values for the 'compensation per hour worked'. This indicator is calculated by dividing the total compensation of employees (at current prices) by the total number of hours worked by those employees. In this context, 'employees' are defined as individuals engaged by contract 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. Please note that thematic maps and findings based on NUTS3 data may not fully reflect local realities due to internal disparities within these territorial units.

In 2023, nominal compensation per hour worked in the Romania–Hungary border region appears to be distributed somewhat unevenly. In the Romanian areas of this cross-border region, the average hourly income ranges between €5 and €10<sup>9</sup>. In the Hungarian parts, the nominal compensation range between €10 and €15. National average for nominal compensation per hour worked is €10.80 in Hungary, and €8.80 in Romania.

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. However, in this particular border region, the wage differences do not appear to be especially pronounced.

<sup>9</sup> 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 2.15: Average income per hour



## 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<sup>2</sup>)

Please refer to the technical annex for more information.

Figure 2.16 illustrates the advertised sales price of housing in 2025 across the border region. The data are categorised into ranges of average housing price per square metre, from below 250 €/m<sup>2</sup> up to more than 8,000 €/m<sup>2</sup>, shown in colours ranging from purple and blue to green, yellow and orange.

The map shows that prices in the Romanian part are very low, ranging from 60 to 1,000 €/m<sup>2</sup>. Only the towns of Arad, Oradea, and Satu Mare have higher prices, with average advertised prices ranging from 1,000 to 2,000 €/m<sup>2</sup>. There are a number of areas in Romania where the low price is below 250 €/m<sup>2</sup>. In the Hungarian part, prices are higher, and the middle category, ranging from 1,000 to 2,000 €/m<sup>2</sup>, is more common alongside the lower categories. The middle categories include the areas of Szeged, Békéscsaba, Debrecen, and Nyíregyháza. The border forms a partial barrier in the advertised average prices per square meter. There are no data available on the average sales price in some places for cross-border areas on both sides.

**Figure 2.16: Advertised housing prices**

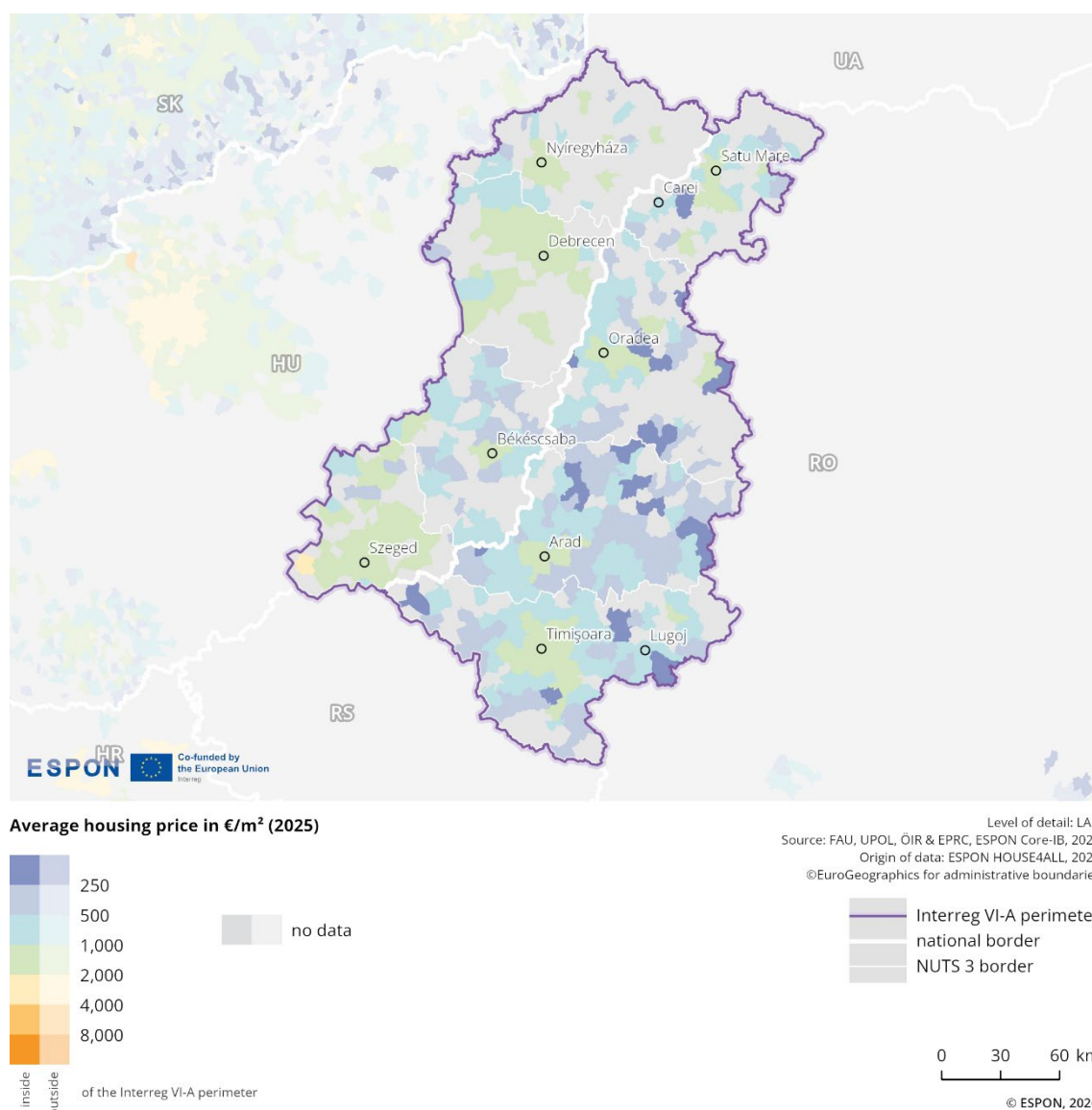
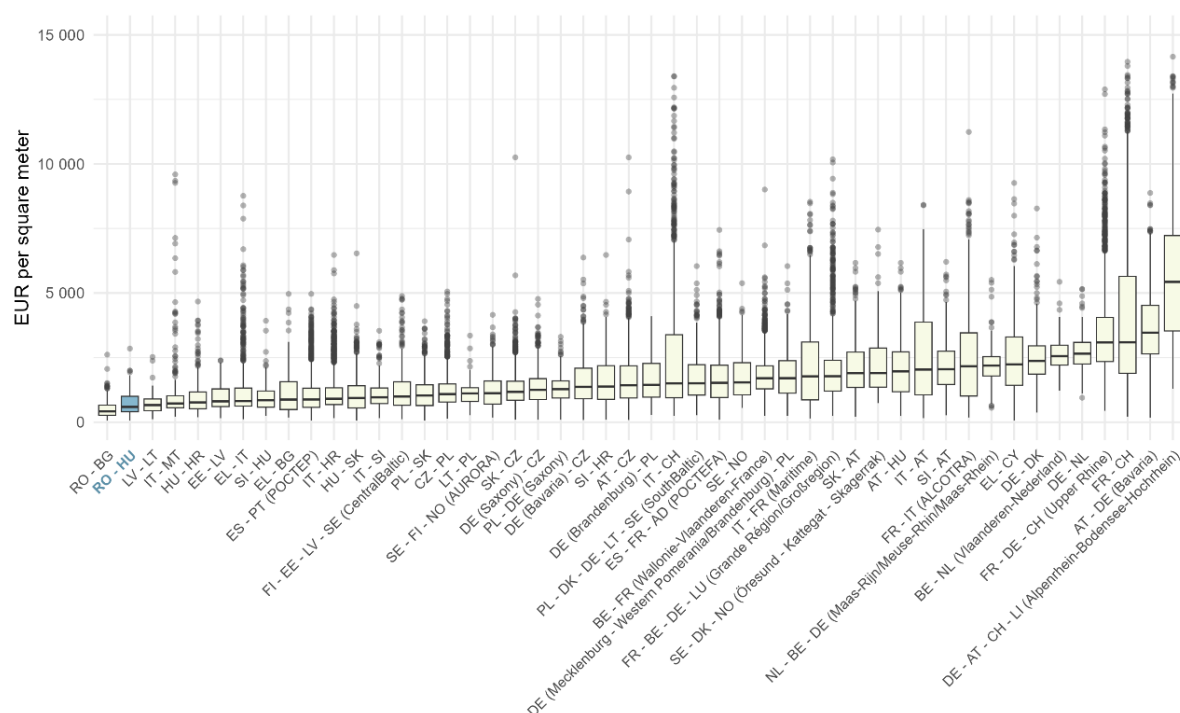


Figure 2.17 shows comparison of advertised sales prices across all 48 cross-border regions. The part of the border region in Hungary has an average advertised sales price of around 955 €/m².

The part of the border region in Romania has an average advertised sales price of around 620 €/m². Both averages are valid for the areas with known data.

The average advertised sales price in this entire cross-border region is 732 €/m², which is significantly below the average of all EU evaluated border regions at 1,900 €/m². The prices are below the European average of 5,600 €/m².

**Figure 2.17: Advertised housing prices (comparison)**

## 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.

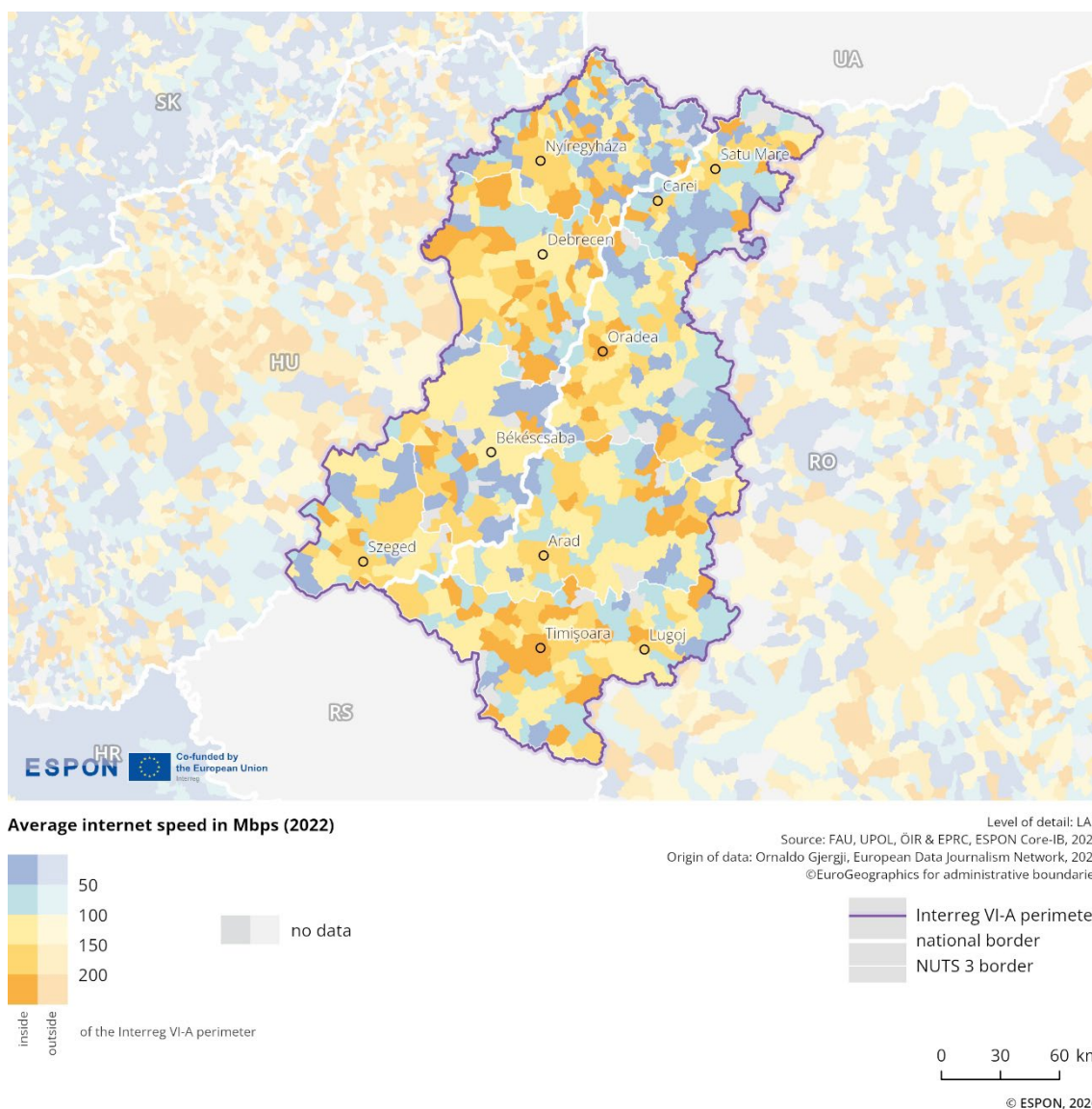
Digitalisation is a highly relevant issue in European border regions, with the overarching objective of ensuring appropriate digital access. It is widely recognised as a key precondition for successful regional and economic development. A major challenge in this process is preventing ‘digital divides’— 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 differences between urban and rural areas. Values range from under 50 Mbps to over 200 Mbps. Cities such as Satu Mare, Carei, Oradea, Arad, Lugoj, Szeged, Békéscsaba, Debrecen, and Nyíregyháza report relatively high average speeds, while surrounding areas tend to have 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.

**Figure 2.18: Average internet download speed**



### 2.2.5 Key messages on the economic dimension

The Romania-Hungary cross-border region shows a dynamic but uneven economic profile. GDP per capita stands at around one-third of the EU average, yet the region has experienced remarkable growth since 2014, with Romania's border counties expanding a bit faster than their Hungarian counterparts. This growth, driven largely by manufacturing and service sectors, has reduced internal disparities but not fully eliminated the broader gap with European levels.

The labour market reveals ongoing weaknesses, i.e. employment rates remain below both national and EU averages, while the working-age population continues to shrink, particularly on the Romanian side. Despite these demographic pressures, the programme area's economic structure has remained broadly stable. Manufacturing and energy-related industries, together with trade, transport, and health and education services, account for more than half of gross value added. Cross-border differentials in hourly wages are limited, reducing incentives for large-scale one-directional commuting.

Against this labour market and wage context, housing conditions and digital infrastructure become important factors shaping economic integration and future development opportunities in the border region. At the same time, housing and infrastructure reflect asymmetries and opportunities. Property prices are low compared to EU border averages, yet urban centres such as Arad, Oradea, Szeged and Debrecen show localised peaks. Internet connectivity highlights sharp rural-urban divides where major cities report high speeds (e.g. Oradea, Timișoara, Nyíregyháza), while surrounding rural areas lag behind (e.g. northeast of Nyíregyháza, south of Satu Mare). Together with the framework for cross-border telework, these conditions might suggest some policy priorities. For example, addressing digital inequalities and supporting sustainable labour integration (though not typically managed by Interreg funding schemes) to strengthen the economic cohesion of the borderland could be seen as potential for future development.

## 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.

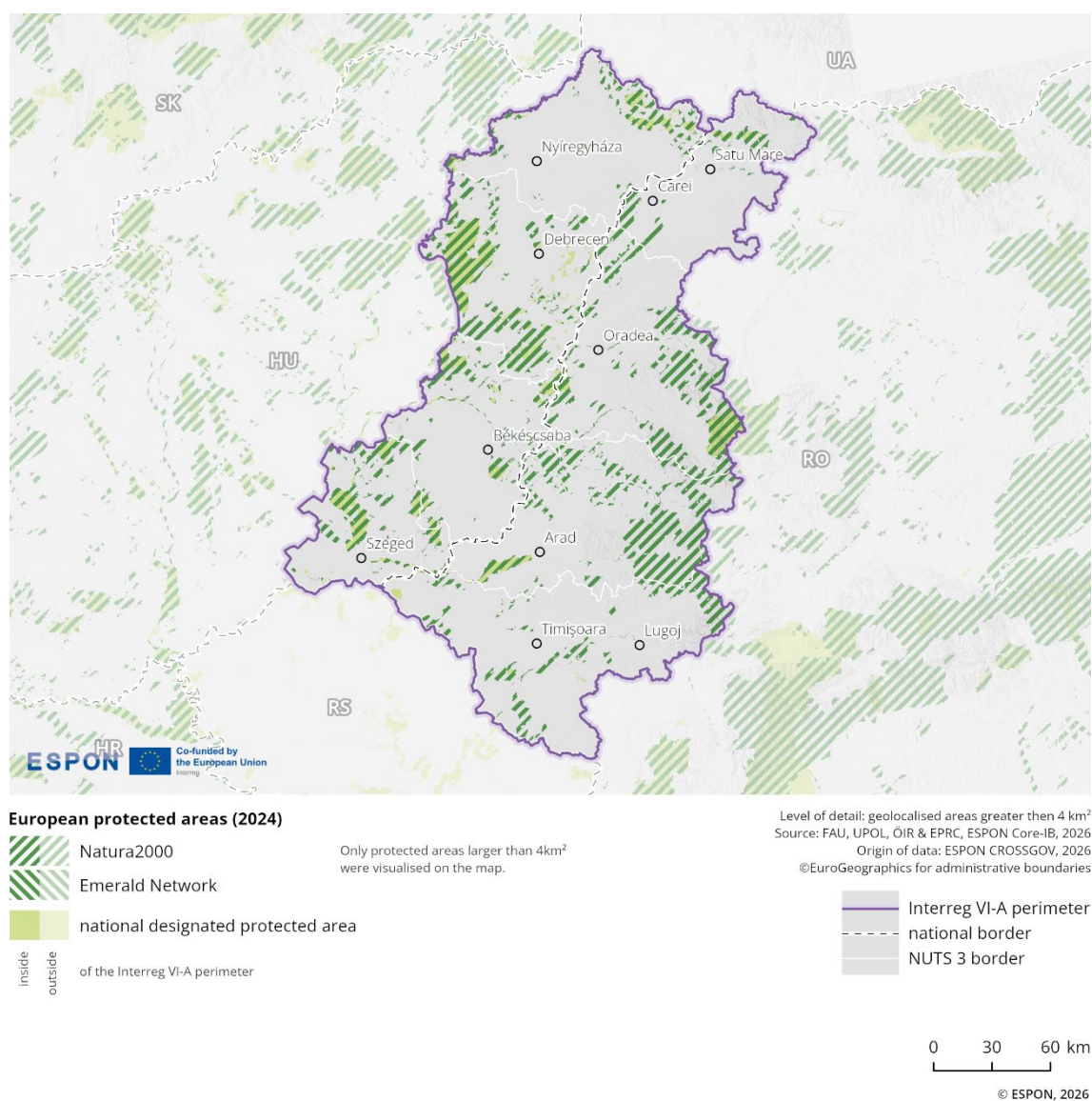
- **Source/method of retrieval:** The indicator represents a combination of nationally designated areas, Natura 2000 and Emerald network provided by EEA (European Environment Agency) Geospatial data catalogue.
- **Temporal coverage:** 2024
- **Unit:** n/a

Please refer to the technical annex for more information.

Figure 2.19 illustrates the distribution of protected areas in 2024 across the border region. The data differentiate between Natura 2000 sites, the Emerald Network, and nationally designated protected areas, with only protected areas larger than 4 km<sup>2</sup> displayed.

Larger protected areas within the Interreg region are mainly concentrated in the central and southeastern zones, particularly west of Debrecen and north of Lugoj. Additional clusters are located near Satu Mare and Szeged however these show more fragmented and sparse coverage. Overall the area lacks larger nationally protected areas, and most Natura 2000 areas are comparably small and patchy, yet do cover a significant terrain.

Several protected areas along the border, especially in the centre, display fragmented cross-border counterparts between Hungary and Romania. Overall the protected areas in the region are rather sparse and not quite continuous.

**Figure 2.19: Nature protected areas**

### 2.3.1.2 Air pollution

#### Indicator description

The indicator shows the air pollution from fine particulates (PM<sub>2.5</sub>) at NUTS3 level. The data shows the population-weighted average air pollution level (μg/m<sup>3</sup>), 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/m<sup>3</sup>

Please refer to the technical annex for more information.

Figure 2.20 illustrates PM<sub>2.5</sub> concentrations (in  $\mu\text{g}/\text{m}^3$ ) across NUTS3 regions in Romania and Hungary. Each small dot represents an individual measurement, while the black crosses indicate the average PM<sub>2.5</sub> concentration for each NUTS3 region<sup>10</sup>. The regions are aligned along the x-axis, with Hungarian regions on the left (in red) and Romanian regions on the right (in blue).

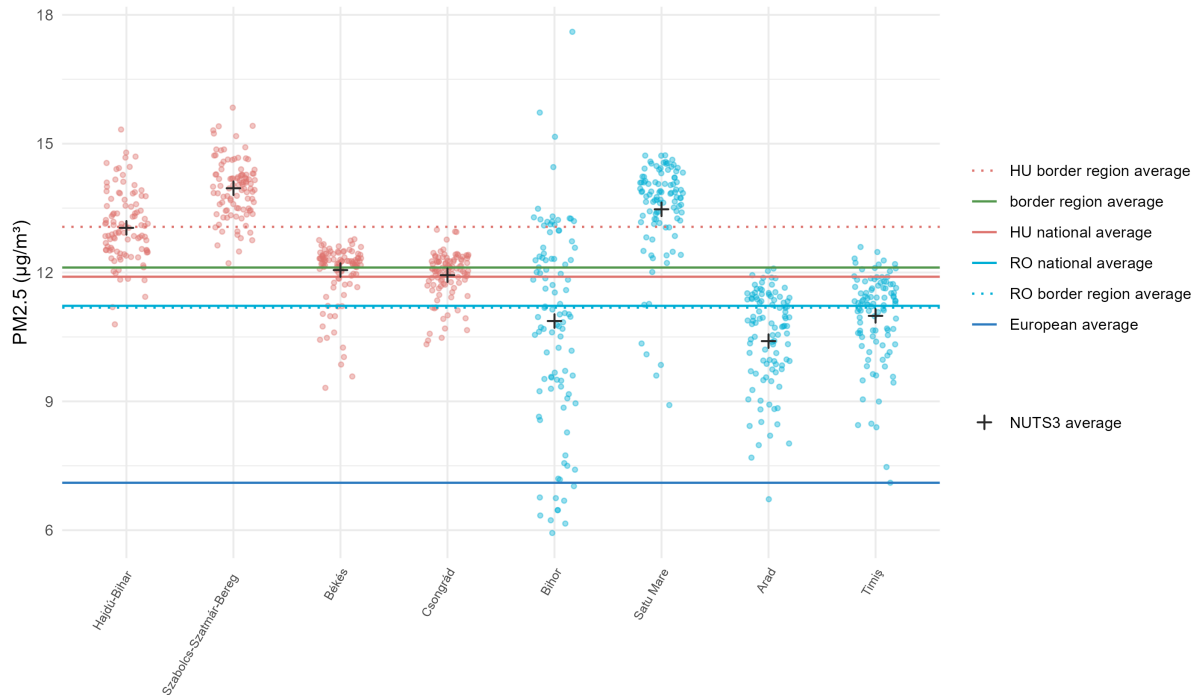
PM<sub>2.5</sub> measurements in the Romanian and Hungarian regions are relatively tightly clustered, with most values ranging between 10 and 15  $\mu\text{g}/\text{m}^3$ . Overall, at the national level, Hungary records a slightly higher average PM<sub>2.5</sub> level than Romania.

Hungary's national average is around 12  $\mu\text{g}/\text{m}^3$ , which is aligned with the cross-border average, while the Hungarian border region average is slightly higher.

In contrast, the Romanian national average and the border region average are almost aligned at a PM<sub>2.5</sub> level of approximately 11.5  $\mu\text{g}/\text{m}^3$ .

The European average is around 7  $\mu\text{g}/\text{m}^3$ , which is lower than both the Romanian and Hungarian values. The cross-border average is slightly around 12  $\mu\text{g}/\text{m}^3$ , making it higher than the European and Romanian national average. This cross-border average reflects the higher PM<sub>2.5</sub> values in the Hungarian border region and the lower values in the Romanian border region.

**Figure 2.20: Air pollution**



<sup>10</sup> 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.

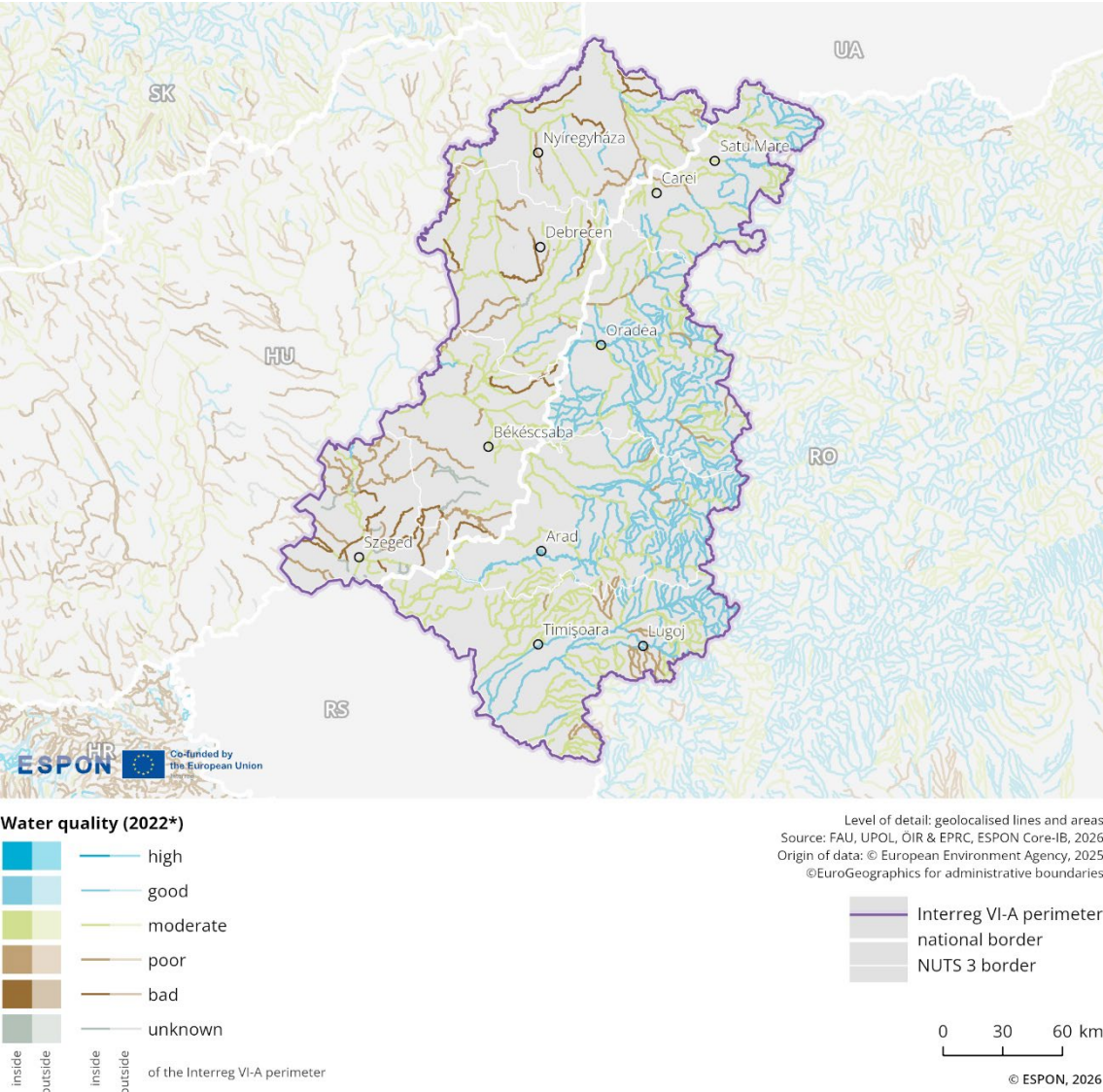
Figure 2.21 illustrates water pollution levels in Hungary and Romania within their Interreg region in 2022. Water quality is represented using 6 colour-coded categories, ranging from "bad" to "high", including an "unknown" category<sup>11</sup>.

In the Hungarian part, a mixed pattern of water qualities is shown. Many rivers are rated as "poor" or "moderate", with only a few achieving "good" water quality. In the southern area around Szeged water quality is mostly rated as "poor" or "bad".

In the Romanian part, water quality is predominantly rated as "good", particularly towards the east. The southern part is rated as mostly "moderate" with "poor" water qualities around Lugoj.

<sup>11</sup> For more information see the Water Framework Directive Reporting Guidance (2022): [https://cdr.eionet.europa.eu/help/WFD/WFD\\_715\\_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. More information in the topic disaster and risk management in cross-border region can be found in the study “Strengthening the resilience of EU border regions: Mapping risks & crisis management tools and identifying gaps.”<sup>12</sup>

### 2.3.2.1 Natural hazard risks

#### Indicator description

The indicator shows the risk the cross-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

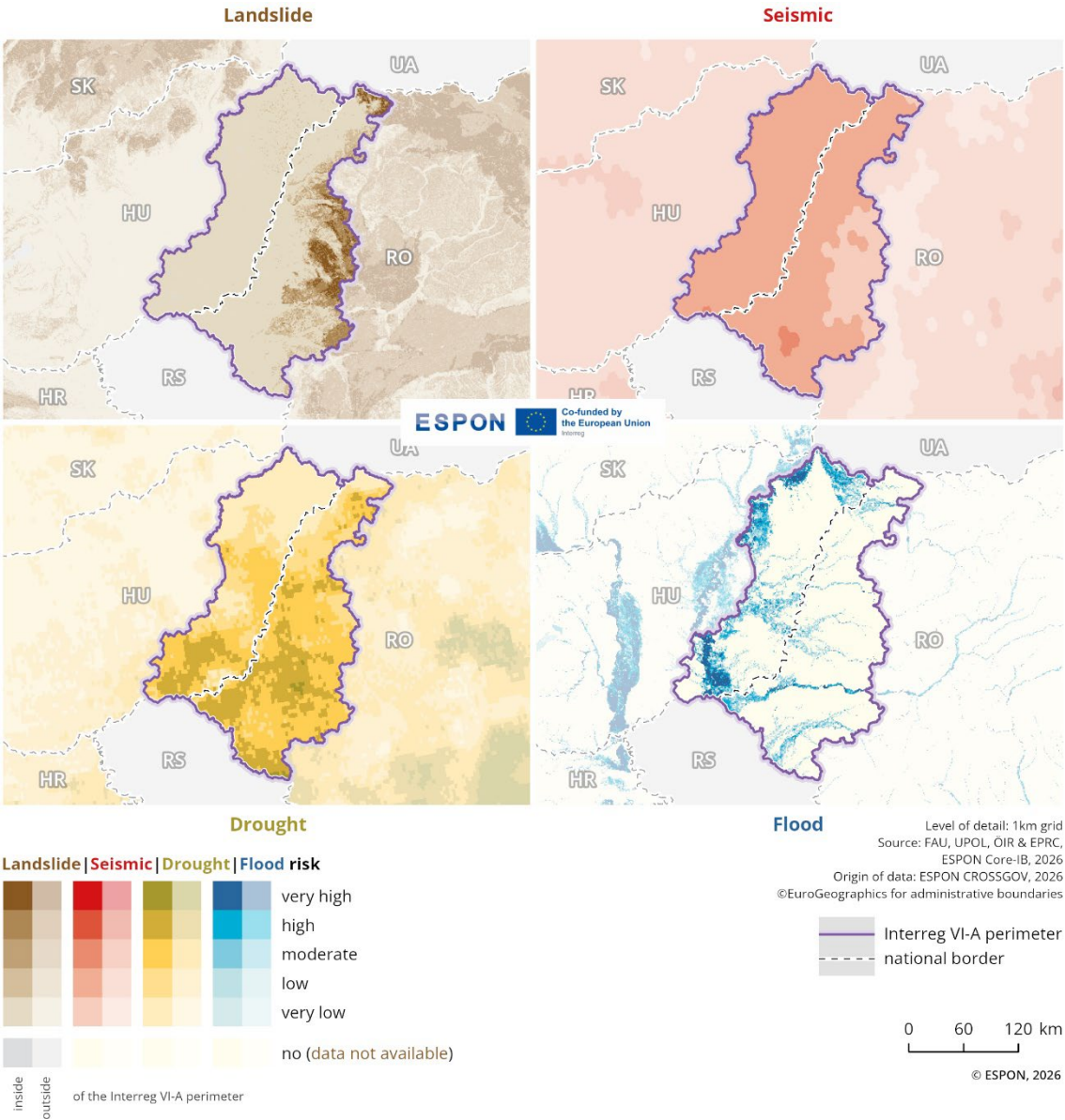
Please refer to the technical annex for more information.

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

Landslides are far more common in the very east of the region, on the Romanian side, where the Apuseni mountains are located. Seismic activities are low across the region, while droughts are more common in the south on both sides of the border. The Tisa River poses the biggest flood risk in the region, but is mainly located in Hungary.

<sup>12</sup> see [Inforegio - Strengthening the Resilience of EU Border Regions](#).

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. More on cooperation between regions and countries in the energy sector is found in the Handbook on Cross-border Energy Communities.<sup>13</sup>

#### 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

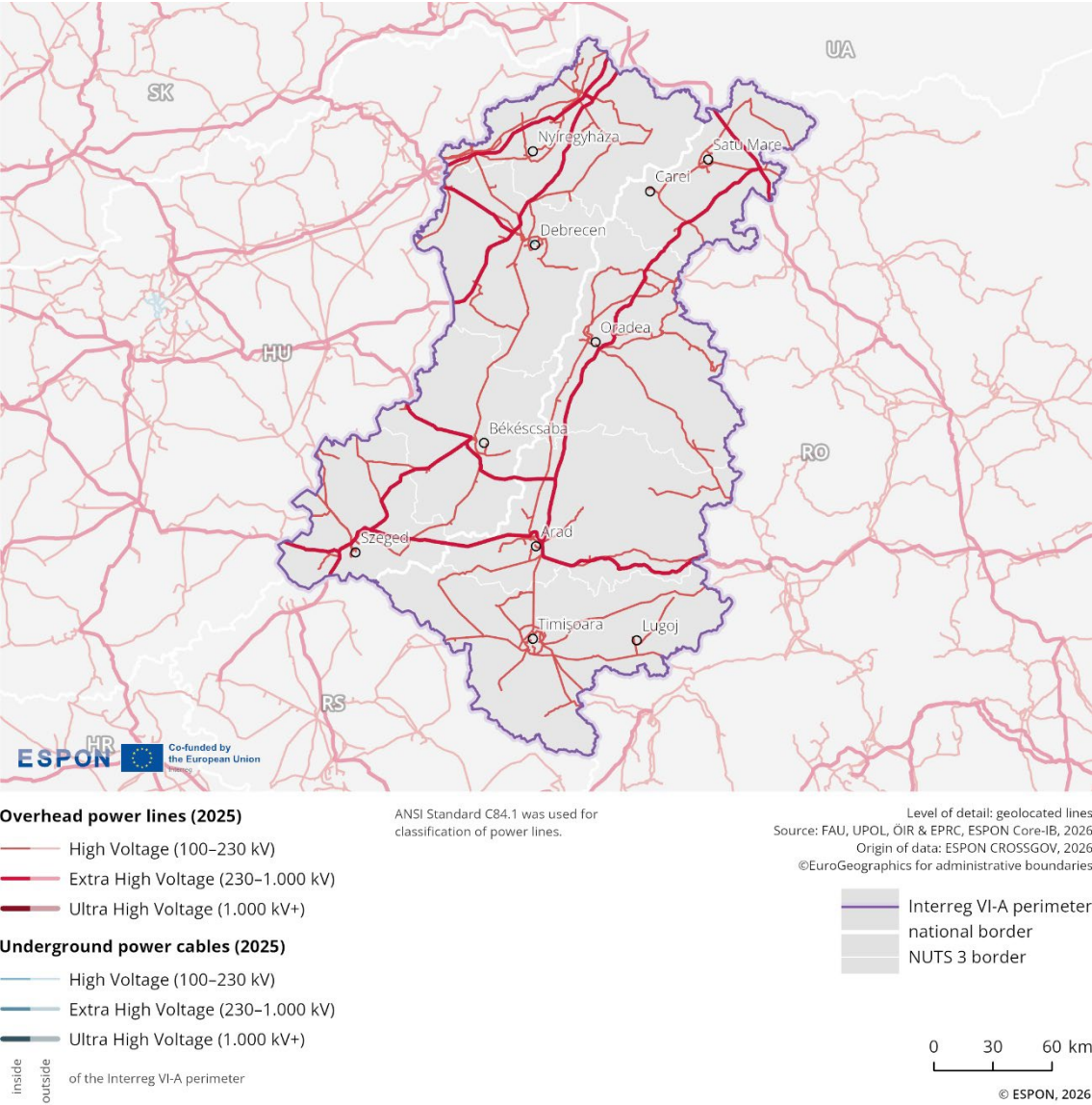
Please refer to the technical annex for more information.

Figure 2.23 illustrates the distribution of power lines and cables in 2025 across the 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 Romania-Hungary features relatively extensive and high- and extra high-voltage energy infrastructure. A considerably branched network of extra high-voltage lines in the north and south of the cross-border region are complemented with a network of high-voltage lines. The main directions of the extra high-voltage lines are north-south on both sides of the border. In the southern part of the cross-border region, there is a diagonal direction from the city of Szeged (Hungary) via Arad (Romania) further east into the inner territory of Romania. There are 2 direct connections between the 2 countries via an extra high-voltage power lines in the southern parts of the cross-border region.

<sup>13</sup> see [Inforegio - Handbook on Cross-border Energy Communities](#).

Figure 2.23: High-voltage transmission infrastructure



### 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

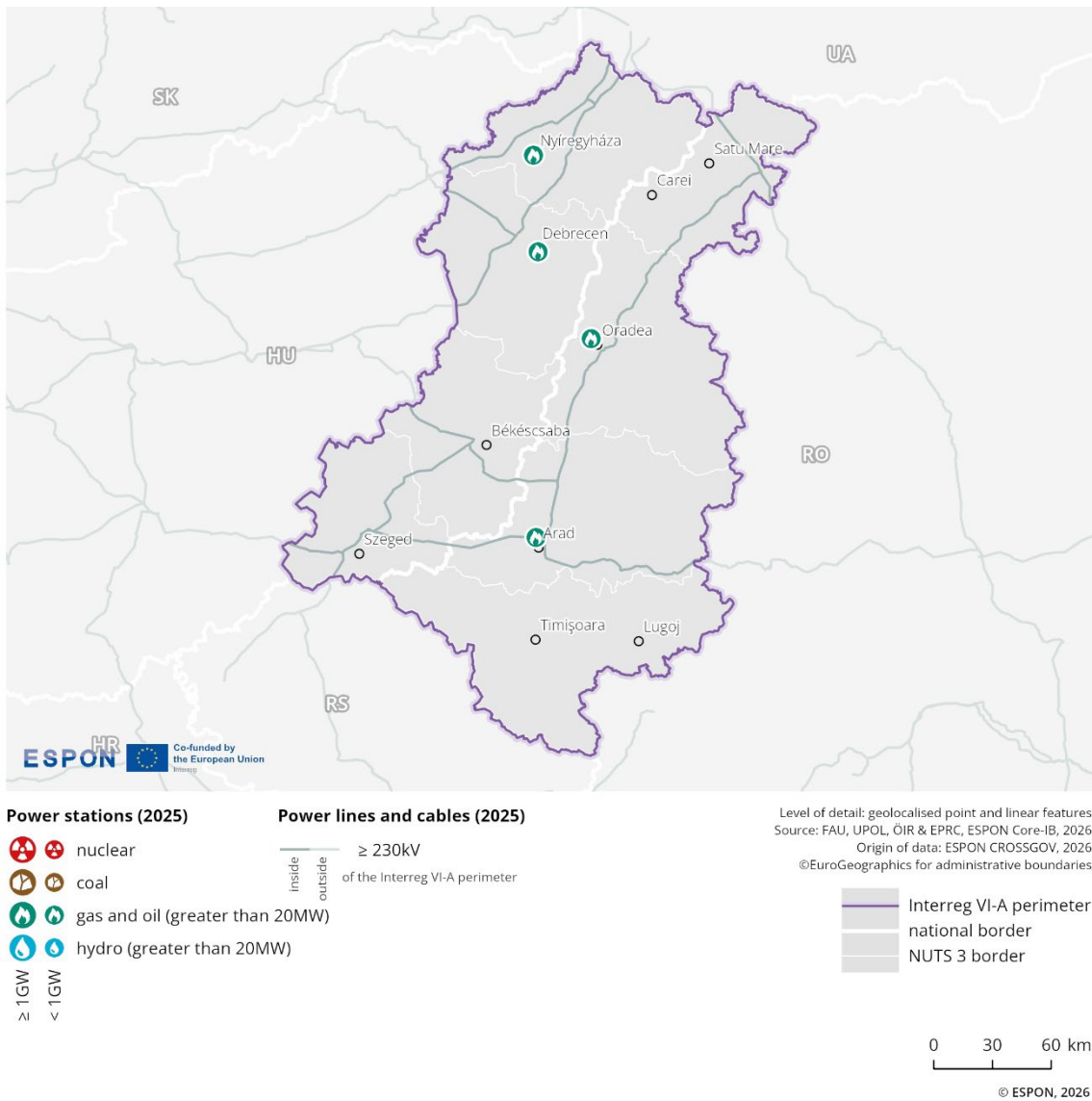
Please refer to the technical annex for more information.

In the Romania-Hungary cross-border region, in total, there are 4 power station locations (Figure 2.24) – all of them are represented by gas and oil power stations (Table 1). There are 2 such facilities in each country – in Romania near the cities of Arad and Oradea, and in Hungary near Debrecen and Nyíregyháza. No other type of power station/plant is present in the region.

**Table 1: Number and type of power stations**

| Power stations/plants | Less than 1GW | 1GW and up |
|-----------------------|---------------|------------|
| Nuclear               | /             | /          |
| Coal                  | /             | /          |
| Gas and oil           | 4             | /          |
| Hydro                 | /             | /          |

Figure 2.24: Power stations infrastructure



### 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

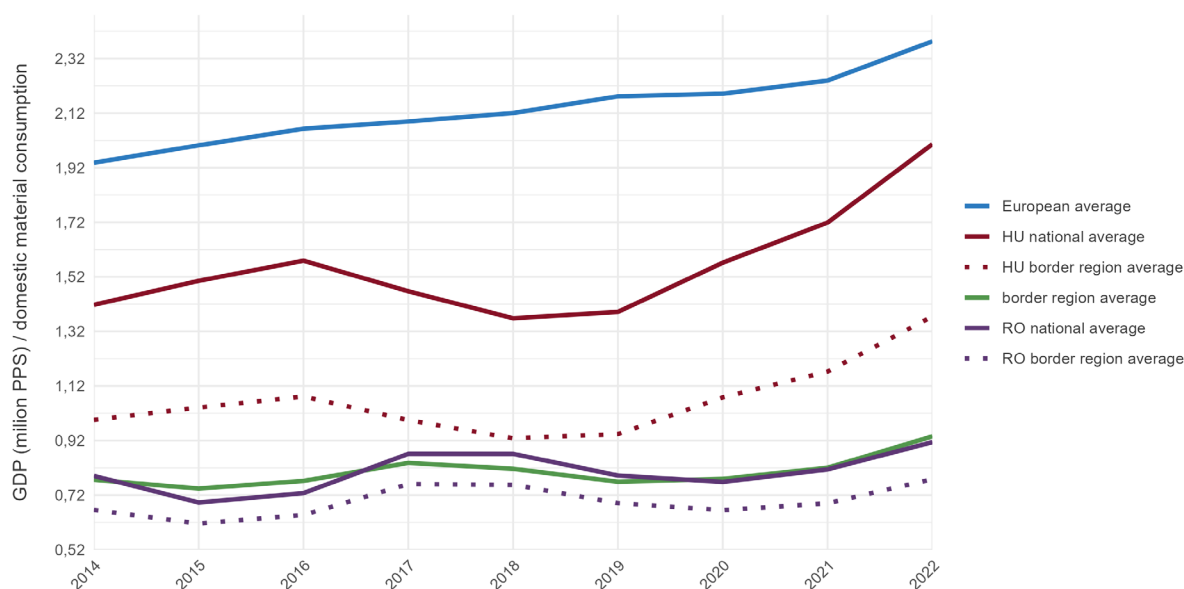
The indicator shows the economic value generated per unit of material consumed for each region within the cross-border area. Developments over time provide insights if the decoupling of productivity from resource use is progressing on regional level.

- **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 national averages, the averages of their respective border regions, and the overall border regional average with the European average.

**Figure 2.25: Resource productivity**



The Hungarian and Romanian national averages both show an upward trend over the observed period, although with several fluctuations. The Romanian national average shows a slight decrease in 2015 but rises again afterward, reaching around 0.92 million PPS/DMC in 2022. Over the observed period, the

figure is almost aligned with the border region average. The Romanian border region average follows a similar trend but is on a slightly lower level.

The Hungarian national average shows a slight decrease between 2016 and 2019, followed by a sharp increase, reaching around 2.0 million PPS/DMC in 2022. The Hungarian border region average follows a similar trend but at a lower level, reaching around 1.3 million PPS/DMC in 2022.

The European average lies significantly above both the Hungarian and Romanian values. The border region average represents a combination of the lower Romanian border region values and the higher Hungarian border region values, reaching approximately 0.92 million PPS/DMC in 2022.

### 2.3.4.2 Generation of waste per GDP

#### Indicator description

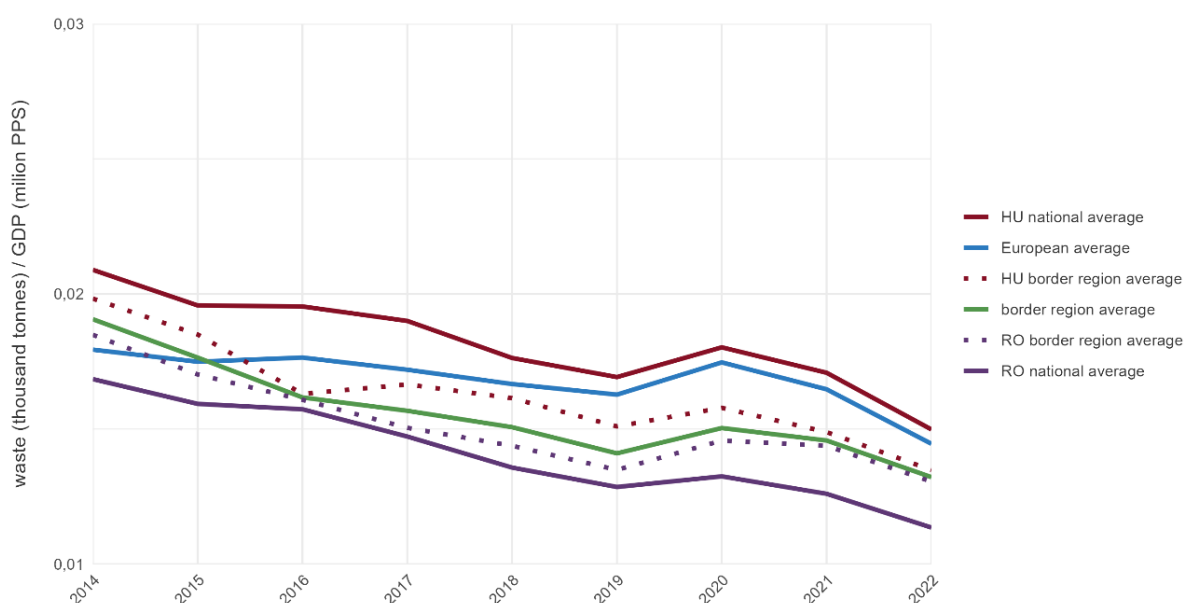
The indicator shows the regional distribution of waste creation in relation to the GDP development. Comparing waste generated to GDP reflects the waste intensity of the economy and provides a measure of “eco-efficiency”. Observation of its change from year to year permits to assess whether the economy 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 Romania, Hungary and their Interreg border region.

**Figure 2.26: Waste generation per GDP**



Hungarian and Romanian values show a steady downward trend over the observed period, with Hungarian values consistently higher than Romanian values. In 2022, the Hungarian national average is around 0.015 tonnes of waste per million PPS, while the Romanian national average is approximately 0.012 tonnes. The Romanian border region average is slightly higher than the national average. In contrast, the Hungarian border region average is notably lower than the national average.

The European average gradually decreases from around 0.018 in 2014 to approximately 0.015 tonnes of waste per million PPS in 2022. Throughout the period, it remains lower than the Hungarian national average but higher than the Romanian national average. Since 2015, it has also been higher than the cross-border regional average.

The cross-border region average consistently remains between the higher values of the Hungarian border region and the lower values of the Romanian border region. From 2020 onwards, all 3 values begin to converge. In 2022, the cross-border average reaches approximately 0.013 tonnes of waste per million PPS.

### 2.3.5 Key messages on the green dimension

The Romania–Hungary cross-border region is defined by a mixture of ecological assets and environmental vulnerabilities. Protected areas exist on both sides, but they tend to be fragmented and relatively small, with limited continuity across the border. Natura 2000 sites cover a substantial share of the land, yet ecological corridors remain rather discontinuous. Therefore, there is a potential for joint environmental initiatives and cooperation, and there also exist clear opportunities for sustainable development and environmental protection. Air quality differs across the region. While Romania records slightly lower PM<sub>2.5</sub> averages (in µg/m<sup>3</sup>) than Hungary, both sides remain above the EU mean, pointing to persistent pressure from energy use, industry and agriculture. Water quality assessments for major rivers show clear contrasts: Romanian stretches are predominantly rated as “good,” especially further east, whereas Hungarian rivers show a patchwork of “poor” to “moderate” quality, with particularly problematic sections around Szeged. These differences show the uneven state of ecological protection and environmental health along the shared border.

The area faces shared climate risks, though with geographically distinct emphases. Droughts are increasingly common in the southern plains on both sides, while flood risk is concentrated around the Tisa River on the Hungarian side. Landslides are limited to the Apuseni Mountains in eastern Romania, and seismic activity remains generally low. These patterns suggest that while the cross-border region is exposed to climate hazards, they do not always manifest as cross-border phenomena. Still, the hydrological systems are interconnected, meaning that river basin management requires joint monitoring and preparedness.

Energy infrastructure reflects a degree of connectivity but also structural limitations. Both Romania and Hungary operate high- and extra-high-voltage transmission lines, with 2 direct cross-border connections in the southern part. Yet generation capacity is limited and narrowly based. The border region hosts only 4 power plants, all gas- and oil-fired, 2 on each side (near Arad and Oradea in Romania, Debrecen and Nyíregyháza in Hungary). The absence of renewables such as hydro, wind or nuclear in the immediate border zone indicates missing opportunities for green transition synergies. In terms of resource efficiency, Hungary demonstrates substantially higher resource productivity than Romania, while Romanian regions have lower but improving performance. Waste generation per unit of GDP is declining on both sides, but values remain somewhat higher in Hungary than in Romania. Taken together, these patterns underline both progress and persistent asymmetries. While the cross-border region shares environmental challenges and some infrastructure links, fragmented ecological networks, uneven water and air quality, and a reliance on fossil-based energy sources limit the degree of green integration.

## 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.

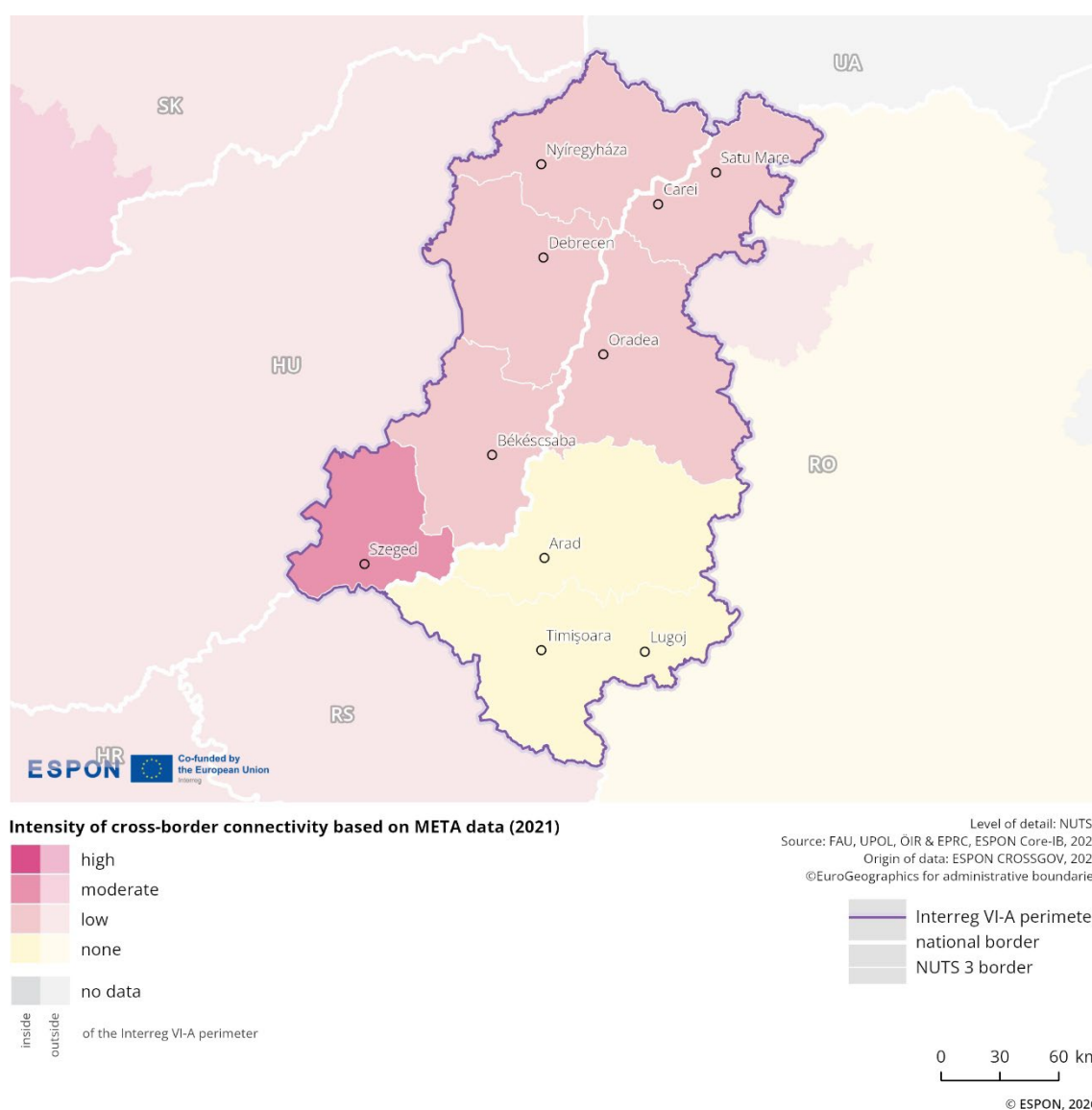
- **Source/method of retrieval:** Processing Facebook data on existing connections across the border (data for Good Meta)
- **Temporal coverage:** 2021
- **Unit:** n/a

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 interaction, 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 cross-border region is relatively homogeneous, so cross-border differences between the included states are not apparent. In most NUTS3 units<sup>14</sup> of the region (including the cities of Békéscsaba, Oradea, Debrecen, Carei, Nyíregyháza, and Satu Mare), cross-border connectivity in social media is assessed as low. Only in the southern part of the Hungarian area (around the city of Szeged), the cross-border connectivity in social media is medium, whereas in the southern areas of the Romanian part, the cross-border connectivity in social media is nonexistent (including the cities of Arad and Lugoj). Please note that thematic maps and findings based on NUTS3 data may not fully reflect local realities due to internal disparities within these territorial units.

<sup>14</sup> 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=49.69576,14.33324&lcis=NUTS2021L3&>

**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. However, there is a strong Hungarian community in Romania, in the regions north from Oradea. For example, one-third of the Satu Mare region is populated by ethnic Hungarians, and in Carei itself, more than half of the population is also of Hungarian origin. On the Hungarian side of the border, there are municipalities in its vicinity where, on the contrary, a large Romanian minority lives (between 10% and 40% of the population of these settlements); mainly east of Békéscsaba. This shows not necessarily the closeness of the 2 languages themselves, but rather the general linguistic and ethnic interconnectedness of the cross-border region. Rights to use language and access to education are regulated adequately.

## 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.

In 2023, all regions in the programme area less than 5 nights per capita. In terms of total overnight stays over the 3-year period, the leading tourism regions are Bihor (approx. 1.5 million) in Romania and Hajdú-Bihar (approx. 1.4 million) in Hungary<sup>15</sup>. Please note that thematic maps and findings based on NUTS3 data may not fully reflect local realities due to internal disparities within these territorial units.

<sup>15</sup> 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=49.69576,14.33324&lcis=NUTS2021L3&>

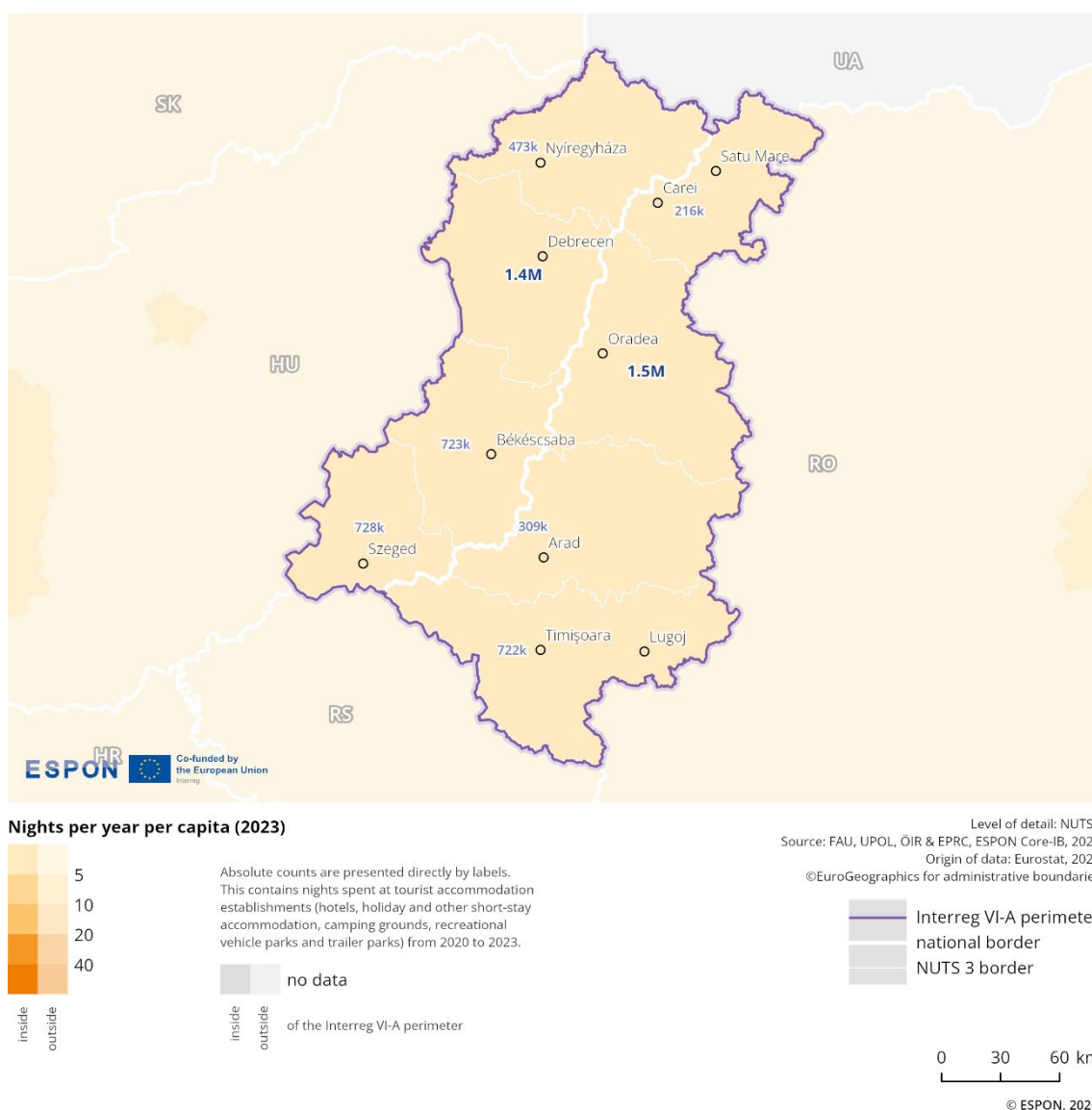
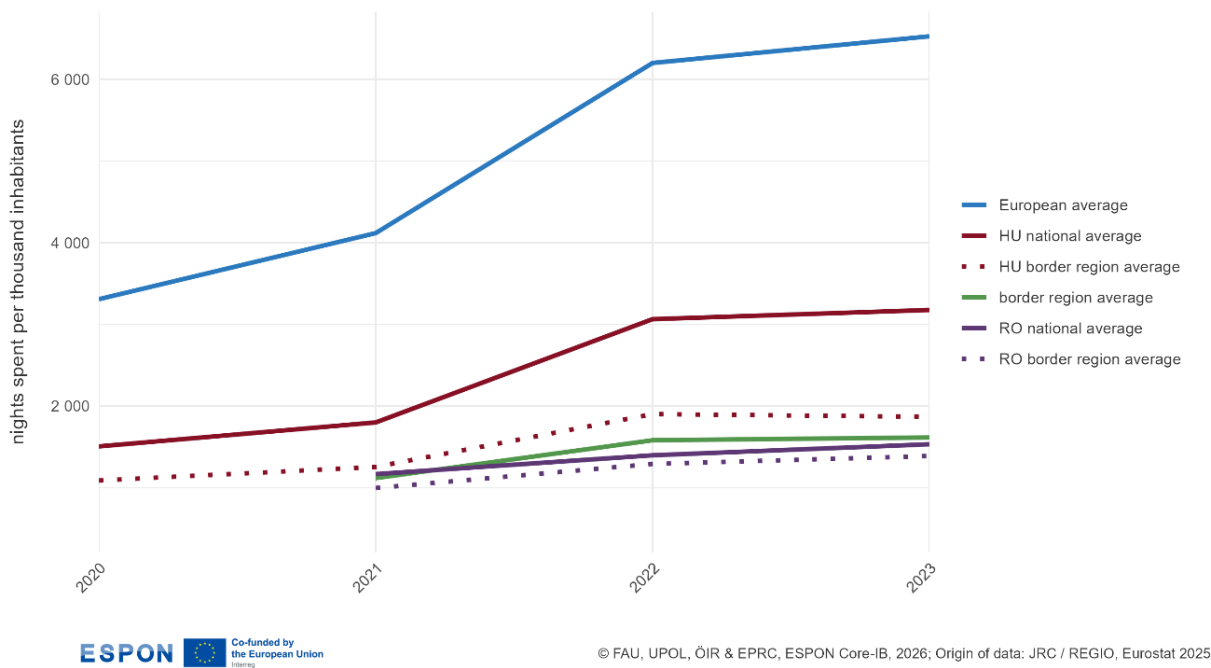
**Figure 2.28: Overnight stays in tourism**

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 Romania-Hungary programme area is lower than the overall European average, which includes both EU member states and the EFTA countries Iceland, Liechtenstein, Switzerland and Norway. In all 4 years, the border regional averages of both countries are lower than their respective national averages. Additionally, the regional average for the Hungarian border area is somewhat higher than that for the Romanian 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)



### 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 Romania–Hungary border area, essential services such as doctors, pharmacies, schools, and grocery shops are evenly distributed in Hungary but less evenly distributed in Romania, where they are more concentrated in cities and densely populated areas. This results in travel times of less than one hour across most of Hungary but sometimes more than one hour in parts of Romania, such as the northeast of Arad and for schools, doctors, and grocery shops in the northeastern regions.

Near the national border, travel times to schools and pharmacies are somewhat longer in the southern regions than in the northern ones.

Hospitals, as medical services, are primarily located in cities and more densely populated areas. This creates an urban–rural gradient, with shorter travel times in and around urban centres and longer travel times in rural or remote regions. The same pattern applies to cinemas as a cultural service.

Figure 2.30: Travel time to secondary schools

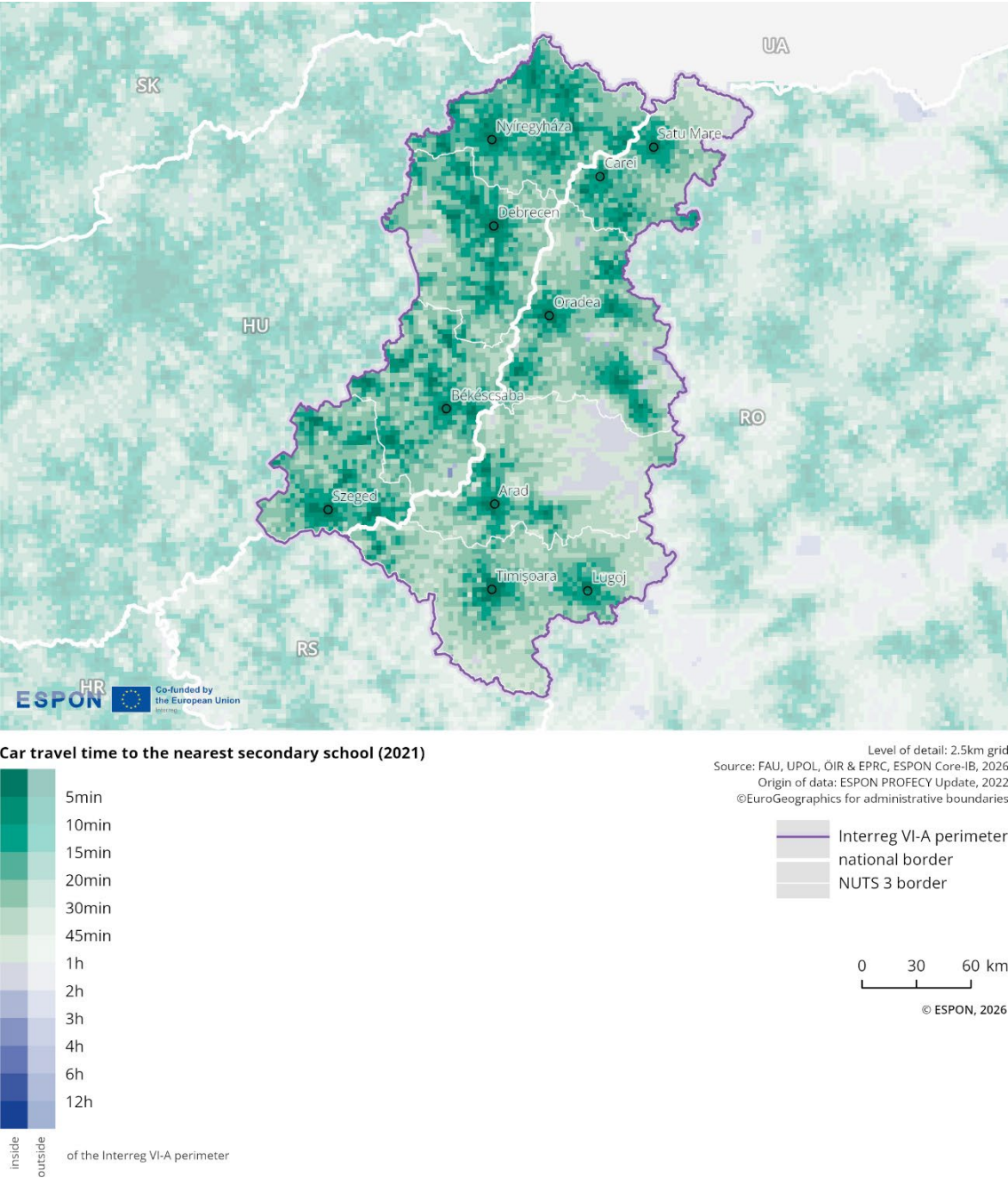
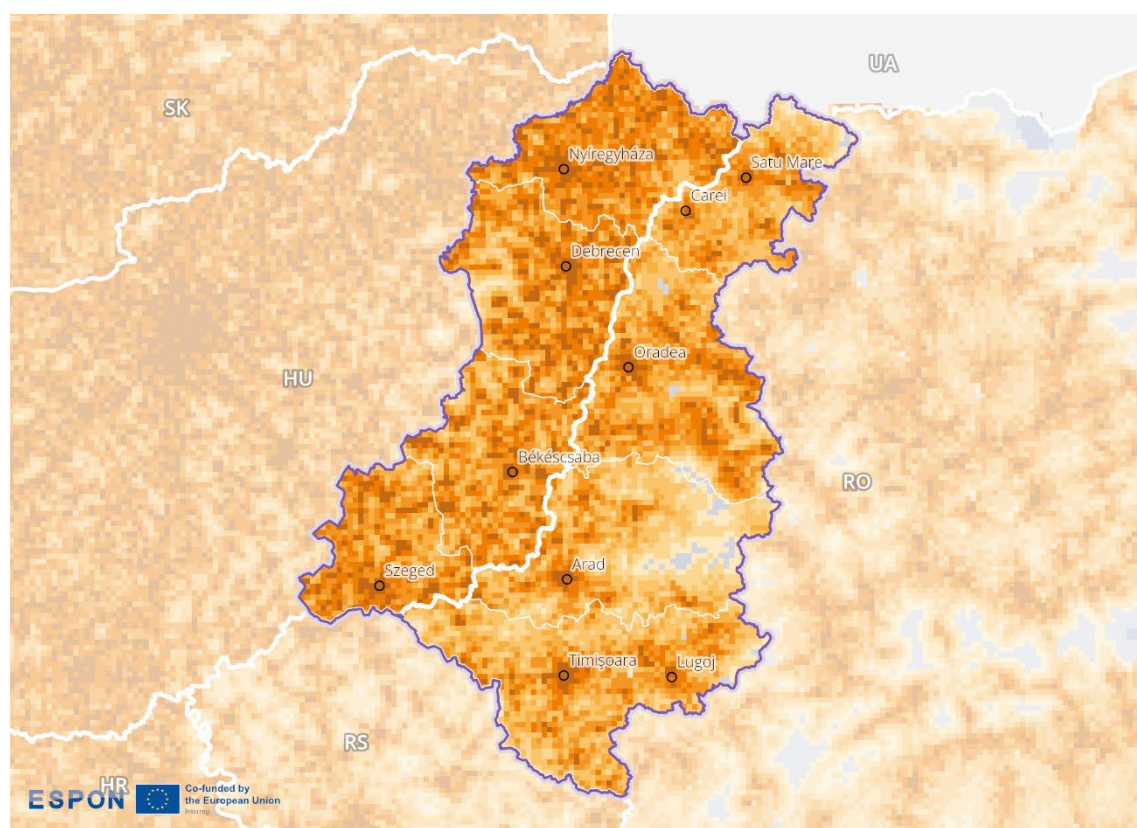
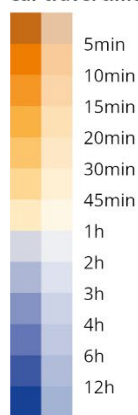


**Figure 2.31: Travel time to grocery shops**



**Car travel time to the nearest shop (2021)**



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 PROCECY Update, 2022  
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter  
national border  
NUTS 3 border

0 30 60 km

© ESPON, 2026

Figure 2.32: Travel time to hospitals

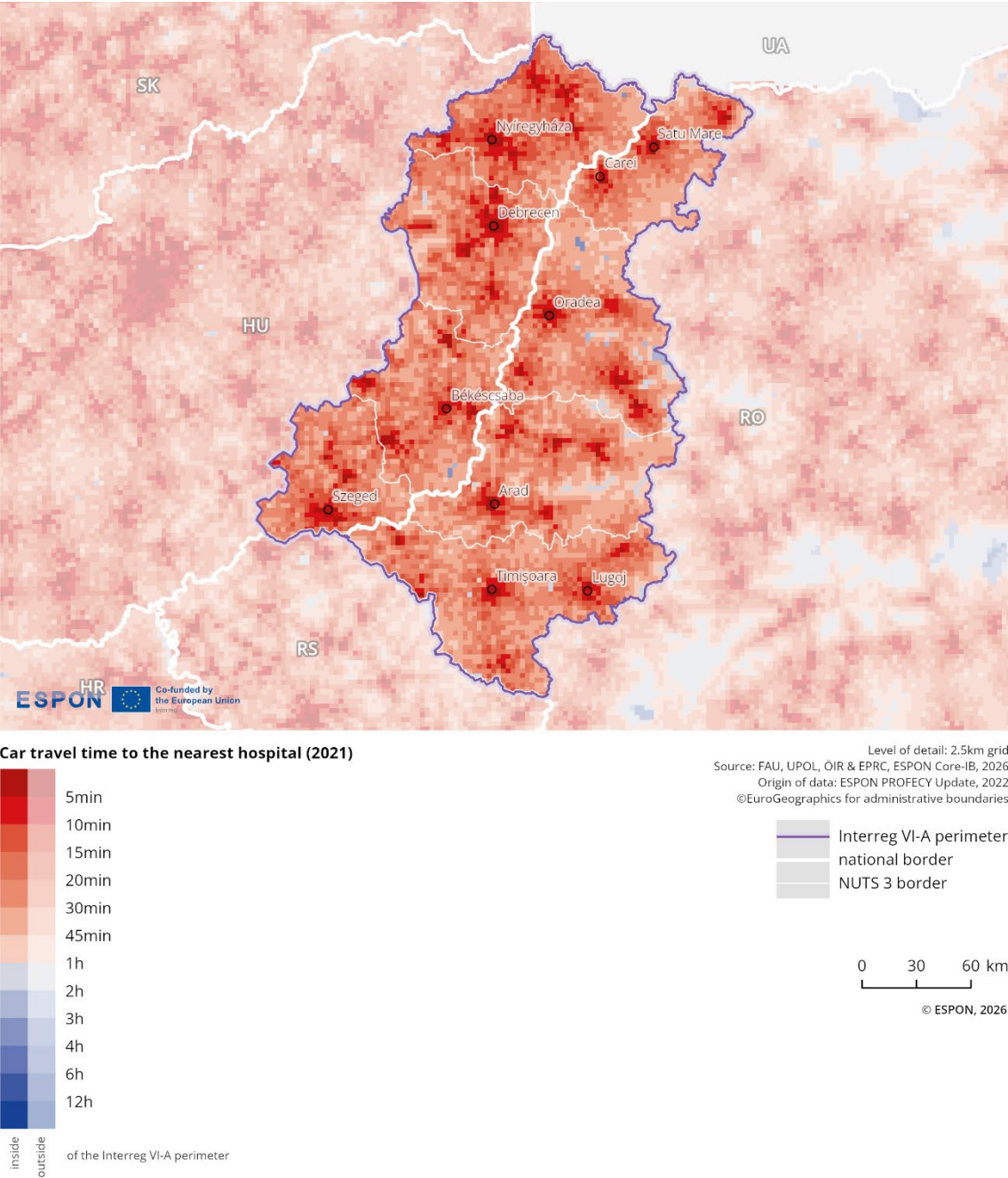
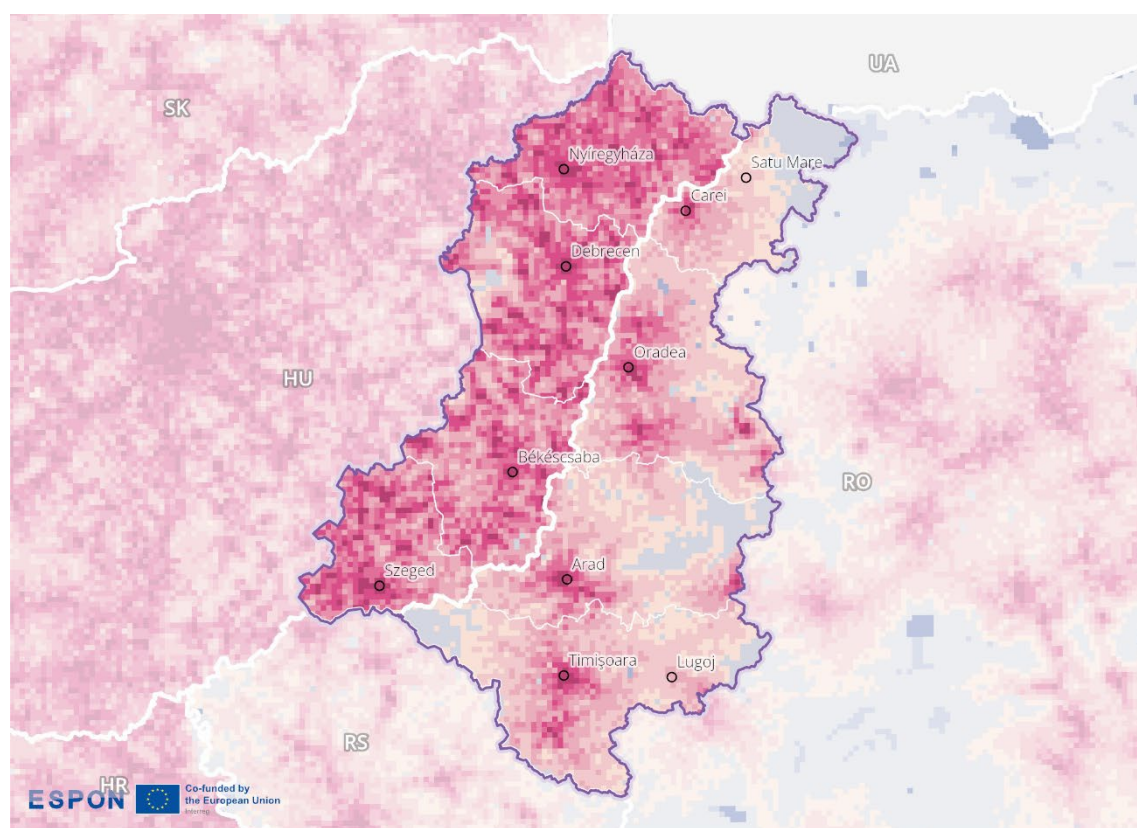
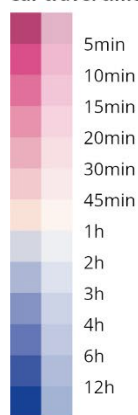


**Figure 2.33: Travel time to doctors**



**Car travel time to the nearest doctor (2021)**



inside  
outside  
of the Interreg VI-A perimeter

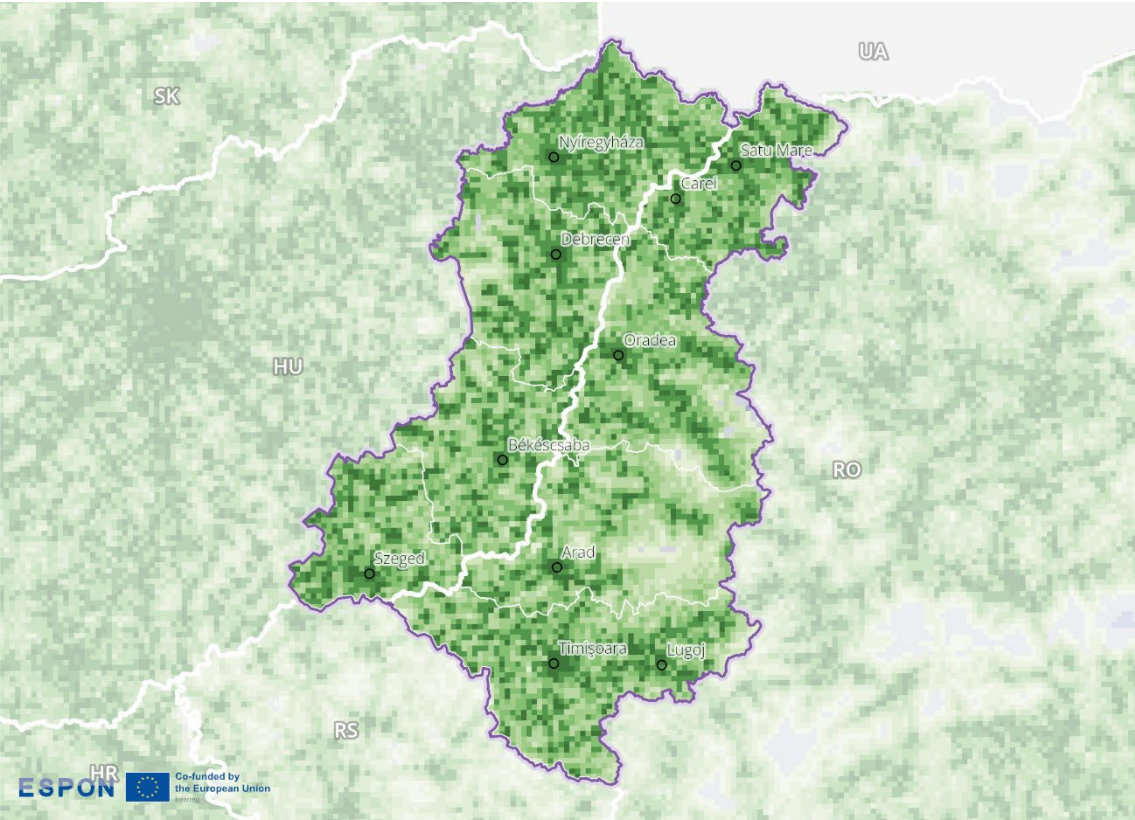
Level of detail: 2.5km grid  
Source: FAU, UPOL, OIR & EPRC, ESPON Core-IB, 2026  
Origin of data: ESPON PROCECY Update, 2022  
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter  
national border  
NUTS 3 border

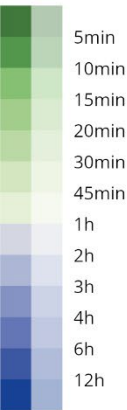
0 30 60 km

© ESPON, 2026

Figure 2.34: Travel time to pharmacies



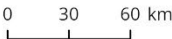
Car travel time to the nearest pharmacy (2021)



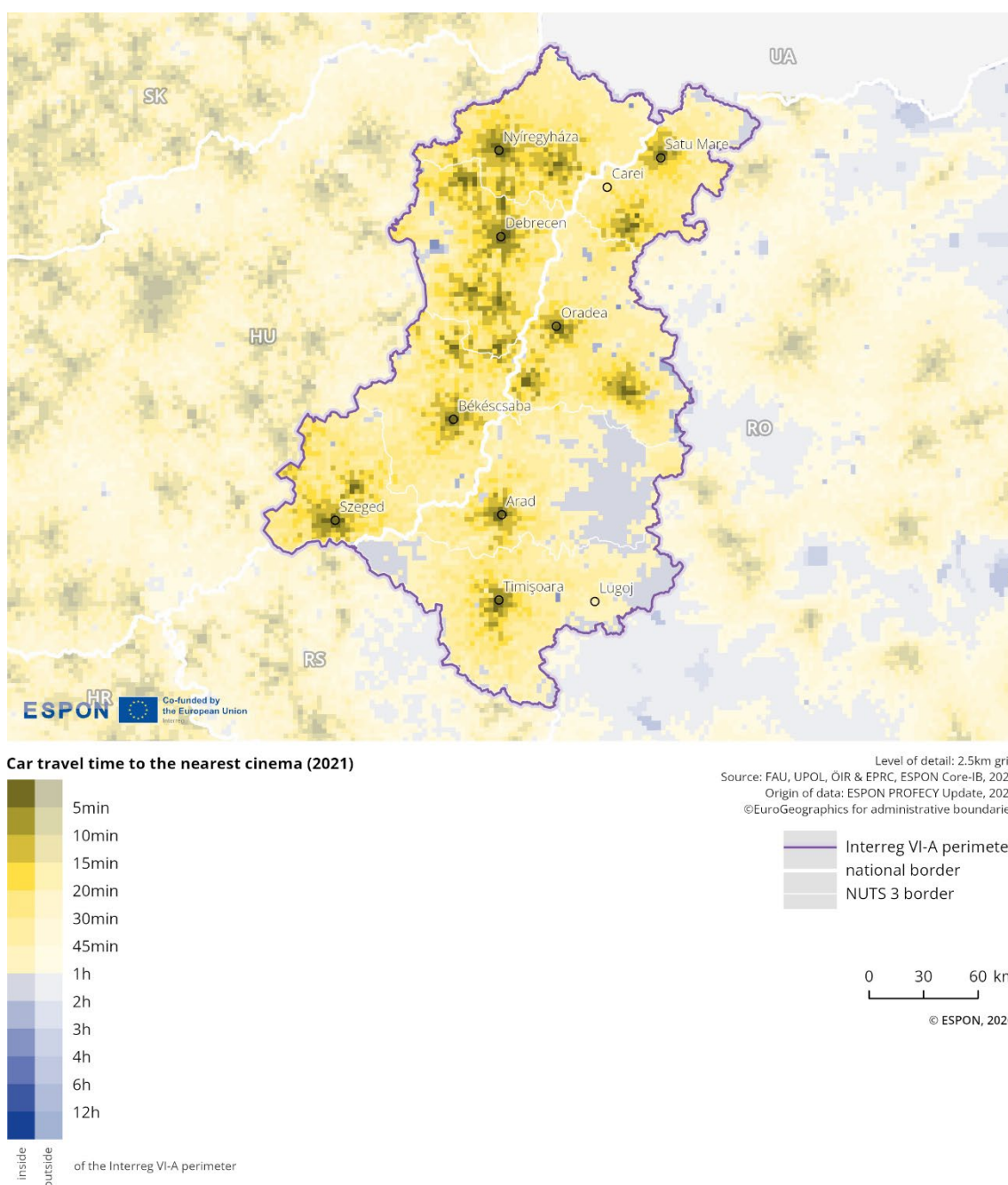
inside  
outside  
of the Interreg VI-A perimeter

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

Interreg VI-A perimeter  
national border  
NUTS 3 border



© ESPON, 2026

**Figure 2.35: Travel time to cinemas**

#### 2.4.4 Key messages on the socio-economic dimension

The socio-economic profile of the Romania–Hungary cross-border region is marked by low levels of cross-border connectivity in social media across the border and linguistic commonalities. Data from social media connections indicate a generally weak intensity of interpersonal links, with only a few areas, mainly in southern Hungary, showing moderate cross-border interaction, while parts of Romania report almost none. The use of distinct national languages with rather sparse overlaps further limits informal contacts, shared media consumption, and cultural exchange. This weak social integration contrasts with the geographical proximity of urban centres and reduces the potential for everyday people-to-people connections. This limited level of everyday social connectivity may influence how tourism-related benefits and cross-border service use are distributed and experienced across the region.

Tourism, however, constitutes a strong socio-economic asset. Major cities and spa resorts in Romania (such as Oradea and Arad) and Hungarian centres (Szeged, Debrecen, Nyíregyháza) act as important destinations, drawing both domestic and international visitors. Overnight stays per capita remain below leading Central European tourism regions but have been rising steadily, pointing to a growing attractiveness of the borderland. Seasonal peaks, particularly in spa tourism and cultural events, create localised pressures on infrastructure but also generate opportunities for joint branding and cross-border tourism products, which are currently underdeveloped.

Access to services of general interest shows clear asymmetries. In Hungary, services such as schools, hospitals, pharmacies and shops are more evenly distributed, resulting in travel times of less than one hour across most areas. On the Romanian side, essential services are clustered in cities, leaving rural and peripheral communities with longer travel times, sometimes exceeding one hour for healthcare and education. This urban-rural divide limits equal opportunities for inhabitants and reduces the attractiveness of certain Romanian border areas. Addressing these imbalances, through cross-border use of services, coordinated investment, and improved accessibility, would significantly strengthen functional integration and the quality of life across the region.

## 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.

Border 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. Hungary has joined the Schengen Area by 2007, while Romania joined in 2024 for air borders and in 2025 for land borders. Between 2024 and 2025 (cut-off: 08 May 2025), neither Romania nor Hungary reintroduced border controls between the 2 countries.

### **2.5.2 Key messages on the border security dimension**

In the Romania–Hungary cross-border region, temporary reintroductions of border controls were not present; as this chapter covers only a period when both countries were members of the Schengen Area, with Romania joining the area regarding land borders in 2025.

The full accession of Romania into the Schengen area as of January 1, 2025 has decisively transformed border management across the Romania–Hungary frontier. Systematic checks at land borders have been abolished, allowing seamless movement, although temporary surveillance within 30 km zones remains in place through mobile patrols and advanced technologies to prevent smuggling and illegal migration. Interim support through EU instruments has been sought by Hungarian authorities to maintain sustainable border protection in light of these evolving security landscapes.

Full Schengen accession could shift border security from routine controls towards cooperation-based arrangements built on joint surveillance and information exchange. The absence of systematic checks may facilitate cross-border mobility, while increasing the importance of institutional coordination and cross-border cooperation frameworks.

## 2.6 Governance dimension

This section outlines the cross-border governance profile of the Hungarian-Romanian border region. Several governance structures operate in the area, including 3 EGTCs and one Euroregion. However, the region has lacked a long-standing strategic framework to support sustained cooperation between the 2 sides. Deep-rooted historical and cultural legacies have contributed to generally low levels of social trust. Engaging local actors in programme monitoring has been challenging. Although a formal mechanism exists to coordinate authorities managing both mainstream and cooperation programmes, there remains room to enhance their active involvement in decision-making.

### 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.

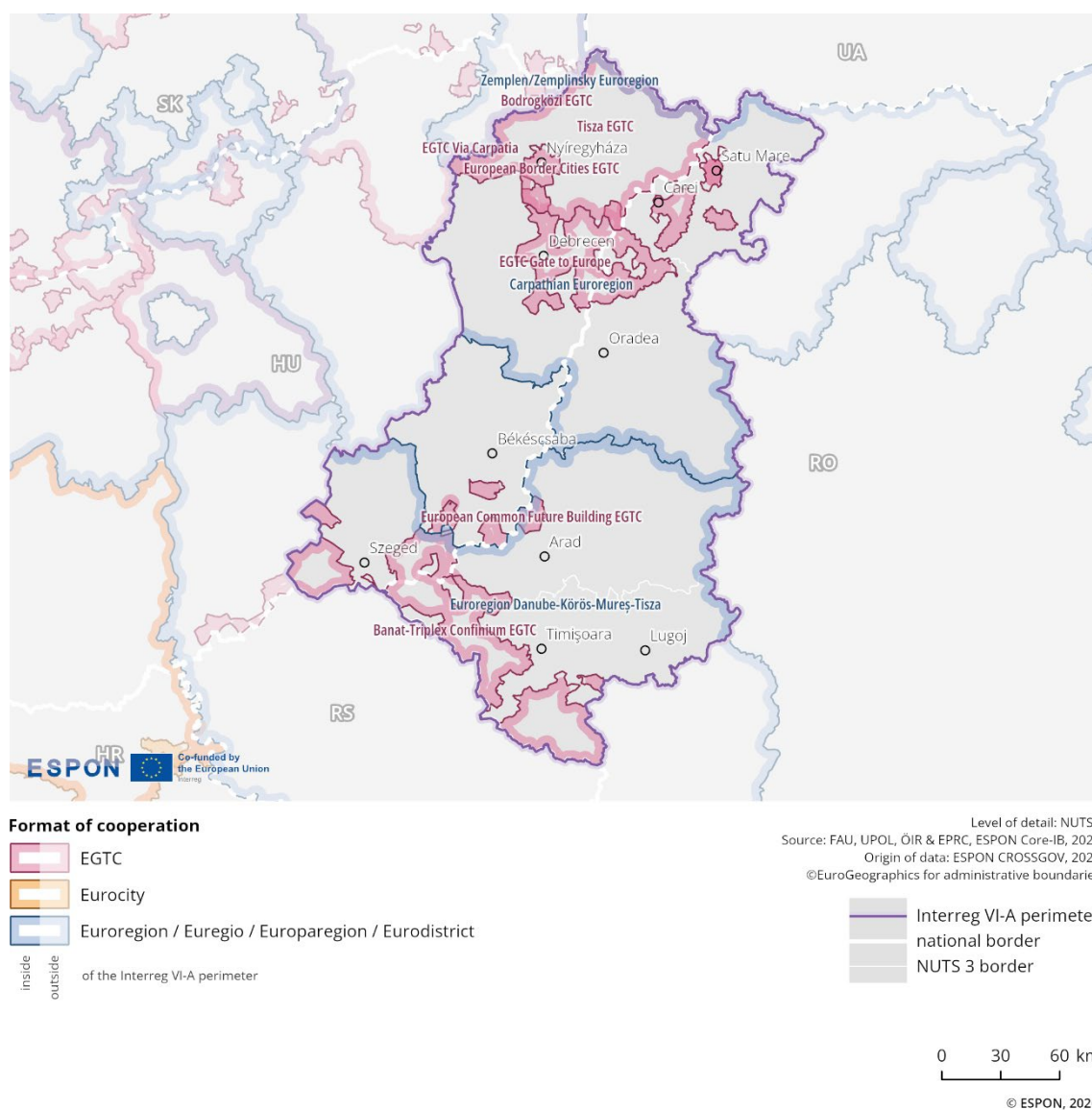
- **Source/method of retrieval:** Localisation and categorising of cross-border cooperation formats (Eurocities, Euroregions, EGTC, cross-border associations, cross-border councils, conferences, working communities), based on desktop research.
- **Temporal coverage:** Status as of October 2025
- **Unit:**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

Please refer to the technical annex for more information.

Figure 2.36 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 along the borders of this programme area shows broad spatial coverage with relatively small perimeters. Overall, the region exhibits a high level of institutionalised cooperation along the national border. EGTCs are the most prevalent format. In the Hungary–Romania border region, for example, European Common Future Building EGTC facilitates joint development initiatives aimed at strengthening economic, social, and territorial cohesion, while Gate to Europe EGTC focuses on coordinating cross-border development activities and project-based cooperation to enhance economic and social cohesion among its members.

**Figure 2.36: 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.

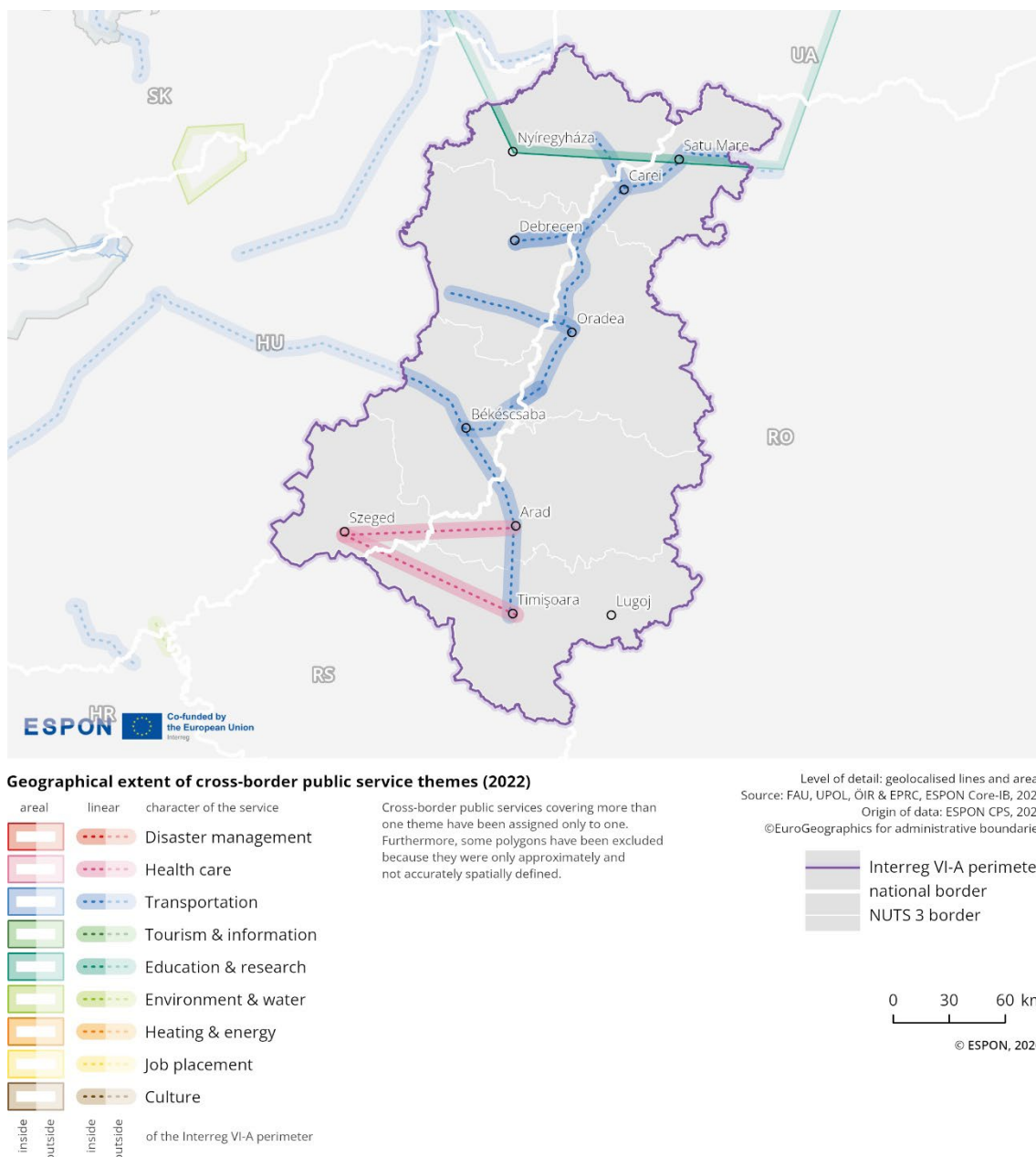
- **Source:** ESPON cross-border public services (CPS) 2.0 database
- **Temporal coverage:** 2022
- **Unit:** n/a

Please refer to the technical annex for more information.

Figure 2.37 depicts the geographical extent of cross-border public services in the border area in 2022. Different thematic areas are represented by distinct symbols and colours, indicating services such as disaster management, health care, transportation, education, environment, energy, job placement, and culture. The visualisation highlights where these services operate across the national boundary.

The Hungary–Romania border region displays transportation services dominating the cross-border public service network. These corridors are linking north and south throughout the border region, on both the Romanian and Hungarian side. Notably, health care service is registered between Szeged and the western Romanian Interreg region. Education & research services are present but spatially limited, concentrated in the northern Interreg region extending into Ukraine.

**Figure 2.37: Cross-border public services**



### 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, in particular from the European perspective.

In the border area between Romania and Hungary, 2 b-solutions advice cases were identified. These involve an analysis of legislative barriers to employment in the agricultural sector and the integration of Serbian members into an EGTC. Both actions were submitted by EGTCs.

In this border region, governance and institutional cooperation form the central theme, with challenges emerging around legal clarity, multilingual administration, and the inclusion of non-EU members in EGTC structures. Economic development and employment also play a significant role, particularly in relation to entrepreneurship, the marketing of local products, and the agricultural labour force.

The solutions proposed in these advice cases are primarily hybrid in nature. The case on legislative borders in agricultural employment combines several solution types: legal (involving the potential use of the European Cross-Border Mechanism, ECBM), operational (such as awareness-raising through leaflets and thematic workshops), and administrative (including simplifying cross-border procedures and conducting comprehensive legal and administrative analyses).

#### 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

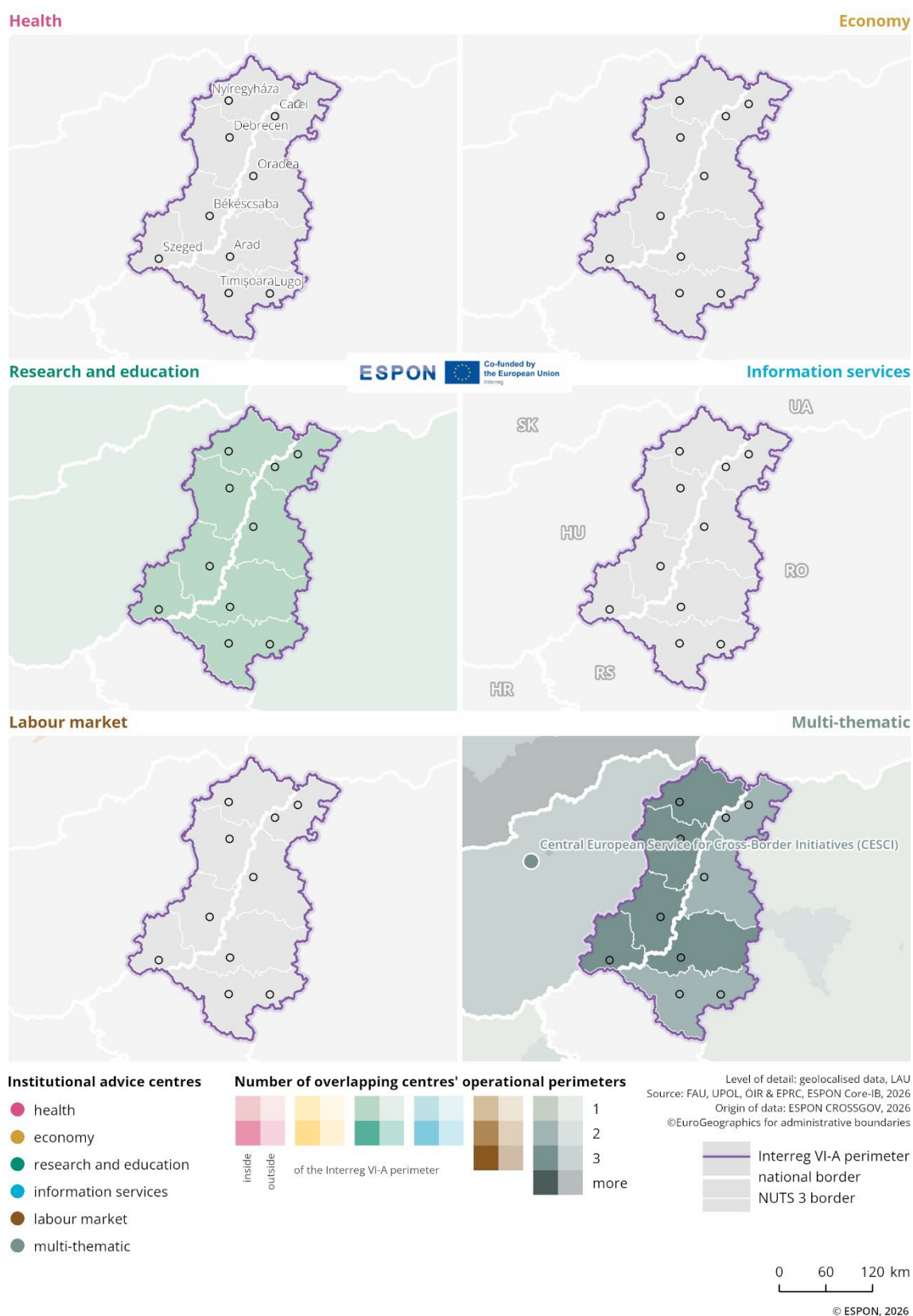
Please refer to the technical annex for more information.

Figure 2.38 shows the locations and types of institutionalised advice centres, along with their operational domains, in the cross-border Interreg region between Romania and Hungary. 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.

There are no institutionalised advice centres within the Interreg region displayed on the map. Outside the Interreg region, in the eastern part of Hungary, there is one multi-thematic institutionalised advice centre, the Central European Service for Cross-Border Initiatives (CESCI).

Centres with multi-thematic operational domains are represented in both countries within the Interreg area, though with regional differences: they are more pronounced in the Hungarian part of the Interreg region and also around the Romanian city of Arad.

**Figure 2.38: Institutionalised cross-border advice centres**



## 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 2.39), overlapping Interreg programmes and the key aspects drawn from the programme.

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

| Topic               | Key development opportunities and challenges identified for Interreg 2021-27                                                                                                                                                                                                                                                                                         |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Economy</b>      | <ul style="list-style-type: none"> <li>▪ Uneven distribution of public services is a barrier to balanced development;</li> <li>▪ Rich natural and cultural heritage; high potential for cross-border tourism initiatives</li> <li>▪ Struggles with low tourism retention; lack of local branding; need for stronger cooperation and common agenda-setting</li> </ul> |
| <b>Environment</b>  | <ul style="list-style-type: none"> <li>▪ High degree of landscape fragmentation;</li> <li>▪ Dense and diverse system of water bodies; abundant geothermal resources offer opportunity for green district heating;</li> <li>▪ Need to strengthen cross-border coordination and capacity for disaster and risk management.</li> </ul>                                  |
| <b>Education</b>    | <ul style="list-style-type: none"> <li>▪ There are strong opportunities to build cross-border cooperation between universities and public authorities in the programme area, particularly in key sectors related to public health.</li> <li>▪ Need to increase cooperation and investment in healthcare exchange of experience and joint trainings.</li> </ul>       |
| <b>Transport</b>    | <ul style="list-style-type: none"> <li>▪ Challenges in absorbing funding dedicated to strategic projects for sustainable transport.</li> </ul>                                                                                                                                                                                                                       |
| <b>Coordination</b> | <ul style="list-style-type: none"> <li>▪ Long history of informal cooperation; twining initiatives.</li> <li>▪ Scope to better understand and enhance community interactions via investments in people-to-people projects,</li> </ul>                                                                                                                                |

**Total Budget:** EUR 175,940,024.96

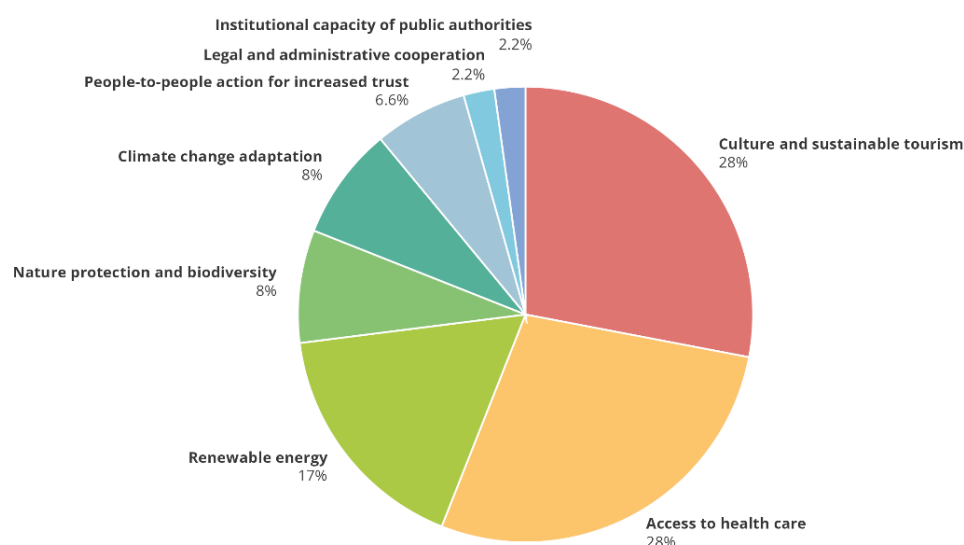
**Figure 2.39: Split of Interreg allocation**

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.<sup>16</sup> The 4 Interreg C programmes Interreg ESPON, Interact, Interreg Europe and URBACT (Urban Action) cover the whole EU territory and provide a range of joint services and initiatives. Note that there have been 2 Interreg A IPA and 2 Interreg Next alongside Interreg A project indicated in the Table 3.

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

| Interreg A (cross-border) | Interreg B (transnational) |
|---------------------------|----------------------------|
| 1                         | 4                          |

### Key aspects

- › Prioritisation of green and social matters, and governance-related aspects of cooperation, in practice this has resulted in projects clustered around the following themes, building mutual trust, culture and tourism, and resilience of health systems over the 2021-27 period.
- › A strong thematic emphasis for Interreg cooperation on disaster risk prevention, health care, valorising culture and natural resources in relation to tourism, strengthening strategic planning capacity and people-to-people actions.
- › Relatively balanced participation, with strong concentrations of projects in Nord-Vest and Vest (RO) and Dél-Alföld and Észak-Alföld (HU) regions in 2014-20 period; given that at NUTS2 level, only these 2 pairs of border regions are included.

<sup>16</sup> 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, particularly through the Interreg B programmes.
- › One of the programme area NUTS2 regions (specifically Szabolcs-Szatmár-Bereg as NUTS3) are also part of the 2021-2027 Interreg VI A Hungary-Slovakia
- › The whole cross-border region is covered by Interreg B Danube programme, while parts of the Hungarian border area are also covered by Interreg B Central Europe.

### 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<sup>17</sup>. 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.

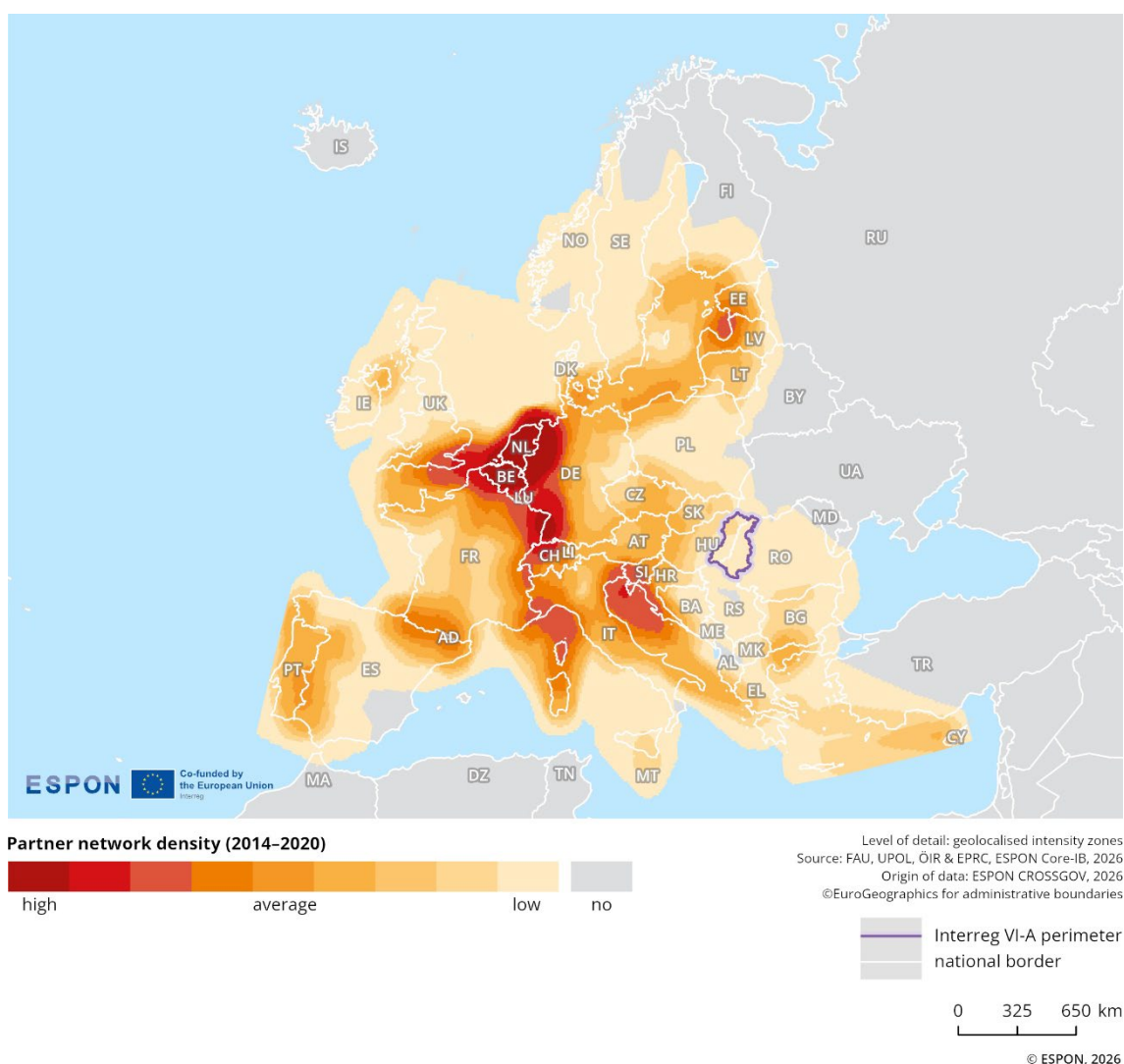
- **Source/method of retrieval:** Processing and analysis of the keep.eu database
- **Temporal coverage:** 2007-2013 (Interreg IV-A), 2014-2020 (Interreg V-A)
- **Unit:** n/a

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 2.40 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 Romania-Hungary border area appears quite evenly spread. Overall, the partner network density in this border area is lower than the European average. Based on the keep.eu database and excluding duplicates, the number of project partners decreased from 636 in Interreg IV-A (2007–2013) to 225 in Interreg V-A (2014–2020), an decrease of about 65%. It is important that these changes are considered in the context of factors such as change in programme budgets between 2007-2013 and 2014-2020, emphasis on targeting impact, and numbers of strategic projects.

<sup>17</sup> see [Keep.eu representativeness: Interreg, Interreg-IPA and ENI cross-border](#)

**Figure 2.40: Interreg V-A partner network density**

### 2.6.3 Key messages on the governance dimension

The governance framework of the Romania–Hungary cross-border region is shaped by a combination of formalised structures and persistent weaknesses. 3 EGTCs and one Euroregion offer platforms for joint planning and project development. Nevertheless, the region has historically lacked a long-term strategic framework, and low levels of social trust have limited deeper engagement of local actors in programme monitoring and decision-making. This structural gap hinders the continuity of cooperation and influences the effectiveness of cross-border service provision and programme-based cooperation.

Cross-border public services are relatively concentrated, with transportation corridors forming the most extensive network linking north and south along the border. Health care cooperation is visible, especially between Szeged and western Romania, while education and research services remain spatially limited, with activity concentrated in the north. These sectoral linkages demonstrate functional complementarities, yet they also underline the need for more balanced service provision across the region.

Participation in Interreg has generated tangible benefits, particularly in areas such as disaster risk prevention, health care, tourism, and cultural heritage. Still, the Interreg V-A partner network density is below the European average, and number of project partners decreased between Interreg IV A and V A by around 65% (based on the keep.eu database and excluding duplicates). The b-solutions initiative

has identified barriers in labour law, pointing to the legal complexity of cooperation. Moreover, the absence of institutionalised advice centres within the programme area limits access to practical guidance for stakeholders and citizens. Overall, while governance structures exist and cooperation has a broad thematic reach, the region continues to face challenges of fragmentation and legal obstacles.

More stable and continuous cross-border cooperation could be supported through better coordination across levels and sectors, as well as a more even distribution of funding throughout the programming period. Over time, this may enhance the effectiveness of EGTCs and Euroregional platforms, facilitate more balanced public service provision, and increase the involvement of local actors in strategic decision-making.

### 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 | <ul style="list-style-type: none"> <li>• Settlement structure is nodal, with medium-sized urban centres (Oradea, Arad, Debrecen, Szeged) surrounded by extensive rural hinterlands of low density;</li> <li>• Population density is low (around 72 inh./km<sup>2</sup>), well below EU and national averages, shaping access to services and transport efficiency;</li> <li>• Demographic decline (–4.7% since 2014) and rapid ageing reduce the working-age population, despite settlement expansion around urban nodes;</li> <li>• Accessibility is car-oriented, with rail links weak and slow, limiting sustainable integration.</li> </ul> |

| Territorial dimension |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Policy options        | <p><b>Population and settlement related aspect</b></p> <ul style="list-style-type: none"> <li>A relevant policy option is to address the demographic decline and population ageing within a nodal settlement structure characterised by medium-sized urban centres (e.g. Oradea, Arad, Debrecen and Szeged) and extensive low-density rural areas.</li> </ul> <p><b>Accessibility related aspect</b></p> <ul style="list-style-type: none"> <li>The car-oriented accessibility patterns and weak rail connectivity can be addressed to support future territorial integration and improve access to services.</li> </ul> <p><b>Cross-cutting aspect</b></p> <ul style="list-style-type: none"> <li>The networks of medium-sized urban centres can be leveraged to support more balanced territorial development and stronger functional integration across rural hinterlands.</li> </ul> |

| Economic dimension      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key analytical findings | <ul style="list-style-type: none"> <li>GDP per capita remains far below EU average (around 36%), but both sides have recorded rapid growth since 2014, especially Romania;</li> <li>Share of employment lags behind EU average (lower by 10.7 percentage points); the working-age population is shrinking fastest in Romanian counties;</li> <li>Industry structure is stable, with manufacturing, trade/services, and health/education sectors driving most GVA growth;</li> <li>Wages are modest (€5–15/hour) and fairly balanced across the border, limiting large-scale one-directional commuting;</li> <li>Housing is affordable compared to EU border averages; digital infrastructure is uneven, with strong urban–rural divides.</li> </ul> |

| Economic dimension |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Policy options     | <p><b>Labour market related aspect</b></p> <ul style="list-style-type: none"> <li>Sustainable labour market integration could be supported in the context of shrinking working-age populations and relatively balanced wage levels.</li> </ul> <p><b>Cross-cutting aspects</b></p> <ul style="list-style-type: none"> <li>The strong economic growth dynamics (78.7% increase of GDP per capita between 2014 and 2022), despite generally low GDP per capita, could be translated into more balanced cross-border development outcomes;</li> <li>The digital inequalities, sustainable labour integration and balanced housing development can be addressed as enabling factors for future growth.</li> </ul> |

| Green dimension         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key analytical findings | <ul style="list-style-type: none"> <li>Protected areas exist on both sides but are fragmented; Natura 2000 sites provide partial continuity without a full ecological corridor;</li> <li>Air quality is pressured by industry and agriculture; Romania generally records better river water quality than Hungary, where several stretches show “moderate” or “poor” status (notably around Szeged with even “bad” quality status);</li> <li>Climate risks include droughts across the southern plains and floods along the Tisa, requiring basin-level coordination;</li> <li>Energy generation capacity in the border zone is fossil-based (gas/oil exclusively), with few renewables and rather limited grid interconnections;</li> <li>Resource productivity is higher in Hungary; Romania is improving but still less efficient, with differences in waste intensity.</li> </ul> |

| Green dimension |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Policy options  | <p><b>Climate risks and resilience related aspect</b></p> <ul style="list-style-type: none"> <li>A focus could be on the differences in river water quality and common flood and drought risks in the Tisa basin as a basis for strengthened cross-border environmental coordination.</li> </ul> <p><b>Energy related aspects</b></p> <ul style="list-style-type: none"> <li>The differences in energy generation profiles and levels of resource productivity could be considered in future sustainability-oriented cooperation (building on renewable energy sources);</li> <li>The existing cross-border energy infrastructure can be built upon to unlock currently untapped cooperation potential.</li> </ul> <p><b>Cross-cutting aspect</b></p> <ul style="list-style-type: none"> <li>Cooperation projects could address the fragmented protected areas and only partially connected Natura 2000 sites through joint cross-border environmental initiatives.</li> </ul> |

| Socio-economic dimension |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key analytical findings  | <ul style="list-style-type: none"> <li>Social integration is weak: language barriers and low intensity of cross-border social media ties limit everyday interaction;</li> <li>Tourism is a growing asset, with spa and cultural centres (Oradea, Arad, Szeged, Debrecen) attracting increasing numbers of visitors, but joint branding remains underdeveloped;</li> <li>Access to services of general interest is more balanced in Hungary; in Romania, healthcare and education are concentrated in cities, leaving rural areas underserved;</li> <li>Functional complementarities exist, but cultural barriers and infrastructural gaps constrain deeper socio-economic integration.</li> </ul> |

| Socio-economic dimension |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Policy options</b>    | <b>Cross-cutting aspects</b> <ul style="list-style-type: none"> <li>• A focus could be on addressing the language barriers and low social connectivity to strengthen everyday cross-border social interaction;</li> <li>• Tourism development around the spa and cultural centres could be coordinated through joint branding and marketing approaches;</li> <li>• Ongoing cross-border monitoring of functional complementarities, particularly in relation to the unequal access to services of general interest and existing infrastructural gaps.</li> </ul> |

| Border security and safety dimension |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key analytical findings</b>       | <ul style="list-style-type: none"> <li>• Temporary border controls haven't been reintroduced in the cross-border region;</li> <li>• The full accession of Romania into the Schengen area as of January 1, 2025 has decisively transformed border management;</li> <li>• Systematic checks at land borders have been abolished since, however temporary surveillance remains in place.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Policy options</b>                | <b>Cross-cutting aspects</b> <ul style="list-style-type: none"> <li>• The impacts of the abolition of systematic land border controls following Romania's full Schengen accession can be anticipated, particularly with regard to mobility patterns, cross-border cooperation and safety management;</li> <li>• The impacts of border controls on cross-border commuting and logistics can be mitigated through coordinated and institutionalised cross-border policy dialogue;</li> <li>• 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.</li> </ul> |

| Governance dimension    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key analytical findings | <ul style="list-style-type: none"> <li>• 3 EGTCs and one Euroregion provide platforms for joint planning and project development, but strategic long-term frameworks remain weak and citizen participation is limited;</li> <li>• Cross-border public services are most developed in transport and healthcare, yet spatially concentrated and uneven;</li> <li>• Legal and administrative barriers persist (e.g. in healthcare and labour law), and the absence of institutionalised advice centres limits stakeholder support.</li> </ul>    |
| Policy options          | <p><b>Cross-cutting aspects</b></p> <ul style="list-style-type: none"> <li>• Links between the existing governance structures, long-term strategic coordination and stakeholder participation can be strengthened;</li> <li>• The institutionalised cross-border advice centres could be addressed to realise currently untapped cooperation potential;</li> <li>• A focus could be placed on transferring the experiences of transport and healthcare cooperation to support balanced cross-border governance of public services.</li> </ul> |



# ESPON



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## ESPON 2030

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### Disclaimer

This delivery does not necessarily reflect the opinion of the members of the ESPON 2030 Monitoring Committee.