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EUROPEAN RESEARCH PROJECT //

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

Lithuania-Poland

Border profile

March 2026

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

Coordination
Andreea China, Laura Dimitriu, Martin Gauk, Nikos Lampropoulos, Nicolas Rossignol – ESPON EGTC

Lead authors
Tobias Chilla, Dominik Bertram, Elias Günther, Stefan Hippe – Friedrich-Alexander University Erlangen-Nürnberg
Irene McMaster, Heidi Vironen, Neli Georgieva, Stefan Kah, Virginia Arena – Stichting EPRC Strathclyde University
Roland Gaugitsch, Sabrina Mansutti, Helene Gorny, Michelle Wiest, Erich Dallhammer, Cristian Andronic, Manon Badouix, Chien-Hui Hsiung, Robert Badea – ÖIR GmbH
Vít Pászto, Radek Barvíř, Karel Macků, Jaroslav Burian, Zdena Dobešová, Oldřich Bittner – Palacký University Olomouc

Steering Committee
Jean-Pierre Halkin, Gaëlle Doleans, Simona Pohlová, Maria Sioliou, Robert Spisiak – Unit D2 Interreg, Cross-Border Cooperation, Internal Borders, Directorate-General for Regional and Urban Policy, European Commission (EC-DG Regio)
Milada Hronkova – Ministry of Regional Development, Department of European Territorial Cooperation (CZ)
Josiane Meier - Federal Ministry for Housing, Urban Development and Building, Division Spatial Planning, Spatial Planning Law and European Spatial Development Policy BMWSB (DE)
Margarita Golovko – Ministry of Regional Affairs and Agriculture (EE)
Olivier Bichel, Sébastien Keiffer– Ministry of Housing and Spatial Planning, Department of Spatial Planning (LU)

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Contact: info@espon.eu

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1 Introduction

1.1 Context and objective of the border profile

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

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

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

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

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

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

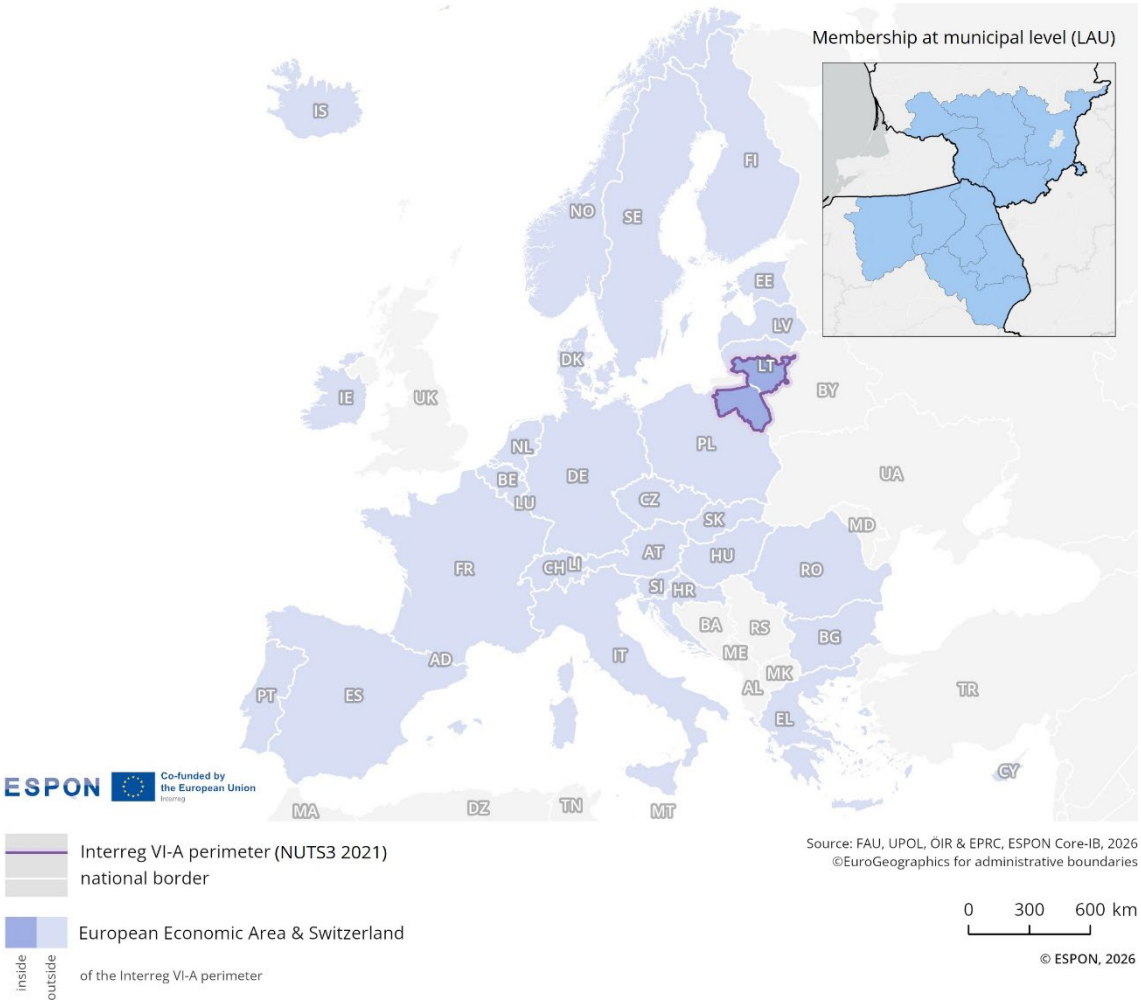
Within the ESPON framework, the CROSSGOV project (Governance mechanisms for cross-border functional areas) has been implemented in parallel to Core-IB. The CROSSGOV hub[2] provides a comprehensive platform for interactive data exploration, and selected data have been incorporated into this study.

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

1.2 Presentation of the border area

The Interreg VI-A border region 'Lithuania-Poland' covers the area between southern Lithuania and north-eastern Poland (see Figure 1.1).

Figure 1.1: Overview map



The geographical area covered by the programme has to be differentiated at 2 scales:

The programme area is defined in EU documents at the district level (NUTS3)[3], cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. In Lithuania, the programme includes the NUTS3 regions

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

[3] The use of NUTS3 geometries is of fundamental importance in this project, as the applied pan-European datasets as well as the newly developed indicators in the ESPON CROSSGOV project refer primarily to the NUTS3 level (in the 2021 version, see also the final report of the project).

of Alytaus apskritis, Kauno apskritis, Marijampolės apskritis, Tauragės apskritis and Vilniaus apskritis. In Poland, the programme area includes the NUTS3 regions Białostocki, Ełcki, Łomżyński, Olsztyński and Suwalski).

The municipal membership differs from this perimeter on the Lithuanian side, as shown in the small map in the upper right part (the blue colour indicates the membership at municipal level). More specifically, in the Lithuanian part of the border area, Vilnius city (LAU) within the NUTS3 area Vilniaus apskritis is not a formal member of the programme. For the statistical analyses, the district level (NUTS3) is used as the reference level due to data availability. In the calculation of some indicators, the area of the city of Vilnius was considered, so there is some potential distortion in the interpretation of data. This should be taken into account when interpreting the results. To provide a general impression: the municipal members of this cooperation area (without Vilnius city) account for approximately 3,21 million inhabitants out of 3,8 million within the NUTS3 perimeter (i.e., approximately 85%; values refer to 2023).

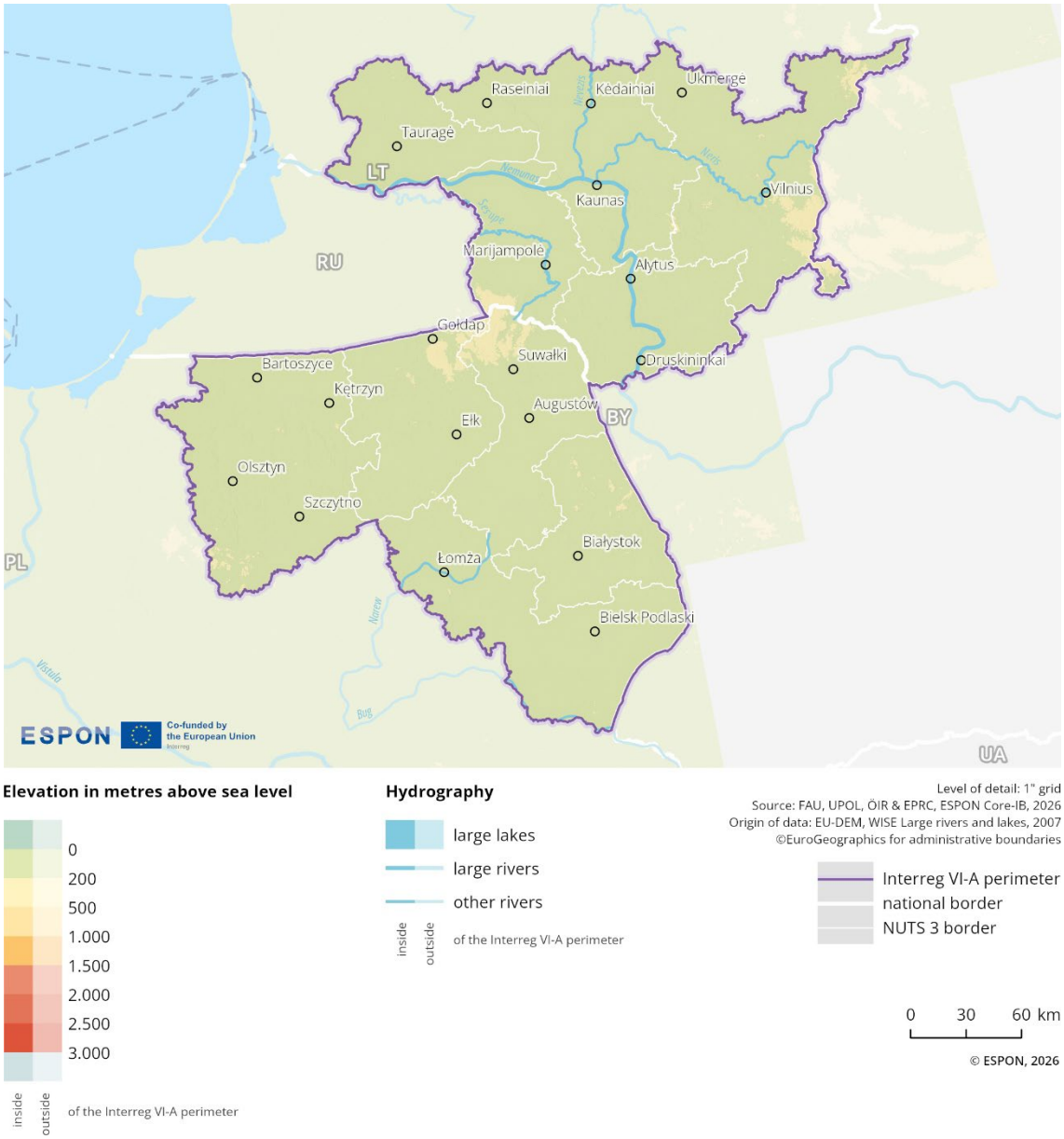
Figure 1.2 illustrates the cross-region's geomorphological features and the perimeter of the Interreg VI-A programme area[4]. Spanning approximately 67,170 km², the border cross-region extends along the entire 104-kilometre Lithuanian–Polish border. Starting at the Russian exclave of Kaliningrad, the border spans from west to east. It lies between the regions of Vilnius and Łomża.

The landscape is predominantly flat and forms part of the Eastern European Plain. It is characterised by several rivers, including the Nemunas, Biała and Czarna Hańcza. The area is also scattered with numerous lakes, wetlands, and peatlands, particularly in the Suwałki and Dzūkija regions. These features contribute to the area's ecological diversity. Significant portions of the territory are covered by forests such as the Augustów and Dainava forests, which form part of protected areas and ecological corridors.

The programme area is characterised by a predominantly rural and sparsely populated landscape, dotted with a few medium-sized towns such as Marijampolė and Suwałki. The settlement structure is dispersed, with few urban agglomerations.

[4] Please note that the spatial reference is the perimeter at district level, i.e., NUTS3. For the details see figure 1.1. This applies to all maps of this border profile.

Figure 1.2: Geographical features and characteristics[5]



[5] 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.

2 Cross-border analysis

2.1 Territorial dimension

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

2.1.1 Population and settlements

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

2.1.1.1 Population density

Indicator description

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

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

Please refer to the technical annex for more information.

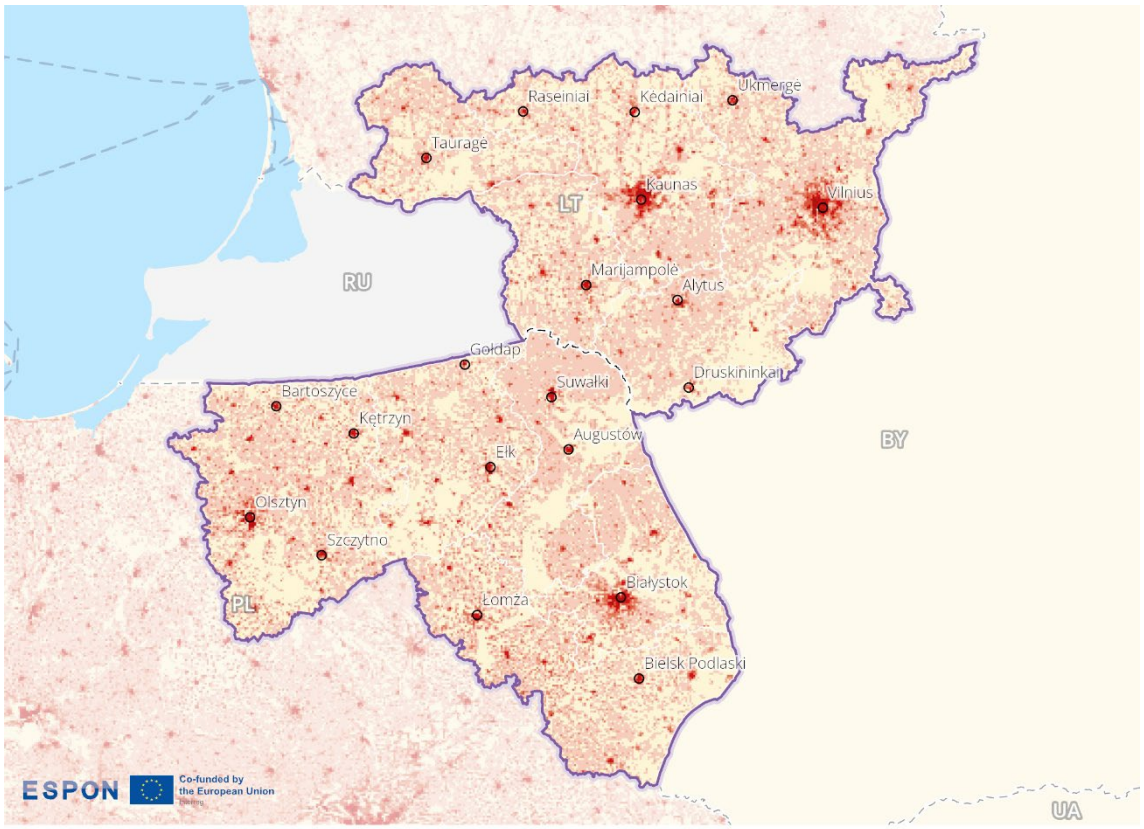
Figure 2.1 shows that the cross-border area is sparsely populated, with both countries exhibiting a similar settlement pattern. The border does not form a significant divide in population density. The population is concentrated in several smaller settlements. The category with a density of up to 50 inhabitants/km² is significantly represented. Some small areas are extremely sparsely populated. The cross-border part of Lithuania includes the cities of Vilnius (over 580,000 inhabitants) and Kaunas (with almost 300,000 inhabitants). The Polish part of the territory includes the cities of Białystok (with nearly 300,000 inhabitants), Olsztyn (over 160,000 inhabitants), Łomża, Suwałki, and numerous other smaller towns. The cross-border region includes a totally 8 urban centres with a population of over 30,000 inhabitants. There are Alytus, Kaunas, Marijampolė in Lithuania and Białystok, Ełk, Łomża, Olsztyn, Suwałki in Poland.

The average population density across the entire cross-border region is 52 inhabitants per square kilometre, which is lower than the EU average of 109 inhabitants per square kilometre (according to Eurostat) and also below the aggregated average of all EU-evaluated cross-border regions (125 inhabitants per square kilometre).

Within the cross-border region, the Lithuanian part records an average population density of approximately 53 inhabitants per square kilometre, exceeding the national average in Lithuania (43 inhabitants per square kilometre). The city of Vilnius was considered in the calculation, so it influenced the average values of inhabitants in the Lithuanian border. In contrast, the Polish part shows an

average population density of around 51 inhabitants per square kilometre, which is less than half of the national average population density in Poland (118 inhabitants per square kilometre).

Figure 2.1: Spatial patterns of population distribution[6]



Number of inhabitants/km² (2021)

- 1–50
- 51–100
- 101–200
- 201–500
- 501–1,000
- 1,001–5,000
- 5,001–56,158
- no population

inside / outside of the Interreg VI-A perimeter

Twin cities (2025)

cities/towns with 10,000+ inhabitants not further than 5km from another one accross a country border

Border cities (2025)

other cities/towns with 10,000+ inhabitants not further than 10km from another one accross a country border

Level of detail: 1km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: GISCO Population Grid (version 1.3), 2021
OpenStreetMap, 2025
©EuroGeographics for administrative boundaries

- Interreg VI-A perimeter
- national border
- NUTS 3 border

0 30 60 km

© ESPON, 2026

[6] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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 Lithuania–Poland cross-border region in 2024 (Eurostat): 3.71 million inhabitants, of which:

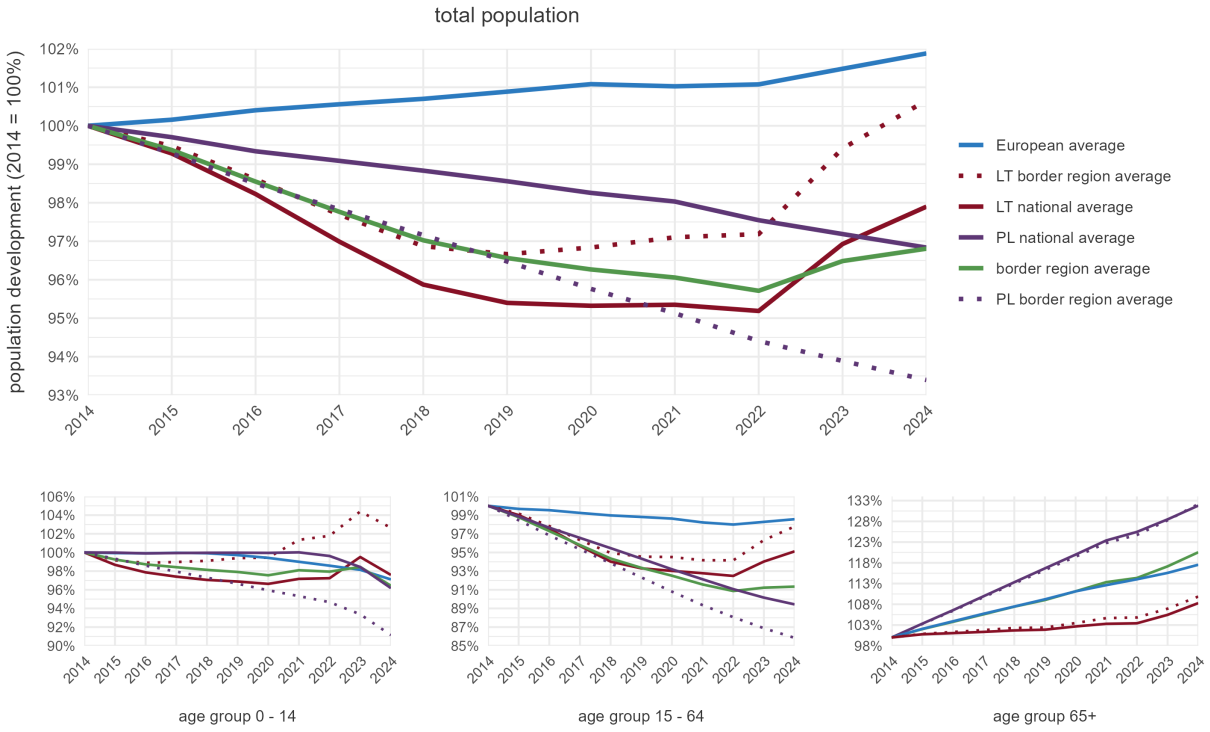
- 51.1% in the Polish border territory (1.90 million inhabitants)
- 48.9% in the Lithuanian border territory (1.81 million inhabitants)
- Region within the border region with the highest population change since 2014: Tauragės apskritis (LT027) with a decline of 14.1%

Figure 2.2 shows the population change in the Lithuania–Poland cross-border region between 2014 and 2024. During this period, the region has experienced a slight population decline of -3.2%, with a more pronounced decline on the Polish side.

Population development in the Lithuania–Poland cross-border region is below the European average (-3.2% vs. 1.9%) and also below the average development in all border regions (-3.2% vs 1.5%). While the Lithuanian border area recorded a higher growth than the national average (0.7% vs. -2.1%), the Polish border area experienced a greater decline than the national average (-6.6% vs. -3.2%).

In terms of the development of individual age groups in the cross-border region, the population aged 0–14 experienced a slight decrease of -3.6%, while the working-age population (15–64) showed a marked decrease of -8.7%. The population aged 65 and over underwent a substantial increase of 20.5%.

Figure 2.2: Population development (2014=100)[7]



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 the municipal level between 2012 and 2018. Overall, the map shows mostly similar patterns of change in settlement areas on both sides of the

[7] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Lithuanian-Polish border. Changes are evident in particular around the urban centres of Ukmergė, Kaunas, Marijampolė, Suwałki, Ełk, Olsztyn, Łomża and Białystok. High growth in settlement areas is particularly evident on the Polish side around Suwałki and Olsztyn as well as between Białystok and Zambrów. In close proximity to the national borders, the settlement area increases mainly between Suwałki and Marijampolė.

Figure 2.3: Settlement area dynamics[8]

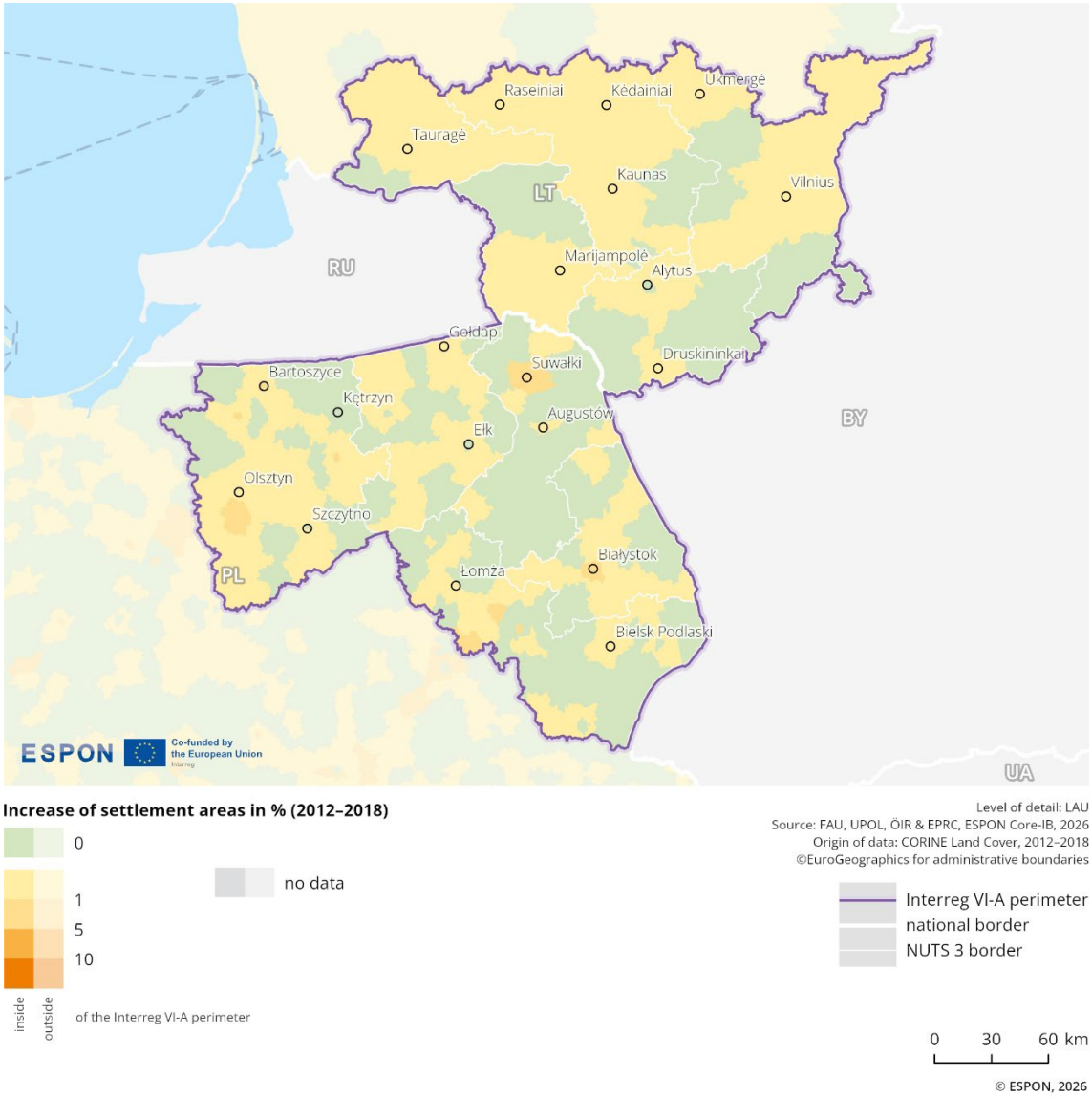
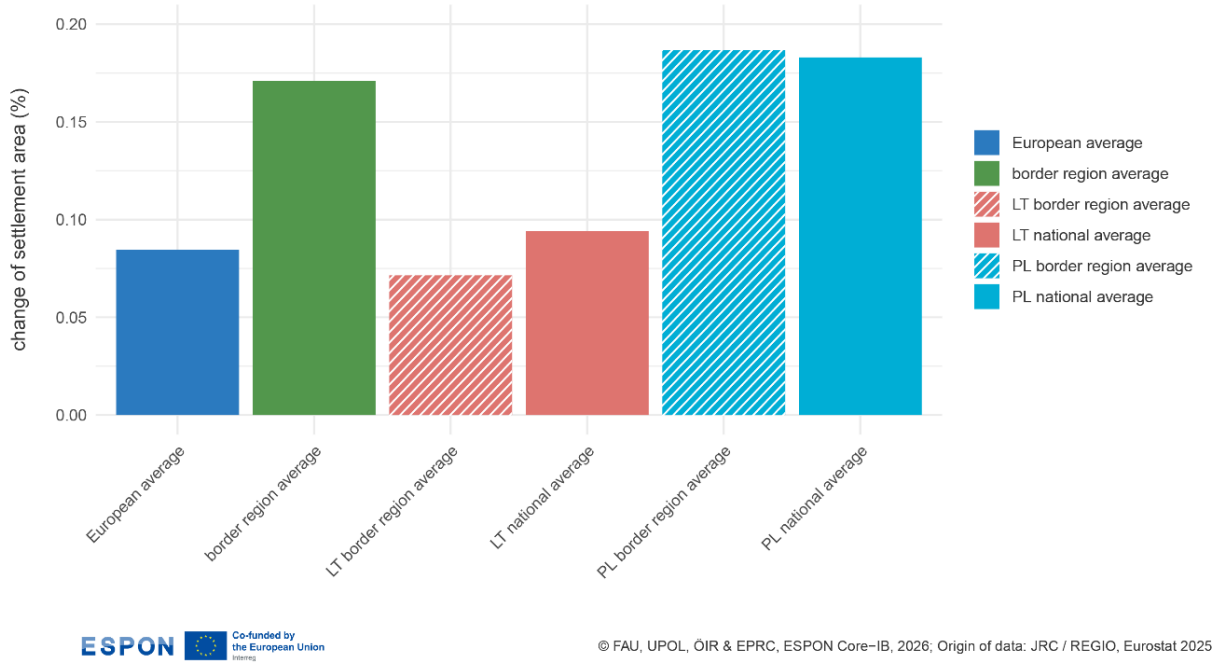


Figure 2.4 presents the change in settlement areas from a comparative perspective. The average for the Lithuania-Poland programme area is higher than the overall European average, which includes both EU member states and the EFTA countries Switzerland, Liechtenstein, and Norway. The Polish values are higher than the Lithuanian ones, which applies for both, the national average as well as the border regions. The Lithuanian average of the border is lower than the national average. The Polish national average is slightly lower than the Polish border region average.

[8] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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)[9]



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[9] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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.

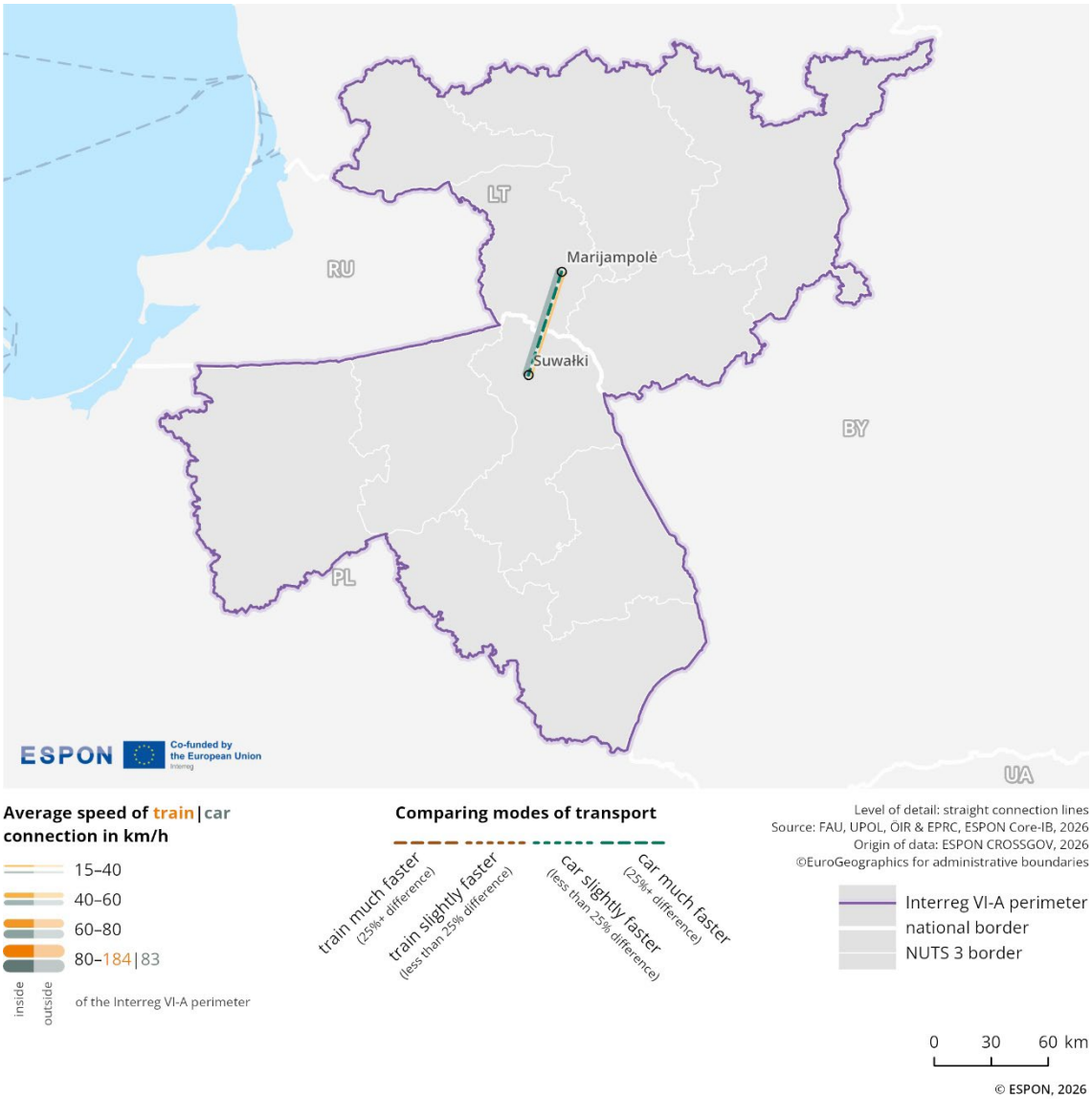
Cross-border accessibility shapes cross-border interactions. Figure 2.5 illustrates this using a "space-time-line" map, which shows parts of a European overview of car and train travel times in the Lithuania-Poland cross-border region. This visualisation enables an assessment of transport quality by highlighting differences between public (train) and private (car) transport modes.

The selection of cities and connections covered is based on a set of criteria applied throughout Europe within the ESPON CROSSGOV project[10]. 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 connection within the programme area is Marijampolė–Suwałki. For this route, car travel outperforms train connections in terms of speed.

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

Figure 2.5: Comparative quality of selected cross-border connections[11]



[11] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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.

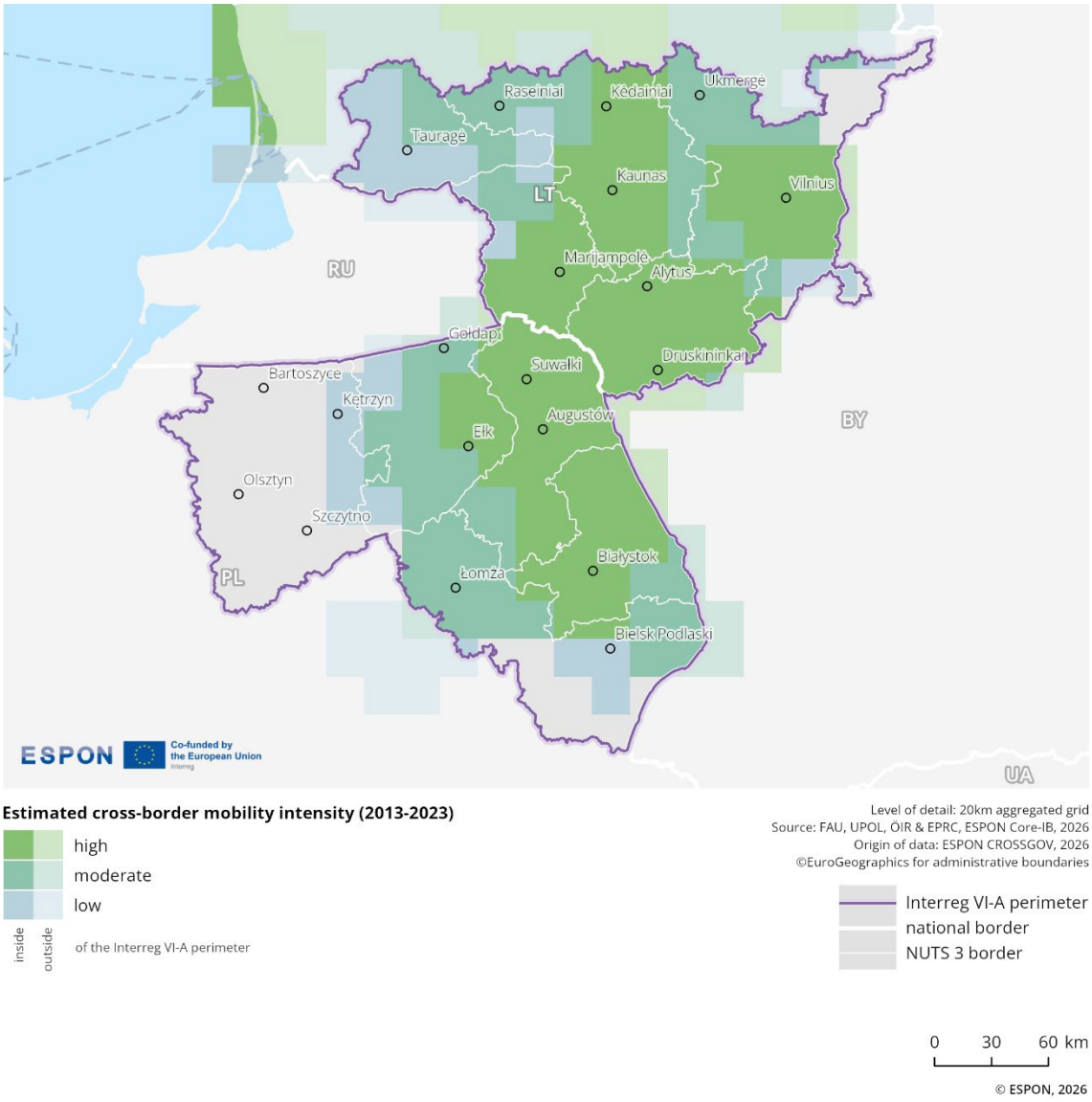
- **Source/method of retrieval**: The indicator is calculated based on Twitter (currently X) data. The digital footprint of individual users provides information about physical mobility flows and is used to calculate cross-border catchment areas of different intensity.
- **Temporal coverage**: 2013-2023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

Please refer to the technical annex for more information.

Figure 2.6 shows the cross-border catchment area in the cross-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 map illustrates that the intensity of cross-border mobility of people within this cross-border region is highly variable. High mobility intensity values are primarily recorded in the central area of the cross-border region around cities such as Białystok, Suwałki, Marijampolė, and Kaunas, as well as around Vilnius. Areas with high intensity are adjacent to zones with moderate mobility intensity. Further away from the national borders, low-intensity areas occur, and in the western part of the Polish section near the city of Olsztyn, no mobility intensity is recorded.

Figure 2.6: Cross-border mobility intensity[12]



[12] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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

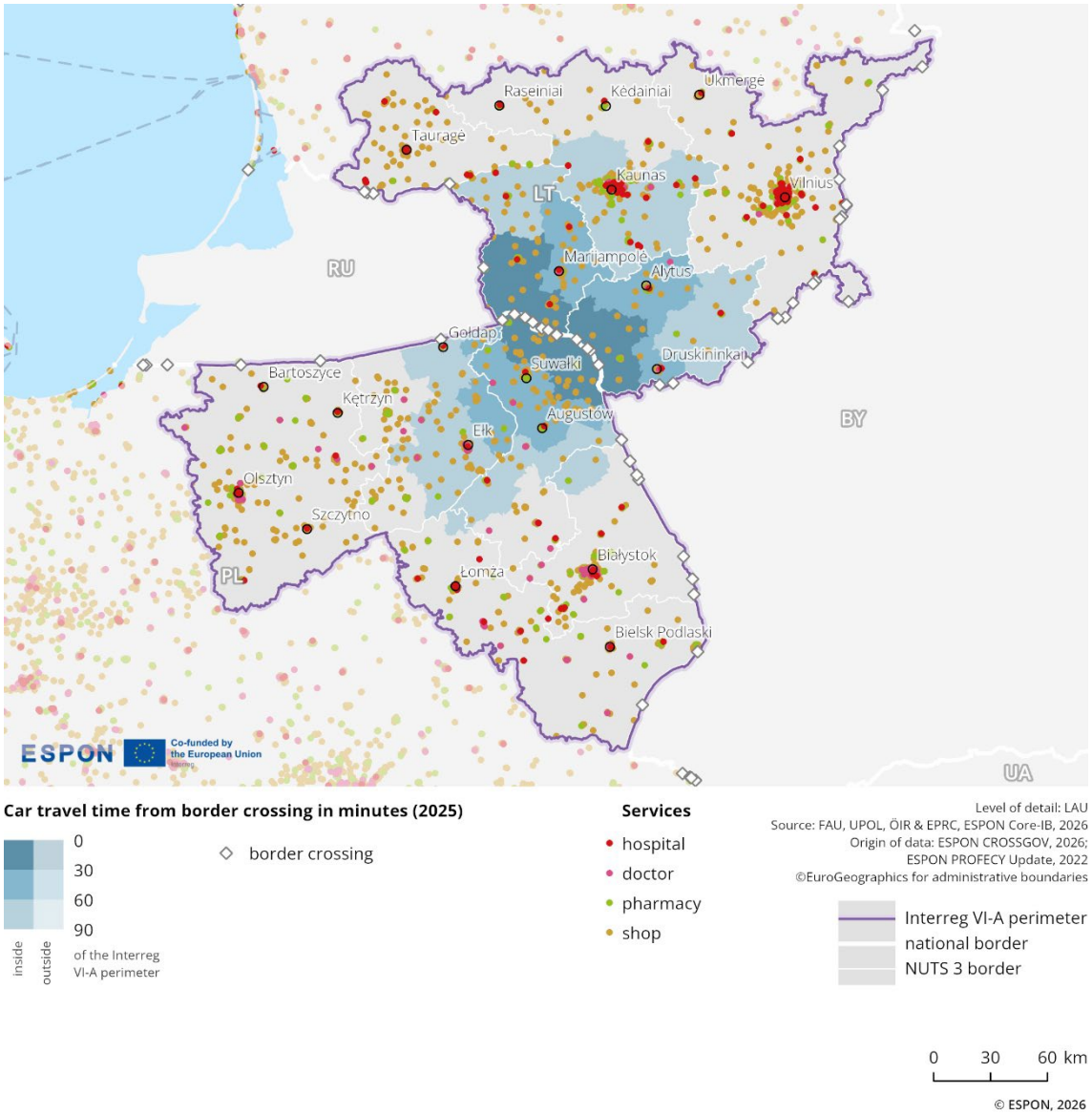
Please refer to the technical annex for more information.

Figure 2.7 illustrates cross-border travel time accessibility in the Interreg area, showing the time distance from the national border in 2025. The legend indicates 3 travel time categories in minutes (30, 60, 90) represented by different shades of blue. In addition, it marks the location of services, including hospitals, doctors (general practitioners), pharmacies, and shops (supermarkets and conventient stores), with distinct coloured symbols.

The map shows that the border is surrounded by a continuous strip of the accessibility zone within 30 minutes from both sides of the border without interruption. The 30-minute category is followed by bands with travel times of up to 60 and 90 minutes. The zone up to 90 minutes is wider than other zones in some parts of the cross-border regions. The border has a good road connection. The northern and southern parts have relatively large areas with the highest travel times to the border, exceeding 90 minutes of travel time.

Services such as shops, hospitals, doctors' offices, and pharmacies are distributed with the same density in both cross-border regions, as shown in Figure 2.7. The nearest concentration of services is in Kaunas, Lithuania, which is within a 90-minute travel time zone. The town of Vilnius, with its larger range of services, is far from the border, requiring over 90 minutes of travel time for accessibility.

Figure 2.7: Travel-time accessibility from border crossings[13]



2.1.3 Key messages on the territorial dimension

The Lithuania–Poland cross-border region lies within the Eastern European Plain and is characterised by a predominantly flat landscape interlaced with rivers, numerous lakes, wetlands, and extensive forested areas such as the Augustów and Dainava forests. These natural assets contribute to high ecological diversity and are partially protected within ecological corridors. The area remains largely rural and sparsely populated, with settlement patterns dispersed across a few medium-sized towns, alongside larger cross-regional centres such as Kaunas, Białystok, and Olsztyn.

Population density (52 inhabitants per square kilometre) is well below both the EU average and the average of all EU cross-border regions. The Lithuanian section slightly exceeds its national average density, whereas the Polish section falls to less than half of its national figure. Over the past decade, the cross-region's population has declined moderately, with sharper losses on the Polish side.

[13] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Demographic change is marked by a notable drop in the working-age population, a slight decrease in the number of children, and a substantial increase in the proportion of elderly residents.

Settlement areas have grown dynamically on both sides of the border, especially around major towns such as Suwałki, Olsztyn, Białystok, Kaunas, and Marijampolė. Growth in the Polish section outpaces that in the Lithuanian section, although both remain below their respective national averages. The Marijampolė–Suwałki corridor stands out as a key cross-border route, where road travel is significantly faster than rail.

Accessibility is generally strong along the immediate border, with a continuous zone of high accessibility extending into both countries, gradually decreasing further inland. However, the northern and southern parts of the analysed area remain less well connected. Service availability, including shops, healthcare, and pharmacies, is similar in both sections. However, major service hubs such as Kaunas and Vilnius, which lie farther from the border, limit direct cross-border access to more specialised services.

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 these have 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.

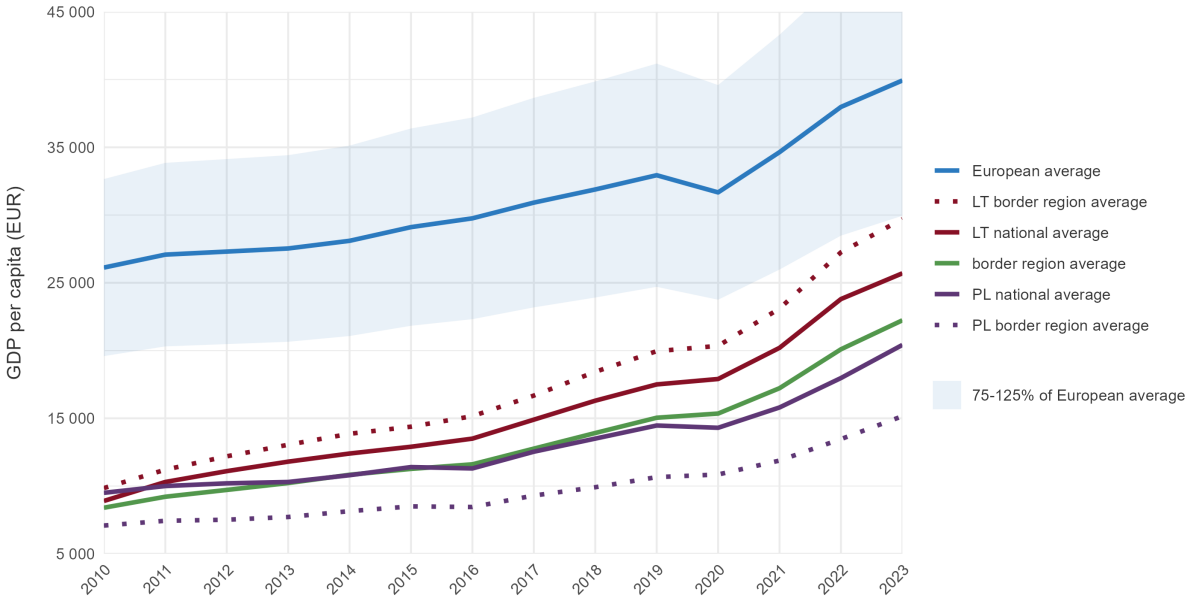
- **Source**: Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2010-2023
- **Unit**: Euro per capita

Please refer to the technical annex for more information.

Figure 2.8 displays for the whole area a GDP/capita value of 55.7% of the EU average in 2022 and 56.6% of the average in European cross-border regions in general. The cross-border region marks an 88.2%

increase of GDP per capita in the cross-border region between 2014 and 2022[14]. This corresponds to a 52.5 percentage points higher increase of GDP per capita in the cross-border region compared to the EU average. Furthermore, this corresponds to 53 percentage points higher increase of GDP per capita in the cross-border region compared to the average of European cross-border regions. The Lithuanian border region's GDP per capita is higher than the national average, while the Polish region is below the national average. The Polish border region grew since 2014 at double the rate of the EU average (+67.5%). Even higher was the growth in the Lithuanian cross-border region, where the GDP per capita almost doubled since 2014 (+99.6%). All calculations on Lithunian border consider the municipality of Vilnius City.

Figure 2.8: Gross domestic product at current market prices (per capita)[15]



ESPON Co-funded by the European Union Interreg

[14] 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.

[15] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.2.2 Labour market and commuting

This sub-dimension highlights the existing and potential functional links within the labour market of the cross-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.[16]

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 %

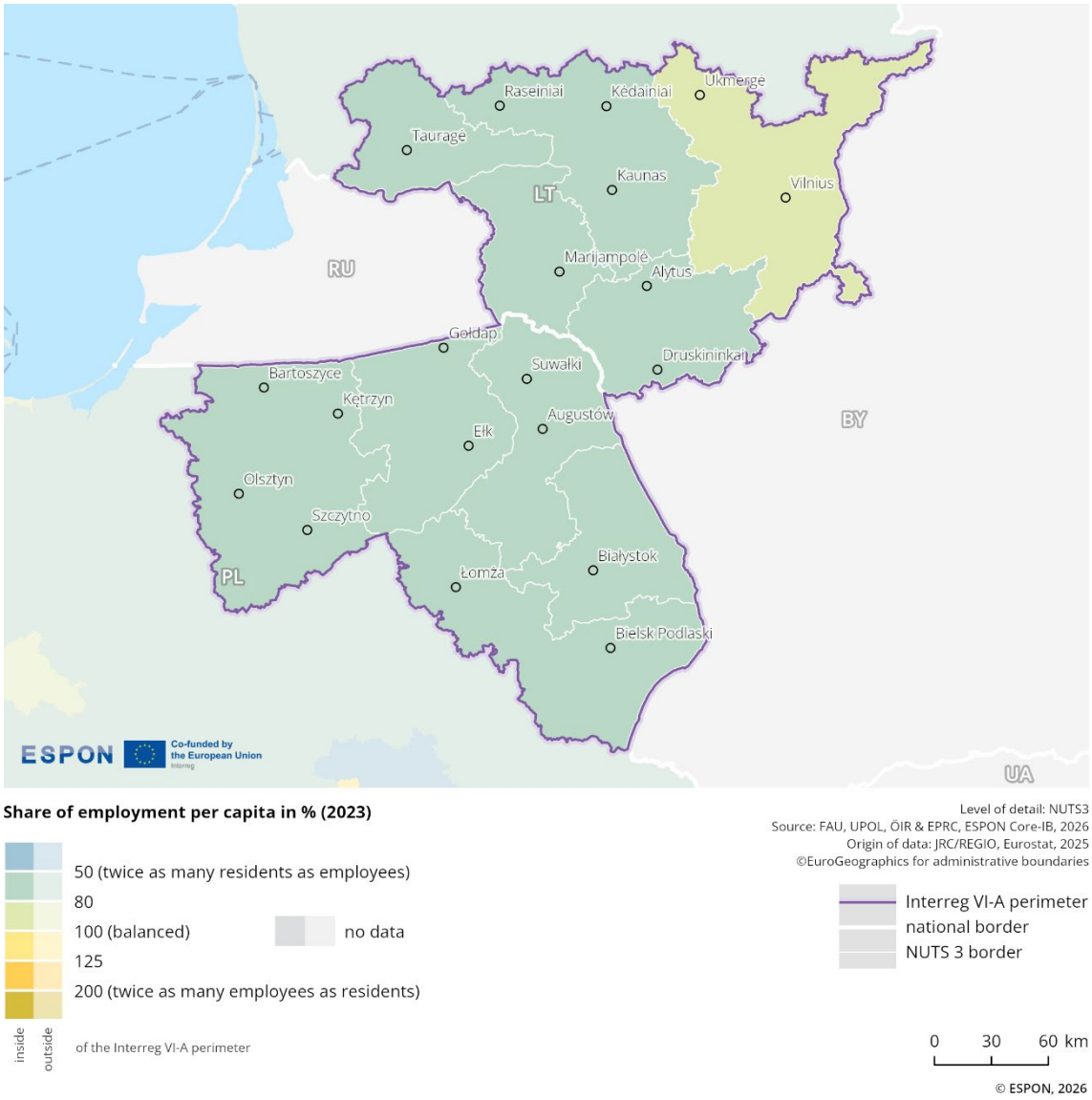
Please refer to the technical annex for more information.

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.

The share of employment in this cross-border region has remained relatively stable, with the regional average reaching 77.5% in 2023, marking an increase of 15.5 percentage points since 2014. Figure 2.9 shows that throughout most of the region, values range between 50% and 80%, except in the vicinity of Vilnius, where they range from 80% to 100%. All calculations consider the municipality of Vilnius City on Lithunian border.

[16] See also: European Commission 2024: Cross-Border Regional Labour Market Analysis, https://op.europa.eu/s/AazM

Figure 2.9: Employment share[17]

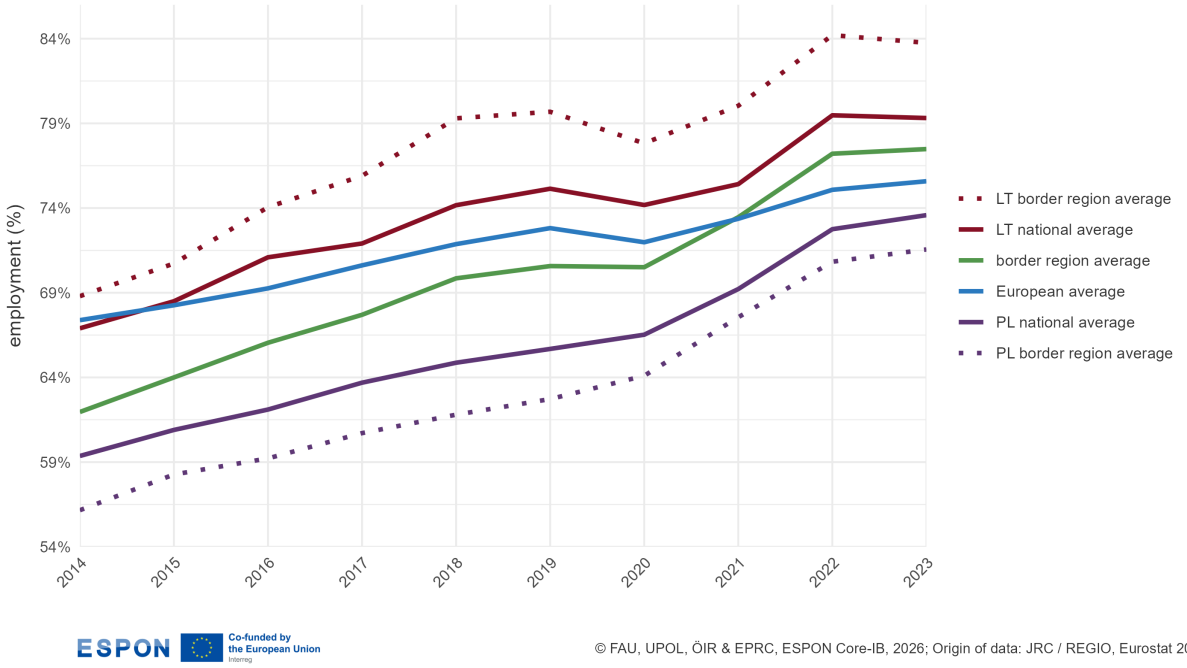


A comparison of the share of employment values of this border region reveals the following situation (in Figure 2.10):

- Compared to the European average, the values in the cross-border region are 2.3 percentage points higher; in 2014, the difference was 5.4 percentage points.
- In comparison to the national average of Lithuania, the cross-border region scores 1.5 percentage points lower, whereas in 2014, the difference was 5.4 percentage points.
- Compared to the national average of Poland, the cross-border region exceeds it by 4.2 percentage points; in 2014, the difference was 2.5 percentage points.
- The Lithuanian part of the cross-border region shows values 4.0 percentage points below the Lithuanian national average, while the Polish part exceeds the Polish national average by 2 percentage points.
- Compared to the average of all cross-border regions, this region's share of employment is higher by 3.03 percentage points; however, in 2014, it was 4.34 percentage points lower.

[17] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1. Note: In this map, 'residents' refers to the population aged 15 to 64.

Figure 2.10: Employment share over time (comparison)[18]



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 Lithuania–Poland cross-border region between 2014 and 2023. In 2023, the region 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 Polish border average (64.9%) and the Lithuanian border average (65.3%). Compared to national

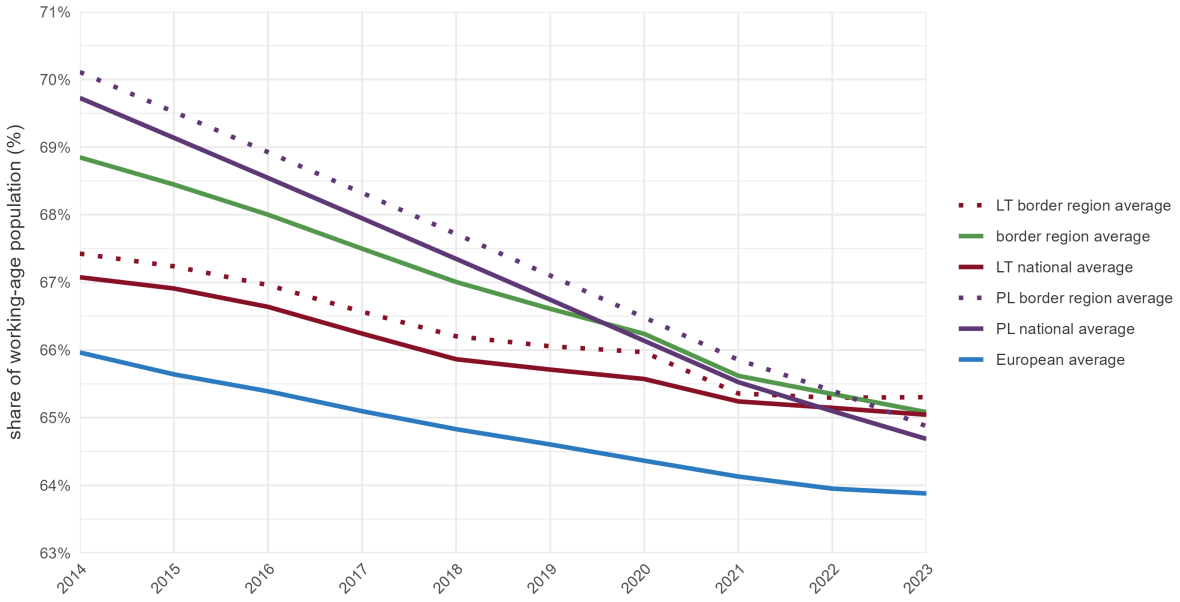
[18] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

averages, it is also very similar to both the Polish national average (64.7%) and the Lithuanian national average (65.0%).

The cross-region experienced a noticeable 3.7 percentage point decrease in the share of the working-age population between 2014 (68.8%) and 2023 (65.1%). This decline is stronger than the European average, which dropped by 2.1 percentage points in the same period. While both countries show a declining trend, the decrease has been substantially more pronounced on the Polish side (-5.2 percentage points at the border and -5.0 percentage points nationally). In contrast, the Lithuanian side experienced only a moderate decline (-2.1 percentage points at the border and nationally).

The Lithuania–Poland cross-border region experienced a noticeable overall decline in the share of the working-age population between 2014 and 2023. In 2023, the cross-border region remained slightly above the EU and cross-border averages, with relatively more favourable demographic developments on the Lithuanian side.

Figure 2.11: Share of working-age population over time (comparison)[19]



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[19] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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 %

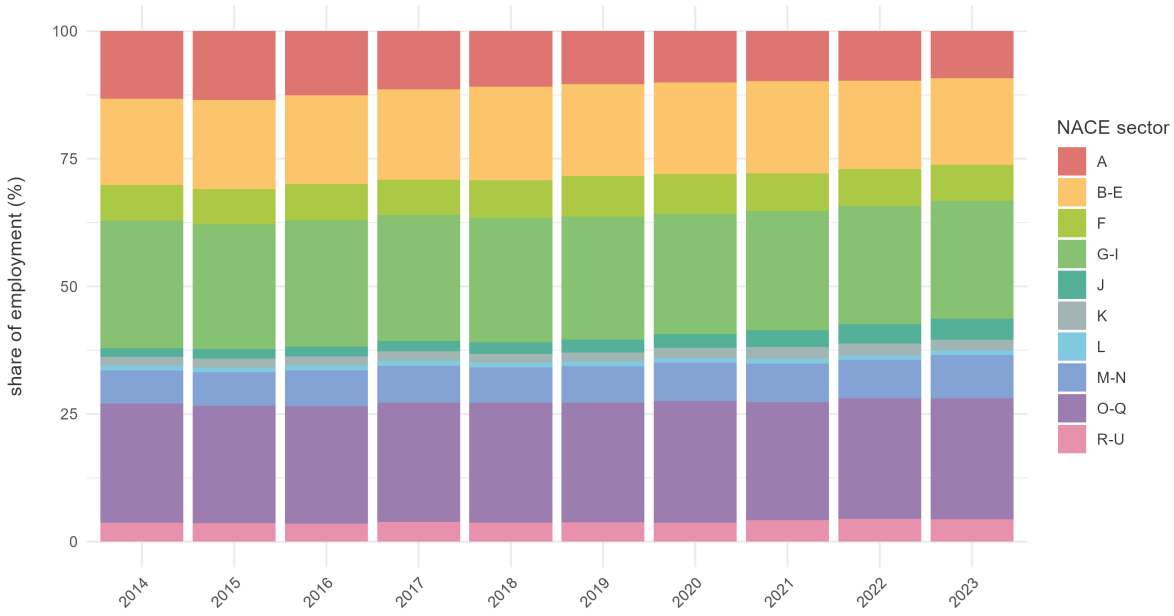
Please refer to the technical annex for more information.

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 cross-border region.

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

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

Figure 2.12: Employment by sector (comparison)[20]



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

Between 2014 and 2023, the relative number of jobs in the different sectors remains fairly stable. There is a slight decline in the share of employment in agriculture, forestry and fishing (A), wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H) and Accommodation and food service activities (I). Conversely, there is a modest increase in the number of jobs in professional, scientific and technical activities (M), Administrative and support service activities (N) and Information and communication (J).

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).

[20] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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 cross-border regions close to the border indicates the relevance of commuting. It highlights functional relations in the labour market within the cross-border region.

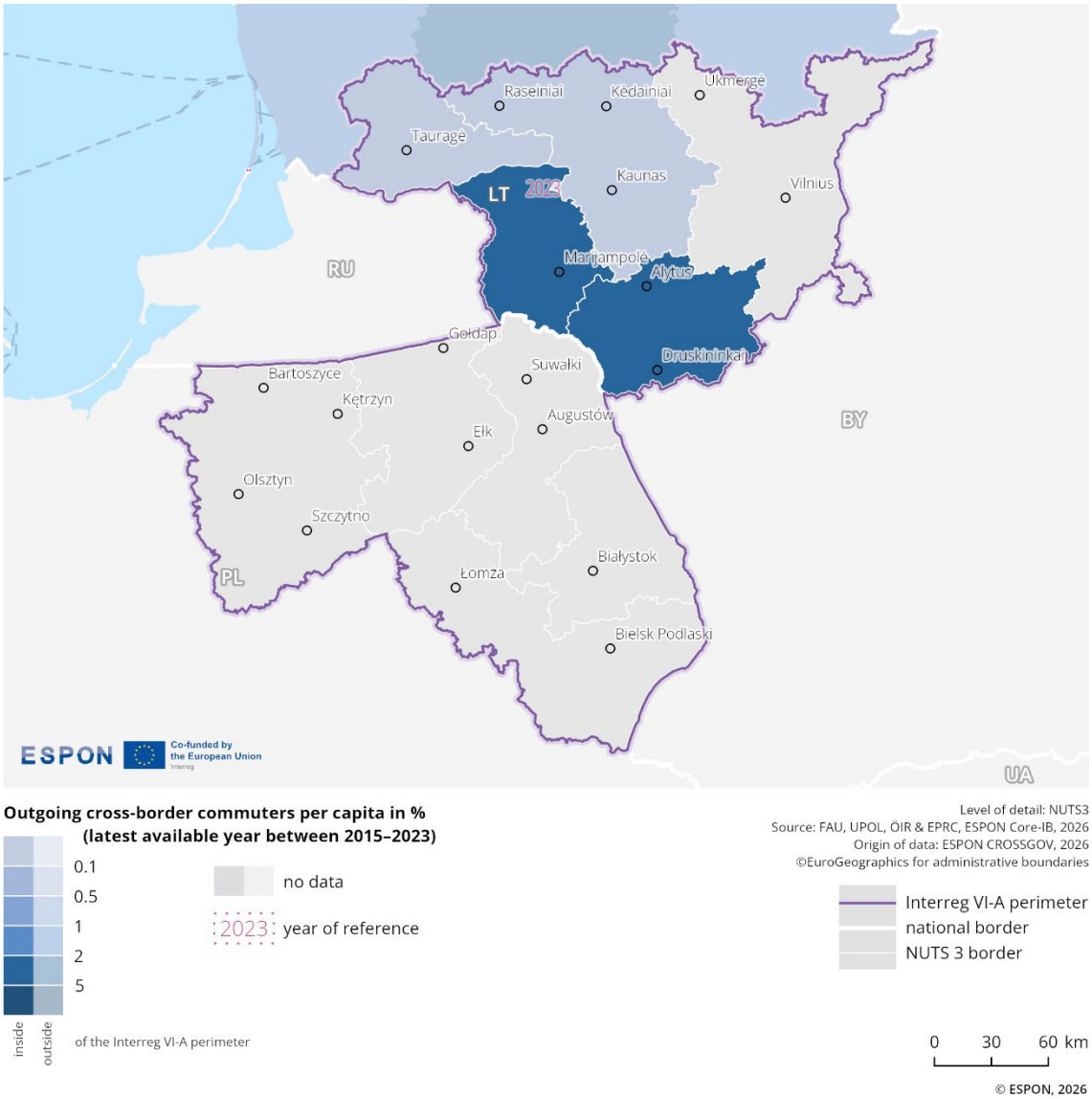
The map illustrates the share of cross-border commuters, based on the most recent available year of data. It shows relatively strong outgoing cross-border commuting activity in areas directly adjacent to the border in Lithuania. For Poland, no data is available.

The regions of Marijampolės apskritis and Alytaus apskritis in Lithuania stand out in particular, with high levels of outgoing commuters[21].

The primary, and most critical, corridor for commuting and logistics between Poland and Lithuania is the Via Baltica (E67 route), which connects Warsaw to Tallinn via Kaunas. This route is considered the main logistical and economic artery, featuring a high-standard highway (A5 in Lithuania and S61 in Poland) that acts as the primary connector to the rest of the European Union. Both nations are actively upgrading these routes to motorway standards to increase capacity, speed, and safety. The main crossing point for most commercial and personal traffic is the Budzisko (PL) - Kalvarija (LT) border point. Another, secondary route that passes through the Suwałki Gap, often utilized for regional traffic and as an alternative to the main Via Baltica path is Vilnius–Augustów Road.

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

Figure 2.13: Outgoing cross-border commuting patterns[22]



[22] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.2.2.5 Cross-border telework agreements

Indicator description

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

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

Please refer to the technical annex for more information.

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

2.2.3 Competitiveness

This sub-dimension illustrates the competitiveness of the cross-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)

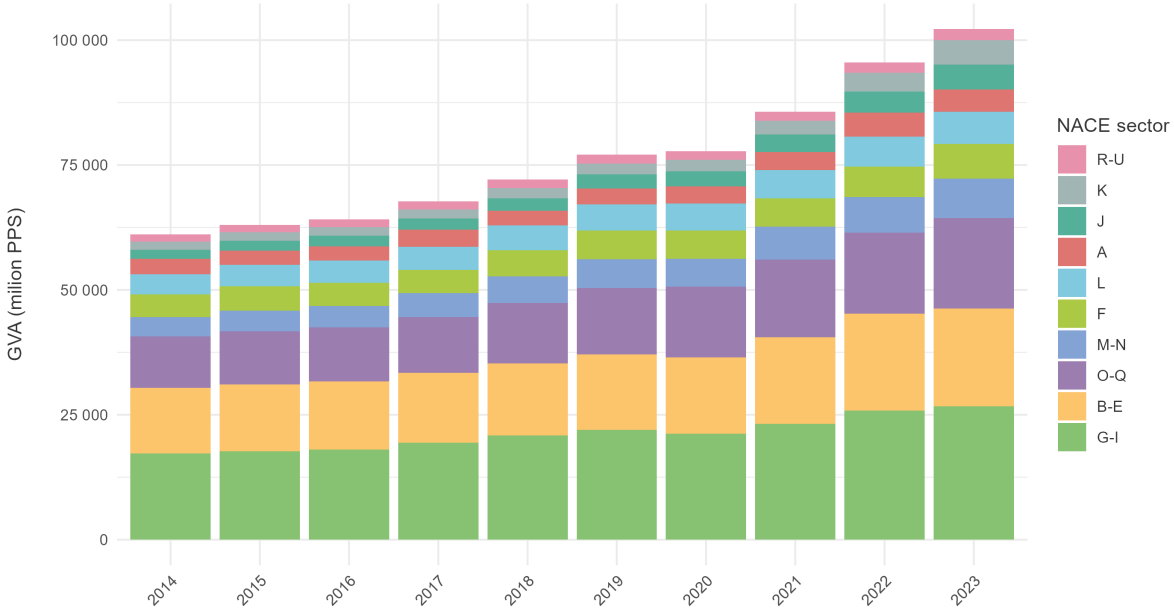
Please refer to the technical annex for more information.

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)

Figure 2.14: Gross value added at basic prices by sector (comparison)[23]



A: Agriculture, forestry and fishing
B-E: Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Water supply; sewerage, waste management and remediation activities (E)
F: Construction
G-I: Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I)
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K: Financial and insurance activities
L: Real estate activities
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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 Lithuania-Poland increased from 61,097 million purchasing power standards (PPS) to 26,720 million PPS — a growth of 67%. 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 G–I contributed the largest share, with a total of 26,720 million PPS in 2023. This underlines the significance of sectors such as Wholesale and

[23] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I) in the Lithuania-Poland cross-border region. All calculations consider the municipality of Vilnius City on Lithunian border.

2.2.3.2 Nominal compensation per hour worked

Indicator description

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

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

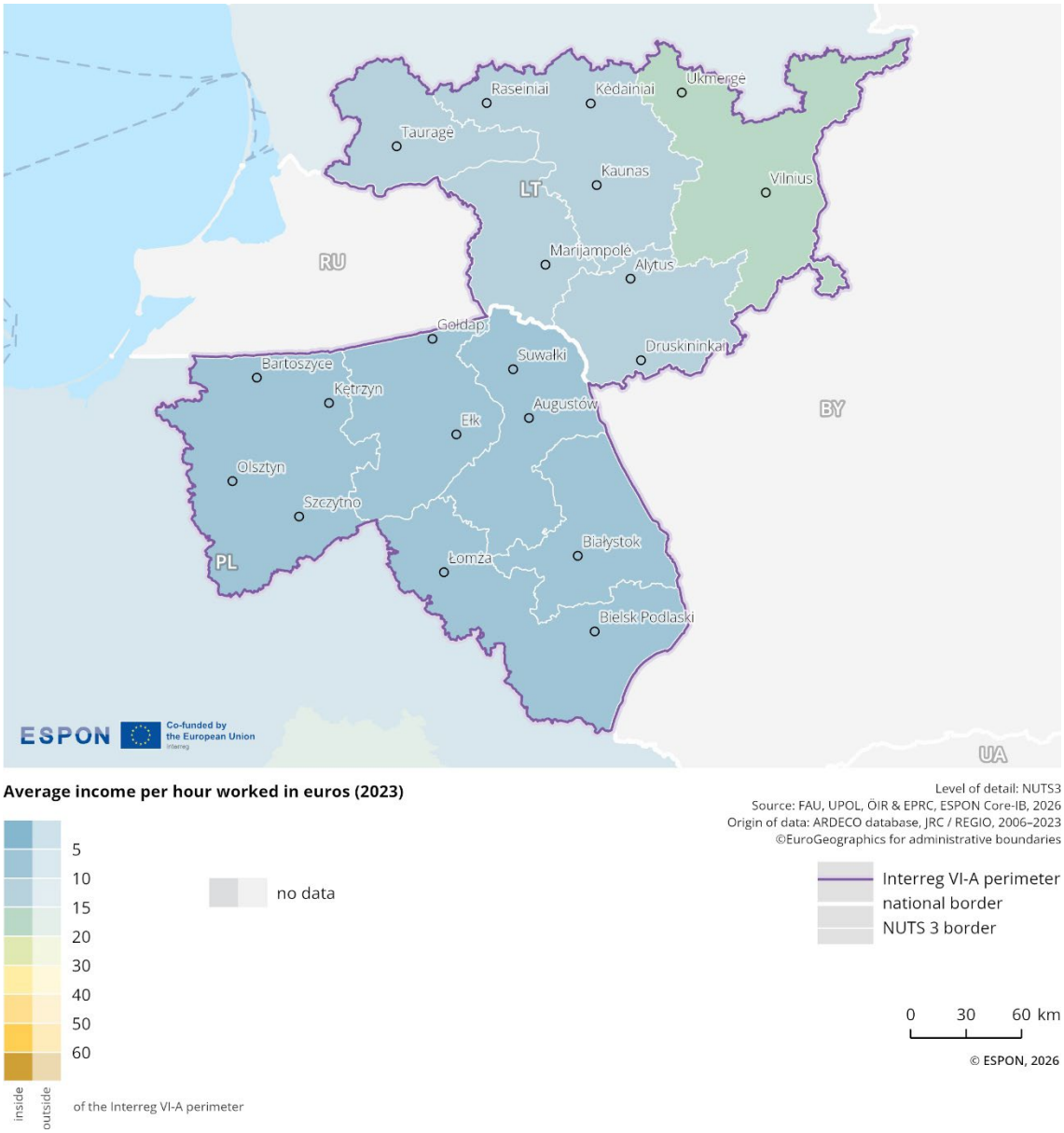
Please refer to the technical annex for more information.

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

In 2023, nominal compensation per hour worked in the Lithuania–Poland cross-border region appears to be distributed somewhat unevenly. In Polish areas, the average hourly income ranges between 5 and €10. In Poland, no cross-border region reports values significantly above this range. The national average of nominal compensation per hour worked for 2023 is €9.90 in Poland. In most Lithuanian areas, the average hourly income ranges between €10 and €15, but Vilniaus apskritis (€18.60) reports a slightly higher value[24]. The national average of nominal compensation per hour worked for 2023 is €13.20 in Lithuania.

[24] 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[25]



[25] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.2.4 Infrastructure and housing

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

2.2.4.1 Advertised sales prices

Indicator description

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

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

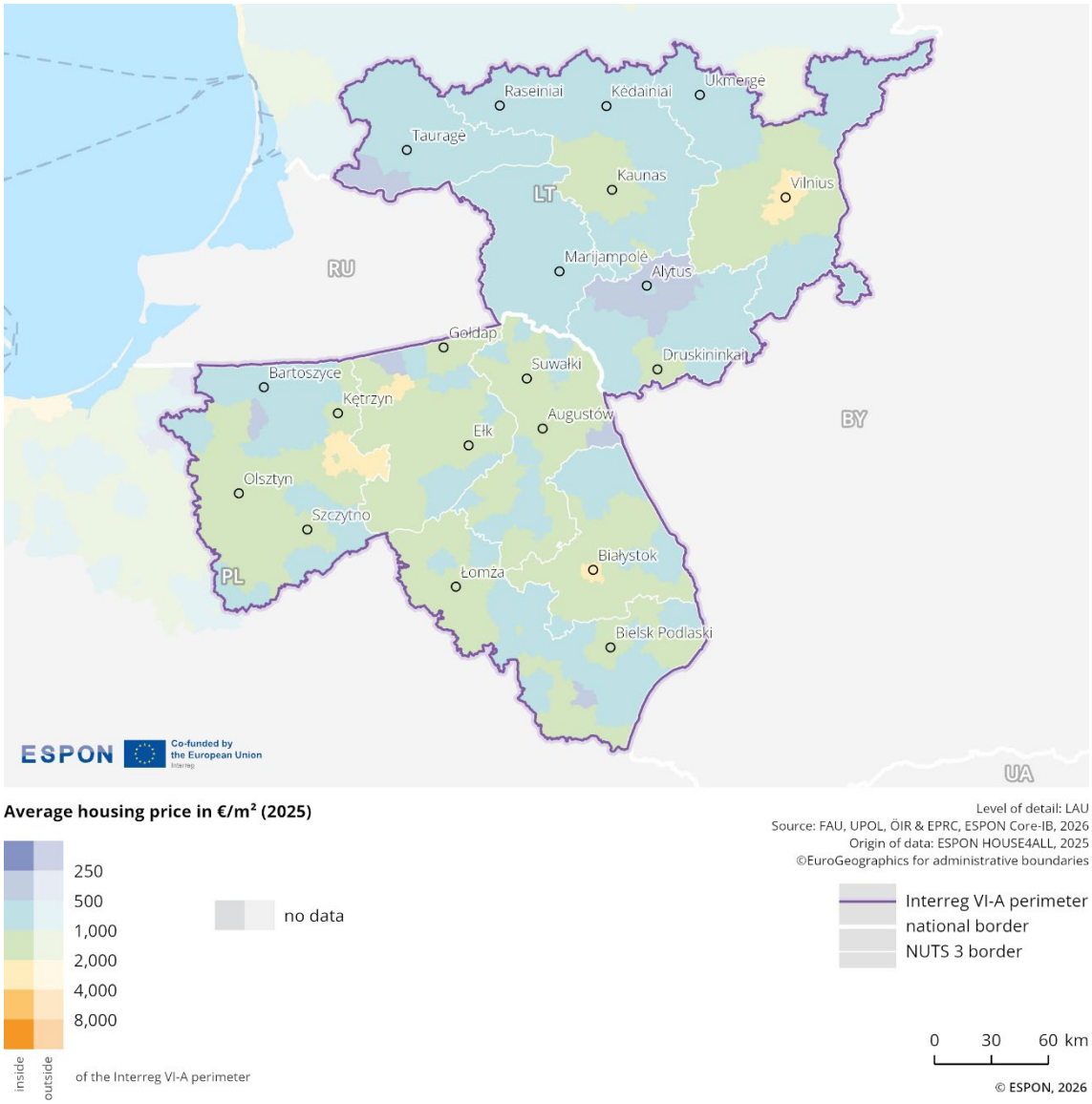
Please refer to the technical annex for more information.

Figure 2.16 illustrates the advertised sales price of housing in 2025 across the cross-border region. The data are categorised into ranges of average housing price per square metre, from 250€/m² up to 8.000€/m², shown in colours ranging from purple and blue to green, yellow and orange.

The map shows that the price category in the range from 1,000 up to 2,000€/m² dominates in Poland. The lower category from 500 to 1,000€/m² is the second frequent category in Poland. The same lower category of average price prevails more in Lithuania. The town, Kaunas, has prices around 1,500€/m². All Polish towns like Białystok, Olsztyn, Łomża and Suwałki are lying in the area where the prices are between 1,000 and 2,000€/m².

The border forms a partial barrier between these 2 countries in terms of the advertised average prices per square meter, but it is not so significant.

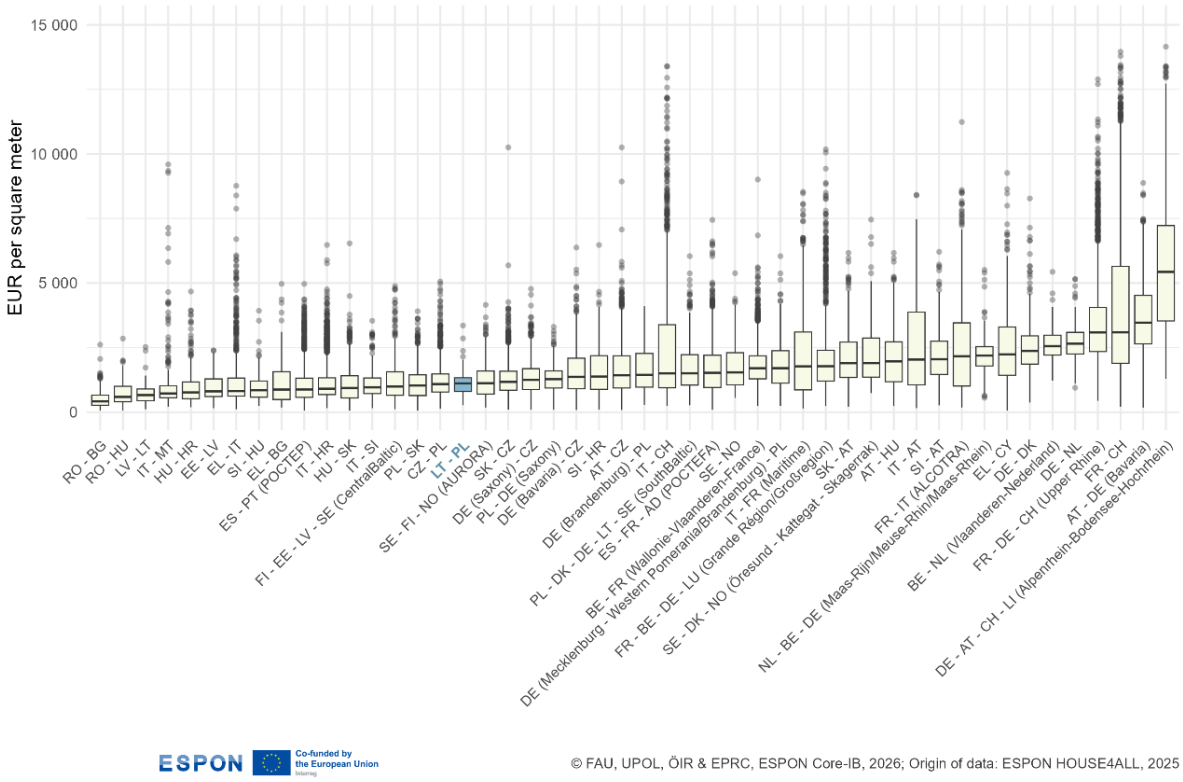
Figure 2.16: Advertised housing prices[26]



The Lithuanian part of the cross-border region records an average advertised residential sales price of approximately €958 per square metre, while the Polish part shows a higher average price of about €1,140 per square metre. Overall, the average advertised sales price across the entire border region amounts to €1,115 per square metre (Figure 2.17). This figure is below the average for all EU-evaluated cross-border regions (€1,900 per square metre) and remains below the European average of approximately €5,600 per square metre. All calculations consider the municipality of Vilnius City on Lithunian border.

[26] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Figure 2.17: Advertised housing prices (comparison)[27]



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

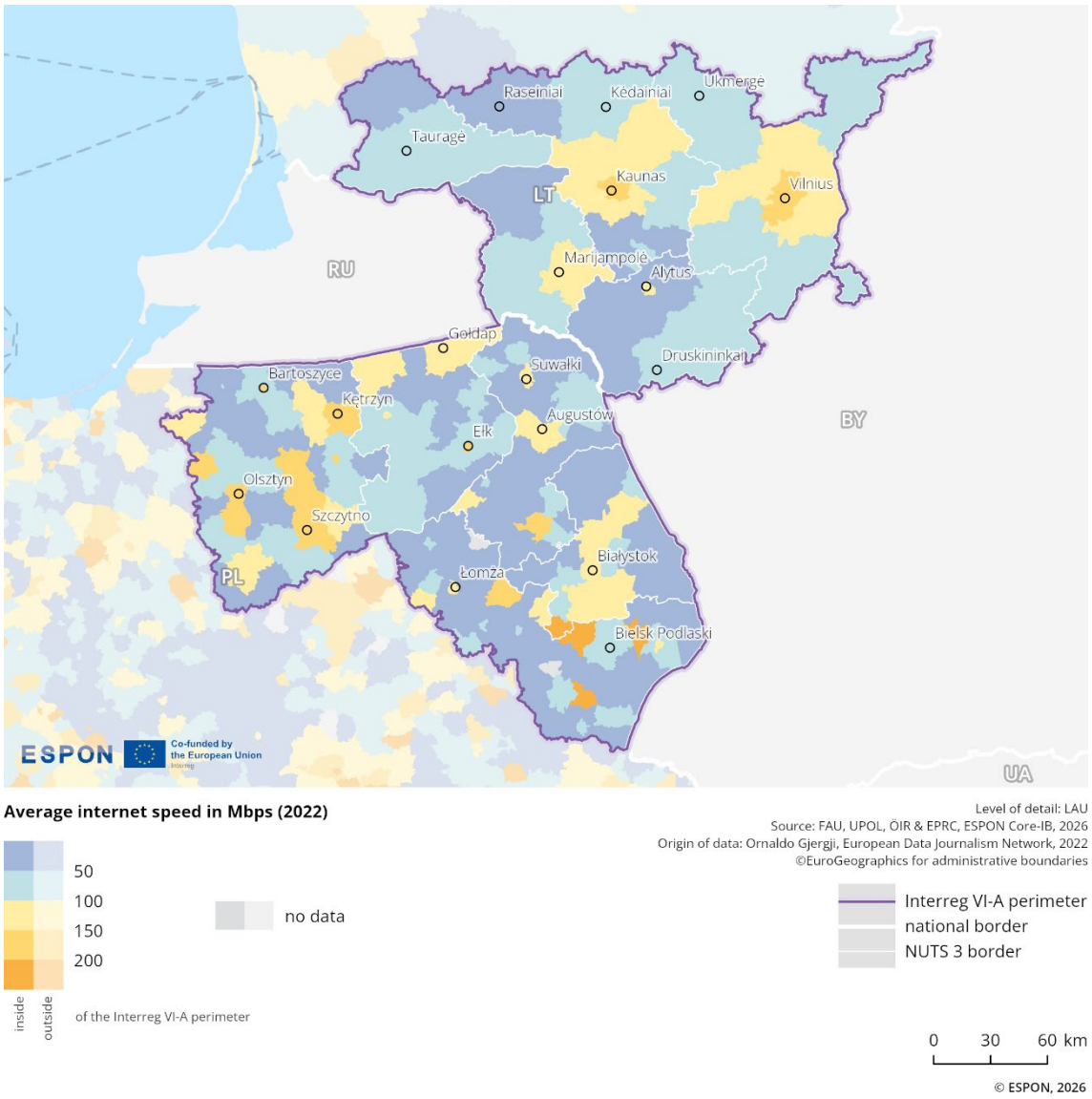
Please refer to the technical annex for more information.

Digitalisation is a highly relevant issue in European cross-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.

[27] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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).

Figure 2.18: Average internet download speed[28]



The map reveals significant differences between urban and rural areas. Values range from under 50 Mbps to over 200 Mbps. Cities such as Kaunas, Vilnius, Marijampolė, Suwałki, Ełk, Olsztyn, Łomża, and Białystok report relatively high average speeds, while surrounding areas tend to have significantly lower values. This may be due to the greater return on investment typically associated with digital infrastructure projects in urban areas compared to rural ones. However, not all urban areas in this

[28] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

cross-border region have high download speeds, for example, Ukmergė does not stand out in this regard.

2.2.5 Key messages on the economic dimension

The economic situation in the Lithuanian–Polish cross-border region has shown notable growth in recent years. Although the level of economic output per capita remains below the EU and European cross-border region averages, the pace of growth has been much faster than in most comparable areas. The Lithuanian side performs better than the national average, while the Polish side remains below it. Growth on the Polish side has outpaced the overall EU rate, and the Lithuanian side has experienced even stronger dynamics.

Employment rates have remained consistently high, exceeding the European average. Compared with Lithuania as a whole, the rate is slightly lower, but it is higher than in Poland overall. The employment structure has remained relatively stable, with the most important sectors being industry and energy, trade, transport and hospitality, as well as education and healthcare. Traditional sectors such as agriculture and trade are gradually losing share, while services with higher added value , particularly professional, administrative, and information-related activities, are gaining importance.

Demographic trends are less favourable. The share of the working-age population is shrinking faster than the EU average, especially on the Polish side of the border. The Lithuanian part is experiencing a milder decline and maintains better demographic indicators than the Polish side.

Economic performance, measured by value added, is growing, with the strongest drivers being trade, transport, and tourism. However, wages remain significantly different: Polish areas record lower pay levels, while most Lithuanian areas reach substantially higher levels. These differences may encourage labour migration from Polish areas to more economically dynamic Lithuanian ones, creating both opportunities for development and risks for the sustainability of local labour markets.

Housing prices across the border area are lower than in the average European cross-border region. The Lithuanian side generally offers cheaper housing than the Polish side, except for Vilnius, where prices are considerably higher. Overall, the price level along the border does not pose a major barrier to the housing market.

The level of digitalisation is uneven in the values of the average internet download speed. Large cities on both sides of the border enjoy fast internet connections, while rural areas lag with considerably lower speeds. These differences confirm a persistent digital divide between core and peripheral areas, highlighting the need for targeted infrastructure investment.

2.3 Green dimension

The green dimension highlights the environmental characteristics, vulnerabilities and sustainability-related interactions within the cross-border region. The analysis provides insight into the environmental interdependence of cross-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 cross-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

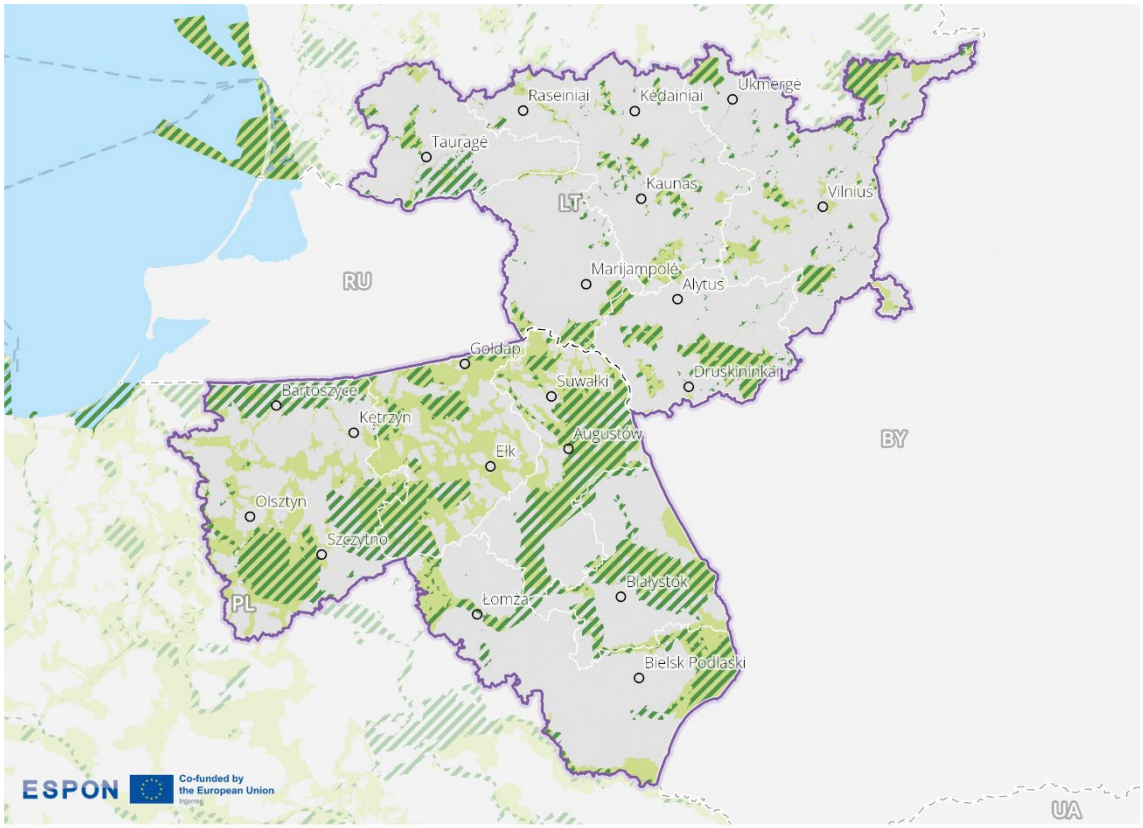
Please refer to the technical annex for more information.

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

The map shows that protected areas within the Interreg region are concentrated in the eastern and southern parts and thus mainly in Poland, especially around Białystok, Olsztyn, and Suwałki, where Natura 2000 and national designations frequently overlap. Additional clusters are found near Ełk and Łomża, while the northern parts of Lithuania around Marijampolė and Kaunas show several yet more fragmented and scattered protected sites.

Several protected areas along the Polish–Lithuanian border form rather sparse cross-border counterparts, many of which are not continuous. Overall, the coverage with protected areas is very high in the area. Nevertheless, Lithuania features a smaller number of protected areas, while Poland has rather larger, more continuous areas.

Figure 2.19: Nature protected areas[29]



European protected areas (2024)

Natura2000

Emerald Network

national designated protected area

inside / outside of the Interreg VI-A perimeter

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

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

Interreg VI-A perimeter
national border
NUTS 3 border

0 30 60 km

© ESPON, 2026

[29] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.3.1.2 Air pollution

Indicator description

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

- **Source/method of retrieval**: Processing and analysis of European Environment Agency data
- **Temporal coverage**: 2022
- **Unit**: Population weighted average of µg/m^3

Please refer to the technical annex for more information.

Figure 2.20 illustrates PM2.5 concentrations (in µg/m³) across NUTS3 regions in Lithuania and Poland. Each small dot represents an individual measurement, while the black crosses indicate the average PM2.5 concentration for each NUTS3 region[30]. The regions are aligned along the x-axis, with Lithuanian regions on the left (in red) and Polish regions on the right (in blue).

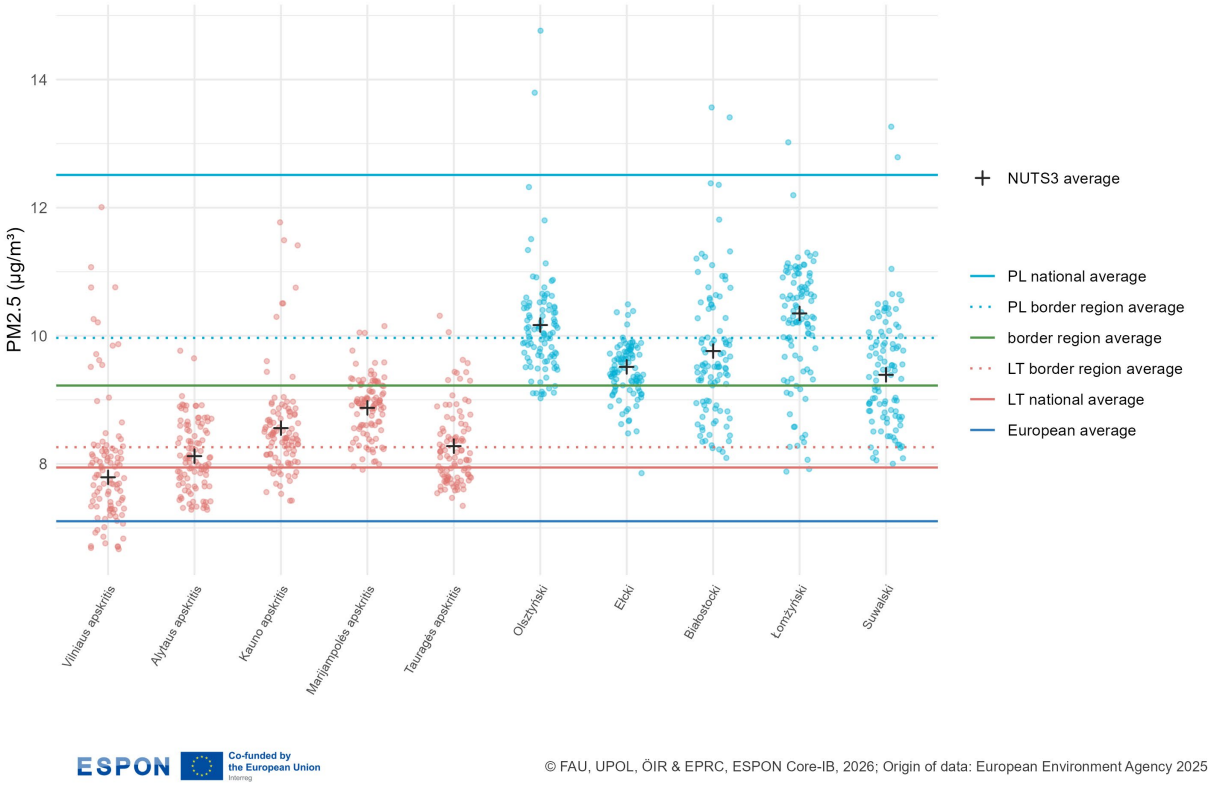
PM2.5 measurements in the Lithuanian regions are relatively tightly clustered, with most values ranging between 7 and 9 µg/m³. The Polish regions show more widely spread PM2.5 measurements, with several exceeding 10 µg/m³. Overall, at the national level, Poland records a significantly higher average PM2.5 level than Lithuania.

Lithuania's national average is slightly below 8 µg/m³, with the cross-border region average being a little bit higher. In contrast, Poland's national average is around 12.5 µg/m³, which is notably higher than its cross-border region average.

The European average is around 7 µg/m³, which is lower than both the Lithuanian and Polish national averages. The cross-border average is slightly above 9 µg/m³, making it higher than both the European average and the Lithuanian national average. This cross-border average reflects the higher PM2.5 values in the Polish cross-border region and the lower values in the Lithuanian cross-border region.

[30] 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&Icis=NUTS2021L3&

Figure 2.20: Air pollution[31]



ESPON Co-funded by the European Union Interreg

2.3.1.3 Water pollution

Indicator description

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

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

Please refer to the technical annex for more information.

The map in Figure 2.21 illustrates water pollution levels in Lithuania and Poland within their Interreg region in 2022. Water quality is represented using 6 colour-coded categories, ranging from "bad" to "high", including an "unknown" category[32].

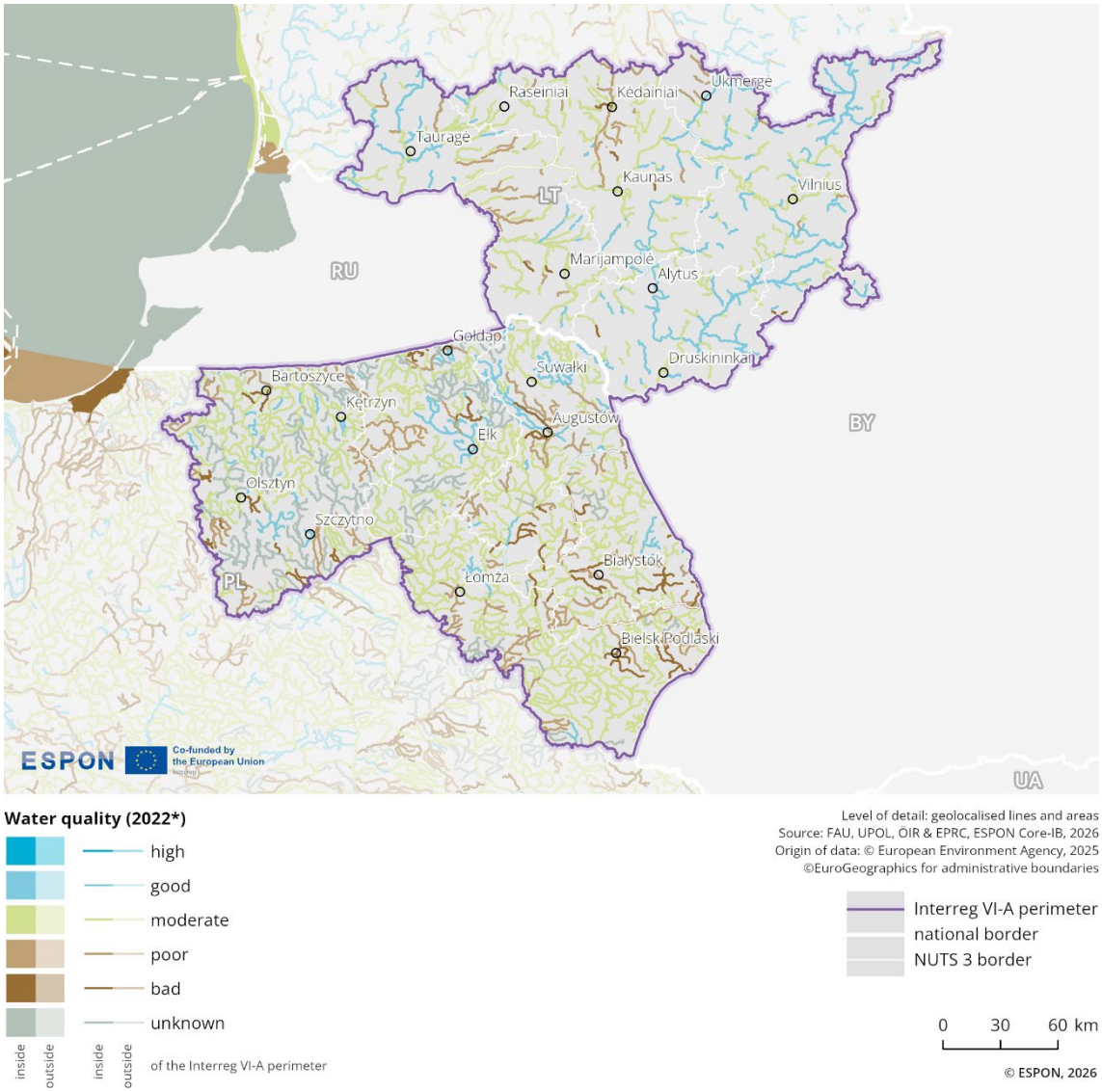
In Lithuania, most rivers in the eastern part are rated as “good” or “moderate”. In the western part, water bodies are more often classified as “moderate” and “poor”.

[31] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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

In Poland, by contrast, water quality is more varied. In the eastern part of the cross-border region, the water quality is rated as “moderate”, “poor” and in some parts also “bad”. Towards the west, there are a few more inland waters classified as “good”, with some parts that fall under the category of unknown.

Figure 2.21: Water quality patterns[33]



[33] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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.[34]

2.3.2.1 Natural hazard risks

Indicator description

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

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

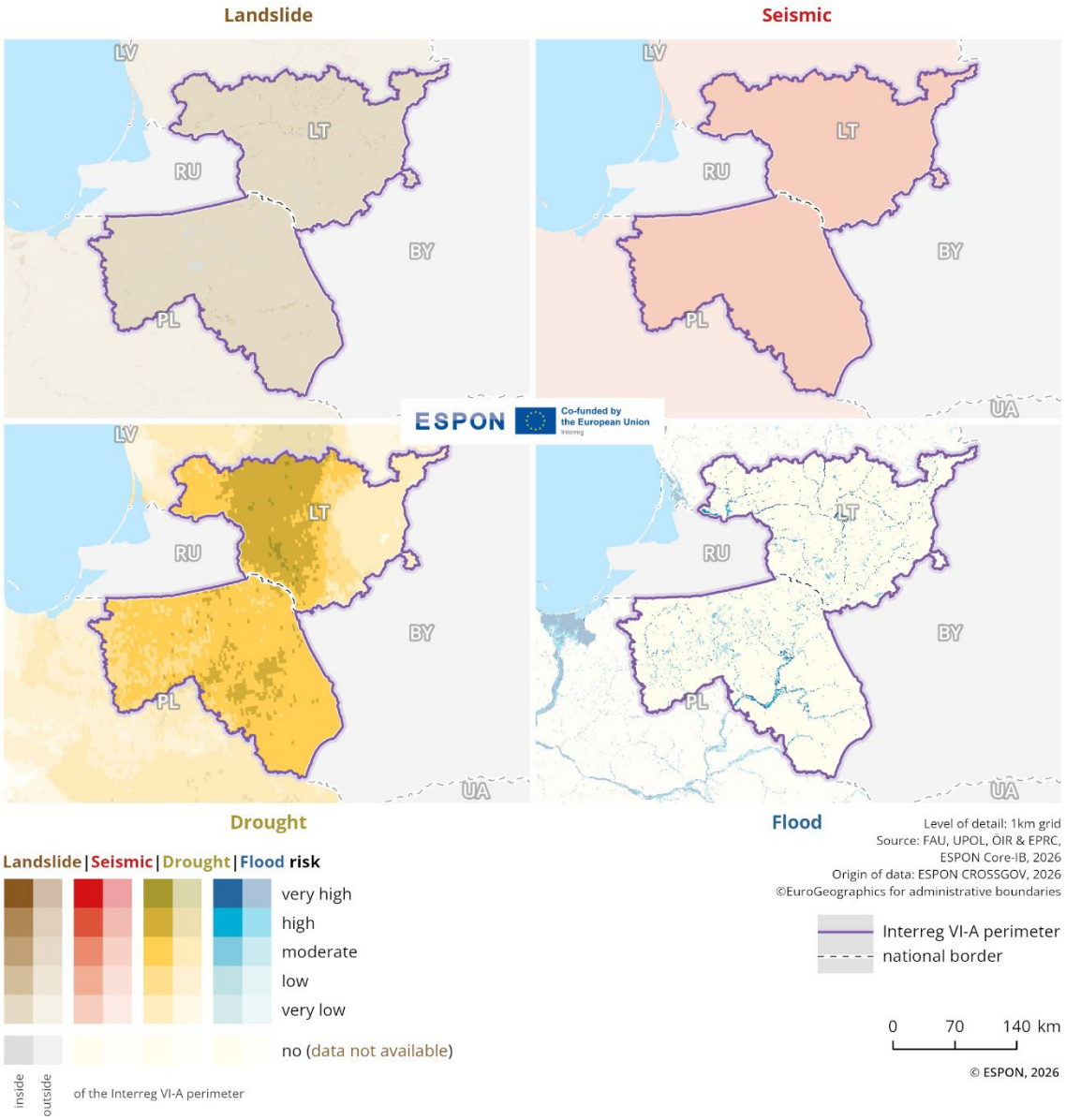
Please refer to the technical annex for more information.

The maps in Figure 2.22 illustrate the spatial distribution of natural hazards in the Lithuania-Poland cross-border region, highlighting areas where risks are shared across national boundaries and where risks are not necessarily cross-border relevant.

The cross-border region displays a very low risk for landslides and earthquakes. Furthermore, risks of flooding are rather local. There exists a moderate to high risk of drought, with the most affected area being located in Lithuania, close to the shared border.

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

Figure 2.22: Natural hazard risks[35]



[35] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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.[36]

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

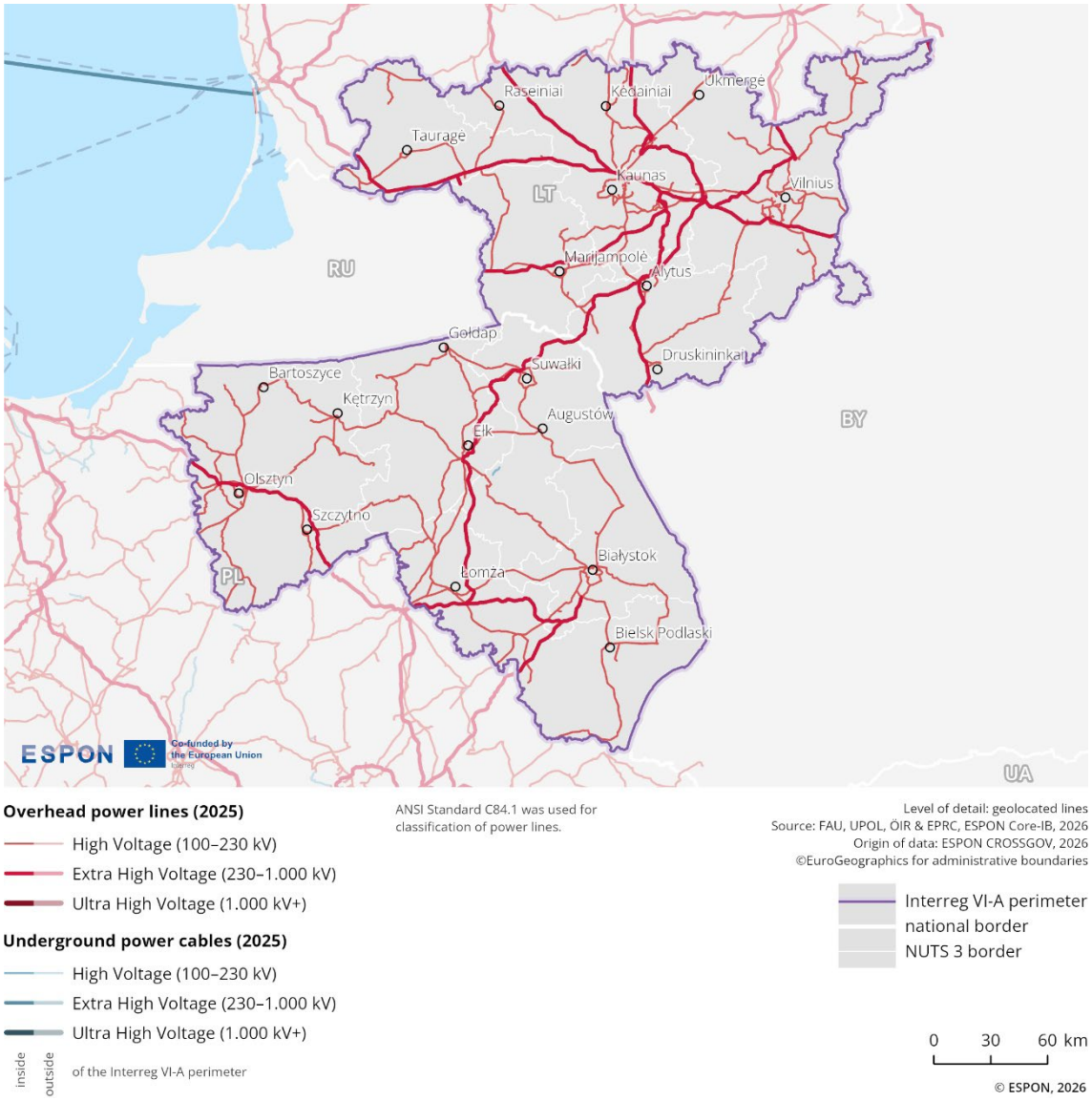
Please refer to the technical annex for more information.

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

The map shows that the cross-border region of Lithuania-Poland features rather sparse in high- and extra high-voltage energy infrastructure. A considerably branched network of extra high-voltage lines is complemented by a network of high-voltage lines. Extra high-voltage power lines connect urban centres in the cross-border region and cross the common national border, thereby providing a direct electricity connection between the 2 countries. This direct connection is seen as particularely relevant, as it is the only land connection between the power grid of the Baltic states and any EU member state.

[36] See also: European Commission 2025: Handbook on Cross-border Energy Communities, https://ec.europa.eu/regional_policy/sources/studies/2025/Handbook_on_Cross-border_Energy_Communities.pdf

Figure 2.23: High-voltage transmission infrastructure[37]



[37] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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

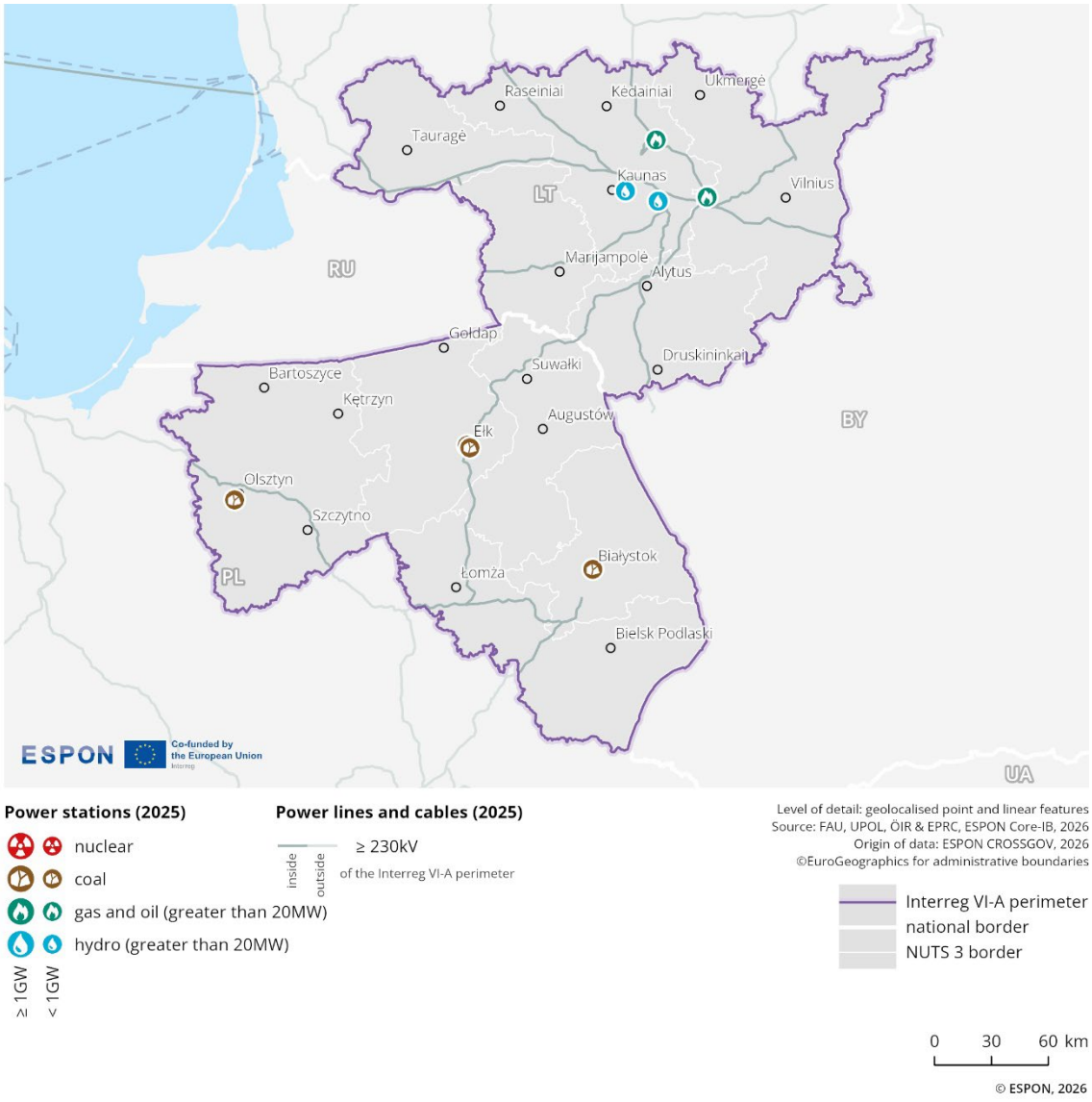
Please refer to the technical annex for more information.

Figure 2.24 shows that there are 8 power stations in unique locations in the Lithuania-Poland cross-border region in total (see also Table 1). Coal-fired power plants are the most common, all of which are located in the Polish part of the cross-border region (in 2 cases quite far from the common border). The other 4 energy facilities (2 gas and oil power stations – but with a total of 5 parallel operations – and 2 hydroelectric power plants) are located in Lithuania, all in the vicinity of Kaunas. No nuclear power plant is present in the whole cross-border region.

Table 1: Number and type of power stations

Power stations/plants	Less than 1GW	1GW and up
Nuclear	/	/
Coal	4	/
Gas and oil	2	/
Hydro	2	/

Figure 2.24: Power stations infrastructure[38]



[38] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.3.4 Resources and circular economy

This sub-dimension focuses on resource use patterns in the cross-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

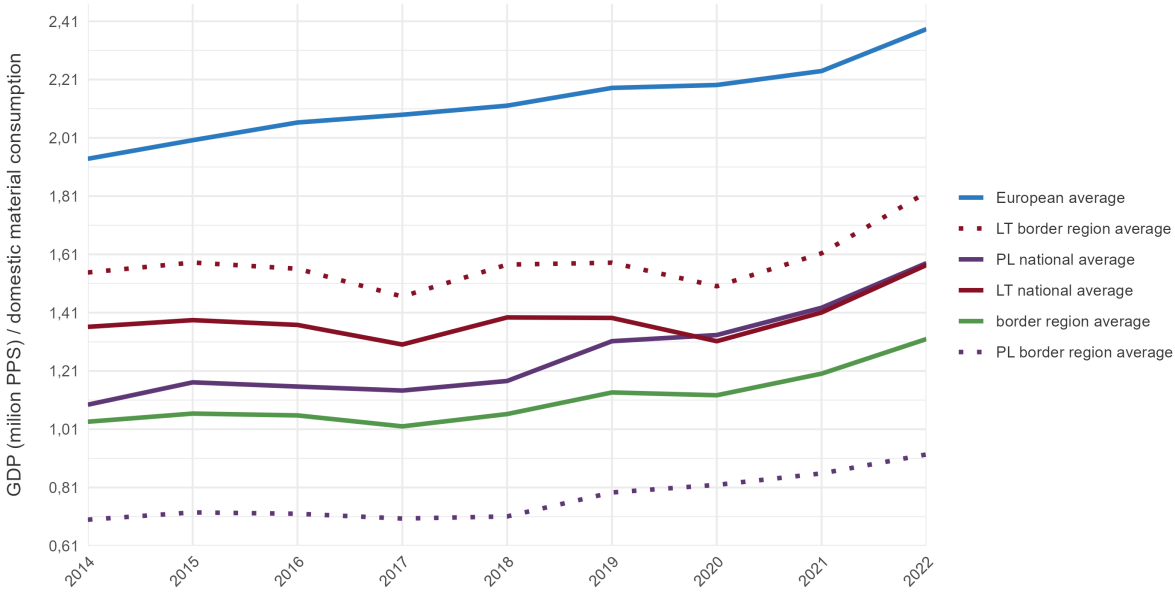
The indicator shows the economic value generated per unit of material consumed for each region within the cross-border area. Developments over time provide insights if the decoupling of productivity from resource use is progressing on regional level.

- **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 cross-border regions, and the overall cross-border regional average with the European average.

Figure 2.25: Resource productivity[39]



ESPON Co-funded by the European Union Interreg

[39] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

The chart shows that the Lithuanian and Polish national averages of resource productivity show a slightly increasing trend. Lithuanian values are higher at the beginning of the period, but from 2020 onward, the 2 are nearly aligned, both reaching around 1.61 million PPS/DMC in 2022. While the Lithuanian cross-border region average is notably higher than the national average, the Polish cross-border region average is lower than its national average.

The European average lies significantly above both the Lithuanian and Polish values. The cross-border region average represents a combination of the lower Polish and higher Lithuanian cross-border region values, reaching approximately 1.31 million PPS/DMC in 2022. However, notable disparities exist within the border area itself.

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.

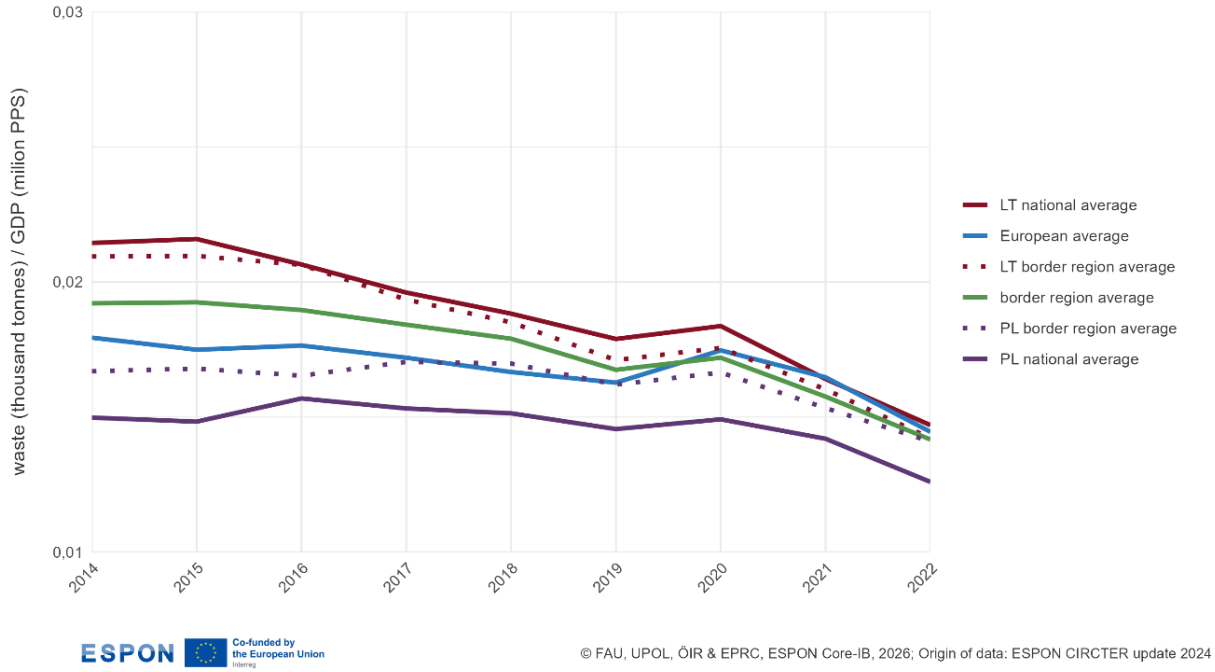
The graph in Figure 2.26 illustrates the trend in waste generation relative to economic output, measured in tonnes of waste per million PPS (Purchasing Power Standard) of GDP from 2014 to 2022 in Lithuania, Poland and their Interreg border region.

Lithuanian and Polish values show a steady downward trend over the observed period, with Lithuanian values consistently higher than Polish values. In 2022, the Lithuanian national average is around 0.015 tonnes of waste per million PPS, while the Polish national average is approximately 0.013 tonnes. The Polish cross-border region average is notably higher than the national average. In contrast, the Lithuanian cross-border region average is slightly 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 higher than the Polish national average but lower than the Lithuanian national average, although from 2020 onwards, the values begin to converge. Until 2019, the European average lies below the cross-border average; after that, it remains above.

The cross-border regional average consistently stays between the higher values of the Lithuanian cross-border region and the lower values of the Polish cross-border region. From 2019 onwards, all 3 values began to converge. In 2022, the cross-border average is slightly below 0.015 tonnes of waste per million PPS.

Figure 2.26: Waste generation per GDP[40]



2.3.5 Key messages on the green dimension

The Lithuania–Poland cross-border region contains a high overall coverage of protected areas, with concentrations primarily in Poland's eastern and southern parts, where Natura 2000 and national designations often overlap. Smaller, more fragmented clusters also occur. Cross-border ecological continuity is limited, with many protected areas lacking direct, contiguous counterparts on the other side of the border.

Air quality patterns show a marked disparity: Lithuania maintains moderate PM2.5 levels (in µg/m³), while Poland records significantly higher concentrations. The cross-border average is elevated compared to European levels, driven by higher Polish values, though Poland's cross-border region performs better than its national average.

Natural hazards are limited, with very low landslide and earthquake risks and only localised flood threats. Drought risk is moderate to high, affecting both countries, but most pronounced in Lithuania, particularly near the border.

Energy infrastructure is nearly extensive, with interconnected high- and extra high-voltage networks. A single cross-border extra high-voltage link is of strategic importance, serving as the only land-based power connection between the Baltic States and any other EU member state. Power generation is split geographically: Poland hosts all coal-fired plants, while Lithuania's facilities comprise gas, oil, and hydroelectric stations clustered near Kaunas. No nuclear power plants are present in the cross-border region.

[40] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.4 Socio-economic dimension

The socio-economic dimension examines patterns of social integration, tourism, and access to public services in the cross-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 cross-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.

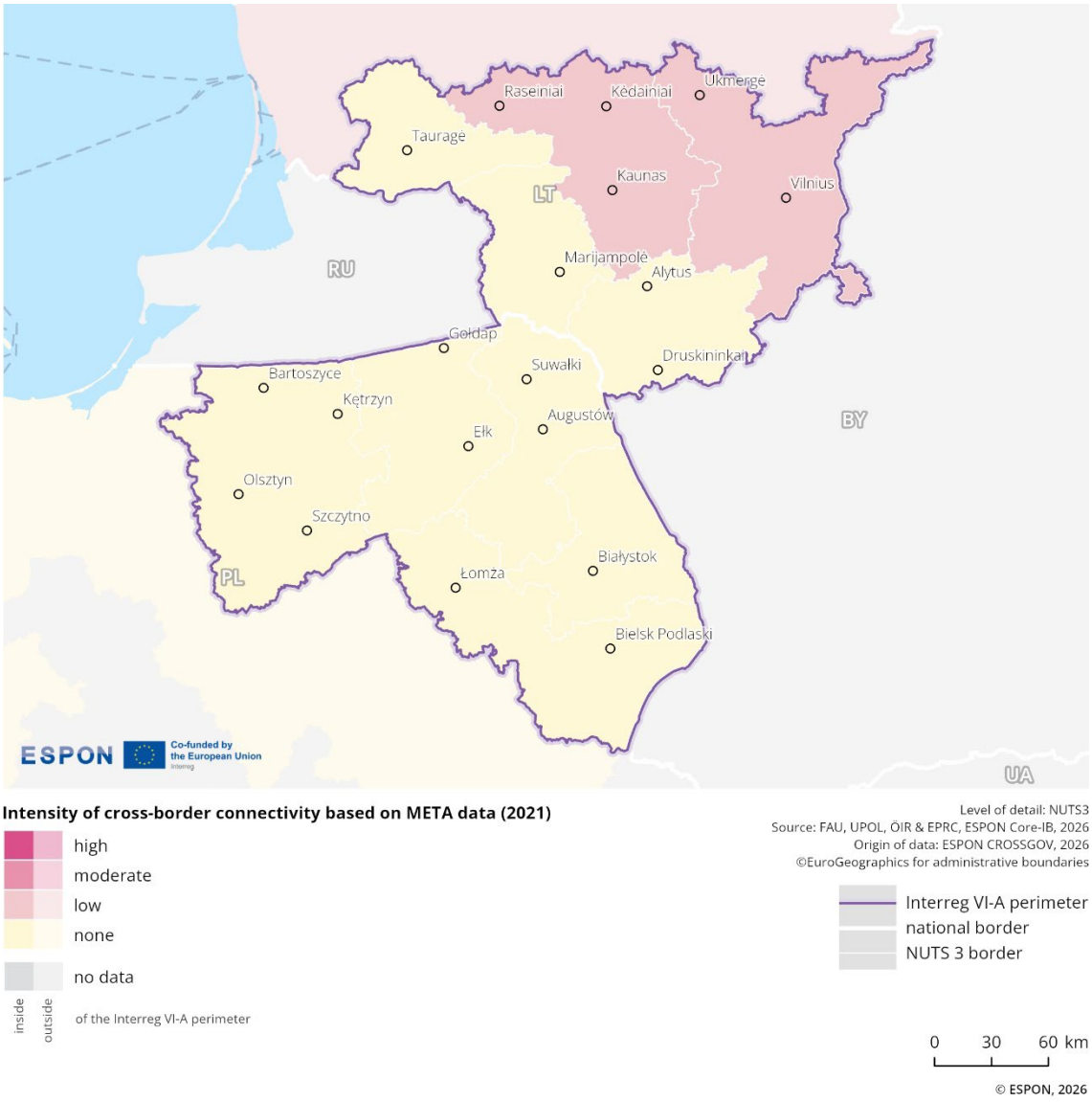
- **Source/method of retrieval**: Processing Facebook data on existing connections across the border (data for Good Meta)
- **Temporal coverage**: 2021
- **Unit**: n/a

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 form low to high, with darker tones representing stronger intensity of cross-border connectivity in social media.

The map shows that the cross-border connectivity in social media among inhabitants of this cross-border region is relatively homogeneous, resulting in no noticeable differences across national borders. In most NUTS 3 units within the cross-border region, cross-border connectivity in social media is negligible. Low levels of cross-border connectivity in social media are observed only in areas surrounding the cities of Kaunas and Vilnius.

Figure 2.27: Cross-border connectivity in social media[41]



[41] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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 cross-border region, with no similarities. Polish is a Slavic language and Lithuanian is a Baltic language. Therefore, they are not mutually intelligible. There are mutual borrowings in the vocabulary, especially Polish words in Lithuanian (due to historical union and Polish influence), and partly also Lithuanian elements in Polish dialects around Vilnius. There is a strong Polish minority living around Vilnius and some of the surrounding villages. The Lithuanian minority in Poland is much smaller. Town Puńsk is the main centre of the Lithuanian minority in Poland. As a result of the historic Polish-Lithuanian union and subsequent border shifts, there has been a long-standing mixing of languages and cultural connections.

2.4.2 Tourism

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

2.4.2.1 Nights spent at tourist accommodation establishments

Indicator description

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

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

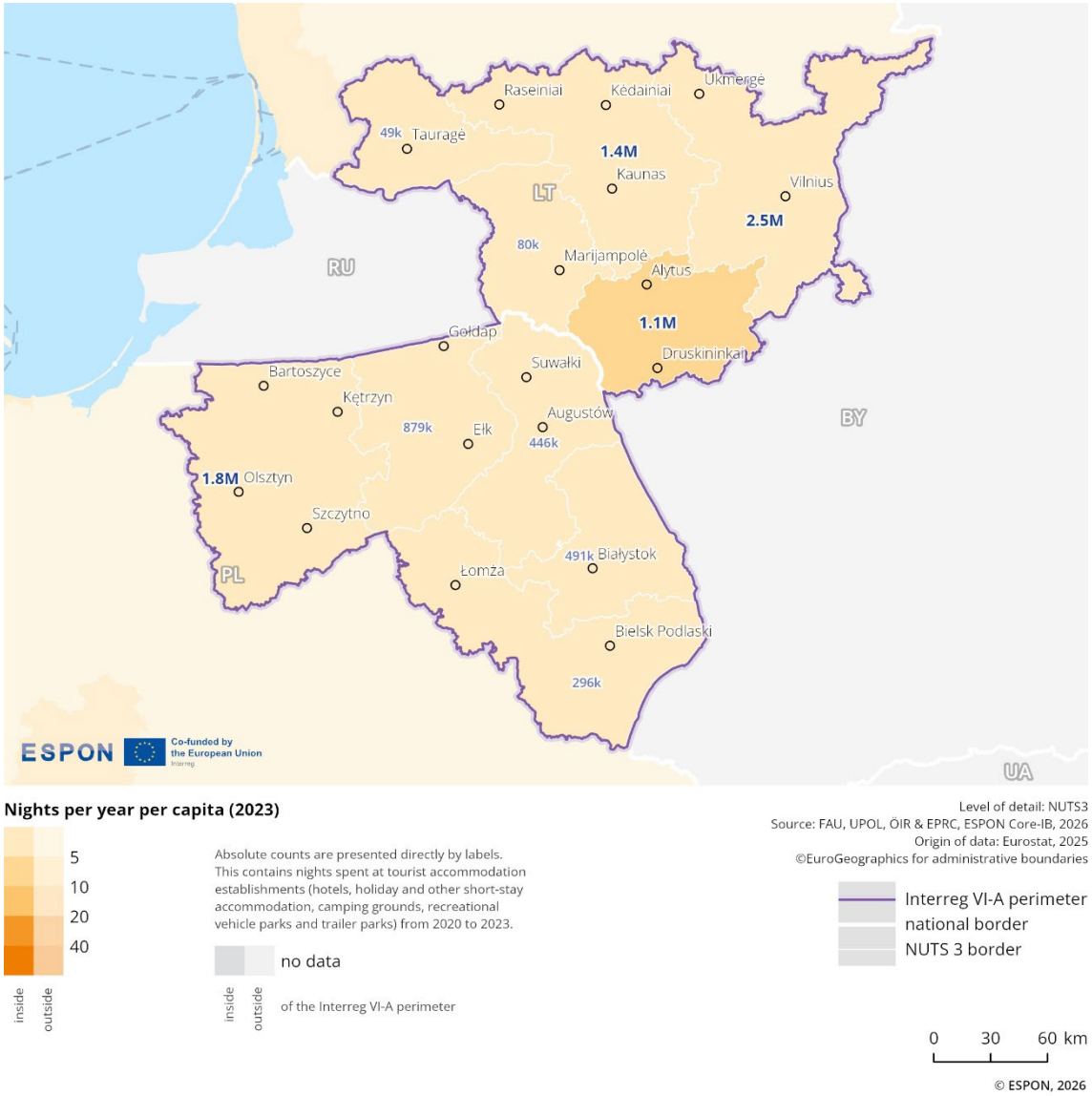
Please refer to the technical annex for more information.

The spatial distribution of overnight stays highlights the importance of key tourist destinations in border areas. Tourism contributes significantly to regional income, infrastructure development and employment, and thereby supports regional prosperity. At the same time, it affects environmental and

living conditions, which may reduce local acceptance despite its economic benefits. This is in particular the case in places of overtourism, seasonal pressures, and increasing land-use conflicts.

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

Figure 2.28: Overnight stays in tourism[42]



In 2023, the Lithuanian NUTS3 region Alytaus apskritis shows 5 to 10 nights per capita[43]. The other cross-border regions in the programme area comprise somewhat lower values. In terms of total overnight stays over the 3-year period, the leading tourism regions are located in Vilniaus apskritis

[42] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

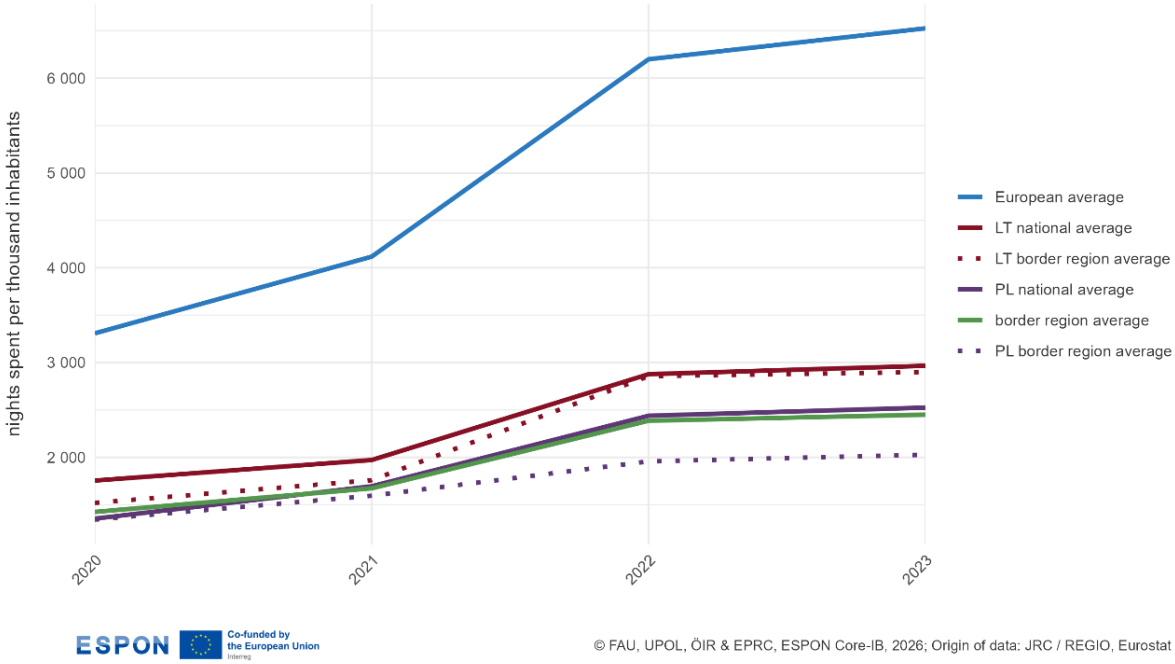
[43] See Eurostat Statistical Atlas for NUTS3 (2021) regions: https://ec.europa.eu/statistical-atlas/viewer/?config=typologies.json&ch=NUTS&mids=BKGCNT,NUTS2021L3,CNTOVL&o=1,1,0.7&center=49.69576,14.3332,4&lcis=NUTS2021L3&

(approx. 2.5 million), Olsztyński (approx. 1.8 million), Kauno apskritis (approx. 1.4 million) and Alytaus apskritis (approx. 1.1 million).

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 Lithuania-Poland 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 cross-border regional averages of both countries are slightly lower than their respective national averages. Additionally, the cross-border regional average for the Lithuanian border area is somewhat higher than that for Poland 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)[44]



[44] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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)

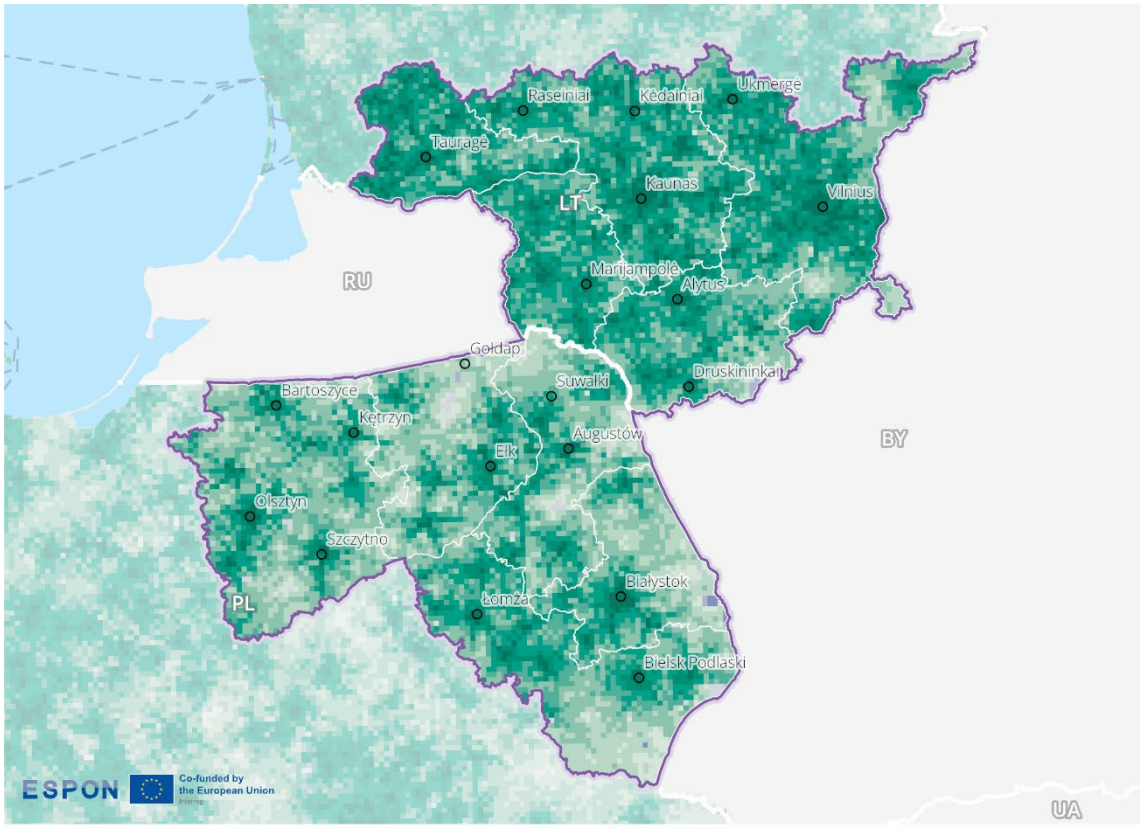
These indicators show how long, on average, it takes to reach the nearest facility by car. The data comes from the ESPON PROFECY Update project (2022) and is visualised based on a 2.5-kilometre grid. All calculations consider the municipality of Vilnius City on Lithunian border.

In the Lithuania–Poland border area, essential services such as hospitals, schools, and grocery shops are evenly distributed across Lithuania, resulting in travel times of less than one hour. In Poland, hospitals and schools are less evenly distributed, with a stronger concentration in cities and densely populated areas. Access to doctors and pharmacies is more centralised in both countries, leading to longer travel times in some cases, especially for doctors in the western cross-border region of Lithuania.

Near the national border, travel times to schools appear to be relatively equal in the southeastern cross-border regions, while more variation is seen in the northwestern regions.

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 cross-border regions. The same pattern applies to cinemas as a cultural service.

Figure 2.30: Travel time to secondary schools[45]



Car travel time to the nearest secondary school (2021)

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

inside outside of the Interreg VI-A perimeter

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

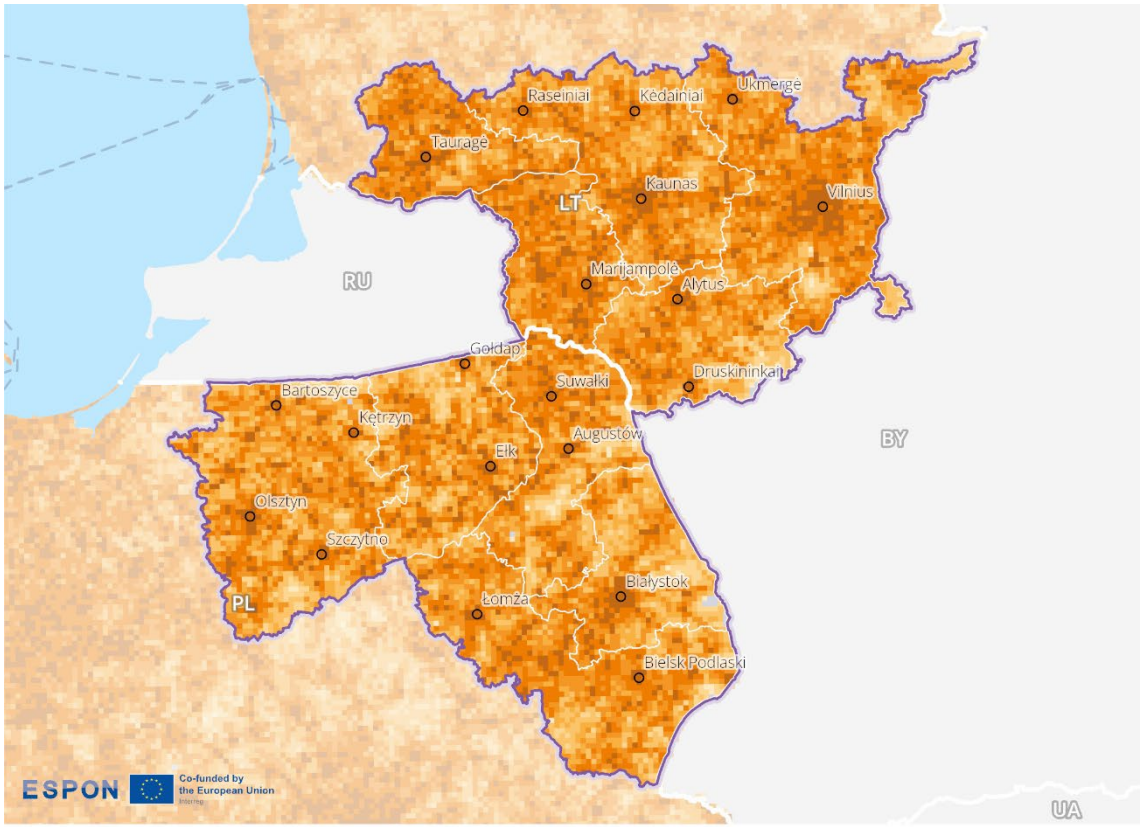
Interreg VI-A perimeter
national border
NUTS 3 border

0 30 60 km

© ESPON, 2026

[45] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Figure 2.31: Travel time to grocery shops[46]



Car travel time to the nearest shop (2021)

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

inside outside of the Interreg VI-A perimeter

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

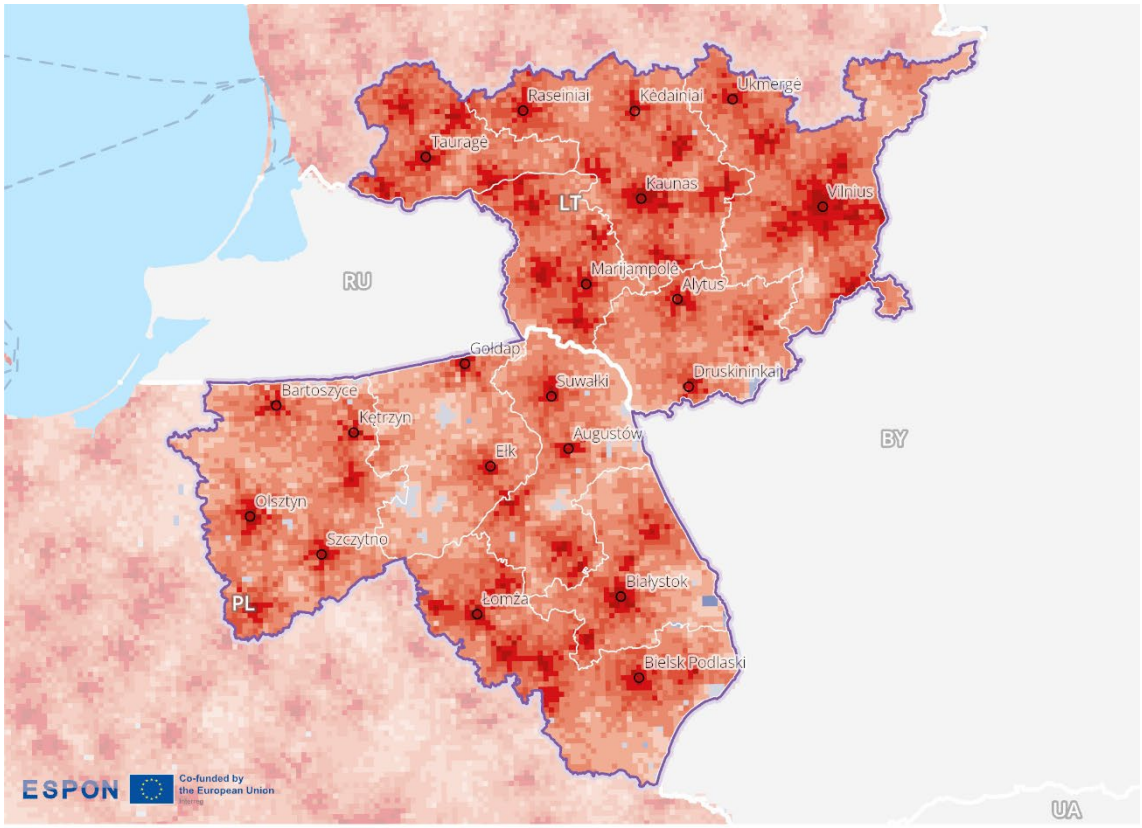
Interreg VI-A perimeter
national border
NUTS 3 border

0 30 60 km

© ESPON, 2026

[46] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Figure 2.32: Travel time to hospitals[47]



Car travel time to the nearest hospital (2021)

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

inside outside of the Interreg VI-A perimeter

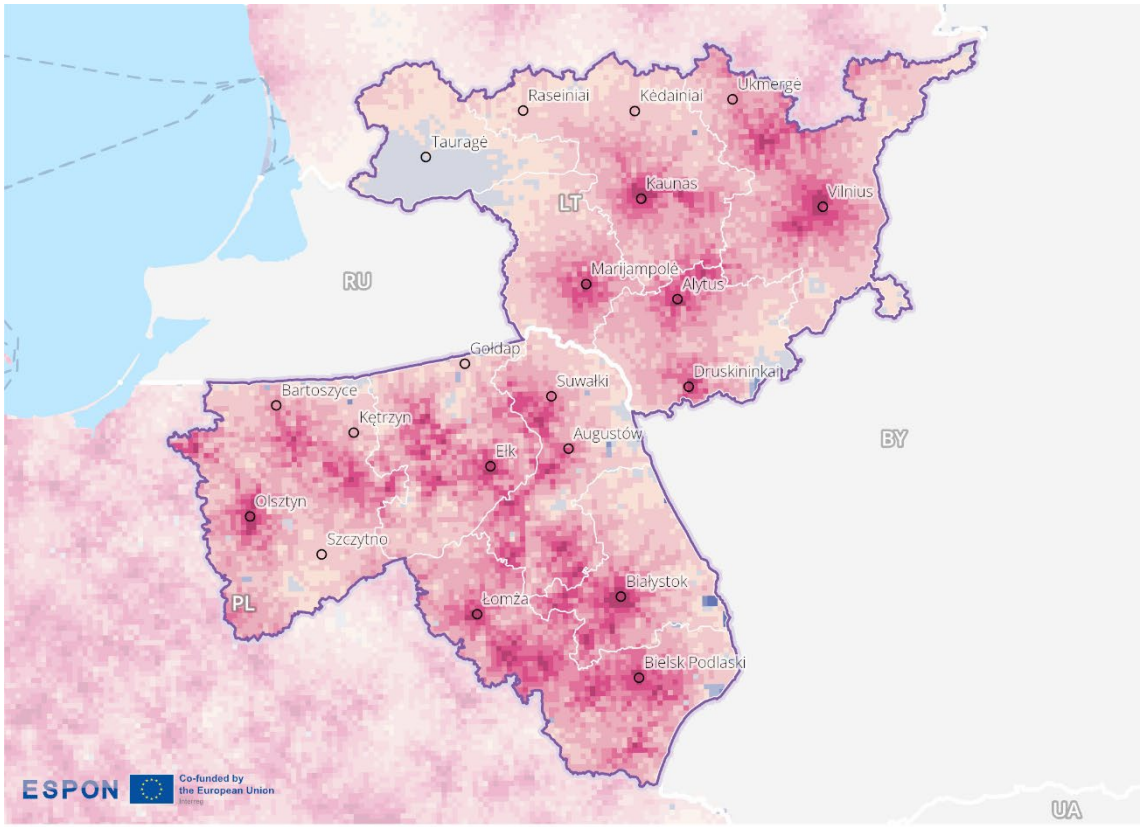
Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
national border
NUTS 3 border

0 30 60 km

[47] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Figure 2.33: Travel time to doctors[48]



Car travel time to the nearest doctor (2021)

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

inside outside of the Interreg VI-A perimeter

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

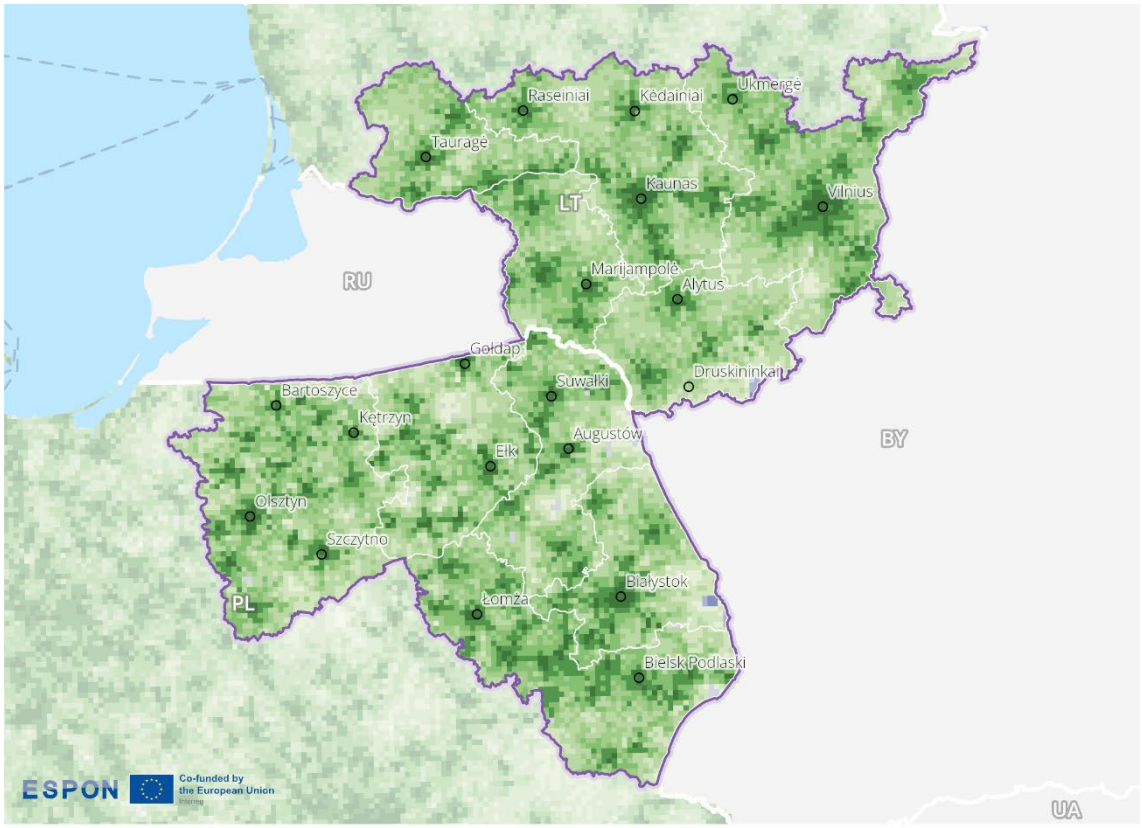
Interreg VI-A perimeter
national border
NUTS 3 border

0 30 60 km

© ESPON, 2026

[48] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Figure 2.34: Travel time to pharmacies[49]



Car travel time to the nearest pharmacy (2021)

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

inside outside of the Interreg VI-A perimeter

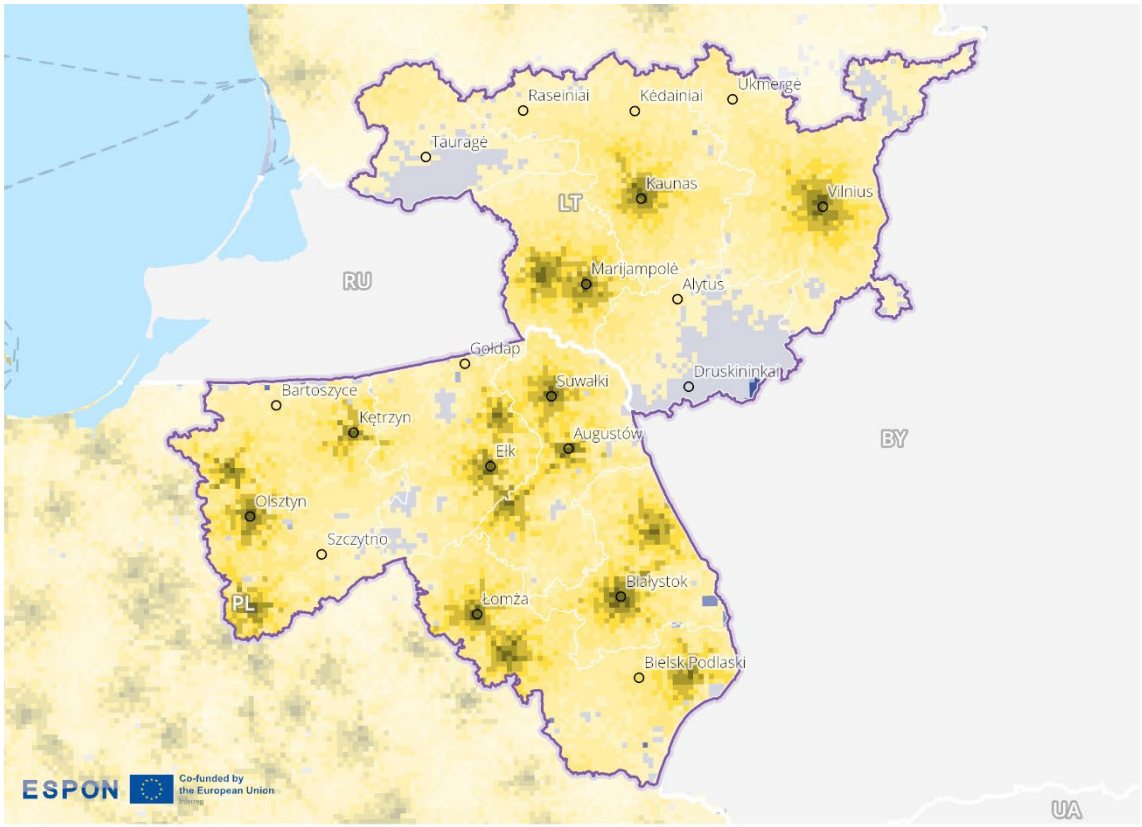
Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

Interreg VI-A perimeter
national border
NUTS 3 border

0 30 60 km

[49] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Figure 2.35: Travel time to cinemas[50]



Car travel time to the nearest cinema (2021)

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

inside outside of the Interreg VI-A perimeter

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

Interreg VI-A perimeter
national border
NUTS 3 border

0 30 60 km

© ESPON, 2026

2.4.4 Key messages on the socio-economic dimension

The Lithuania–Poland cross-border region exhibits a generally uniform pattern of low social connectivity, with minimal differences across the border. Most areas record no significant cross-border engagement, and only limited interaction is observed near Kaunas. The lack of a common language, combined with limited proficiency in the neighbouring country's language, may act as a barrier to informal interactions and cross-border social connectivity. There is a strong Polish minority living around Vilnius and some of the surrounding villages.

[50] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

Tourism is present but comparatively modest in scale. The most active areas are located around Vilnius, Olsztyn, Kaunas, and Alytus, though overall performance remains below European averages and slightly lower than national averages on both sides of the border. Lithuanian cross-border regions tend to outperform their Polish counterparts in per capita terms. Tourism development poses challenges for spatial planning, requiring adjustments to transport infrastructure, housing markets, and the balance between recreational use and cultural–environmental preservation.

Access to essential services is generally good in Lithuania, where hospitals, schools, and grocery shops are well distributed and reachable within short travel times. In Poland, these services are more concentrated in urban areas, creating disparities in accessibility. Medical services such as doctors and pharmacies are relatively centralised in both countries, leading to longer travel times in certain rural and border areas, particularly in western Lithuania. Cultural services, such as cinemas, follow a similar urban–rural pattern, with better availability in and around cities.

Overall, the border area benefits from adequate basic infrastructure and a degree of tourism potential but faces constraints from low levels of social interaction, language barriers, and uneven access to certain services, especially in rural or peripheral zones. The differences around the border are evident.

2.5 Border security and safety

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

2.5.1 Temporary reintroduction of border controls at internal borders

Indicator description

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

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

Please refer to the technical annex for more information.

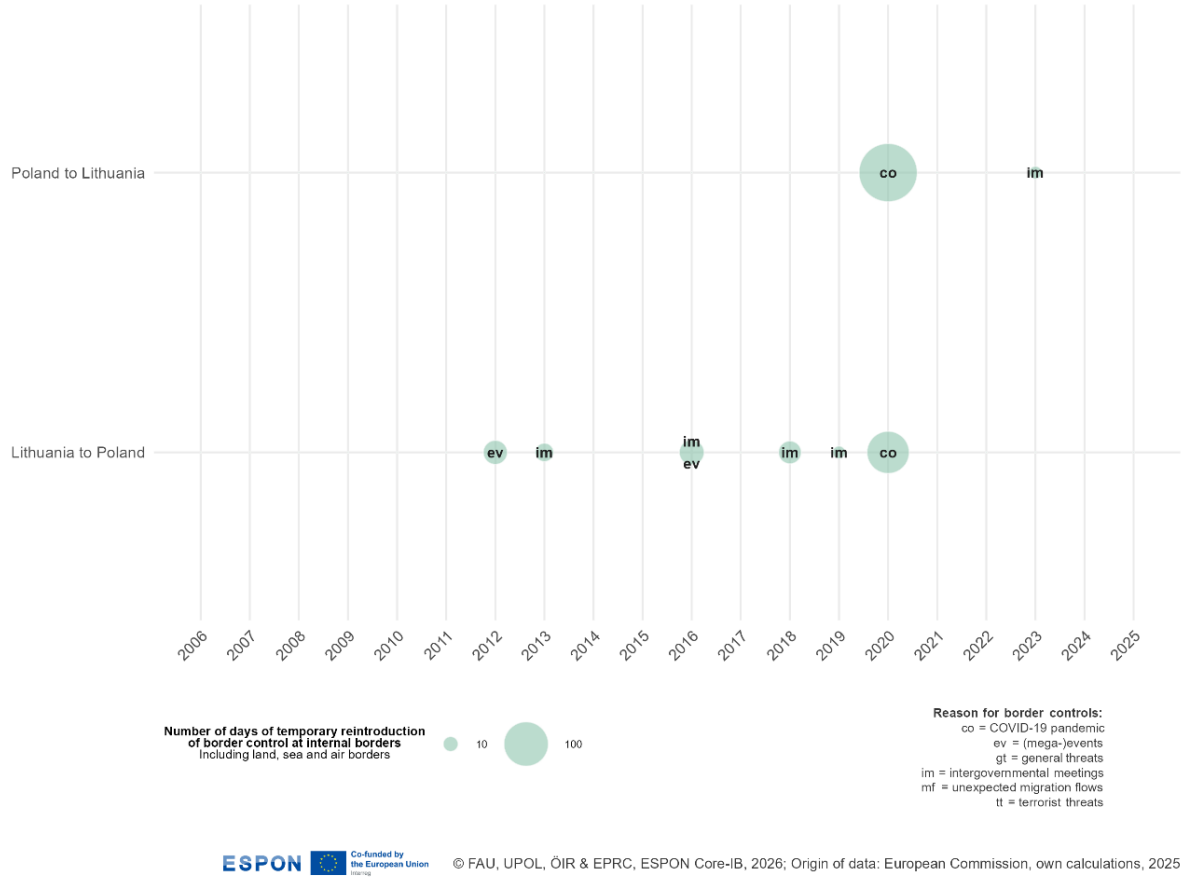
Figure 2.36 illustrates the number of days during which temporary border controls were reintroduced at internal borders within the Schengen Area. Each bubble represents a specific year with bubble sizes indicating the number of days the respective border was under control. The categories of reasons for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

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

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

Both, Lithuania and Poland joined the Schengen Area in 2007.

Figure 2.36: Temporary reintroduction of border controls



The Lithuania-Poland border area is characterised by a slightly asymmetric pattern:

- Crossing the border from Poland to Lithuania: Temporary border controls occurred in 2 out of 20 years, mainly due to COVID-19 (2020).
- Crossing the border from Lithuania to Poland: Temporary border controls took place in 6 out of 20 years. Reasons are major sports events like the EURO 2012, intergovernmental meetings, such as the NATO summit (2016) or the climate conference COPT 24 (2018) and COVID-19 (2020).

In general, neither country reintroduced temporary border controls for extended periods. However, Poland implemented controls for significantly more years than Lithuania. Poland re-introduced controls as of 7 July 2025, and they will be maintained until April 2026 minimum. This was in response to an increase in irregular migration, driven by factors including Germany's border policies.

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

2.5.2 Key messages on the border security dimension

The analysis of temporary border controls in the Lithuania–Poland cross-border region reveals a slight asymmetry, with Poland reintroducing controls for more years overall, while Lithuania applied them more frequently within individual years, often linked to major international events such as the EURO 2012, the NATO summit in 2016, the COP24 climate conference in 2018, and the COVID-19 pandemic. Poland re-introduced controls as of 7 July 2025 in response to an increase in irregular migration. Although neither country has maintained controls for extended periods, these measures have a tangible impact on cross-border flows, particularly in commuting and logistics, where delays and unpredictability undermine efficiency. The findings indicate that, despite a generally cooperative relationship, the cross-border region remains vulnerable to unilateral actions, highlighting the need for coordinated approaches to preserve the stability of cross-border interactions.

From the geopolitical situation, it is important to mention the Suwałki Gap, also known as the Suwałki corridor. It is a sparsely populated area around the border between Lithuania and Poland, and centres on the shortest path between Belarus and the Russian exclave of the Kaliningrad area on the Polish side of the border. The corridor is named after the Polish town of Suwałki, this choke point has become of great strategic and military importance since Poland and the Baltic states joined the North Atlantic Treaty Organization (NATO).

2.6 Governance dimension

Cooperation in the Poland–Lithuania Cross-Border Programme area has been notably supported through the involvement of municipal and regional public authorities in Interreg programmes. As there have been no links to pre-existing cross-border strategies, the Interreg programmes play a particularly important role. To date, no cross-border entities have been established under EU, national, or international law. According to an inventory of agreements, institutions, tools and processes for risk management, several formal agreements and cooperative institutions exist between Poland and Lithuania. Recent efforts have begun to address shared risks - such as wildfires, flooding, and public health emergencies - by supporting joint initiatives, including capacity-building. The programme area is covered by the EU Strategy for the Baltic Sea Region (EUSBSR), whose priorities align with the key challenges and opportunities of the region.

2.6.1 Cross-border cooperation

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

2.6.1.1 Cross-border governance structures

Indicator description

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

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

Please refer to the technical annex for more information.

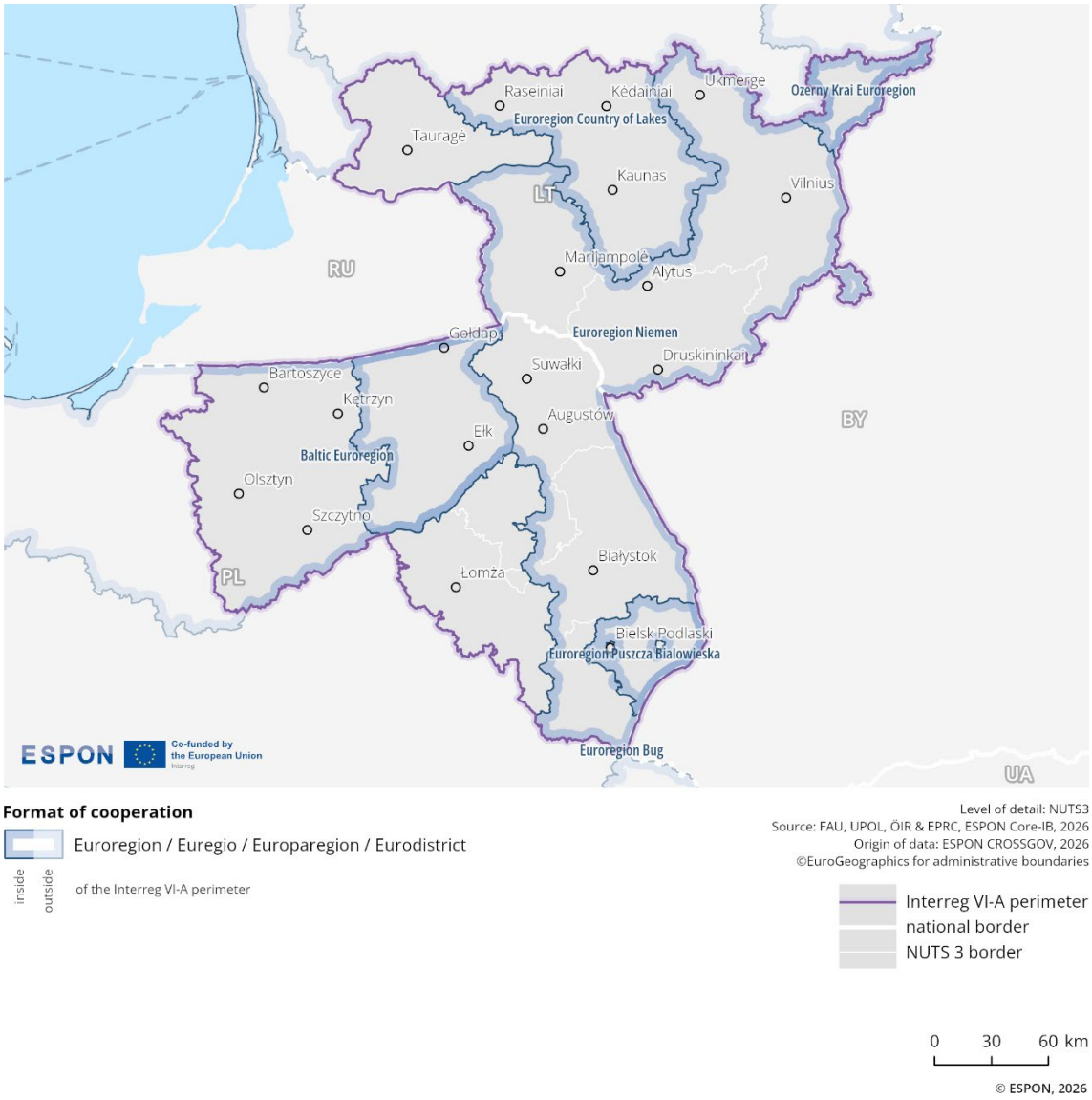
Figure 2.37 shows the different types of institutionalised cooperation. These governance structures either function as cross-border entities or bring together stakeholders from the cross-border region around shared topics. The governance structures covered include Eurocities, Euroregions, European Groupings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

The coloured markings on the map indicate different types of institutionalisation: EGTCs are shown in red, Eurocities in yellow, Euroregions/Euregios/Europaregions/Eurodistricts in blue, and other formats in grey. The Euroregion Niemen and others are labelled in the map in blue. Moreover, a EGTC was recently established, representing 9 Polish municipalities and 3 Lithuanian districts in close procximity to the national border (not part of the dataset shown in this map)[51].

The governance structure shows spatial coverage along the borders in this programme area. Overall, the cross-border region exhibits a high level of institutionalised cooperation at the Euroregional level along the national borders.

[51] See https://egtc-polska-lietuva.eu/

Figure 2.37: Cross-border governance structures[52]



[52] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.6.1.2 Cross-border public services

Indicator description

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

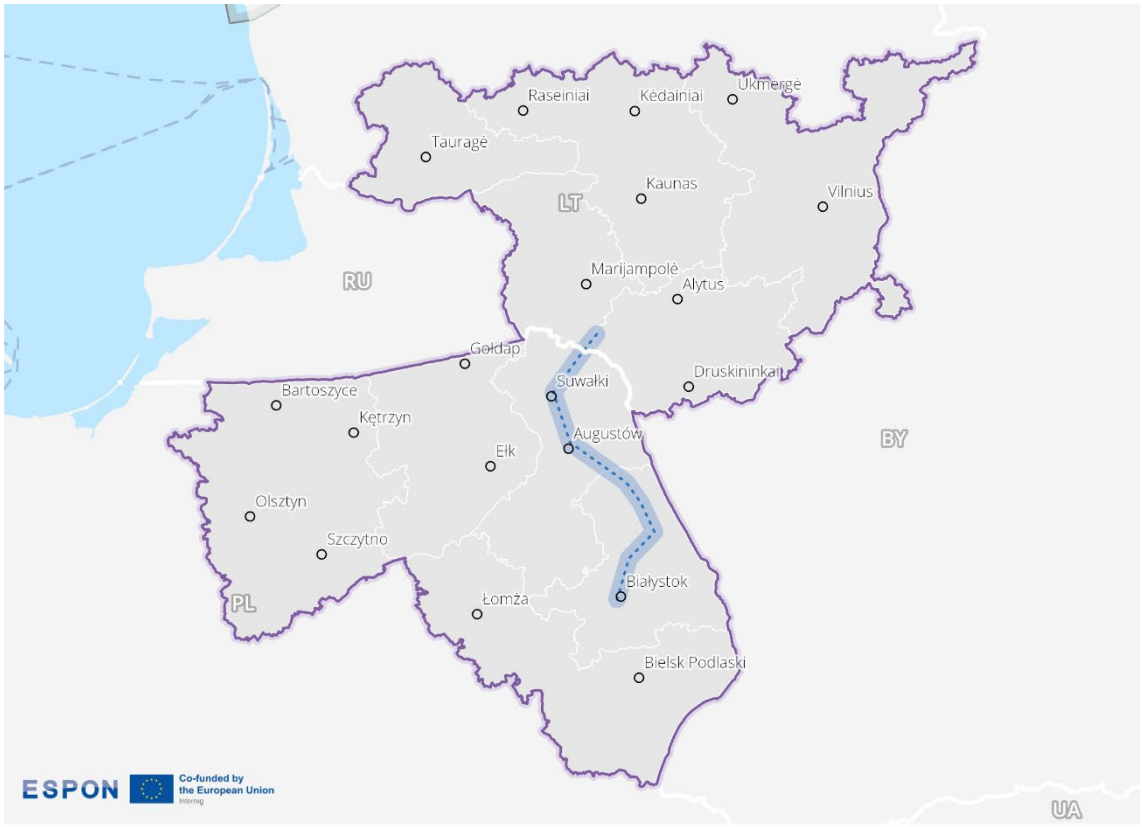
- **Source**: ESPON cross-border public services (CPS) 2.0 database
- **Temporal coverage**: 2022
- **Unit**: n/a

Please refer to the technical annex for more information.

Figure 2.38 depicts the geographical extent of cross-border public services in the 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 map shows that cross-border public services between Lithuania and Poland are minimal and limited to a single thematic focus. The only visible service is a transportation link extending from Białystok through Suwałki and to the Lithuanian border.

Figure 2.38: Cross-border public services[53]



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

areal linear character of the service

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

inside outside inside outside of the Interreg VI-A perimeter

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

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

- Interreg VI-A perimeter
- national border
- NUTS 3 border

0 30 60 km

[53] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

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 cross-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 of Lithuania–Poland, 5 b-solutions pilot actions were identified. These focus on institutional cooperation in emergency management, cross-border infrastructure development, employment and entrepreneurship, and healthcare coordination. Applications for these actions were mainly submitted by public/public-equivalent bodies, often representing local municipalities and regional actors.

In this border area, governance and institutional cooperation plays a central role, with challenges concerning the coordination of rescue services, transparency in procedures, and the legal framing of joint initiatives. In the field of employment and economic development, issues include social and health insurance coordination for cross-border workers, juridical barriers to the establishment of joint business incubators, and difficulties in fostering cross-border entrepreneurship. Energy and environment also feature through efforts to jointly develop water infrastructure while safeguarding nature and biodiversity. Regarding health and public services, obstacles stem from complex reimbursement rules, data exchange gaps, and the need for stronger cross-border healthcare provision.

The solutions proposed in the pilot actions are predominantly legal or hybrid in nature. For example, the initiative on cross-border emergency management proposes legal amendments to existing agreements to improve transparency, insurance, and financial arrangements, complemented by operational solutions such as joint training and dissemination of agreed procedures through Interreg projects. The development of a cross-border water supply network relies on legal agreements between border municipalities to co-develop and manage territorial networks. Addressing juridical obstacles to setting up a trans-national business incubator involves both legal and administrative measures—ranging from the interpretation of national law to the creation of joint legal entities like EGTCs or EEIGs. The case on cross-border employment tackles challenges through a hybrid solution that includes bilateral legal agreements, the creation of independent social security systems, and targeted training via Border Information Points. Lastly, the initiative on cross-border healthcare provision between Lithuania and Poland focuses on a bilateral legal agreement to enable improved service delivery, data coordination, and cost reimbursement.

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

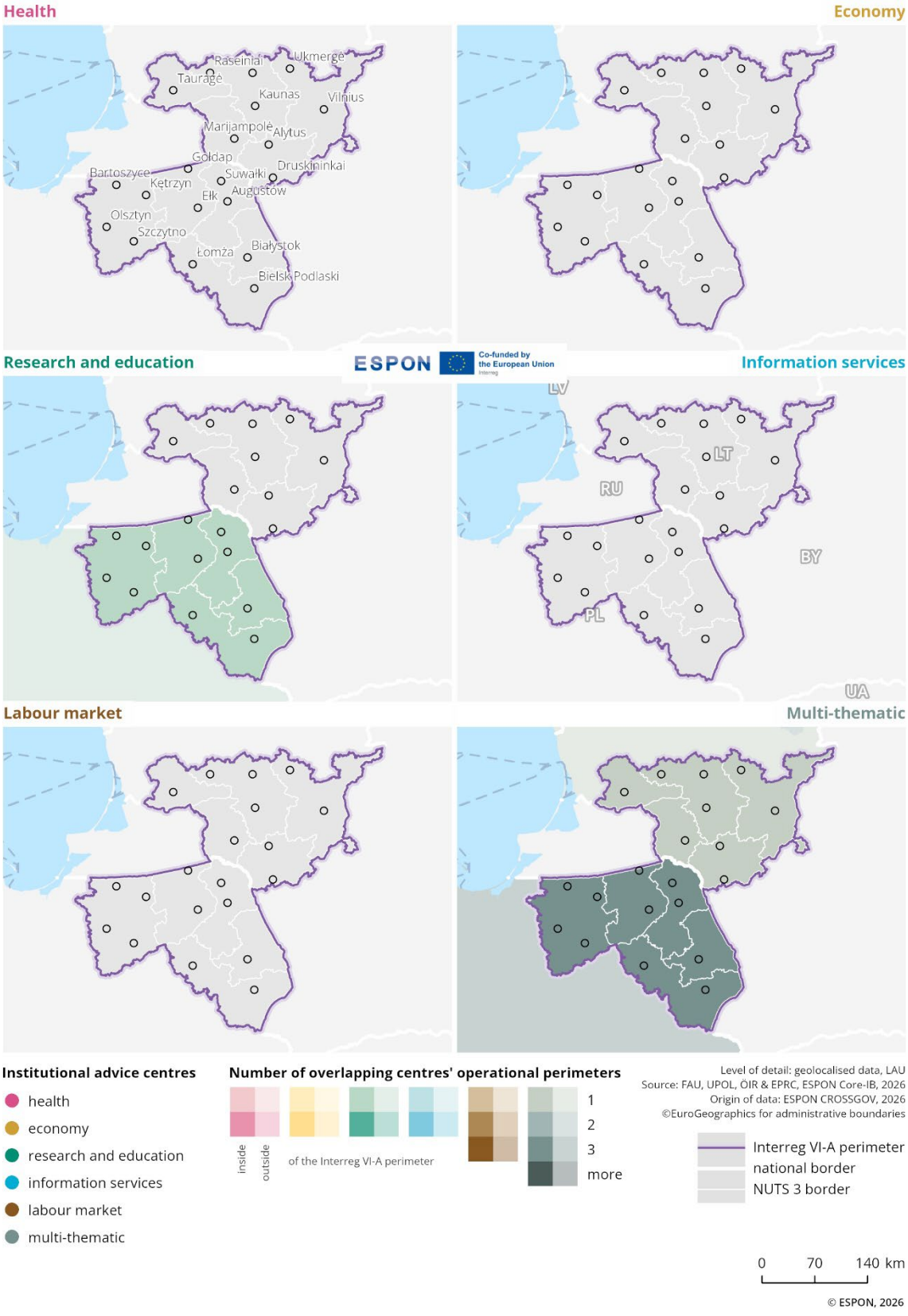
Please refer to the technical annex for more information.

This map in Figure 2.39 shows the locations and types of institutionalised advice centres, along with their operational domains, in the cross-border Interreg region between Lithuania and Poland. These centres throughout Europe provide support in various fields, including 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, nor are there any outside the Interreg region.

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 Polish part of the Interreg region. Additionally, research and education operational domains are only active in the Polish part of the Interreg region.

Figure 2.39: Institutionalised cross-border advice centres[54]



[54] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

2.6.2 Outline of Interreg activities

The following section outlines the key Interreg activities in the 2021-2027 programming period. The aspects included concern the development opportunities and challenges identified (see Table 2), the budget available and split of allocation (Figure 2.40), overlapping Interreg programmes and the key aspects drawn from the programme.

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

Topic	Key development opportunities and challenges identified for Interreg 2021-27
Economy and society	▪ Ageing and depopulation, especially in rural areas ▪ Low-tech economic base limits innovation and competitiveness ▪ Urban–rural disparities in services and infrastructure ▪ Well-being tourism potential linked to natural and cultural assets ▪ Geopolitical exposure reinforces the need for resilience and cooperation
Environment and infrastructure	▪ Nature-based tourism potential linked to forests, wetlands, and biodiversity ▪ Joint climate and disaster risks require cross-border coordination (e.g. wildfires, water pollution) ▪ Rising waste and emissions challenge EU climate targets ▪ Low-density infrastructure gaps affect mobility, energy efficiency, and service access ▪ Water quality and biodiversity under pressure from fertilisers, poor wastewater management, and underfunded protected areas
Healthcare	▪ Improve access to care through mobile healthcare services in underserved rural areas ▪ Tackle shared challenges in mental health, building on pandemic-era awareness and fear linked to the proximity of aggressor countries ▪ Support cross-border cooperation between healthcare providers and institutions ▪ Invest in digital healthcare solutions to reduce waiting times and regional disparities ▪ Raise health awareness and promote preventive care to reduce mortality from avoidable causes
Functional linkages and functional areas	▪ Tourism offers the strongest functional potential, especially through sustainable nature-based assets and reach cultural heritage ▪ Creating joint public services and cultural/tourism products can strengthen cross-border ties ▪ Strategic projects could lay the groundwork for functional linkages beyond the current Programme area

Total Budget: EUR 124,602,460.98

Figure 2.40: Split of Interreg allocation

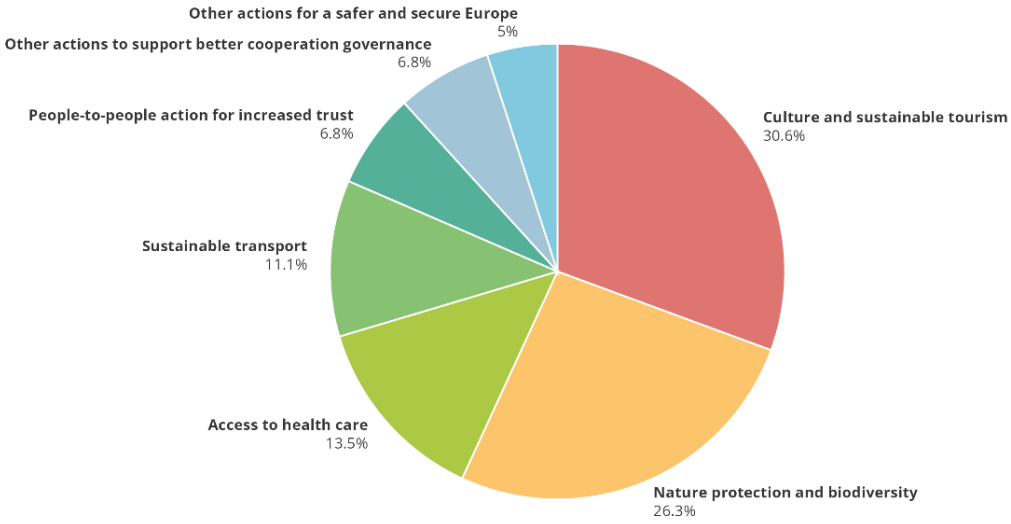


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Table 3 shows the number of Interreg 2021-2027 cross-border and transnational programmes which share at least one NUTS3 region with the border area. Each programme has its own distinct rationale, value and territorial focus. However, for the purposes 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.[55] The 4 Interreg C programmes Interreg ESPON, Interact, Interreg Europe and URBACT cover the whole EU territory and provide a range of joint services and initiatives.

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

Interreg A (cross-border)	Interreg B (transnational)
1	2

Key aspects

- Interreg cooperation in 2021–2027 between Lithuania and Poland places a distinctive focus on cultural heritage, sustainable tourism, and biodiversity, with the largest share of funding directed to the development of joint tourism offers and the protection of natural resources. Substantial investments are also made in strengthening access to healthcare and improving sustainable transport. More targeted support is allocated to actions enhancing cross-border safety, governance cooperation, and people-to-people initiatives that foster trust and community cohesion.
- Potential for synergies across programmes, particularly through the Interreg A and B programmes: some NUTS3 regions of the programme area are also part of the Interreg A programme South Baltic, as well as the Interreg B programmes Baltic Sea Region and Central Europe.

[55] 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.

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[56]. Nevertheless, this development should be interpreted as indicative, as variations in partner name reporting and general limitations regarding the representativeness of the dataset affect the robustness of the results.

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

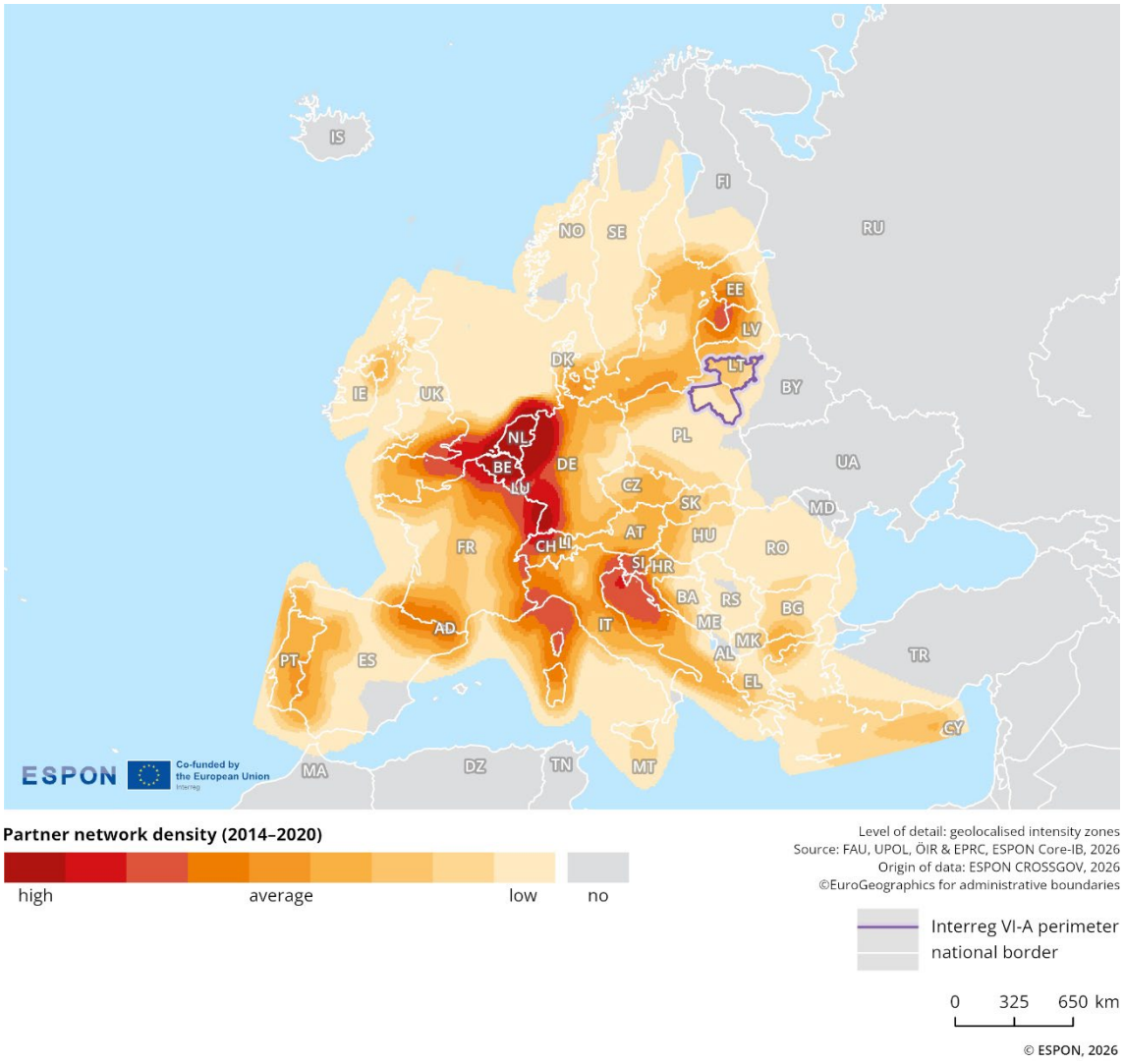
Please refer to the technical annex for more information.

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

Figure 2.41 shows the density of Interreg V-A (2014–2020) partner networks. The indicator includes the location of, and links between, Interreg project partners within a project consortium. From a European perspective, partner network density in the Lithuania–Poland border area appears to be somewhat spatially concentrated. It is higher in areas closer to the border. 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 increased from 110 in Interreg IV-A (2007–2013) to 181 in Interreg V-A (2014–2020), an increase 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.

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

Figure 2.41: Interreg V-A partner network density[57]



2.6.3 Key messages on the governance dimension

The Poland–Lithuania cross-border region has a well-developed framework for institutionalised cooperation, largely driven by municipal and regional authorities through Interreg programmes.

A European Grouping of Territorial Cooperation (EGTC) was recently established and the Euroregion Niemen is fully functioning. Formal agreements and cooperative platforms address shared risks like wildfires, flooding, and public health emergencies, and are aligned with the EU Strategy for the Baltic Sea Region. Cooperation formats include Euroregions, Eurocities, and cross-border associations, providing structured stakeholder engagement. There are no institutionalised advice centres within the Interreg region, nor are there any outside the Interreg region.

Cross-border public services remain minimal, limited to a single transport link, but 5 b-solutions pilot actions highlight the region's capacity to address governance challenges in emergency management, infrastructure, employment, environment, and healthcare. These initiatives combine legal and

[57] Please consider the particular spatial reference in this border profile: The statistical analysis refers to the programme area as defined at EU level at the district level (NUTS3), cp. https://eur-lex.europa.eu/eli/dec_impl/2022/75/oj/eng. The municipal membership differs from this perimeter on the Lithuanian side, as shown in Figure 1.1.

operational measures such as joint agreements, harmonised procedures, shared databases, and targeted training.

In 2021–2027, Interreg priorities focus on cultural heritage, sustainable tourism, and biodiversity, alongside improved healthcare, sustainable transport, safety, and governance cooperation.

Interreg V-A partner network density is highest near the border but below the EU average. Key challenges include rural depopulation, a low-tech economy, environmental pressures, and service disparities, while opportunities lie in leveraging natural and cultural assets for sustainable tourism, strengthening environmental governance, and expanding joint public services to build resilience and competitiveness.

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 cross-border region, as discussed earlier in this profile. Secondly, it suggests policy options based on the analytical findings. These options are intended to provide a practical and informative basis for the strategic dialogue among programme bodies, managing authorities and the European Commission.

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

Table 4: Evidence-based conclusions

Territorial dimension	
Key analytical findings	• The cross-border region is predominantly flat, with an extensive network of rivers, lakes, wetlands, and large forest areas that contribute to high ecological diversity and are partly protected within ecological corridors; • It is largely rural and sparsely populated (52 inhabitants per square kilometre), with similar settlement patterns on both sides of the border. The major hubs are Kaunas and Białystok. The population is declining, particularly in Poland, with a growing proportion of older people and a decreasing number of working-age residents; • Settlement areas are expanding dynamically around major towns, and road connections, such as between Marijampolė and Suwałki, are significantly faster than rail, limiting sustainable transport options; • Border areas have good accessibility and a balanced distribution of basic services, though peripheral northern and southern parts are less connected and key regional hubs lie farther from the border.

Territorial dimension	
Policy options	**Population and settlement related aspects** • Cooperation projects could specifically address the ageing population and a shrinking workforce; • A relevant policy option is to focus on preparring education systems, labour markets and service provision for demographic ageing, with particular attention to social services for people aged over 65. **Accessibility related aspects** • The improvement of the accessibility of border areas from key regional hubs located further away from the border through targeted cross-border transport and service-planning approaches; • Improved accessibility could be used as a lever to support a more even spatial distribution of services across the cross-border region. **Cross-cutting aspects** • Cross-border cooperation projects could address the exchange of knowledge on managing challenges linked to the dynamic settlement growth; • The coordination between settlement and service planning could help to mitigate the disparities between urban hubs and more remote border areas.

Economic dimension	
Key analytical findings	• The cross-border region's economy is growing faster than most comparable areas, with the Lithuanian side outperforming national averages and the Polish side showing strong but comparatively lower results; • Employment levels are high and stable, with a gradual shift from traditional sectors toward higher value-added services such as professional, administrative, and information-related activities; • Demographic trends are unfavourable, with a faster decline in the working-age population than the EU average, particularly on the Polish side; • Wage differences, with higher nominal comensation in the Lithuanian part of the border region, uneven housing prices with generally lower advertised housing prices in large parts of the Lithunian side, and a pronounced urban–rural digital divide in both countries within the border area shape both opportunities and challenges for balanced cross-border regional development.

Economic dimension	
Policy options	**Competetiveness related aspect** • Cooperation projects could address the education sector in preparing specialists for higher value-added and high-skilled professions, including information-related activities and social services. **Cross-cutting aspect** • The effects of the declining working-age populations, particularly on the Polish side, could be strategically focused on through targeted cross-border approaches; • The significant differences in economic performance, wages and housing prices can be addressed via strategy development and pilot actions.

Green dimension	
Key analytical findings	• The Lithuania–Poland cross-border region has extensive protected area coverage, concentrated mainly in Poland with larger and more continuous sites, while Lithuania hosts smaller and more fragmented clusters; cross-border ecological continuity is limited; • Air quality differs notably, with Lithuania recording moderate PM2.5 levels and Poland significantly higher values, resulting in a cross-border average above the European level; • Natural hazards are generally low, with only localised flood threats, very low landslide and earthquake risks, and a moderate to high drought risk affecting both countries, particularly Lithuania; • Energy infrastructure is well-developed and interconnected, with a single strategically vital high-voltage link serving as the only land connection between the Baltic States and the EU power grid; • Power generation is divided geographically, with Poland hosting all coal-fired plants and Lithuania operating gas, oil, and hydroelectric facilities near Kaunas, and no nuclear capacity on either side.

Green dimension	
Policy options	**Climate risks and resilience related aspects** • A focus could be on the climate resilience through expanded cross-border management of protected areas, taking into account the differing patterns of protection across the border; • The high PM2.5 pollution levels in Poland could be reduced through coordinated measures, including exploration of cross-border cooperation in air quality management. **Cross-cutting aspects** • The energy infrastructure can be strengthened via cross-border perspectives, including consideration of an additional interconnection between the Baltic States and the EU power grid at the Poland-Lithuania border; • Cooperation projects could specifically address the progress in resource efficiency and the green transition via cross-border solutions.

Socio-economic dimension	
Key analytical findings	• Social interaction in the Lithuania–Poland cross-border region is uniformly low, with minimal variation across the border and only slightly higher activity near Kaunas and Vilnius; the absence of a shared language partially limits informal contact and deeper cross-border integration; • Tourism is concentrated around Vilnius, Olsztyn, Kaunas, and Alytus but remains below European and national averages, with Lithuanian cross-border regions generally outperforming Polish ones; development requires careful planning to address transport, housing, and cultural–environmental balance; • Access to essential services in Lithuania is broadly even, while in Poland hospitals, schools, and other key facilities are more urban-centred, creating disparities for rural communities; medical and cultural services in both countries show a similar concentration in cities; • The cross-border region's strengths lie in solid basic infrastructure and untapped tourism potential, while its weaknesses stem from low social connectivity, language barriers, and uneven access to certain services in rural and peripheral areas.

Socio-economic dimension	
Policy options	**Cross-cutting aspects** • Strategy development, pilot projects and knowledge exhange can explore the potentials of cross-border cooperation to support social connectivity across Poland and Lithuania; • The tourism potential of Polish counterparts can be strategically addressed and further explored; • The access for rural communities in Poland to hospitals, schools and other key facilities could be improved through coordinated cross-border develeopment approaches.

Border security and safety dimension	
Key analytical findings	• The Lithuania–Poland cross-border region shows a slight asymmetry, with Poland imposing temporary controls in more years, while Lithuania applied them more frequently within specific years, often in connection with major international events and the COVID-19 pandemic. Poland reintroduced new controls in 2025 in response to an increase in irregular migration; • The part of the Polish border is known as the Suwałki Gap (corridor) lying between Belarus and Russian Kaliningrad. This choke point has become of great strategic and military importance since Poland and the Baltic states joined NATO; • Although both countries have avoided long-term controls, even short-term measures disrupt commuting and logistics, creating delays and uncertainty that reduce operational efficiency; • The region's otherwise strong cross-border cooperation remains sensitive to unilateral decisions, underlining the importance of coordinated governance to maintain stability in cross-border flows.
Policy options	**Cross-cutting aspects** • Border security and cross-border dialogues can be addressed in a context of political tension along the borders with Belarus and the Russian Kaliningrad region; • Cooperation and coordination of logistics near the border could be improved, with particular attention to the Suwałki gap; • The impacts of border controls on cross-border commuting and logistics can be mitigated through coordinated and institutionalised cross-border policy dialogue; • The mitigation of border control effects can form part of cross-border cooperation projects in various sectors. Economic networks, transport infrastructure initiatives and tourism-related actions can incorporate considerations related to the impacts of border controls.

Governance dimension	
Key analytical findings	• The Poland–Lithuania cross-border region benefits from a strong institutional cooperation framework built mainly through Interreg, with municipal and regional authorities leading risk management initiatives despite the absence of pre-existing cross-border strategies. EGTC is recently established in Puńsk and Euroregion Niemen is functional; • Cross-border public services remain minimal, limited to a single transport link, but 5 pilot actions demonstrate the ability to address governance, infrastructure, employment, environment, and healthcare challenges through combined legal and operational measures; • Interreg 2021–2027 priorities emphasise cultural heritage, sustainable tourism, biodiversity, healthcare, transport, safety, and governance, with additional synergies available via other EU cross-border and transnational programmes; • Based on the keep.eu database and excluding duplicates, partner networks have expanded between Interreg IV-A and Interreg V-A, while key challenges such as rural depopulation, a low-tech economy, environmental pressures, and service disparities are offset by opportunities in tourism, environmental governance, and joint public services.
Policy options	**Cross-cutting aspects** • Cooperation and coordination of new governance frameworks required to support the long-term development of the cross-border region could be strategically addressed; • The existing governance structures could address the education systems and labour markets specifically, in order to prepare them to meet the demand for the specialised skills required in this strategically and politically significant cross-border region.

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ESPON 2030

ESPON EGTC
11 Avenue John F. Kennedy
L-1855 Luxembourg
Grand Duchy of Luxembourg
Phone: +352 20 600 280
Email: info@espon.eu
www.espon.eu

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