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**EUROPEAN RESEARCH PROJECT //**

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

Spain-France-Andorra

**Border profile**

March 2026



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## **Disclaimer**

This document is a final report.

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

# Table of contents

<b>1</b>	<b>Introduction .....</b>	<b>8</b>
1.1	Context and objective of the border profile .....	8
1.2	Presentation of the border area .....	9
<b>2</b>	<b>Cross-border analysis .....</b>	<b>12</b>
2.1	Territorial dimension .....	12
2.1.1	Population and settlements .....	12
2.1.2	Accessibility of the border area .....	17
2.1.3	Key messages on the territorial dimension .....	22
2.2	Economic dimension .....	23
2.2.1	Gross Domestic Product .....	23
2.2.2	Labour market and commuting .....	25
2.2.3	Competitiveness .....	33
2.2.4	Infrastructure and housing .....	37
2.2.5	Key messages on the economic dimension .....	41
2.3	Green dimension .....	41
2.3.1	Nature protection and pollution .....	41
2.3.2	Climate risks and resilience .....	47
2.3.3	(Renewable) Energy and energy infrastructure .....	49
2.3.4	Resources and circular economy .....	53
2.3.5	Key messages on the green dimension .....	55
2.4	Socio-economic dimension .....	56
2.4.1	Social integration .....	56
2.4.2	Tourism .....	58
2.4.3	Services of general interest .....	61
2.4.4	Key messages on the socio-economic dimension .....	67
2.5	Border security and safety .....	68
2.5.1	Temporary reintroduction of border controls at internal borders .....	68
2.5.2	Key messages on the border security dimension .....	70
2.6	Governance dimension .....	70
2.6.1	Cross-border cooperation .....	70
2.6.2	Outline of Interreg activities .....	78
2.6.3	Key messages on the governance dimension .....	81
<b>3</b>	<b>Summary and key observations .....</b>	<b>83</b>

## List of figures

Figure 1.1:	Overview map .....	9
Figure 1.2:	Geographical features and characteristics .....	10
Figure 2.1:	Spatial patterns of population distribution.....	13
Figure 2.2:	Population development (2014=100).....	14
Figure 2.3:	Settlement area dynamics .....	16
Figure 2.4:	Change in settlement areas (2012-2018) (comparison).....	17
Figure 2.5:	Comparative quality of selected cross-border connections.....	18
Figure 2.6:	Cross-border mobility intensity.....	20
Figure 2.7:	Travel-time accessibility from border crossings.....	22
Figure 2.8:	Gross domestic product at current market prices (per capita).....	24
Figure 2.9:	Employment share .....	26
Figure 2.10:	Employment share over time (comparison).....	27
Figure 2.11:	Share of working-age population over time (comparison).....	28
Figure 2.12:	Employment by sector (comparison).....	30
Figure 2.13:	Outgoing cross-border commuting patterns.....	32
Figure 2.14:	Gross value added at basic prices by sector (comparison).....	34
Figure 2.15:	Average income per hour .....	36
Figure 2.16:	Advertised housing prices .....	38
Figure 2.17:	Advertised housing prices (comparison).....	39
Figure 2.18:	Average internet download speed.....	40
Figure 2.19:	Nature protected areas.....	43
Figure 2.20:	Air pollution.....	44
Figure 2.21:	Water quality patterns .....	46
Figure 2.22:	Natural hazard risks .....	48
Figure 2.23:	High-voltage transmission infrastructure .....	50
Figure 2.24:	Power stations infrastructure.....	52
Figure 2.25:	Resource productivity .....	53
Figure 2.26:	Waste generation per GDP .....	55
Figure 2.27:	Cross-border connectivity in social media .....	57
Figure 2.28:	Overnight stays in tourism .....	59
Figure 2.29:	Overnight stays in tourism (comparison).....	60
Figure 2.30:	Travel time to secondary schools .....	62
Figure 2.31:	Travel time to grocery shops.....	63
Figure 2.32:	Travel time to hospitals.....	64
Figure 2.33:	Travel time to doctors .....	65
Figure 2.34:	Travel time to pharmacies .....	66
Figure 2.35:	Travel time to cinemas.....	67
Figure 2.36:	Temporary reintroduction of border controls.....	69
Figure 2.37:	Cross-border governance structures.....	72
Figure 2.38:	Cross-border public services.....	74
Figure 2.39:	Institutionalised cross-border advice centres .....	77
Figure 2.40:	Split of Interreg allocation .....	79
Figure 2.41:	Interreg V-A partner network density.....	81

## List of tables

Table 1: Number and type of power stations .....	51
Table 2: Interreg VI (2021-2027): Opportunities and challenges.....	78
Table 3: Shared geographies with other cross-border and transnational programmes.....	79
Table 4: Evidence-based conclusions.....	83

# 1 Introduction

## 1.1 Context and objective of the border profile

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

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

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

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

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

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

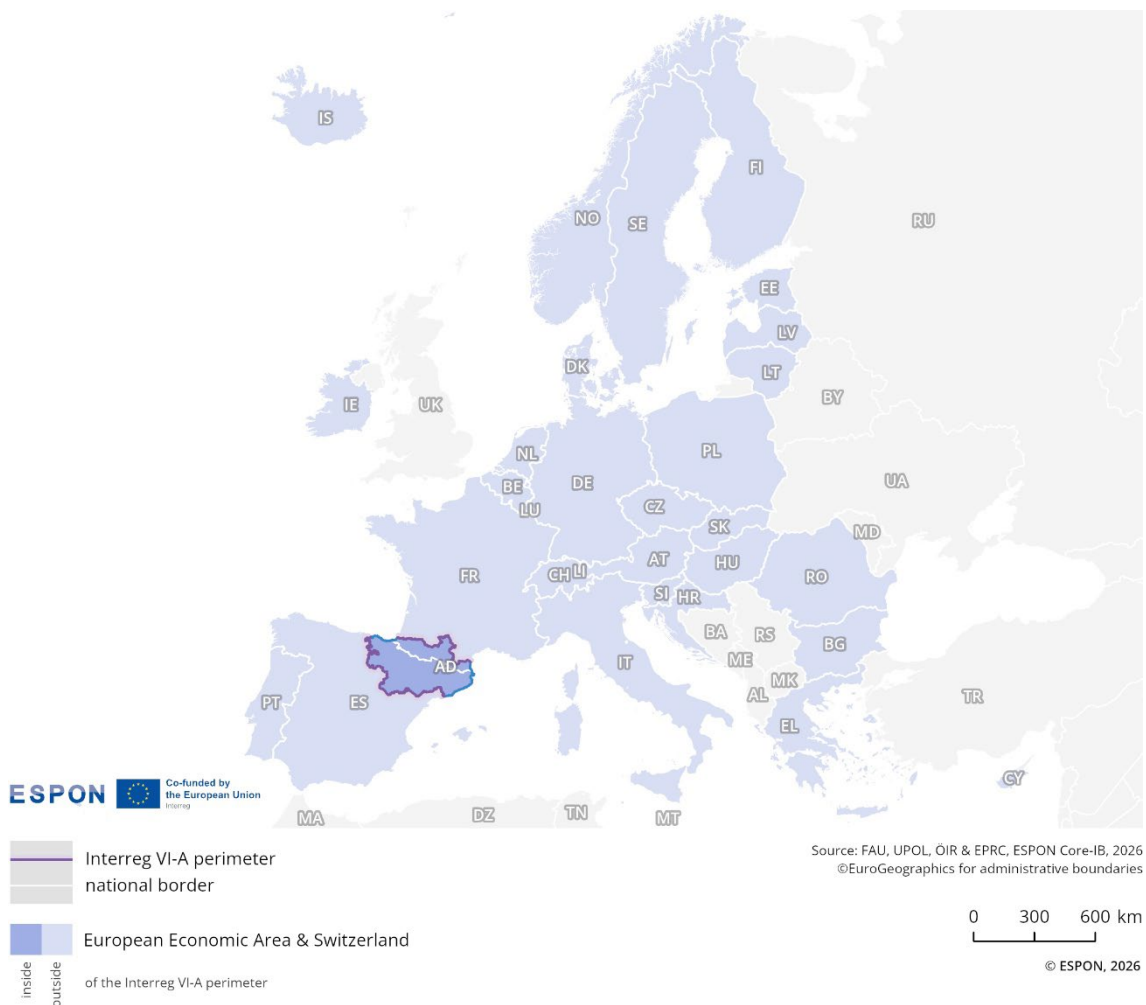
Within the ESPON framework, the CROSSGOV project (Governance mechanisms for cross-border functional areas) has been implemented in parallel to Core-IB. The CROSSGOV hub<sup>2</sup> provides a comprehensive platform for interactive data exploration, and selected data have been incorporated into this study.

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

## 1.2 Presentation of the border area

The Interreg VI-A border region ‘Spain–France–Andorra (POCTEFA)’ covers the area between north-eastern Spain, Andorra, and south-western France (see Figure 1.1).

**Figure 1.1: Overview map**

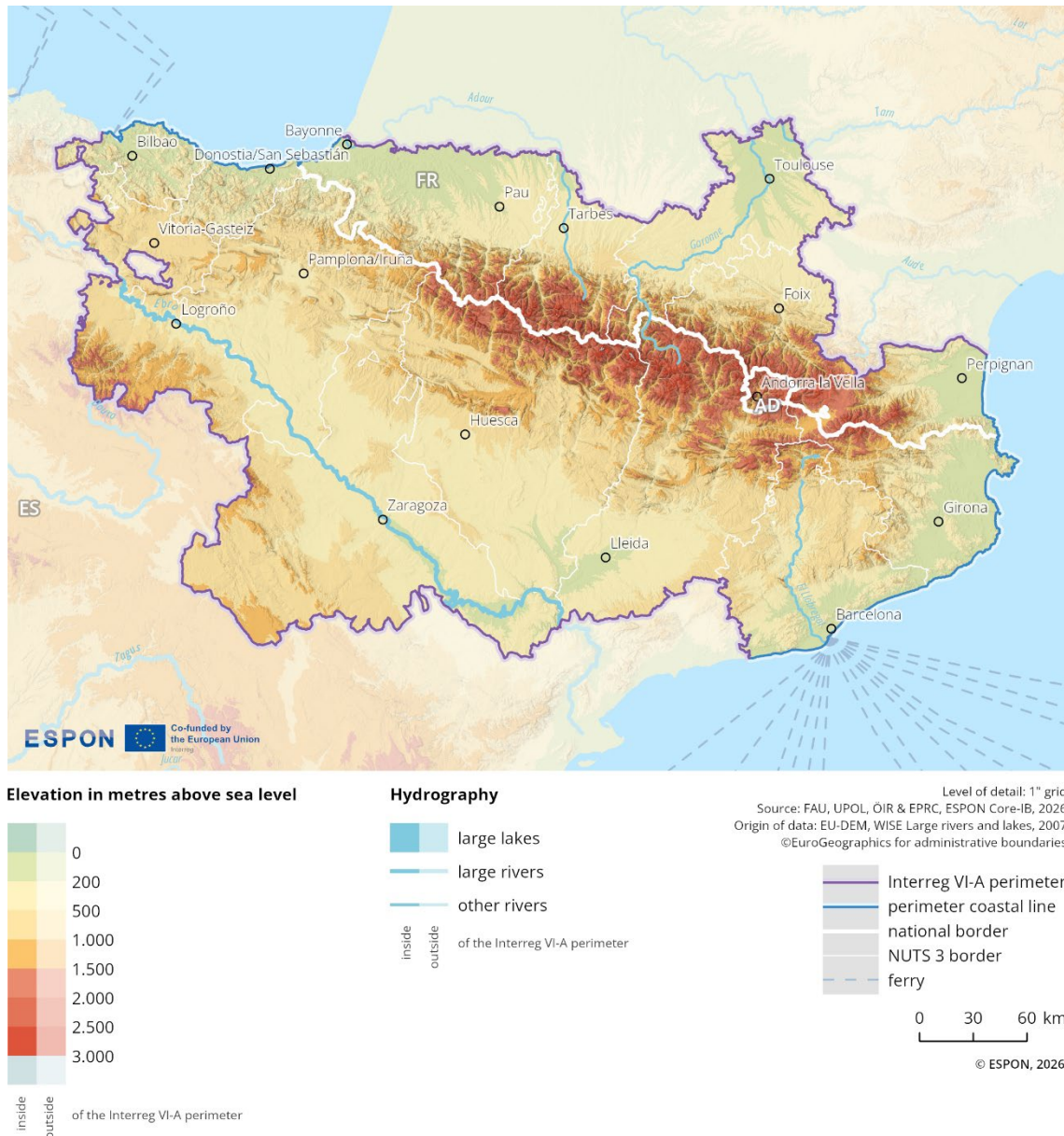


In France, the programme area includes the regions of Midi-Pyrénées, Aquitaine, and Languedoc-Roussillon, which are part of Occitanie and Nouvelle-Aquitaine, comprising a total of 5 NUTS3 regions. In Spain, it covers parts of the regions of the Basque Country, Catalonia, Aragon, La Rioja, and the Chartered Community of Navarre, located in the north-east and east of the country, encompassing a total of 10 NUTS3 regions. The area also includes the country of Andorra, which is classified simultaneously as a NUTS1, NUTS2, and NUTS3 region.

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

Figure 1.2 illustrates the region's geomorphological features and the perimeter of the current Interreg VI-A programme area.

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



Spanning approximately 109,275 km<sup>2</sup>, the border area exhibits a high degree of heterogeneity. The map illustrates the region's topographical and functional differences, ranging from sub-areas of significant international importance to more peripheral regions.

The border region extends along the entire Spanish–French border, completely including Andorra. Starting at the Atlantic Ocean in the west, it stretches across the Pyrenees to the Mediterranean Sea in the east. The territory covers the Iberian Peninsula to mainland Europe and encompasses coastal and high mountainous regions.

The defining natural feature of the programme area is the Pyrenees Mountain range, forming a continuous natural and climatic barrier between Spain and France. Peaks exceed 3,000 metres in

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

elevation), and the area contains glacial cirques, deep valleys, karst plateaus and alpine meadows. Andorra is entirely embedded in the Pyrenees, with steep topography, narrow valleys and a high average elevation.

The programme area is bordered by 2 coastal zones: the Bay of Biscay to the west and the Gulf of Lions to the east. Both have distinctive geomorphological features. The Atlantic coast is characterised by rugged, cliff-lined shores, whereas the Mediterranean coast features low-lying deltas, lagoons and sandy beaches, particularly around the Roussillon plain.

The hydrographic network is shaped by both the Atlantic and the Mediterranean watersheds and comprises key rivers such as the Garonne, the Adour, the Ebro, the Segre and the Tech. Numerous glacial lakes, mountain streams and seasonal torrents also contribute to the region's hydrological complexity, particularly in the high mountains.

The landscape features extensive forested areas, pastures, high-altitude ecosystems and agricultural terraces, particularly in the valley bottoms. The region's geology is complex, comprising metamorphic, sedimentary, and igneous formations, as well as numerous mineral springs, thermal zones, and karstic cave systems.

These topographical and ecological characteristics not only define the environment, but also influence connectivity, land use, and exposure to natural hazards (e.g., avalanches, landslides, floods, and wildfires) within the programme area.

## 2 Cross-border analysis

### 2.1 Territorial dimension

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

#### 2.1.1 Population and settlements

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

##### 2.1.1.1 Population density

###### Indicator description

Population density refers to the number of residents per km<sup>2</sup>. This indicator shows the number of inhabitants per square kilometre in a 1x1 km grid. It therefore provides information on the distribution and concentration of population across the region and allows to identify agglomerations of high density. In particular agglomerations at or close to the border area of key interest.

- **Source:** Eurostat
- **Temporal coverage:** 2021
- **Unit:** Inhabitants/km<sup>2</sup>

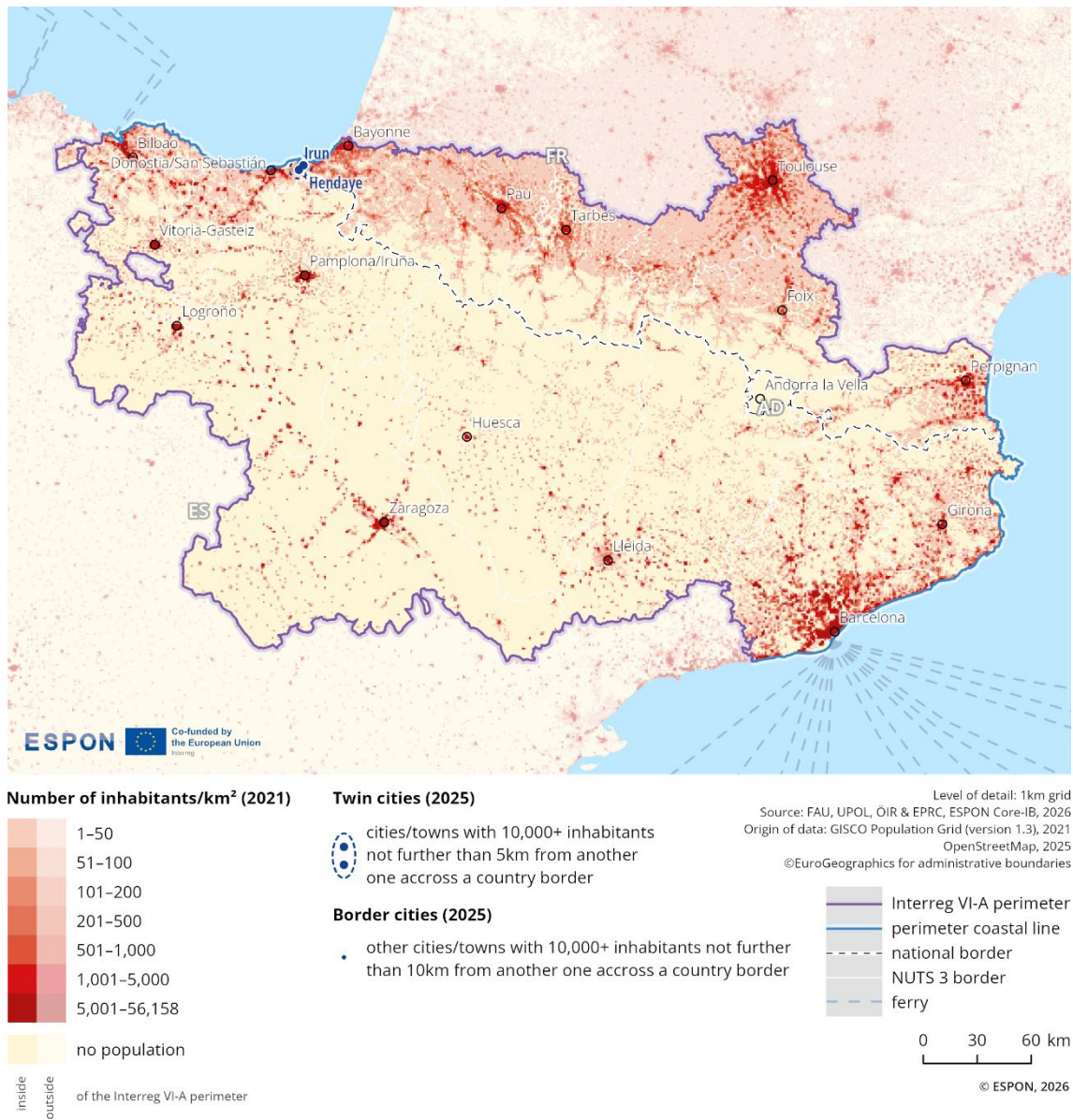
Please refer to the technical annex for more information.

The border region includes 19 urban centres with a population of over 30,000 inhabitants. The map shows that the area directly adjacent to the border is very sparsely populated due to the mountainous region of the Pyrenees. The population is denser only in the northern and southern parts of the border, near French Bayonne (north) and Perpignan (south). The French part has a more even population distribution from the border to the interior, with a large centre in Toulouse and local centres in Tarbes and Pau. The Spanish part is much more sparsely populated, with a few large, isolated centres such as Barcelona and Girona in the south, Zaragoza and Pamplona in the centre of the border region, and Bilbao and San Sebastian in the north.

The population density in this whole border region is 129 inhabitants/km<sup>2</sup>, which exceeds the EU average of 109 inhabitants/km<sup>2</sup>, and it is comparable to the aggregated average of all EU evaluated border regions, which is 125 inhabitants/km<sup>2</sup>.

The part of the border region in Spain has an average population density of around 137 inhabitants/km<sup>2</sup>. It exceeds the national average population density in Spain (93 inhabitants/km<sup>2</sup>). The part of the border region in France has an average population density of approximately 106 inhabitants/km<sup>2</sup>. It is comparable to the national average population density in France (102 inhabitants/km<sup>2</sup>). Andorra has an average population density of 178 inhabitants/km<sup>2</sup>.

**Figure 2.1: Spatial patterns of population distribution**



### 2.1.1.2 Population development (by age groups)

#### Indicator description

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

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

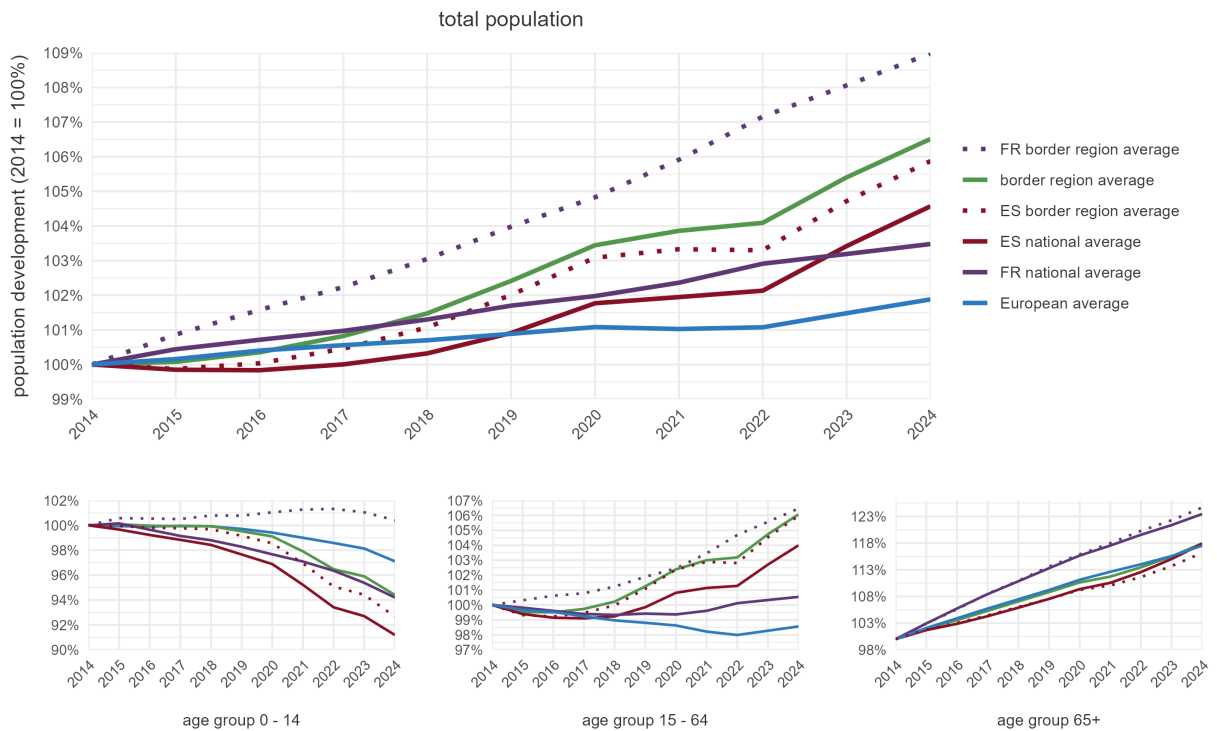
Please refer to the technical annex for more information.

Population in the Spain–France–Andorra (POCTEFA) region in 2024 (Eurostat): 14.7 million inhabitants, of which:

- › 79.0% in the Spanish border territory (11.6 million inhabitants)
- › 21.0% in the French border territory (3.1 million inhabitants)
- › Region within the border region with the highest population increase since 2014: Haute-Garonne (FRJ23) at 13.1%

Figure 2.2 shows the population growth in the Spain–France–Andorra (POCTEFA) region between 2014 and 2024. During this period, the region has experienced substantial growth of 6.5%, with the highest growth rate observed on the French side. This can be linked to the presence of several large urban centers on the French side (e.g. Toulouse, Bayonne and Perpignan), while the Spanish side (besides Barcelona) counts fewer.

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



Population growth across the border region is noticeably above the European average (6.5% vs. 1.9%) and substantially above the average development in all border regions (6.5% vs 1.5%). While the Spanish border area shows slightly higher growth than the national average (5.9% vs. 4.6%), the French border area shows substantially higher growth than the national average (9.0% vs. 3.5%).

In terms of the development of individual age groups in the region, the population aged 0–14 experienced a marked decrease of -5.6%, while the working-age population (15–64) showed a notable increase of 6.1%. The population aged 65 and over underwent a substantial increase of 18.0%.

### 2.1.1.3 Change in settlement areas

#### Indicator description

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

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

Please refer to the technical annex for more information.

Figure 2.3 illustrates the change in settlement areas at municipal level between 2012 and 2018. Overall, the map shows similar patterns of change in settlement areas on both sides of the Spanish-French border. The Andorran side shows no data. Changes are evident in particular around the urban centres of Logroño, Zaragoza, Lleida, Pau, Toulouse and Perpignan. Bilbao, Pamplona/Iruña, Huesca and Barcelona show no significant changes during the observed time period. High growth in settlement areas is particularly evident around the French cities Toulouse and Perpignan as well as between Lleida and Barcelona and in the valley between Bilbao and Logroño. In close proximity to the national borders, the settlement area increases, mainly in Perpignan, as well as along and between Pamplona/Iruña and the Atlantic coast. The map also reflects the topographical characteristics of the border region, with hardly any changes in settlement areas visible in steep, high-altitude mountainous areas.

**Figure 2.3: Settlement area dynamics**

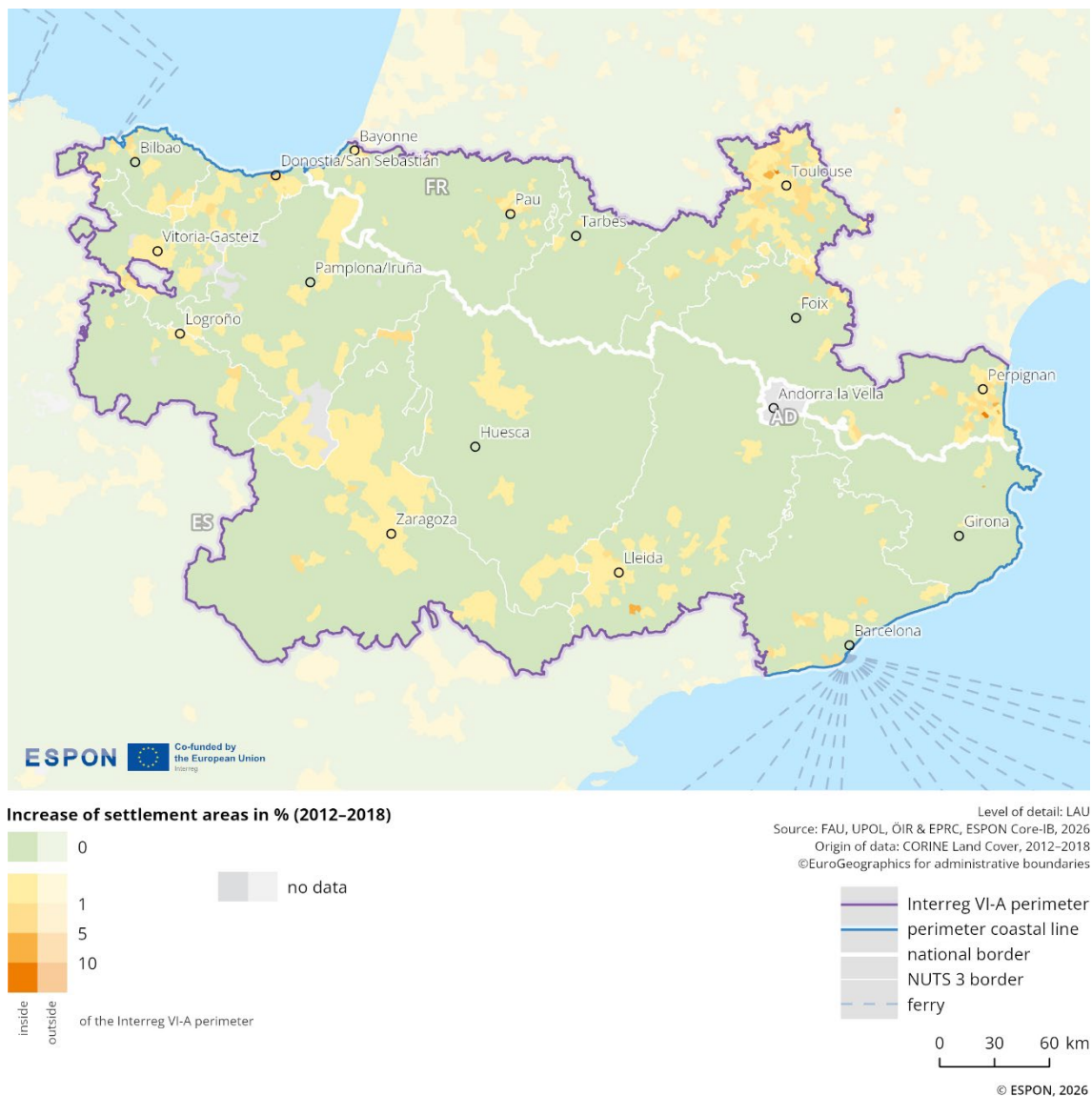
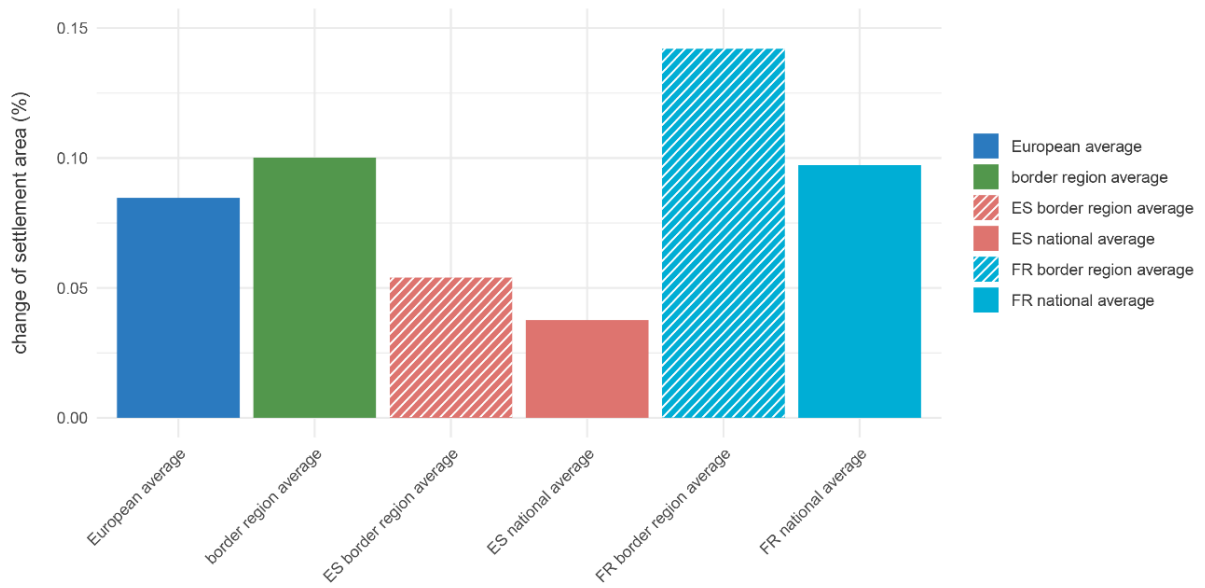


Figure 2.4 presents the change in settlement areas from a comparative perspective. The average for the Spain-France-Andorra (POCTEFA) programme area is higher than the overall European average (0.10% vs. 0.08%), which includes both EU member states and the EFTA countries Switzerland, Liechtenstein, and Norway. The French values are higher than the Spanish ones, which applies for both, the national average as well as the border regions. The Spanish and French border-regional averages lie above the national Spanish and French averages.

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

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



## 2.1.2 Accessibility of the border area

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

### 2.1.2.1 Comparative quality of selected cross-border connections

#### Indicator description

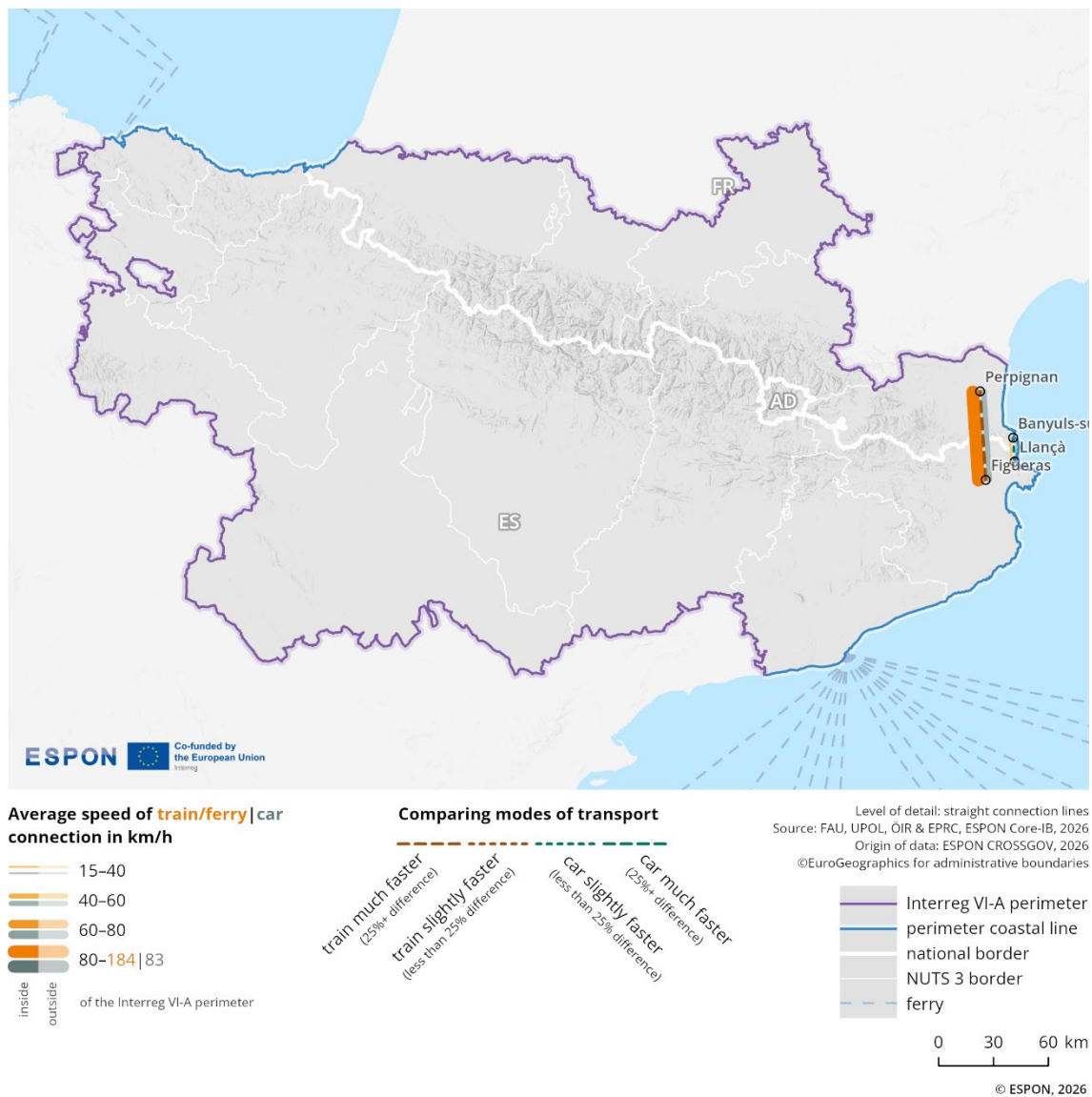
The indicator presents a comparative perspective for different modes of transport (public and private) and their average travel speed (so-called space-time-lines). As such it helps to understand and interpret accessibility patterns along the border and highlights the comparative quality of selected cross-border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

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

Please refer to the technical annex for more information.

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

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



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

The selected connections within the programme area include Figueres-Perpignan and Llançà-Banyuls-sur-Mer. On the Figueres-Perpignan route, train travel outperforms car travel in terms of speed, whereas on the Llançà-Banyuls-sur-Mer route, car travel is the faster option. Notably, the Figueres-Perpignan connection offers a fast train service. In contrast, the Llançà-Banyuls-sur-Mer route is characterised by slow travel times for both train and car, although the car remains significantly faster than the train.

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

While other train and road connections do exist, e.g., between Hendaye and Irun in the west, these do not meet the selection criteria and are therefore not featured on the map. Several local train connections (e.g., through the Canfranc train station) used to link the regions across the border. Nonetheless, most of them were closed due to the high maintenance costs and relatively low occupancy. Public transport options also exist, although connections are limited, infrequent and very much bound to the respective national networks.

### 2.1.2.2 Cross-border catchment area based on mobility flows

#### Indicator description

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

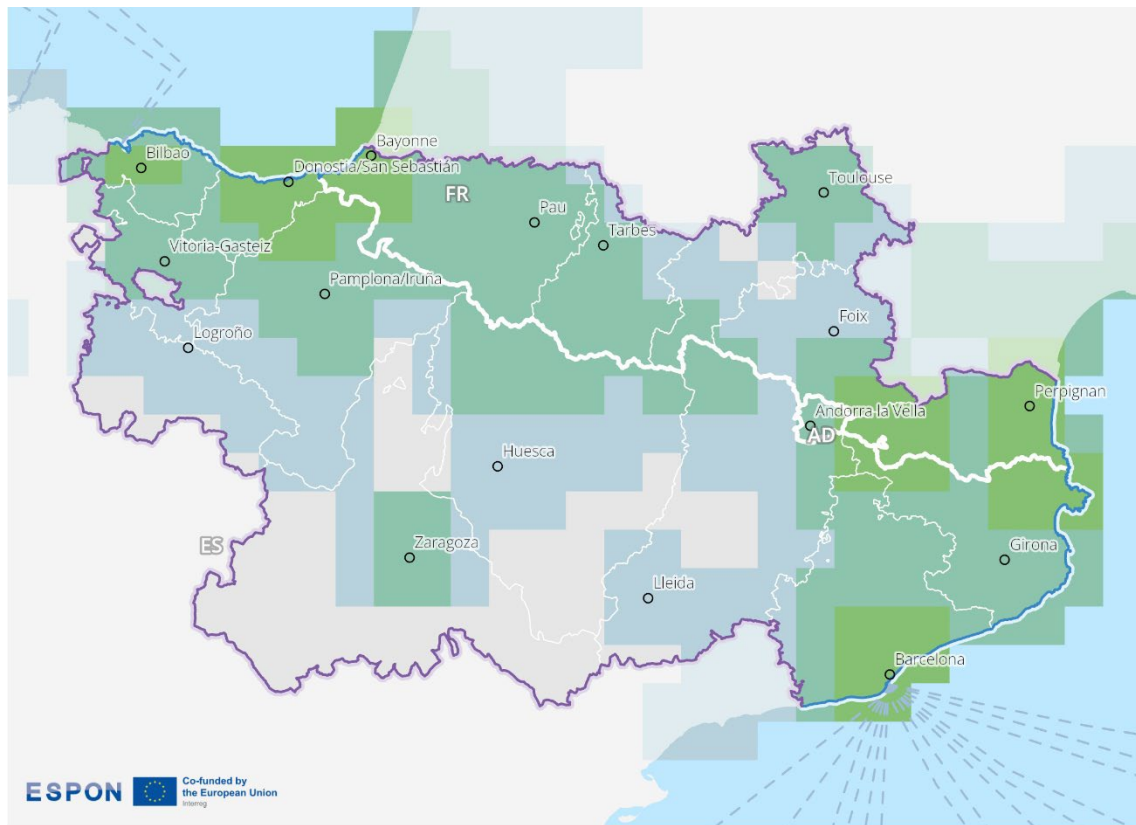
- **Source/method of retrieval:** The indicator is calculated based on Twitter (currently X) data. The digital footprint of individual users provides information about physical mobility flows and is used to calculate cross-border catchment areas of different intensity.
- **Temporal coverage:** 2013-2023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

Please refer to the technical annex for more information.

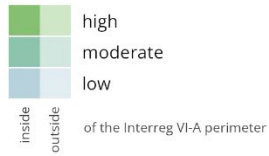
Figure 2.6 shows the cross-border catchment area in the border region based on mobility flows from 2013 to 2023, highlighting estimated cross-border mobility intensity across 3 different quartiles. The first quartile represents the 25% highest mobility intensity shown in dark green, the second quartile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

The intensity of cross-border mobility of people within this cross-border region is highly variable. The highest mobility intensity is recorded in several smaller areas, including around Bilbao, northwards to the city of Pamplona, near Perpignan, east of Andorra la Vella, and around Barcelona. Moderate intensity is observed across most border areas, gradually transitioning into zones of low intensity further away from the national borders. Beyond these areas, in the Spanish part of the region, no mobility intensity is recorded.

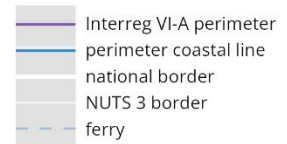
**Figure 2.6: Cross-border mobility intensity**



**Estimated cross-border mobility intensity (2013-2023)**



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



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### 2.1.2.3 Cross-border travel-time accessibility

#### Indicator description

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

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

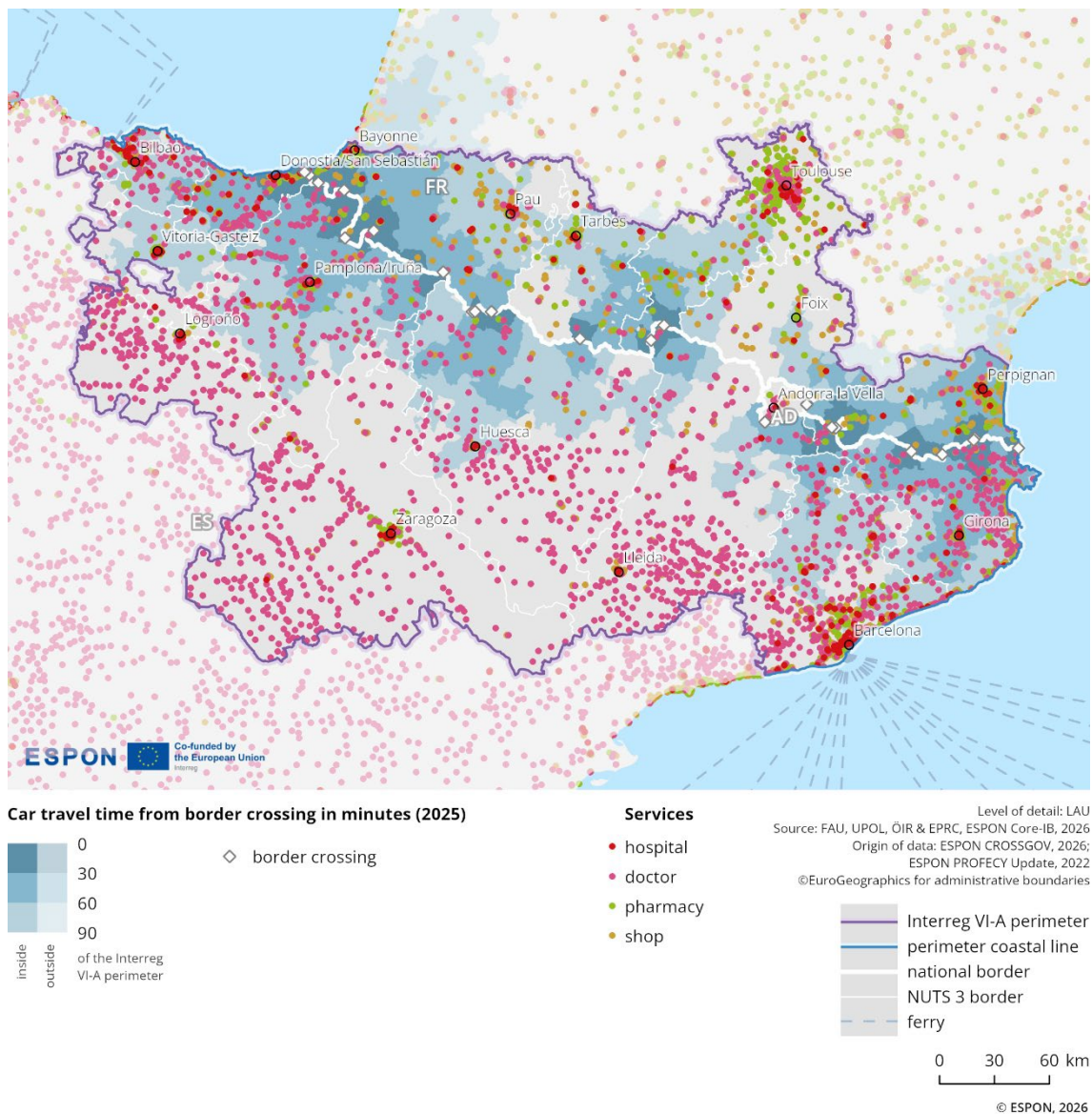
Please refer to the technical annex for more information.

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

The Map shows that shorter travel times under 30 minutes are present only in some areas along the border between France and Spain. The area below 60 minutes is wider on both side of the border than the area below 30 minutes. More distant parts from the border are accessible in over 90 minutes from both sides of the border. In some cases, the central part of accessibility categories differs between border sides, where one side is better, and the other side is worse. The better accessibility at both coasts covers only small areas, but in these parts the road connection is good. Not all the programme area is covered by available data.

Services such as shops, hospitals, doctors, and pharmacies are spread evenly. The higher concentration of services is found in cities such as Barcelona, Lleida, Zaragoza, and Toulouse, which unfortunately all fall into the category of travel times exceeding 90 minutes. Better accessibility of services is available in Perpignan, located within a 60-minute travel time from the border.

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



### 2.1.3 Key messages on the territorial dimension

The Pyrenees Mountain range forms a natural border between France and Spain which strongly influences settlement patterns and population density of the whole cross-border area, but especially close to the more elevated parts of the territory. Overall, the border region, which comprises several large urban centres, is quite dynamic from a demographic point of view. The population growth on the French side is notably quite substantial and widespread (in terms of population density). The population growth is still positive in Spain, but the population is more concentrated around important urban centres.

Higher population density can be observed along the 2 coastal areas (Atlantic Ocean and Mediterranean Sea) due to favourable climatic conditions, a relatively good connectivity, a decent transport network (more developed than inland) and existence of services of general interest.

Accessibility across the Spain–France–Andorra programme area is highly uneven and strongly shaped by topography. On the Spanish side, the Pre-Pyrenean areas play a key structuring role, concentrating the main transport corridors and providing access routes towards the central Pyrenees, while highways infrastructure is largely confined to the eastern and western coastal extremities. In contrast, the central

Pyrenees remain weakly accessible, relying predominantly on conventional roads, some of which are still under development. The French side shows a somewhat more continuous accessibility pattern, with highway connections extending closer to the central Pyrenean areas. Rail infrastructure is largely located in the Pre-Pyrenean periphery, reinforcing accessibility contrasts between coastal and inland mountain areas. The lack of rail crossings in the central Pyrenees remains a major structural constraint for cross-border accessibility.

## 2.2 Economic dimension

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

### 2.2.1 Gross Domestic Product

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

#### 2.2.1.1 Gross domestic product per capita at current market prices

##### Indicator description

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

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

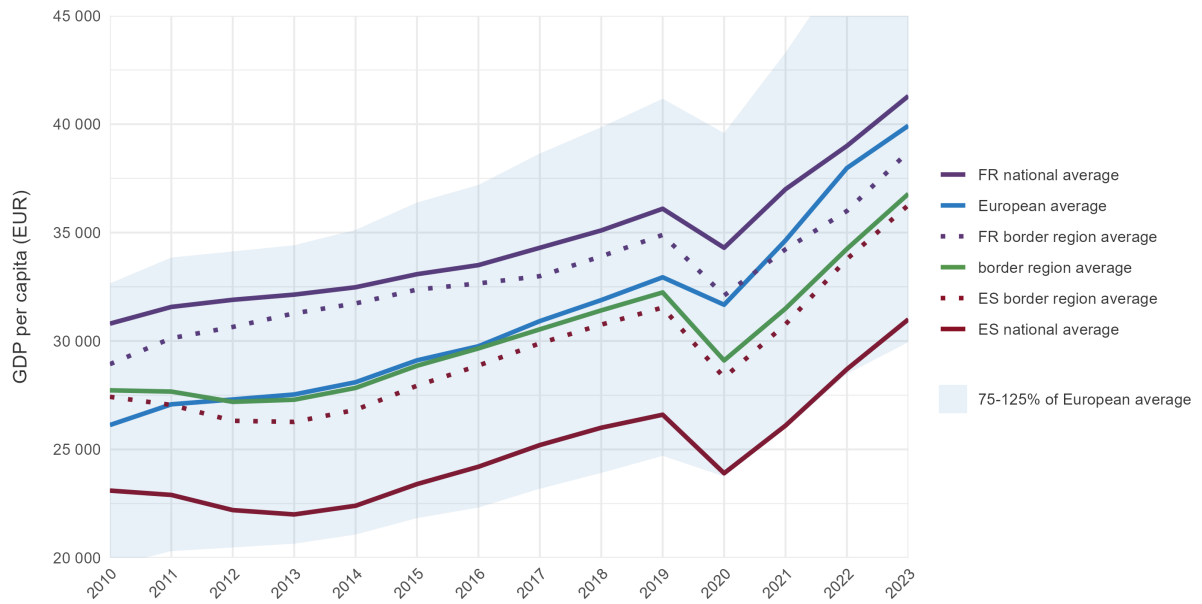
Please refer to the technical annex for more information.

The cross-border region shows a GDP/capita value of 95,2% of the EU average in 2022 and 96,6% of the average in European border regions in general. The region marks a 23.8% increase of GDP per capita in the border region between 2014 and 2022<sup>5</sup>. This corresponds to a 11.9 percentage points lower increase of GDP per capita in the border region compared to the EU average. Furthermore, this corresponds to 11.4 percentage points lower increase of GDP per capita in the border region compared to the average of European border regions. Both the French as well as the Spanish border region are close to the EU average in terms of their GDP per capita. The Spanish border region has a considerably higher GDP per capita than the country of Spain while the French border region lays below the national

<sup>5</sup> Percentage changes are calculated using Eurostat data to ensure harmonised statistics from official sources. The latest year for which full coverage of all European regions is available on Eurostat is 2022. For visualisation purposes, ARDECO data has been used to enable longer time series to be visualised by filling the official dataset's existing gaps with model-based estimates. Therefore, slight deviations between the calculation and visualisation are possible.

average. In terms of GDP growth, both sides lag behind the EU average, however the French border region registering lower growth and this falling behind since 2020.

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



## 2.2.2 Labour market and commuting

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

### 2.2.2.1 Share of employment

#### Indicator description

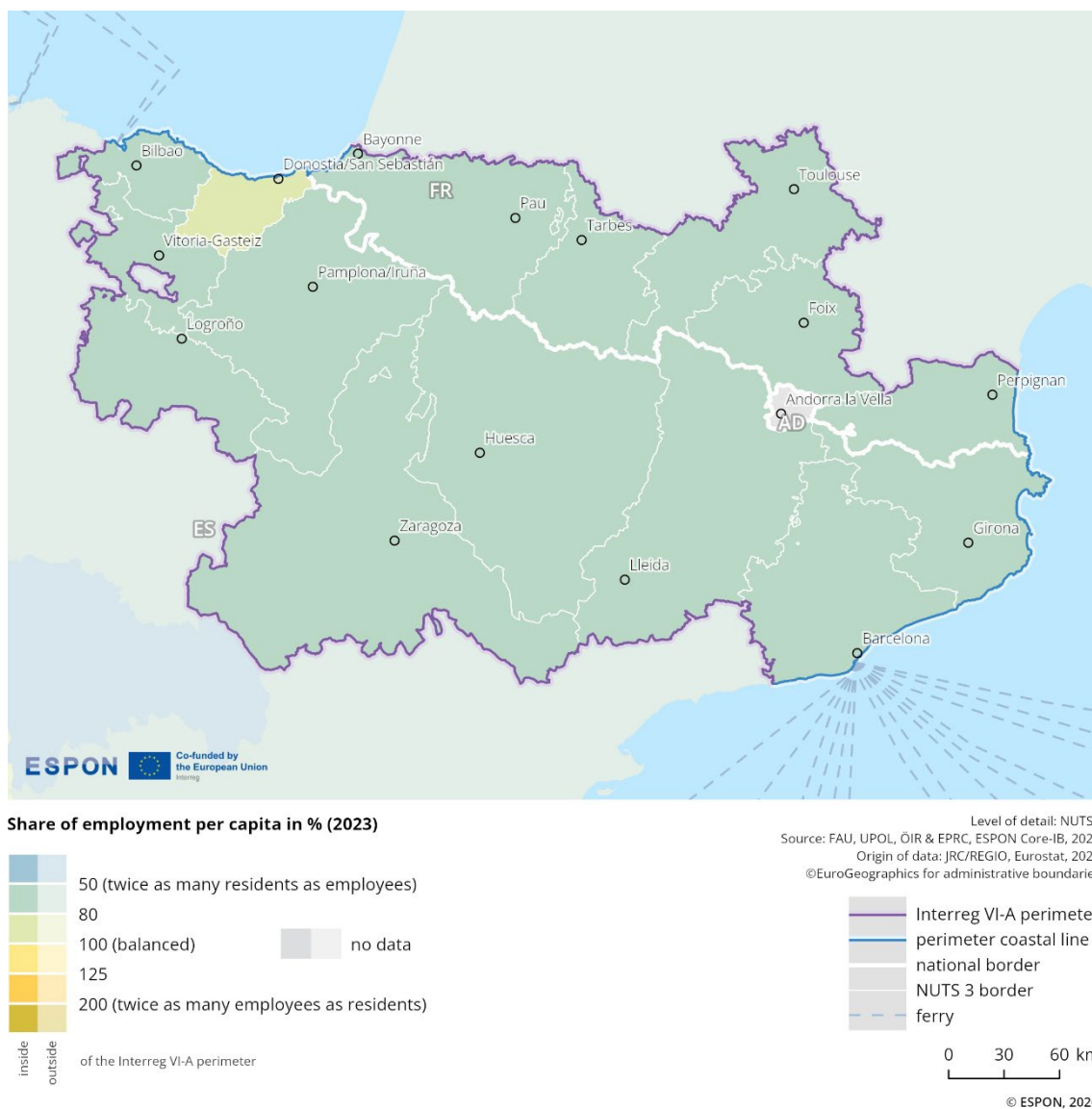
This indicator shows the share of employees in the population aged 15 to 64. Although it does not fully capture entrepreneurs, marginal employees, or civil servants, this is an important statistic for understanding general labour market patterns. It covers 2 aspects: first, high values can result from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

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

Please refer to the technical annex for more information.

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

**Figure 2.9: Employment share<sup>6</sup>**



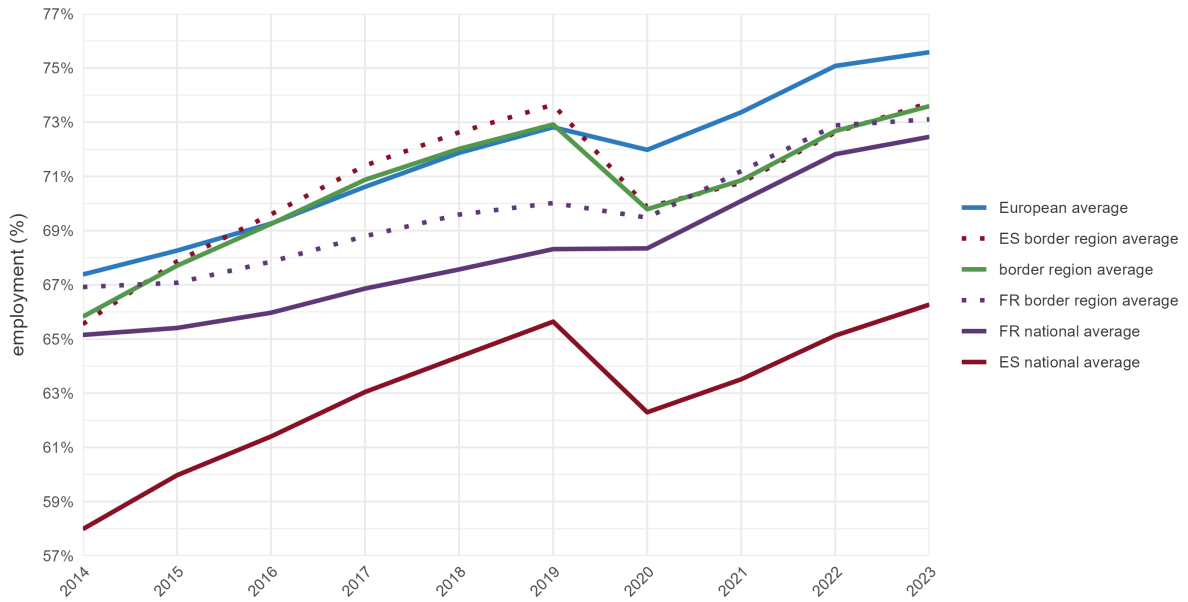
The share of employment in this border region remains stable, with the regional average reaching 73.6% in 2023, which represents an increase of 7.8 percentage points since 2014. Across the entire region, values range from 50% to 80%, except for the area east of the city of Bilbao, where values range from 80% to 100%. When comparing the share of employment in this border region with different averages, the following can be observed (see Figure 2.10):

- › Compared to the European average, values in the cross-border region are lower by 2 percentage points; in 2014, the difference was 1.6 percentage points.
- › Compared to the Spanish national average, values in the cross-border region are higher by 7.3 percentage points; in 2014, the difference was 7.8 percentage points.
- › Compared to the French national average, values in the cross-border region are higher by 1.1 percentage points; in 2014, the difference was 0.7 percentage points.
- › The Spanish border area records values 7.5 percentage points above the Spanish national average, while the French border area is 0.7 percentage points below the French national average.

<sup>6</sup> Note: In this map, 'residents' refers to the population aged 15 to 64.

- › Compared to the average of all cross-border regions, the values are lower by 0.9 percentage points; in 2014, the difference was 0.5 percentage points.

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



### 2.2.2.2 Share of working-age population

#### Indicator description

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

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

Please refer to the technical annex for more information.

Figure 2.11 shows the evolution of the share of the working-age population in the Spain-France-Andorra (POCTEFA) cross-border region between 2014 and 2023. In 2023, the analysed area shows an average working-age population share of 64.9%, compared to the European average of 63.9% and 63.7% for the average of all cross-border regions.

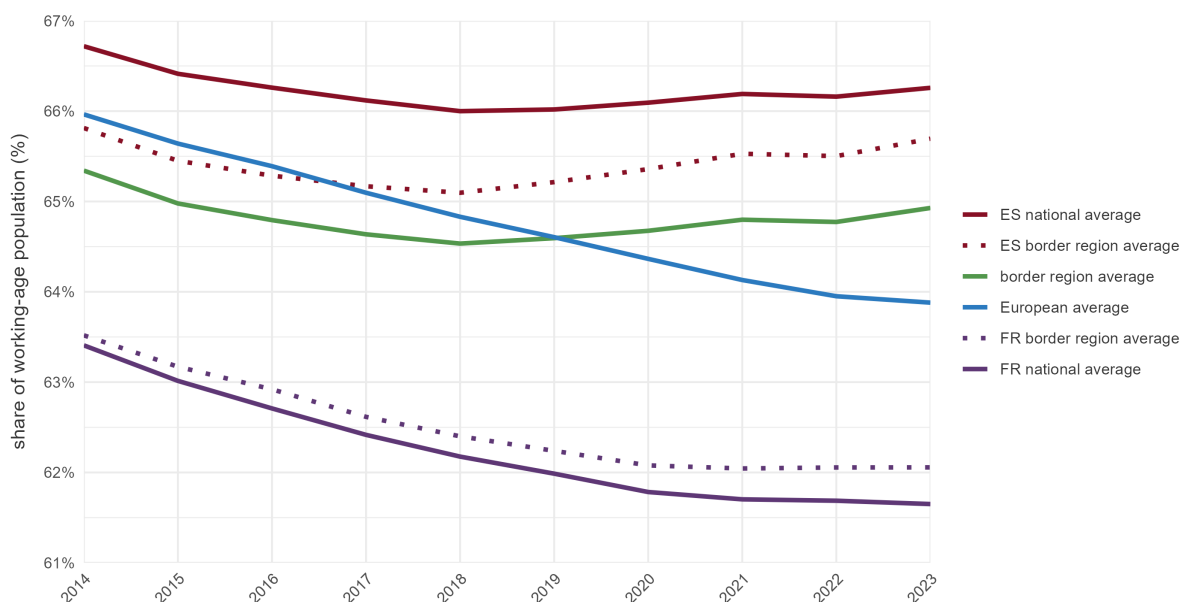
The share of the working-age population in the whole cross-border region is moderately higher than the French border average (62.1%), and slightly lower than the Spanish border average (65.7%).

Compared to national levels, it is noticeably higher than the French national average (61.7%), and slightly lower than the Spanish national average (66.3%).

The region experienced a very slight 0.4 percentage point decrease in the share of working-age population between 2014 (65.3%) and 2023 (64.9%). Although the overall trend is negative, the chart initially shows a decline followed by an increase from 2018. This decline is somewhat slower than the European average, which dropped by 2.1 percentage points in the same period. While both sides of the region show stable or slightly declining trends, the decrease has been more pronounced in the French parts (-1.4 percentage points at the border and -1.7 percentage points at the national level) than in the Spanish parts, where the decline was very slight (-0.1 percentage points at the border and -0.4 percentage points at the national level).

The Spain–France–Andorra (POCTEFA) cross-border region experienced a very slight overall decline in the share of the working-age population between 2014 and 2023. In 2023, the region remained above both the European and cross-border averages, with a more favourable trend on the Spanish side.

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



### 2.2.2.3 Employment by sector

#### Indicator description

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

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

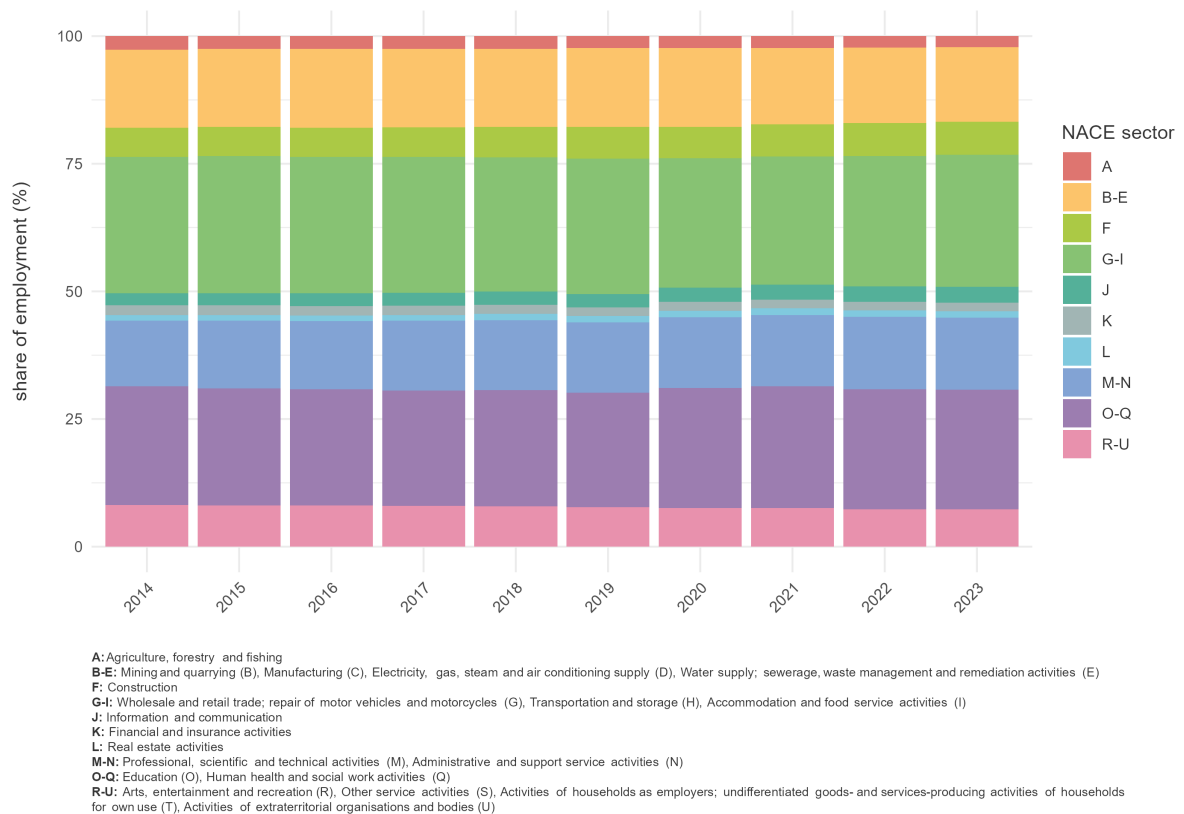
Please refer to the technical annex for more information.

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

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

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

**Figure 2.12: Employment by sector (comparison)**



Between 2014 and 2023, the relative number of jobs in the different sectors remains fairly stable. There is a slight decline in the share of employment in agriculture, forestry and fishing (A), Arts, entertainment and recreation (R), Other service activities (S), Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (T) and Activities of extraterritorial organisations and bodies (U). Conversely, there is a modest increase in the number of jobs in Construction (F), Information and communication (J), Professional, scientific and technical activities (M) and Administrative and support service activities (N).

Over the entire period, the sectors with the highest share of jobs are 'B-E' (mining, quarrying, manufacturing, electricity, gas, steam and air conditioning supply, water supply; sewerage, waste management and remediation activities), 'G-I' (wholesale and retail trade; repair of motor vehicles and motorcycles, transportation and storage, accommodation and food service activities) and 'O-Q' (education, human health and social work activities).

## 2.2.2.4 Outgoing cross-border commuters

### Indicator description

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

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

Please refer to the technical annex for more information.

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

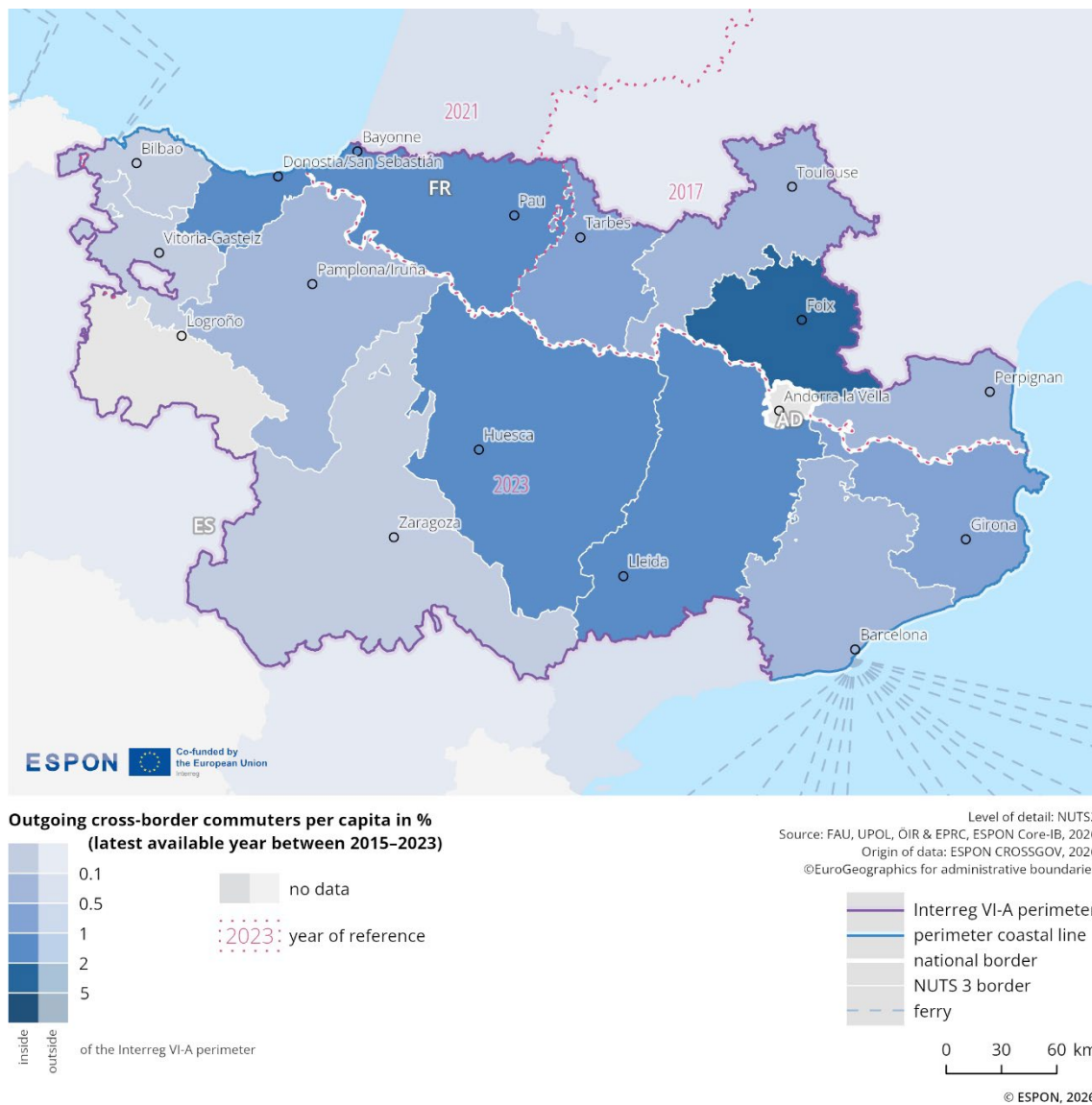
The map illustrates the share of outgoing commuters, based on the most recent available year of data. It shows relatively strong and fairly evenly distributed cross-border commuting activity in areas directly adjacent to the border on both the French and Spanish sides. For Andorra, no data is available.

The french department of Ariège (where the city of Foix is located) stands out in particular, with high levels of outgoing commuters, highlighting the important role of this border area as a commuting corridor<sup>7</sup>. Although no origin-destination information can be provided, this might be partially explained by the proximity with Andorra and the strong demand for labour in its service-oriented economy. Other 'hotspots' include the spanish provinces of Lleida, Huesca and Gipuzkoa<sup>8</sup> and the french department of the Pyrénées-Atlantiques. These areas also show elevated shares of outgoing cross-border commuters per capita.

<sup>7</sup> See Eurostat Statistical Atlas for NUTS3 (2021) regions: <https://ec.europa.eu/statistical-atlas/viewer/?config=typologies.json&ch=NUTS&mid=BKGCNT.NUTS2021L3.CNTOVL&o=1.1.0.7&center=49.69576,14.3332,4&lcis=NUTS2021L3&>

<sup>8</sup> For more information on the cross-border labour market between Region Navarre and Basque Country – New Aquitaine see: European Commission: Directorate-General for Regional and Urban Policy, AEBR, HÉTFA, Nordregio and ÖIR, *Cross-border regional labour market analysis – Case study – Region Navarre and Basque country – New Aquitaine (Spain – France)*, Publications Office of the European Union, 2025, <https://data.europa.eu/doi/10.2776/6878311>

**Figure 2.13: Outgoing cross-border commuting patterns**



### 2.2.2.5 Cross-border telework agreements

#### Indicator description

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

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

Please refer to the technical annex for more information.

Spain and France 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. For Andorra, special rules can apply based on bilateral agreements and an updated legal act on various matters including social security is currently (2025) in the decision phase.

### 2.2.3 Competitiveness

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

#### 2.2.3.1 Gross value added at basic prices by sector

##### Indicator description

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

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

Please refer to the technical annex for more information.

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

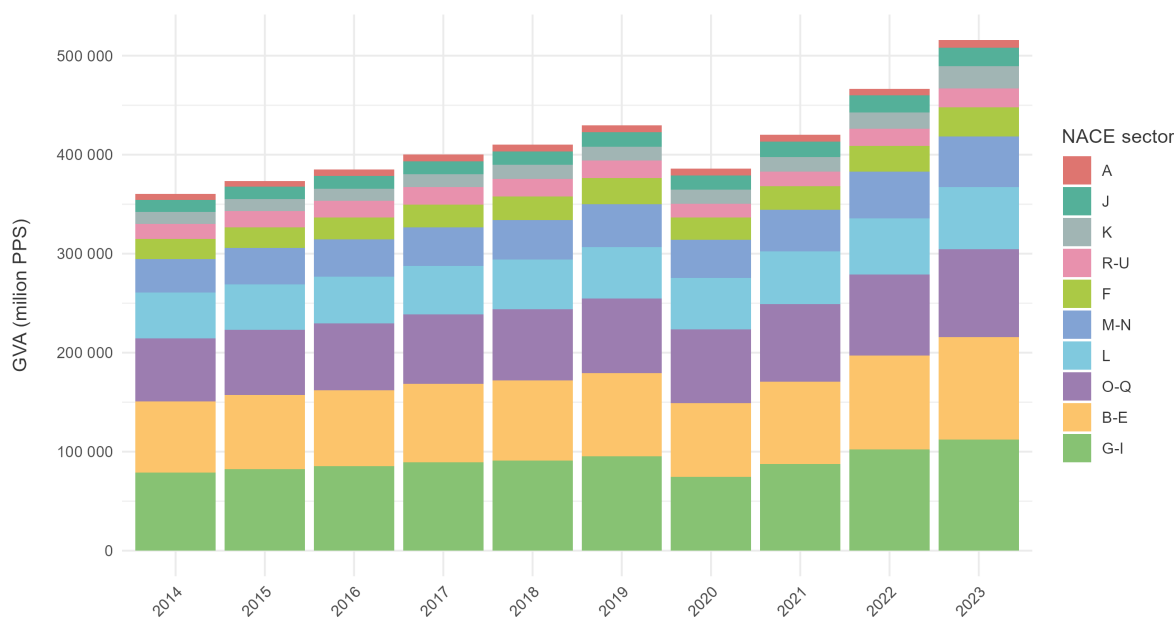
The dataset uses a '10-sector' classification based on NACE categories. The sectoral breakdown is as follows:

- › A: Agriculture, forestry and fishing
- › B-E: Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Water supply; sewerage, waste management and remediation activities (E)
- › F: Construction
- › G-I: Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I)
- › J: Information and communication
- › K: Financial and insurance activities
- › L: Real estate activities
- › M-N: Professional, scientific and technical activities (M), Administrative and support service activities (N)
- › O-Q: Education (O), Human health and social work activities (Q)

- › R-U: Arts, entertainment and recreation (R), Other service activities (S), Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (T), Activities of extraterritorial organisations and bodies (U)

Between 2014 and 2023, the GVA in the border area of Spain-France-Andorra (POCTEFA) increased from 360,302 million purchasing power standards (PPS) to 515,744 million PPS — a growth of 43%. 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 112,191 million PPS in 2023. This underlines the significance of sectors such as Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I) in the Spain-France-Andorra (POCTEFA) border region.

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



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

### 2.2.3.2 Nominal compensation per hour worked

#### Indicator description

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

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

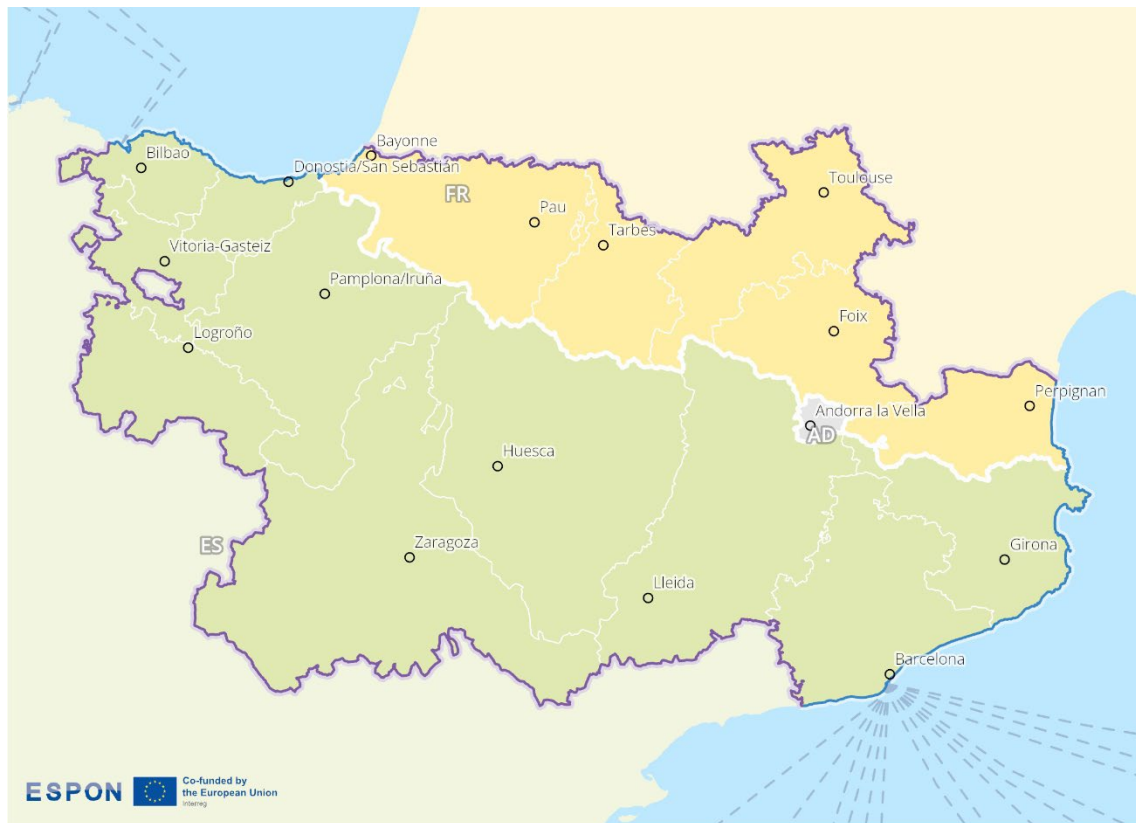
Please refer to the technical annex for more information.

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

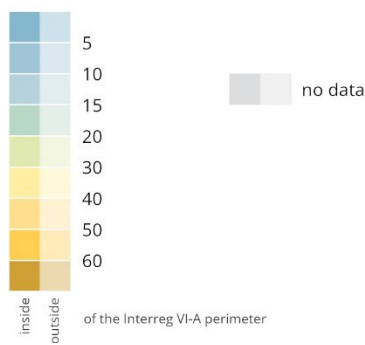
In 2023, nominal compensation per hour worked in the Spain–France–Andorra border region appears to be somewhat unevenly distributed. In France, the national average hourly income is €36,30, with some French regions in this cross-border area reporting values slightly above this (Ariège, Haute-Garonne, Hautes-Pyrénées, with €36,70). Spanish national average hourly income is €23,70 and several NUTS3 regions in the NUTS 2 País Vasco area such as Gipuzkoa and Araba/Álava (€28.20) are reporting values above this average. For Andorra, no data is available for this indicator.

Cross-border wage differences can encourage labour migration from lower-wage areas to more economically prosperous neighbouring regions, creating both opportunities and challenges for local labour markets and social systems. However, in this particular border region, the wage differences do not appear to be especially significant.

**Figure 2.15: Average income per hour**

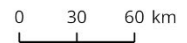


**Average income per hour worked in euros (2023)**



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

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



© ESPON, 2026

## 2.2.4 Infrastructure and housing

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

### 2.2.4.1 Advertised sales prices

#### Indicator description

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

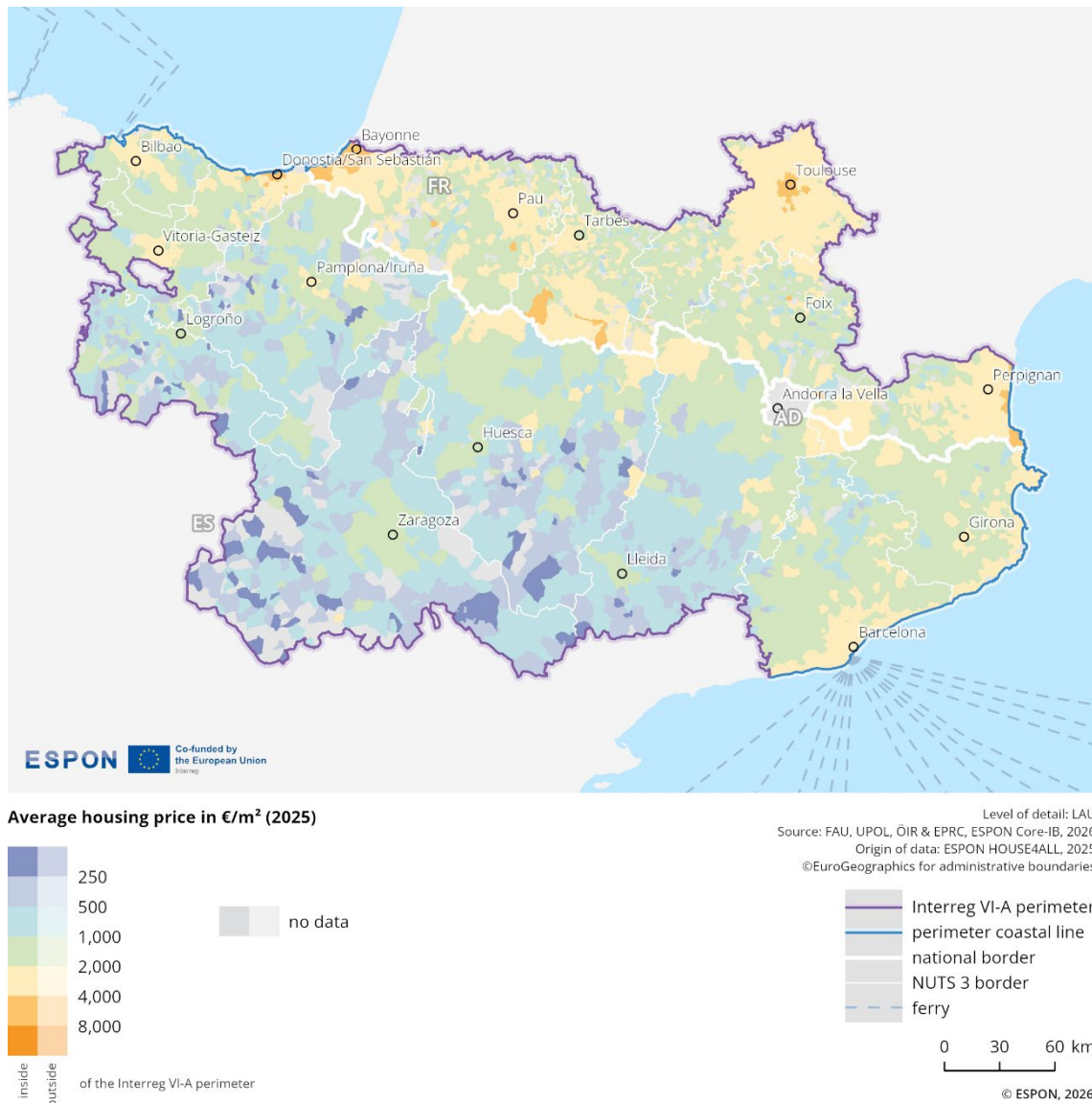
- **Source/method of retrieval:** Processed ESPON House4all data. The original data is collected via web-scraping of national listing websites over a one-year period.
- **Temporal coverage:** 2024/2025
- **Unit:** Average price per square meter (€/m<sup>2</sup>)

Please refer to the technical annex for more information.

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

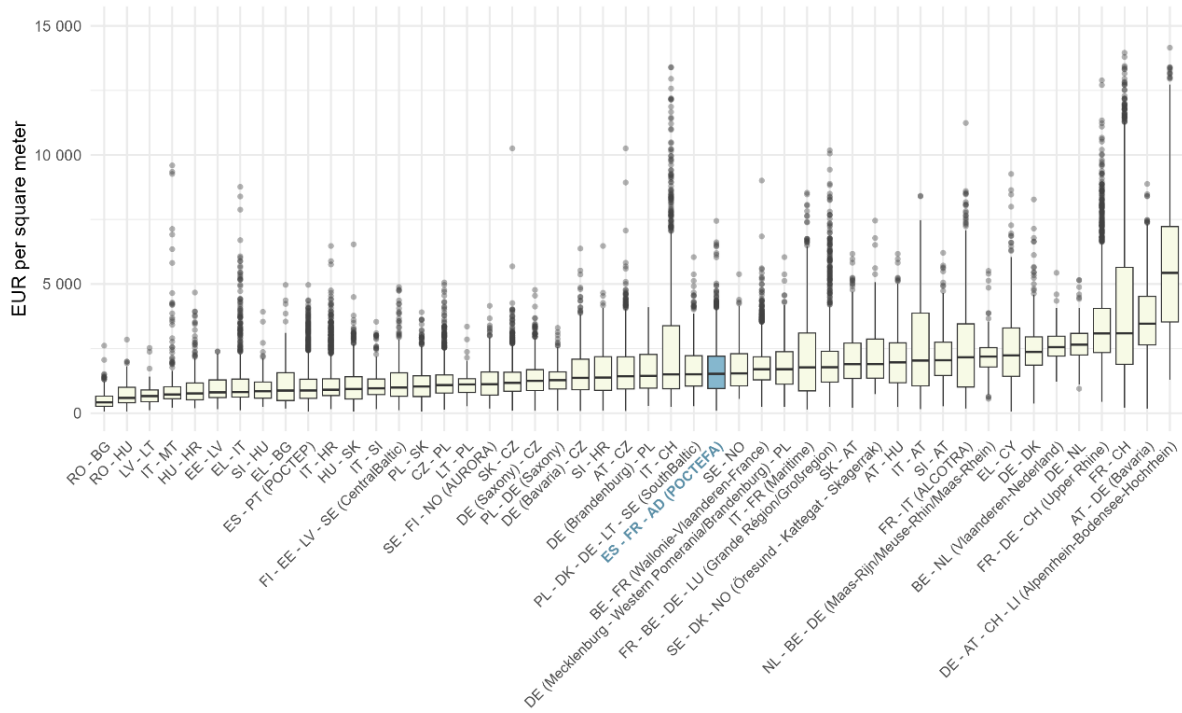
The Spanish cross-border territory is divided into 3 areas according to average price. The first 2 are in the north and south. In the northern and southern parts, prices are higher, ranging from 1,000 to 2,000 €/m<sup>2</sup>. These interval mainly concerns the entire large area in Catalonia around Barcelona. In the north, prices are higher around the city of Bilbao. The third, central part of Spain contains areas with lower prices starting at 50, predominantly in the category up to 1,000 €/m<sup>2</sup>. The exception is the area around the city of Zaragoza, where prices in this category can reach up to 2,000 €/m<sup>2</sup>. The French part has higher prices, with areas ranging from 1,000 to 4,000 appearing almost regularly. Areas up to 8,000 €/m<sup>2</sup> appear on the map along the northern coast (towns Biarritz, Anglet, Bayonne) and also around the city of Toulouse. The border does not form a clear divide between the countries; the price pattern more or less continues across the Pyrenees.

**Figure 2.16: Advertised housing prices**



The Spanish part of the border region records an average advertised residential sales price of approximately €1,185 per square metre, while the French part shows a higher average price of about €2,072 per square metre. Overall, the average advertised sales price across the entire border region is estimated at €1,645 per square metre. This value remains below the average for all EU-evaluated border regions (€1,900 per square metre) and is also lower than the European average of approximately €5,600 per square metre.

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



### 2.2.4.2 Average internet speed

#### Indicator description

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

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

Please refer to the technical annex for more information.

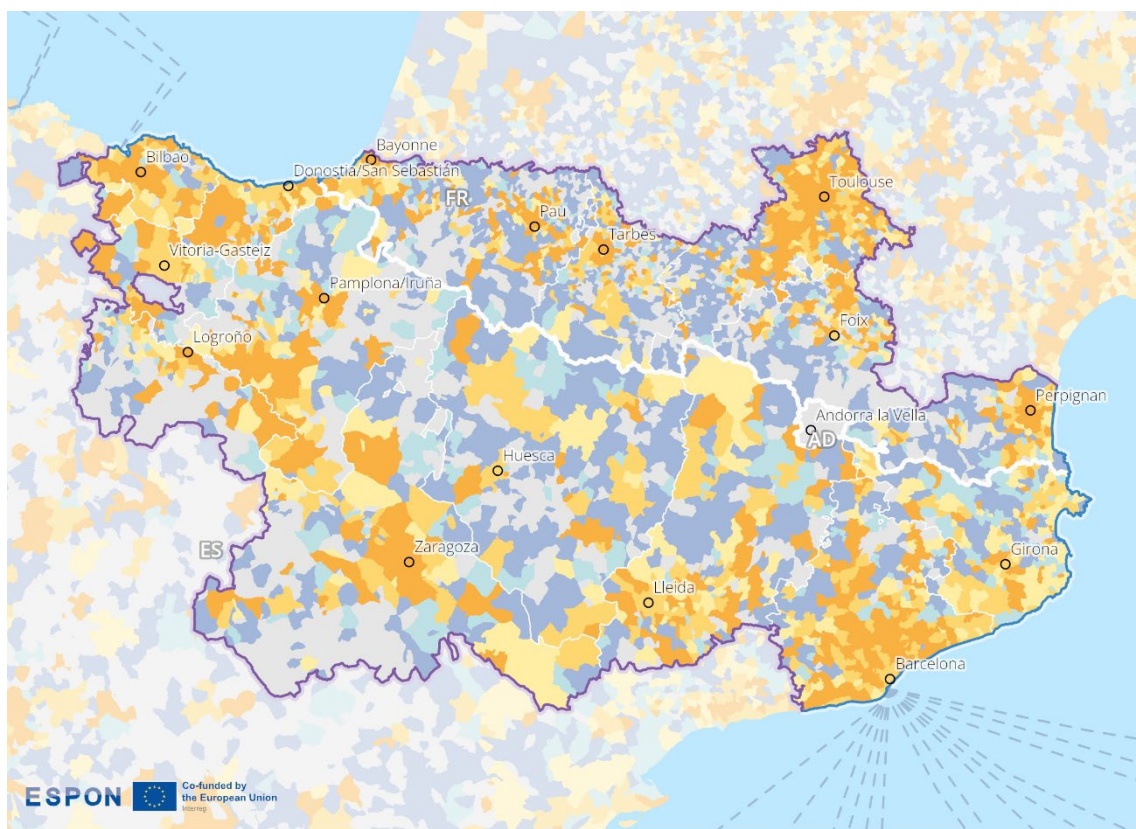
Digitalisation is a highly relevant issue in European border regions, with the overarching objective of ensuring appropriate digital access. It is widely recognised as a key precondition for successful regional and economic development. A major challenge in this process is preventing ‘digital divides’— i.e., avoiding significant disparities in economic, social, and spatial terms.

Average internet speed is a telling indicator of such disparities, highlighting differences in ‘digital preparedness’ at the local level. Figure 2.18 shows the average download speed at the municipality level. The colour scheme ranges from dark blue (very slow speeds) to orange (very fast speeds). The

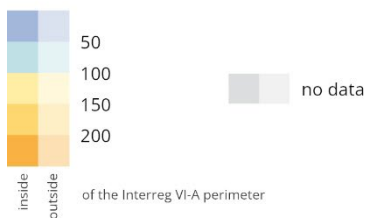
data, prepared by OBC Transeuropa for EDJNet, is based on Speedtest Intelligence data from Speedtest/Ookla's Global Fixed and Mobile Network Performance Maps for the first quarter of 2022. The average download speeds are expressed in megabits per second (Mbps), not to be confused with megabytes per second (MBps).

The map reveals significant differences between urban and rural areas, with values ranging from under 50 Mbps to over 200 Mbps. Cities such as Bilbao, Pamplona/Iruña, Logroño, Zaragoza, Huesca, Lleida, Barcelona, Pau, Toulouse, and Perpignan report relatively high average speeds, while surrounding areas tend to have significantly lower values. This may be due to the greater return on investment typically associated with digital infrastructure projects in urban areas compared to rural ones. However, not all urban areas in this border region have high download speeds. Mountainous terrain on all sides of the border clearly poses a challenge to providing high-speed internet. There is no available data for Andorra.

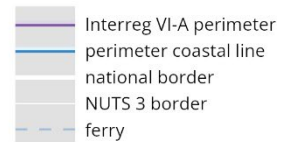
**Figure 2.18: Average internet download speed**



**Average internet speed in Mbps (2022)**



Level of detail: LAU  
 Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026  
 Origin of data: Orinaldo Gjergji, European Data Journalism Network, 2022  
 ©EuroGeographics for administrative boundaries



© ESPON, 2026

### 2.2.5 Key messages on the economic dimension

Considering the GDP per capita, the economic situation of the cross-border area has been following a positive development, resuming its economic growth since the 2019-2020 Covid crisis. The programme area is close to the EU average. The Spanish border region has a considerably higher GDP per capita than its national level while the French border region lays below the national average. Of note, the discrepancy (in terms of GDP per capita) between the 2 sides of the border region has narrowed down, especially in the last few years. While the French side has a comparatively higher GDP per capita, the Spanish territory is catching up relatively fast.

The share of employment per capita in the whole cross-border region is homogeneous. However, compared to its national average, the Spanish border region has a substantially higher share. Also, while the share of working age population in the French border region has been decreasing since 2014, in turn, the border regional average of the Spanish region shows an upward trend since 2017.

Cross-border commuting is relatively strong and fairly evenly distributed, with several key commuting hotspots in the analysed area. An influencing factor could be the wage difference, with wages being slightly higher in the French border region.

Sectors which are driving the border region's economic growth and providers of jobs are principally linked to industrial and utility-related activities. For example, the cross-border region boasts a strong and vibrant aerospace and defence industry, including many suppliers and start-ups which are strengthening the job market. Market-oriented services linked to trade, transport and tourism, and public and social services such as education, health and social care also play a key role.

## 2.3 Green dimension

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

### 2.3.1 Nature protection and pollution

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

### 2.3.1.1 Protected areas

#### Indicator description

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

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

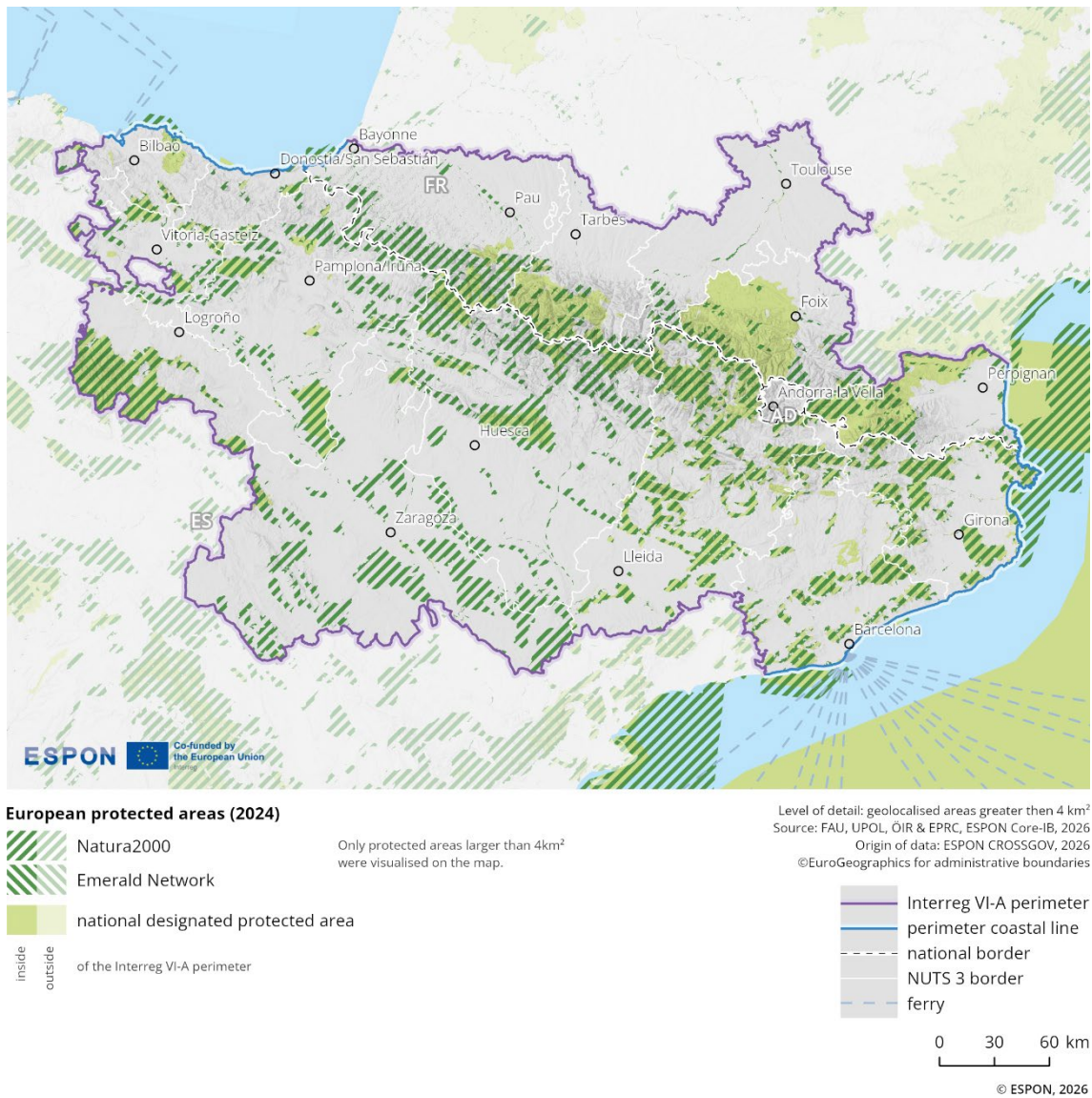
Please refer to the technical annex for more information.

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

Protected areas within the Interreg region are densely concentrated along the Pyrenees, particularly between Andorra, Huesca, and Pau, where large contiguous Natura 2000 and national designations dominate the landscape. Additional clusters are visible around Pamplona, Lleida, and the eastern coastline near Perpignan. Western parts near Logroño and Bilbao contain smaller, fragmented protected areas, similar to central lowlands around Zaragoza and Huesca.

Several protected areas display clear cross-border counterparts, especially throughout the Pyrenean mountain range between Spain, France, and Andorra. These form continuous cross-border corridors and are in most cases covered both by Natura 2000 and by nationally designated areas.

**Figure 2.19: Nature protected areas**



### 2.3.1.2 Air pollution

#### Indicator description

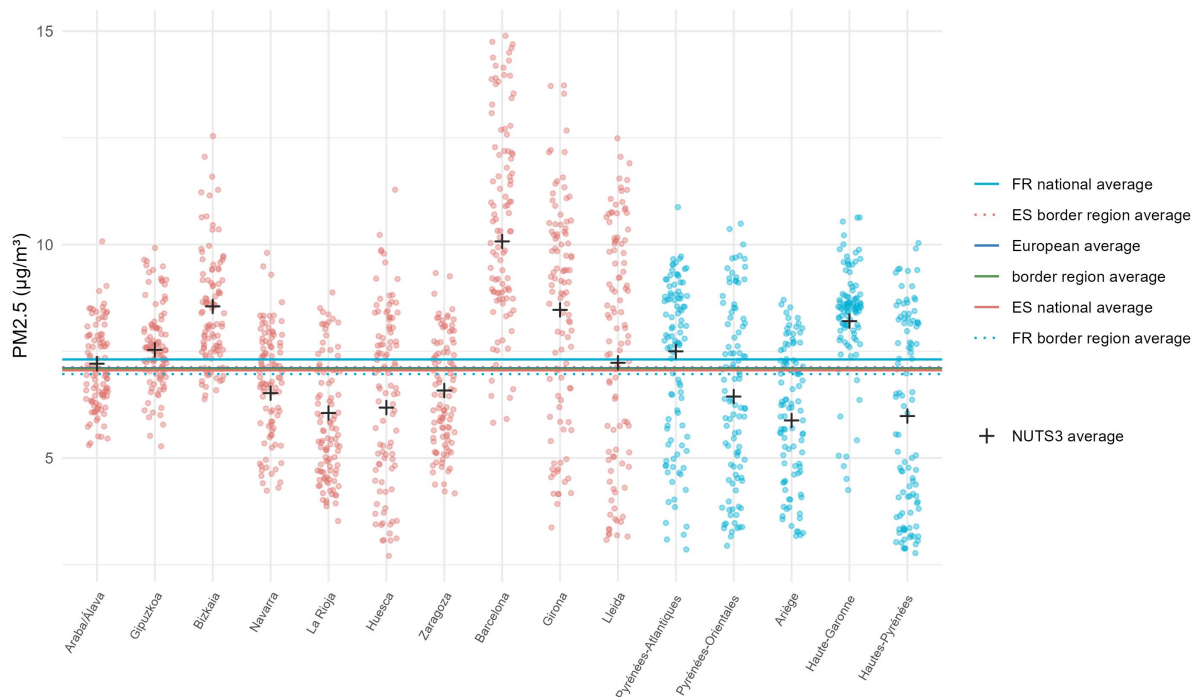
The indicator shows the air pollution from fine particulates (PM<sub>2.5</sub>) at NUTS3 level. The data shows the population-weighted average air pollution level (µg/m<sup>3</sup>), providing an indication of the extent to which the regional population is affected by air pollution.

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

Please refer to the technical annex for more information.

France and Andorra. Each small dot represents an individual measurement, while the black crosses indicate the average PM2.5 concentration (in  $\mu\text{g}/\text{m}^3$ ) for each NUTS3<sup>9</sup> region. The regions are aligned along the x-axis, with Spanish regions on the left (in red) and French regions on the right (in blue). There is no data for Andorra available.

**Figure 2.20: Air pollution**



PM2.5 values Spain and France span a wide range. Overall, Spanish regions show higher individual peaks in PM2.5 concentrations than French regions. French NUTS3 averages cluster below  $12 \mu\text{g}/\text{m}^3$  with only few measurements exceeding  $10 \mu\text{g}/\text{m}^3$ .

All the averages are relatively similar. The French border region average is slightly lower than the French national average. The cross-border average, the European average, and the Spanish national average are all at nearly the same level. The cross-border average reflects the relatively similar PM2.5 levels observed in the French and Spanish border regions.

<sup>9</sup> See Eurostat Statistical Atlas for NUTS3 (2021) regions: <https://ec.europa.eu/statistical-atlas/viewer/?config=typologies.json&ch=NUTS&mids=BKGCNT.NUTS2021L3.CNTOVL&o=1.1.0.7&center=49.69576,14.33324&lcis=NUTS2021L3&>

### 2.3.1.3 Water pollution

#### Indicator description

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

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

Please refer to the technical annex for more information.

The map illustrates water pollution levels in the Spain–France–Andorra Interreg region POCTEFA in 2022. Water quality is represented using 6 colour-coded categories, ranging from "bad" to "high", including an "unknown" category<sup>10</sup>.

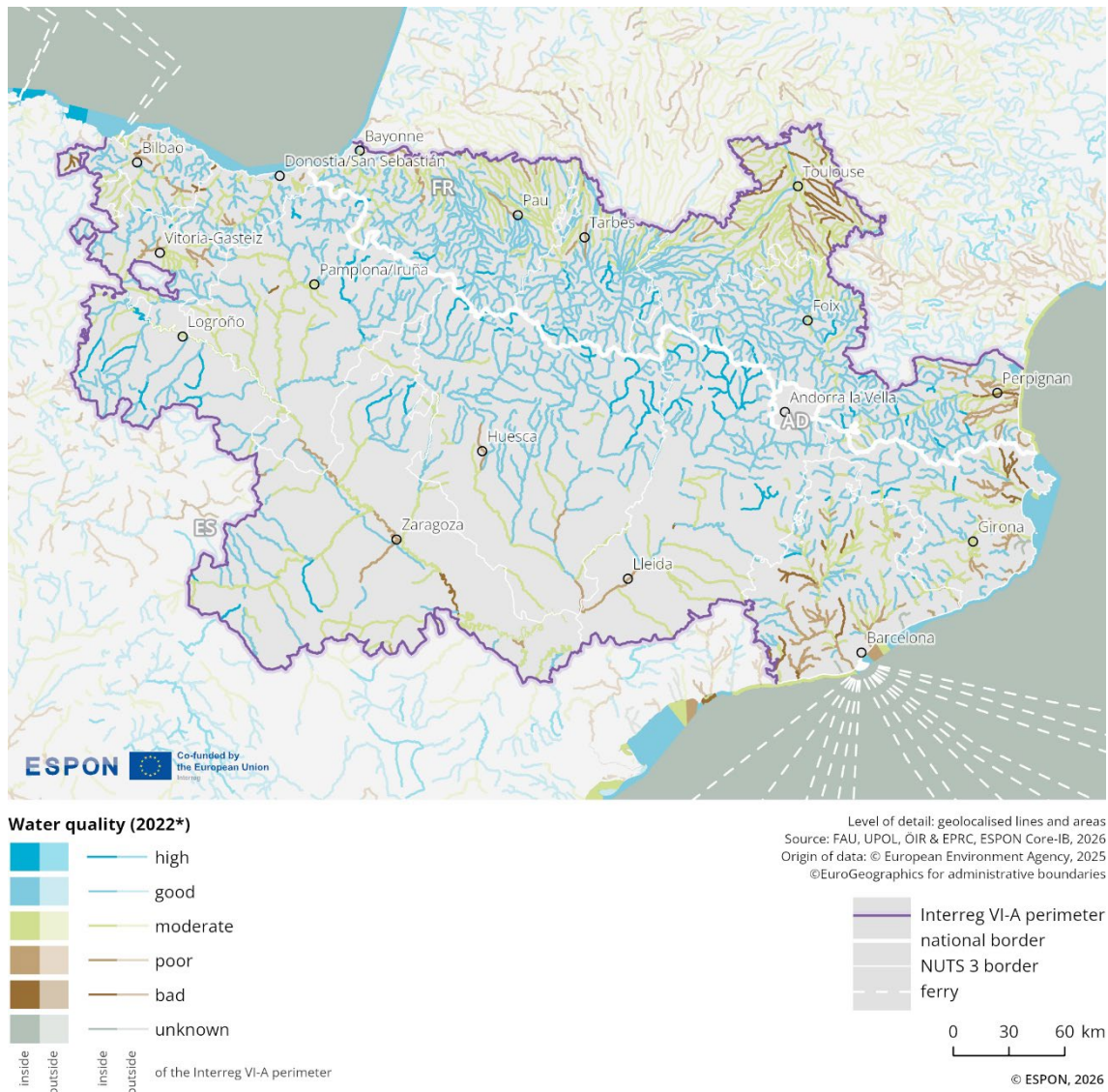
In the Spanish part of the Interreg region, rivers in the north around Bilbao, Pamplona/Iruña, and Logroño are mostly rated as "high" or "good". Moving southwards towards Zaragoza, Lleida and particularly Barcelona, more rivers are classified as "moderate" or "poor".

In the French part of the Interreg region, rivers south of Pau and Perpignan are generally classified as "good" or "high". Water bodies towards the north are frequently classified as "moderate", particularly around Toulouse, where they are also rated as "bad".

In the Andorran part of the Interreg region, the water quality is "unknown".

<sup>10</sup> For more information see the Water Framework Directive Reporting Guidance (2022): [https://cdr.eionet.europa.eu/help/WFD/WFD\\_715\\_2022](https://cdr.eionet.europa.eu/help/WFD/WFD_715_2022)

**Figure 2.21: Water quality patterns**



## 2.3.2 Climate risks and resilience

This sub-dimension examines cross-border functional links relating to climate risks and resilience. It analyses exposure to natural hazards such as landslides, earthquakes, droughts and floods in order to identify vulnerabilities and risks.<sup>11</sup>

### 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

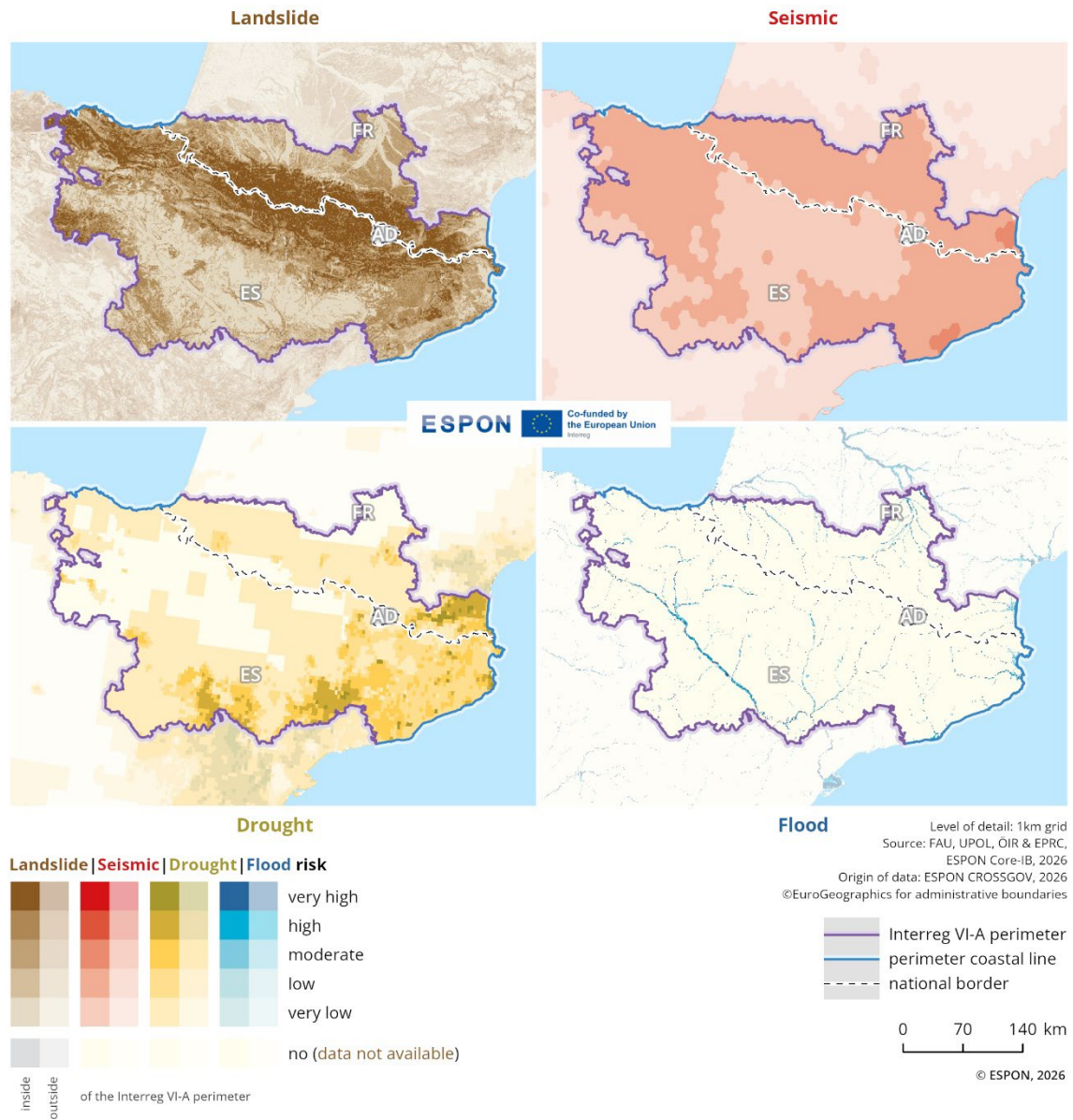
Please refer to the technical annex for more information.

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

The risk of landslides is especially high alongside the Pyrenees, which function as the shared border between the countries of the region. Seismic activities are (very) low across all the regions. Besides the southern regions located in Spain, drought risk is also moderate to high in the border regions close to the Mediterranean. Floodings on a larger scale occur mainly next to the Ebro River, which is exclusively located in Spain.

<sup>11</sup> 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](https://ec.europa.eu/regional_policy/sources/studies/KN-02-24-586-2A-N.pdf)

**Figure 2.22: Natural hazard risks**



### 2.3.3 (Renewable) Energy and energy infrastructure

This sub-dimension assesses cross-border functional links in energy supply and infrastructure, focusing on existing connections and missing links. The distribution of power lines, energy infrastructure and power stations is analysed to identify supply patterns and potential integration gaps. The analysis reveals whether the border facilitates energy cooperation and connectivity, or if infrastructural differences create barriers.<sup>12</sup>

#### 2.3.3.1 Power lines and energy infrastructure

##### Indicator description

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

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

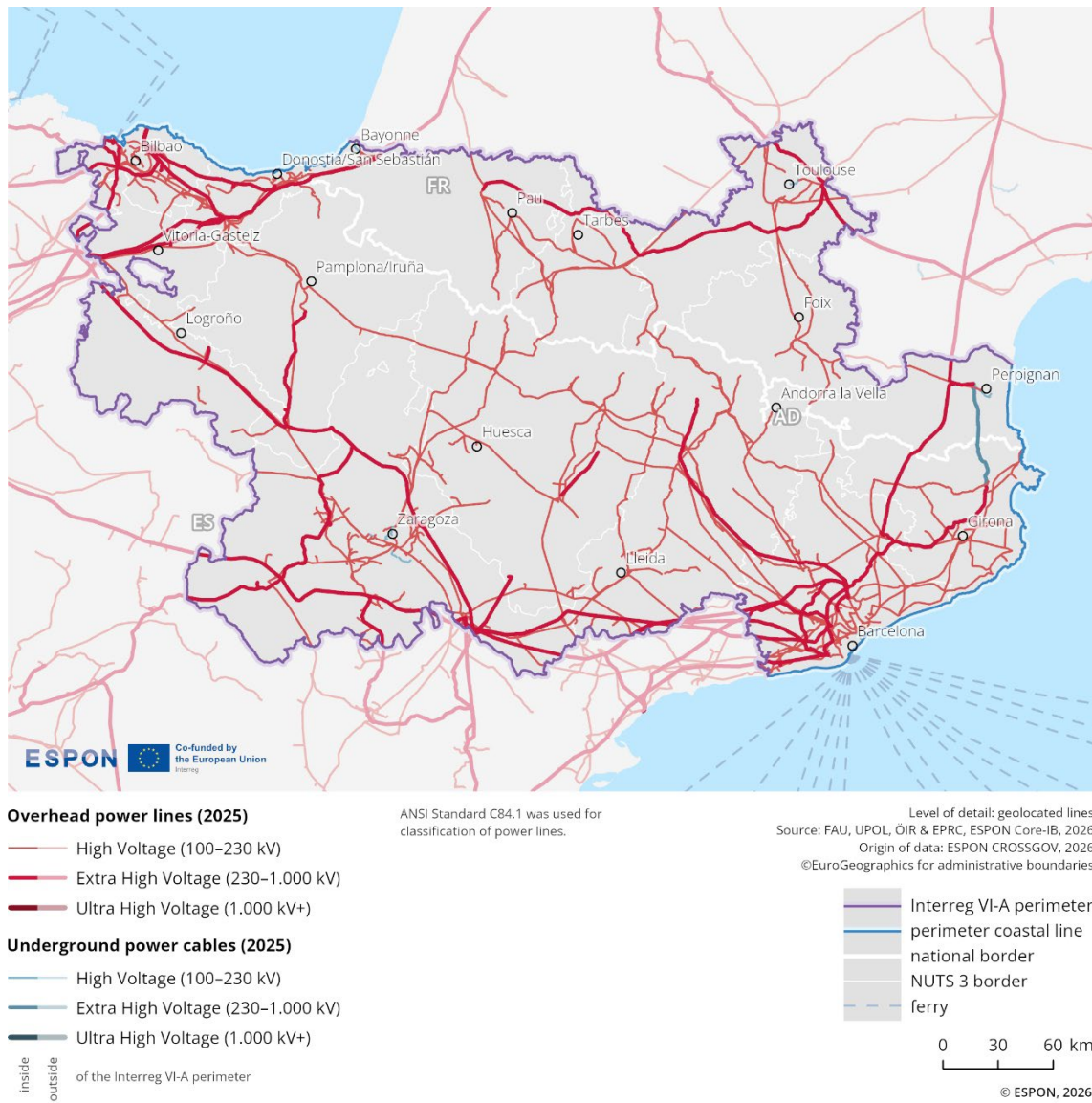
Please refer to the technical annex for more information.

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

The cross-border region of Spain-France-Andorra exhibit relatively extensive high- and extra high-voltage transmission infrastructure, especially on the Spanish side of the border. The densest network of electrical power lines, both extra- and high-voltage, can be found around urban centres (e.g. around Bilbao, Barcelona, Zaragoza, Toulouse and Perpignan). Grids are relatively interconnected across borders in this region, with extra high-voltage lines crossing the French-Spanish border at 3 points – once in the north-west and twice in the south-east (once via underground cabling). 2 further direct connections are made via high-voltage lines in the central part of the common border. High-voltage lines from both neighbouring countries also connects Andorra.

<sup>12</sup> 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](https://ec.europa.eu/regional_policy/sources/studies/2025/Handbook_on_Cross-border_Energy_Communities.pdf)

**Figure 2.23: High-voltage transmission infrastructure**



### 2.3.3.2 Power stations

#### Indicator description

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

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

Please refer to the technical annex for more information.

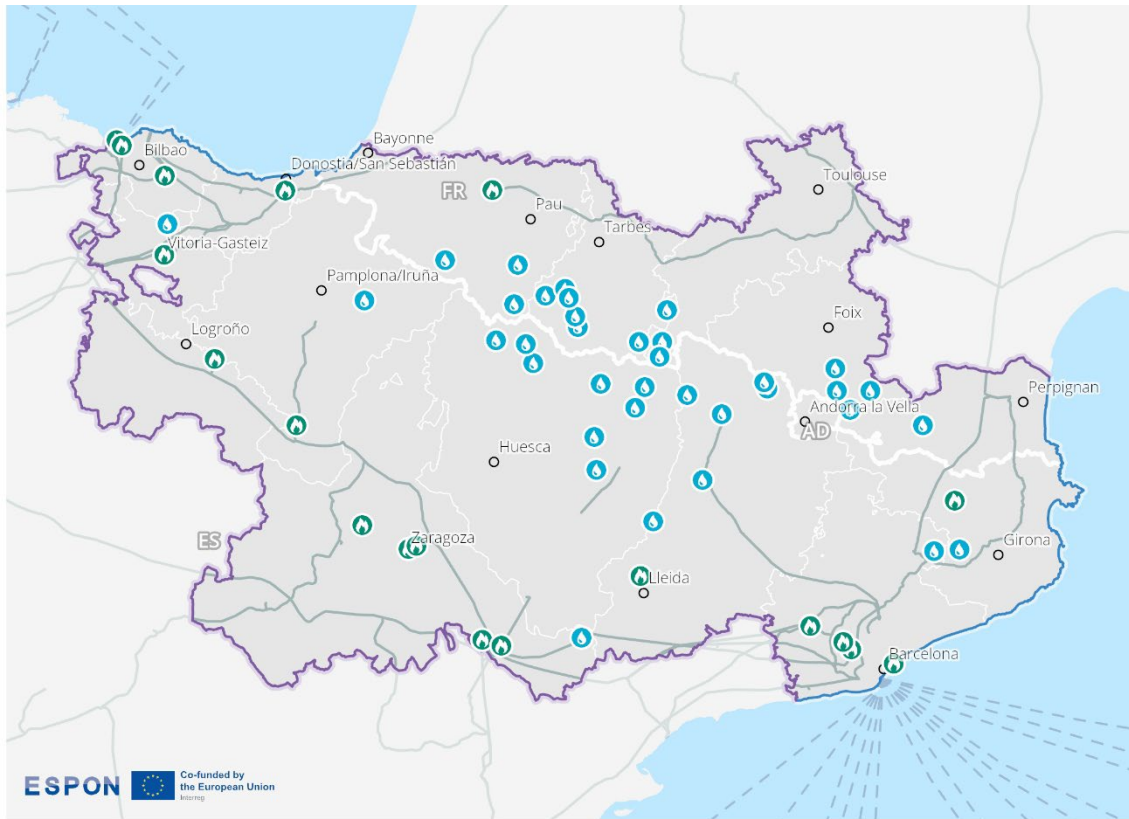
In the Spain-France-Andorra cross-border region, in total, there are 46 power station locations, while the most prevalent is represented by hydroelectric power stations (37 in total) (see Table 1).

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







Power stations/plants	Less than 1GW	1GW and up
Nuclear	/	/
Coal	/	/
Gas and oil	19	/
Hydro	37	/

These are concentrated almost exclusively in the Pyrenees mountain range, with a total of 20 such power plants in Spain and the remaining 17 in France (see Figure 2.24). As regards gas and oil power stations, all sites except one in France (but with 2 operations) are located in Spain, but there are also several sites with multiple operations. There are no power stations in Andorra, and no nuclear power plant or coal power stations are present in the whole region.

**Figure 2.24: Power stations infrastructure**








**Power stations (2025)**

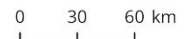
-  nuclear
-  coal
-  gas and oil (greater than 20MW)
-  hydro (greater than 20MW)
-  ≥ 1GW
-  < 1GW

**Power lines and cables (2025)**

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

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

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



© ESPON, 2026

### 2.3.4 Resources and circular economy

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

#### 2.3.4.1 Resource productivity

##### Indicator description

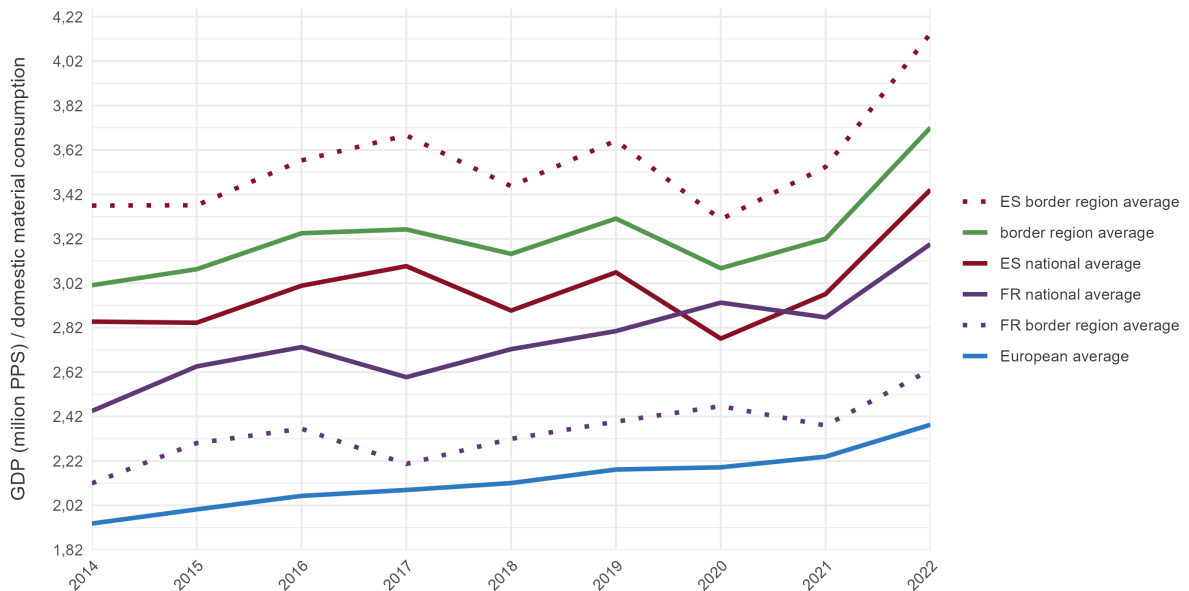
The indicator shows the economic value generated per unit of material consumed for each region within the cross-border area. Developments over time provide insights if the decoupling of productivity from resource use is progressing on regional level.

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

Please refer to the technical annex for more information.

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

Figure 2.25: Resource productivity



The Spanish national average shows some fluctuations, with 2 pronounced peaks in 2017 and 2019. From 2020 onward, the value of resource productivity increases sharply, rising from around 2.82 to 3.42 million PPS per unit of domestic material consumption in 2022. The Spanish border region average

shows a similar trend on a higher level reaching a value of over 4.02 million PPS per unit of domestic material consumption in 2022.

The French national average also shows an upward trend during the observed period, but at a significantly lower level compared to the Spanish values and with less pronounced fluctuations. The average for the French border region follows a similar pattern, but remains notably below the French national average, reaching around 2.62 million PPS per unit of domestic material consumption in 2022.

The European average lies significantly below both the Spanish and the French national averages, while the French border region average is only slightly higher. The border region average represents a combination of the lower values from the French border region and the higher values from the Spanish border region, reaching around 3.72 million PPS per unit of domestic material consumption in 2022. However, notable disparities exist within the border region 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

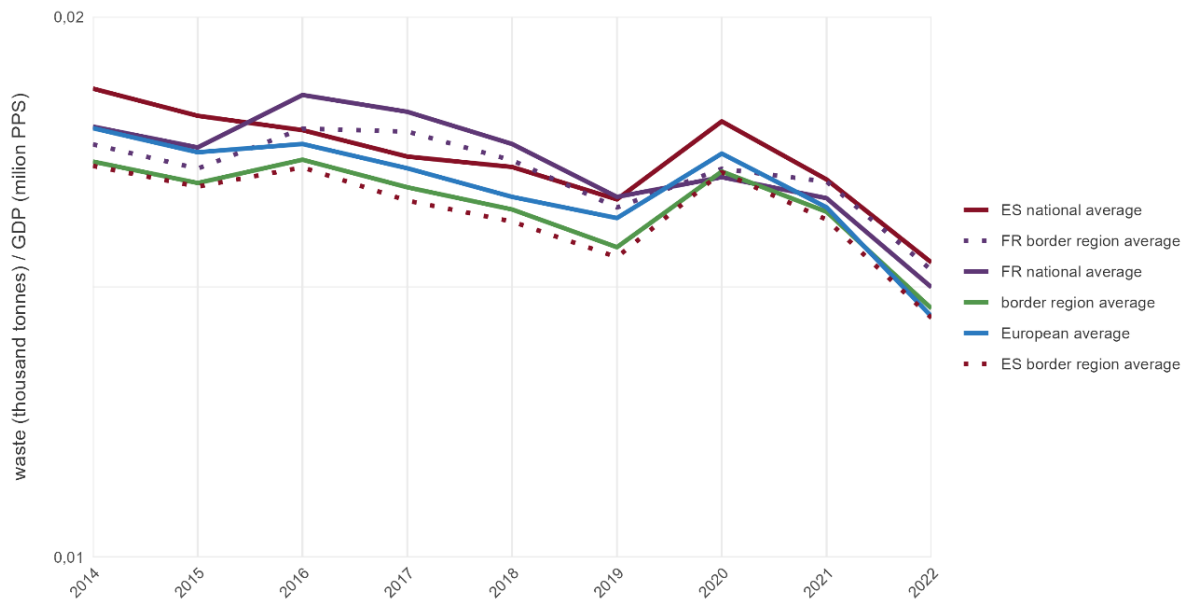
Please refer to the technical annex for more information.

The figure 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 the Interreg region POCTEFA (Spain-France-Andorra). There is no data available Andorra.

Spanish and French values show a steady downward trend over the observed period, with a peak in the Spanish national average in 2020, followed by a subsequent decline. In both countries, the average for the border region lies below the national average. In 2020, all values are around 0.015 tonnes of waste per million PPS.

The European average gradually decreases from around 0.018 in 2014 to approximately 0.015 tonnes of waste per million PPS in 2022. The cross-border regional average consistently remains below the European average and lies between the higher values of the French border region and the lower values of the Spanish border region. Throughout the entire period, it is closely aligned with the Spanish border region average. In 2022, it reaches approximately 0.014 tonnes of waste per million PPS.

**Figure 2.26: Waste generation per GDP**



### 2.3.5 Key messages on the green dimension

The Spain-France-Andorra cross-border area is marked by a clear presence of protected areas, mainly Natura 2000 and nationally designated areas, forming a natural corridor along the Pyrenees. Water quality is generally good to high across the whole border territory, although it worsens in the vicinity of urban centres (e.g. Toulouse, Perpignan and Barcelona). Besides its quality, the high number of water ways is a key advantage and a resource used in the region to generate electricity. There is no substantial difference across border regarding air quality. The risk of landslides is, perhaps along with fires and floods, one of the greatest natural threats present in this territory. Drought risks are mostly featured on the outskirts of the cross-border territory, but are also of high relevance for the area together with wildfires and coastal erosion.

The economic value generated per unit of material consumed within the cross-border area has been sharply rising, notably steered by the Spanish border region. The generation of waste in the cross-border region has correspondingly resumed its decrease following the Covid 19 crisis.

In addition to the well-developed hydropower sector, the programme area has untapped potential for solar and wind energy production, which could support further diversification of the energy mix and accelerate the transition away from fossil fuels.

## 2.4 Socio-economic dimension

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

### 2.4.1 Social integration

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

#### 2.4.1.1 Cross-border connectivity in social media

##### Indicator description

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

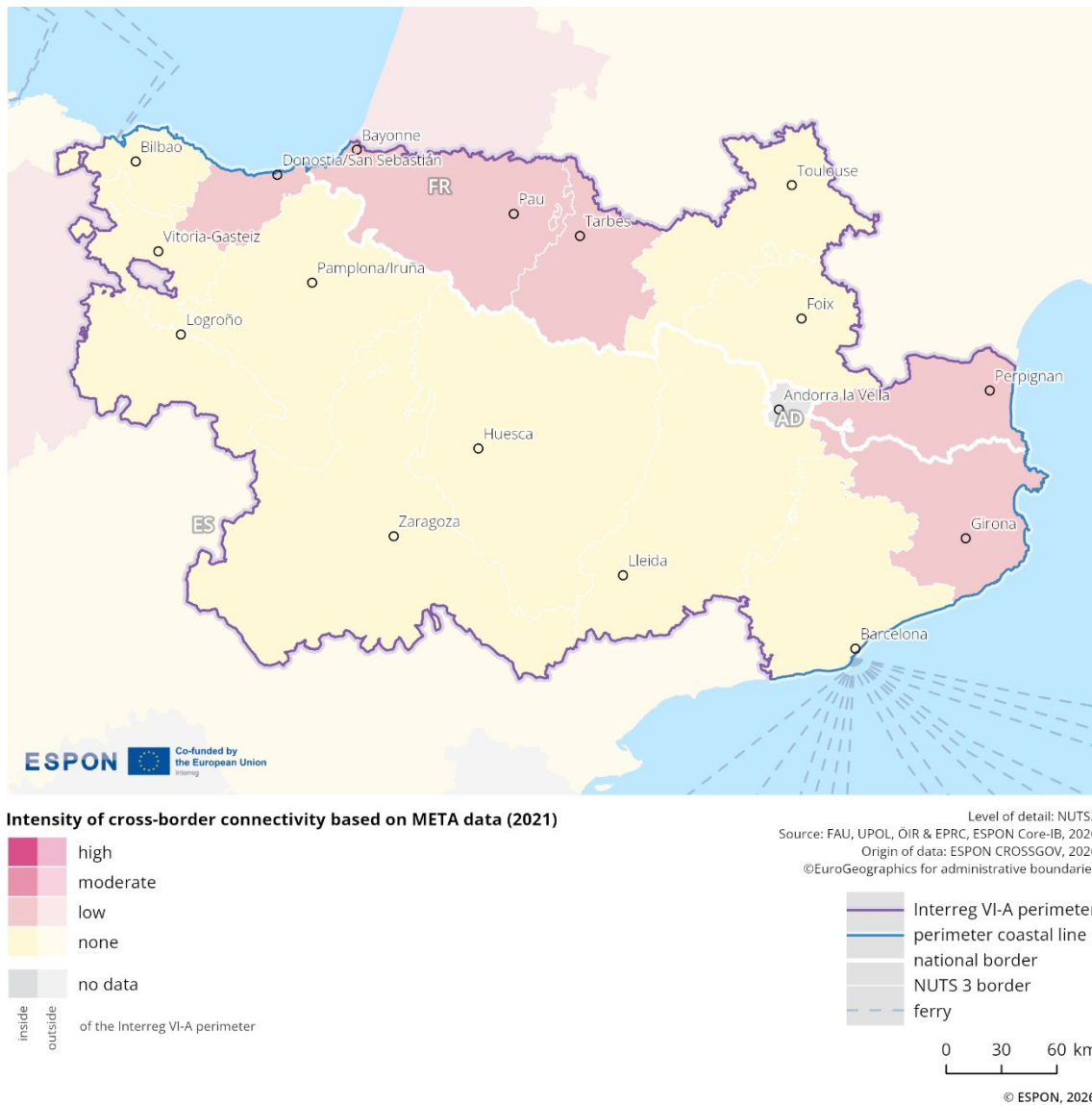
- **Source/method of retrieval:** Processing Facebook data on existing connections across the border (data for Good Meta)
- **Temporal coverage:** 2021
- **Unit:** n/a

Please refer to the technical annex for more information.

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

The cross-border connectivity among residents of this border region is rather heterogeneous. Low cross-border connectivity in social media is observed around the French city of Pau and in 2 NUTS3 units, one located in the French part of the region and the other in the Spanish part. Low cross-border connectivity is also recorded around Perpignan and in one NUTS3 unit in Spain, south of the aforementioned French city and north of Barcelona. In the remaining areas of the region, including cities such as Bilbao, Pamplona, Zaragoza, Huesca, Barcelona, and Toulouse, cross-border connectivity in social media is absent. No data were available for Andorra.

**Figure 2.27: Cross-border connectivity in social media**



### 2.4.1.2 Language similarities along national borders

#### Indicator description

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

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

Please refer to the technical annex for more information.

The programme area is characterised by a complex structure of languages. Several official regional languages are spoken here, including Catalan, Basque and Occitan. There is generally no language barrier between Andorra and Spain because both sides can use Spanish as a common language. The majority of Basque and Catalan speakers live in Spain; however, sizeable communities also live in France. By contrast, almost all Occitan speakers live in France, with only a small minority in Spain.

## 2.4.2 Tourism

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

### 2.4.2.1 Nights spent at tourist accommodation establishments

#### Indicator description

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

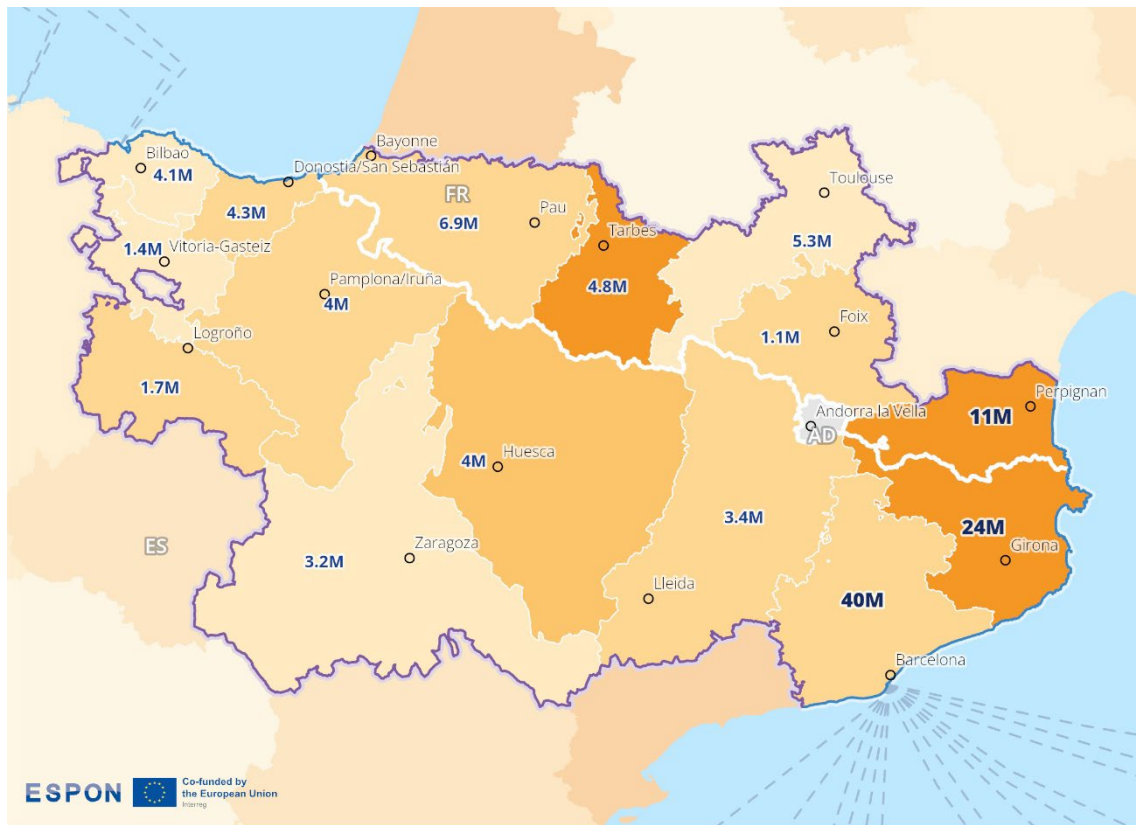
- **Source:** Eurostat
- **Temporal coverage:** 2020-2023
- **Unit:** Nights per capita

Please refer to the technical annex for more information.

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

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

**Figure 2.28: Overnight stays in tourism**



**Nights per year per capita (2023)**



In 2023, there is a particularly high intensity of overnight stays in the eastern coastal NUTS3 regions of France and Spain, where some popular UNESCO heritage sites are located, such as the Fortifications of Vauban and Lourdes (FR) and many sites in the city of Barcelona. 3 NUTS3 regions show 20 to 40 nights per capita in 2023, including Pyrénées-Orientales, Girona and Hautes-Pyrénées<sup>13</sup>. In Spain, Huesca show 10 to 20 nights spent per capita. In terms of total overnight stays over the 3-year period, the leading tourism regions are located in Barcelona (approx. 40 million), Girona (approx. 24 million) and Pyrénées-Orientales (approx. 11 million), Pyrénées-Atlantiques (approx. 6.9 million) and Haute-Garonne (approx. 5.3 million).

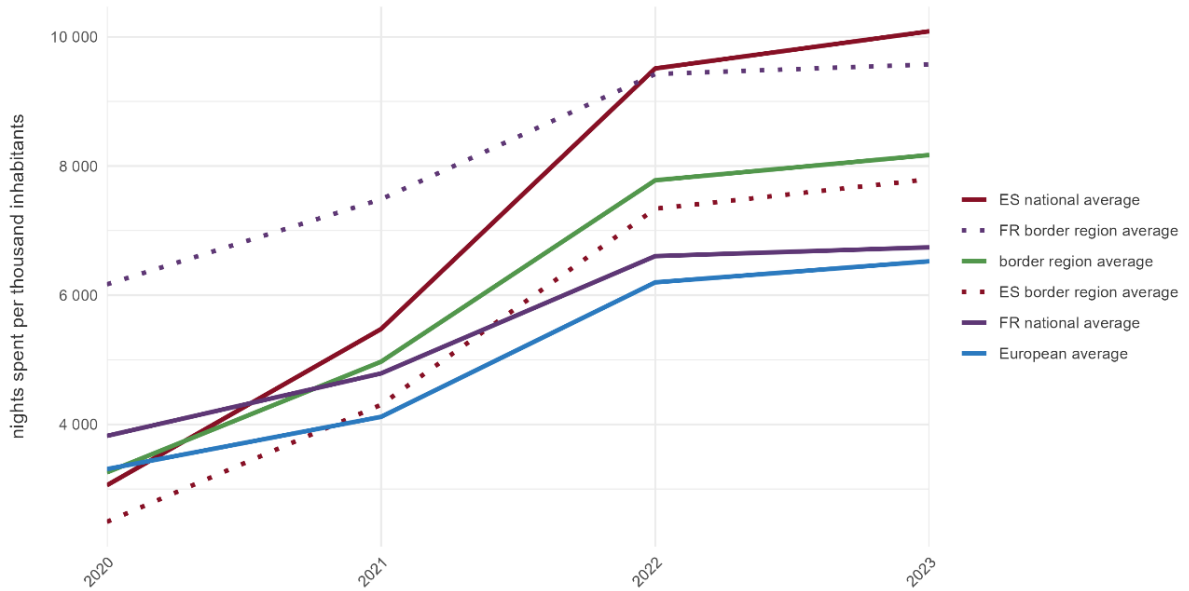
Figure 2.29 illustrates the development of nights spent at tourist establishments per thousand inhabitants from 2020 to 2023. Since 2021, the average for the Spain-France-Andorra programme area is higher than the overall European average, which includes EU member states and the EFTA countries Iceland, Liechtenstein, Switzerland and Norway. While the border regional average in France is higher than the national average for all 4 years, the Spanish border regional average is lower than the national

<sup>13</sup> See Eurostat Statistical Atlas for NUTS3 (2021) regions: <https://ec.europa.eu/statistical-atlas/viewer/?config=typologies.json&ch=NUTS&mids=BKGCNT.NUTS2021L3.CNTOVL&o=1.1.0.7&center=49.69576,14.33324&lcis=NUTS2021L3&>

average. Additionally, the regional average for the French border area is higher than that for the Spanish throughout the given period. There is no data available for Andorra.

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

**Figure 2.29: Overnight stays in tourism (comparison)**



### 2.4.3 Services of general interest

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

#### 2.4.3.1 Accessibility to services of general interest

##### Indicator description

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

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

Please refer to the technical annex for more information.

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

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

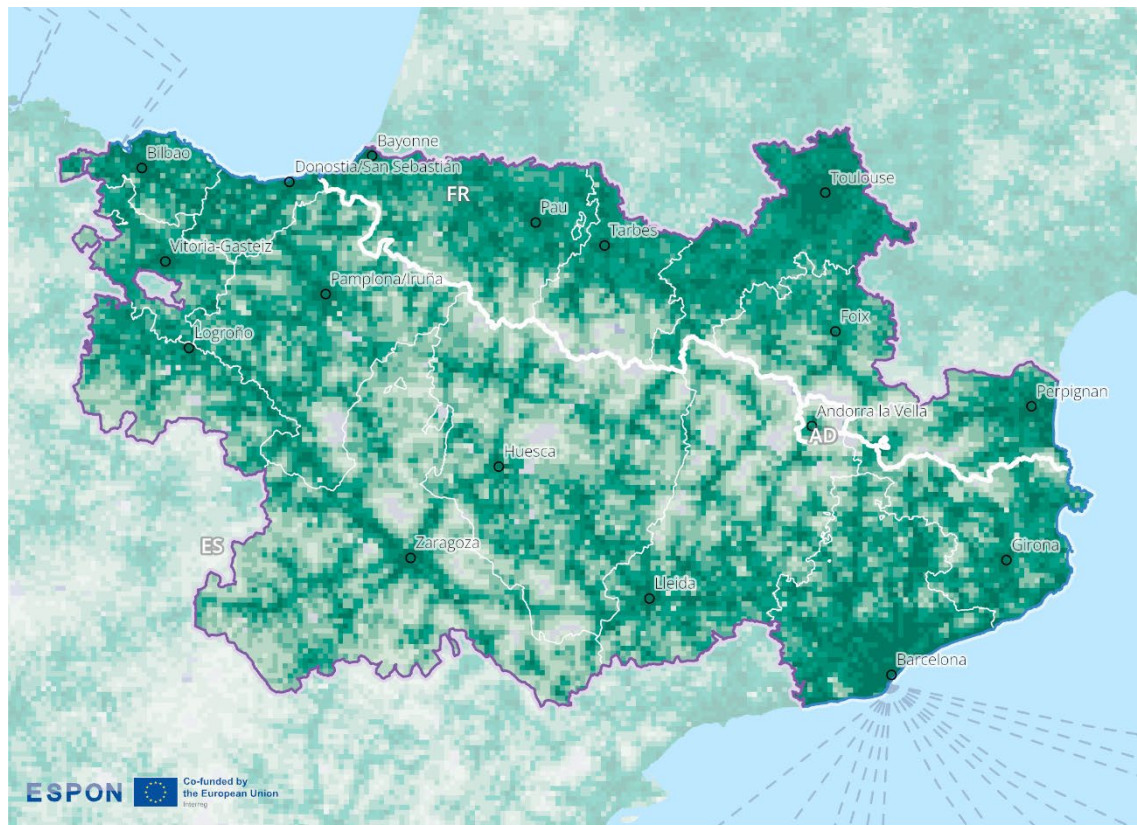
These indicators show how long, on average, it takes to reach the nearest facility by car. The data comes from the ESPON PROFECY Update project (2022) and is visualised based on a 2.5-kilometer grid.

In the Spain–France–Andorra border area, essential services such as doctors, pharmacies, schools, and grocery shops are evenly distributed across most French regions, resulting in overall good accessibility. In the Spanish regions, these services are mostly concentrated in the main valleys and coastal areas, which are also relatively well accessible. The area around Zaragoza, however, has partly poor accessibility. In Andorra, most services are concentrated around the capital, while grocery shops, doctors, and pharmacies are more evenly distributed.

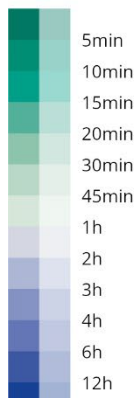
However, the mountainous terrain along the border creates accessibility challenges. Some areas located directly along the national border are harder to reach. Steep mountains make it difficult to build and maintain transport infrastructure. Consequently, travel times to essential services are often longer in these regions.

Hospitals, as a medical service, are mainly located in cities and more densely populated areas. This leads to an urban–rural gradient, with shorter travel times in and near urban centers and longer travel times in rural or remote regions. The same applies to cinemas as a cultural service.

**Figure 2.30: Travel time to secondary schools**

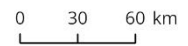
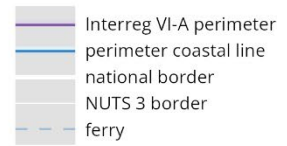


**Car travel time to the nearest secondary school (2021)**



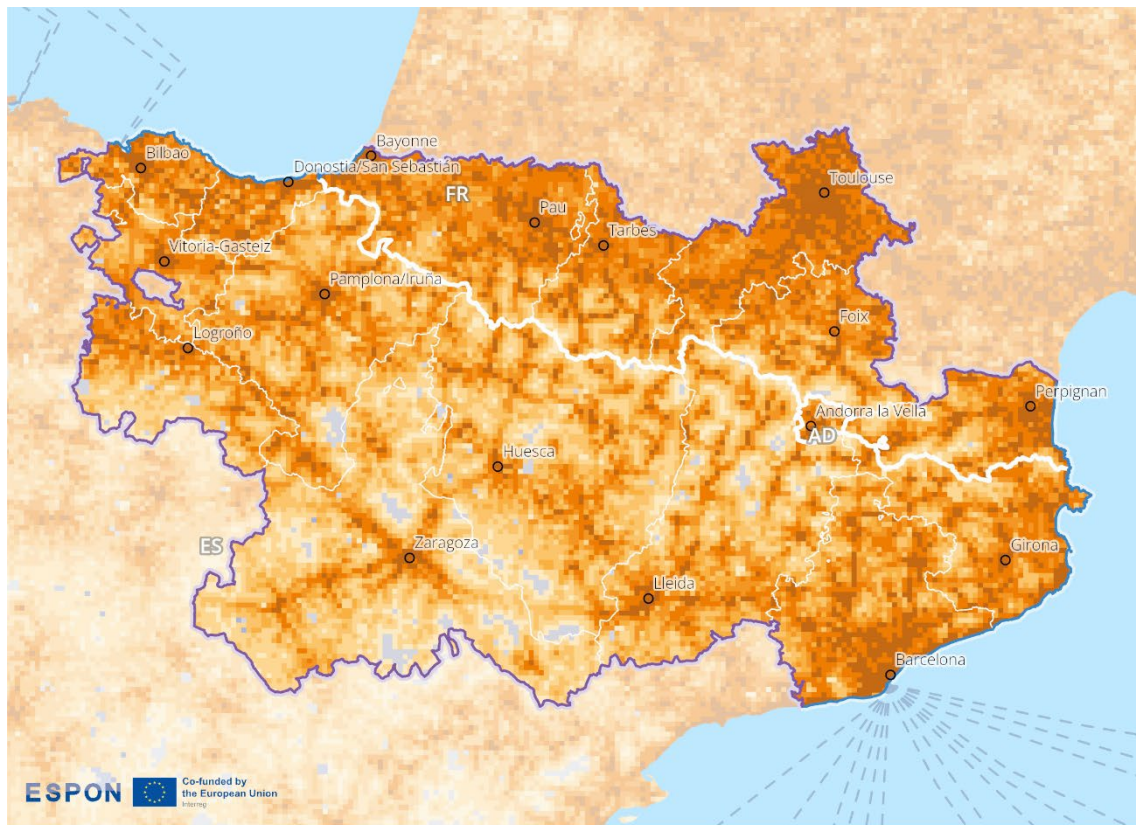
inside  
outside  
of the Interreg VI-A perimeter

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

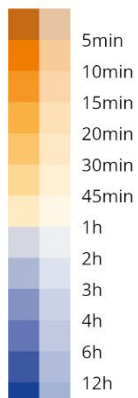


© ESPON, 2026

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

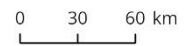
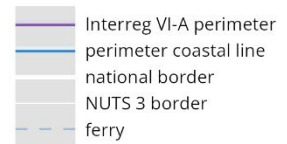


**Car travel time to the nearest shop (2021)**



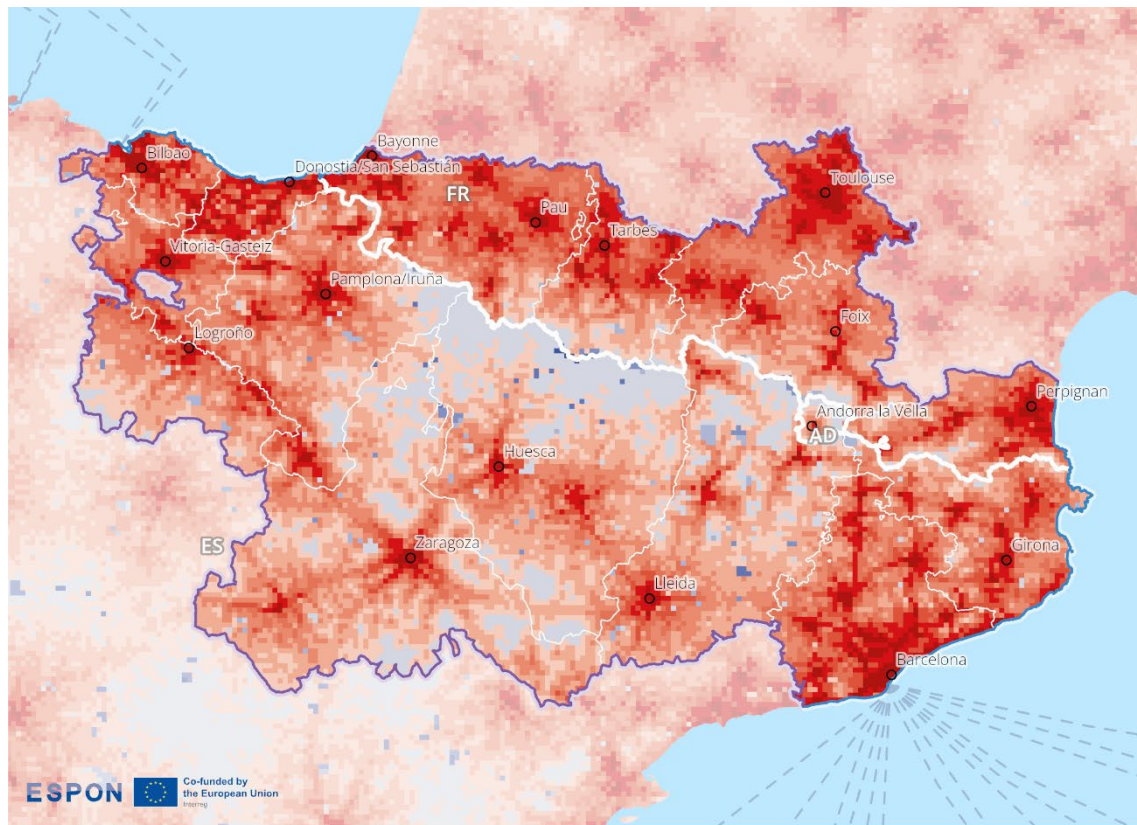
inside  
outside  
of the Interreg VI-A perimeter

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

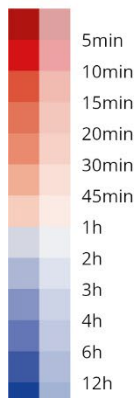


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**Figure 2.32: Travel time to hospitals**

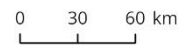
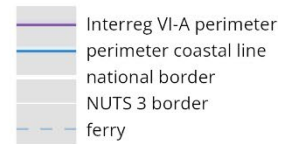


**Car travel time to the nearest hospital (2021)**



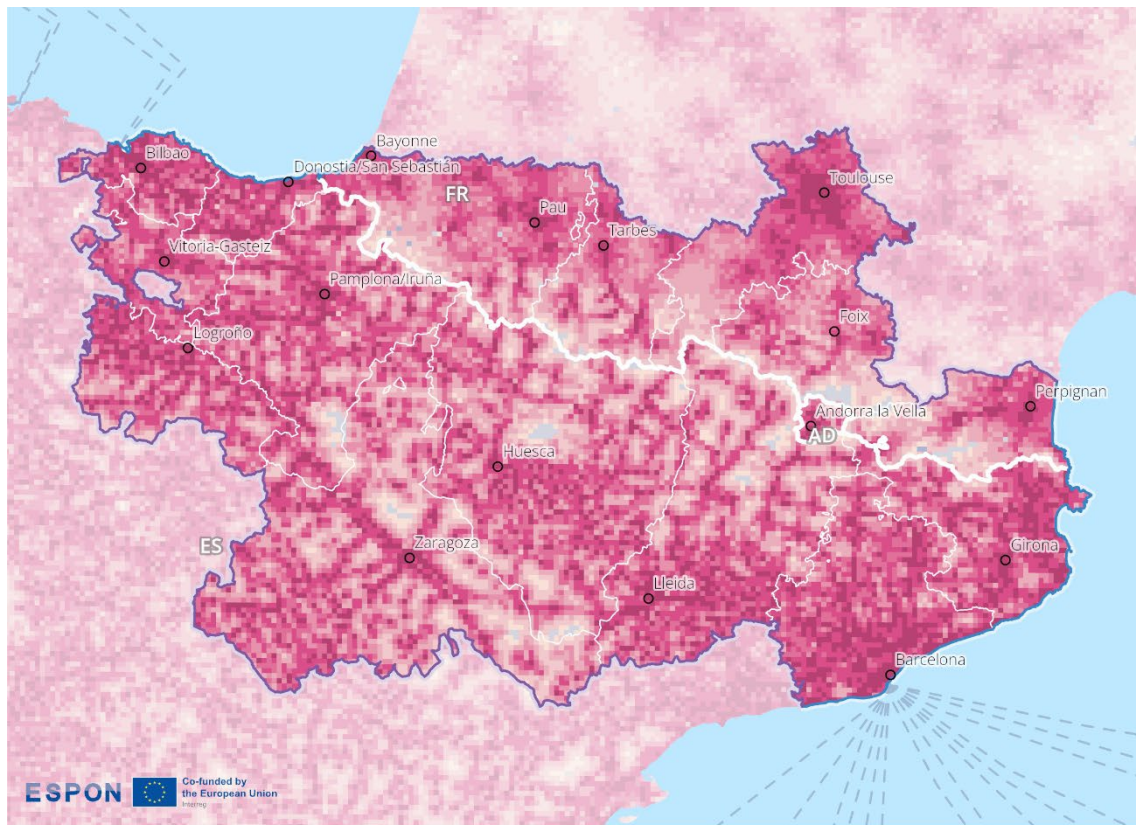
inside  
outside  
of the Interreg VI-A perimeter

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

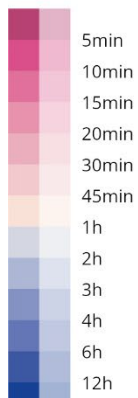


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**Figure 2.33: Travel time to doctors**

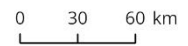
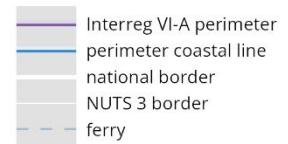


**Car travel time to the nearest doctor (2021)**



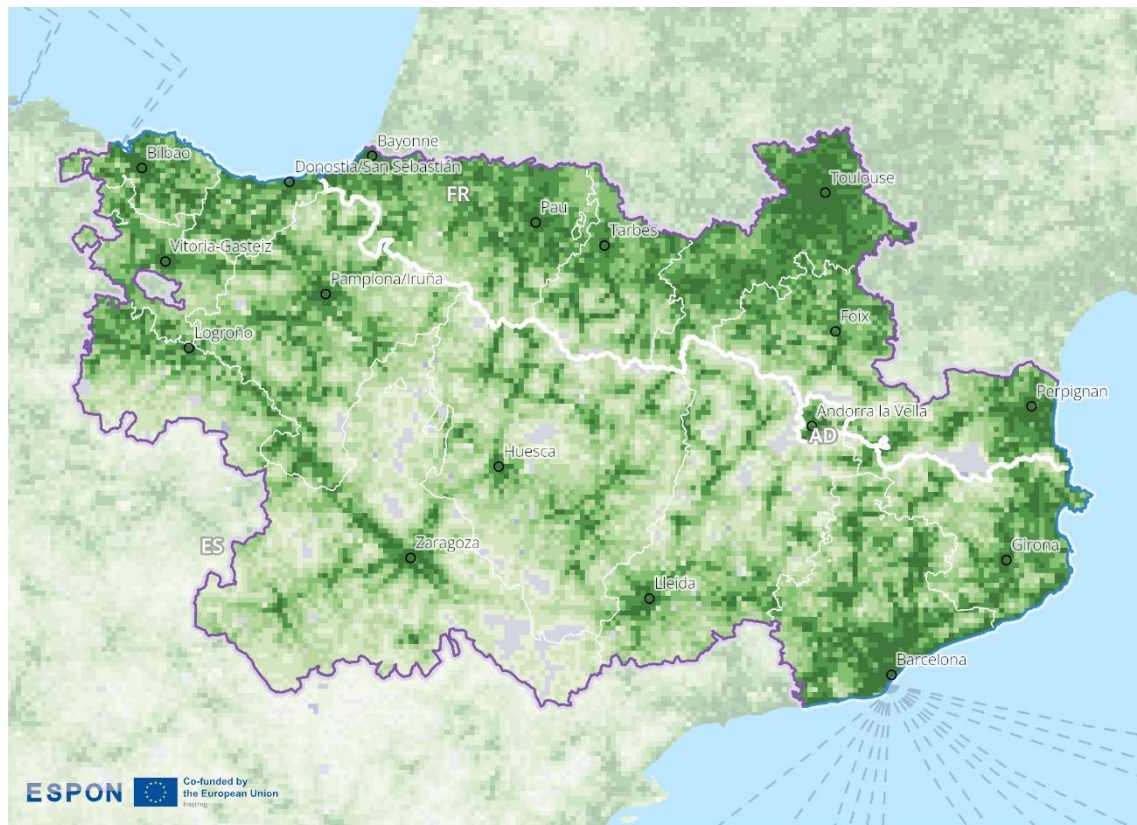
inside  
outside  
of the Interreg VI-A perimeter

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

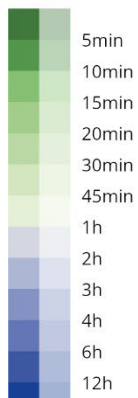


© ESPON, 2026

**Figure 2.34: Travel time to pharmacies**

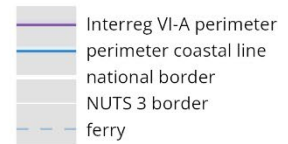


**Car travel time to the nearest pharmacy (2021)**



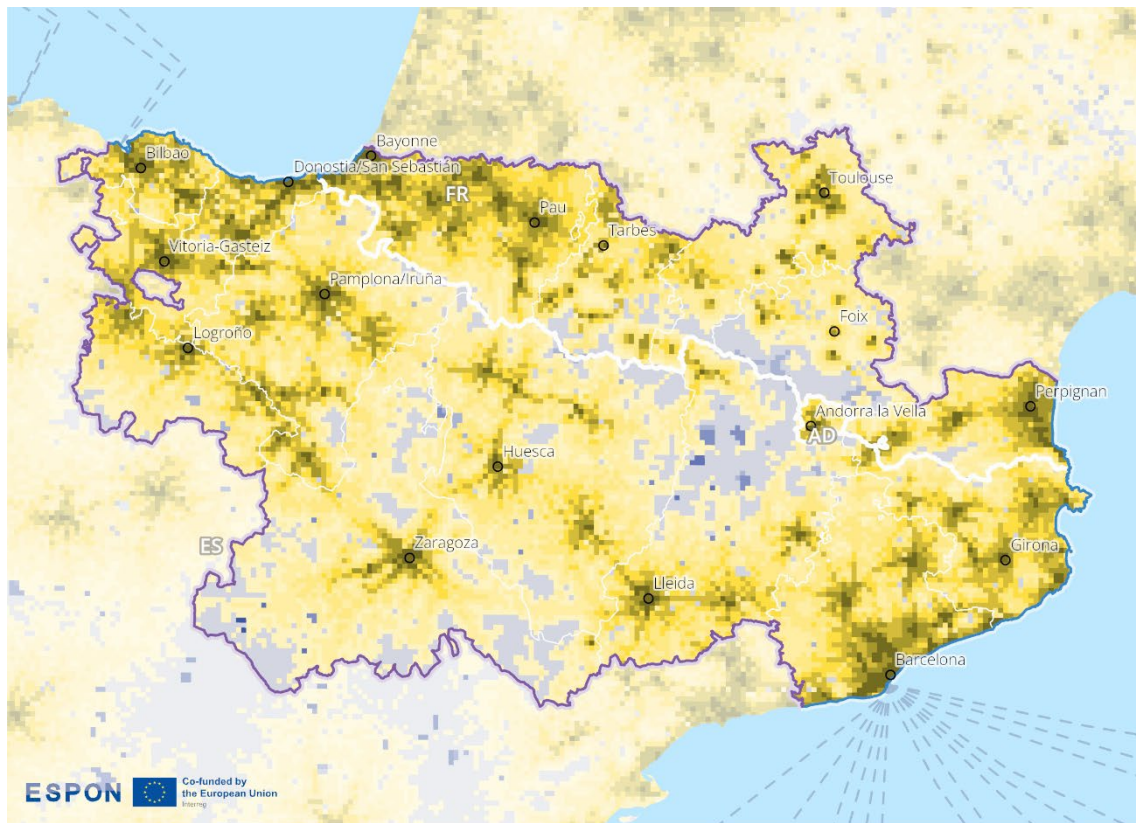
inside  
outside  
of the Interreg VI-A perimeter

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



© ESPON, 2026

**Figure 2.35: Travel time to cinemas**



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



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

The cross-border connectivity in social media among the inhabitants of this border region is rather heterogeneous, particularly concentrated in the outer, coastal regions. This may be notably linked to the shared regional language (Basque) and commonalities between French and Catalan.

Tourism hotspots are principally located in Cataluña and Pyrénées-Orientales. In terms of (average number of) nights spent at tourism accommodation establishments, the France-Spain-Andorra cross border area is well placed above the French and European averages. The French region's border average is very close to the Spanish average (whole country). This shows that tourism activities and therefore the revenue generated throughout the entire region are substantial and essential for the socio-economic development of the border region.

While accessibility to several services of general interest is relatively good, the mountainous terrain along the border creates accessibility challenges. Some areas located directly along the national border are harder to reach. Steep mountains make it difficult to build and maintain transport infrastructure. Consequently, travel times to essential services are often longer in these regions. Several “health deserts” (i.e. very limited accessibility to doctors, pharmacies and hospitals) can also be seen in the central and southern part of the Spanish border region.

## 2.5 Border security and safety

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

### 2.5.1 Temporary reintroduction of border controls at internal borders

#### Indicator description

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

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

Please refer to the technical annex for more information.

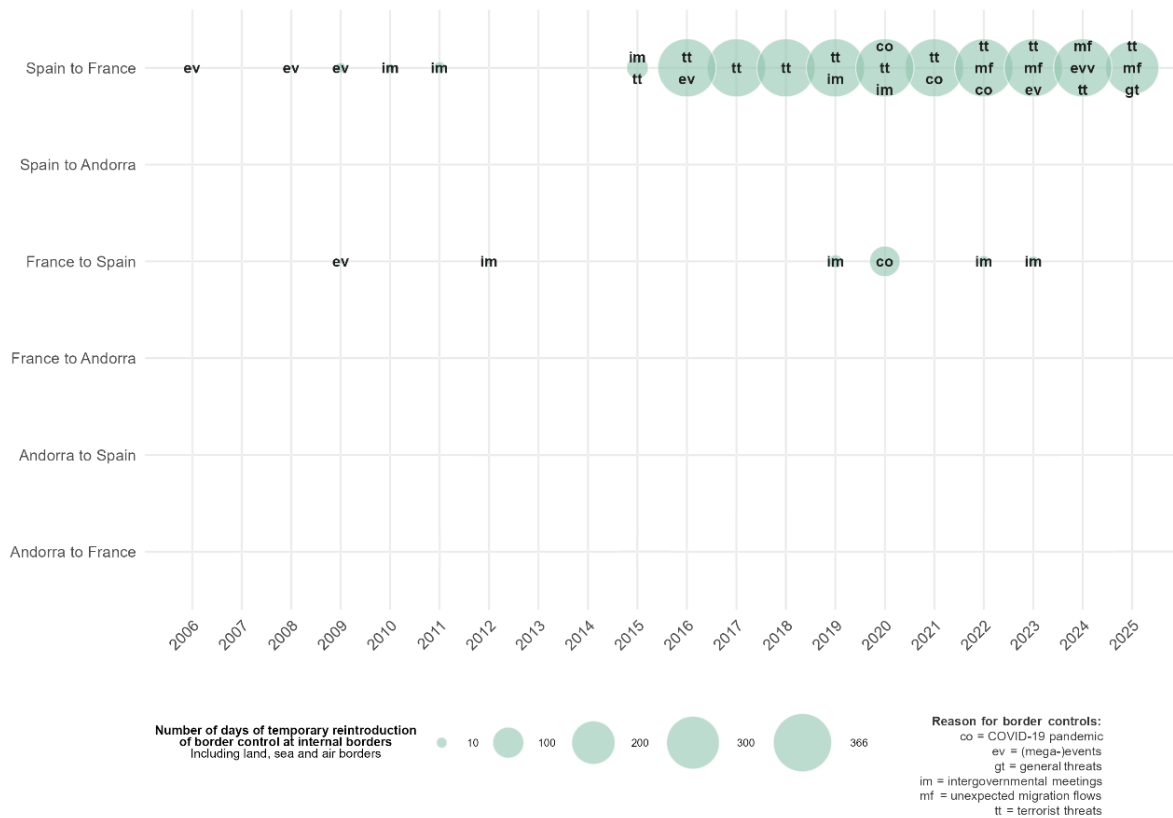
Figure 2.36 illustrates the number of days during which temporary border controls were reintroduced at internal borders within the Schengen Area. Each bubble represents a specific year with bubble sizes indicating the number of days the respective border was under control. The categories of reasons for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

Spain and France had already been part of the Schengen Area by 2006, while Andorra is in 2025 still not part of the Schengen Area.

**Figure 2.36: Temporary reintroduction of border controls**



ESPON Co-funded by the European Union © FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026; Origin of data: European Commission, own calculations, 2025

The Spain-France-Andorra border area is characterized by an asymmetric pattern:

- › Crossing the border from Spain to France: Temporary border control occurred in 6 out of 20 years, driven by intergovernmental meetings such as NATO and G20 meetings (2010, 2011, 2015) and events like Basque demonstrations (2006, 2008, 2009). From 2016 until 2024 the border is permanently controlled. The reasons are terrorist threats e.g., due to attacks in Paris and Nice (2016-2017), major sports events like the EURO 2016, the Tour de France (2016) or the Olympic and Paralympic Games (2024). Further the border has been controlled due to COVID-19 (2020-2022) and general threats like the situation at the external borders, organized criminality and smuggling (2020-2022). Another reason is the unexpected and persistent migration flows since 2019 (until 2025).
- › Crossing the border from France to Spain: Temporary border controls occurred in 6 of 20 years, tied to intergovernmental meetings like an UN conference on climate change (2019) or a NATO summit (2022) as well as the celebration of 'Basque warrior day' (2009) and COVID-19 (2020).

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

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

### 2.5.2 Key messages on the border security dimension

The analysis of temporary reintroductions of border controls highlights challenges and potential in the Spain-France-Andorra border region, in particular the asymmetrical implementation of such controls. From a comparative perspective, France has imposed border controls for a significantly longer period of time than Spain. Besides from the Covid crisis, the most recent reasons for reintroducing border controls are linked to terrorism threats (in line with the anti-terrorism plan “Vigipirate”) and illegal migratory flows.

In parallel to the reintroduction of border controls, France has also restricted or closed several secondary border crossings, particularly in the Pyrenean area, often without systematic border checks. These measures, which mainly affected road traffic, had tangible impacts on local mobility and cross-border everyday life. The recent reopening of some cross-border passages, such as the Col de Banyls in the Pyrénées-Orientales may show a renewed willingness to strengthen the cooperation between France and Spain. This is a positive step, notably for local residents and seasonal workers.

Overall, the findings suggest that, although the border region benefits from close socio-economic interaction, it remains vulnerable to uncoordinated national measures. Strengthening resilience and ensuring the long-term functionality of cross-border cooperation, particularly in times of crisis, will require continuous, balanced and jointly managed governance mechanisms.

## 2.6 Governance dimension

Cross-border cooperation in the Franco-Spanish-Andorran area has a long history and has been significantly consolidated over the last decade. The Treaty of Bayonne, signed in 1995 between Spain and France and amended in 2010 to include Andorra, established the framework for cross-border cooperation activities. Interregional cooperation agreements date back to the 1980s, when the Pyrenees Working Community (CTP) was created in 1983. These cooperation initiatives have expanded significantly since 2000 with the establishment of Euroregions, EGTCs, and Consortia, as well as various agreements to address specific local or regional needs. Successive Interreg cooperation programs have provided a fundamental boost to this cooperation.

### 2.6.1 Cross-border cooperation

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

### 2.6.1.1 Cross-border governance structures

#### Indicator description

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

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

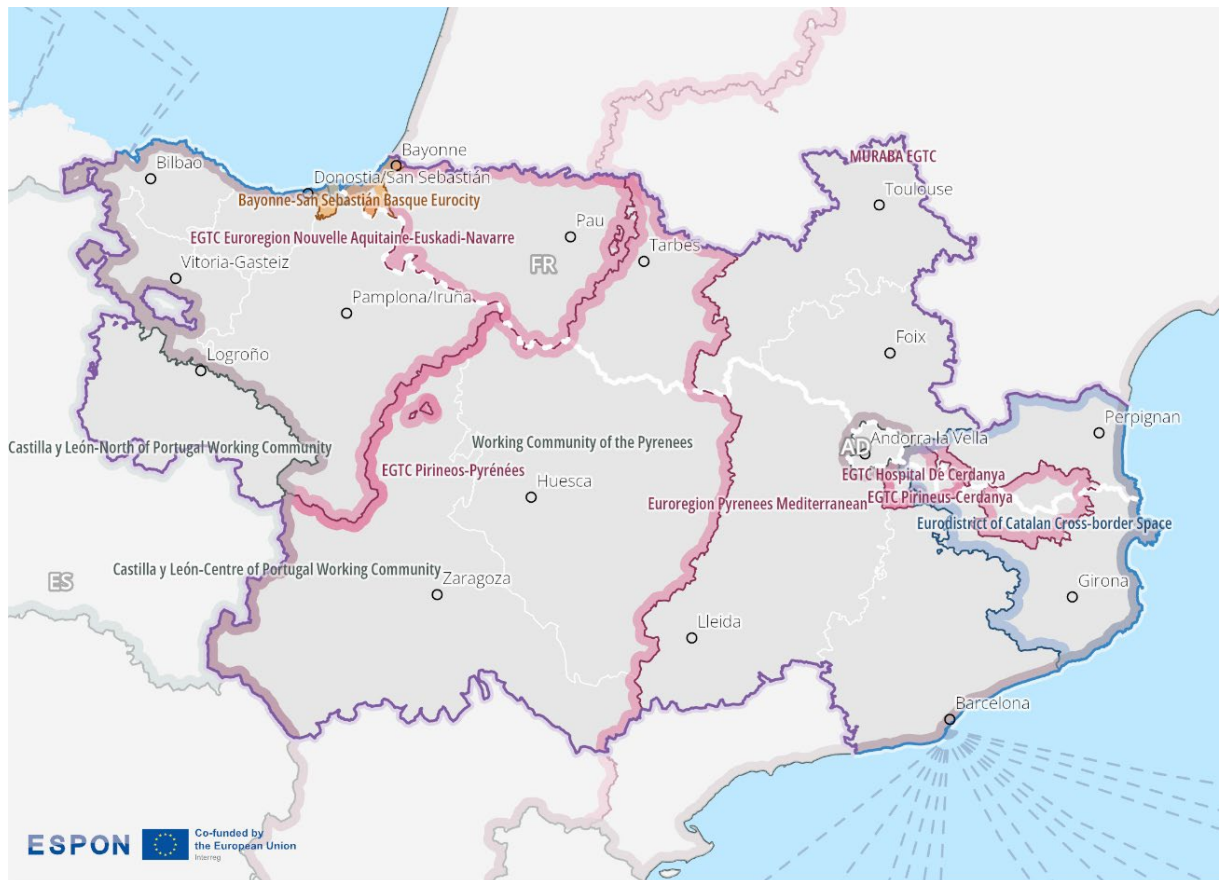
Please refer to the technical annex for more information.

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

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

The multi-level governance structure along the borders of this programme area shows broad spatial coverage, with only a few areas not addressed by cross-border cooperation formats. Overall, the region exhibits a high level of institutionalised cooperation along the national border, comprising both relatively small perimeters, such as a Eurocity or smaller EGTCs in the eastern part of the programme area, as well as larger cooperation formats. EGTCs are the most prevalent format. Of note, the EGTC "Pays d'art et d'histoire transfrontalier Les vallées catalanes" is displayed in red within the 'Eurodistrict of Catalan cross-border space'.

**Figure 2.37: Cross-border governance structures**



**Format of cooperation**

- EGTC
  - Eurocity
  - Euroregion / Euregio / Europaregion / Eurodistrict
  - other
- inside  
outside  
of the Interreg VI-A perimeter

Level of detail: NUTS3  
 Source: FAU, UPOL, ÒIR & EPRC, ESPON Core-IB, 2026  
 Origin of data: ESPON CROSSGOV, 2026  
 ©EuroGeographics for administrative boundaries

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

0 30 60 km

© ESPON, 2026

### 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.

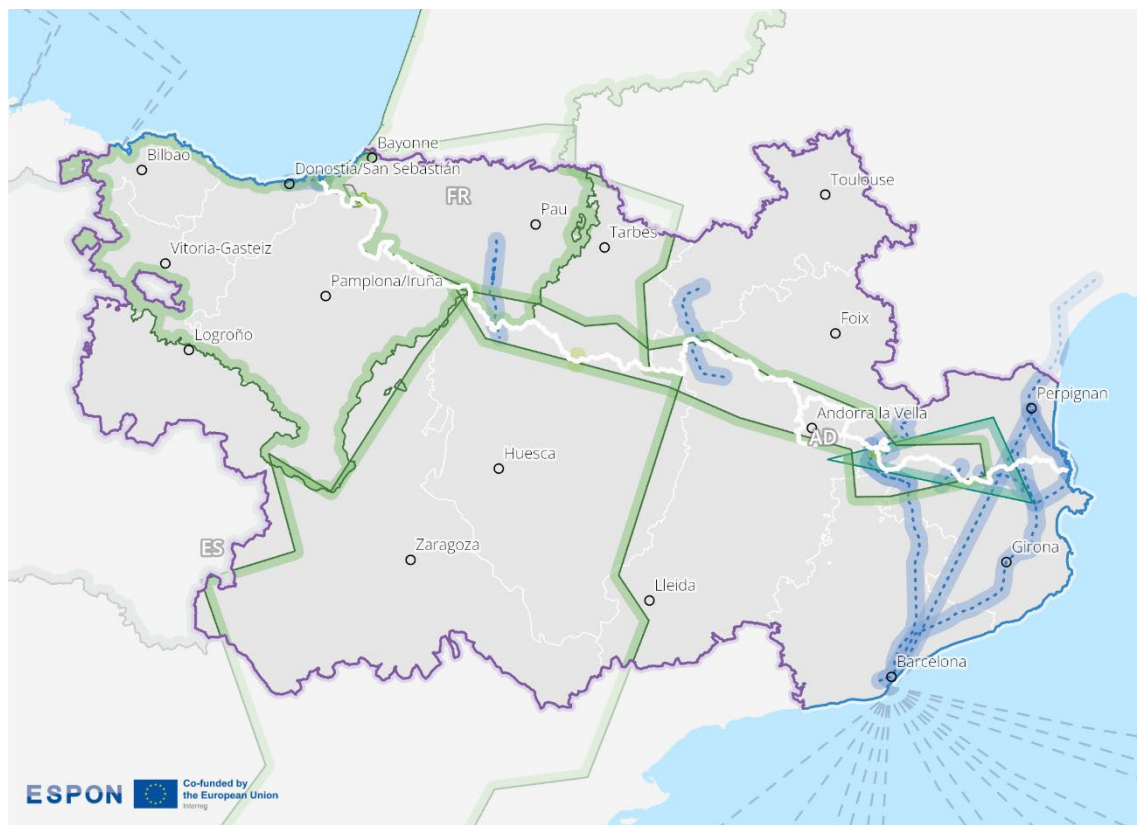
- **Source:** ESPON cross-border public services (CPS) 2.0 database
- **Temporal coverage:** 2022
- **Unit:** n/a

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. When relevant, the visualisation highlights where these services operate across the national boundary.

Cross-border public services in the Pyrenean region between Spain and France are concentrated along the mountain chain, with a strong focus on tourism & information. This theme dominates the entire border area from the Basque Country in the west to Catalonia in the east. Several shorter transport links are found along the border region, particularly connecting France and Spain. A longer transport link connects Perpignan and Barcelona. A few isolated services in the domains of environment & water.

**Figure 2.38: Cross-border public services**



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

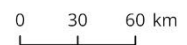
areal	linear	character of the service
		Disaster management
		Health care
		Transportation
		Tourism & information
		Education & research
		Environment & water
		Heating & energy
		Job placement
		Culture

inside outside    inside outside  
of the Interreg VI-A perimeter

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

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

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



© ESPON, 2026

### 2.6.1.3 Perceived cross-border obstacles in b-solutions

#### Indicator description

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

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

Please refer to the technical annex for more information.

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

As part of the ESPON CROSSGOV project, all b-solutions initiatives were analysed to deepen the understanding of the thematic focus of the perceived cross-border obstacles across different border regions and the suggested solution, in particular from the European perspective.

In the border area of Spain–France–Andorra, 12 b-solutions pilot actions were identified. These included initiatives aimed at enhancing the Emergency Medical System to ‘erase’ borders, achieving speedy mutual recognition of qualifications for healthcare professionals, financing cross-border pupils’ education, fostering rail transport through rolling stock approval, promoting employability in the health and social sector, facilitating cross-border cooperation on social benefits, legalizing border crossings for rescue services, and reopening cross-border roads. Applications for these pilots were mainly submitted by public bodies and EGTCs.

In this border area, in the field of health care, issues relate to the recognition of skills, administrative procedures for emergency services, and cross-border health interventions. Challenges in this area include the need for legal collaboration agreements and streamlined processes for healthcare professionals and services. In terms of education, obstacles revolve around the recognition of qualifications and financing for cross-border students. The transport sector faces issues related to sustainable rail transport, cabotage, and coordination between national safety authorities.

The solutions proposed in the pilot actions are predominantly hybrid or legal in nature. For example, the initiative on emergency medical services involves legal solutions that establish collaboration agreements leading to a convention between the French State and the Spanish Autonomous Communities, thereby enabling cross-border emergency health interventions. The project aimed at speedy mutual recognition of qualifications for healthcare professionals suggests a legal change to the Spanish procedural framework, introducing a “non-response period,” along with administrative measures that delegate diploma recognition to the Girona Medical Association for the Cerdanya Cross-border Hospital.

In education, the financing of cross-border pupils’ education focuses on establishing legal frameworks for institutional cooperation agreements to support students from both sides of the border. The rolling stock approval project promotes sustainable transport through legal cooperation agreements between the French and Spanish national safety authorities, complemented by the creation of a technical working group to facilitate coordination.

The KOMPAR initiative is aimed at promoting employability in the health and social sector via a hybrid approach, combining a legal framework agreement with operational efforts to develop local projects and lobby for better recognition of skills. Additionally, the cross-border cooperation on social benefits initiative emphasizes legal reforms at both the EU and national levels to create directives and agreements while also establishing a working group for effective coordination.

Legalizing border crossings for rescue services calls for amendments to the Treaty of Bayonne and the establishment of local cooperation agreements, along with the administrative creation of a cross-border forum or EGTC. Furthermore, the initiative for reopening cross-border roads addresses legal remedies and judicial issues, alongside administrative coordination between police cooperations and technical monitoring tools.

#### 2.6.1.4 Institutionalised advice centres for cross-border issues

##### Indicator description

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

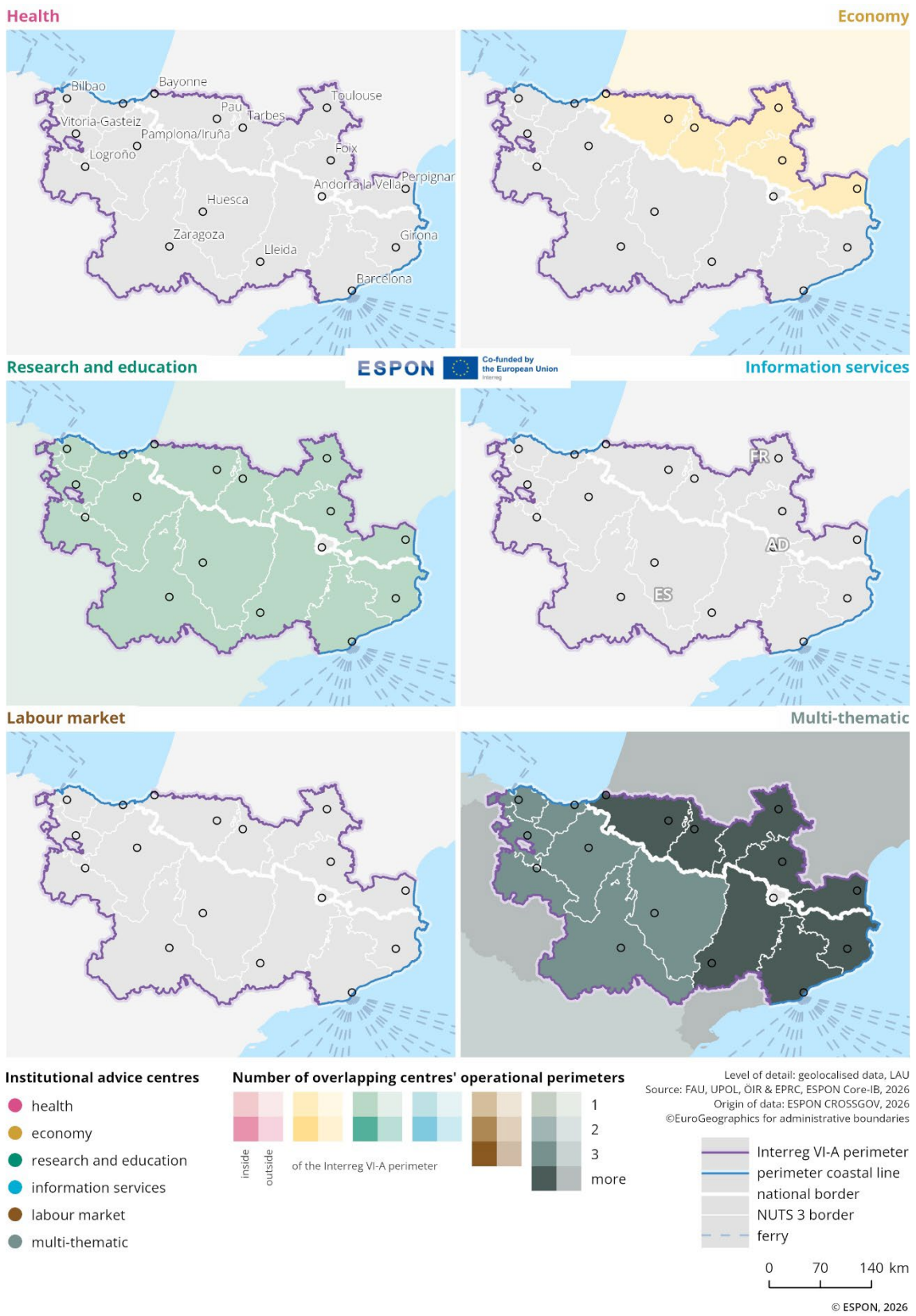
- **Source/method of retrieval:** Localisation and thematic focus of advice centres for cross-border issues are identified via desktop research.
- **Temporal coverage:** Status as of February 2025
- **Unit:** n/a

Please refer to the technical annex for more information.

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

Centers with multi-thematic, as well as research and education operational domains, are represented in France and Spain within the programme area. They are however more pronounced in the French part of the programme area. Additionally, economic operational domains are also present in the French part. In Andorra, there are no operational domains of any institutionalised advice centres.

**Figure 2.39: Institutionalised cross-border advice centres**



## 2.6.2 Outline of Interreg activities

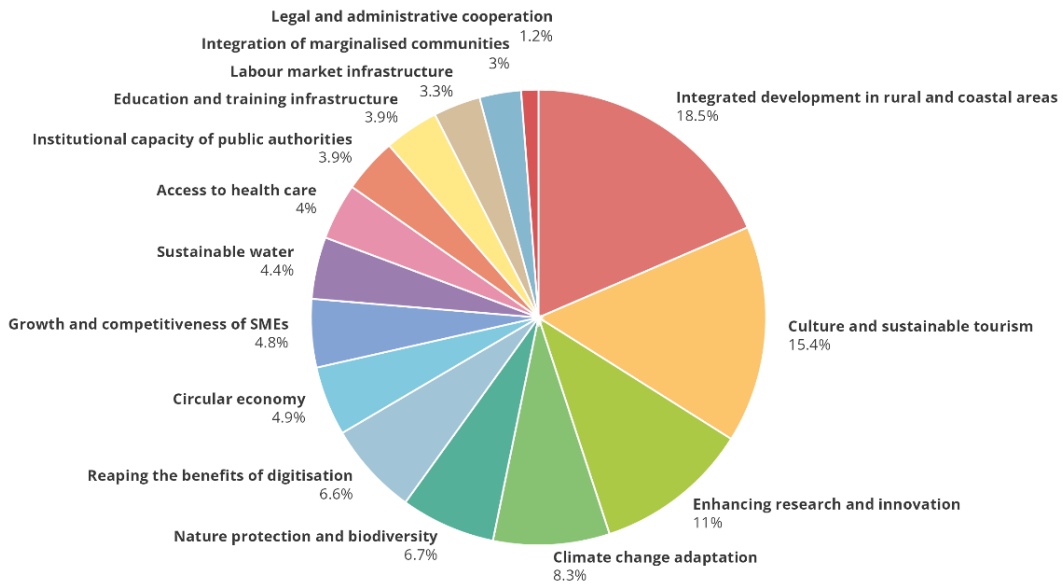
The following section outlines the key Interreg activities in the 2021-2027 programming period. The aspects included concern the development opportunities and challenges identified (see Table 2, the budget available and split of allocation (Figure 2.40), overlapping Interreg programmes and the key aspects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

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

Topic	Key development opportunities and challenges identified for Interreg 2021-27
<b>Territorial</b>	<ul style="list-style-type: none"> <li>▪ Territorial diversity – mountainous-coastal</li> </ul>
<b>Economy</b>	<ul style="list-style-type: none"> <li>▪ Maintaining economic activities that generate employment and income, attracting population and addressing progressive aging and depopulation, maintaining public and other services in rural areas</li> <li>▪ research and innovation capacities and efforts in major urban centres and a relatively low level of business involvement in research and innovation,</li> <li>▪ Tourism is a very important sector in the regional economy. However, significant differences are observed in the area of cooperation: domestic tourism predominates in the French part and in the Spanish inland regions, while in the Basque Country and, especially, Catalonia, almost 60% of visitors are foreigners</li> </ul>
<b>Population</b>	<ul style="list-style-type: none"> <li>▪ Aging and depopulation are structural challenges, with multiple interrelationships with other socioeconomic and territorial processes especially in rural areas</li> <li>▪ Youth unemployment, difficulties entering the labour market</li> <li>▪ Strengthen the integration of cross-border labour markets and improve the quality of employment and training in the cross-border territory</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>▪ Terrestrial and marine biodiversity shared assets of the cooperation territory</li> <li>▪ Pressures from urbanization and habitat fragmentation:</li> </ul>
<b>Climate</b>	<ul style="list-style-type: none"> <li>▪ Adaptation to climate change and the adoption of measures to prevent or mitigate their consequences.</li> <li>▪ Regions have medium to high environmental sensitivity to climate change, with a considerable risk of natural events of varying magnitude, including natural disasters.</li> </ul>

**Total Budget:** EUR 373,969,174.87

**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.<sup>14</sup> The 4 Interreg C programmes Interreg ESPON, Interact, Interreg Europe and URBACT cover the whole EU territory and provide a range of joint services and initiatives.

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

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

**Key aspects**

- › The Needs Analysis of the cooperation area has highlighted the diversity of the territory, which encompasses 3 countries, 2 coastal areas, several biogeographic zones, a wide range of climates, coastal and inland areas, valleys and mountains, urban and rural areas, populated and depopulated areas, all of which face common challenges and present significant economic, social, and territorial disparities.
- › The programme has 5 functional areas, linked to which 5 operations of strategic importance have been planned. These operation are identified with the process of developing and implementing the integrated territorial development strategies.
- › Some territories within the programme area are also covered by 2021-27 Interreg-B SouthWest Europe, Euro (MED) and Atlantic Area programmes.

<sup>14</sup> It is noted that synergies and links with a wide range of other territorial cooperation and sectoral programmes and initiatives are also valuable and this is reflected in the wider analyses presented in this border profile, but not specifically covered in this table.

### 2.6.2.1 Interreg cooperation

#### Indicator description

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

An additional element in this section is the development of project partner numbers between Interreg IV-A (2007–2013) and Interreg V-A (2014–2020), based on data from the keep.eu database. The datasets were cleaned to remove duplicates, using the partner names as reported in keep.eu. For both programming periods, keep.eu indicates a high level of data completeness<sup>15</sup>. Nevertheless, this development should be interpreted as indicative, as variations in partner name reporting and general limitations regarding the representativeness of the dataset affect the robustness of the results.

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

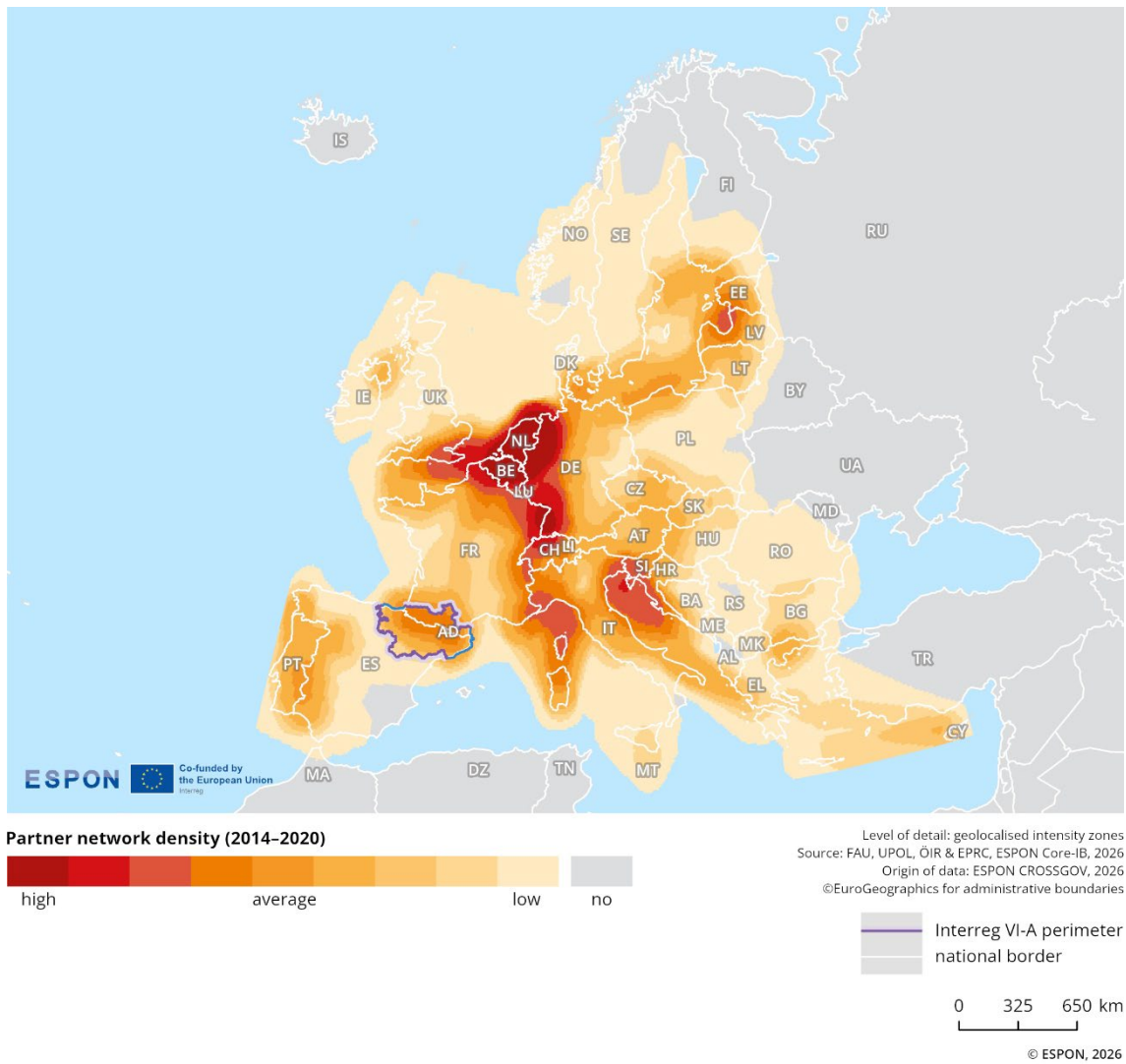
Please refer to the technical annex for more information.

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

Figure 2.41 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 Spain-France-Andorra border area appears to be quite homogenous (being high, close to the national border, and naturally more limited further away from the border). Overall, the partner network density in this border area is close to the European average. Based on the keep.eu database and excluding duplicates, the number of project partners increased from 482 in Interreg IV-A (2007–2013) to 746 in Interreg V-A (2014–2020), an increase of about 55%. It is important that these changes are considered in the context of factors such as change in programme budgets between 2007-2013 and 2014-2020, emphasis on targeting impact, and numbers of strategic projects.

<sup>15</sup> see [Keep.eu representativeness: Interreg, Interreg-IPA and ENI cross-border](#)

**Figure 2.41: Interreg V-A partner network density**



### 2.6.3 Key messages on the governance dimension

The Spain-France-Andorra border region shows a relatively high degree of institutionalised cross-border cooperation, supported by well-established multi-level governance structures, in particular through EGTCs. This institutional framework ensures broad spatial coverage (only a few areas of the border region remain uncovered). According to the analysed indicator, cross-border public services are mainly concentrated in the fields of tourism and information. Beyond what is captured by the indicators, the region also hosts the Cerdanya Cross-Border Hospital, a flagship example of cross-border healthcare provision and one of the most advanced cases of institutionalised service integration in Europe.

Moreover, the analysed area includes advice centres within multi-thematic, as well as research and education operational domains, in both France and Spain and advice centres working on economic operational domains in the French part of the programme area.

Obstacles identified through the b-solutions initiative highlight the need for strengthened bilateral and multi-level governance frameworks to support functional cross-border cooperation. The 12 pilot actions identified point in particular to persistent legal and administrative barriers in key policy fields such as healthcare, education, transport and social protection. In healthcare, challenges relate to the recognition of qualifications, emergency service procedures and cross-border health interventions, while in education obstacles concern the recognition and financing of cross-border schooling. In the transport

sector, barriers affect sustainable rail connectivity, rolling stock approval and cabotage, as well as the reopening and management of cross-border road connections. The proposed solutions are predominantly legal or hybrid in nature, combining legal reforms, bilateral cooperation agreements and targeted administrative arrangements. EGTCs and public authorities play a central role in initiating and implementing these solutions, supported by targeted Interreg funding.

The strong focus of the Interreg support on integrating development in rural and coastal areas is in line with the territorial discrepancies shown in previous sections of this border profile. Likewise, culture and sustainable tourism form the backbone of the region's economic development. The partner network density is quite homogenous and concentrated along the border.

### 3 Summary and key observations

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

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

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

**Table 4: Evidence-based conclusions**

Territorial dimension	
<b>Key analytical findings</b>	<ul style="list-style-type: none"> <li>• The Pyrenees Mountain range forms a natural border between France and Spain which strongly influences settlement patterns and population density, especially close to the more elevated parts of the territory;</li> <li>• Higher population density can be observed along the 2 coastal and more urbanised areas due to favourable climatic conditions, a relatively good connectivity and transport network (more developed than inland) and existence of services of general interest.</li> </ul>

Territorial dimension	
<p><b>Policy options</b></p>	<p><b>Population and settlement related aspects</b></p> <ul style="list-style-type: none"> <li>• Population concentration in coastal areas and major inland cities offers opportunities to support development, while low-density settlement patterns in mountainous and rural areas may be addressed through coordinated cross-border spatial and service-planning strategies;</li> <li>• Balanced spatial development in a context of continued population growth and urban expansion around centres such as Zaragoza, Toulouse and Perpignan could be supported through joint cross-border strategies.</li> </ul> <p><b>Accessibility related aspects</b></p> <ul style="list-style-type: none"> <li>• Accessibility in the central Pyrenees could be improved through cross-border cooperation, addressing persistent road and rail connectivity constraints linked to topographic conditions despite good accessibility along coastal and Pre-Pyrenean corridors;</li> <li>• Enhanced accessibility across the Pyrenees may be facilitated by cross-border cooperation, supporting measures aimed at reducing car dependency.</li> </ul> <p><b>Cross-cutting aspects</b></p> <ul style="list-style-type: none"> <li>• The integration of demographic trends, accessibility disparities and topographic constraints into cross-border spatial development strategies would support territorial cohesion across the border region;</li> <li>• Stronger cross-border coordination on transport, housing policy and spatial planning could contribute to the revitalisation of sparsely populated mountain regions.</li> </ul>

Economic dimension	
<p><b>Key analytical findings</b></p>	<ul style="list-style-type: none"> <li>• Sectors which are driving the border region's economic growth and providers of jobs are principally linked to industrial and utility-related activities, market-oriented services linked to trade, transport and tourism, and public and social services such as education, health and social care;</li> <li>• The economic situation of the cross-border area has been following a positive development, resuming its economic growth since the 2019-2020 Covid crisis. Both parts of the border region are close to the EU average.</li> </ul>

Economic dimension	
<p><b>Policy options</b></p>	<p><b>Competitiveness and labour market related aspects</b></p> <ul style="list-style-type: none"> <li>• More strategic use of economic complementarities between dynamic urban centres (e.g. Toulouse, Barcelona and Bilbao) and surrounding lower-density territories could support balanced development through targeted cross-border cooperation;</li> <li>• The transition towards knowledge-intensive services and increased digitalisation may be accelerated through cross-border cooperation initiatives;</li> <li>• Digital asymmetries could be mitigated through the development and sharing of cross-border digital infrastructure;</li> <li>• The attractiveness of cross-border employment may be enhanced through targeted policy approaches, including expanded telework arrangements, tax coordination and harmonised recognition of qualifications, helping to address the physical barrier posed by the Pyrenees.</li> </ul> <p><b>Cross-cutting aspect</b></p> <ul style="list-style-type: none"> <li>• Integrated planning responses to high housing costs in high-demand areas such as Toulouse and coastal zones could enhance the attractiveness of less pressured areas within the cross-border region;</li> <li>• In a context characterised by physical accessibility constraints and uneven population distribution, cross-border cooperation provides a basis for strengthening economic resilience.</li> </ul>

Green dimension	
<p><b>Key analytical findings</b></p>	<ul style="list-style-type: none"> <li>• The Pyrenees form a unique and largely preserved natural corridor, characterised by a high concentration of protected areas;</li> <li>• The abundance of waterways represents a key natural asset, supporting hydropower generation across the border region;</li> <li>• Landslides are one of the most pronounced natural risk, especially along the Pyrenees, alongside significant drought, wildfire and flood risks in the outer areas of the cross-border territory;</li> <li>• Waste generation in the cross-border region has resumed a downward trend following the COVID-19 crisis.</li> </ul>

<b>Green dimension</b>	
<b>Policy options</b>	<p><b>Climate risks and resilience related aspects</b></p> <ul style="list-style-type: none"> <li>• Cross-border management of protected areas and energy systems could strengthen climate resilience and improve resource efficiency;</li> <li>• Risk management may be enhanced by addressing shared vulnerabilities through cross-border cooperation, including the development of joint early warning systems and coordinated adaptive infrastructure in response to risks such as landslides in the Pyrenees;</li> <li>• Coordinated preparation for the gradual phase-out of coal and fossil-fuel plants could be supported through cross-border cooperation;</li> <li>• The untapped potential of solar and wind energy production may be harnessed through cross-border cooperation, contributing to further diversification of the energy mix across the border region.</li> </ul> <p><b>Cross-cutting aspects</b></p> <ul style="list-style-type: none"> <li>• The combination of strong natural assets, shared climate risks and renewable energy potential provides a basis for the development of coordinated cross-border transition pathways;</li> <li>• Sustainable economic development could be promoted on the basis of the region's natural assets and renewable energy potential, while limiting land consumption and environmental pressures;</li> <li>• Coordinated approaches to transport, settlement development and energy transition may help reduce territorial divides between coastal, urban and mountain areas.</li> </ul>

Socio-economic dimension	
<b>Key analytical findings</b>	<ul style="list-style-type: none"> <li>• Cross-border connectivity in social media across the border is uneven and registered only along the border, particularly in coastal areas, partly reflecting shared languages and cultural ties such as Basque and Catalan;</li> <li>• Tourism is a major socio-economic driver, with high tourism intensity in Catalonia and Pyrénées-Orientales and average overnight stays well above French and European levels;</li> <li>• Despite generally good service provision, mountainous terrain creates accessibility challenges, leading to longer travel times and the presence of health-service gaps in parts of the Spanish border region.</li> </ul>
<b>Policy options</b>	<p><b>Socio-economic related aspects</b></p> <ul style="list-style-type: none"> <li>• Regional language communities (Catalan, Basque and Occitan) and cultural initiatives may be mobilised to improve cross-border communication and service availability along the border;</li> <li>• Coordinated cross-border tourism strategies could help reduce pressures on high-intensity destinations, while promoting shared cultural and natural sites;</li> <li>• Existing regional specificities (local culture, traditions and communities) are an asset which could be further used to support the diversification of economic activities, notably enlarging the tourism offer (beyond coastal tourism);</li> <li>• Accessibility gaps to essential services in mountainous areas could be reduced through targeted cross-border cooperation.</li> </ul> <p><b>Cross-cutting aspect</b></p> <ul style="list-style-type: none"> <li>• Existing socio-cultural integration can serve as a foundation for strengthening cross-border cooperation in labour markets, education and service provision.</li> </ul>

Border security and safety dimension	
<b>Key analytical findings</b>	<ul style="list-style-type: none"> <li>• From a comparative perspective, France has imposed border controls for a significantly longer period of time than Spain;</li> <li>• Aside from the Covid crisis, the most recent reasons for reintroducing border controls are linked to terrorism threats, illegal migratory flows and general threats like the situation at the external borders, organized criminality and smuggling.</li> </ul>

Border security and safety dimension	
<b>Policy options</b>	<b>Cross-cutting aspects</b> <ul style="list-style-type: none"> <li>• The impacts of border controls on cross-border commuting and logistics can be mitigated through coordinated and institutionalised cross-border policy dialogue;</li> <li>• The mitigation of border control effects can form part of cross-border cooperation projects in various sectors. Economic networks, transport infrastructure initiatives and tourism-related actions can incorporate considerations related to the impacts of border controls.</li> </ul>

Governance dimension	
<b>Key analytical findings</b>	<ul style="list-style-type: none"> <li>• The Spain-France-Andorra border region shows a relatively high degree of institutionalised cross-border cooperation, supported by well-established multi-level governance structures, in particular through EGTCs;</li> <li>• According to the analysed indicators, cross-border public services are mainly concentrated in tourism and information; however, this is complemented by flagship initiatives beyond the indicator scope, notably the Cerdanya Cross-Border Hospital as a leading example of cross-border healthcare provision;</li> <li>• The region hosts several advice centres operating in multi-thematic, research, education and economic domains, yet the thematic concentration of cooperation and the obstacles identified through b-solutions point to untapped potential for expanding cross-border cooperation into additional policy fields.</li> </ul>
<b>Policy options</b>	<b>Cross-cutting aspects</b> <ul style="list-style-type: none"> <li>• Synergies in administrative reforms may be used to address structural legal barriers identified through b-solutions initiatives, facilitating more effective cross-border cooperation;</li> <li>• Cross-border governance structures provide scope for developing integrated solutions to interconnected challenges in energy, transport, land use, nature protection and demographic change.</li> </ul>



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