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EUROPEAN RESEARCH PROJECT //

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

Italy-Malta

Border profile

March 2026

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1 Introduction

1.1 Context and objective of the border profile

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

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

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

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

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

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

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

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

1.2 Presentation of the border area

The Interreg VI-A border region 'Italy–Malta' covers the area between south-western Italy and Malta (see Figure 1.1). In Italy, the programme area includes Sicily in insular Italy, comprising a total of 9 NUTS3 regions. It also covers Malta, which is classified as both NUTS1 and NUTS2, encompassing a total of 2 NUTS3 regions.

Figure 1.1: Overview map

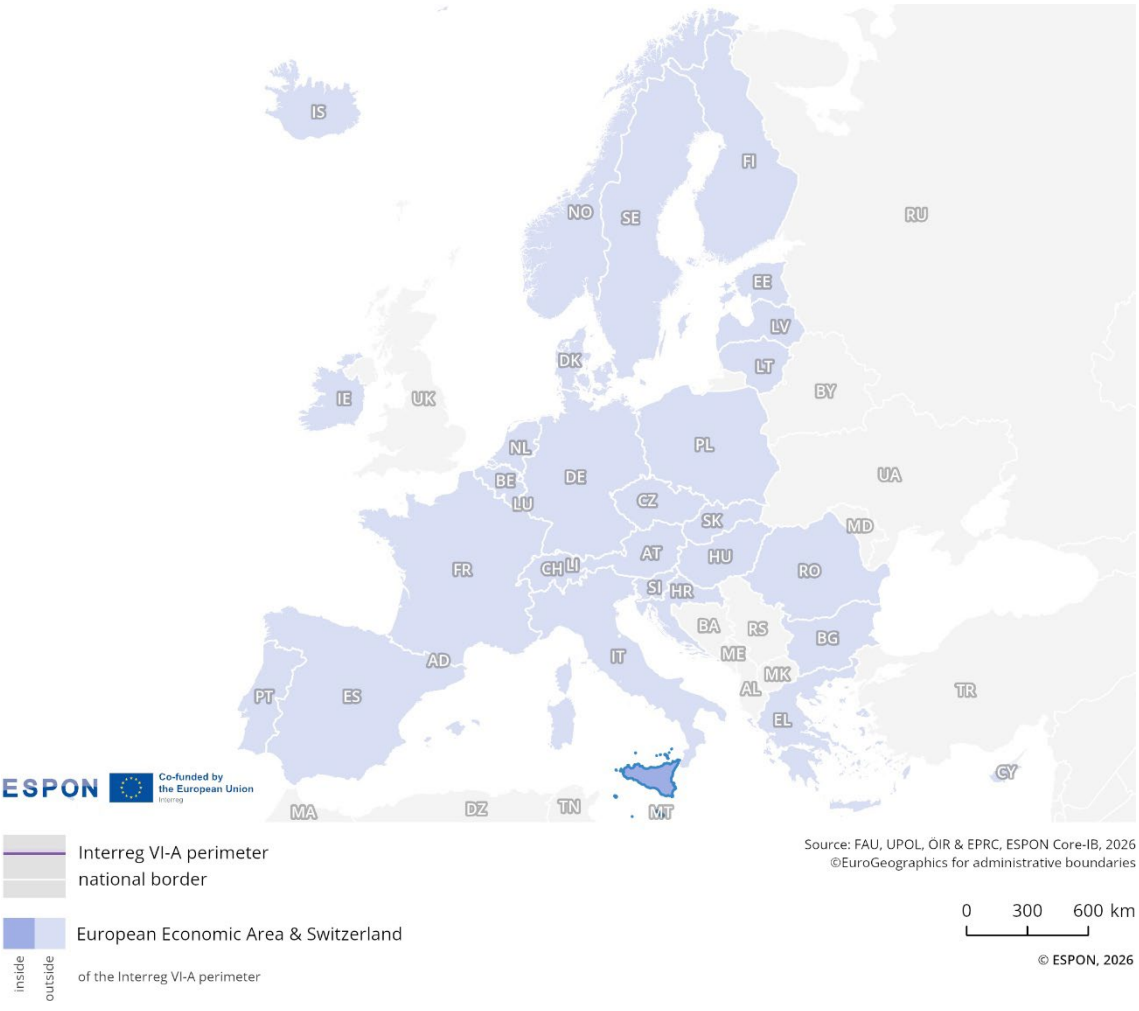
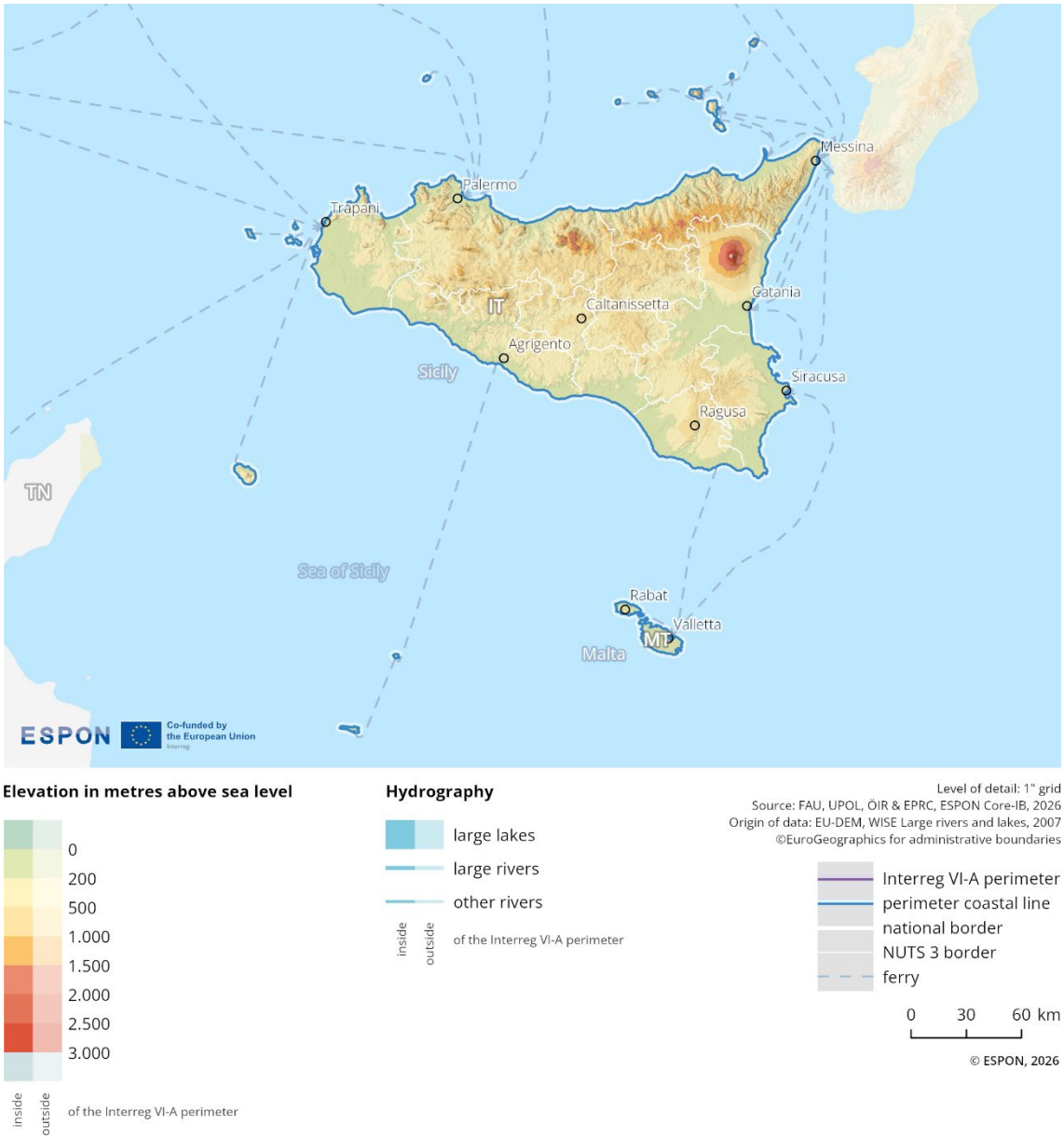


Figure 1.2 illustrates the region's geomorphological features and the perimeter of the current Interreg VI A programme area. Spanning approximately 26,148 km², the cross-border area exhibits a high degree of heterogeneity. The cooperation area consists of Sicily and the Maltese archipelago in the

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

central Mediterranean Sea. The area features a variety of altimetric zones, with Sicily displaying a predominantly hilly landscape that includes coastal elevations and inland relief features such as the Monti Iblei in the southeast and the Erei Hills in the central region. The eastern coast of Sicily is dominated by Mount Etna, Europe's highest and most active volcano, which has a significant impact on the area's geomorphology and the surrounding plains.

Figure 1.2: Geographical features and characteristics[3]



By contrast, Malta is predominantly low-lying, consisting of limestone plateaus, rolling plains and rocky coastlines. The archipelago comprises 3 main islands: Malta, Gozo and Comino. These islands are characterised by karstic landscapes and terraced agriculture.

The coastal morphology of the programme area is diverse. While Sicily has a mixture of rocky cliffs, sandy beaches, and coastal plains, Malta's coastline is deeply cut, with cliffs, natural bays, inlets, and

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

marine terraces. Both territories are surrounded by shallow marine shelves and exhibit submarine geological structures, such as tectonic ridges and rifts.

The geography of the programme area gives it a maritime character, with the Sicilian Channel forming a natural boundary between the 2 territories while also linking them. The marine ecosystem is highly diverse, with significant Posidonia oceanica meadows, coralligenous formations, and important fish spawning grounds, making it a key element of the region's natural environment.

2 Cross-border analysis

2.1 Territorial dimension

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

2.1.1 Population and settlements

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

2.1.1.1 Population density

Indicator description

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

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

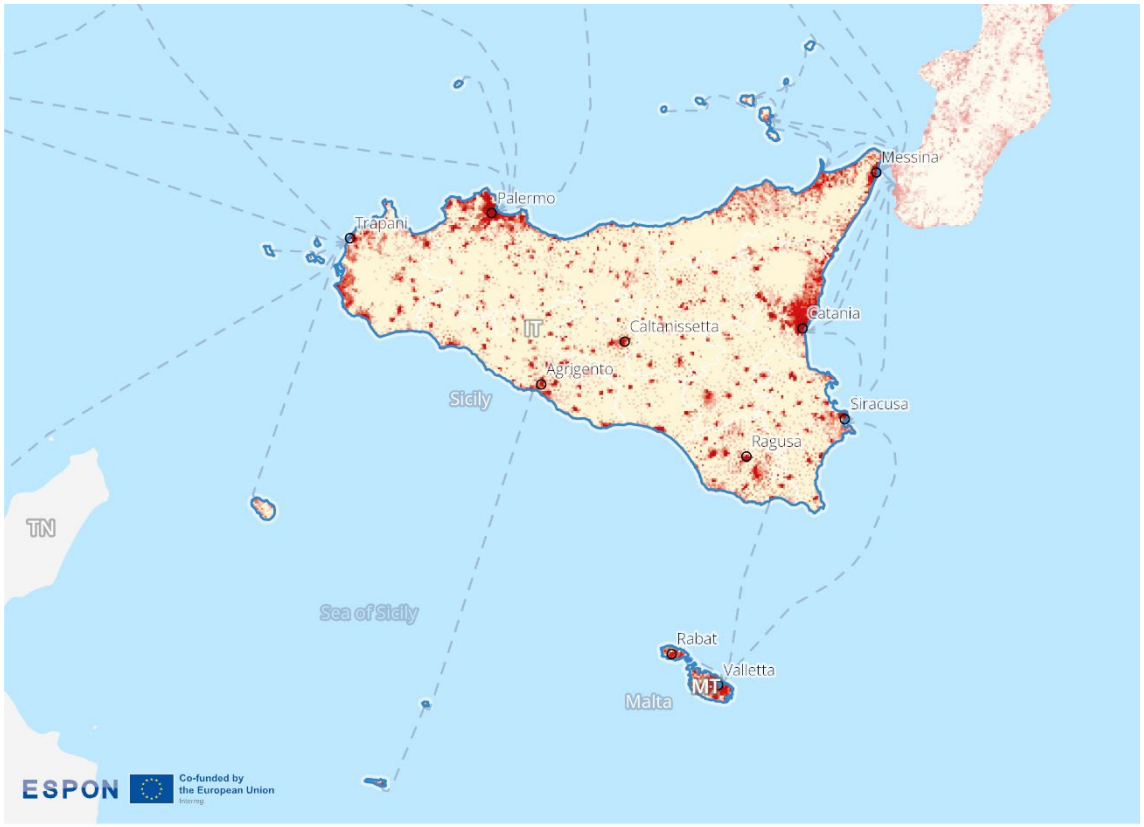
Please refer to the technical annex for more information.

The cross-border region includes 9 urban centres with a population of over 30,000 inhabitants. The population of Sicily is mainly concentrated in 2 large cities, Palermo and Catania (see Figure 2.1). Otherwise, the entire island is evenly covered with small, isolated inhabited areas around smaller settlements, with the population increasing towards the coast. Malta is evenly populated with a high density, which is higher in the central and southern parts, stretching from the capital, Valletta on the east coast to the interior. The central part of the northern island of Gozo also has a higher population density.

The population density in the cross-border region is 199 inhabitants/km², which exceeds the EU average of 109 inhabitants/km² (according to EUROSTAT), and it exceeds the aggregated average of all EU evaluated border regions, which is 125 inhabitants/km² thanks the highest population density of Malta in whole EU.

The Italian side of the Interreg region has an average population density of around 182 inhabitants/km². It is lower than the national average population density in Italy (193 inhabitants/km²). The Maltese side of the Interreg region has an average population density of around 1,289 inhabitants/km². Overall, Malta has the highest population density among EU countries.

Figure 2.1: Spatial patterns of population distribution



Number of inhabitants/km² (2021)

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

inside / outside of the Interreg VI-A perimeter

Twin cities (2025)

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

Border cities (2025)

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

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

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

0 30 60 km

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 %

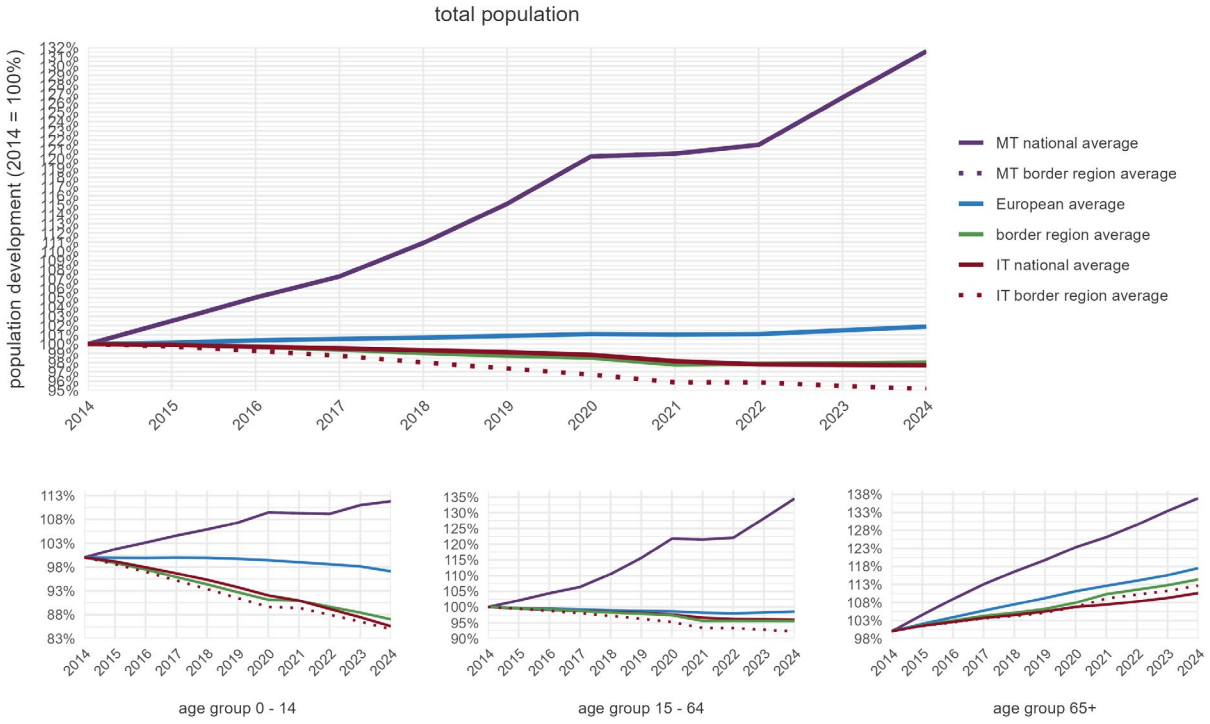
Please refer to the technical annex for more information.

Population in the Interreg region in 2024 (Eurostat): 5.4 million inhabitants, of which:

› 89.5% in the Italian border territory (4.8 million inhabitants)
› 10.5% in the Maltese border territory (0.56 million inhabitants)
› Region within the border region with the highest population increase since 2014: Malta (MT001) at 31.8%

Figure 2.2 shows the population change in the Italian Maltese Interreg region between 2014 and 2024. During this period, the region has experienced a moderate decline of 2.0%, with the most pronounced decrease observed on the Italian side.

Figure 2.2: Population development (2014=100)



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Population development across the border region is noticeably below the European average (-2.0% vs. 1.9%) and also noticeably below the average development in all border regions (-2.0% vs 1.5%). While

the Italian border area shows a decrease both in border and national averages (-4.8% vs. -2.3%), the Maltese area shows a growth of 31.6%.

In terms of the development of individual age groups in the region, the population aged 0–14 experienced a sharp decrease of -13.0%, while the working-age population (15–64) showed a slight decrease of -4.4%. The population aged 65 and over underwent a notable increase of 14.4%.

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. Changes are evident in particular around the urban centres of Palermo, Agrigento, Catania and Valetta. Trapari, Caltanissetta and Siracusa show no significant changes during the observed time period. High growth in settlement areas is particularly evident in Valetta as well as around Palermo. The settlement area increases mainly around the coastal cities Palermo, Agrigento and Cantania. On the Maltese side, this is true for Valetta. The map also reflects the topographical characteristics of the border region, with some changes in settlement areas visible along the Mediterranean coast.

Figure 2.3: Settlement area dynamics

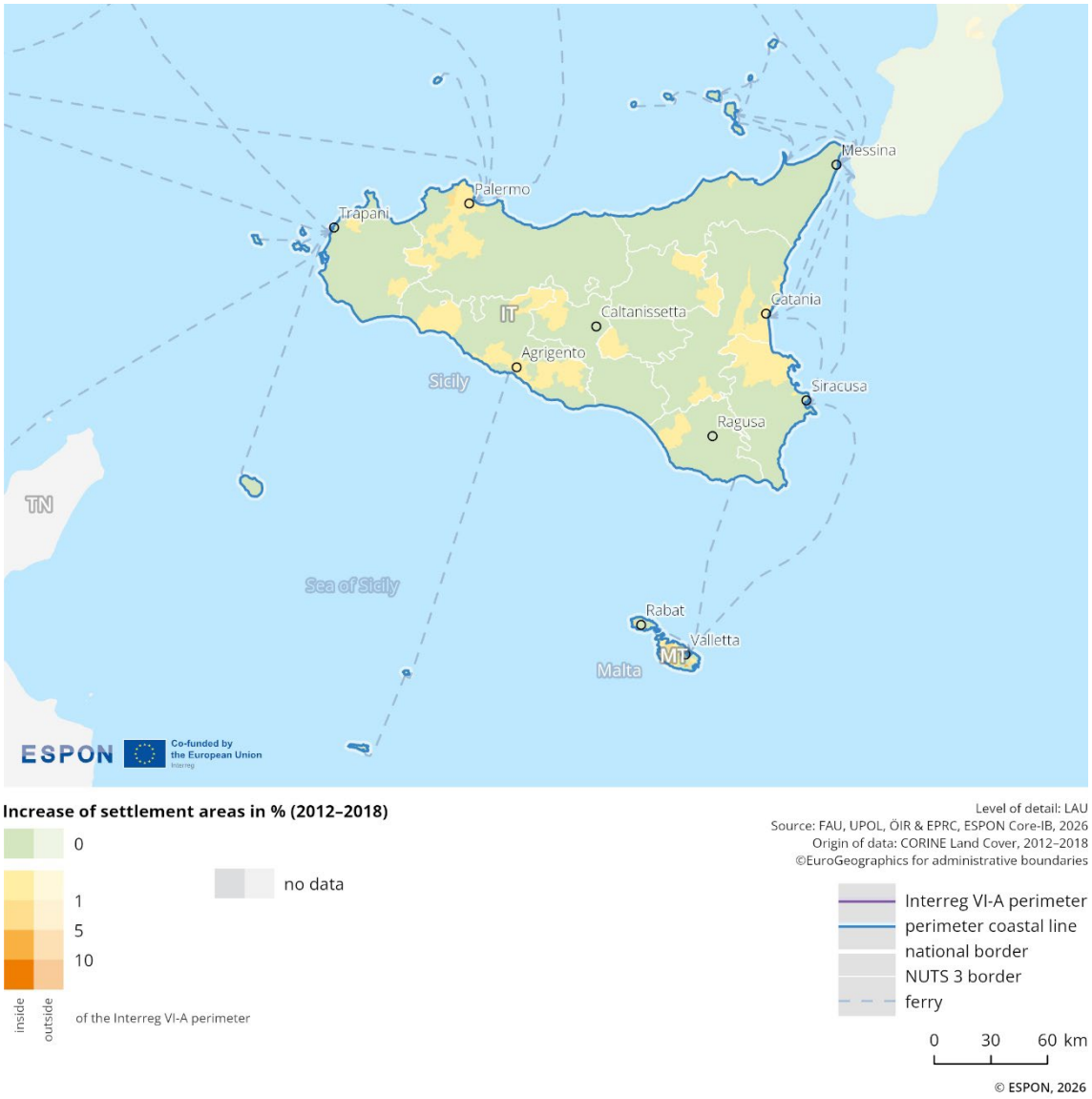
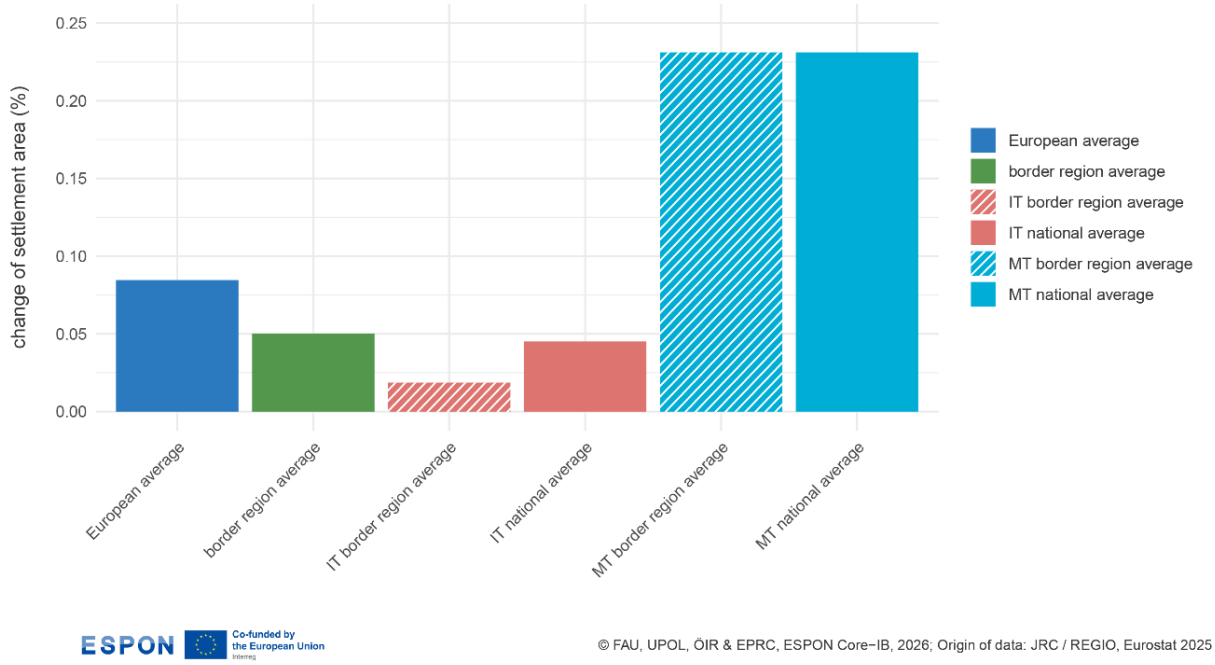


Figure 2.4 presents the change in settlement areas from a comparative perspective. The average for the Italy-Malta programme area is lower than the overall European average (0.05% vs. 0.08%), which includes both EU member states and the EFTA countries Switzerland, Liechtenstein, and Norway. The Maltese values are higher than the Italian ones, with values exceeding 0.20%, which applies for both, the national average as well as the border regions. Nevertheless, the programme area shows a relatively low dynamic of settlement development.

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



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2.1.2 Accessibility of the border area

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

2.1.2.1 Comparative quality of selected cross-border connections

Indicator description

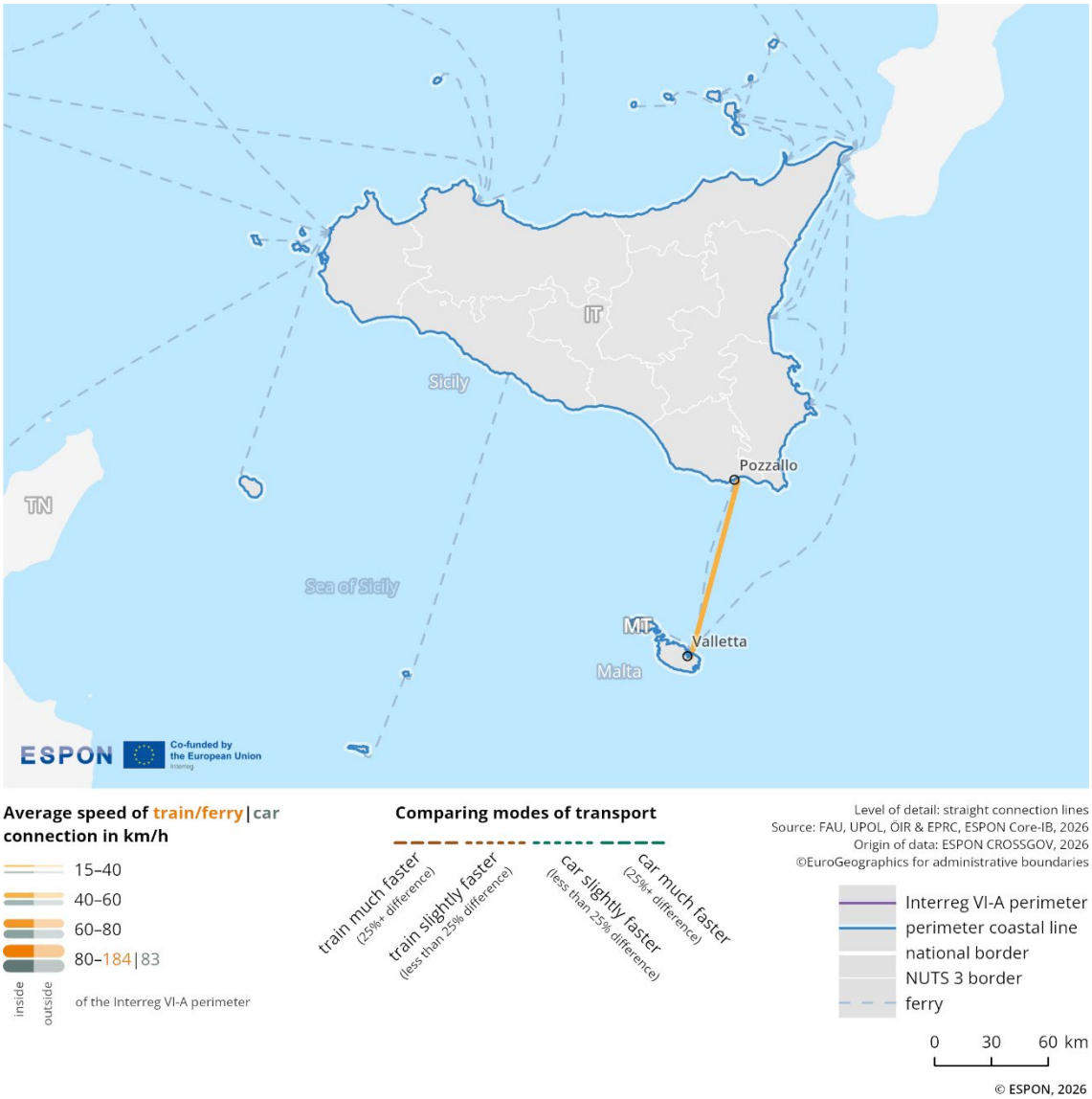
The indicator presents a comparative perspective for different modes of transport (public and private) and their average travel speed (so-called space-time-lines). As such it helps to understand and interpret accessibility patterns along the border and highlights the comparative quality of selected cross-border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

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

Please refer to the technical annex for more information.

Cross-border accessibility shapes cross-border interactions. Figure 2.5 illustrates this using a "space-time-line" map, which shows parts of a European overview of car, train and ferry travel times in the Italy-Malta border region. This visualisation enables an assessment of transport quality by highlighting differences between public (train, ferry) 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[4]. 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 and ferries, grey for cars) indicates the average speed of connections in km/h, with thicker lines representing faster connections. Dotted lines in-between reflect the indexed ratio between train and car speeds. A brown colour scale (values below 100) denotes that trains are faster than cars along the specific route, while a green scale (values above 100) indicates the opposite.

Within this programme area, the only selected connection is a ferry line, namely Pozzallo–Valletta[5]. This route is with 40-60 km/h quite fast (approx. 1 hour 45 minutes) and an interesting option for maritime cross-border connectivity. Around 3 rounds trips are possible during weekdays and 2 during the weekends, with frequencies changing with the seasons and depending a sole service provider. While several flights connect Catania or Palermo and Malta, the tendentially higher irregularity of the flights and inconvenience of their schedules (no daily, regular schedules) render them less attractive for

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

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

commuting. Nevertheless, for business travel purposes, such connections can be of interest. Here, the sea arm separating both countries builds a geographical barrier, hindering more autonomous, self-organised border crossings.

2.1.2.2 Cross-border catchment area based on mobility flows

Indicator description

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

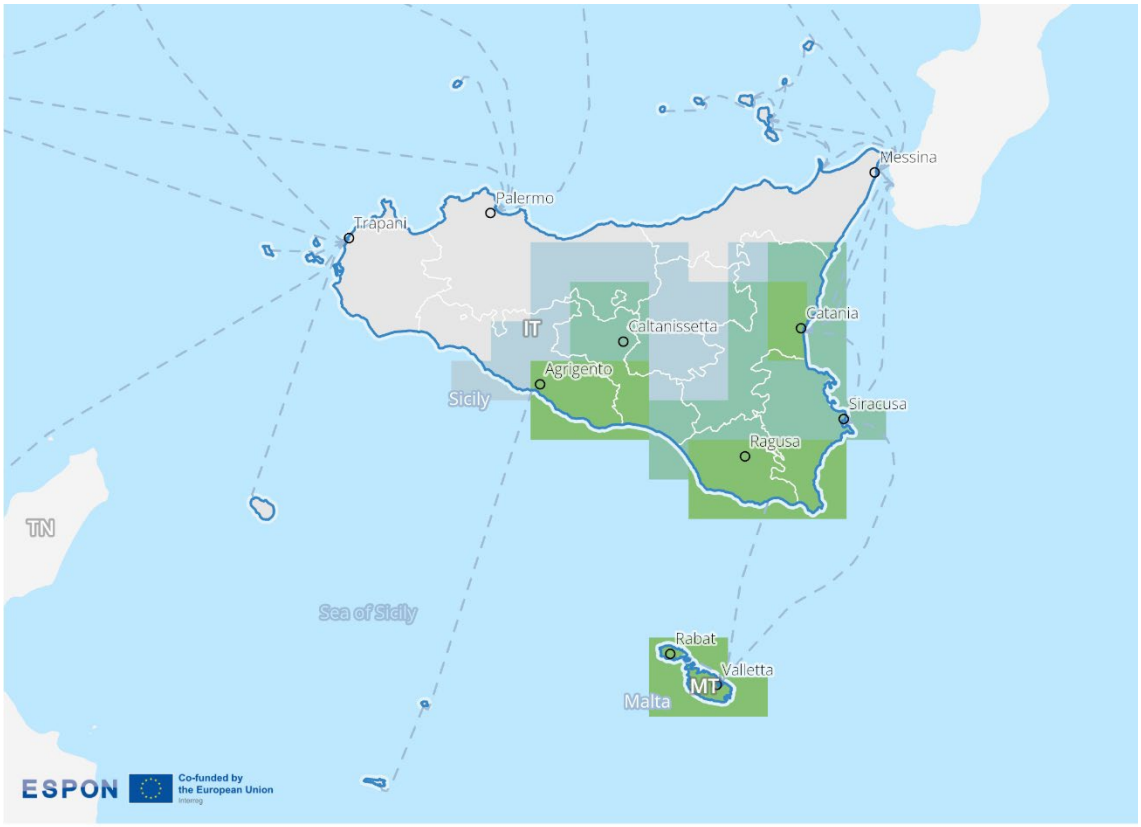
- **Source/method of retrieval**: The indicator is calculated based on Twitter (currently X) data. The digital footprint of individual users provides information about physical mobility flows and is used to calculate cross-border catchment areas of different intensity.
- **Temporal coverage**: 2013-2023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

Please refer to the technical annex for more information.

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

The intensity of cross-border mobility of people within this cross-border region is variable. The highest mobility intensity is recorded around the cities of Agrigento and Catania, in southern Sicily, and across the entire territory of Malta. Moderate mobility intensity is observed around the city of Caltanissetta and in the broader vicinity of Syracuse. At greater distances from Caltanissetta, intensity decreases to low levels. In the western and northern parts of Sicily, no intensity is recorded or data are unavailable. It is important to note that, whereas this indicator can capture cross-border commuting trends in the context of inland borders, this indicator appears less relevant in the case of maritime borders. Indeed, in this case the indicator encompasses all international movements, including tourists, especially around the cities with airports.

Figure 2.6: Cross-border mobility intensity



Estimated cross-border mobility intensity (2013-2023)

high
moderate
low

inside outside of the Interreg VI-A perimeter

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

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

0 30 60 km

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

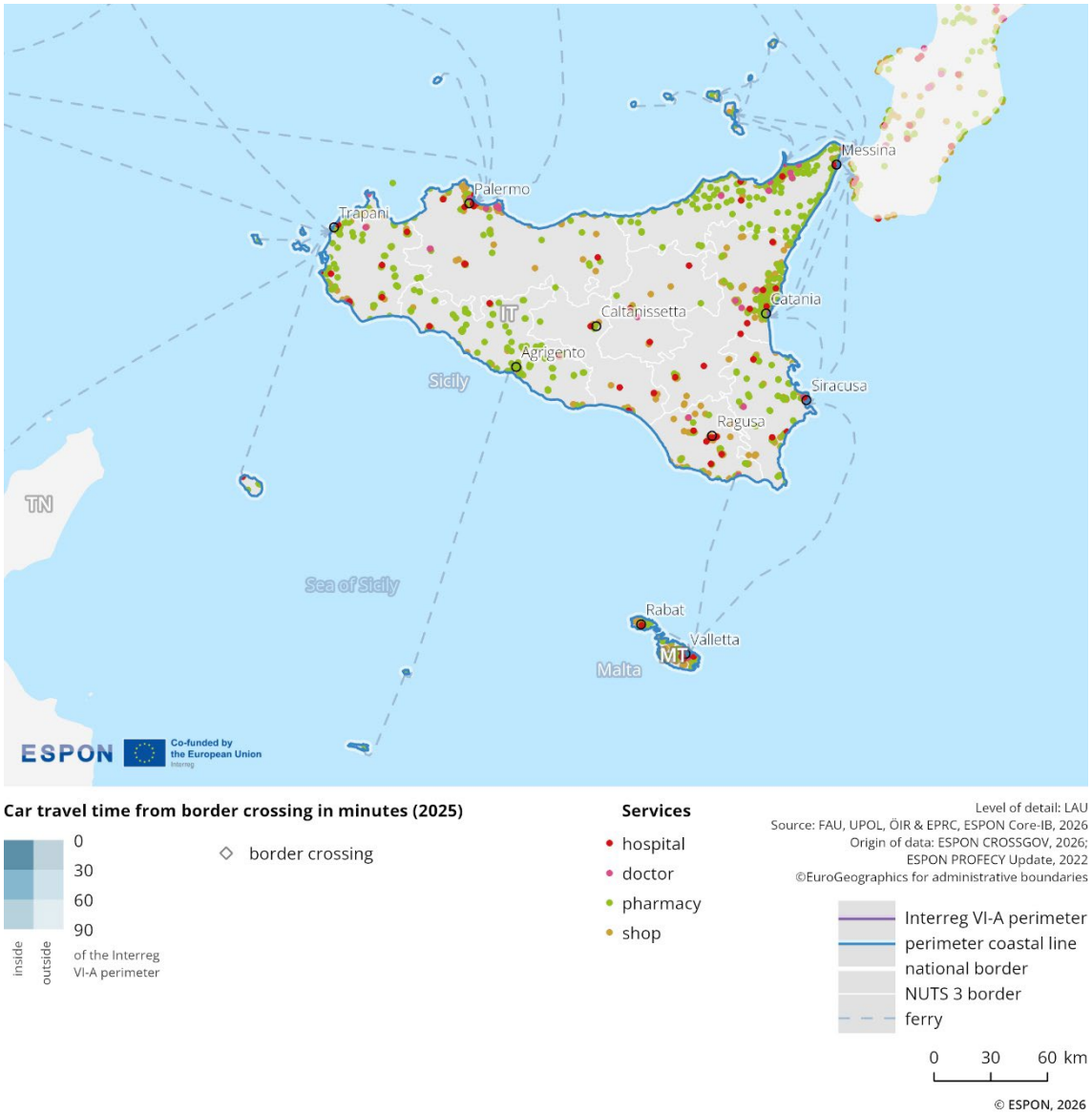
Please refer to the technical annex for more information.

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

The map depicts the maritime nature of this cross-border region, and thus, its lack of road connections. Due to the absence of existing roads, no travel time zone is recorded by this indicator for that cross-border region.

Services such as shops, hospitals, doctors' offices, and pharmacies are located along the coast of Italy, with a concentration around the town of Catania on the island of Sicily. The capital city, Valletta, is the centre of services in Malta.

Figure 2.7: Travel-time accessibility from border crossings



2.1.3 Key messages on the territorial dimension

The whole cross-border region is marked by both topographic and demographic particularities. It's island character renders low-level and regular exchanges difficult.

Over the last 10 years, the island of Malta saw its population growing quickly and importantly while Sicily's population slightly decreased. Combined to the island character of Malta and its distance to Sicily, the island is the most dense region of the European space and shows an important increase in settlement areas. Interestingly the Italian part of the border region also shows an overall increase in settlement area, while its population is decreasing – which is partially linked to seasonal residences and speculative land use developments. This could be interpreted as a sign of expansion of built area, potentially for economic development or secondary residencies, or a loss of population in the city centre.

Despite the limited transportation means, the population of the south of Sicily and of Malta show important mobility degrees, especially around the cities of Catania (presence of an international airport), Agrigento region (linking via ferry the Italian island Linosa) and Ragusa area (where the port of Pozzallo is situated). Further north into Sicily, the mobility of the population decreases progressively

until having no more cross-border movement intensity. As there are no direct connections over land road is possible, no particular patterns appear, the emplacement of shops, pharmacies, doctors and hospitals seem to rather correspond to the population's repartition.

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.

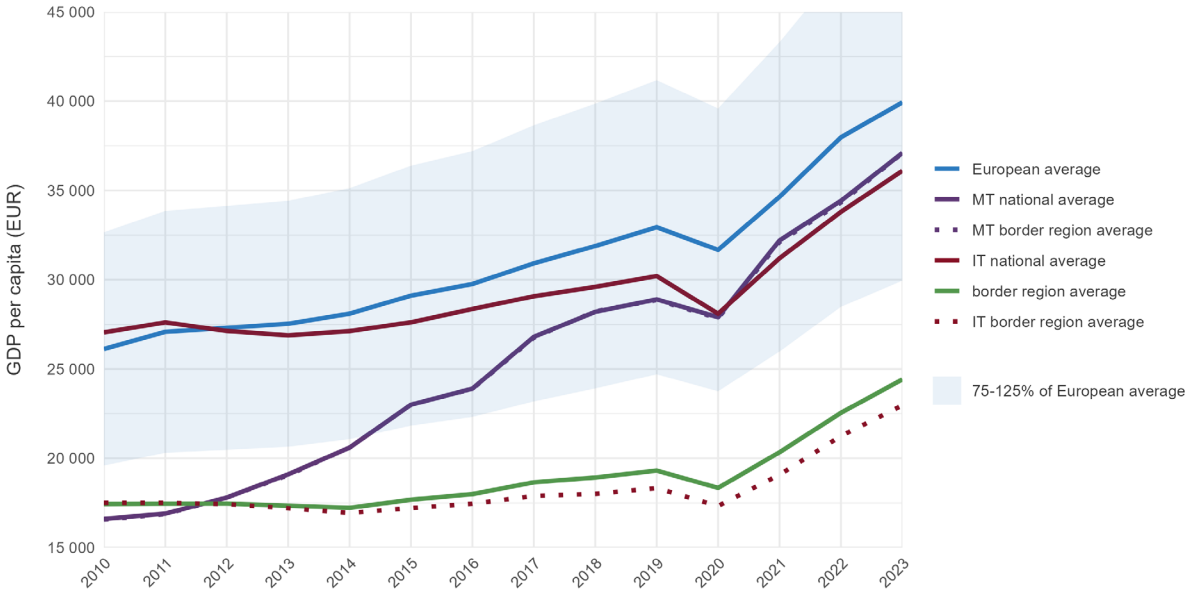
- **Source**: Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2010-2023
- **Unit**: Euro per capita

Please refer to the technical annex for more information.

The whole cross-border region shows a GDP/capita value of 62.3% of the EU average in 2022 and 63.4% of the average in European border regions in general (see Figure 2.8). The programme area marks a 31.6% increase of GDP per capita in the border region between 2014 and 2022[6]. This corresponds to a 4.1 percentage points lower increase of GDP per capita in the border region compared to the EU average. Furthermore, this corresponds to 3.6 percentage points lower increase of GDP per capita in the border region compared to the average of European border regions. Development in the border region is not uniform though. Malta displayed a GDP per capita increase of 68.1%, closing the gap to the Italian national average. The GDP per capita growth in the Italian border region on the other hand almost stagnated from 2010 until 2020.

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

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



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2.2.2 Labour market and commuting

This sub-dimension highlights the existing and potential functional links within the labour market of the border region. It examines the employment situation and commuting patterns, as well as the role of telework agreements, and considers developments over time based on analysed indicators. The analysis identifies factors that facilitate or hamper cross-border labour market integration.[7]

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).

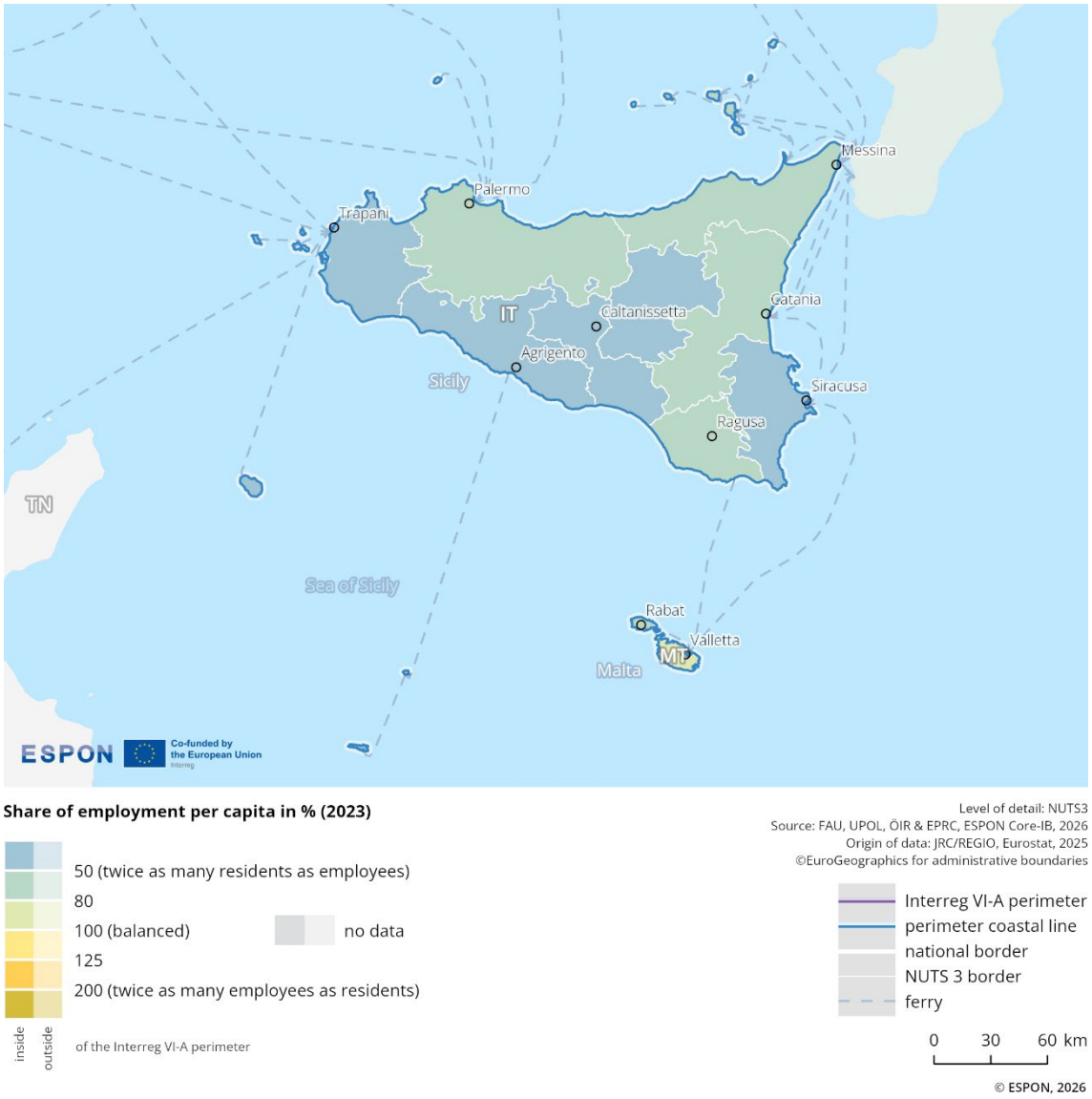
- **Source**: Eurostat, Annual Regional Database of the European Commission (ARDECO)
- **Temporal coverage**: 2014-2023
- **Unit**: Share in %

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.

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

Figure 2.9: Employment share[8]



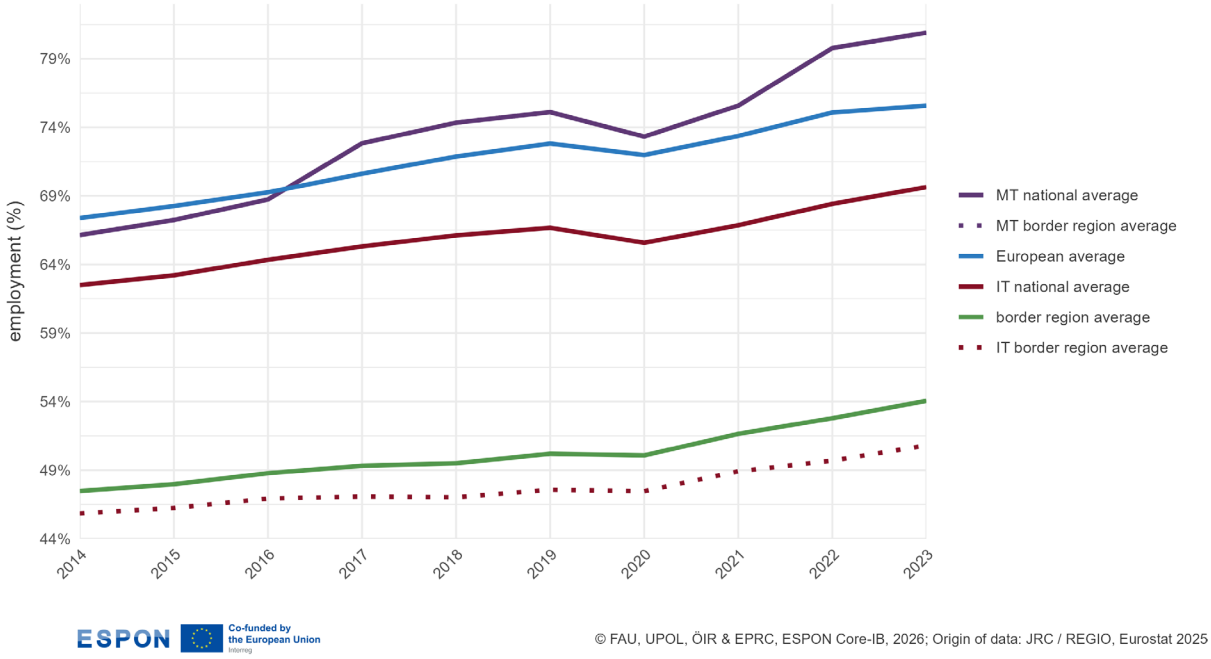
The share of employment in this border region remains relatively stable, with the regional average reaching 54% in 2023, which represents an increase of 6.6 percentage points since 2014. In the southwestern part of Sicily, particularly around the cities of Trapani, Agrigento, and Caltanissetta, as well as in the area surrounding Siracusa, the indicator value is below 50%. In the rest of Sicily and across Malta, values range from 50% to 80%. When comparing the share of employment in this border region with different averages, the following can be observed (see Figure 2.10):

- Compared to the European average, values in the cross-border region are lower by 21.5 percentage points; in 2014, the difference was 19.9 percentage points.
- Compared to the Italian national average, values are lower by 15.6 percentage points; in 2014, the difference was 15 percentage points.
- Compared to the Maltese national average, values are lower by 26.9 percentage points; in 2014, the difference was 18.7 percentage points.
- Sicily records values 18.8 percentage points below the Italian national average.

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

› Compared to the average of all cross-border regions, values are lower by 20.4 percentage points; in 2014, the difference was 18.8 percentage points.

Figure 2.10: Employment share over time (comparison)



ESPON Co-funded by the European Union Interreg

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.

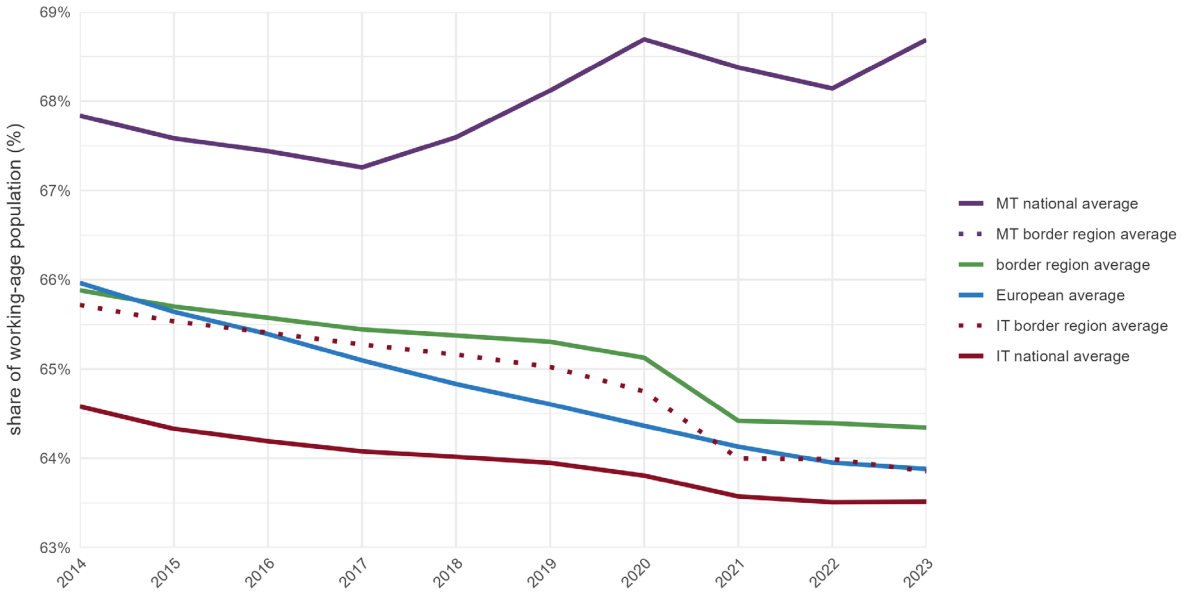
Figure 2.11 shows the evolution of the share of the working-age population in the Italy–Malta cross-border region between 2014 and 2023. In 2023, the programme area marks an average working-age population share of 64.3%, compared to the European average of 63.9% and 63.7% for the average of all cross-border regions.

The share of the working-age population in the whole cross-border region is very similar to the Italian border average (63.9%), and noticeably lower than the Maltese average (68.7%). Compared to national levels, it is slightly higher than the Italian national average (63.5%).

The region experienced a moderate 1.6 percentage point decrease in the share of working-age population between 2014 (65.9%) and 2023 (64.3%). This decline is somewhat slower than the European average, which dropped by 2.1 percentage points in the same period. The trend differs between the 2 countries: the Italian part shows a moderate decrease (-1.8 percentage points at the border and -1.1 percentage points at the national level). In contrast, the Maltese part recorded a slight increase (+0.9 percentage points).

The Italy–Malta cross-border region experienced a moderate overall decline in the share of the working-age population between 2014 and 2023. In 2023, the region remained close to the European and cross-border averages, with contrasting demographic trends on the 2 sides.

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



ESPON Co-funded by the European Union Interreg

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 statistiques des activités économiques dans la Communauté européenne) classifications, allowing for detailed analysis of employment distribution across various industries.

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

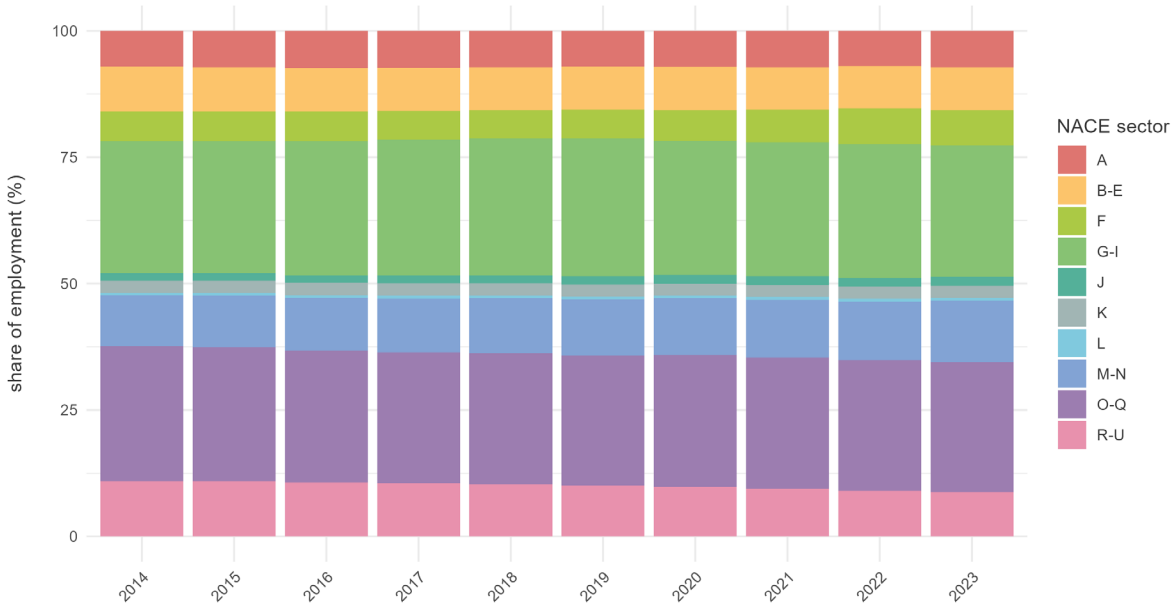
Please refer to the technical annex for more information.

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

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

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

Figure 2.12: Employment by sector (comparison)



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

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

Over the entire period, the sectors with the highest share of jobs are ´G-I´ (Wholesale and retail trade, repair of motor vehicles and motorcycles, Transportation and storage, Accommodation and food service activities), ´M-N´ (Professional, scientific and technical activities, Administrative and support 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.

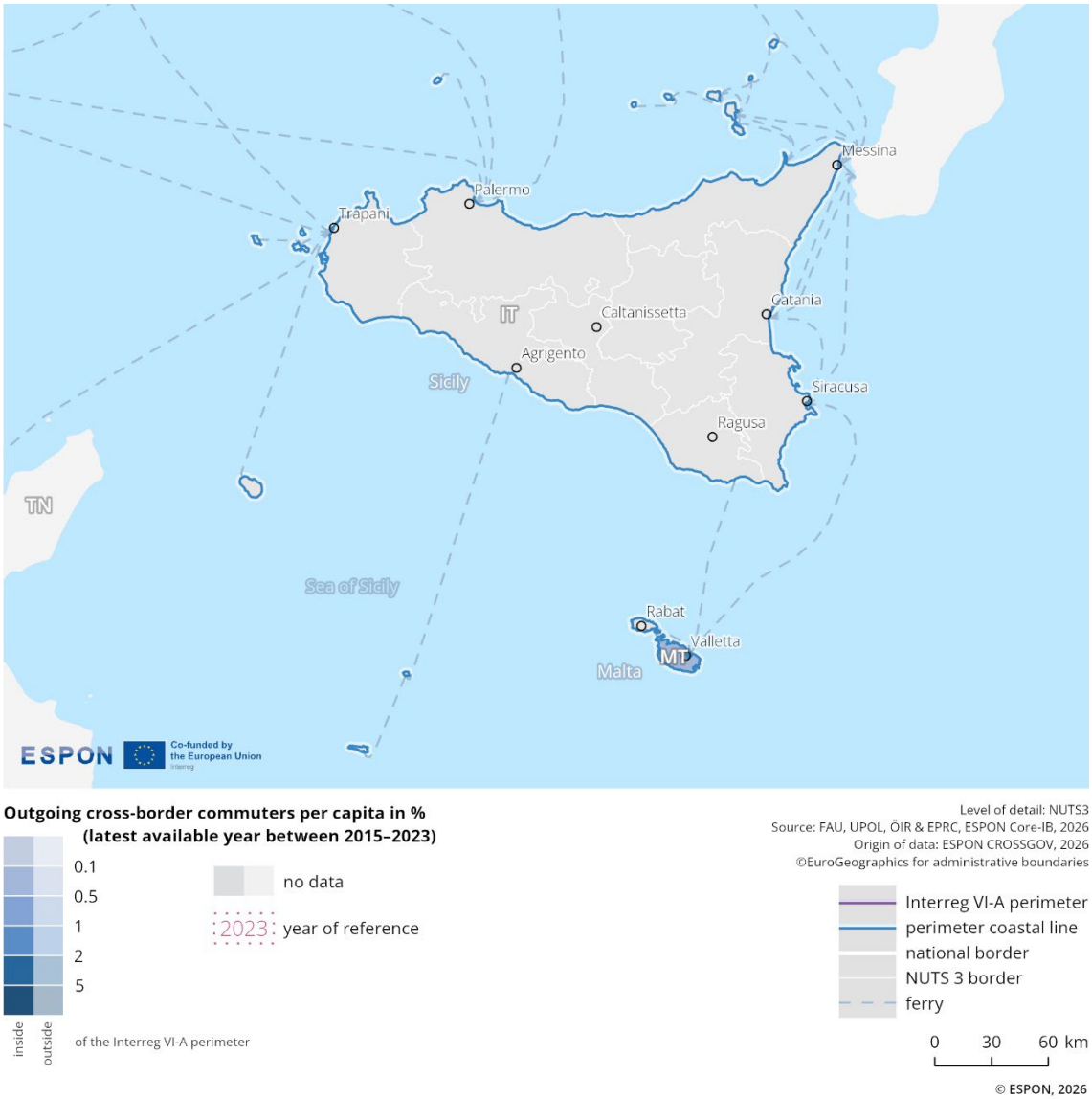
- **Source/method of retrieval**: Eurostat/LFS data on outgoing commuters currently available on NUTS2 level has been regionalised for NUTS3 by means of weighting by border length, NUTS3 population-weighted centroid distance to border, population per NUTS3 region (15–64 years old) and real compensation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

Please refer to the technical annex for more information.

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

In the case of maritime borders, such short-term exchanges are rendered more complex by the geography of the region. Transport by plane or cruising ships are more common and commuting more seasonal than on a daily basis. This can explain why the map for the Interreg area Sicily-Malta shows only some outgoing commuting activity in Malta. For regions in Sicily, no data is available.

Figure 2.13: Outgoing cross-border commuting patterns



2.2.2.5 Cross-border telework agreements

Indicator description

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

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

Please refer to the technical annex for more information.

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

2.2.3 Competitiveness

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

2.2.3.1 Gross value added at basic prices by sector

Indicator description

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

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

Please refer to the technical annex for more information.

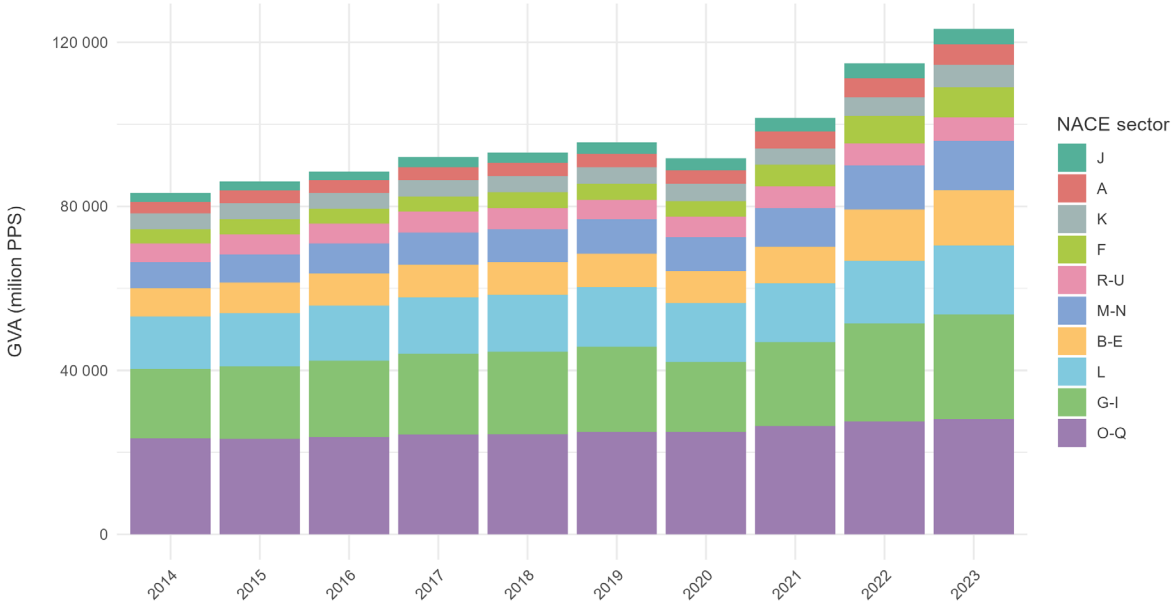
Figure 2.14 visualises gross value added (GVA), which is an important indicator of economic activity. GVA measures the value created by all economic activities involved in producing goods and services in a specific area. It is differentiated by sectors to provide detailed insights into the economic contributions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

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

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

Between 2014 and 2023, the GVA in the border area of Italy-Malta increased from 83,277 million purchasing power standards (PPS) to 123,292 million PPS — a growth of 44%. Sector groups G–I, L and O–Q together make up over half of the total GVA, highlighting their significant contribution to the regional, also green and blue, economy within the border area. The sector groups O–Q contributed the largest share, with a total of 28,052 million PPS in 2023. This underlines the significance of sectors such as Education (O), Human health and social work activities (Q) in the Italy-Malta border region. The comparatively large share of Information and communication (J) highlights the relevance of digital growth within the green and blue economies in this maritime border area. The constantly growing and substantial share of real estate activities (L) can also be attributed to maritime tourism.

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
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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.

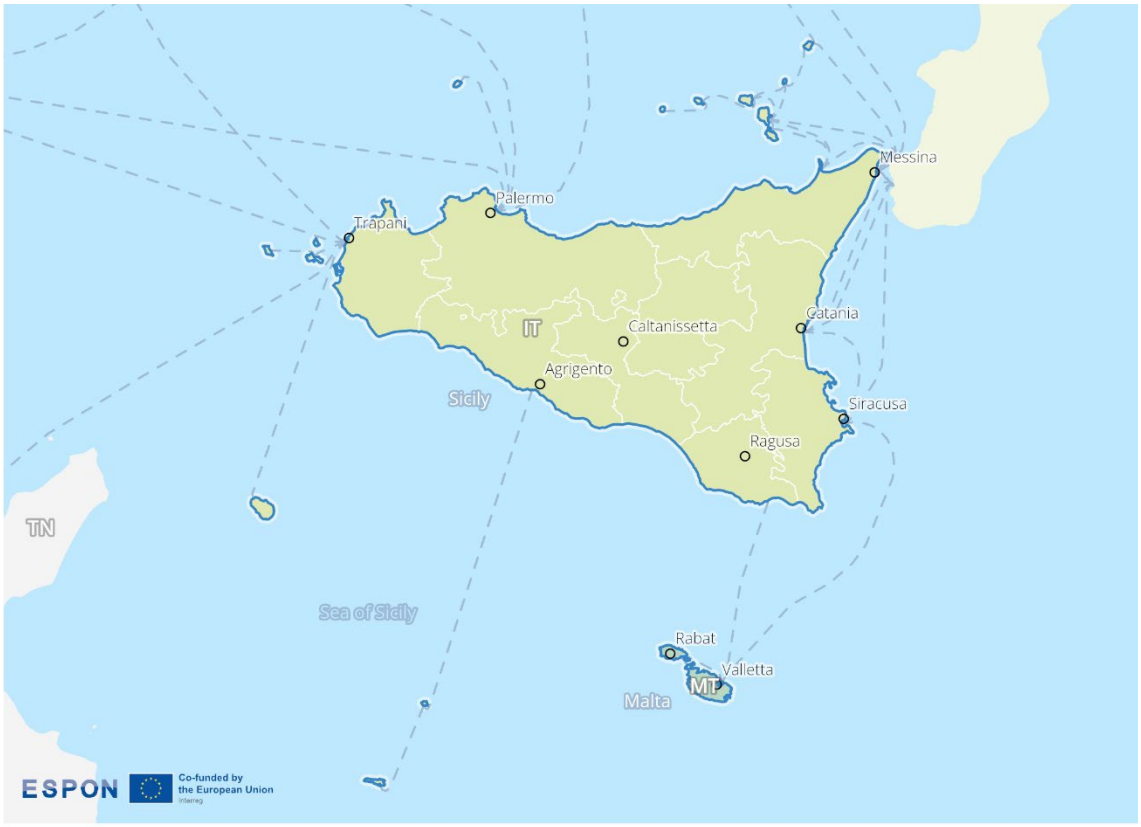
Figure 2.15 shows the average values for the 'compensation per hour worked'. This indicator is calculated by dividing the total compensation of employees (at current prices) by the total number of hours worked by those employees. In this context, 'employees' are defined as individuals engaged by contract 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 Italy–Malta border region appears to be somewhat unevenly distributed. In the Italian areas of this cross-border region, the average hourly income ranges between €20 and €30, with no region reporting values significantly above the general range.[9]. For reference, the national average in Italy is of €24.70. In the Maltese areas, the average hourly income ranges between €15 and €20. The Maltese average hourly income is of €17.7.

Cross-border wage differences is one of the factors encouraging labour migration, usually 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.

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

Figure 2.15: Average income per hour



Average income per hour worked in euros (2023)

5
10
15
20
30
40
50
60

no data

inside
outside
of the Interreg VI-A perimeter

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

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

0 30 60 km

© 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.

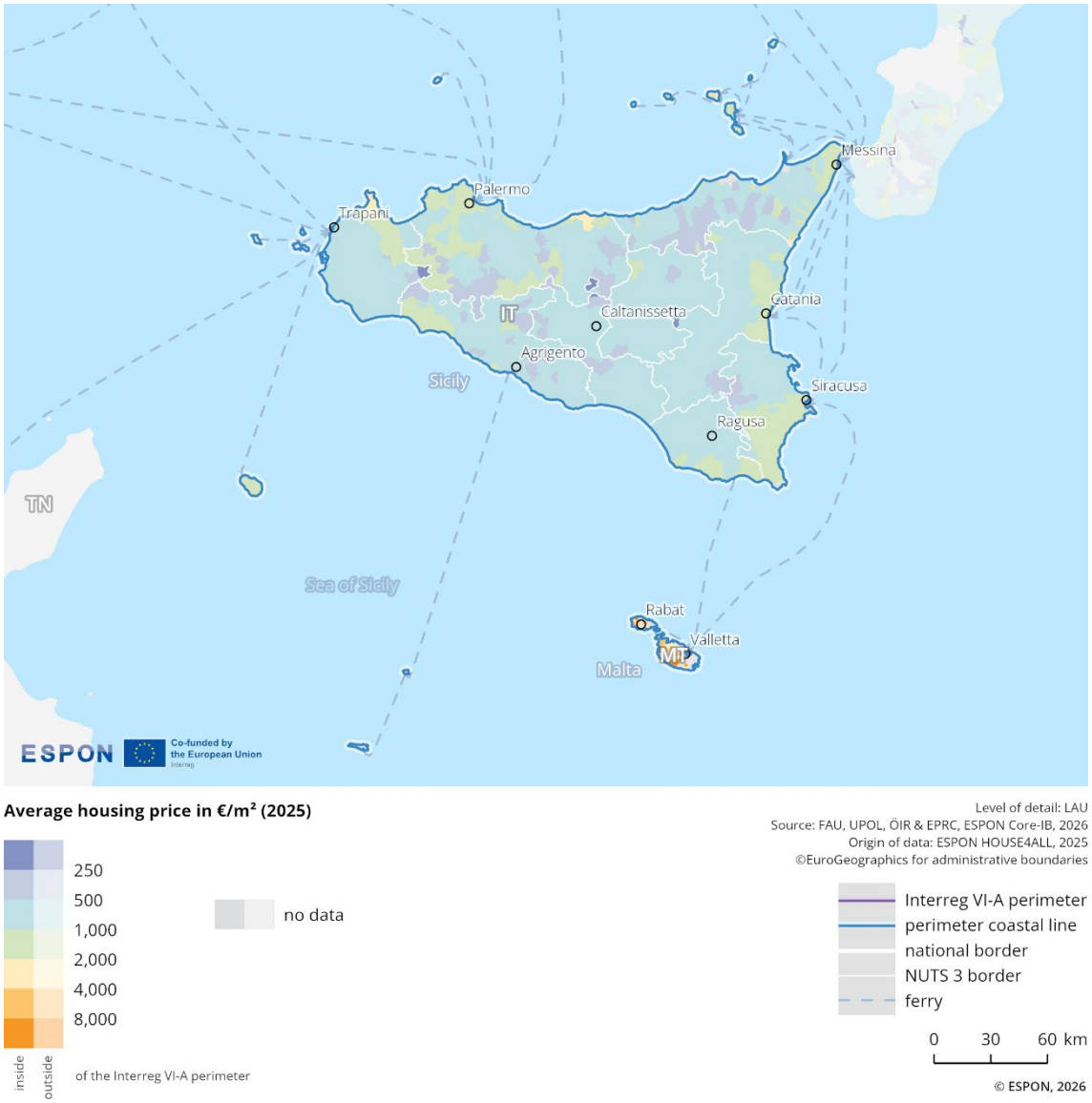
- **Source/method of retrieval**: Processed ESPON House4all data. The original data is collected via web-scraping of national listing websites over a one-year period.
- **Temporal coverage**: 2024/2025
- **Unit**: Average price per square meter (€/m^2)

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^2 up to more than 8,000 €/m^2, shown in colours ranging from purple and blue to green, yellow and orange.

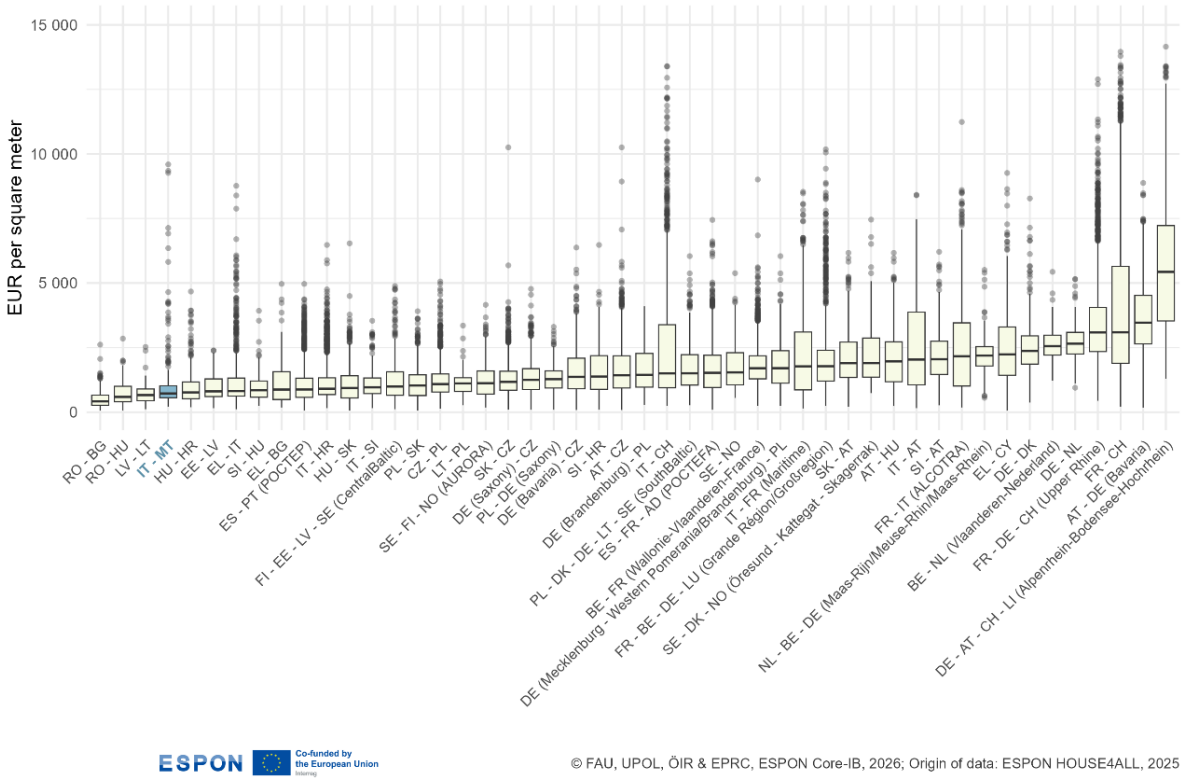
The map shows that the Italian island of Sicily has average prices ranging from 50 to 2,000 €/m^2 with small exception in the port of Trapani where the price is above 2,000 €/m^2. Linked to the limited land availability, Malta has much higher prices than Sicily, Italy. In Malta, prices range from 2,000 to over 8,000 €/m^2, with the dominant category above 4,000 €/m^2.

Figure 2.16: Advertised housing prices



As depicted in Figure 2.16, Sicily has an average advertised sales price of around 794 €/m². Malta has an average advertised sales price of around 4,848 €/m². The average advertised sales price in this whole border region is 1,015 €/m², it is below the average of all EU evaluated border regions, which is 1,900 €/m². The prices are below European average of 5,600 €/m² (see Figure 2.17).

Figure 2.17: Advertised housing prices (comparison)



ESPON Co-funded by the European Union

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.

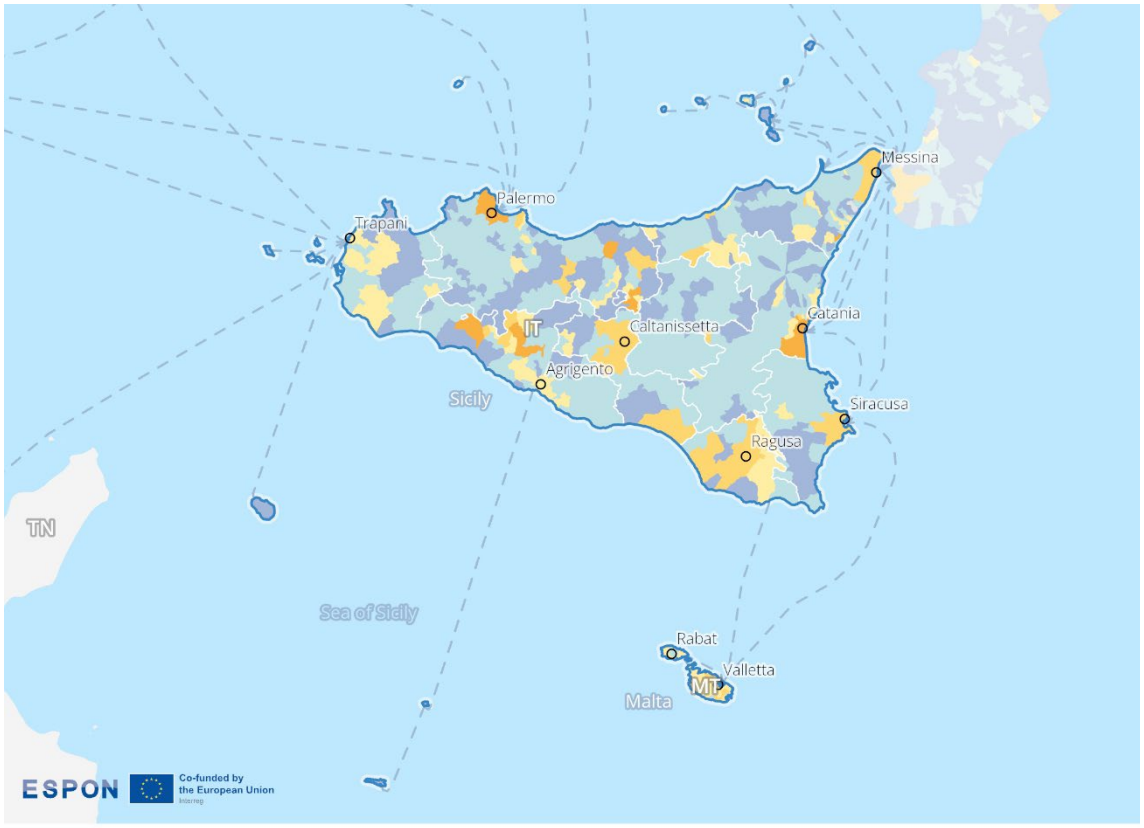
Digitalisation is a highly relevant issue in European border regions, with the overarching objective of ensuring appropriate digital access. It is widely recognised as a key precondition for successful regional and economic development. A major challenge in this process is preventing 'digital divides'— 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 Trapani, Palermo, Agrigento, Caltanissetta, Catania, Siracusa, and Valletta 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. The mountainous terrain in Sicily clearly poses a challenge in providing high-speed internet. In the case of islands and remote coastal areas, digital disparities need to be understood within the specific context of maritime geography. These territories often face structural disadvantages in connectivity compared to the mainland, resulting from their physical isolation, limited infrastructure, and higher costs of network deployment and maintenance.

Figure 2.18: Average internet download speed



Average internet speed in Mbps (2022)

50
100
150
200
inside
outside
of the Interreg VI-A perimeter

no data

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

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

0 30 60 km

© ESPON, 2026

2.2.5 Key messages on the economic dimension

Despite an important growth over the last 10 years, the GDP per capita of the whole programme area remains below the 75% of the European average GDP per capita. It is mostly carried by the Maltese part of the border region, which while remaining lower than the European average is much stronger than the Sicilian GDP per capita. The share of employment per capita remains lower than the European average, while the share of population in working age is higher than the European average. This discrepancy suggests a high unemployment rate and difficulties for young people of working age to enter the labour market, while the value of goods and services purchased on the island increased, probably due to tourism and higher prices and/or improved quality of services in the tourism sector.

The sectors of employment are driven by one productive sector (wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, accommodation and food service activities) and 2 (public) services sectors. These also carry the regional gross added value, with the real estate activities, which despite having a low share of employment generating high gross values added. This can be partially explained by the very high prices per m^2 in Malta, which are mainly driven by scarce land availability and the boom of short-term rentals via platforms such as Airbnb.

While commuting appears to be possible between the south of Sicily and Valletta, commuting does not appear to be an explaining factor of economic trends in the border region. No clear territorial pattern of economic development appears when analysing the economic indicators of the border region.

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

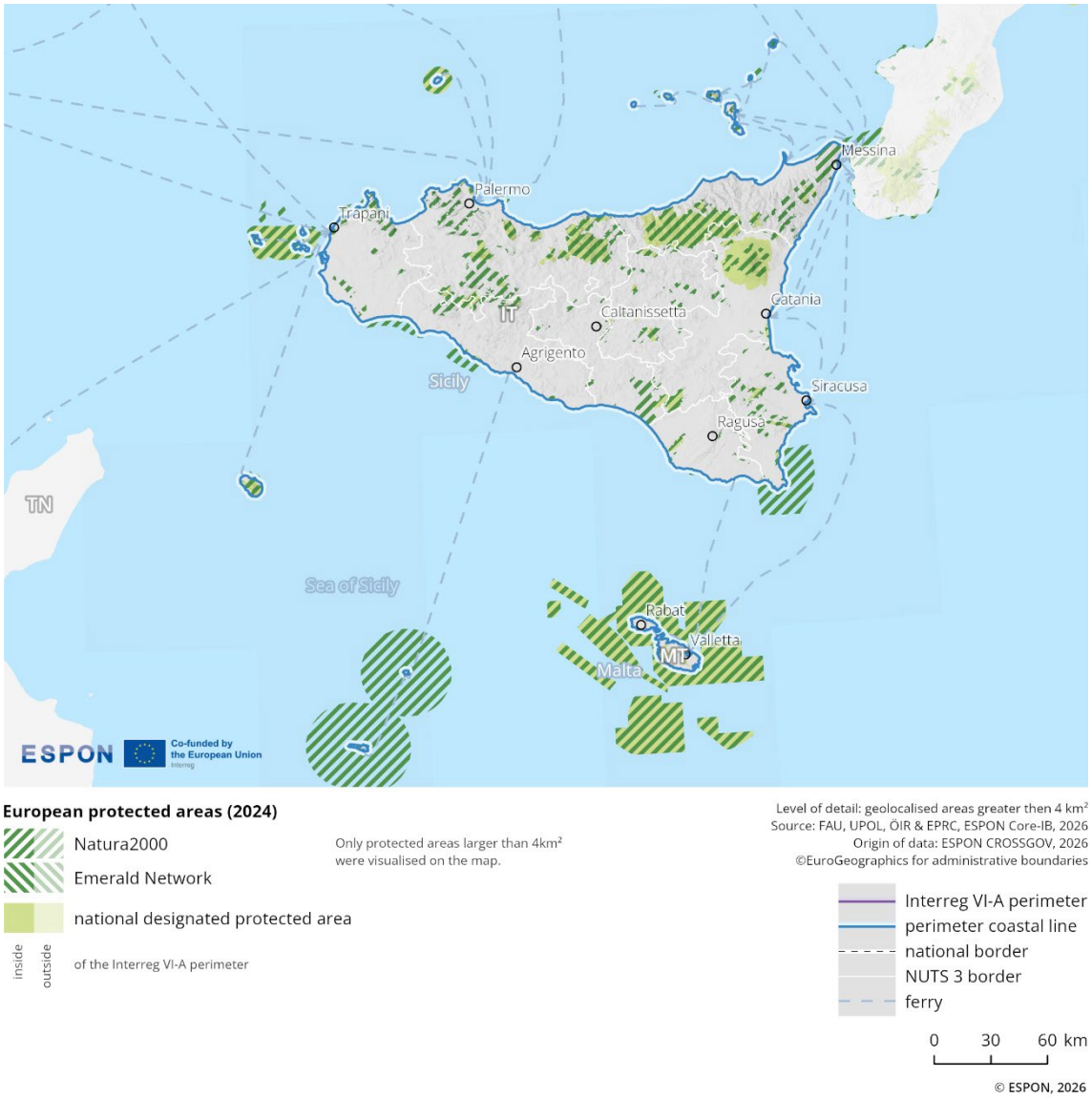
Please refer to the technical annex for more information.

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 km² displayed.

Protected areas within the Interreg region are primarily concentrated along the coastlines and in the marine zones surrounding Sicily and Malta. Larger contiguous protected areas are found near Trapani, Siracusa, and along the northern and eastern coasts of Sicily, with overlapping Natura 2000 and national designations. Inland coverage is more limited, with smaller patches near Catania and central Sicily.

Due to the maritime setting, there are no protected areas with direct cross-border counterparts between Sicily and Malta.

Figure 2.19: Nature protected areas



2.3.1.2 Air pollution

Indicator description

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

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

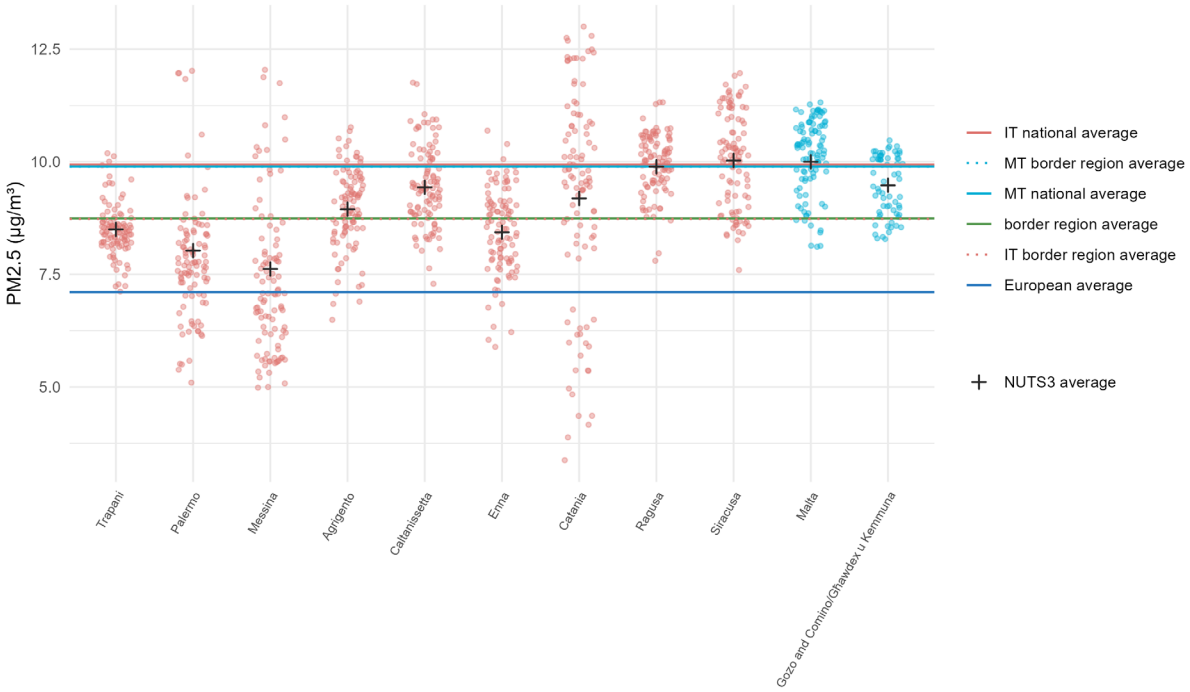
Please refer to the technical annex for more information.

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

PM2.5 measurements in the Italian regions show a wider range compared to those in the Maltese regions, where values are more concentrated between 8 and 12 µg/m³. Overall, the Italian national average is slightly higher than the Maltese national average, though both are closely aligned.

The European average is significantly lower than the values for Italy and Malta, as well as the cross-border region average. The cross-border average is closely aligned with the Italian border region average and is clearly lower than the national averages of both countries.

Figure 2.20: Air pollution



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

2.3.1.3 Water pollution

Indicator description

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

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

Please refer to the technical annex for more information.

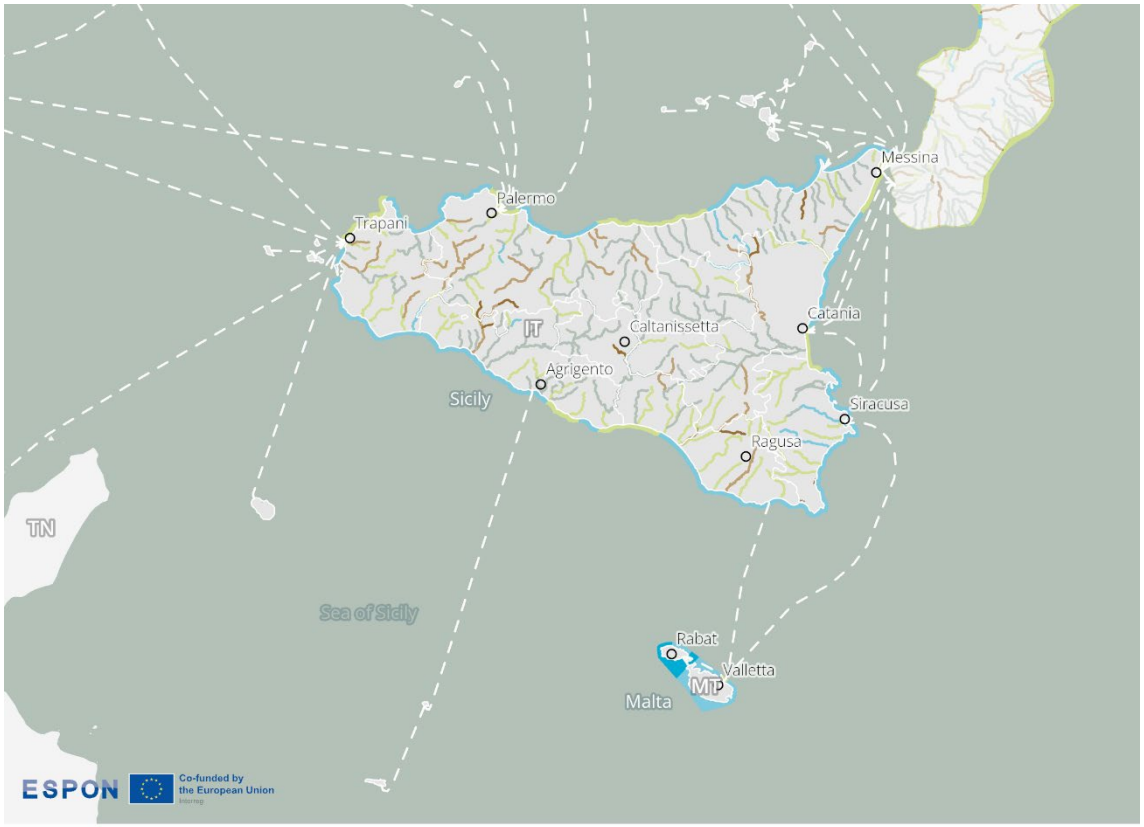
Figure 2.21 illustrates water pollution levels within the Interreg region in 2022. Water quality is represented using 6 colour-coded categories, ranging from "bad" to "high", including an "unknown" category[11].

The coast of Malta is mostly rated as having "high" water quality, with "moderate" values in some areas around the city of Valletta. There is no additional data available for inland areas of the Maltese island.

On the Italian island of Sicily, water quality is rather mixed, with no clear overall spatial pattern. However, there is a tendency for water quality to be "moderate" to "low" or "bad". The Sicilian coastline is alternately rated as having "moderate", "good", or "high" water quality. However, there are many rivers classified as "unknown", which limits the reliability of the data due to missing information. While no clear cause for the quality of the water can be derived from the information at hand, partial explanations can be found in the high to very high risk of drought which the island is facing.

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

Figure 2.21: Water quality patterns



Water quality (2022*)

- high
- good
- moderate
- poor
- bad
- unknown

inside outside inside outside of the Interreg VI-A perimeter

Level of detail: geolocalised lines and areas
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: © European Environment Agency, 2025
©EuroGeographics for administrative boundaries

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

0 30 60 km

© ESPON, 2026

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.

2.3.2.1 Natural hazard risks

Indicator description

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

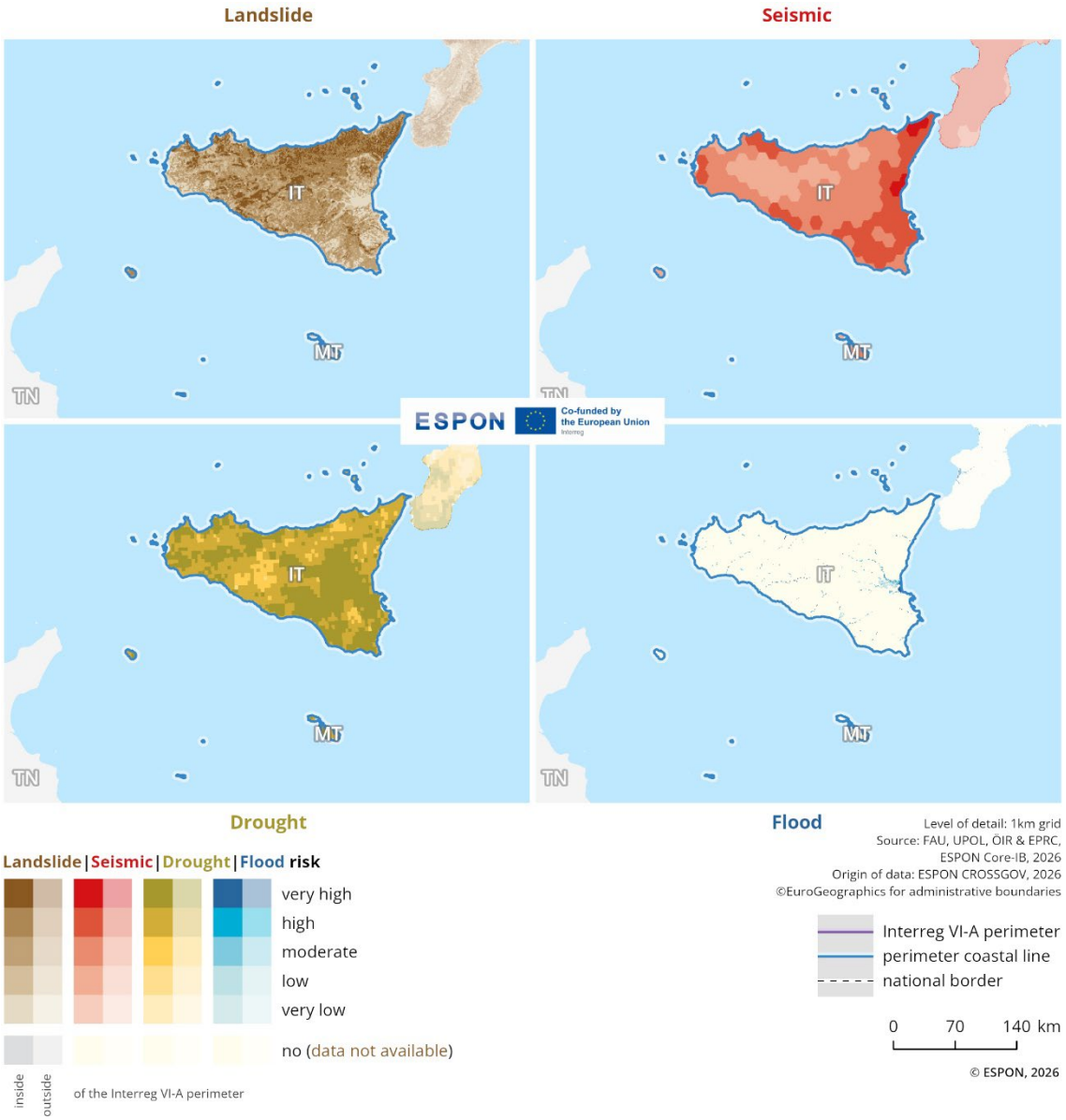
- **Source/method of retrieval**: The indicator is based on geodata from the Disaster Management Risk Knowledge Centre/JRC. It provides the likelihood of specific natural hazard events at grid level.
- **Temporal coverage**: 2024
- **Unit**: n/a

Please refer to the technical annex for more information.

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

Sicily has a high risk of landslide across the whole island but especially in the North. Seismic activities occur especially alongside the cost and are highest in the eastern part of the region, while in Malta they are not prevalent. The whole island of Sicily is in severe risk of droughts, while floodings only occur very locally. Likewise, Malta is affected by drought risks.

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.[12]

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

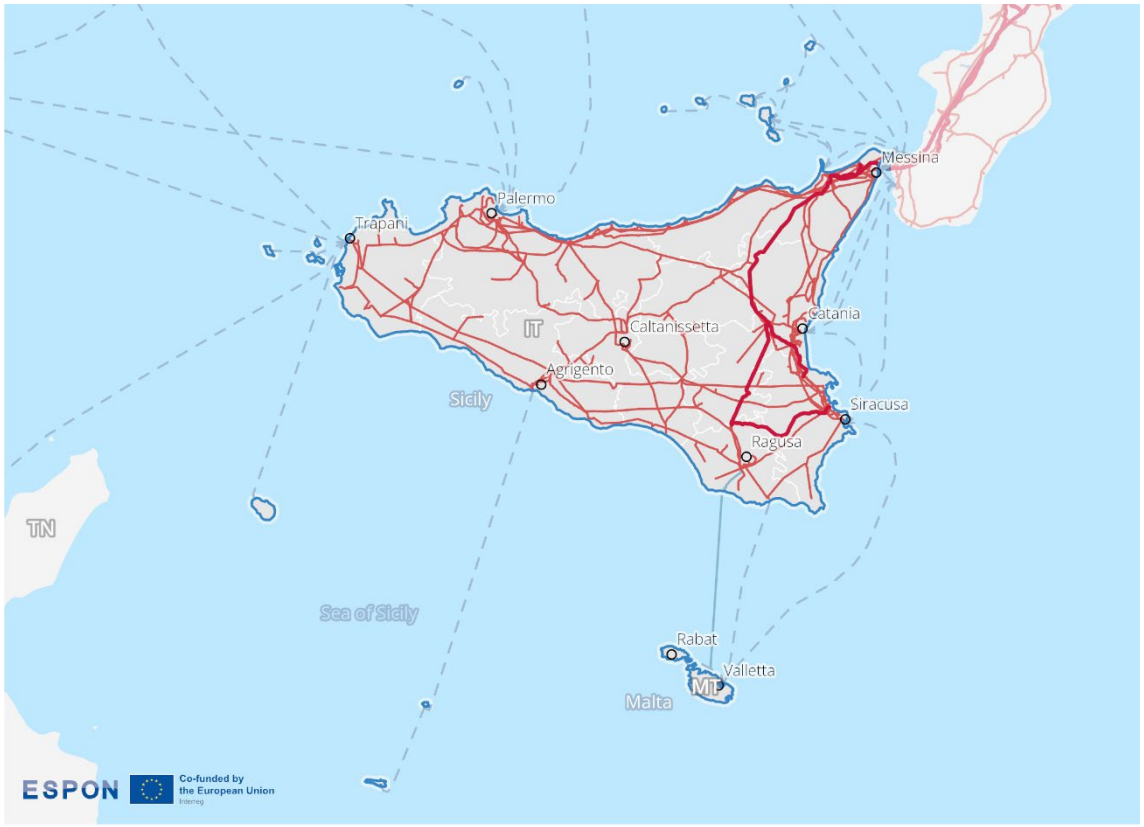
Please refer to the technical annex for more information.

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 lies, further classified into high-voltage (100-230 kV), extra high-voltage (230-1,000 kV), and ultra-high voltage (above 1,000 kV).

In the case of cross-border region of Italy-Malta, it is not possible to fully assess the electricity network of the Maltese archipelago (given the size of Malta and the scale of Figure 2.23). However, in Italy (Sicily) the map shows quite developed high-voltage transmission infrastructure. In the eastern part of Sicily, an extra high-voltage power line runs southwards from the mainland of Italy. After being reduced to a lower level of electrical power, the undersea cable emerges from the southern part of Sicily and directly connects Malta and Italy.

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

Figure 2.23: High-voltage transmission infrastructure



Overhead power lines (2025)

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

Underground power cables (2025)

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

inside / outside of the Interreg VI-A perimeter

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

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

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

0 30 60 km

© ESPON, 2026

2.3.3.2 Power stations

Indicator description

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

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

Please refer to the technical annex for more information.

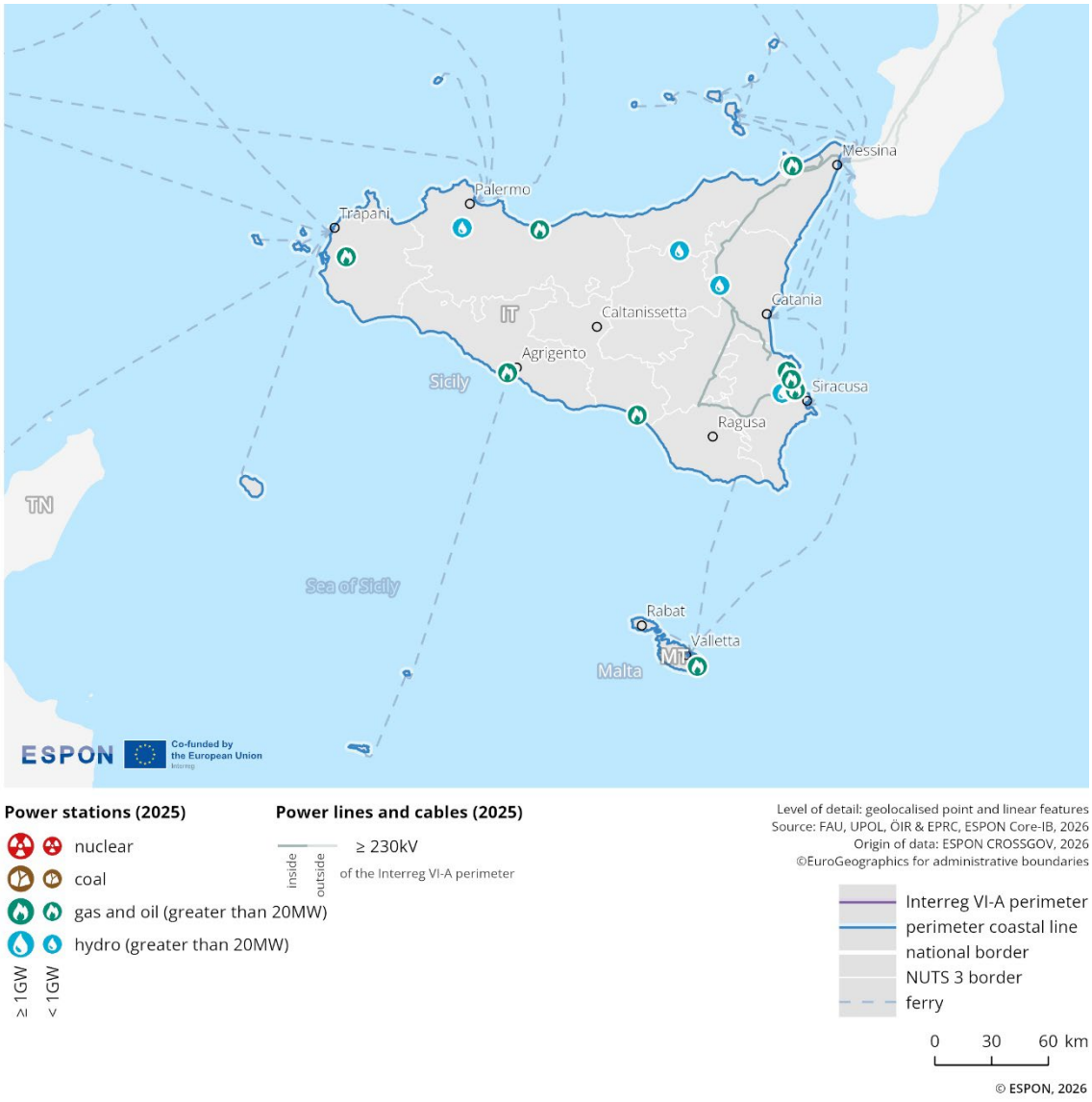
In the maritime Italy-Malta cross-border region, in total, there are 17 power station locations and the most frequent category is represented by gas and oil power stations (see Table 1).

Table 1: Number and type of power stations

Power stations/plants	Less than 1GW	1GW and up
Nuclear	/	/
Coal	/	/
Gas and oil	13	/
Hydro	4	/

All gas and oil power stations are located right on the coast. Hydroelectric power stations are all located in Sicily, 3 of them further inland. No nuclear power plant or coal power stations are present in the whole region (see Figure 2.24).

Figure 2.24: Power stations infrastructure



2.3.4 Resources and circular economy

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

2.3.4.1 Resource productivity

Indicator description

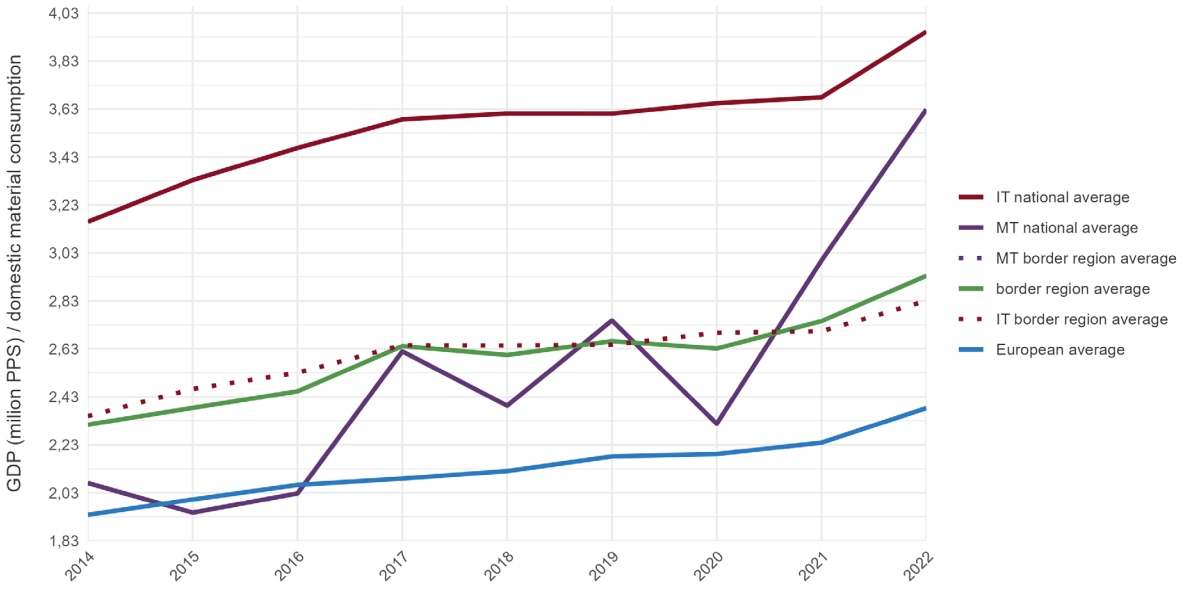
The indicator shows the economic value generated per unit of material consumed for each region within the cross-border area. Developments over time provide insights if the decoupling of productivity from resource use is progressing on regional level.

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

Please refer to the technical annex for more information.

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

Figure 2.25: Resource productivity



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The Italian national average of resource productivity is represented by the highest line in Figure 2.25, showing an increase over the period from around 3.23 in 2014 to over 3.83 million PPS GDP per unit of domestic material consumption in 2022. The Italian border region average follows a similar trend but remains clearly lower.

The Maltese national average shows strong fluctuations, with 2 pronounced peaks in 2017 and 2019. From 2020 onward, the value of resource productivity increases sharply, rising from around 2.33 to 3.53 million PPS GDP per unit of domestic material consumption in 2022.

The European average lies significantly below both the Italian values and the border regional average. This border region average is nearly aligned with the Italian border region average, reaching around 2.93 million PPS GDP per unit of domestic material consumption in 2022.

2.3.4.2 Generation of waste per GDP

Indicator description

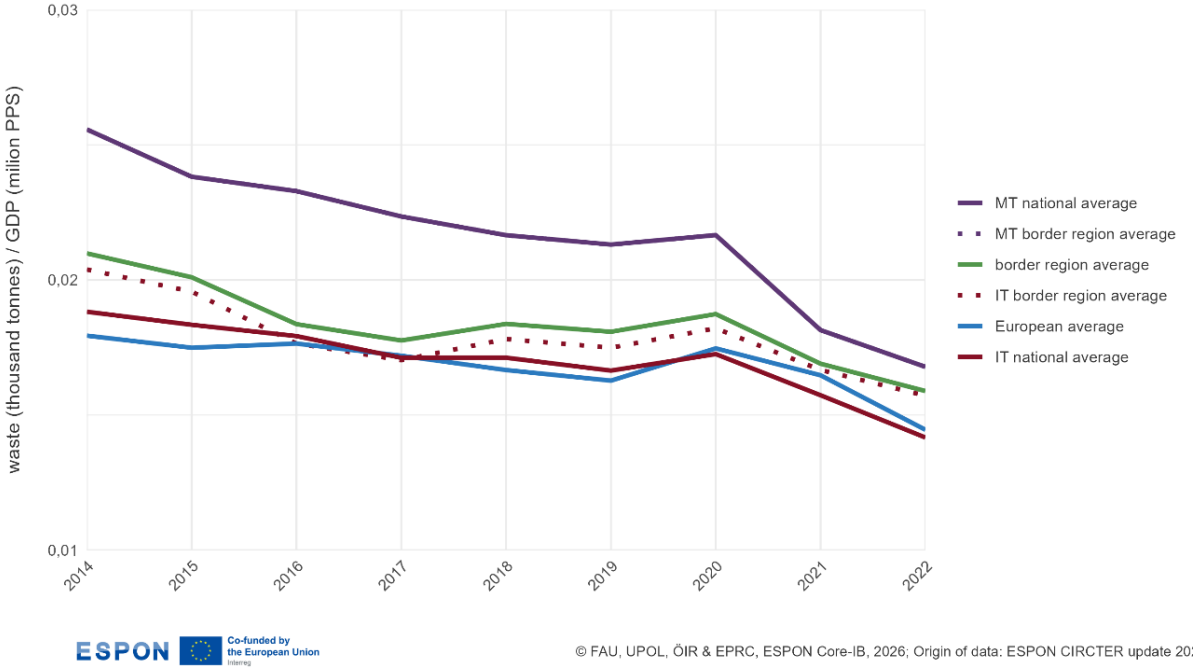
The indicator shows the regional distribution of waste creation in relation to the GDP development. Comparing waste generated to GDP reflects the waste intensity of the economy and provides a measure of "eco-efficiency". Observation of its change from year to year permits to assess whether the economy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

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

Please refer to the technical annex for more information.

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

Figure 2.26: Waste generation per GDP



ESPON Co-funded by the European Union Interreg

Italian and Maltese values exhibit a steady downward trend over the observed period. The Italian national average closely aligns with the European average, reaching approximately 0.015 tonnes of

waste per million PPS in 2022. The Italian border region average follows a similar trend. Overall, the Maltese national average is significantly higher than the Italian and European values; however, it shows a sharp decrease in 2020 and decreases to approximately 0.017 tonnes of waste per million PPS by 2022.

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 above the European average and is closely aligned with the Italian border region average. In 2022, it reaches a value of approximately 0.016 tonnes of waste per million PPS.

2.3.5 Key messages on the green dimension

The whole cross-border region is determined by a number of environmental aspects (long coastal areas and important marine life, the Vulcan Etna, limited land availability for Malta, similar climate…) but has no common, cross-border protected area. The common and most important risk for both islands is the risk of droughts, with higher risks of landslides and seismic activity in Sicily.

Air pollution in the islands is relatively high, with the highest average appearing in the region of Siracusa and the main island of Malta. The main reasons for air pollution in Sicily are forest fires, eruptions of the Etna Vulcan, industry and transports. For Malta the source of pollution seems to be mostly linked to population density. Overall, the water quality is moderate to high on the coasts with tendentially lesser quality as they rank down to bad quality in Sicily and might be linked to questions droughts. These common challenges together with the management of protected areas present potential for cross-border cooperation.

As for energy production and distribution, the islands of Sicily and Malta are related by one underground high voltage line which is mostly transporting electricity produced at gas and oil powerplants, thus implying that an important part of the energy produced and consumed comes from none renewable sources of energy, with only few opportunities to stock solar energy via the 4 hydropower plants in Sicily.

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.

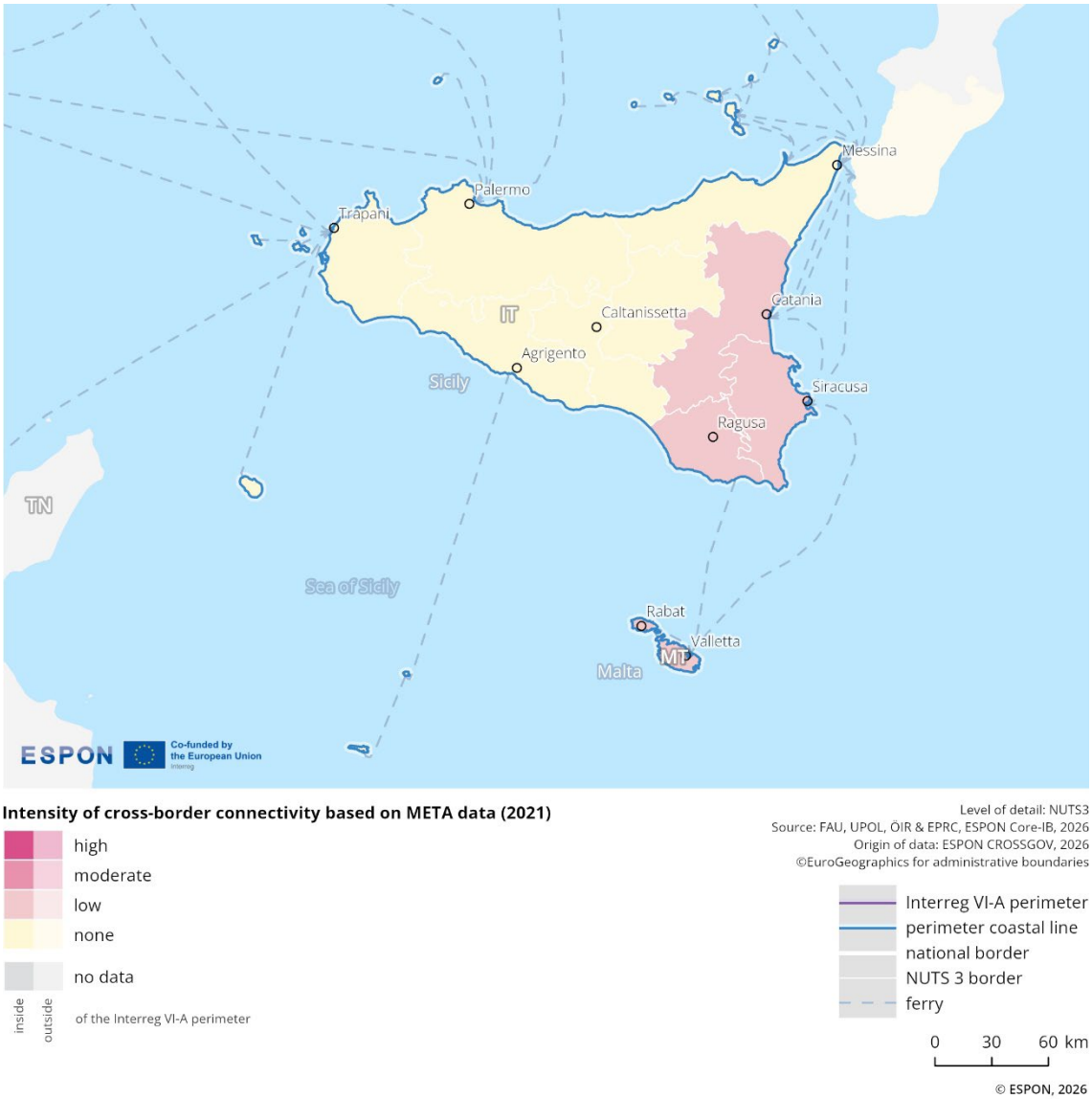
- **Source/method of retrieval**: Processing Facebook data on existing connections across the border (data for Good Meta)
- **Temporal coverage**: 2021
- **Unit**: n/a

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

The map depicts a relatively uniform intensity of cross-border connectivity in social media among residents of this border region. Across most of Sicily, cross-border connectivity in social media is absent (including cities such as Trapani, Palermo, Agrigento, and Caltanissetta), with only the areas around Catania and Siracusa exhibiting at least low cross-border connectivity intensity in social media. In Malta, cross-border connectivity in social media intensity is low.

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.

3 different languages characterise the border region (Italian, Maltese and English), with no similarities. It has to be noted that Italian is by far the most relevant foreign language in Malta, with 62% of the population reporting at least basic understanding, about 30% of which reporting even advanced knowledge.[13]

2.4.2 Tourism

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

2.4.2.1 Nights spent at tourist accommodation establishments

Indicator description

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

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

Please refer to the technical annex for more information.

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

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

In 2023, the NUTS3 regions Messina, Trapani and Malta show 5 to 10 nights per capita[14]. In terms of total overnight stays over the 3-year period, the leading tourism regions are Malta (approx. 9.6 million), Palermo (approx. 3.9 million) and Messina (approx. 3.7 million). There is a particularly high density of popular UNESCO heritage sites, such as the City of Valetta on Malta and the Villa Romana del Casale, the Archaeological Area of Agrigento and the Late Baroque Towns of the Val di Noto in south-eastern Sicily.

[13] NSO Malta | Malta Skills Survey: Final Report - NSO Malta

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

Figure 2.28: Overnight stays in tourism

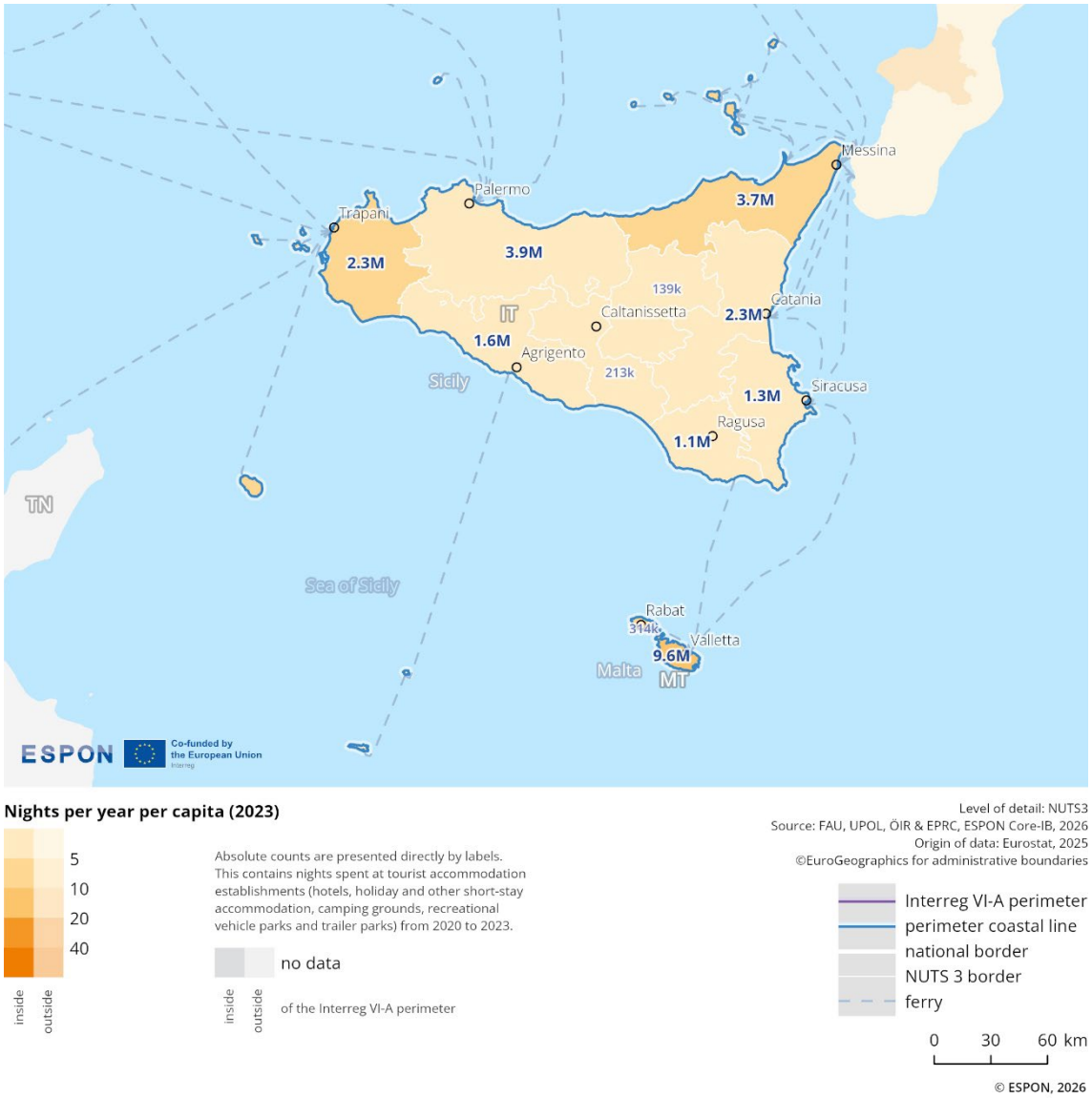
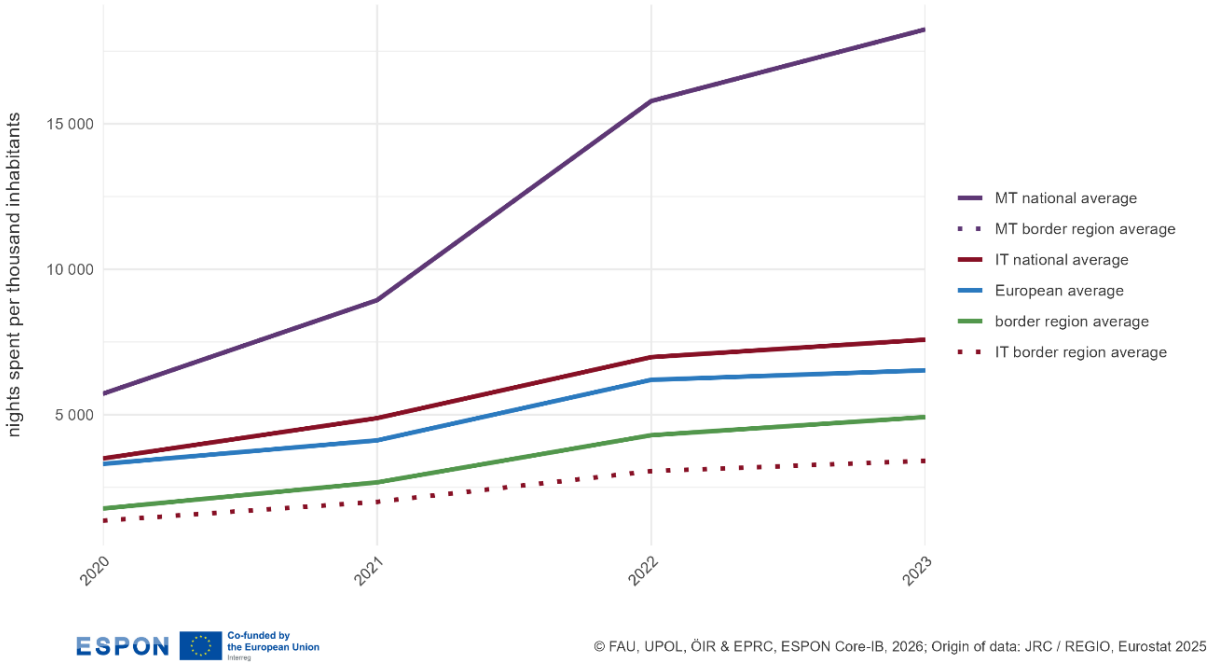


Figure 2.29 illustrates the development of nights spent at tourist establishments per thousand inhabitants from 2020 to 2023. Over the entire period, the average for the Italy-Malta programme area is lower than the overall European average, which includes both EU member states and the EFTA countries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

Figure 2.29: Overnight stays in tourism (comparison)



ESPON Co-funded by the European Union Interreg

2.4.3 Services of general interest

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

2.4.3.1 Accessibility to services of general interest

Indicator description

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

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

Please refer to the technical annex for more information.

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

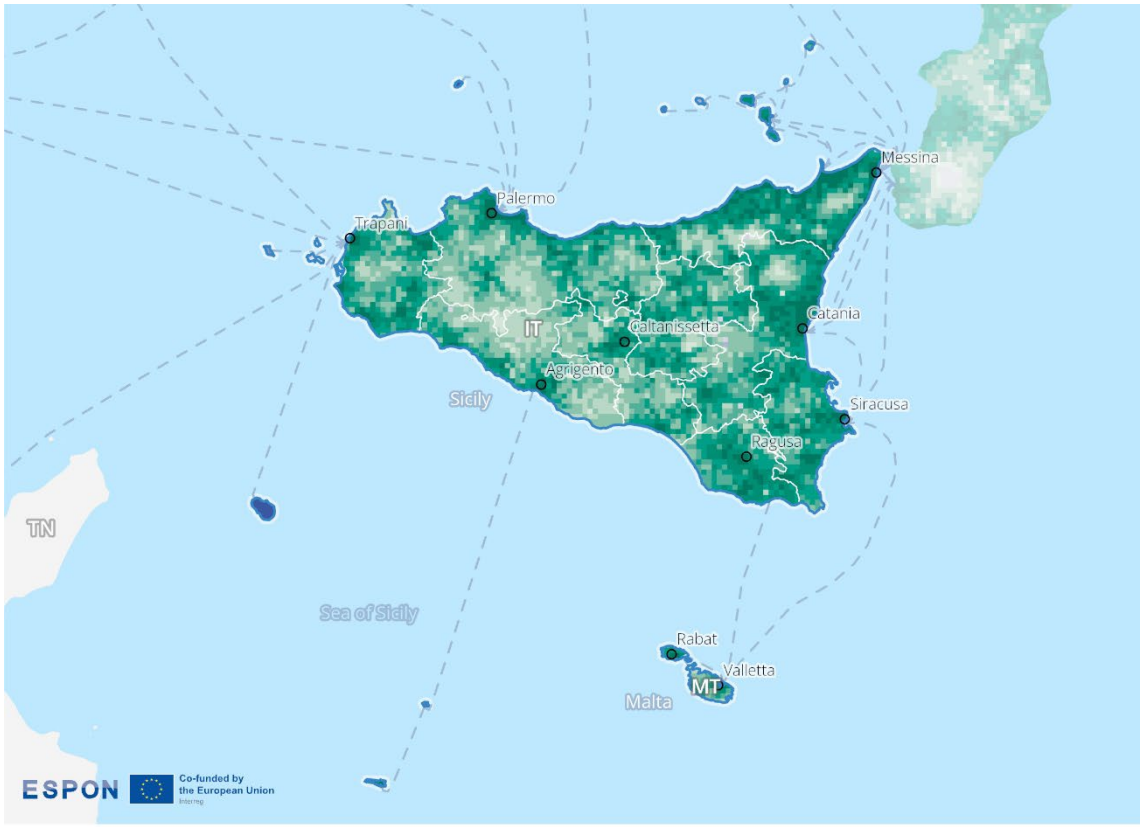
- Secondary schools (Figure 2.30)
- Grocery shops (Figure 2.31)
- Hospitals (Figure 2.32)
- Doctors (Figure 2.33)
- Pharmacies (Figure 2.34)
- Cinemas (Figure 2.35)

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

In the Italy–Malta border area, essential services such as hospitals, doctors, pharmacies, schools, and grocery shops are quite evenly distributed in Malta. In Sicily, services are mostly concentrated around larger cities. This results in travel times of more than one hour in some parts of Sicily.

Hospitals are mainly located in cities and more densely populated areas. This common challenge in Italian and Maltese border areas creates an urban–rural gradient. Travel times are shorter in and near urban centres and longer 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)

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

inside outside of the Interreg VI-A perimeter

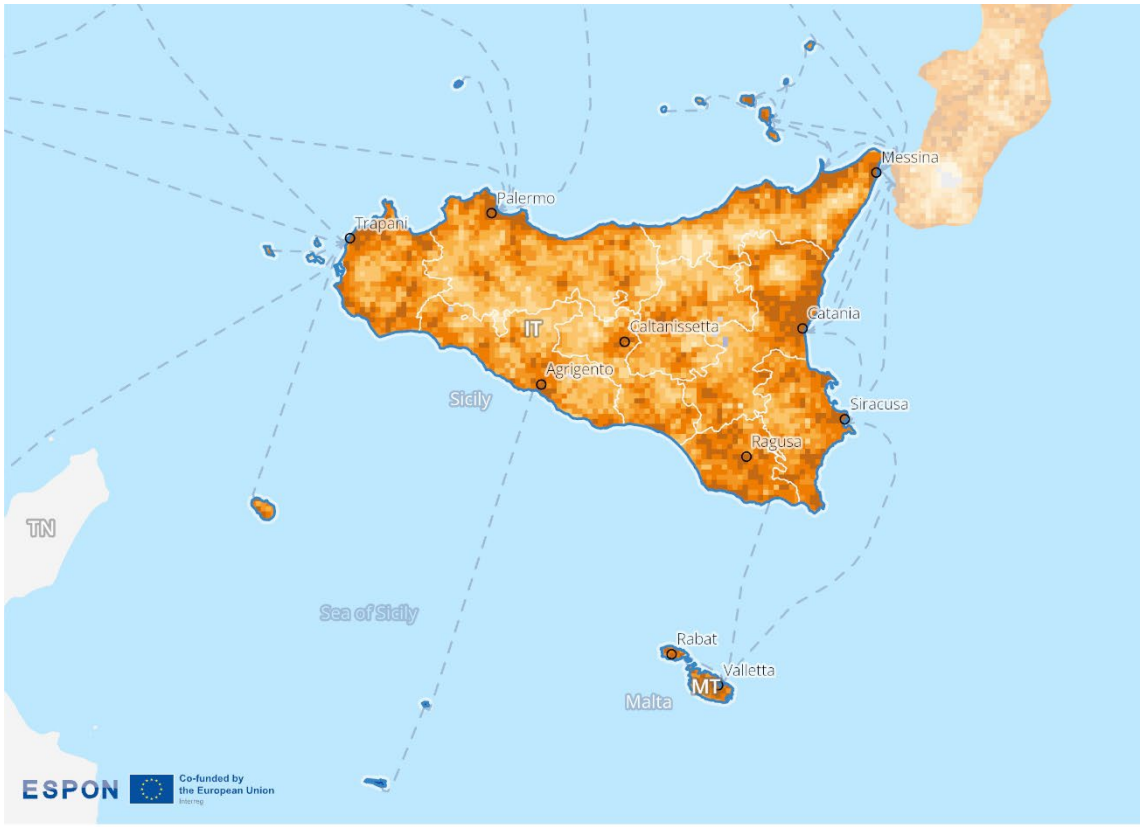
Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

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

0 30 60 km

© ESPON, 2026

Figure 2.31: Travel time to grocery shops



Car travel time to the nearest shop (2021)

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

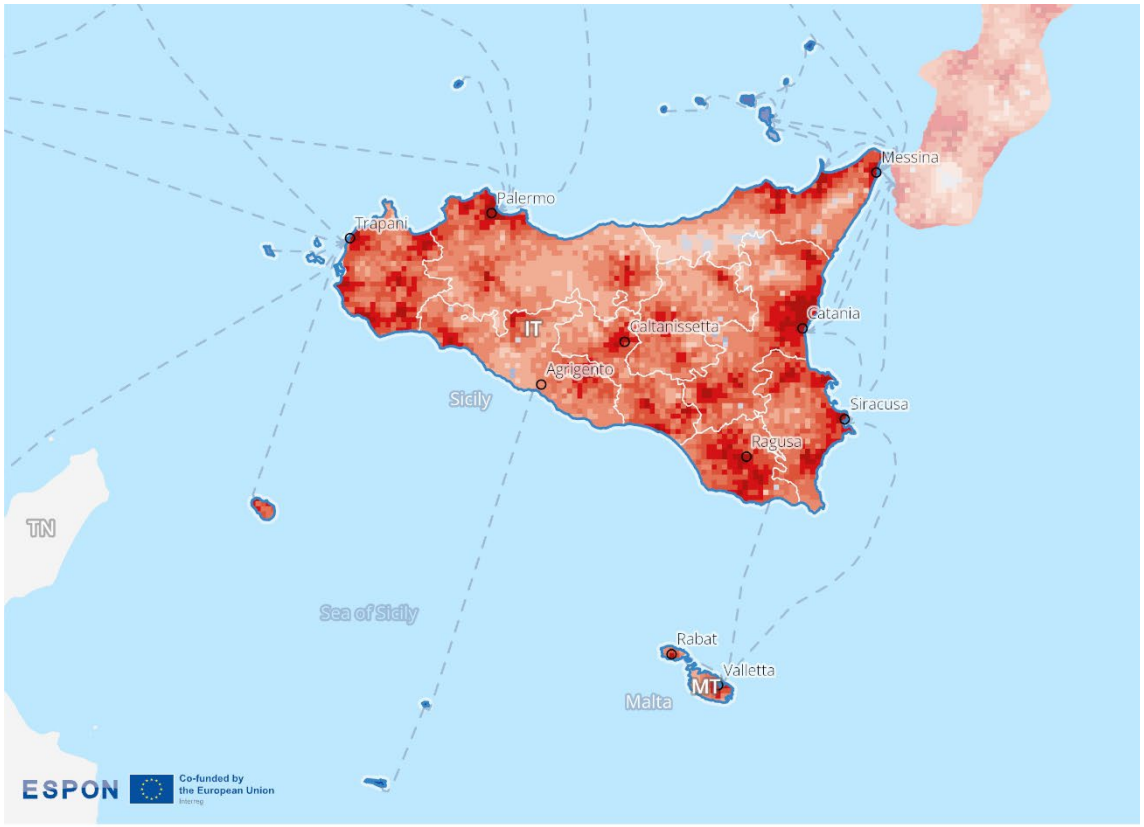
inside outside of the Interreg VI-A perimeter

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

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

0 30 60 km

Figure 2.32: Travel time to hospitals



Car travel time to the nearest hospital (2021)

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

inside outside of the Interreg VI-A perimeter

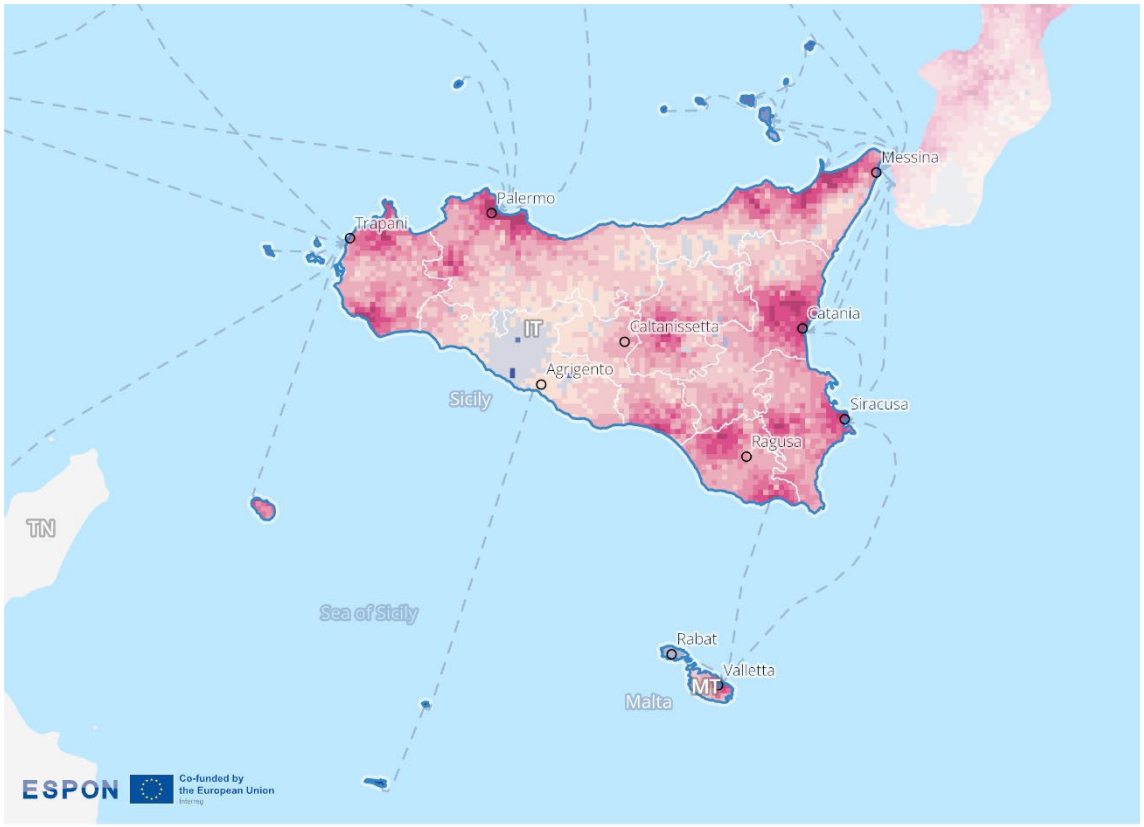
Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

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

0 30 60 km

© ESPON, 2026

Figure 2.33: Travel time to doctors



Car travel time to the nearest doctor (2021)

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

inside outside of the Interreg VI-A perimeter

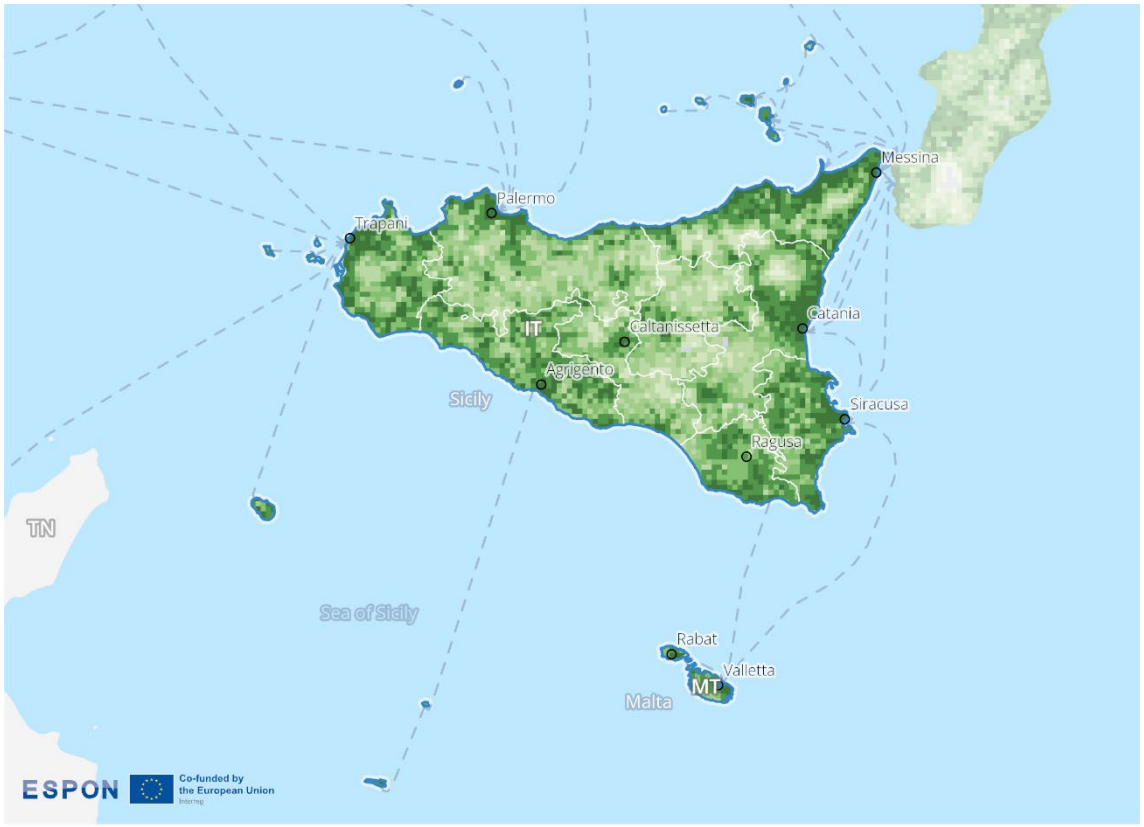
Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

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

0 30 60 km

© ESPON, 2026

Figure 2.34: Travel time to pharmacies



Car travel time to the nearest pharmacy (2021)

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

inside outside of the Interreg VI-A perimeter

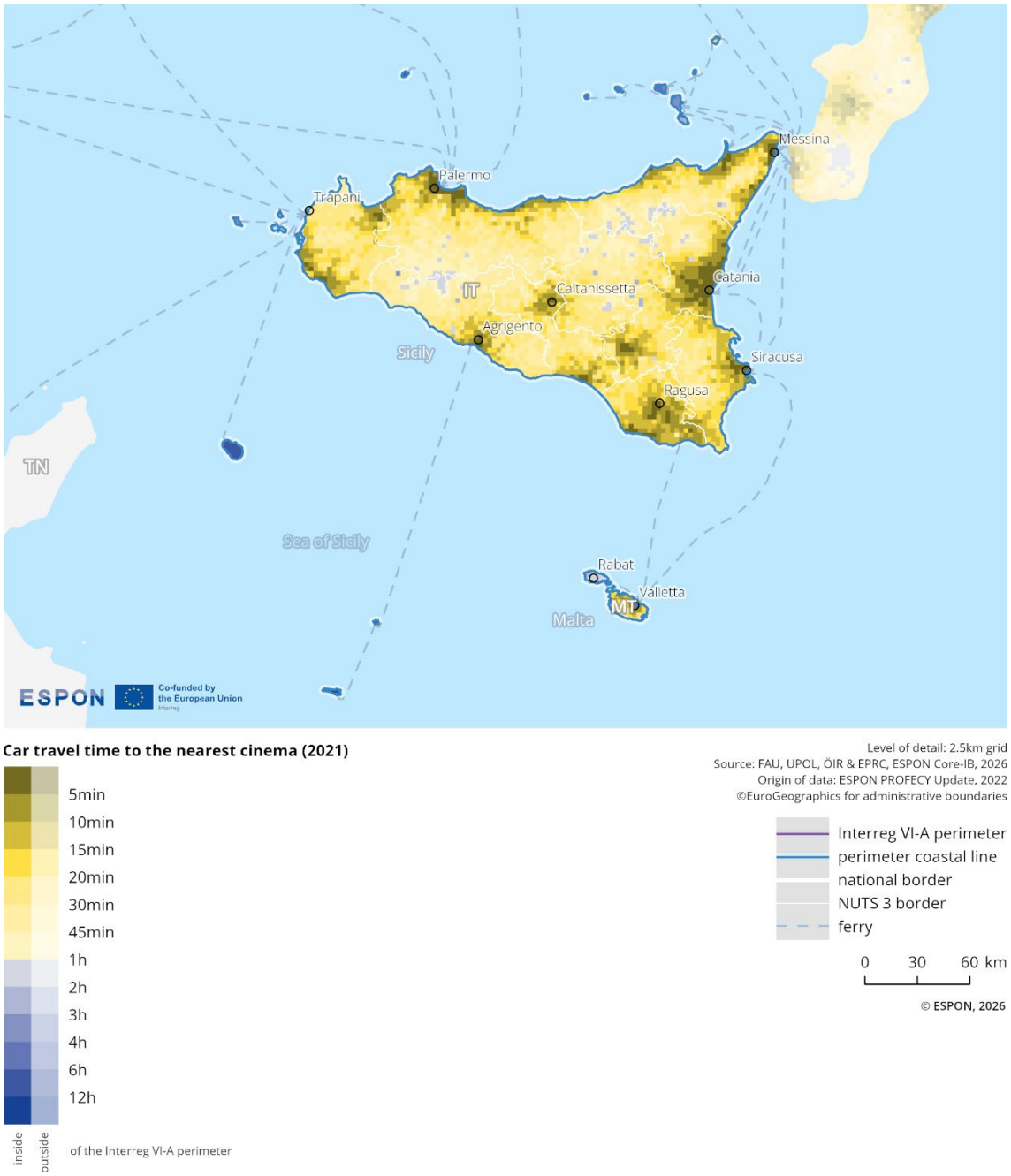
Level of detail: 2.5km grid
Source: FAU, UPOL, ÖIR & EPRC, ESPON Core-IB, 2026
Origin of data: ESPON PROFECY Update, 2022
©EuroGeographics for administrative boundaries

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

0 30 60 km

© ESPON, 2026

Figure 2.35: Travel time to cinemas



2.4.4 Key messages on the socio-economic dimension

The impact of the geographical distance and language dissimilarities between both islands is reflected in the low intensity of social cross-border connectivity in social media observed. Furthermore, it renders cross-border accesses of services of general interest irrelevant as a mean of compensation for local gaps. The programme area shows an overall good accessibility of services, coherent to the patterns of population density. This leads in the case of Sicily for stronger urban/rural divides, especially for cultural services like cinemas.

Common to both islands, however, is the intensity of tourism and the challenges that come with it (waste management, fluctuating needs in infrastructure size, seasonal overpopulation…).

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.

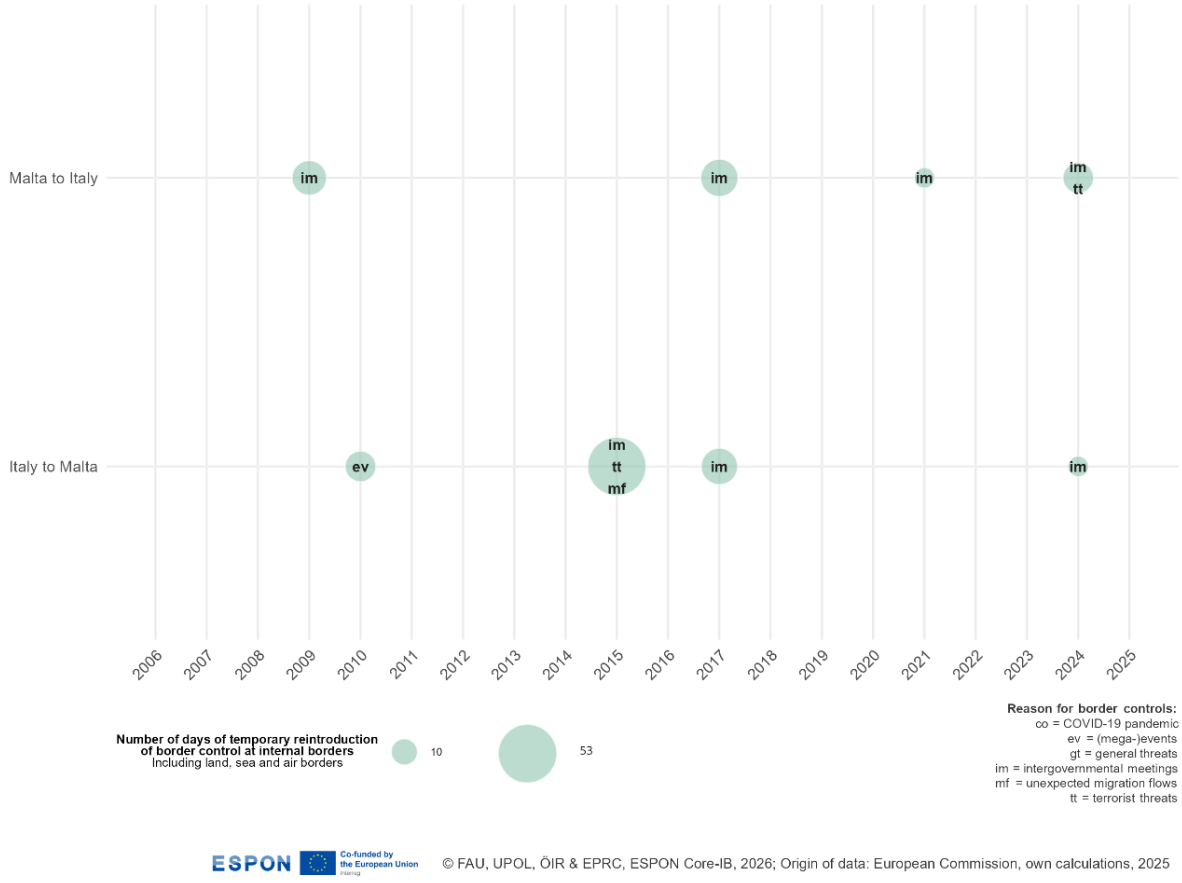
Figure 2.36 illustrates the number of days during which temporary border controls were reintroduced at internal borders within the Schengen Area. Each bubble represents a specific year with bubble sizes indicating the number of days the respective border was under control. The categories of reasons for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

Italy had already been part of the Schengen Area by 2006, while Malta joined in 2007.

Figure 2.36: Temporary reintroduction of border controls



The Italy-Malta border area is characterised by a similar pattern:

- Crossing the border from Malta to Italy: Temporary border control occurred in 4 out of 20 years, driven by intergovernmental meetings like G7/G8 summits (2009, 2017, 2021, 2024).
- Crossing the border from Italy to Malta: Temporary border controls occurred in 4 out of 20 years, mainly driven by conferences as the Conference on Migration and Commonwealth (2015).

From a comparative perspective, both countries have implemented temporary controls for a several days due to intergovernmental meetings.

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 reintroduction of border controls for this region is quite balanced and remain rather sporadic, except for the year 2015 when controls were reintroduced due to terrorist threats and unexpected migration flows. Such controls could impede already low exchanges between the border regions.

2.6 Governance dimension

This section covers the cross-border governance profile of the Italia-Malta Cross Border Programme area. The territories involved have a long history of cooperation between the Italian region of Sicily and Malta, going back to earlier EU funding periods cooperation among the 2 regions has intensified in recent years. Particularly for the 2021-2027 period Italy and Malta have agreed on common challenges and established shared priorities that focus on climate change adaptation, circular economy, smart specialisation, stronger social inclusion through culture and sustainable tourism and enhanced cross-border governance and institutional cooperation. Although the programme area is not covered by any Macro-Regional Strategy, it is in line with more general Mediterranean goals and policy frameworks. Important institutional cooperation mechanisms, such as the Joint Monitoring Committee (JMC) and Joint Secretariat (JS), play a central role in facilitating the effective implementation of the programme's objectives.

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

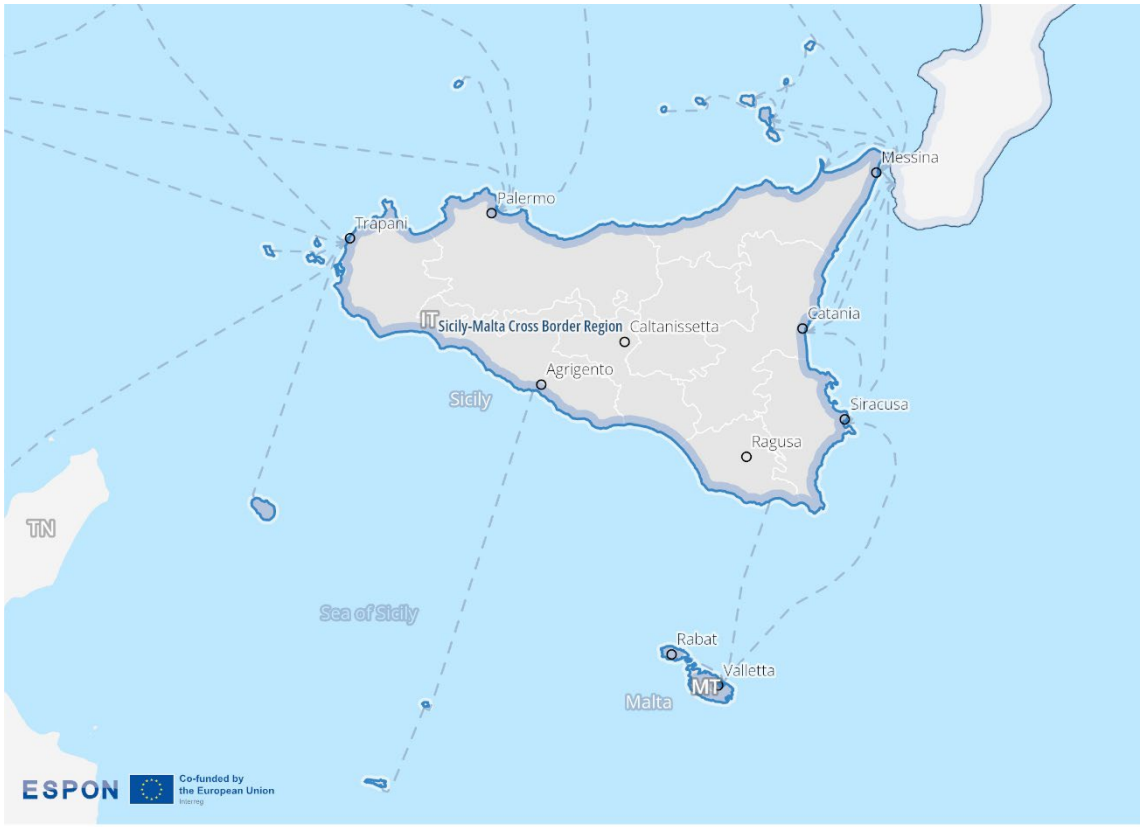
The indicator shows active institutionalised cooperation that act as cross-border entities. It includes cooperation formats such as Eurocities, Euroregions, EGTC, cross-border associations, cross-border councils, etc.

- **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 Interreg region of Sicily and Malta takes part in at least one Euroregion cooperation.

Figure 2.37: Cross-border governance structures



2.6.1.2 Cross-border public services

Indicator description

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

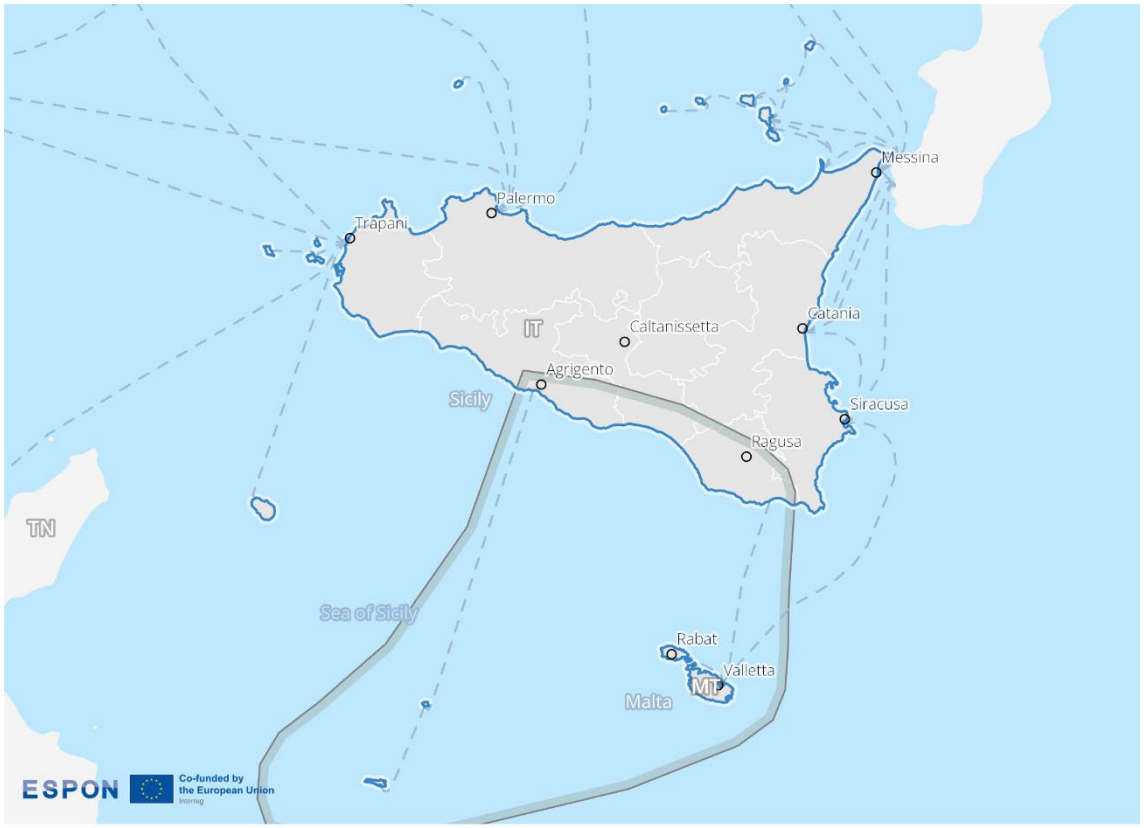
- **Source**: ESPON cross-border public services (CPS) 2.0 database
- **Temporal coverage**: 2022
- **Unit**: n/a

Please refer to the technical annex for more information.

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

Cross-border public services between Sicily (Italy) and Malta are very limited. The only identified cross-border public service is the SIMIT (Sistema Integrato di Protezione Civile Italo-Malteses) service of civile protection and disaster management link between the southeast of Sicily (around Siracusa) and Valletta, Malta.

Figure 2.38: Cross-border public services



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

areal linear character of the service

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

inside outside inside outside of the Interreg VI-A perimeter

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

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

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

0 30 60 km

2.6.1.3 Perceived cross-border obstacles in b-solutions

Indicator description

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

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

Please refer to the technical annex for more information.

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

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

2.6.1.4 Institutionalised advice centres for cross-border issues

Indicator description

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

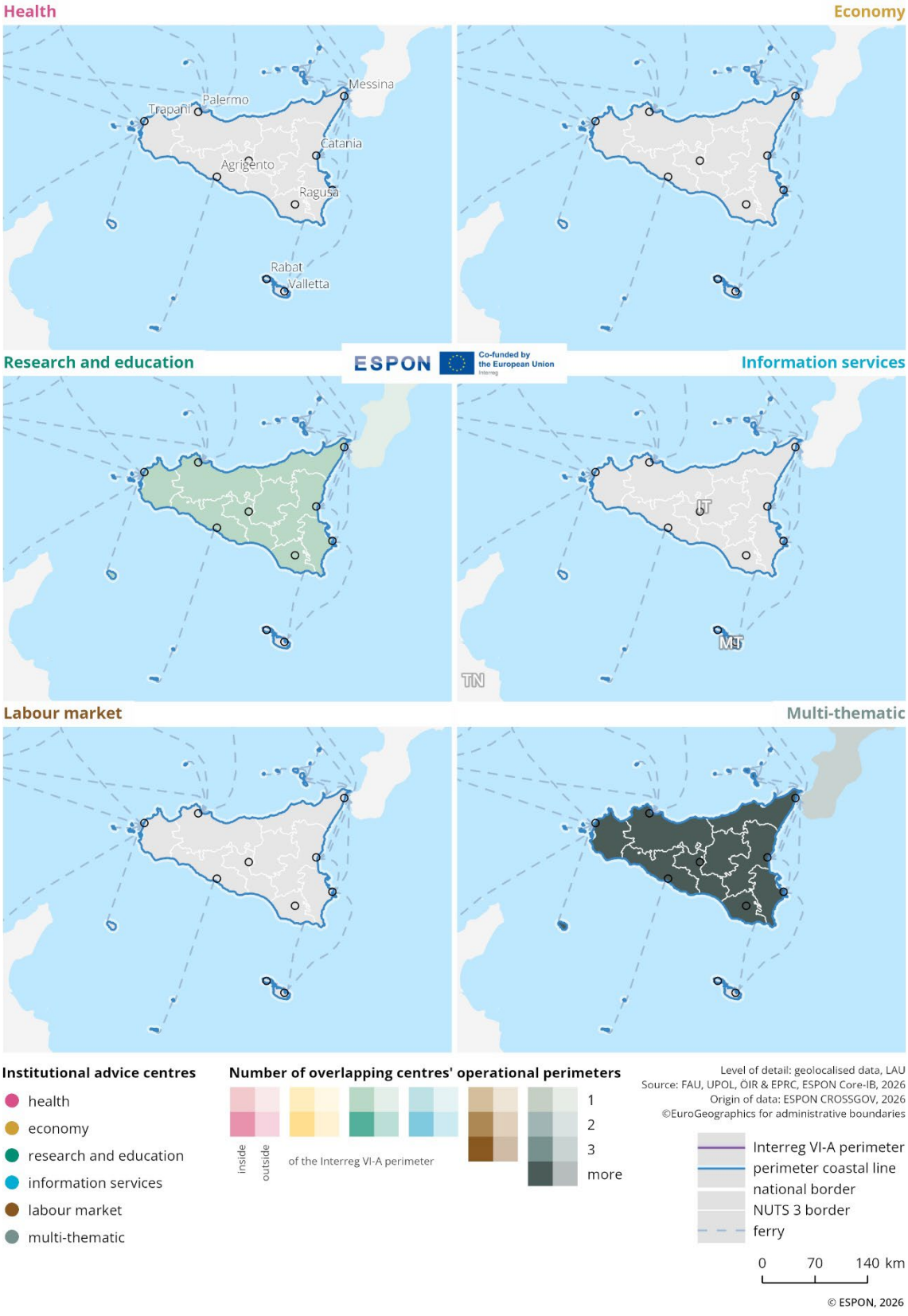
- **Source/method of retrieval**: Localisation and thematic focus of advice centres for cross-border issues are identified via desktop research.
- **Temporal coverage**: Status as of February 2025
- **Unit**: n/a

Please refer to the technical annex for more information.

Figure 2.39 shows the locations and types of institutionalised advice centres, along with their operational domains, in the cross-border Interreg region between Malta and Italy. These centres throughout Europe provide support in various fields such as health, economy, research & education, information services, the labour market, and multi-thematic issues. The operational domains of these centres are also indicated by coloured shading on the map. The more intense the colour, the stronger the influence of that specific domain in the corresponding area. There are no institutionalised advice centres in the Interreg region displayed on the map, nor are there any outside the Interreg region.

Centres with multi-thematic, as well as research and education operational domains, are represented in the Italian part of the Interreg region. In Malta, 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
Economy	▪ The maritime border, the island size of the 2 territories of the programme, the limited total research and development (R&D) spending, in particular in its private component, make it more difficult for small and medium enterprises (SMEs) to take full advantage of joint cross-border opportunities.
Environment	▪ Exposure to natural and man-made disasters: risks such as coastal erosion, floods, earthquakes, landslides, hydrocarbon spills into the sea. water scarcity and ▪ Promoting circular and resource-efficient economy will play an important role in mitigating environmental challenges and partnerships offer great potential to foster protection of natural heritage, biodiversity, and ecosystem-based approaches. focusing on coastal protection, water management, and biodiversity preservation.
Tourism	▪ Development of "safe destinations" and sustainable post-pandemic tourism that is inclusive of the most vulnerable social groups. ▪ Generation of sustainable and digital development of tourism, creative industries and cultural sector, while involving local communities and vulnerable social groups.
Cooperation Governance	▪ Difficulty of engaging in multi-level coordination between all cross-border institutional actors

Total Budget: € 57,604,032.02

Figure 2.40: Split of Interreg allocation

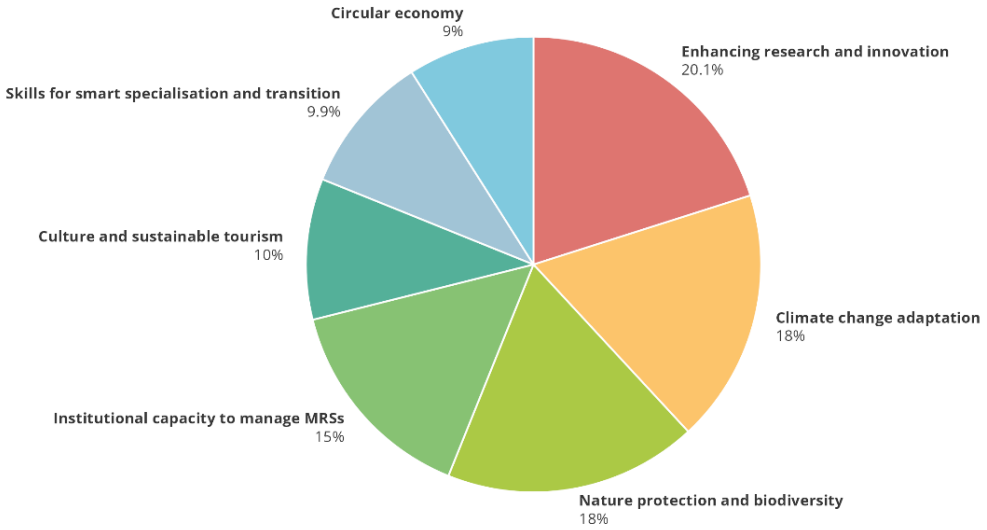


Table 3 shows the number of Interreg 2021-2027 cross-border and transnational programmes which share at least one NUTS3 region with the border area. Each programme has its own distinct rationale, value and territorial focus. However, for the purposes of, for example, planning and capitalisation activities it is potentially helpful for programmes and programme stakeholders to be aware of and connected to other Interreg programmes with which they share a direct territorial link[15]. 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)
/	2

Key aspects

- Challenges linked to the geographical location of Malta and Sicily, such as risk prevention and adaptation to climate change, the importance of tourism for economic stability and the long-term difficulties brought about by Covid-19, and the obstacles encountered while implementing multi-level governance and cooperation mechanism, have led the 2 countries to jointly focus on similar priorities/goals.
- Distinctive focus for Interreg cooperation on smart specialisation, support for SMEs, resource-efficient and circular economy, sustainable tourism and greater administrative cooperation across stakeholders as well as multi-level governance complementarities.

[15] 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.

- Prioritisation of green and sustainable development, in practice this has resulted in projects clustered around the following themes, tourism, cultural heritage and coastal management and maritime issues over the 2014-20 and 2021-2027 periods.
- Functionally balanced participation. In terms of geographical balance and financial allocation, Sicily tends to dominate on the Italian side, with stronger concentrations of partners and lead beneficiaries and a larger share of the total budget. Despite a fewer number of partners in the Maltese size, due to its size, their engagement is highly active and strategic.
- Potential for synergies across programmes.
- The programme areas are also included within the EURO Mediterranean (EURO MED) and NEXT Mediterranean Sea Basin (NEXT MED) Interreg B programme areas.

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[16]. 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

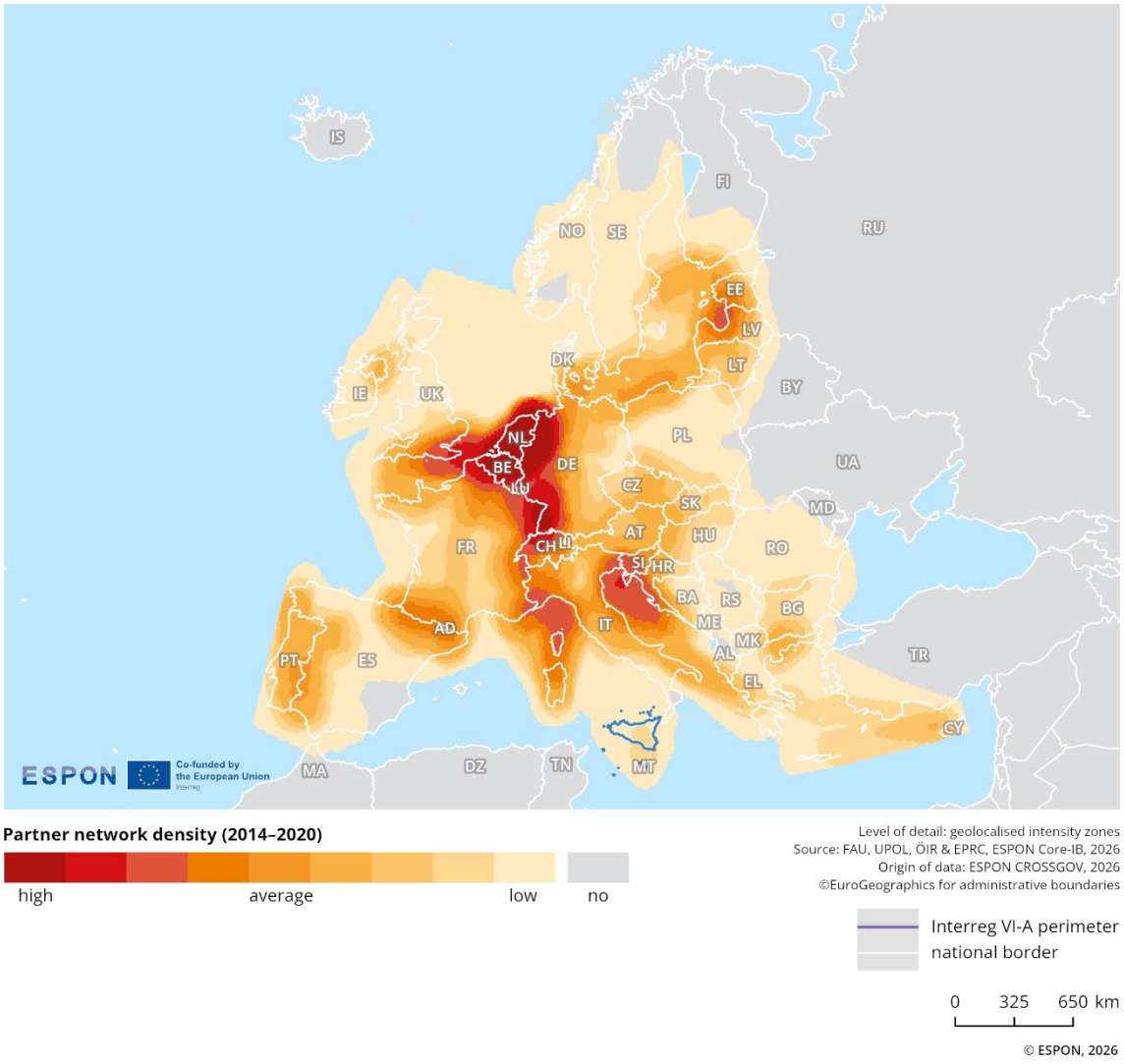
Please refer to the technical annex for more information.

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 Interreg region appears quite evenly spread. Intensity appears to be homogeneous across the specific border segments of the programme area. Overall, the partner network density in this border area is lower than the European average. Based on the keep.eu database and excluding duplicates, the number of project partners decreased from 106 in Interreg IV-A (2007–2013) to 94 in Interreg V-A (2014–2020), a decrease of about 11%. 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.

[16] 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

Coherently to the findings of the other indicators, only few governance links can be found in the Italian Maltese cross-border region. Here opportunities of cooperation could be of interest, especially on the questions of risk prevention, environmental protection and restoration, tourism mitigation and economic development[17]. While an overall imbalance in budget remains between both islands, the structure of government and competencies could allow for greater coordination, as both Malta and Sicily dispose of a great degree of governmental autonomy.

The current allocation of Interreg budget resources appears thematically coherent but lacks more long-term discussion and coordination groups.

[17] Inforegio - Strengthening the Resilience of EU Border Regions: https://ec.europa.eu/regional_policy/sources/studies/KN-02-24-586-2A-N.pdf

3 Summary and key observations

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

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

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

Table 4: Evidence-based conclusions

Territorial dimension	
Key analytical findings	• The geographic conditions strongly influence the degree of exchange between Sicily and Malta. Only one ferry line and 2 airports connect Sicily to the main island of Malta; • Both Sicily and Malta are showing trends of increases in built areas near urban centres; • The population trends are diverging: the Maltese population grew by over 30% over the last 10 years and the Sicilian population remains on a decreasing pent.

Territorial dimension	
Policy options	**Population and settlement related aspects** • A policy option is to address the strongly diverging demographic trends in a context of rapid population growth in Malta and population decline in Sicily through cross-border exchange and strategy formulation on spatial planning policies; • Cross-border cooperation, joint monitoring and in particular knowledge exchange could support sustainable land-use development in the coastal and urban areas where settlement expansion is most pronounced; • Coordinated strategies or joint learning for dealing with second homes and speculative investments are relevant as policy options for all involved regions as well. **Accessibility related aspects** • A focus can be on addressing the structural accessibility constraints resulting from the maritime nature of the Italy–Malta border through strategic cross-border cooperation; • The strengthening and diversification of maritime connections (e.g., through higher frequency) can contribute to more regular cross-border mobility. **Cross-cutting aspects** • Demographic and population density imbalances, together with limited cross-border accessibility, could be integrated into coherent territorial development pathways for a maritime border region; • Integrated land–sea spatial planning approaches can support sustainable territorial development in a region with high coastal dynamics and tourism pressures with related seasonal mobility.

Economic dimension	
Key analytical findings	• Despite a certain dynamicity over the last 10 years, the GDP per capita of the border region remains below the 75% of the European average GDP per capita; • Significant disparities remain between Sicily and Malta both in terms of GDP per capita and wages; • The maritime nature of the border between Sicily and Malta has important consequences on the cross-border mobility of its inhabitants: no cross-border commuting flows are registered for the Sicilian side. Only a low level of commuters registered on the Maltese side. When combined with the reduced amount of transport possibilities this suggest overall low commuter exchanges, even though both countries signed the Framework agreement on cross-border telework from 2023; • Property prices reflect both economic conditions and tourism-related demand, with higher prices observed on the Maltese islands.
Policy options	**Competetiveness and cohesion related aspects** • Cross-border cooperation could focus on accelerating economic convergence in a border region where GDP per capita remains below 75% of the European average despite recent growth; • A focus can be on better targeting and developing economic synergies linked to Malta's dynamic growth to support cross-border development and cohesion; • In a context of difficult commuting situation, cooperation projects could address digital work arrangements and skills development to improve employment opportunities in particular in Sicily, particularly for young and working-age populations; • The diversification into knowledge-based, digital and green activities could reduce reliance on a limited number of sectors and strengthen long-term economic stability; • Targeted development strategies could help to ensure that tourism-driven economic growth translates into broader socio-economic benefits for residents. **Cross-cutting aspect** • The territorial evidence has shown that there is potential to integrate demographic disparities, limited accessibility and digital constraints into coherent cross-border economic development strategies.

Green dimension	
Key analytical findings	• Protected areas are fragmented and no common zone appears between both Sicily and Malta, despite similar maritime eco-systems; • The highest risk in the cross-border region is the risk of drought and problems linked to air pollution, though for the latter the sources of pollution might differ; • A certain dependency of Malta towards Sicily on energy production and exchange might exist.
Policy options	**Environmental protection related aspects** • Cross-border cooperation could focus on addressing the current fragmentation of protected areas; • Joint marine ecosystem monitoring and integrated coastal zone management in particular in a context of urbanisation and tourism related pressures could be implemented in both countries. **Climate risks and resilience related aspects** • A focus can be on joint monitoring, data exchange and policy coordination to improve responses to air and water quality pressures in a shared maritime environment and in particular in coastal zones; • Climate resilience could be strengthened through joint approaches to water management, efficiency and reuse in a region facing structural water scarcity; • Cooperation projects could focus on common energy planning to better understand potential vulnerabilities related to limited storage capacity and reliance on a single interconnector (2 in the future). **Cross-cutting aspect** • A specific focus on cross-border environmental governance to preserve biodiversity while balancing tourism, coastal development and economic activities.

Socio-economic dimension	
Key analytical findings	• Social integration between Sicily and Malta only exists at a low level in the east of Sicily and Malta and is constrained by geographical barriers and one-sided language barriers; • Services of general interest are relatively well distributed across the islands, the cross-border context is however irrelevant in their strategical planning, as no widespread, regular exchanges exists.
Policy options	**Social interaction and tourism** • A focus can be on targeted cultural, educational and digital initiatives to address linguistic barriers in particular in Sicily and foster social exchange, particularly between eastern Sicily and Malta where interaction potential exists; • Cross-border tourism strategies could be developed to address shared challenges such as seasonality, second homes, waste management and fluctuating infrastructure needs. **Cross-cutting aspect** • Cross-border cooperation could specifically address tourism-driven growth that translates into broader social benefits, despite limited direct social integration between populations.

Border security and safety dimension	
Key analytical findings	• The temporary border controls remain relatively limited in their number of days and almost balanced in their directionality; • This low number could also be linked to overall low commuing and transport opportunities between Sicily and Malta; • Such controls could impede already low exchanges between the border regions.

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

Governance dimension	
Key analytical findings	• Institutionalised cross-border cooperation are underdeveloped in the Interreg region; • There is untapped potential for long-term institutionalised cooperation on the questions of risks prevention, climate change adaptation and environment restoration, economic development and research.
Policy options	**Institutional aspects** • Existing cooperation formats could be further developed to improve strategic coordination beyond project-based collaboration; • The high degree of autonomy of both Sicily and Malta could be leveraged to foster more effective and flexible cross-border governance arrangements; • A focus can be on operational cooperation in areas where physical distance limits everyday interaction but shared risks and challenges, such as environmental protection, risk prevention and sustainable tourism, are evident. **Cross-cutting aspect** • Cooperation projects could address governance innovation to transform limited cross-border interaction into more durable institutional cooperation in the maritime context.

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