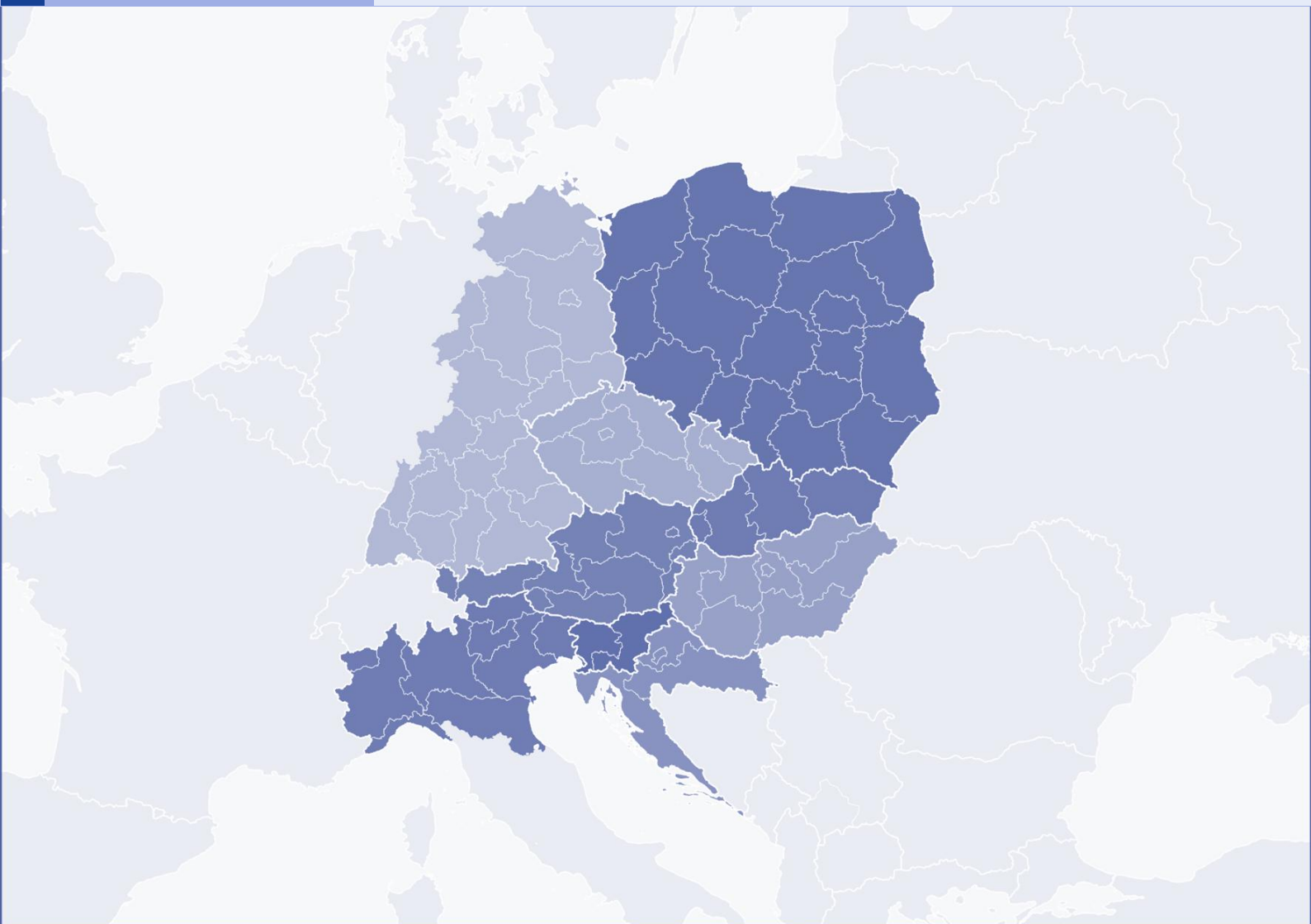
ESPON

Co-funded by the European Union
Interreg

EUROPEAN RESEARCH PROJECT //

Interreg Transnational Programmes: needs and opportunities for the future cooperation [TNCOOP]

Programme fiche Interreg Central Europe // May 2026



This European Research Project is conducted within the framework of the ESPON 2030 Cooperation Programme, partly financed by the European Regional Development Fund.

The ESPON EGTC is the Single Beneficiary of the ESPON 2030 Cooperation Programme. The Single Operation within the programme is implemented by the ESPON EGTC and co-financed by the European Regional Development Fund, the EU Member States and the Partner States, Iceland, Liechtenstein, Norway and Switzerland.

This delivery does not necessarily reflect the opinions of members of the ESPON 2030 Monitoring Committee, nor those of the European Commission.

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

Project consortium: Austrian Institute for Regional Studies (ÖIR GmbH) (lead), Joint Partners: Stichting Strathclyde University (EPRC Delft); Nordregio; Wiener Institut für Internationale Wirtschaftsvergleiche/The Vienna Institute for International Economic Studies (wiiw)

Authors
Helene Gorny, Roland Gaugitsch, Manon Badouix, Sabrina Mansutti, Erich Dallhammer, Cristian Andronic, Chien-Hui Hsiung, Robert Badea, Michelle Wiest (ÖIR GmbH)
Irene McMaster, Heidi Vironen, Liliana Fonseca, Stefan Kah, Rachel Maguire and Odilia van der Valk (EPRC Delft)
Jonas Kačkus Tybjerg, Anna Berlina, Miia Itänen, Madelene Sonesson, Lumi Tomren, John Moodie (Nordregio)
Simone Grabner, Ambre Maucorps, Nora Kungl, Meryem Gökten (Wiener Institut für Internationale Wirtschaftsvergleiche (wiiw)/The Vienna Institute for International Economic Studies)

External reviewers
Sébastien Bourdin (IÉSEG School of Management, Univ. Lille, CNRS, UMR 9221 – LEM), Giancarlo Cotella (Politecnico di Torino), Eduardo Medeiros (Polytechnic Institute of Setubal and Lisbon University Institute), Georges Mercier (ADT Consult), Serafin Pazos-Vidal (AEIDL), Iveta Puzo

Steering Committee
Milada Hronkova (Ministry of Regional Development – CZ); Sina Redlich, Jens Kurnol (BBSR – DE); Eedi Sepp, Margarita Golovko (Ministry of Regional Affairs and Agriculture – EE); Rita Allegrini, Francesca Amendola, Rocco Paduano, Zaira Piazza (Ministry of Iinfrastructures and Transports – IT); Karolina Jasinska-Muehleck, Elisa Cocco (European Commission, DG REGIO)

Acknowledgements
We gratefully acknowledge the support and constructive feedback received during the project implementation from all the Interreg programme Managing Authorities/Joint Secretariats, European Commission services, as well as from Interact, Interreg Europe and TESIM representatives. The insightful comments and recommendations provided have been instrumental in enhancing the quality, coherence, and robustness of the analysis.

Information on ESPON and its projects can be found at www.espon.eu.
The website provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

ISBN: 978-2-919839-59-9

Layout and graphic design by BGRAPHIC, Denmark

Contact: info@espon.eu

ESPON

Co-funded by the European Union
Interreg

EUROPEAN RESEARCH PROJECT //

Interreg Transnational Programmes: needs and opportunities for the future cooperation [TNCOOP]

Programme fiche Interreg Central Europe // May 2026

Table of contents

List of figures and maps

List of figures

List of maps

Abbreviations

AROPE	Share of people at risk of poverty or social exclusion
CA	Certifying Authority
CBC	Cross-border cooperation
CE	Central Europe
EEA	European Environment Agency
EFTA	European Free Trade Association
ERDF	European Regional Development Fund
EU	European Union
GDP	Gross Domestic Product
GHG	Greenhouse gas
ICT	Information and Communication Technology
Interreg	European Territorial Cooperation Programme
JAR	Joint Activity Report
JEMS	Joint Electronic Monitoring System
JFR	Joint Finance Report
JRC	Joint Research Centre (European Commission)
JS	Joint Secretariat
KPI	Key performance indicator
MA	Managing Authority
MMF	Multiannual Financial Framework
MRS	Macro-Regional Strategy
MTA	Multi-scalar Territorial Analysis
NCP	National Contact Point
NEET	Young people neither in employment nor in education or training
NSI	National Statistical Institute
NUTS	Nomenclature of Territorial Units for Statistics
OSM	OpenStreetMap
PO	Programme Officer
PPS	Purchasing Power Standard
RCI	Regional Competitiveness Index
RIS	Regional Innovation Scoreboard Index
SCO	Simplified Cost Option
SMEs	Small and medium-sized enterprises
SNA	Social Network Analysis
SSP	Small-scale project
TEN-T	Trans-European Transport Network
ToR	Terms of reference

Introduction: Context and objectives of the Programme fiche

The aim of the ESPON TNCOOP project is to produce evidence-based analyses that will contribute to the discussion on the strategic objectives and priorities of transnational cooperation in the post-2027 period. The results of these analyses serve as common evidence base for programme authorities to complement their own territorial analyses and for the European Commission in view of the next programming period. The project covers all 13 transnational programme areas as defined for 2021-2027 period.

The main outputs of the ESPON TNCOOP project are the following:

- **A comprehensive database** – referred to as **knowledge database**, including quantitative territorial indicators and data covering, to the extent possible, each Interreg B programme at NUTS2 (or above) level.
- **13 programme fiches** outlining the main socio-economic and territorial development characteristics, disparities and trends, functional linkages as well as uncovering opportunities within current and beyond programme areas. Each programme-level fiche includes analyses using the data from the knowledge database as well as other sources of information.
- **1 fiche for the whole Interreg B Strand** which builds on findings from all 13 programme fiches, programme documents and evaluations, consultations and workshop with Interreg stakeholders.
- **The ESPON TNCOOP portal** which comprises the territorial and context indicators mapped for each Interreg B programme. The maps featured in the portal are analysed in Annex B – Socio-economic overview of the programme fiches.
- **A final report** providing methodological information as well as guidance on the use of the ESPON TNCOOP Portal and knowledge database.

This document is one of the 13 programme fiches. Each programme fiche is articulated around **four main sections:**

The first section introduces the programme area, provides an overview of **its key territorial characteristics**[1] based on an analysis of selected territorial and contextual indicators (see Annex B – Socio-economic overview for maps and analyses). It also draws on relevant programme documents. The description of the **programme area profile** highlights the functional linkages and connections that bind the programme area, as well as the (shared) challenges and opportunities of the territory. Data on programme beneficiaries, mainly from keep.eu, provides further information on beneficiary cooperation and funding intensity on regional level across the programme area.

Section 2 examines the programme's **synergies and added value**. This involves analysing the programme's unique role and contribution compared to programmes of other Interreg strands,

[1] The analyses describe the fundamental socio-economic characteristics of the programme area, including demographic, economic, and environmental features, around pre-defined dimensions (as per the project technical specifications):

- Demography & geography
- Innovation, research and SMEs
- Environment and climate change
- Digital connectivity and transport
- Sustainable regional development
- Cultural heritage & tourism
- Housing
- People to people action and engagement

and identifying synergies and complementarities with not only other Interreg strands, but also mainstream cohesion policy programmes and macro-regional and sea basin strategies. Potential areas for further developing synergies and cooperation opportunities are also explored.

Section 3 of the fiche synthesizes **findings on programme operations**, addressing governance, impact, and capacity-building issues.

Finally, the last section (section 4) of the fiche provides **operational recommendations** for enhancing the effectiveness of the transnational programme after 2027. These recommendations address the functional rationale for programme geographies and scale, potential future cooperation themes and cooperation processes, with the aim of maximising the impact and added value of transnational collaboration.

Operational recommendations for the post-2027 period

The annexes include further information on the programme's regions and overlapping Interreg A programmes (Annex A – Programme geography and overlapping Interreg A programmes), a detailed analysis of maps featuring territorial indicators (Annex B – Socio-economic overview), a thematic social network analysis of programme project partners (Annex C – Social network analysis) and a comparative thematic funding analysis (Annex D – Comparative thematic funding analysis).

Annexes
Programme geography and overlapping Interreg A programmes
Socio-economic overview
Social network analysis
Comparative thematic funding analysis

Reading note – Main information sources used in the programme fiche
The content provided in the present programme fiche includes both quantitative data as well as qualitative information. The quantitative data included and analysed in the fiche corresponds to: territorial and context indicators selected within the frame of the TNCOOP project included in the extended knowledge database accessible via the ESPON portal as well as ▪ beneficiary data mainly from KEEP ▪ Interreg planned funding data from Open Cohesion Data. The qualitative information stems from the review of key documents (Programme documents, ESPON studies and European Commission's publications), consultations with programme bodies' representatives (managing authority/joint secretariat as well as national contact points), Interreg expert reviews and interviews with (other) Interreg Strands representatives. Most sections of the programme fiche combine several sources of information, comparing and contrasting evidence. The maps presented (in Annex B – Socio-economic overview) are screenshots from the ESPON TNCOOP Portal, a web-based environment used by the project team to prepare and streamline the necessary input for the programme fiches. The ESPON TNCOOP portal can be accessed here, please consult the guidelines for further information on how to navigate through the portal.

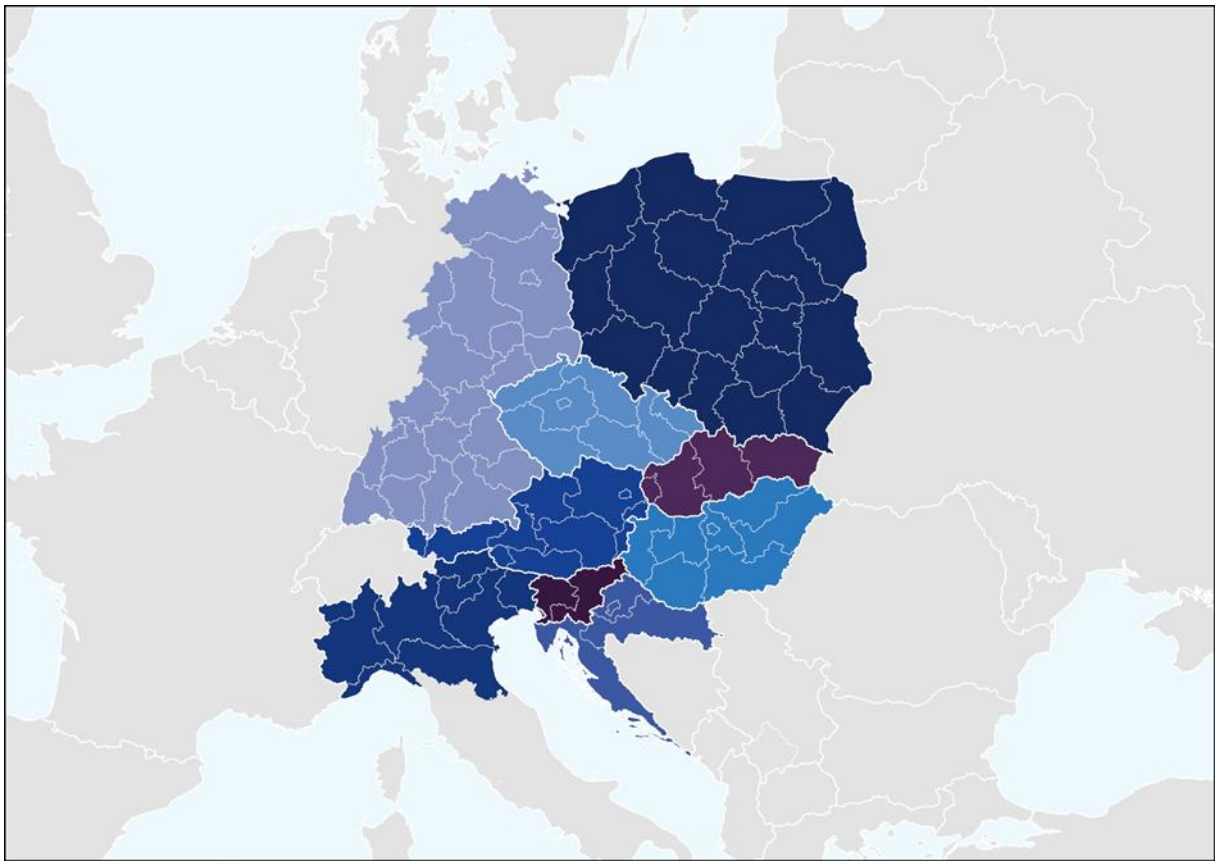
1 Programme area profile

Reading note – Content of section 1
This section provides a descriptive overview of the programme area, highlighting its socio-economic & territorial characteristics, functional linkages, challenges and opportunities.

1.1 Presentation of the programme area

The 2021-2027 Interreg Central Europe (CE) Programme covers nine countries: **Czech Republic, Germany, Italy, Croatia, Poland, Austria, Hungary, Slovenia, Slovakia.**

Map 1.1: Map of the programme area



Source: Project Team, based on Eurostat, 2026

The full list of NUTS 2 regions covered by the programme territory is presented in Annex A – Programme geography and overlapping Interreg A programmes.

Annex A
Programme geography and overlapping Interreg A programmes

1.2 Territoriality and functional linkages

Reading note – Content of section 1.2

This section presents past and current developments and interlinkages, including economic, social, and environmental interdependencies. It builds on the analysis of the territorial and context indicators (see maps in Annex B – Socio-economic overview) as well as complementary document analysis. Furthermore, the regional thematic cooperation intensity analysis (section 1.2.3) and the territorial funding intensity analysis (section 1.2.4) rely on keep.eu data.

1.2.1 Key territorial and socio-economic development patterns

Reading note – Content of section 1.2.1

The quantitative data analysed in this section (further details are presented in Annex B) covers the available data time series up to September 2025. It is important to note that data availability and time coverage vary per indicator. Consequently, the most recent data point for a given indicator may be up to several years old. Nevertheless, a few of such indicators were included due to their high thematic relevance and lack of more up to date data sources. The other main criteria underpinning the selection of the indicators is the comparability across all Interreg B programme areas, data completeness and availability at regional level (NUTS 2). For further information on the indicator selection and associated limitations, please refer to the ESPON TNCOOP Final report.

The territorial analysis as presented in Annex B reveals that the area has undergone substantial development in the past 10 years, with considerable improvements in many fields, but also challenges remaining and even several declining indicators. Many indicators still show a clear central-west vs. southern/eastern divide, and despite many catching up effects, the divide remains frequently visible. For eastern European countries, a strong gradient between capital regions and most other regions is evident from the analyses. Several aspects are likely to be interlinked, such as strong depopulation trends overlapping with lack of innovative performance or the lack of industrial production. However, the analysis does not investigate the causal relations between all these trends, and thus, the below summary outlines only patterns. Overall, these patterns reveal a large territory comprising some of the strongest regions in terms of GDP. This territory is defined by high industrial employment shares and covers multiple main mountain ranges and river basins in the EU, creating strong tourism potential. It also features many different governance systems at EU level, including coordination bodies at multiple levels and cross-border institutions, as well as at national level, including centralised and federal states and regional governance systems.

Demography in CE is shaped by a relatively balanced population density, with medium population densities across most regions and very high concentrations in urban regions. Rural and mountainous areas remain sparsely populated (however valley structures can lead to high localised population density) and face the trend of demographic ageing in most cases. This leads to population decline and limited generational renewal. Overall, a clear west–east divide persists, with population growth concentrated around metropolitan areas and regions with strong economies, while rural and peripheral territories especially in the east and southeast continue to experience strongest depopulation trends and out-migration.

This demographic change is closely tied to the **innovation** landscape in CE area. The region exhibits significant contrasts, with highly competitive and innovative regions concentrated in metropolitan and economically advanced areas, with several eastern capitals already catching up or surpassing central and western regions. However, alongside the rise of innovation hubs, there has been a slow decline in some of traditionally strong regions, in particular linked to a reduction in secondary sector strength. Similar patterns are evident in innovation performance, which remains strongest in urban centres and weaker in rural and eastern regions.

Environmental challenges remain a major concern across the CE cooperation area. While the overall increase in renewable energy consumption marks a positive step in the energy transition, many regions across the programme area show only low or medium levels in the European perspective. This is particularly relevant in several northern regions of the programme area, where this coincides with high greenhouse gas emissions (potentially due to the strong manufacturing sector). Furthermore, environmental

issues such as poor air quality often occur in the same regions. Climate-related risks such as flood risk and recurring droughts continue to pose serious challenges throughout the region. Flood risk is more prevalent in southern and mountainous areas, while drought risk is more prevalent in northern parts from an environmental perspective. Soil sealing, on the other hand, is mainly an issue in regions unaffected by the previously mentioned factors. The highest percentage of soil sealing at a regional level (outside the capital cities) is observed in southern Germany and northern Italy. Natura 2000 protected areas are present throughout the region, with varying densities across the countries. Naturally, the most dense concentrations can be found along specific ecosystems, such as the Alpine arc, the Carpathian foothills and river corridors, such as the Danube, the Drava and the Sava. Other areas with high concentrations include parts of northern Poland, eastern Hungary, and the Croatian coastline.

Connectivity both in terms of **digital and physical connectivity** is comparatively good in the European perspective. Broadband access has improved considerably across the programme area, with some lagging regions in eastern Germany, eastern Hungary, Slovakia and Croatia, and considerable improvements in western Poland, Austria and northern Italy. Accessibility to major road networks is generally high, particularly around capitals and major economic centres. Comparably lower values are recorded in eastern Poland, northern Czechia, Slovakia and parts of Hungary. Digital and transport infrastructure thus mirrors broader territorial divides.

Regional development in terms of economic and social aspects is characterised by ongoing structural change in line with larger European trends. Of particular note, some regions today still show among the highest values for the share of primary sector employment across Europe. However, employment in the primary sector continues to decline, while the secondary sector remains rather stable throughout the area, in line with the region's ongoing dependence on industrial production and export-oriented manufacturing. Manufacturing is particularly concentrated in Czechia, parts of Poland, Hungary, Slovakia and Croatia. Education levels vary considerably, with most regions (except for northern Italy) having a low proportion of individuals with only primary education and a high proportion of individuals who have completed secondary education. Regions with higher tertiary education attainment rates tend to have at the same time stronger economic performance and often coincide with the capital regions. Although regional disparities persist, unemployment and NEET rates have declined notably. Notably, throughout the area, a higher unemployment rate for the female population is evident. At the same time, GDP in PPS continues to increase throughout the programme area, with particularly striking values for capitals such as Warsaw and Prague, which (considerably) exceed values for Berlin or Vienna. However, GDP also shows the strongest urban-rural divides in more eastern parts of the programme area, with capitals ahead of Austrian or German values, and more rural regions considerably below.

Cultural heritage and tourism are important and stable components of regional development in the cooperation area. Urban and historic centres as expected have a greater density of cultural assets than rural regions, which however can benefit from natural attractions[2]. Particular high density of such assets is recorded in Friuli-Venezia-Giulia and Veneto regions. Over time, the spatial pattern of tourism has shown only minor fluctuations, with the most popular destinations remaining central alpine winter destinations and Croatian coastal summer destination. While these well-established tourist areas contribute significantly to local economies, they show partially very high tourism intensity values with pressure to the population. Furthermore, they considerably impact **housing** prices, with highest prices outside of capital regions recorded exactly for those regions which also show a high tourism density. Purchase and rental prices in Poland, Czechia, Slovakia and Hungary on the other hand show generally lower levels.

[2] Of note, such more natural attractions are not visible from the territorial indicators analysed due to the focus of those indicators but have to be kept in mind.

The **quality of government**[3] across the Central European cooperation area varies considerably from medium- to low values in the European picture. Strikingly, the quality assessed has gone down throughout most of the regions in central Europe. These patterns correlate with economic trends and higher shares of the population at risk of poverty or social exclusion, which can reach values of more than 30% in some regions.

1.2.2 Functional linkages

The Central European programme area is characterised by a dense system of functional linkages compared to other Programme regions. These linkages have their roots in shared historical connections (even if these connections saw a strong interruption during the iron curtain), integrated economic structures leading to cross-border labour and knowledge flows, and environmental and infrastructural systems. While the intensity of these linkages varies across topics and regions, and not all linkages are seen positive in all regions, the programme area still is among the most connected within Europe. Functional linkages include cross-border spillovers (e.g. in the labour market) which are actively supported for parts of the programme area however in many cases are simply "happening" due to economic incentives. Furthermore, some mutual dependencies exist (e.g. through supply chains) which are actively targeted by governments and also by several funding programmes and provide clear economic benefits within the region. Finally, overall, the programme area shows partially shared exposure to natural and human-made risks.

In terms of **industrial links,** robust secondary-sector employment across large parts of the programme area provides a solid basis for functional ties. Industrial transition processes driven by decarbonisation, electrification, automation, and circularity create shared challenges for regions with such high secondary sector employment. Beyond the analyses in the project at hand, various other studies[4] have identified strong economic interdependencies between southern Germany, Austria, the Czech Republic, western Poland, Slovakia, northern Italy, Hungary and Slovenia, particularly in the automotive, machinery, chemicals and electrical equipment sectors. While the share of employment in the secondary sector is generally shrinking, it remains stable or even slightly increasing in many parts of the programme area. This indicates the potential relevance of functional linkages in these fields, a finding that has been confirmed by several studies[5].

Innovation (in relation to industry and beyond) is a further aspect creating functional linkages within the CE area. Strongest innovation capacity is concentrated in a corridor stretching from Bavaria and Baden-Württemberg in Germany through Austria and into northern Italy. This corridor is complemented by metropolitan hubs such as Prague, Warsaw, Bratislava and Budapest, creating a network of hot spots throughout the programme area. The rising innovation capacity in more eastern regions and reduction of gaps throughout the programme area likely is influenced by these close links to a strong innovation region/corridor. The network analysis within the programme confirms that among the most involved actors are universities connected across borders, with well developed ties and a dense cooperation network which is not based only on individual projects within the programme.

While outside of the immediate analysis in the project at hand, a critical functional link in the CE area, which has been investigated by some studies[6] is related to labour markets. In particular, due to the

[3] Based on the comprehensive indicator by the University of Gothenborg which measures the perception of quality of government (without specifying an administrative level) for providing several key resources and services to the population. The analysis is shown by the map in annex B.8

[4] See e.g. Römisch et. Al. (2018): Socio-economic challenges, potentials and impacts of transnational cooperation in central Europe, p. 14

[5] See e.g. Römisch et. Al. (2018): Socio-economic challenges, potentials and impacts of transnational cooperation in central Europe,

[6] See e.g. Cavallaro, Dianin (2019): Cross-border commuting in Central Europe: features, trends and policies

presence of borders with (historically) very sharp contrasts in terms of income, strong connections in functional labour markets have to be considered. Daily and seasonal commuting occurs across several borders (e.g. Austria–Czech Republic, Austria–Slovakia, Germany–Poland), creating mutual dependencies. However, commuting is not concentrated only in metropolitan areas, as daily commuting (e.g. for tradespersons) and long-term commuting (e.g. for tourism work) is relevant to urban and rural regions.

Besides human-related aspects, natural systems create strong functional linkages throughout (parts of) the programme area. Major river basins such as the Danube, Po, Rhine, Elbe, Oder and Wisla link together parts of the programme, while the two major mountain ranges of the Alps and the Carpathians likewise create such links. These are relevant as ecological corridors, they create shared risks in relation to climate change, but they also exhibit a particular economic relevance, e.g. in relation to tourism, in the programme area. The programme area furthermore comprises some of the highest intensity (overnight stays in relation to the population) summer tourism as well as highest intensity winter tourism regions of all of Europe. Functional linkages across challenges are especially relevant when, for example, regions with a high flood risk in the Alps immediately border regions with high soil sealing in adjacent territories. This can potentially create increasing challenges, due to climate change, that spill over regional boundaries. Environmental functional linkages are therefore shaped by very different geographical patterns and influenced by human activities in general.

A defining feature for functional linkages in the CE area is a considerable imbalance in multiple topics. This includes labour commuting and labour markets in general, the presence of limited innovation hubs in particular, in eastern parts of the programme area, as outlined above. Asymmetric interdependencies are thus a considerable factor to be considered.

1.2.3 Regional thematic cooperation intensity

Reading note – Content of section 1.2.3

To complement the understanding of cooperation patterns in the programme, the analysis subsequently presented highlights beneficiaries distribution (i.e. lead partners and project partners) and territorial cooperation patterns. The analysis is based on the beneficiary data from the keep.eu database for the 2021-2027 period, with a cut-off date in February 2026. In practical terms, the analysis shows who (which beneficiary) repeatedly cooperates with whom (which other beneficiaries), and from which territory the partners originate. Ultimately, this helps identifying:

- The main (most connected) beneficiaries in the programme
- Their cooperation links and relation with other beneficiaries
- The frequency of connections and related territorial patterns

The analysis is structured per Policy Objective (PO). For some POs, too few projects have been selected to derive a meaningful network analysis from it. Those figures have been excluded from the fiche.

Only partners which have cooperated with one another in more than one project are shown as connections in the visualisations. This approach has been adopted for readability reasons, to identify and highlight the most frequent cooperations and potential multipliers.

When interpreting the following visuals, a few caveats have to be considered:

- due to the data availability in keep.eu, the analysis is made on programme level. Connections between beneficiaries through other regional networks or even other programmes cannot be taken into account
- the analysis is made with a cut-off date in February 2026. At this stage, depending on the programme, only a limited budget (through the selected projects) is considered, and further developments are to be expected. In addition, depending on the focus of the included calls, the analysis can be skewed towards specific themes which were (potentially) more relevant for early calls in the period.

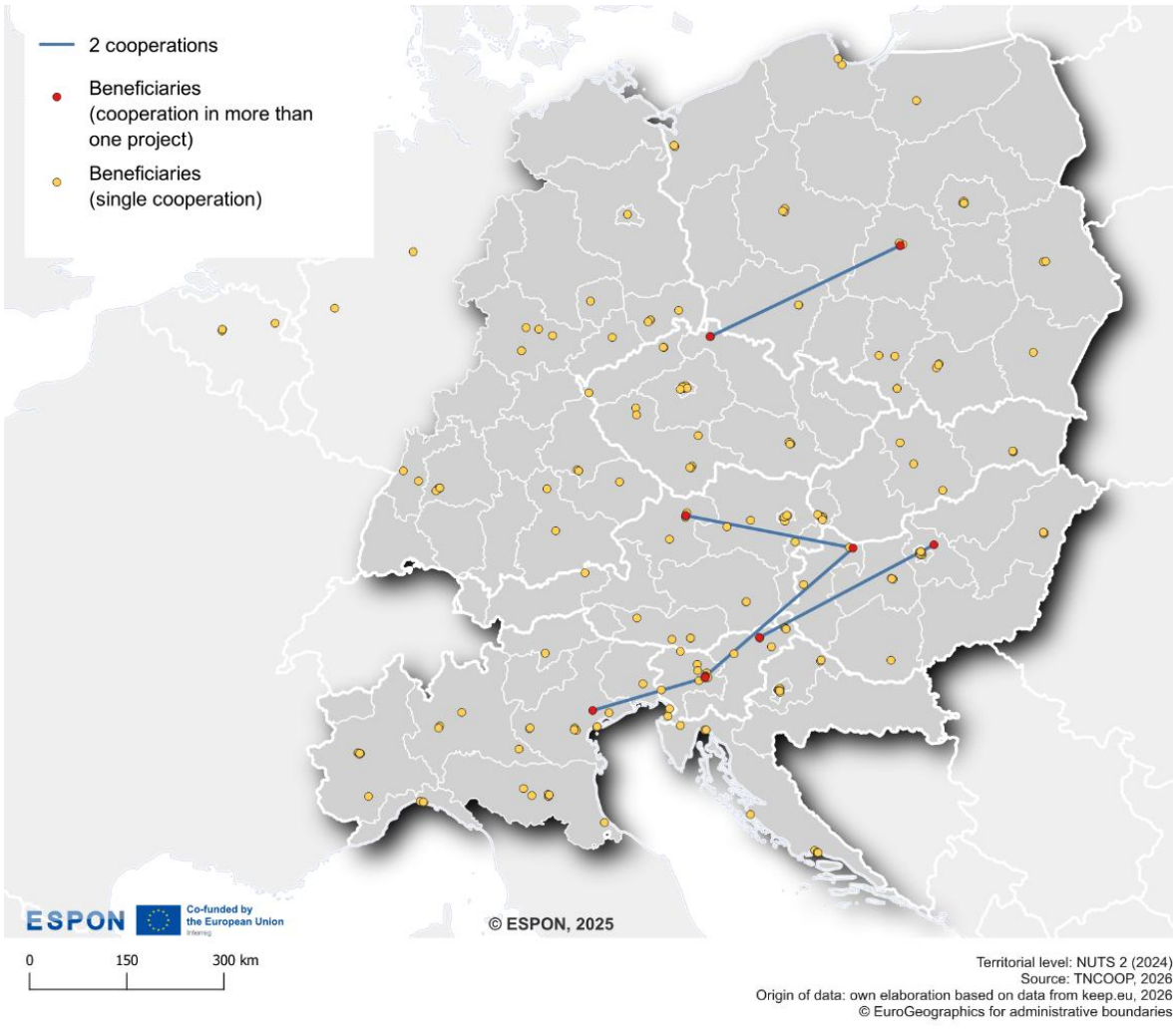
Moreover, additional insights are included from the programme beneficiaries' social network analysis (SNA). The full analysis is presented in Annex C. The social network analysis presented in Annex is also based beneficiary data stemming from Keep.eu. Nonetheless, the SNA was carried out prior to the thematic cooperation intensity analysis, and thus, the cut-off date for the data is August 2025.

This section presents the outcome of the analysis of cooperation intensity by PO in the programme. It aims to assess which partners, partner types and regions cooperate most frequently. As per the data available in February 2026 in Keep.eu, the number of projects considered as a basis for the cooperation intensity analysis is as follows: 27 projects under PO1, 58 projects under PO2, 6 projects under PO3 and 9

projects under ISO1. As for PO3 and ISO1, no cooperation partners in multiple projects emerged, this analysis covers cooperation patterns under PO1 Smarter Europe and PO2 Greener Europe. As can be seen, most frequent cooperation patterns are exhibited by projects under PO2 which also include partners from all participating countries. Most dense cooperation patterns are visible for Slovene and Croatian beneficiaries which are involved in multiple recurring cooperations.

Cooperation can be observed across a range of applied research institutions, sectoral organisations and business support actors. Organisation types exhibit a key role in those patterns for PO1, with e.g. frequently occurring between two universities which cooperate in multiple projects (e.g. Hungarian University of Agriculture and Life Sciences and University of Maribor). The Pannon Business Network Association (HU) emerges as a central partner, cooperating with organisations such as Business Upper Austria (AT) and the Chamber of Commerce and Industry of Slovenia (SI) across multiple projects, with further connections to 5, 6 respectively 7 partners connected to those three beneficiaries, albeit in only one project each. This indicates a hub-like role in connecting economic and innovation-oriented actors within the programme area.

Map 1.2: Regional thematic cooperation intensity – PO1 Smarter Europe



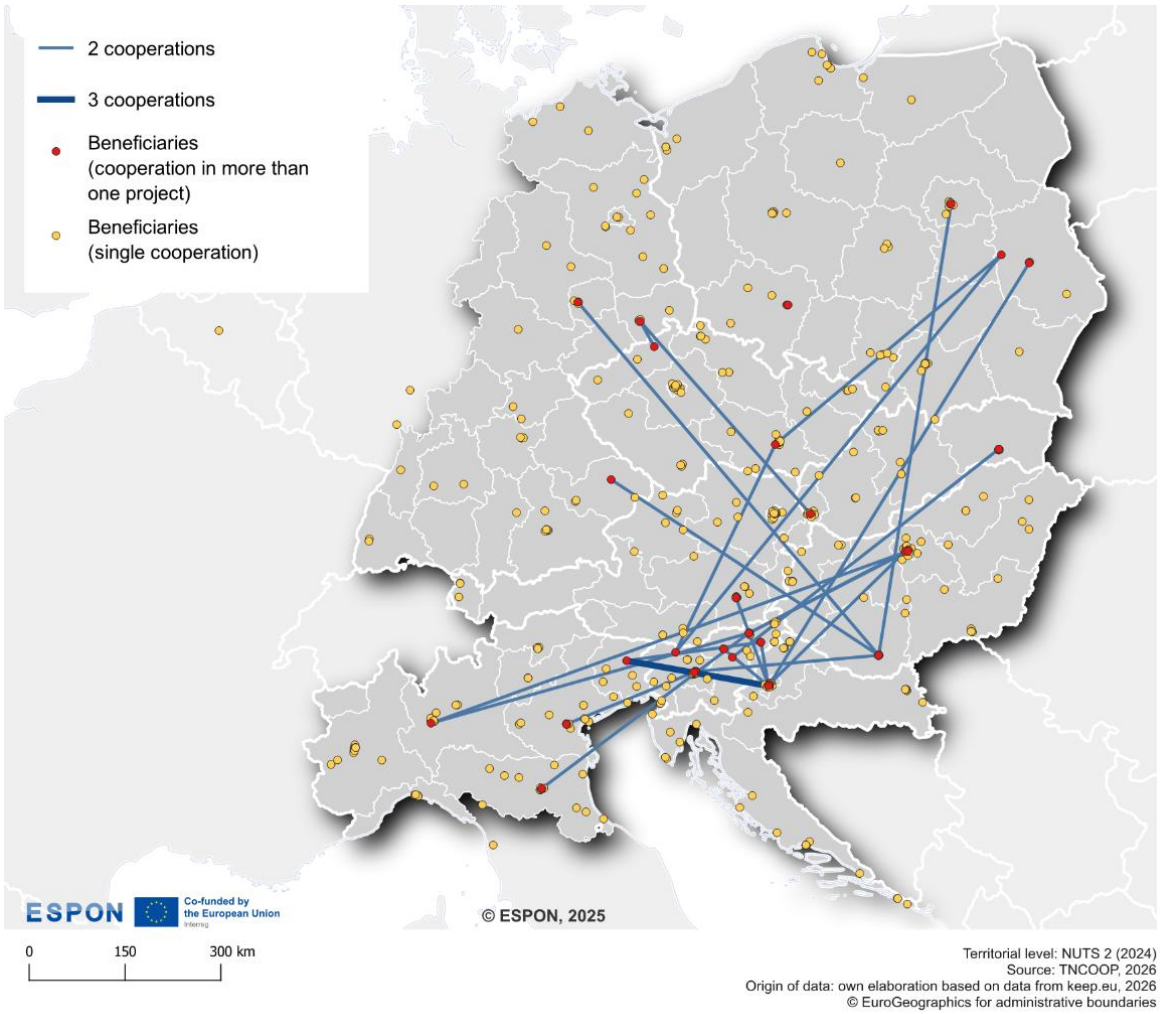
The most frequent cooperations occurred in the field of energy involving the Energy Institute Hrvoje Pozar (HR) and the Energy Management Agency of Friuli Venezia Giulia (IT). These two organisations cooperate in three different projects, as visible in the map below. This represents the highest cooperation intensity in PO2.

Overall, the Energy Institute of Hrvoje Pozar can be considered a key player, being involved in recurring cooperation with 4 different partners and cooperating with multiple further partners in only one project each. Likewise, the University of Maribor (SI) is involved in recurring cooperation with 4 different partners with different organisation types and further 2 partners in only one project.

Besides a number of municipalities (Maribor (SI), Velenje (SI), Zagreb (HR)) and Universities (Maribor (SI), Kosice (SK), Lublin (PL) etc.), a range of private companies from various countries show recurring cooperation. The patterns therefore suggest a clear thematic and structural width going beyond university networks which can frequently be observed in most programmes.

Beneficiaries with recurring cooperations are mostly involved in the following two projects: "HEAT 35" and "CE4CE".

Map 1.3: Regional thematic cooperation intensity – PO2 Greener Europe



Main conclusions from the social network analysis (Annex C – Social network analysis)

The full social network analysis (see Annex C) includes data from Keep.eu on beneficiaries (lead and project partners) until August 2025. The Keep.eu databased featured 102 projects. It brings additional insights on the cooperation between project beneficiaries along selected theme (economy, environment, society and governance) and also covers cooperation between partners in single projects. For further information on the method, please refer to the reading note in Annex C.

The network analysis of the Central Europe Programme from a thematic perspective complements the regional perspective as it highlights patterns in the variance in cooperation structures between themes which cannot be captured by the territorial analysis. Nevertheless, some patterns are visible in both perspectives: strong links are evident between key actors in the economy and environment themes, while the governance and society topics have more dispersed networks as well as a considerably smaller number of cooperating partners. However, while from a territorial perspective strongest cooperation patterns are evident for projects under PO2 (representing a strong link with the "environment" theme), the thematic analysis reveals that projects in the "economy" field (closely related to PO1) exhibit equally strong cooperation patterns. The analysis highlights that several partners such as the University of Kosice, the South Transdanubian Regional Innovation Agency or the Slovene chamber of commerce (amongst others) do not only act as multipliers through recurring cooperation but connect across themes with up to 10 different projects and dozens of partners.

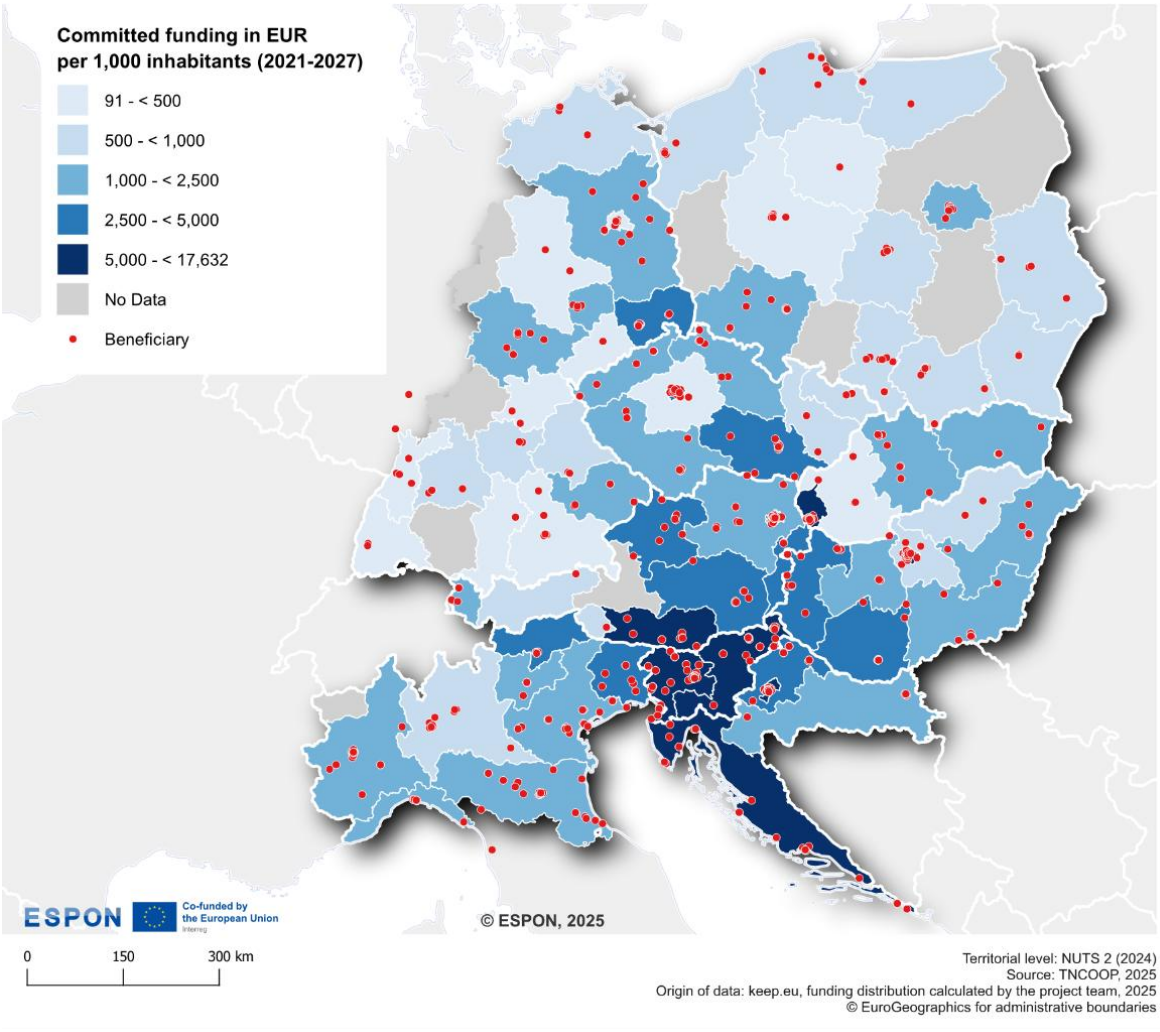
Where projects are interconnected, throughout themes, most show a rather balanced cooperation structure. The networks are usually made up of small and medium sized partners, with several of the mentioned central players which represent different types of project partners.

1.2.4 Territorial funding intensity

The territorial funding analysis for the Central Europe (CE) cooperation area reveals distinct patterns in funding intensity across NUTS2 regions and the location of beneficiaries, often highlighting an urban-rural divide. Overall, beneficiaries are distributed across the area, with a distinct but not overwhelming "capital effect" visible. The respective capital regions of Prague, Berlin, Warszawa, Budapest, Bratislava and Vienna do see a concentration of beneficiaries but are not concentrating all funding. A higher number of beneficiaries is also noticeable in southern countries such as Italy and especially Slovenia.

However, when interpreting the data, it should be noted that it only allows funding to be linked to the location of a beneficiary, not the actual implementation location of a project. Therefore, there is a potential bias towards capitals and regions with a greater concentration of urban centres. At the NUTS 2 level, this bias is reduced to some extent, as only some capitals form their own NUTS 2 region, while most urban centres in the programme area are part of a larger region.

Map 1.4: Funding intensity and beneficiaries



The data shows all beneficiaries (lead and project partners) and their location based on information stemming from keep.eu. Committed funding includes spent funding and funding already allocated to projects but not yet spent.

Rural, less populated and less urbanised areas tend to have fewer beneficiaries and thus a considerably lower budget to be spent for the benefit of their area. However, it is not the only pattern as several urbanised areas also see limited funding per capita. This can be seen in many parts of Poland, such as Wielkopolskie and Kujawsko-Pomorskie, as well as in southern and eastern Germany, including Freiburg, Karlsruhe, Oberbayern, Chemnitz, and Sachsen-Anhalt. As the number of beneficiaries increases towards the south, so does the funding amount per capita. Regions with a high number of beneficiaries and funding include Jadranska Hrvatska in Croatia, Slovenia, and Kärnten in Austria. The Bratislava region also shows a higher number of beneficiaries and among the highest per capita funding.

1.3 Territorial challenges and opportunities

Reading note – Content of section 1.3

This section relies on input stemming from the analysis carried out in the Annex B – Socio-economic overview, 1.2.1 as well as on additional document analysis. It focuses on highlighting territorial needs, challenges and disparities in the programme area which may hinder functional linkages. Moreover, in order to mitigate the intrinsic limitations of quantitative analyses, qualitative information on emerging policy- and thematic trends relevant to the programme area and considered as cooperation opportunities has been added.

Additional analyses are also added, e.g. Map 1.5 which highlights economic development disparities across the programme area. Moreover, section 1.3.1 includes quantifications and assessments of territorial disparities within the programme area for a selected number of indicators (multi-scalar territorial analysis – MTA). The indicators and corresponding maps are selected based on the relevance to the programme area.

Section 1.3 also comprises (if relevant) information on territorial adjustments to better target functional linkages beyond the programme area as well as opportunities for adjusting the geography of some programme areas or joining forces on relevant priorities.

1.3.1 Disparities and challenges in the programme area

The Central Europe programme area is characterised by historical disparities that to this day influence development. While many regions have made substantial progress over the past decade, as visible for rising GDP per capita, improving innovation performance in several eastern regions and narrowing competitiveness gaps, a number of structural divides remain. These disparities follow two dominant spatial patterns: a gradient between central-western and east-southeastern regions, and a pronounced divide between the capital and the rest of the country, which is evident in all participating countries, but especially in more eastern countries.

Disparities between the **central-western parts** of the programme area, including southern Germany, Austria, northern Italy, and parts of western Czechia and western Poland, and the **eastern and south-eastern regions,** including among others eastern Poland, Slovakia, Hungary, and Croatia remain most visible in terms of innovation aspects and competitiveness, tourism and cultural aspects, as well as GDP (outside of capital regions) where considerably lower competitiveness and innovation scores, lower GDP and overnight stay rates as well as lower density of cultural assets are visible. Although convergence tendencies are clearly visible, e.g. increased productivity and innovation capacity in Polish metropolitan regions and falling unemployment in parts of Slovakia and Hungary, the overall picture still shows some territorial imbalance.

The overlapping pattern of a strong **"capital effect"** is visible in almost all countries in the programme area. Capital regions such as Warsaw, Prague, Vienna, Budapest, Berlin and Bratislava outperform the rest of their countries in many indicators, including productivity, innovation, education, labour market outcomes, accessibility and cultural density. In several cases, particularly in eastern Member States, the development gap between the capital city and the rest of the national territory is larger than the gap between the western and eastern sub-regions of the programme area.

Capitals in more eastern parts of the region often not only exceed their own national averages but also outperform regions in Western Europe in multiple cases. This creates a pattern where the previous larger gap between eastern and western countries of the programme area is reduced or even turned around for capital regions, while other regions including smaller cities and more rural areas cannot advance at the same rate and stay at a considerable gap compared to other regions. While not overwhelming, the concentration of programme beneficiaries in capital regions also reflects this pattern. However, even if the more urbanised Ukrainian regions perform better in many indicators, they still lag behind most central European regions in most indicators.

Demographic trends highlight another dimension of territorial disparity. Ageing is a widespread challenge across the programme area, affecting most regions except a few urban centres and certain eastern regions, which have comparatively younger populations. Several regions are subject to a double challenge, with some rural and peripheral territories, particularly in Croatia, eastern Hungary, Slovakia and

eastern Poland, are experiencing both ageing and population decline simultaneously. The outmigration of young, highly educated individuals increases this demographic imbalance. Several countries show pronounced brain drain patterns, where young, educated population relocates from intermediate and rural regions to national capitals or even other countries within and outside of the programme area[7]. These demographic shifts put additional pressure on labour market and economic transition processes. They also increase the structural divide between more dynamic metropolitan centres and lagging regions, thus inducing ripple effects from demographic challenges into other territorial dimensions. The examined Ukrainian regions mirror the demographic trends of the current programme area. For example, they have similar population densities and population development trends (prior to the ongoing war), as well as similar outmigration trends among educated individuals (in most regions).

Innovation capacity remains unevenly distributed across Central Europe. A corridor of strong innovation regions stretching from southern Germany and Austria through northern Italy represents programme areas hub for research and innovation. These regions are performing well in terms of competitiveness and innovativeness as compared to several regions in particular in Slovakia, Hungary, Croatia and eastern Poland. However, innovativeness and competitiveness gaps are closing, and while German and Austrian regions still outperform the rest of the programme area, the distance is lower than 10 years ago. However, especially regions at the easternmost border of the programme area still show lower progress. Combined with considerably lower amounts (relative to GDP) spent on innovation activities[8], as well as persistent gaps in digital connectivity, catching up will be a key challenge for those regions. As for the Ukrainian regions considered, their preconditions and enabling conditions considerably lag behind those of the neighbouring regions and Central Europe. Large disparities emerge between these Ukrainian regions and the rest of the programme in terms of both digital infrastructure and GDP.

Environmental disparities do not follow one single territorial pattern across the programme area, but differ depending on the specific environmental factor considered. Large disparities in relation to greenhouse gas and air pollutant emissions are evident, often coinciding with a strong manufacturing presence. Conversely, regions in the eastern and northern parts of the programme area were able to reduce waste intensity despite having a strong presence of the manufacturing sector and wider industry, while several regions in the central and southern parts show increasing waste intensity trends. Flood risks (strongest in mountainous areas, mostly in the centre and south) and drought risks (strongest in the north) likewise highlight clear disparities with diverging patterns. Ukrainian regions, in line with their neighbouring regions, also show very low flood risk values. These patterns show that environmental challenges are territorially differentiated, but also linked: industrial structures, settlement patterns, land use, biodiversity protection and climate risks overlap in different combinations across the pro-gramme area. Addressing those cross-links represents a key challenge for the regions.

Tourism and housing add another territorial dimension with highly polarised disparities. High tourism intensity is strongly concentrated in alpine, coastal and capital-region destinations, especially in parts of Italy, Austria, Germany and capital regions. These tourism patterns contribute to economic opportunities, but also reinforce local pressures, particularly where high visitor numbers and strong seasonality of tourism coincide. At the same time, many rural and eastern regions have lower tourism intensity and fewer cultural assets which leads to lower visibility and weaker integration into established tourism networks. These patterns mainly reinforce trends that are evident in other areas: a few strong regions benefit economically, but also experience intense pressure on their housing markets and local populations. Many other regions are excluded from economic opportunities and, when other factors are considered, experience population decline over time.

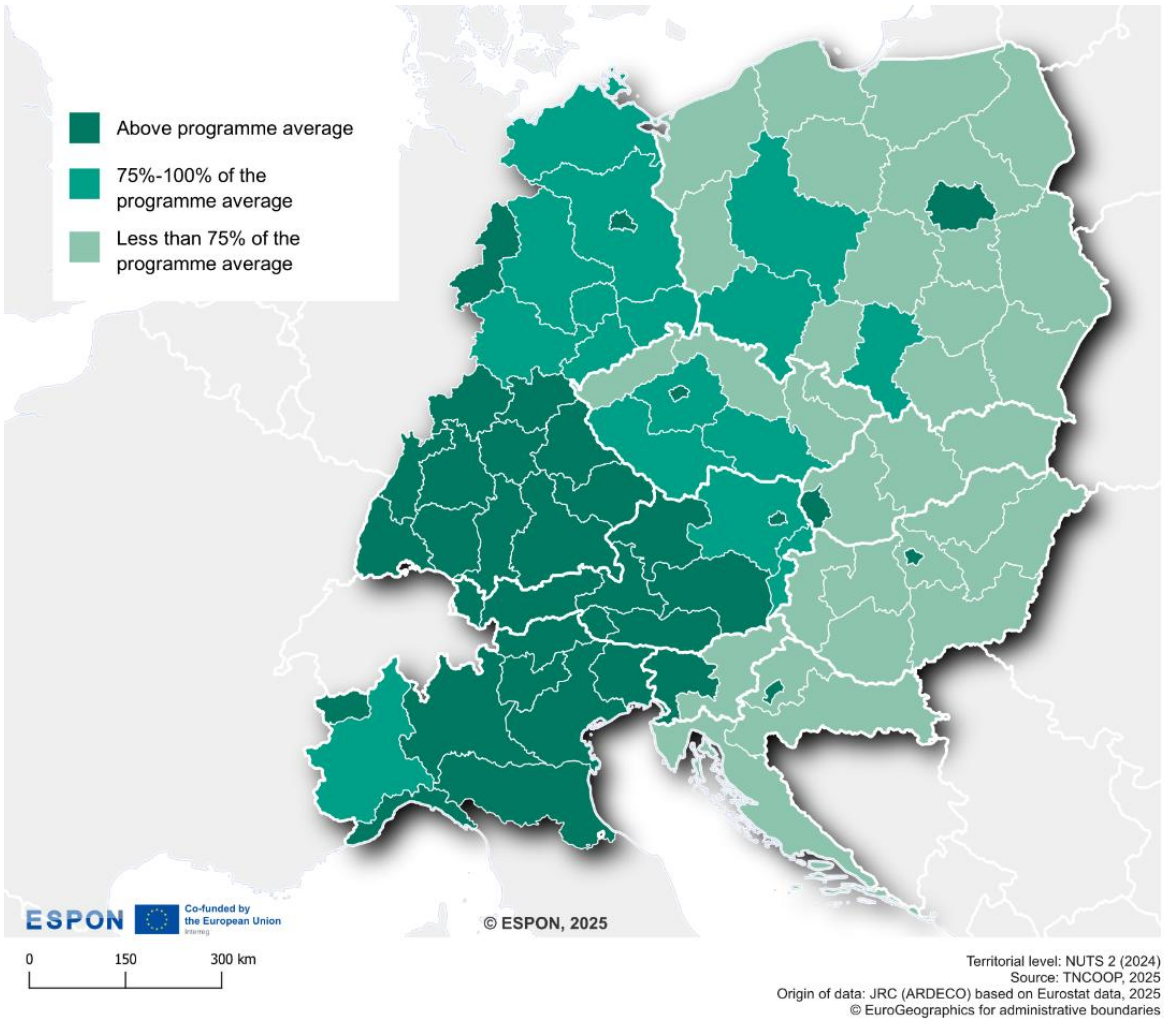
[7] See also Römisch (2020): Synthesis paper of joint challenges and needs of the Interreg CENTRAL EUROPE programme area. P13.

[8] See also Römisch (2020): Synthesis paper of joint challenges and needs of the Interreg CENTRAL EUROPE programme area. P6.

Reading note: Map 1.5

The map below has been developed to illustrate contrasts in GDP within the programme area following a common approach used in cohesion policy. In cohesion policy, this approach classifies regions based on their GDP/capita in relation to the average EU GDP/capita. Regions below 75% of the average are considered "less developed", between 75% and 100% of the average are considered "transition" and above 100% are considered "more developed". For the map, the same classification has been calculated in relation to the programme average. This is necessary for the context of the project, as otherwise non-EU countries (except NO, CH etc.) would fall exclusively in the "less developed" category thus reducing the analytical value of the map.

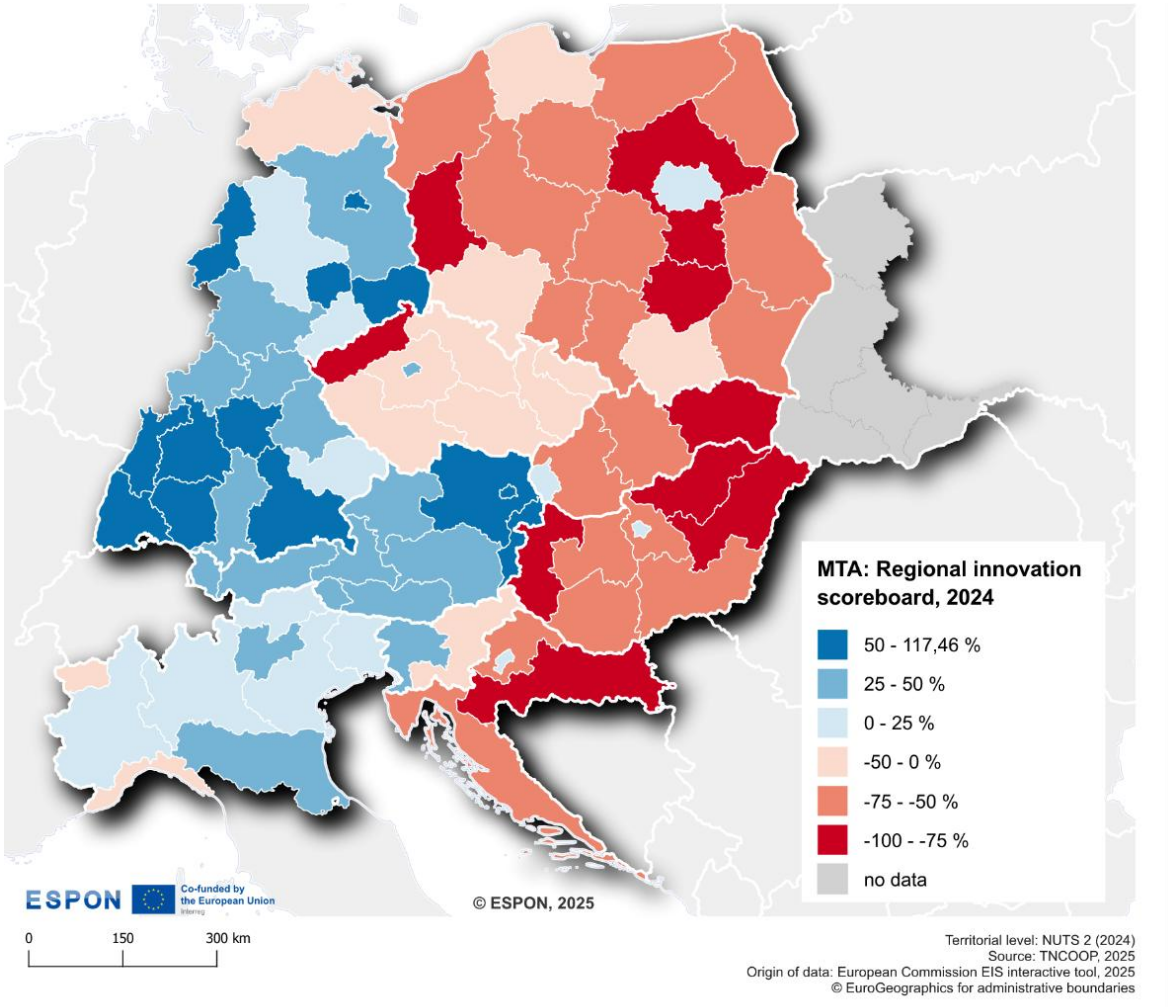
Map 1.5: Regional development status (GDP/capita in relation to the programme average)



The map above depicts the regional development status of NUTS2 regions within the programme area in relation to the programme average, i.e. it categorises regions in the same logic as Cohesion Policy does in relation to the European average. The Central Europe programme represents a good cross-section of low- to high GDP/capita regions, and as such, the categorisation does not differ much from the Europe-wide calculation. A clear east-west divide is visible, where Croatia, Hungary, Slovenia and Slovakia only show the capital as above programme average, while all other regions are lower than 75% of the programme average. Poland and the Czech Republic show a more differentiated picture, while Italy, Austria and Germany have the majority of their regions above the programme average.

Reading note: Multi-scalar territorial analysis (MTA)
The multi-scalar territorial analysis highlights regional characteristics in different contexts and across different governance levels, allowing for benchmarking of regions, providing a differentiated picture in particular for those programmes covering a very diverse set of regions. For each region and each assessed indicator in a programme area, the MTA method highlights the distance of this region from the median value of the whole programme. Please refer to the TNCOOP Final Report for further details on the method.

Map 1.6: MTA: Regional innovation scoreboard



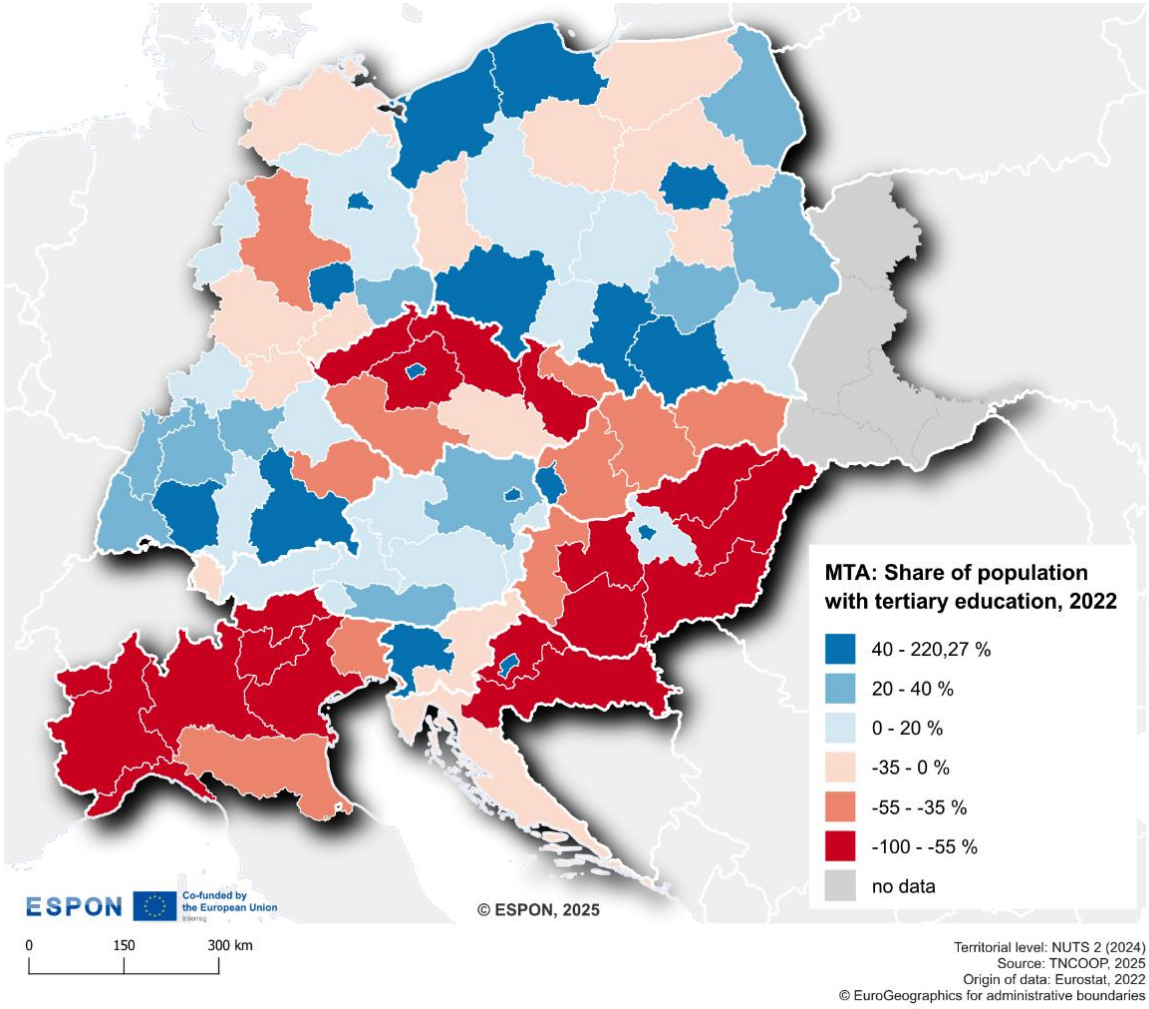
Innovation performance in Central Europe in 2025 shows a clear west–east divide. Regions in southern Germany, Austria and northern Italy, perform above the CE median, forming a strong innovation corridor across the western part of the region. In contrast, most regions in Slovakia, Hungary and eastern Poland perform well below the programme median, with several areas performing at over 75% below the CE median. These patterns highlight pronounced regional disparities, with innovation capacity concentrated in the west and significantly weaker performance in the eastern parts of the cooperation area. The only exception are cities in countries located in the eastern part of the programme, which are roughly at the median of the programme area.

For Ukrainian regions[9], no directly comparable data is available. However, looking at current trends in research and development (innovative activities), after a considerable reduction in 2022 and 2023,

[9] Five Ukrainian regions are specifically examined for a potential expansion of the programme area to these regions

expenditure is currently back to the pre-2022 status in relation to GDP and has substantially increased, in particular for applied research[10].

Map 1.7: MTA: Share of population with tertiary education



Compared to the programme median, the regions with the highest proportion of the population with tertiary education in 2024 are major urban and metropolitan areas such as Warsaw, Prague, Vienna, Bratislava and Budapest. Several regions in southern Germany and Poland also perform considerably above the programme median. In contrast, large parts of Hungary, eastern Croatia, northern Czechia and northern Italy have shares that are significantly lower than the CE median, sometimes by more than 50%.

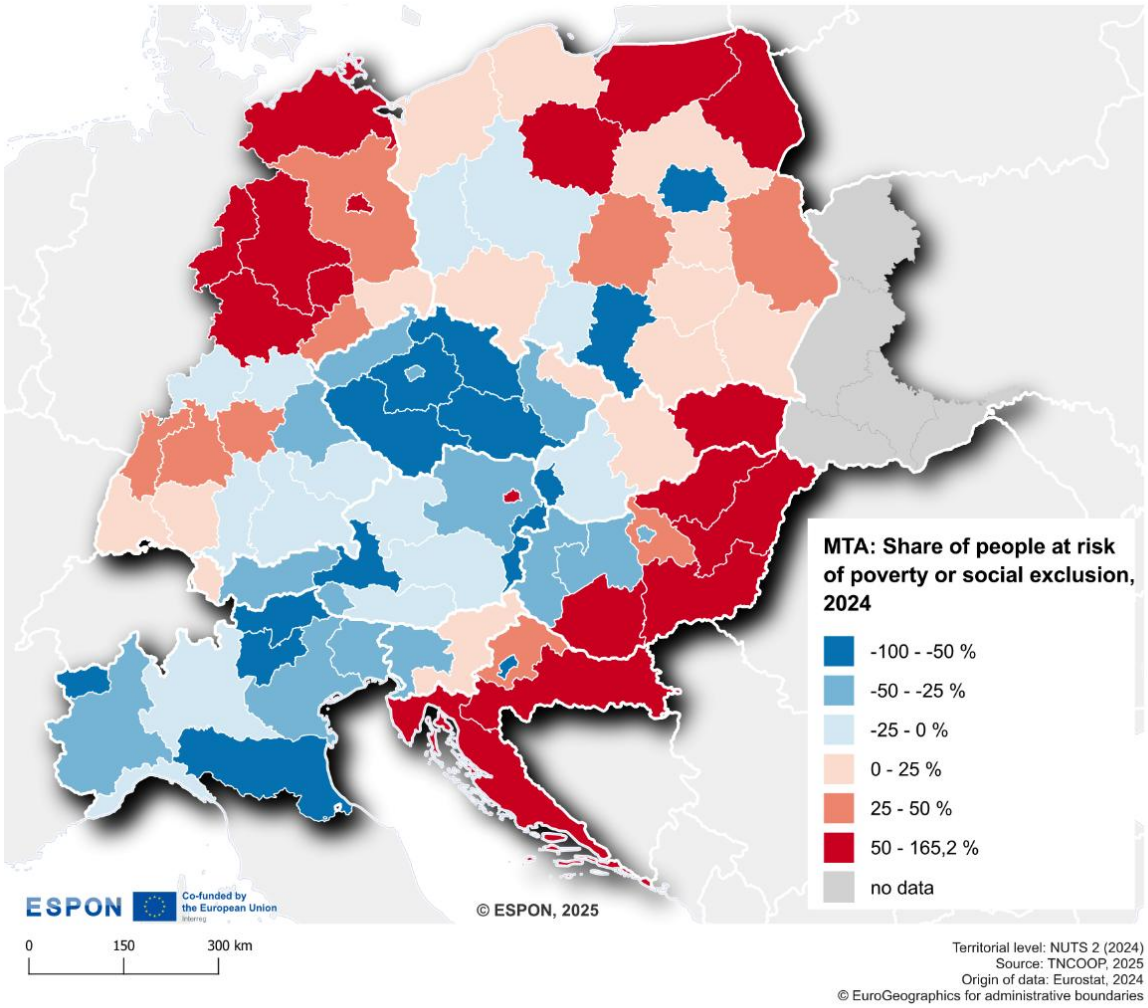
For Ukrainian regions[11], no recent regional data is available. On national level, the number of institutions for tertiary education (-50%) as well as the number of students enrolled (-35%) have both considerably decreased since 2019, however remain relatively stable since 2022 despite the ongoing war. While education data available for Ukrainian regions is not directly comparable due to different structures of data

[10] Implementation of scientific research and development | State Statistics Service of Ukraine

[11] Five Ukrainian regions are specifically examined for a potential expansion of the programme area to these regions

collection and definitions[12], the Ukrainian regions investigated show values which are most likely quite below the programme median[13].

Map 1.8: MTA: Share of people at risk of poverty or social exclusion



In 2024, the proportion of people at risk of poverty or social exclusion varied significantly across the Central and Eastern European region. The highest concentrations were found in Croatia, eastern Hungary, eastern Germany and eastern Poland. Several regions exceeded the programme median by a considerable amount. By contrast, better-performing values are evident in most regions of the Czech Republic, as well as in northern Italy. Strong regions such as Bavaria and Austria show moderate percentages around the programme median. Notably, while in Poland, Hungary, Slovakia, Croatia and Slovenia, the capital region performs better than the majority of the country, Vienna and Berlin by contrast display values considerably above median for the programme.

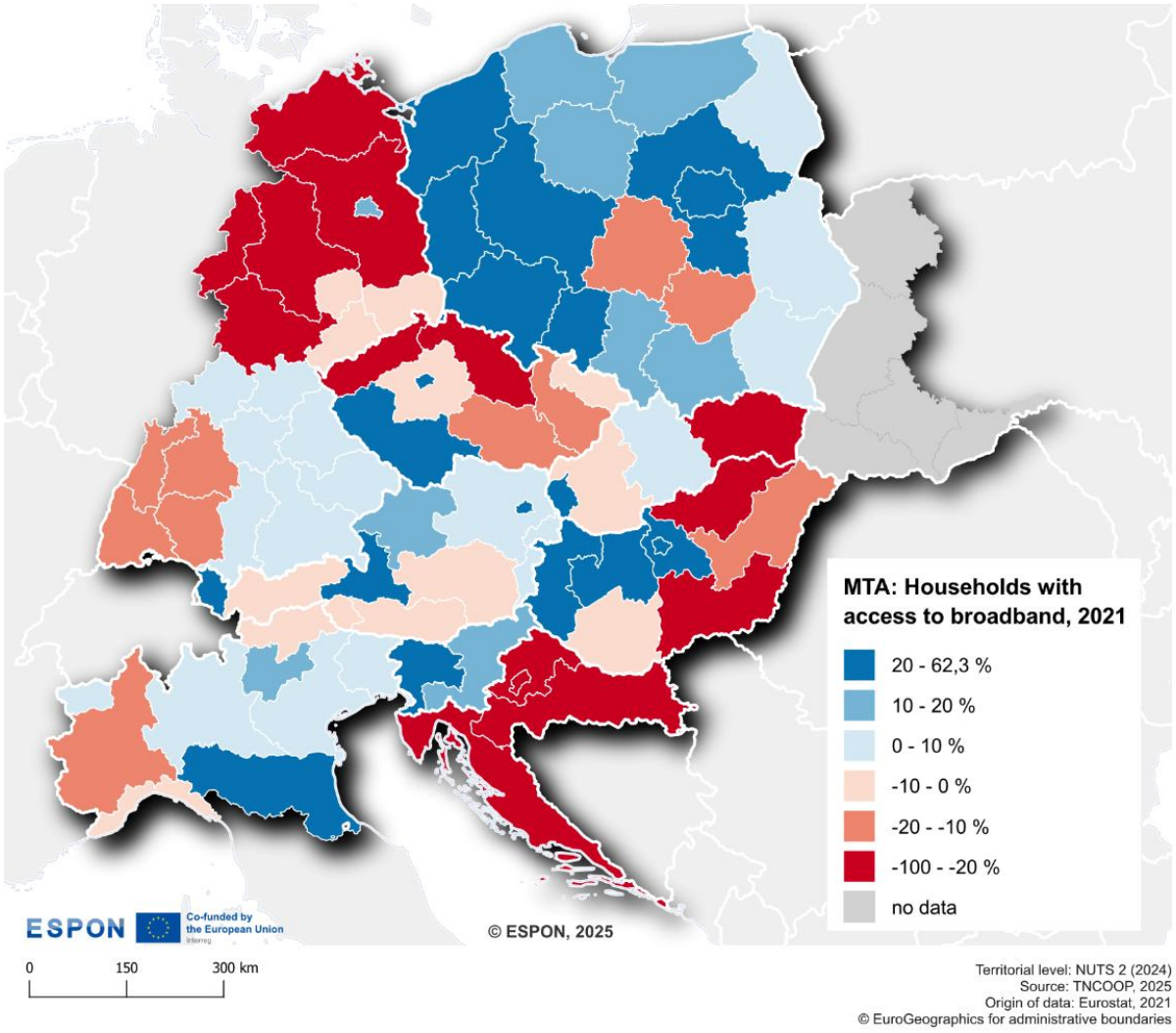
For Ukrainian regions, no reliable data is available due to the ongoing war, statistics are not comparable to other countries on this indicator[14].

[12] i.e. available indicators use different age groups as a basis for calculation, thus data for UA regions are biased to under-estimate the share in comparison to the EU

[13] Stat.gov.ua and Network and activities of educational institutions | State Statistics Service of Ukraine

[14] Five Ukrainian regions are specifically examined for a potential expansion of the programme area to these regions

Map 1.9: MTA: Households with access to broadband



Compared to the Central European median, broadband access in 2021 was the highest around major urban centres, as well as in the western regions of Poland and western Hungary. Emilia-Romagna in Italy and western Slovenia also showed significant positive values. By contrast, broadband access was significantly more limited in parts of eastern Hungary and Slovakia, northern Czechia and in Croatia as a whole, with regions falling far below the Central European median. Germany shows regionally very differentiated values, with Bavaria having moderate broadband connections and eastern Germany falling well below the programme median. For Ukrainian regions[15], no data is available, however on country level, Ukraine is slightly behind the neighbouring regions in terms of internet- and broadband access at household level[16].

1.3.2 Emerging new policy and thematic trends: cooperation opportunities

A number of emerging policy and thematic developments across the Central Europe area present opportunities for new transnational collaborations. These trends are derived from document review and the spatial patterns identified in the territorial analysis (section 1.2.1 and Annex B).

[15] Five Ukrainian regions are specifically examined for a potential expansion of the programme area to these regions

[16] Fixed-broadband subscriptions – ITU DataHub

The transition towards climate neutrality is one of the most key processes affecting Central Europe. The programme area shows a very diverse range of energy production sources and subsequently consumption patterns. Some regions, particularly in Austria, Slovenia, Croatia, parts of Germany and northern Italy, already have comparatively high levels of renewable energy consumption. However, others still rely heavily on fossil fuels, be it from coal or other sources. This uneven starting point creates both a shared challenge and a strong rationale for cooperation, particularly in supporting less advanced regions in managing the transition.

Transition challenges combine environmental aspects with labour market aspects (as e.g. coal regions tend to have a high share of employment linked to the corresponding industry, and phasing out creates local challenges on the labour market) and are furthermore of crucial relevance for manufacturing and industry. Changes in energy prices, transition towards more self-sufficient sources etc. create implications for large and small companies in those fields, and might create additional cost pressures but long-term savings.

From an environmental perspective, the transition presents a very positive opportunity, as large parts of the programme area have considerable potential for improving their use of renewable energy, while also being affected by low air quality. Furthermore, the territorial analysis also highlighted several key environmental risks, such as increased drought exposure in northern Poland and eastern Germany, and heightened flood risk along the Alpine and Danube corridors. Reducing and mitigating these risks is necessary, especially as joint and coordinated efforts, beyond borders, are required. Reducing activities contributing to climate change as well as improving solutions for mitigation and adaptation is crucial and can be considered as cooperation opportunities.

At the same time, industrial competitiveness is likely to remain a core feature of the Central Europe area in the future. Much of the region is heavily industrialised and closely integrated into regional and European supply chains. The shift towards cleaner, more digital and more resource-efficient production systems will affect all countries in the programme area which are involved in such industrial activities. However, the territorial analysis reveals significant disparities in preparedness. While some regions enjoy strong innovation ecosystems and competitive advantages, others lag behind in terms of innovation capacity and development levels. Given the high degree of interdependence within industrial value chains, these disparities pose a shared risk. Transnational cooperation can therefore play a role in promoting more balanced industrial transformation processes, facilitating the transfer of knowledge and supporting joint development across interconnected regions.

Linking environmental aspects and competitiveness, environmental pressures in central Europe are often connected to industrial production. Decoupling emissions and competitiveness to reduce the high greenhouse gas emissions in parts of the programme area, and high waste intensity in other parts of the programme territory presents a cooperation opportunity. Climate neutrality in industry as well as increased focus on circular economy, in line with European level initiatives, can support progress throughout the programme area in those interlinked fields. Ultimately, such cooperation could help to ensure that the territory remains a strong manufacturing hub in the long term.

As a fourth cooperation opportunity, cultural heritage and tourism remain defining features of Central Europe. The large concentrations of cultural assets found in Italy, Austria, Germany and the capital regions of other countries, combined with the cross-border tourism systems found in the Alps, on the Adriatic coast and in the Danube basin, create an incentive for cooperation and joint management. While tourism patterns, despite the strong interruption due to the Covid-19 pandemic, have remained relatively stable over time, the sector now faces new challenges, including the impact of climate change on winter tourism, seasonal pressure on sensitive alpine and coastal environments, and growing demand for more sustainable forms of tourism. Taking environmental considerations and the needs of local populations into account to a greater extent than before represents a clear opportunity for transnational cooperation.

Service provision is another emerging territorial issue, particularly in rural, peripheral and demographically shrinking regions in the eastern parts of the programme and in mountainous areas. Ageing, outmigration and weaker accessibility can increase pressure on education, health, mobility and other services of general interest. These challenges are not distributed evenly across the programme area, but they are relevant for many regions facing demographic decline and weaker labour-market dynamics as well as lower institutional capacity. Digital connectivity and new models of local service delivery can therefore be considered as cooperation opportunities, especially where similar territorial challenges occur across national borders.

Finally, the programme is exploring the possibility of re-involving Ukrainian regions. Five regions, namely Volyn, Lviv, Zakarpattia, Ivano-Frankivsk and Chernivtsi, were previously part of the Central Europe Programme area (between 2007 and 2013). They are therefore the focus of particular interest in assessments and discussions about programme area expansion.

For this reason, the analysis of the disparities and challenges in the programme area (section 1.3.1) covers these regions by examining thematically relevant indicators. Please also refer to the analysis of maps in Annex B, which include the five regions for indicators where data was available. Where data availability allows, this intends to inform discussions on geographical adjustments in the post-2027 period. The assessment shows some clear disparities between Ukrainian regions and Central Europe regions which fall in line with thematic aspects addressed by transnational cooperation and analysed in the project. Nevertheless, considerable limitations in the possible data accuracy and timeliness also limit the possibility of concluding judgments in this regard. The ongoing Russian aggression against Ukraine means that multiple measures, e.g. related to poverty, educational attainment or innovativeness and tourism are not comparable with information for the rest of the programme (e.g. poverty related aspects are based strongly on disposable income, however inhabitants of regions affected by the war might require different indicators to measure their risk of poverty). These aspects strongly influence the discussions on expanding the programme area as implications of the conflict are far-reaching in terms of security, governance, social cohesion etc. The war fundamentally changes understanding of many of those aspects, which go beyond statistical measures. Thus, while the examined Ukrainian regions show a potential for being included in the programme area, their actual integration is rather a political decision than one based on territorial data.

2 Synergies & value-added

Reading note – Content of section 2
This section examines the synergies between the programme and other trans-national programmes, its alignment/coherence with broader EU frameworks (in particular Cohesion Policy mainstream programmes, Interreg strands, EU Macro-regional and Sea Basin Strategies) and its overall value-added.
This section includes several key terms and concepts, often understood and used in different ways. Conceptual clarity is however essential; more harmonised and unambiguous definitions for terms such as "synergies", "capitalisation", "embedding" contribute to establish a common understanding of these terms across all relevant stakeholders, thereby possibly ensuring a greater uptake.
Following work by Interact, the analysis adopts the following definitions: "synergies are about rowing in the same direction. Capitalisation ensures we steer better, guided by past journeys."17 Synergies may be of different type (e.g. strategic, operational, territorial…. etc.) and accordingly at different levels or scales (e.g. programme, project). Synergies and capitalisation go hand in hand as synergies may contribute to further the uptake of programme successes. Embedding (of EU-funded programmes, including beyond Interreg) is about identifying and understanding the interconnection and interdependences between projects, processes, policies and objectives.
The analysis draws on information from the programme-level interviews, programme relevant documents as well as an interview with Interact.

2.1 Existing synergies and mechanisms

Building on evidence from existing evaluations[18] and studies[19] in the context of synergies, as well as qualitative consultation with the programme, the following section identifies existing synergies and mechanisms of the programme. The analysis focuses on how synergies are operationalised at different levels and through different instruments. It should be noted that the available evidence is largely based on programme-level information, while systematic evidence on outcomes at project level remains limited.

Building on the work carried out by Interact, the analysis distinguishes between synergies, which refer to aligning actions towards shared objectives, and capitalisation, which refers to building on the results of previous projects. These two aspects are nonetheless closely interlinked: synergies contribute to the uptake and further use of programme outputs at different levels (e.g. programme and project) and types (e.g. strategic, operational, or territorial).

Overall, the Central Europe Programme is proactive in establishing synergies with various EU funding instruments to reinforce complementarity throughout the programme lifecycle. This does not only include active coordination with other Interreg programmes but also EU programmes such as Horizon and similar programmes.

Programme-level coordination across Interreg programmes and MRS

At programme level, coordination with other transnational Interreg programmes is well established. Regular formal and informal exchanges take place with programmes such as Interreg Danube Region, Baltic Sea Region, Euro-MED, Alpine Space and North Sea Region as well as Interreg Europe. Continuous communication between Managing Authorities (MAs) and Joint Secretariats (JSs) supports collaboration

[17] Interact presentation (2025) New Waters Ahead: Strengthening Synergies and Capitalisation

[18] Operational evaluation of the Interreg CENTRAL EUROPE programme 2021-2027, final report See Link; Impact evaluation of the Interreg 2014-2020 CENTRAL EUROPE programme, final report See Link

[19] Analysing the potential for joint valorisation of cross-border and transnational Interreg solutions in CENTRAL EUROPE, draft report

on programme management issues as well as the development of common positions on emerging challenges. These include operational and more strategic aspects, such as exchanges on the timing and focus of calls for applications contribute to avoiding duplication and identifying potential complementarities.

At national level, Interreg Central Europe participates in country-specific coordination mechanisms within Member States, including national Interreg meetings and conferences. In this context, National Contact Points (NCPs) play an important role as intermediaries with a cross-programme perspective, supporting coordination across funding sources and facilitating information exchange. This contributes to identifying potential synergies between Interreg Central Europe and other EU and national instruments. These efforts to foster coordination and create synergies are perceived as positive, effective and successful, by the programme bodies.[20]

Coordination with macro-regional strategies (MRS) is described as more complex, reflecting differences in governance structures and operational systems. The Central Europe Programme overlaps with four macro-regional strategies (EUSALP, EUSAIR, EUSDR and EUSBSR), which increases both the potential for synergies and the coordination effort required. Programme representatives participate in selected MRS working groups (e.g. Danube and Adriatic–Ionian), typically on an invitation basis and in a rather observing role. As a result, coordination tends to follow a more selective and ad hoc approach, even though stakeholders from the four strategies were consulted during programme preparation. Nevertheless, this limits the potential for systematic alignment and reduces the visibility of transnational programme contributions within macro-regional frameworks. On a different level however, macro-regional priorities are reflected in programme operationalisation, as application forms for beneficiaries explicitly reference MRS. [21]

Capacity constraints also pose a significant challenge to the development of synergies. Although synergies are widely regarded as desirable, they are not always prioritised in day-to-day programme management. Their realisation is seen as strongly depending on programme-level interest and initiative. For instance, CE actively seeks exchanges and makes use of operational synergies, such as shared templates for project applications, but is rarely approached by other programmes with similar offers. Likewise, although invitations to joint formats, such as roundtables, are occasionally extended to other programmes, reciprocal invitations are less frequent. A potentially contributing factor to this is limited access to information. Programmes often lack sufficient visibility of other funding instruments and initiatives, making it difficult to identify concrete entry points for cooperation. Variations in the structures of Interreg B programmes can complicate coordination and further limit synergies.

Project-level mechanisms for preventing overlap and fostering synergies and capitalisation

Another significant aspect of this coordination and synergy work is **communicating with other programmes to avoid double funding.** The programme has several mechanisms in place, which are particularly used during the application assessment phase. One of those is the check of application against existing projects with the help of the Keep.eu database as well as INDEX[22], verifying potential issues with all six (partially) overlapping Interreg-B programmes. While applications are being checked for double funding, the identification of **potential synergies** at project level is undertaken. These potential synergies are noted and communicated to funded projects and are then used to plan further thematic or cross-project activities. Examples of such activities include the "Synergy Roundtables" that were organised in 2023, 2024 and 2025 to help connect first and second call projects and enabling knowledge transfer and

[20] Interview with the programme joint secretariat, 2026

[21] Interview with the programme joint secretariat, 2026

[22] https://www.interact.eu/about-interact/our-tools/index

collaboration opportunities. In this regard, the Interreg CE and Interreg Danube region programme synergy-building exercise in 2024–25 is notable. While these mechanisms create opportunities for interaction, the extent to which they lead to sustained collaboration still depends largely on project-level initiative.

Capitalisation is further supported through dedicated programme instruments. In particular, the Strategic Call for Capitalisation (Call 4), building on a preparatory study[23], it is designed to reduce border effects and strengthen functional linkages across the programme area. It requires projects to build on and further develop results from Interreg Central Europe and cross-border cooperation projects, thereby linking existing knowledge with new interventions in a more structured way.[24] This strategic approach requires projects to combine transnational and cross-border efforts by building on the outcomes of at least two previously funded Interreg Central Europe projects and two Cross-Border Cooperation projects. It is implemented through two complementary pathways: 'upstreaming', which tailors outputs for policymakers to improve territorial strategies, and 'downstreaming', which facilitates the rollout of solutions to new regions or industrial sectors. To ensure that results are built upon and scaled up effectively, beneficiaries are supported during a dedicated 'capitalisation phase' with practical tools by the programme.[25]

Thematic linkages with EU-level initiatives

On a **thematic perspective,** for the 2021–2027 period, Interreg CE is not only promoting active coordination with cross border cooperation programmes in Central Europe, but also actively engaging with the Clean Energy Transition Partnership (CETP) to create synergies between transnational cooperation and European research innovation efforts in the energy sector. The purpose is to align Interreg CE projects (PO2: Greener CE) with broader EU goals for climate neutrality and digital transformation. More generally, synergy-building and capitalisation are supported through a combination of measures, including the organisation of thematic events and exchange formats, as well as cooperation with other Interreg programmes, EU funding schemes and INTERACT.

Overall assessment of synergies

Overall, cooperation between the Central Europe programme, other Interreg programmes and MRS is **not very institutionalised but quite effective**. It employs a multi-layered approach to synergy-building, combining coordination mechanisms, operational tools and targeted instruments. While these provide a general solid framework for interaction and knowledge exchange, their translation into systematic results still relies strongly on project-level initiative. Furthermore, coordination with other programmes is not always reciprocal and sometimes lacks a more structured and continuous approach.

2.2 Potential for synergies and cooperation opportunities

This section examines the potential for further synergies and cooperation under the Interreg Central Europe Programme, building on existing experience while identifying areas for improvement. It focuses on how existing mechanisms could be further developed and which new approaches could enhance coordination, capitalisation and strategic alignment across different funding frameworks.

[23] Analysing the potential for joint valorisation of cross-border and transnational Interreg solutions in Central Europe

[24] Interview with the programme joint secretariat, 2026

[25] ToR for the Strategic call for Capitalisation (fourth call). See Link

As a core element for strengthening long-term impact, post-project capitalisation is key. Building on current programme actions on identified thematic areas with high potential and the already established Strategic Call for Capitalisation (Call 4), the programme is at a good starting point. The design of future programmes could further strengthen the requirements for projects to develop, transfer and scale up existing results. By systematically linking new projects to previous outputs, capitalisation instruments may contribute to greater continuity and higher cumulative impact over time. Nevertheless, their effectiveness will depend on the extent to which beneficiaries are supported in identifying relevant results and benefit from previous work in their field.

Territorial synergies, to an extent, are already embedded in the programme design, and ongoing activities do have a territorially targeted element. However, the territorial dimension could be strengthened further by linking projects to functional areas (such as joint cross-border labour markets, or functional tourism areas), and existing regional strategies more systematically, thereby enhancing the relevance and scalability of results. Links with other Interreg programmes are particularly relevant in this regard, particularly cross-border programmes, which often inherently have a more targeted territorial perspective.

Another area of potential development concerns stronger linkages with mainstream funding instruments, in particular the ERDF and relevant national or regional programmes. At programme level, achieving synergies with mainstream programmes remains challenging, as this largely depends on the initiatives of individual projects. There is also limited scope for strategic steering. In the future, there is an opportunity for improvement in the form of more structured interfaces with the managing authorities of mainstream programmes and more continuous strategic exchange formats. These can be grounded on existing coordination mechanisms with national contact points, expanding coordination in order to move from ad hoc cooperation towards more institutionalised forms of coordination. Given the large number of regions involved, particularly in cross-border contexts, simplified and more targeted coordination formats could support this process. Therefore, a realistic way forward would not be a broad institutional coordination with all mainstream managing authorities, but rather targeted interfaces in selected thematic fields where CE projects generate transferable outputs. Examples of these fields include climate neutrality, industrial transition, digital connectivity, and sustainable regional development.

In the same line, there is scope to further strengthen coordination and alignment with multiple macro-regional strategies. While current cooperation is largely based on participation in selected activities and informal exchanges, more structured and continuous interaction could enhance coherence. Through more systematic involvement in thematic working groups and establishment of continuous exchange mechanisms, the ad-hoc nature of current communication could be overcome.

Existing instruments and approaches suggest a gradual shift from more ad-hoc and small-scale coordination-based synergies towards more structured, long-term impact-oriented forms of cooperation. Their future effectiveness will depend on how strongly they are embedded in programme design, how well they are supported by coordination mechanisms across programmes (such as expanded use of capitalisation oriented calls, joint communication of existing projects to potential beneficiaries (beyond keep.eu, which is not user friendly for this purpose), and how widely they are ultimately adopted by beneficiaries.

3 Operational analysis

Reading note – Content of section 3
This section synthesizes findings on programme operations, addressing governance, impact, and capacity-building issues. The information sources feeding into this section include programme documents analysis (e.g. capitalisation, amplification and impact strategies when available, evaluations) interviews with the programme Joint Secretariat and/or Managing Authority and Interact representatives.

3.1 Governance

This section examines the governance structure of the programme, focusing on how it supports territorial relevance, coordination across levels and efficient programme implementation. It also considers key challenges and opportunities for improving outreach and stakeholder engagement.

Overall, the programme is characterised by a well-established multi-level governance system, combining strategic decision-making at programme level with decentralised implementation across participating countries. In this context, territorial outreach is usually supported through national and regional structures that act as key intermediaries, and which are supported by programme-level action.

Territorial governance patterns

The programme systematically monitors the geographical distribution of applicants to identify and address regional disparities in participation. Historically, adjusted (to population) participation rates have been highest in Slovenia, Croatia, Hungary and north-eastern Italy, while several regions in Poland and Germany have recorded persistently lower levels of involvement. Applications tended to be concentrated in NUTS 3 regions that host national capitals or major metropolitan areas, such as Ljubljana, Budapest, Zagreb, Bratislava and Prague. This reflects the presence of well-established institutional ecosystems and dense professional networks in capital regions.

These imbalances were addressed through the design of the third call in this period, targeting in particular territories where cooperation needs were greatest. This covers regions showing low economic potential, poor access to services of general interest, such as education, health, or transport and lack of relational proximity.[26] This attracted project beneficiaries from 22 NUTS 3 regions who had not previously participated in the programme. These newcomers were predominantly located in peripheral and rural areas across countries including Poland, Hungary and Italy. As a result, the beneficiary profile became more balanced in terms of geographical coverage, types of organisations and levels of experience.[27],[28]

Further differences in participation levels can be explained by structural and institutional factors. These include variations in national co-financing requirements, differences in administrative capacity and the availability of alternative funding opportunities (depending on the respective countries, applicants often prioritise the more familiar, nationally managed instruments for regional development as well as mainstream ERDF), particularly in larger member states such as Germany and Poland.

[26] ToR for the third call proposal. See Link

[27] ToR for the third call proposal. See Link

[28] Operational Evaluation 2025. See Link

Furthermore, the programme has adopted an increasingly adaptive communication strategy aimed at reaching under-explored territories and broadening its geographical base of beneficiaries. A key element of this approach is the enhanced responsibilities of National Contact Points (NCPs). Their role involves identifying thematic influencers and carrying out regional outreach activities to support organisations in underrepresented areas. In parallel, the programme has expanded its use of digital communication tools. In 2024, it launched paid social media campaigns on Meta and LinkedIn, using geographical targeting to raise awareness among potential applicants in underrepresented regions.

Overall, these patterns indicate that while the programme benefits from strong core cooperation networks, targeted measures building on the successful first experiences by the programme are required to ensure a more balanced territorial participation.

Targeted action to expand the number of beneficiaries

As outlined by section 1.2.3 the most intensive cooperation patterns between current beneficiaries, based on partners collaborating in two or more Interreg B projects, are concentrated in Slovenia and the Italian regions of Friuli Venezia Giulia and Veneto, as well as the Budapest region in Hungary. Academic institutions and business support organisations act as stable connectors within the cooperation network, maintaining cross-regional partnerships. At the same time, there is a high degree of transnational continuity, with many partnerships building on previous cooperation under the preceding programme, other Interreg programmes or EU funding schemes. This indicates that the programme has a platform for sustained collaboration and establishes entry points for new participants. [29], [30]

However, the programme recognises the need to expand the number of beneficiaries and, in particular in this period, has actively targeted the involvement of newcomers, particularly actors with prior experience in other EU or Interreg programmes but not yet active in this programme. This undertaking can be assessed as successful since newcomers accounted for 58% of all beneficiaries under Calls 1 and 2, which represents an increase compared to the 23% recorded during the 2014–2020 period[31].

These actions are complemented by a territorial and thematic focus. Priorities 3 and 4 focus on rural and peripheral connectivity, as well as integrated governance. This creates a thematic entry point for regions that have traditionally shown lower participation level in the past and thus supports the expansion of the beneficiary base while at the same time improving the territorial targeting.

These aspects show that the programme has been effective in lowering entry barriers and expanding its beneficiary base, while maintaining continuity in established cooperation networks.

Internal programme governance

Targeted measures were introduced by CE during the 2021-2027 period to improve the efficiency and effectiveness of programme management and implementation. These measures include administrative restructuring, more refined monitoring and reporting procedures, efforts to simplify processes, and extensive use of digital tools.

A key development in project implementation is the transition to a flexible, risk-based reporting system from projects to the JS. Central to this approach is the clear separation of financial and activity reporting. The programme introduced two separate reporting instruments for this purpose. This decoupling

[29] Interview with the programme joint secretariat, 2026

[30] Operational Evaluation 2025. See Link

[31] Operational Evaluation 2025. See Link

prevents delays in expenditure verification from impacting the reporting and assessment of project activities. [32]

Additionally, the programme has transitioned to continuous monitoring by tracking selected milestones and outputs. This approach is formalised in a monitoring plan established at the start of each project, enabling the joint secretariat (JS) to identify delays or implementation challenges early on and provide targeted, proactive support. Alongside increased digitalisation, these refinements have accelerated reimbursement processes, reducing the average time between report submission and payment by almost 70%.

Several organisational changes have also contributed to more efficient programme management. The joint secretariat has restructured its internal organisation by merging the financial and project units. Consequently, each project is now overseen by a single Programme Officer, which enables staff to adopt a more holistic perspective on project implementation, placing more emphasis on quality and content rather than financial control alone. In addition, the integration of the Certifying Authority (CA) into the Managing Authority (MA) has simplified administrative procedures and reduced complexity.

Simplification and administrative burden

Simplification has been a central objective throughout the 2021–2027 period. The programme has significantly expanded the use of Simplified Cost Options (SCOs), including flat rates and lump sums, in order to reduce the administrative burden of documenting actual costs, which simplified budget preparation for around 80% of applicants (according to the conducted survey).

In standard project selection (Calls 1 and 2), the relevance filter was used as an initial quality assessment phase, screening proposals against the two strategic criteria of relevance and partnership. This phase also evaluated the competence and relevance of the partnership for achieving the project goals. This mechanism was designed specifically to handle high volumes of applications more efficiently by eliminating weaker proposals early in the process. For targeted Call 3, the programme introduced online hearings for shortlisted lead applicants whose proposals were likely to be funded. A refined scoring system integrating thematic and territorial relevance ensured that projects strictly aligned with the call's specific focus on pioneering solutions for peripheral and lagging areas.[33]

Digitalisation plays a central role in supporting these changes. Changes in the monitoring system as well as introduction of a web-based Internal Workflow Tool support this considerably. The changes allow programme management to get a real-time overview of each project, thereby strengthening internal coordination, increasing transparency, and reducing the risk of management errors.[34]

These measures not only reduce administrative burden but also contribute to improving accessibility for new beneficiaries and enhancing the overall efficiency of programme implementation.

3.2 Impact

This section examines how the Central Europe Programme generates territorial impact, based on available evidence from participation patterns, cooperation structures and early implementation experience. While most projects are still ongoing, limiting direct impact assessment, relevant insights can be derived from the programme's design and emerging cooperation dynamics.

[32] Operational Evaluation 2025. See Link

[33] Operational Evaluation 2025. See Link

[34] Operational Evaluation 2025. See Link

Territorial impact in the programme is primarily generated through the composition of partnerships in projects, the structure of cooperation networks and the ability of projects to transfer and upscale results beyond their initial (territorial) scope.

Critically, as shown in earlier sections (1.2.1 and 1.3.1), participation and cooperation remain concentrated in capital regions. This reflects well-developed institutional ecosystems and dense professional networks. However, this pattern also hints at potential knowledge and capacity disparities between urban centres and rural or peripheral regions, where fewer organisations have the necessary experience and institutional capacity to engage with more complex programmes. These gaps are proven not to be immutable and could be bridged (to an extent) by the programmes territorial targeting. By focusing on small-scale projects with a limited thematic scope, the programme successfully attracted first-time applicants from a number of previously less active regions. This provides clear evidence that targeted call design and tailored support measures can effectively broaden territorial participation, although such effects may require sustained efforts to be maintained over time.

The analysis of cooperation intensity as presented in section 1.2.3 and Annex C further highlights the importance of stable institutional actors as multipliers within the programme. Academic institutions and business support organisations act as key connectors, maintaining cross-regional partnerships and ensuring continuity across projects. This is particularly significant in light of the programme's understanding that new participants following a gradual capacity-building path from first participation as project partner in small projects to lead partners. Multipliers which are present in the programme and also connect across themes play a vital role in this process by passing on procedural knowledge, thematic expertise, and informal programme know-how to less experienced partners. This peer-based learning is particularly important for organisations in under-explored and peripheral regions where institutional capacity and access to cooperation networks are more limited.

At the same time, the analyses conducted in the context of the TNCOOP project as well as through the programme evaluations indicate that generating participation and cooperation alone does not automatically translate into sustained territorial impact. While the Central Europe programme demonstrates rather balanced partner involvement across countries, organisational types and experience levels, there are still clear (territorial) differences. The main challenge in achieving programme impact lies on ensuring that project results are embedded effectively within existing institutional and funding ecosystems. The programme therefore could evolve beyond simply attracting partners and concentrate on incorporating project outcomes into these existing ecosystems to effect long-lasting change. This highlights the need for clearer guidance on sustainability and scaling up pilot actions. The focus should be on territories where there is sufficient political commitment and financial capacity to ensure that the results of projects continue beyond their lifecycle. By engaging more purposefully with the managing bodies of other transnational, cross-border and EU-wide programmes, Interreg CE can strengthen thematic complementarities and support that project outputs are effectively 'upstreamed' or rolled out into broader policy frameworks, thereby enhancing the long-term impact of the programme. However, the actual upstreaming and roll-out depends on the involvement policymakers, which can be supported through activities such as the strategic call for capitalisation.

3.3 Capacity building and programme delivery

This section examines how the programme supports applicants and beneficiaries throughout the project lifecycle, with a focus on capacity-building measures, delivery mechanisms and the role of support tools in facilitating participation and implementation. It also considers how these measures contribute to participation, project quality and the effective transfer and uptake of results.

Application support and matchmaking

The programme provides a variety of support measures and tools to help applicants prepare high-quality project proposals. These include the "Applicant Community" which facilitates the exchange of project ideas and partner matchmaking, video explainers and tutorials to guide applicants through key procedural steps and requirements, webinars to cover the key elements of each call and address applicants' questions, and individual consultations with the Joint Secretariat to allow lead applicants to receive tailored feedback and guidance. Applicants can also rely on regularly updated FAQs, helpdesks dedicated to content, financial, communication and technical issues, national-level support from National Contact Points and tools to support self-assessment and proposal drafting.

In the special context of the third call (addressing peripheral and lagging areas), a key innovation was the introduction of compulsory individual consultations with the JS. This ensured that project ideas were technically sound and aligned with the specific territorial objectives of the call before they were submitted.

Digital tools

The Interreg CE Programme offers a comprehensive range of digital resources and tools to support potential applicants. Key resources include a wiki-style online manual, technical video tutorials and thematic explainers on specific objectives. To help applicants prepare high-quality proposals, the programme offers interactive tools such as a project self-assessment tool, a project summary generator and digital eligibility checks.

Evaluations and interviews confirmed the significant impact of digital platforms, such as the "Applicant Community", which served as a "matchmaking hub" in different calls. It facilitated transnational networking, partner searches and the sharing of project ideas, which was particularly beneficial for organisations in less connected areas. More broadly, these digital platforms contribute to promoting synergies and fostering opportunities for knowledge exchange and collaboration.

Implementation support

During the implementation phase, beneficiaries receive continuous and structured support. The programme organises targeted implementation training, including thematic webinars and online training series that cover financial reporting, project communication and the use of the JEMS monitoring system. To ensure continuous oversight and guidance, each project is assigned a Programme Officer (PO) at the JS, who provides managerial and personal support throughout the entire project lifecycle. To further reduce the administrative burden, the programme offers harmonised communication tools. These include standard templates, brand books and automated project websites hosted directly on the main programme domain. At a national level, National Contact Points (NCPs) provide localised assistance in national languages, helping beneficiaries to navigate specific national reporting requirements and project modifications.

A key feature is the "learning-by-doing" approach to build institutional capacity across the cooperation area. This strategy has been helpful in attracting newcomers which currently represent 57-58% of beneficiaries. Thanks to this approach, new organisations typically join the programme as project partners in standard calls. Through this initial involvement, they develop the expertise required to assume Lead

Partner roles in subsequent calls. This trend is particularly evident in the more accessible small-scale project format of Call 3.

The programme's proactive and coordinated approach to support applicants contributes to a strong and well-prepared pool of applicants. Early-stage guidance, combined with comprehensive digital resources and close coordination with NCPs ensures consistency and clarity throughout the application process.

At the same time, the programme builds on the lessons, capitalisation experience and demonstrated value added of the 2014–2020 period, notably by continuing integrated innovation approaches, capacity-building and skills development, pilot actions, and strengthened synergies and policy uptake across priorities. Pilot actions have proven a successful way to implement and exchange experiences on current methods and technologies. They helped to test and subsequently implement new technologies and solutions, providing valuable demonstration effects that have contributed to the rollout and significant leverage of funds in various projects. [35], [36]

[35] Insights on the third call. See Link

[36] Interview with the programme joint secretariat, 2026

4 Operational recommendations for the post-27 period

Reading note – Content of section 4

The last section of the fiche provides conclusions derived from the analyses presented in the programme fiche as well as associated actionable operational recommendations for enhancing the effectiveness of the transnational programme post-2027. The recommendations are targeted at the programme managing authorities and secretariat responsible for the development of the operational programme documents.

The conclusions and recommendations are organised into four categories:

- Functional rationales for programme geographies and scale
- Transnational development themes
- Transnational cooperation in practice
- Territorial impact and added value

For each category, the main findings and conclusions are succinctly presented as evidence basis underpinning the formulation of recommended actions. These recommendations are not binding and should be, if deemed necessary, examined in the light of additional sources of information by the programme authorities.

The types of information used in the programme fiche, and thereby providing the basis for the following conclusions and recommendations, include both quantitative data as well as qualitative information.

The quantitative data analysed corresponds to territorial and context indicators selected within the frame of the TNCOOP project (see Annex B) as well as beneficiary data mainly from Keep.eu, and Interreg planned funding data from Open Cohesion Data.

The qualitative information stems from the review of key documents (Programme documents, ESPON studies and European Commission's publications) and programme stakeholders' consultation (in particular the programme Joint Secretariat and/or Managing Authority as well as, for some programmes, national contact points), Interreg expert reviews and interviews with (other) Interreg Strands representatives.

Please refer to the reading notes included in the various sections of this programme fiche as well as to the ESPON TNCOOP Final Report for further details on the methods and information sources.

Where: Functional rationales for programme geographies and scale

These recommendations focus on **where and which territorial levels** transnational cooperation should take place, focusing on the relevance of the transnational level programme geographies, functional areas and linkages, geographic flexibility, and looking beyond programme borders.

As outlined by sections 1.2 and 1.3, the Central Europe Programme covers a territorially diverse area characterised by strong economic interdependencies, shared environmental challenges and well-established cooperation networks. While those disparities have not been fully overcome, remarkable progress has been made over the past 20 years, notably supported by transnational cooperation actions besides the strong drivers such as ERDF, CF and national policies.

Given the high territorial diversity of the Central Europe area, the programme should remain attentive to the risks associated with uneven development patterns. Aggregate indicators often hide existing or even growing intra-regional disparities, particularly between dynamic urban centres and their surrounding areas in several eastern European countries. This is an important element in pursuing wider cohesion objectives, moving beyond simplified distinctions between "lagging" (often linked, in a simplified manner, to eastern European countries) and "non-lagging" countries. In several parts of Central Europe, urban regions have performed strongly for some time, while adjacent rural or structurally weaker areas increasingly struggle to keep pace. In line with this pattern, for most topics, all Ukrainian regions considered are "lagging" and show considerable gaps to the rest of Central Europe regions.

In the current period, this effect is further deepened by the programme's bottom-up approach which provides a high degree of flexibility, allowing partnerships to emerge based on thematic relevance and institutional capacity. While this supports innovation and "development pathways", it may also lead to concentration in more experienced regions. The strengthened performance-based approach of the post-

2027 period could, depending on the final implementation, lead to incentives to further concentrate programme activities on more competitive, more dynamic regions which are likely to be able to reach outputs and results quicker. While difference between location of beneficiaries and location of project implementation have to be taken into account, there is a considerable risk that performance based approaches and a focus on input-output aspects will lead to deepening further these tendencies and counteract the intended broader territorial effects.

The analysis highlights the importance of functional areas related to e.g. manufacturing and industrial clusters including their value chains, shared natural features such as mountain ranges and river basins, mobility and labour-market interactions etc. as key themes for cooperation. However, these are not always explicitly addressed in the programme design. Understanding such functional relationships is crucial for the design of more targeted programme actions, but defining them remains challenging in such a large, geographically diverse area of cooperation.

Experience from the current period as presented in section 3 shows that targeted actions aimed at underrepresented or specific types of territories are effective in broadening participation and addressing territorial imbalances.

Along those lines, the recommended actions are

- **Broaden the understanding of territorial disparities** beyond the usual approaches of "lagging" and "more developed regions" and adopt a differentiated thematic perspective. Building on the analyses of the TNCOOP project, themes with large east/west disparities (e.g. renewable energies), urban/rural disparities (e.g. innovation) and with very differentiated patterns (e.g. employment) should be embedded in the programme to support territorially balanced approaches across themes.
- Approaches to better address territorial imbalances could **build on the experiences gathered with territorial targeting** and expand beyond "underrepresented" territories to territories with greater development needs. Following the model of the current approaches, this may include further use of tailored calls, differentiated project formats or also specific selection criteria that encourage broader territorial participation. These measures should also consider the risks associated with performance-based approaches, as these can exacerbate territorial imbalances. Therefore, target setting at programme level should, already at the programming stage, consider these imbalances and, where possible, formulate targets that support balanced territorial impacts (e.g. by applying different, realistic, input-output ratios for target setting for different types of regions), rather than simply aiming to reach the highest possible values and lowest unit costs.
- At the programming stage, actions to address territorial imbalances require **placing greater emphasis on reinforcing functional linkages between core and peripheral regions in various dimension**, ensuring that cooperation more effectively reflects existing territorial interdependencies while supporting more balanced participation across the area. The TNCOOP project provides a first analysis of potential functional aspects which can be considered for programme development. However, this still requires follow up on programme level to be further investigated, as e.g. more in-depth definitions for those aspects (e.g. peripheries) are required for operationalisation in the programme.
- To address wider functional linkages, the programme should consider **potential adjustments to programme geography**, such as the renewed inclusion of neighbouring regions from Ukraine. Territorial disparities which are evident in some topics outlined in section 1.3 (e.g. in relation to education and research) could be addressed, even if they do present a considerable challenge due to the large disparities. At the same time, they can enhance the programme's functional reach and geopolitical relevance.
- In order to address disparities in funding access and beneficiary distribution, for the next programming period, a **stocktaking exercise of territorial participation gaps** should be carried out towards the end of the current programme. This should be done at a sufficiently early point to inform the design and targeting of the first calls in the subsequent period, but also late enough to have a clear picture of participation patterns.

What: Transnational development themes

These recommendations focus on what policy themes should be the key focus of transnational cooperation, identifying new strategic challenges and opportunities for transnational programmes.

A range of topics of continued- and newly emerging relevance can be identified as important for the programme area, in line with analyses presented in sections 1.2 and 1.3:

- The transition towards climate neutrality and the need to strengthen climate resilience remain central challenges across the programme area. While progress varies significantly between regions, shared vulnerabilities such as increasing exposure to droughts and floods puts an emphasis on the importance of coordinated action.
- Central Europe's strong industrial base makes the transformation towards more sustainable, digital and resilient production systems (embedding not only production related aspects but all parts of a circular economy) a key area for cooperation. At the same time, disparities in innovation capacity are a clear challenge and risk reinforcing territorial imbalances.
- Tourism and cultural heritage are important economic and territorial assets across the programme area. However, increasing environmental pressures, seasonal imbalances and the impacts of climate change (particularly in alpine and coastal areas) highlight the need for new, more sustainable approaches.
- Demographic change alongside labour market transformation as in many parts of Europe are increasingly relevant across Central Europe, with particular relevance in rural and peripheral regions. These trends affect not only economic performance but also access to services and overall territorial cohesion.

These challenges are characterised by strong territorial differentiation, but also by shared structural features across the programme area, making them particularly suitable for transnational cooperation.

Along those lines, the recommended actions are

- **Ensuring continuity in core themes is crucial for a programme which builds on gradual learning pathways.** Several identified themes (e.g. climate mitigation and adaptation measures) require longer term cooperation beyond the scope of a single programming period. Furthermore, capitalisation of results is only possible in such long-term stable environments, a key strength of Central Europe' s strategic approach. This naturally implies that the programme should strive to further improve coordination with existing policies and policy instruments which provide a long-term strategic umbrella beyond the MFF timeframe for programme implementation.
- Other themes of relevance for the programme, which should be considered in the upcoming programming period, include the **economic development and accompanying industrial transitions in core industrial clusters.** Evidence highlights structural challenges in the area linked to energy matters (i.e. in particular prevalence of renewable energy) and industrial value chains in energy and in manufacturing as well as circular economy. Transnational cooperation can support mutual learning in industrial clusters across borders, ensuring joint development and supporting balanced territorial benefits of the transition.
- Besides supporting enterprises in transition processes linked directly or indirectly to climate neutrality, the programme could further expand its thematic focus on social inclusion, skills development and employment, particularly in relation to the green and digital transitions. Transnational cooperation can provide opportunities to develop and test innovative employment approaches and support mutual peer learning.
- Future thematic development could **place greater emphasis on sustainable tourism models** that balance economic benefits with environmental protection and social inclusion. This complex balance has been identified as a shared challenge for multiple regions. Transnational cooperation may support the exchange of practices, the development of joint strategies and the diversification of tourism offers, particularly in regions facing structural challenges or seasonal dependency.

- As a cross-cutting field, ISO1 should be considered but not understood as a core pillar of the programme. The presence of many functional areas cutting across strong administrative systems implies a high relevance of multi-level governance related actions. Furthermore, when considering the programme area expansion, governance related aspects will be important to support.
- The expected **increase in thematic flexibility at the programming stage in the forthcoming programming period** will provide additional potential to enhance thematic synergies with other programmes in the fields outlined above. Given the experiences voiced during the consultation phases, it is likely that the initiative for such assessments and subsequent coordination will need to be driven strongly by the programme itself. Such coordination is crucial already at an early stage of programme preparation since thematic flexibility in programming is at the same time accompanied by a more rigid structure in implementation and target setting. Therefore, the programme should already embed considerations related to thematic synergies in the programme design.

How: Transnational cooperation in practice

These recommendations address how cooperation processes can be improved outlining potential changes to governance structures, capacity building, and managing synergies in complex institutional environments.

The Central Europe Programme has established a comprehensive framework for transnational cooperation, combining structured coordination mechanisms, a diversified call for projects architecture and extensive support for applicants and beneficiaries. Coordination with other Interreg programmes is rather well developed at programme level, supported by both formal and informal exchanges and the intermediary role of National Contact Points. However, alignment with other EU initiatives and funding programmes as well as macro-regional strategies remains more selective and less institutionalised.

At project level, mechanisms to prevent duplication and foster synergies include screening procedures and thematic exchange formats and are further complemented by capitalisation-oriented approaches. The programme's call architecture, including standard calls and more targeted formats, merges continuity and accessibility, increasing participation opportunities for newcomers and underrepresented territories.

Operationally, recent improvements in simplification, digitalisation and project support have enhanced efficiency and delivery. At the same time, the programme's bottom-up approach does not automatically ensure balanced participation or the uptake and scaling of results beyond individual projects.

The programme provides a solid and well-functioning cooperation framework. However, challenges remain in ensuring sustained cross-Interreg programme synergies and embedding project results more effectively in broader policy and (national) funding contexts.

Along those lines, the recommended actions are

- Greater emphasis could be placed on **capitalisation** as a central principle. This includes further developing existing practices that require projects to build on existing results, in particular more structured support for identifying and reusing relevant results across programmes.
- Opportunities for **cross-programme cooperation** should be further explored, and in particular with non-Interreg programmes covering (partially) the same territories and funded under Cohesion Policy and the wider NRPP, coordination mechanisms could be improved. Better aligning thematic priorities and timelines as well as potentially joint or parallel calls with other Interreg programmes is difficult, but could support the development of complementary projects and enhance impact of results beyond individual programme areas. In line with other programmes experiences, such stronger integration for thematic fields where mature outputs in both/all involved programmes can be successful when supported by the coordination formats. The strand fiche identifies best practice examples from the Euro MED, Baltic Sea Region or Norther Periphery and Arctic programmes in this regard.

- Stronger **linkages with mainstream funding programmes,** such as ERDF, should be encouraged in order to support the uptake and scaling of results. As a precondition, this involves more systematic engagement with managing authorities. Likewise, coordination with macro-regional strategies and EU-level initiatives could be further strengthened in a more structured manner, going beyond integration with Horizon projects. In particular, the European Competitiveness Fund, in the fields of clean transition, digital transition, bioeconomy and decarbonisation, offers clear thematic complementarities.
- In this context, the upcoming **changes to the structure of Cohesion Policy and the wider European Union funding landscape should be seen as an opportunity to enhance synergies**. The Central Europe programme already builds on a comparably effective coordination system with their National Contact Points. Under the (currently proposed) new policy framework, the increased relevance of national considerations could create new opportunities for aligning national and transnational interventions more effectively. Furthermore, it would reduce the current governance challenges in coordination with too many layers of administration.
- Stronger integration of various programmes with the National and Regional Partnership Plans can be an opportunity for improved strategic coordination, at an early stage, with programmes following the same time-cycle. The CE programme should thus already include respective considerations and coordination in the programme design phase to align where possible developed measures and also targets with other programmes. This will also avoid considerable changes during programme implementation, which will be more difficult in the new framework.
- Finally, the programme should build on and continue to **refine its call architecture to balance flexibility with strategic targeting.**

How: Territorial impact and added value

These recommendations address how the programme could maximise transnational collaboration impact and added value.

As shown in section 1, the programme covers a territorially diverse area, characterised by strong interdependencies and also considerable disparities. While the programme effectively generally creates impact across the whole area, the outlined risks of leaving regions behind and concentrating support in already stronger regions require future attention. Impacts[37] currently concentrate on some (types of) regions for most calls, and only targeted calls for lagging and peripheral regions manage to get participants to be widely involved from those areas.

Nevertheless, the programme adds value by providing a framework for knowledge exchange and the development of shared approaches across regions with different levels of capacity. It can play a particularly important role in linking more advanced regions with those facing structural challenges ideally supporting convergence and territorial cohesion.

[37] As assessed based on the available data and information analysed within the framework of the ESPON TNCOOP project

Along those lines, the recommended actions are

- Priority should be given to **challenges characterised by strong territorial interdependencies or shared risks** such as climate change, industrial transformation and functional economic linkages in and beyond traditionally addressed sectors such as manufacturing. In these areas, transnational cooperation can be particularly effective in facilitating coordination and reducing fragmentation.
- **The programme should further strengthen its role as a platform for knowledge transfer and mutual learning, particularly between regions with different levels of development and institutional capacity**. This could include targeted actions to engage project partners from these differentiated regional contexts in joint projects, expanding the current approach to targeted calls. As an example, the approach of the Interreg Europe programme, which requires the involvement of partners from specified region types, could be investigated. Involvement of different region types could be implemented as a requirement or in a softer manner as an incentive in the project selection process.
- As outlined for other recommendations above, greater emphasis should also be placed on **linking transnational cooperation with broader policy and investment frameworks.** Strengthening connections with mainstream programmes and macro-regional strategies can considerably enhance the long-term impact of programme activities. For programmes covered by the National and Regional Partnership Plans, alignment in the programme development phase is difficult, yet crucial to ensure accurate planning for the new period.
- To strengthen the territorial anchoring of programmes, being able to judge more clearly on the territorial dimension of programme impacts is necessary. Thus, the corresponding data collected should be improved. The concrete location(s) of project implementation should be identified, and correspondingly an upgrade of the keep.eu database to coherently collect the information on a pan-European basis should be supported.

Annexes

A Programme geography and overlapping Interreg A programmes

The 2021-2027 Interreg Central Europe (CE) Programme covers nine countries: **Czech Republic, Germany, Italy, Croatia, Poland; Hungary, Slovenia, Slovakia. The following table lists all NUTS 2 regions in the programme area.**

List of the NUTS 2 regions in the programme area

Country	NUTS 2
Czech Republic	CZ01 Praha
	CZ02 Střední Čechy
	CZ03 Jihozápad
	CZ04 Severozápad
	CZ05 Severovýchod
	CZ06 Jihovýchod
	CZ07 Střední Morava
	CZ08 Moravskoslezsko
Germany	DE11 Stuttgart
	DE12 Karlsruhe
	DE13 Freiburg
	DE14 Tübingen
	DE21 Oberbayern
	DE22 Niederbayern
	DE23 Oberpfalz
	DE24 Oberfranken
	DE25 Mittelfranken
	DE26 Unterfranken
	DE27 Schwaben
	DE30 Berlin
	DE40 Brandenburg
	DE80 Mecklenburg-Vorpommern
	DE91 Braunschweig
	DED2 Dresden
	DED4 Chemnitz
	DED5 Leipzig
	DEE0 Sachsen-Anhalt
	DEG0 Thüringen
Italy	ITC1 Piemonte
	ITC2 Valle d'Aosta/Vallée d'Aoste
	ITC3 Liguria
	ITC4 Lombardia
	ITH1 Provincia Autonoma di Bolzano/Bozen
	ITH2 Provincia Autonoma di Trento
	ITH3 Veneto
	ITH4 Friuli-Venezia Giulia

Country	NUTS 2
	ITH5 Emilia-Romagna
Croatia	HR02 Panonska Hrvatska
Croatia	HR03 Jadranska Hrvatska
	HR05 Grad Zagreb
	HR06 Sjeverna Hrvatska
Hungary	HU11 Budapest
	HU12 Pest
	HU21 Közép-Dunántúl
	HU22 Nyugat-Dunántúl
	HU23 Dél-Dunántúl
	HU31 Észak-Magyarország
	HU32 Észak-Alföld
	HU33 Dél-Alföld
Austria	AT11 Burgenland
	AT12 Niederösterreich
	AT13 Wien
	AT21 Kärnten
	AT22 Steiermark
	AT31 Oberösterreich
	AT32 Salzburg
	AT33 Tirol
	AT34 Vorarlberg
Poland	PL21 Małopolskie
	PL22 Śląskie
	PL41 Wielkopolskie
	PL42 Zachodniopomorskie
	PL43 Lubuskie
	PL51 Dolnośląskie
	PL52 Opolskie
	PL61 Kujawsko-pomorskie
	PL62 Warmińsko-mazurskie
	PL63 Pomorskie
	PL71 Łódzkie
	PL72 Świętokrzyskie
	PL81 Lubelskie
	PL82 Podkarpackie
	PL84 Podlaskie
	PL91 Warszawski stołeczny
	PL92 Mazowiecki regionalny
Slovenia	SI03 Vzhodna Slovenija
	SI04 Zahodna Slovenija
Slovakia	SK01 Bratislavský kraj
	SK02 Západné Slovensko
	SK03 Stredné Slovensko
	SK04 Východné Slovensko

The following Interreg-A programmes are located entirely in the programme area:

- Interreg VI-A – Austria-Czechia
- Interreg VI-A – Austria-Germany/Bavaria
- Interreg VI-A – Czechia-Poland
- Interreg VI-A – Germany/Bavaria-Czechia
- Interreg VI-A – Germany/Brandenburg-Poland
- Interreg VI-A – Germany/MWP/Brandenburg-Poland
- Interreg VI-A – Germany/Saxony-Czechia
- Interreg VI-A – Hungary-Slovakia
- Interreg VI-A – Italy-Austria
- Interreg VI-A – Italy-Slovenia
- Interreg VI-A – Poland-Germany/Saxony
- Interreg VI-A – Poland-Slovakia
- Interreg VI-A – Slovakia-Austria
- Interreg VI-A – Slovakia-Czechia
- Interreg VI-A – Slovenia-Croatia
- Interreg VI-A – Slovenia-Hungary
- Interreg VI-A – Slovenia-Austria

The following Interreg A-programmes are partially located in the programme area:

- Interreg VI-A – Alpenrhein-Bodensee-Hochrhein (Germany/Austria/Switzerland)
- Interreg VI-A – Croatia Serbia
- Interreg VI-A – Croatia-Bosnia and Herzegovina- Montenegro
- Interreg VI-A – France-Germany-Switzerland (Upper Rhine)
- Interreg VI-A – France-Italy (ALCOTRA)
- Interreg VI-A – Hungary-Serbia
- Interreg VI-A – Hungary-Slovakia-Romania-Ukraine
- Interreg VI-A – Italy-Croatia
- Interreg VI-A – Italy-France (Maritime)
- Interreg VI-A – Italy-Switzerland
- Interreg VI-A – Lithuania-Poland
- Interreg VI-A – Interreg NEXT Poland–Ukraine
- Interreg VI-A – Romania-Hungary
- Interreg VI-A – South Baltic

B Socio-economic overview

Reading note – Content of Annex B

The eight below listed dimensions have been predefined as the reference for the TNCOOP project in the Terms of Reference. For each one of them, a set of territorial and context indicators (core and additional indicators) has been identified, which has been further complemented with programme-specific indicators, in some cases, based on discussion with programme authorities (MA/JS).

Due to the geographic scope of programmes and the involvement of many non-EU countries (depending on the programme) which have no or only very limited coverage by Eurostat or other European level sources, efforts have been made to provide as complete as possible information comparable across programmes.

Therefore, **timewise,** availability for indicators is not provided in specific years but as:

- "Baseline year" to be understood as "2014 or closest", with a cut-off of +- 2 years
- "Most recent year" to be understood as "2024 or closest", with a cut-off of +- 2 years

While slightly lowering accuracy of the assessments, it allows to avoid data gaps as much as possible. Furthermore, in most cases, European level information is available for 2014 and 2024 (if not this is stated in the metadata box). A metadata box is provided for each indicator, specifying the data sources, temporal coverage and unit.

Furthermore, the geographic extent required **the combination of various sources for statistical information.** In cases where the information is (almost) directly comparable, (e.g. for population density), no distinction between European sources (e.g. Eurostat, European Environmental Agency (EEA), Joint Research Centre (JRC)…) and non-European sources (e.g. national statistical institutes – NSIs) have been made. For some indicators, the information from non-European sources is provided in the same maps, yet in a separate visualisation scheme (e.g. for renewable energy consumption), if it refers to a thematically very close indicator, but which uses a not directly comparable calculation base.

This section describes the fundamental socio-economic characteristics of the programme area, including demographic, economic, and environmental features, around 8 identified dimensions (prescribed in the project technical specifications). The following table presents an overview of the 22 context and territorial indicators (at NUTS 2 level) and 8 additional indicators (at national level). Importantly, the 8 additional indicators were collected and visualised essentially to make up for the data coverage gaps (of the 22 core indicators at regional level), particularly in programmes including non-EU countries. As such, these 8 indicators are only relevant and visualised for some programmes which include non-EU countries. Of note, several non-EU countries, e.g. countries of the European Free Trade Association, could still be covered by the European level data sources and therefore feature data at regional level.

List of the context and territorial indicators per dimension

Dimension	Core indicators (NUTS 2 level)	Additional indicators (national level)
Demography and Geography	population density, median population age, population change	
Innovation, research & SMEs	Regional Competitiveness Index, Regional Innovation Scoreboard ranking	Global Competitiveness Index 4.0
Environment & Climate Change	Share of renewable energy final consumption, Air quality, Flood risk, Drought impact on ecosystems, Waste intensity	Renewable Energy Consumption
Digital connectivity & Transport	Households with access to broadband, Access to major road networks	Share of households with Internet access at home

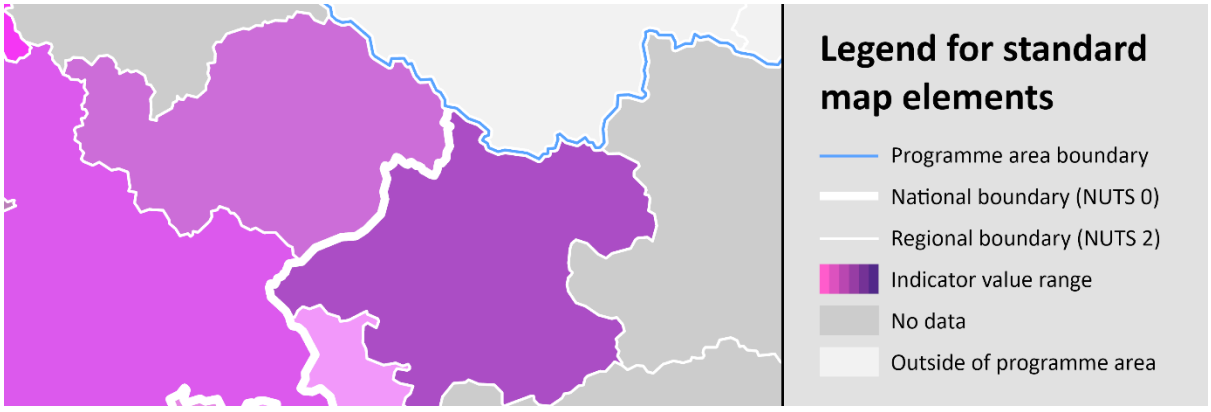
Dimension	Core indicators (NUTS 2 level)	Additional indicators (national level)
Sustainable regional development (Education, Labour market & Cooperation)	Employment by economic sectors, Educational attainment level, Young people neither in employment nor in education and training, Unemployment rate (by gender), GDP per capita (in PPS),	Share of employment by economic sectors (primary, secondary, tertiary), Tertiary education enrolment, Share of youth not in employment, education or training
Cultural heritage & tourism	Tourism intensity, Cultural asset density	Guests in hotels and similar establishments
Housing	Average sales price per square meter for houses/apartments, Average renting price per square meter for houses/apartments	
People to people action and engagement	Spatial accessibility – social infrastructure, share of people at risk of poverty or social exclusion, quality of government index	Poverty rate

Source: Project team, 2026

Besides the programme area, the analysis also outlines territorial characteristics of adjacent Ukrainian regions which are potentially considered for re-integration into the programme. To focus on a specific geographical area, only regions that have previously participated in the programme are depicted. However, in many cases, the data is only available at the country level. If no information for Ukraine is given, no data was available from the screening.

In the subsequent sections, a map is provided for each indicator (and data point). Each map is designed using a standardised approach and includes common visual elements, such as national and regional borders, and the perimeter of the programme area, as illustrated in the figure below. This approach is used for all maps of all 13 programmes.

Legend for standard map elements



Source: Project team, 2026

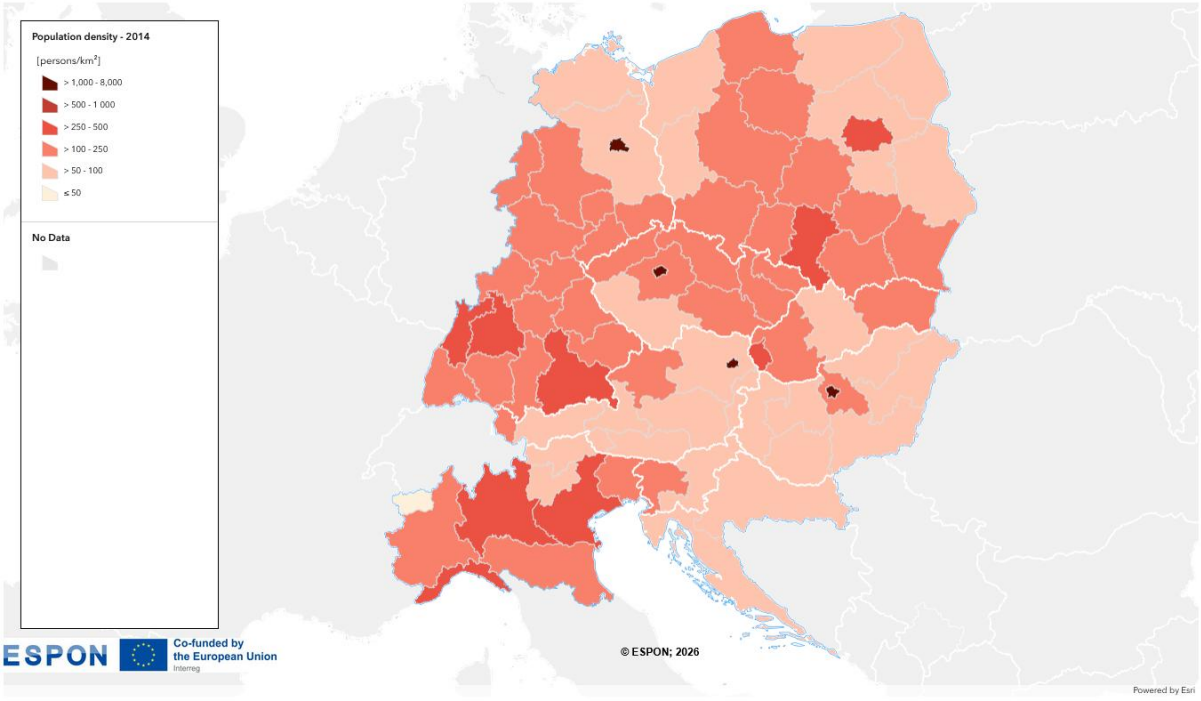
B.1 Demography & geography

Population Density
The indicator depicts the population density on NUTS2 level. It is calculated as ratio between the annual average population and the land area of the respective region. The land area concept (excluding inland waters, such as lakes, wide rivers, estuaries) is used wherever available. If it is not possible to subtract inland waters from the regional area, the total area of the region (including inland waters) is used instead. The population density provides a first glance at regional structures related to settlements and is a relevant factor for multiple aspects such as infrastructure development, industrial development etc.
Population Density –European sources
▪ Source: Eurostat ▪ Temporal coverage: 2010-2025 ▪ Unit: Inhabitants/km²
Population Density – non-European sources
▪ Sources: Various NSI ▪ Temporal coverage: Various years ▪ Unit: Inhabitants/km²

Central Europe (CE) has a rather balanced population density distribution, with medium-density regions covering much of the territory. Densely populated urban areas can be found around major cities such as Vienna, Prague, Budapest, Munich, Warsaw and Ljubljana, where population density exceeds 500 inhabitants per km² in some areas. In contrast, rural and mountainous regions, particularly in southern Austria, Slovenia, northern Croatia and parts of Poland and Hungary, have lower population densities of less than 100 inhabitants per km². Ukrainian regions at the border show patterns similar to the neighbouring regions within the programme, with Volyn at 50 inhabitants per km² in line with neighbouring polish regions, and other considered Ukrainian regions exhibiting densities around 100 people per km².

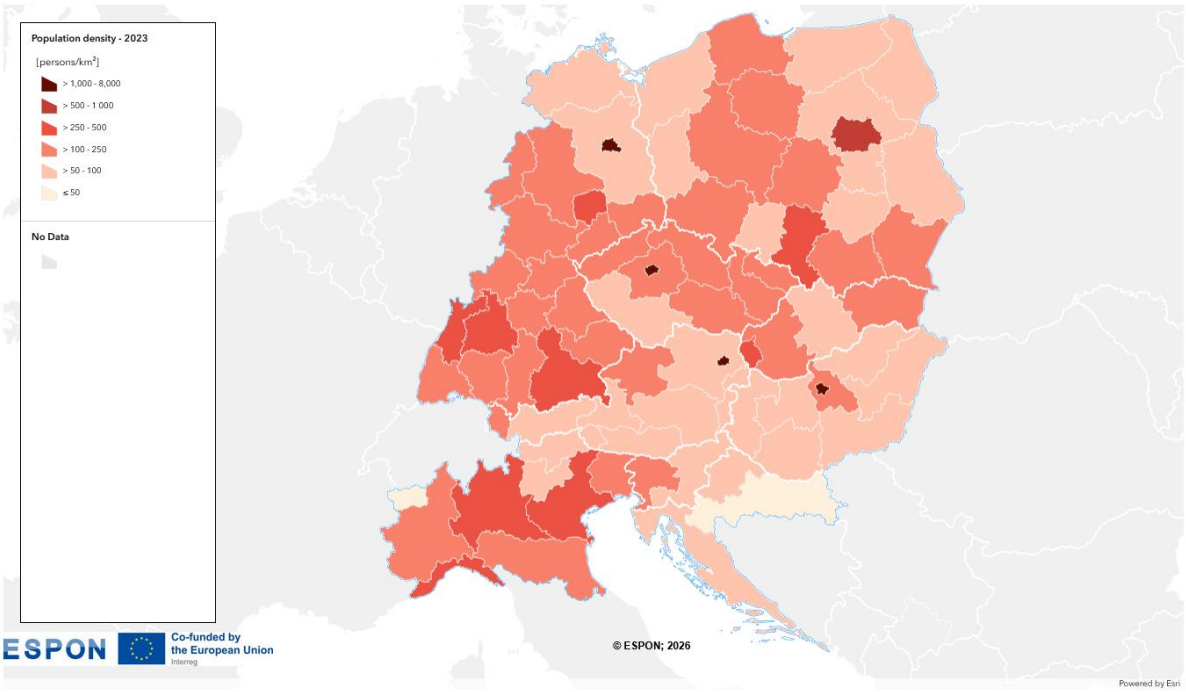
On NUTS2 level, population density in the CE area has remained relatively stable between 2014-2023, with notable change being the decreasing population density in eastern Croatia and in Poland (see maps below). The same stable pattern is mirrored by the Ukrainian regions considered.

Map B.1: Population density (in p per km²) – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025, various NSI with multiple years
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.2: Population density (p per km²) – most recent year



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025, various NSI with multiple years
Administrative boundaries: ©EuroGeographics ©ESPON

Median population age

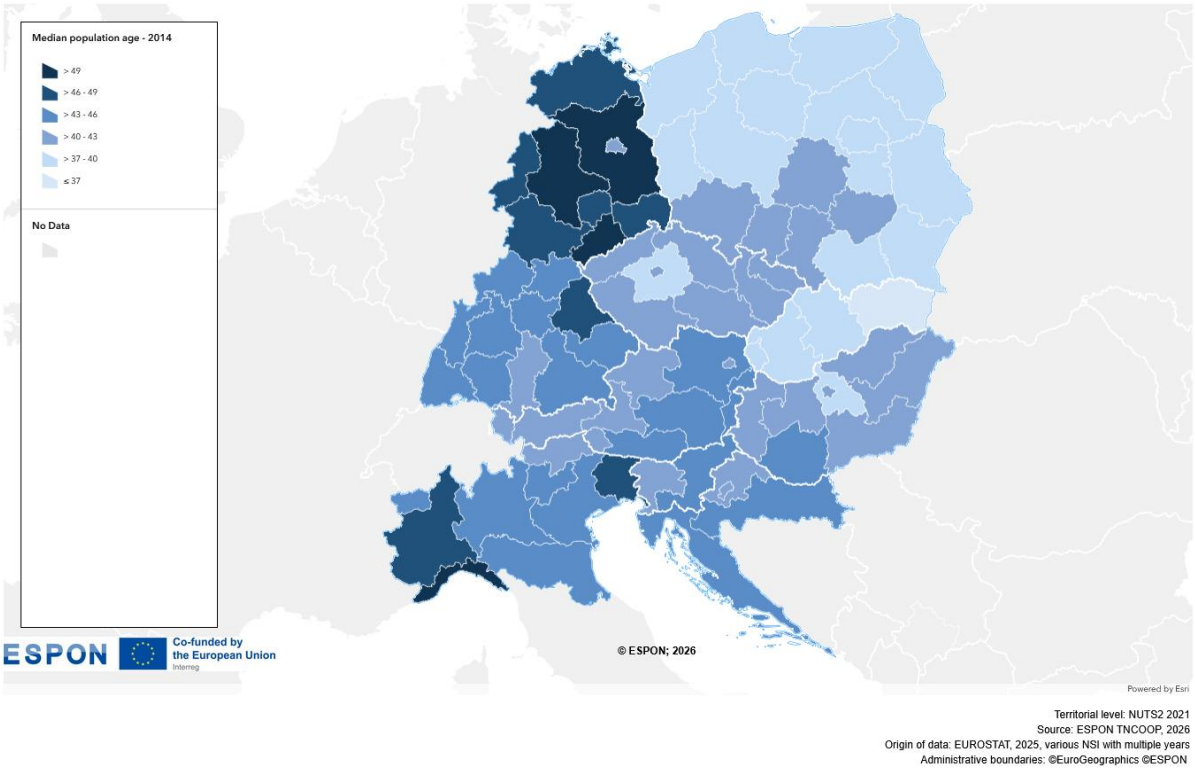
The indicator depicts the median age in years on NUTS2 level. The median age of a population is a statistical measure that indicates the age at which half of the population is younger and half is older. It provides insights

into the demographic structure of a population and can be indicative of various social and economic factors. The median age at a regional level can reveal important insights into the demographic composition of that area, coupled with development over time indicating whether the population is aging or is predominantly younger.
Median population age – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2010-2024 ▪ Unit: Years
Median population age – non-European sources
▪ Sources: Various NSI ▪ Temporal coverage: Various years ▪ Unit: Years

Between 2014 and 2024, the Central Europe (CE) area has experienced a clear demographic ageing trend almost universally throughout the regions. In 2014, younger median age was predominantly located in Poland, Slovakia, and parts of Hungary, where the median age was below 40 years. In contrast, several regions in Germany, Austria, and northern Italy already showed significantly higher median ages above 46 years already in 2014.

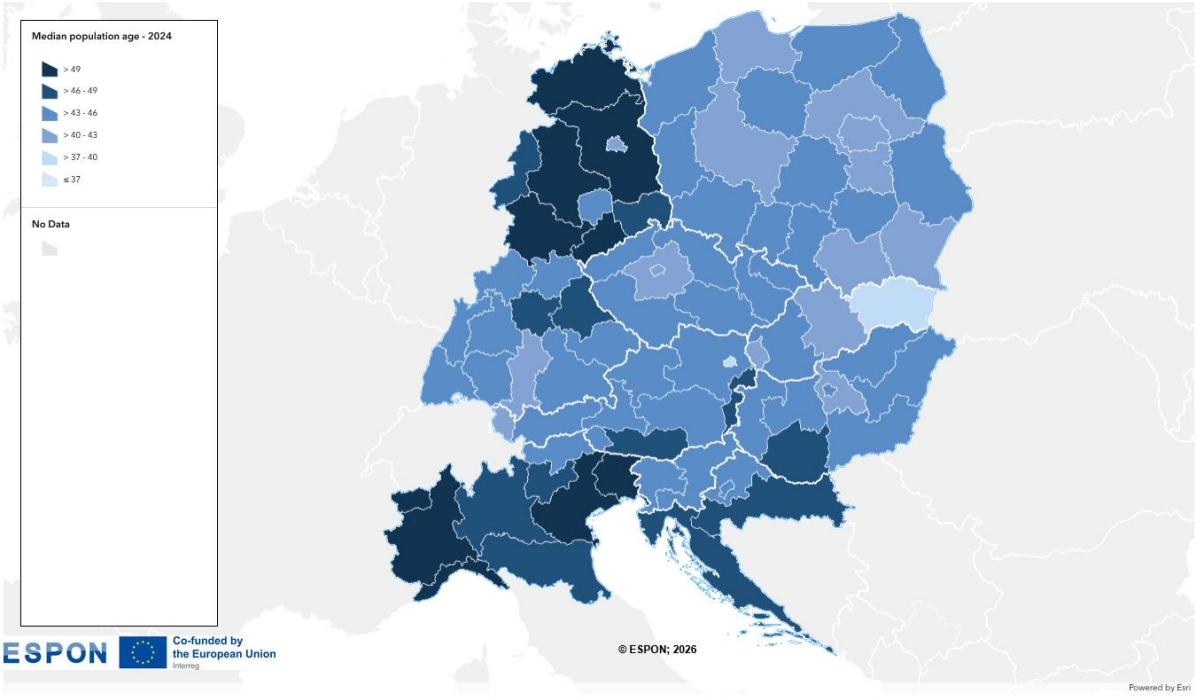
By 2024, the ageing process has intensified and expanded eastwards. Most German, Austrian, and Italian regions now record median ages above 49 years, while several Czech and Hungarian regions also entered higher age categories. Younger population profiles persist mainly in eastern Poland, eastern Slovakia and around Prague. Overall, the maps indicate a converging trend towards older median ages across the CE territory, reflecting ongoing demographic decline and limited generational renewal. The Ukrainian regions considered also show a slow increase in median age. However, in 2022 (the latest year for which data is available), all of them had values below 40.

Map B.3: Median population age – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT, 2025, various NSI with multiple years
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.4: Median population age – most recent year



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025, various NSI with multiple years
Administrative boundaries: ©EuroGeographics ©ESPON

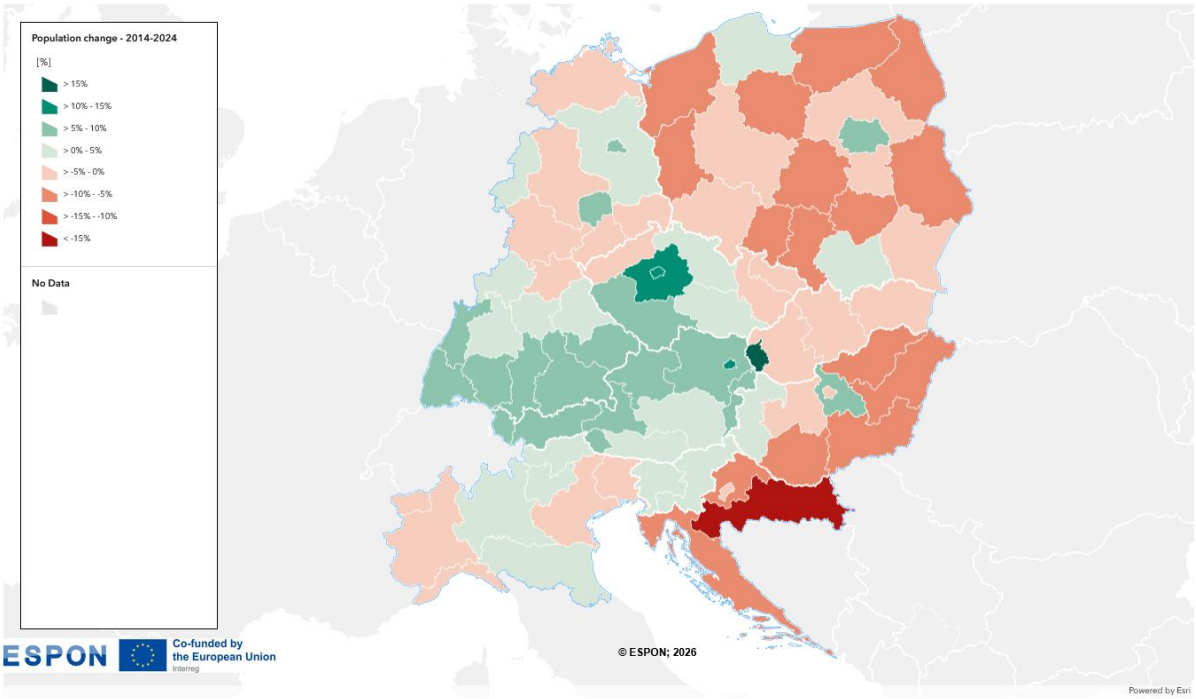
Population change
The indicator depicts the relative population change between 2014 and 2024. Population change, in general terms, refers to the variation in the size of a population from the beginning to the end of a specific time frame (typically one year). More specifically, it is the difference in population size recorded on January 1 of two consecutive years. By comparing these changes at regional level, it is possible to identify which areas are experiencing population growth or decline, which has considerable implications for infrastructure and accessibility, employment and others.
Population change – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2010-2024 ▪ Unit: % change
Population change – non-European sources
▪ Sources: Various NSI ▪ Temporal coverage: Various years ▪ Unit: % change

Between 2014 and 2024, population change across the CE programme area reveals contrasting demographic dynamics. While some regions in western Austria, southern Germany, and parts of the Czech Republic and Poland recorded population growth of up to 10–15%, large parts of eastern Poland, Slovakia, Hungary, and Croatia experienced population decline. The strongest negative change is observed in Croatia's eastern regions, where depopulation exceeded 15%, reflecting long-term outmigration and ageing trends.

Overall, the pattern shows a west–east divide. There is growth around metropolitan areas and economically dynamic regions in the centre of the programme area, contrasted with persistent depopulation especially in more peripheral and rural territories in the east and southeast of the CE area. The Ukrainian

regions considered show a slow decline of between -1% and -2.5% from 2014 to 2022. This is in line with, or lower than, neighbouring regions within the programme.

Map B.5: Population change (2014-2024)

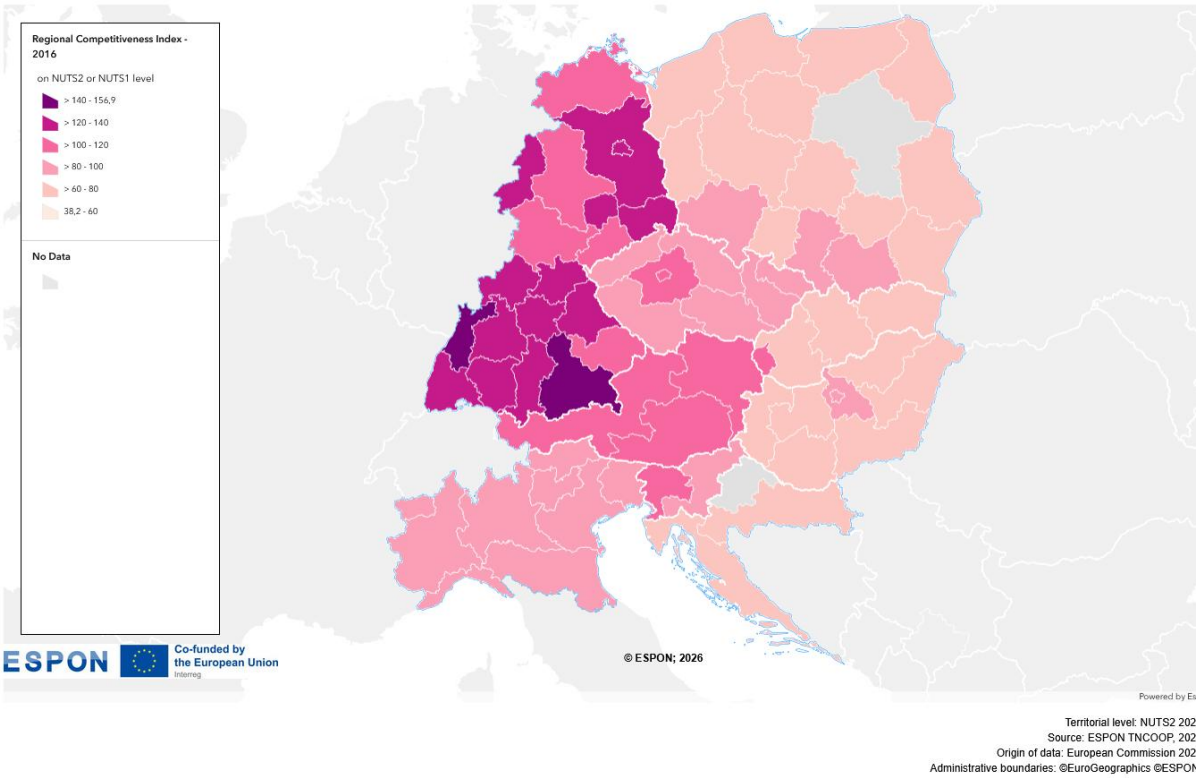


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT, 2025, various NSI with multiple years
Administrative boundaries: ©EuroGeographics ©ESPON

B.2 Innovation, research & SMEs

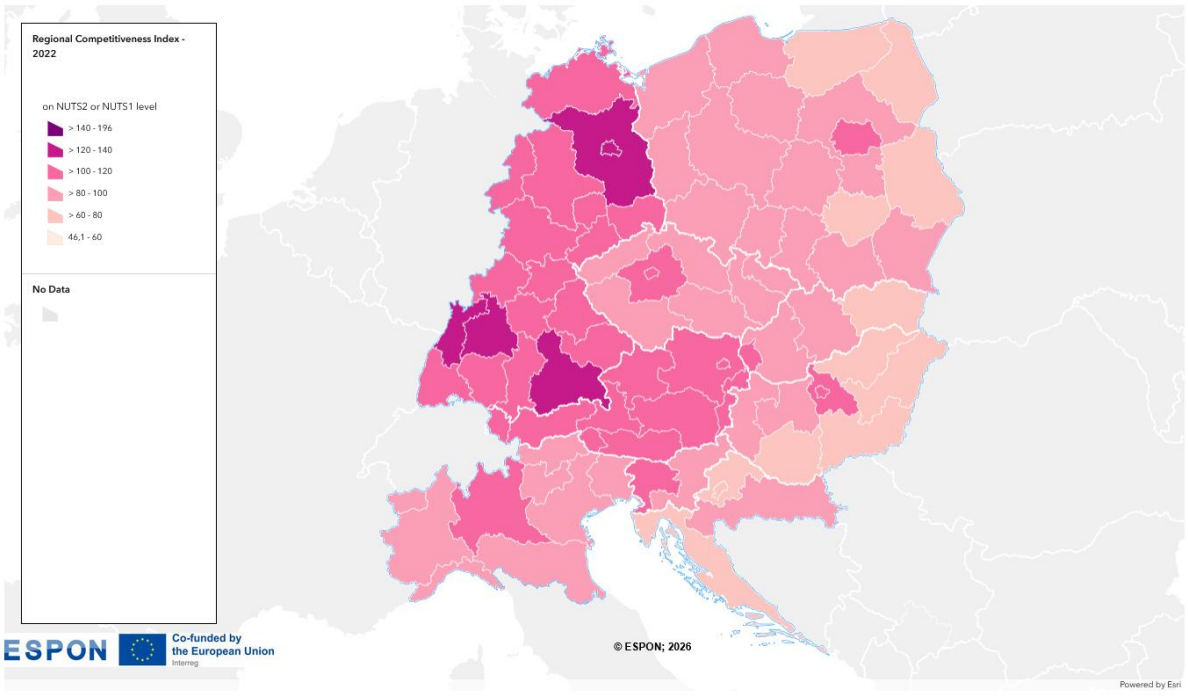
Competitiveness index
The indicator depicts the competitiveness of regions measured by a regional index (EU) and a national index (most non-EU countries). The EU Regional Competitiveness Index (RCI) measures the major factors of competitiveness for all the NUTS-2 level regions across the European Union. Likewise, the Index of the World Bank provides a similar measure on National level for all countries. The indices measure, with a large set of sub-indicators, the ability of a region or country to offer an attractive environment for firms and residents to live and work.
Regional competitiveness index – European sources
▪ Source: European Commission ▪ Temporal coverage: 2016-2022 ▪ Unit: Index
Global competitiveness index – non-European sources
▪ Sources: World Bank/WEF ▪ Temporal coverage: 2019 ▪ Unit: Index

Map B.6: Regional competitiveness index – baseline



Territorial level: NUTS2 202
Source: ESPON TNCOOP, 202
Origin of data: European Commission 202
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.7: Regional competitiveness index – most recent year



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: European Commission 2025; World Bank/WEF 2025
Administrative boundaries: ©EuroGeographics ©ESPON

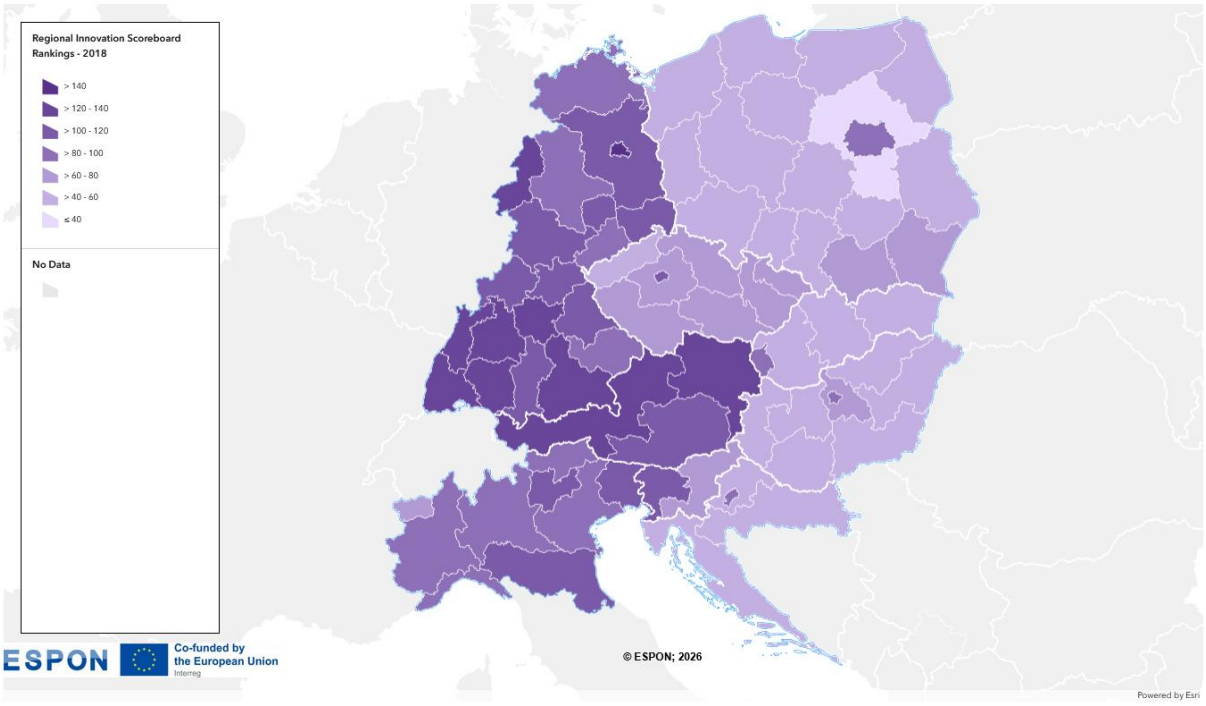
In 2016, regional competitiveness levels in the CE cooperation area were generally high. However, there were also significant contrasting trends. Regions in Germany and Austria performed better overall than many areas in eastern countries such as Slovakia and Hungary, where only the capital cities experienced

greater development than the rest of the country. It is noticeable that while the east-west divide remains visible in 2022 as well, it is considerably reduced from 2016. While some of the highest-performing regions experienced a slight decline in competitiveness between 2016 and 2022, particularly in southern Germany, all eastern regions, including those in Poland, showed positive development. Ukraine on country level is only covered for the year 2022, where competitiveness lags considerably compared to all countries of central Europe. However, due to the regional differentiation for European countries, regions bordering Ukraine in Hungary, Slovakia and partially also in Poland show a lower competitiveness gap to Ukraine on country level.

Regional Innovation
The Regional Innovation indices provide a comparative assessment of the research and innovation performance of EU Member States and other European countries at regional level from 2018 to 2024 as well as on national level for most non-EU countries. It is based on the Regional Innovation Scoreboard by the European Commission and the Global Innovation Index by the WIPO. The indices are built on a set of sub-indicators and depict the potential for implementing innovation in businesses as an indication of potential future developments.
Regional innovation scoreboard ranking – European level sources
▪ Source: European Commission ▪ Temporal coverage: 2018-2025 ▪ Unit: Index
Global Innovation Index – non-European sources
▪ Sources: WIPO (World Intellectual Property Organisation) ▪ Temporal coverage: 2025 ▪ Unit: Index

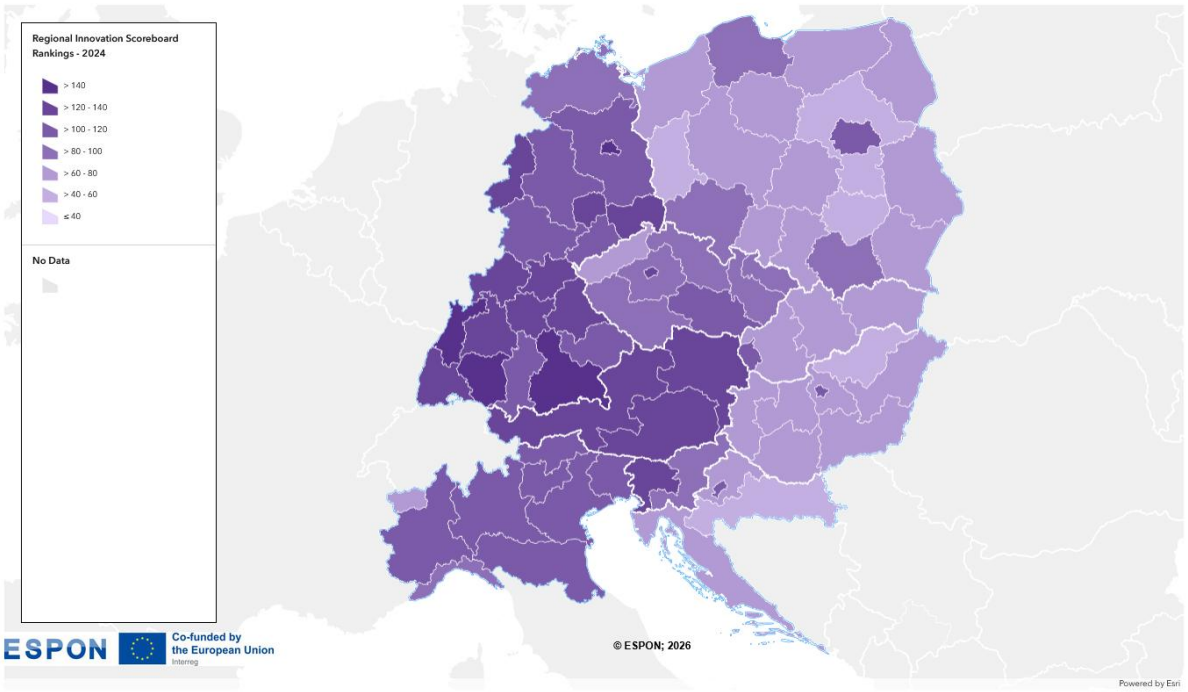
The Regional Innovation Scoreboard for the CE area reveals consistent spatial disparities in innovation performance roughly in line with the patterns revealed for competitiveness alike. Western regions, particularly those in Germany and Austria, continue to perform strongly as innovators, maintaining their high rankings between 2018 and 2024. Eastern regions in Poland, Slovakia, Hungary and Croatia remain mostly below the EU average as moderate or emerging innovators. However, considerable improvements can be observed in nearly all eastern regions, particularly in capital regions such as Warsaw, Budapest, Bratislava and Zagreb but also in more rural regions. Thus, the innovation divide between the west and the east remains, with core innovation hubs around southern Germany and Austria continuing to anchor the region's innovation landscape, however the gaps might be slowly closing in this regard.

Map B.8: Regional innovation scoreboard ranking – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: European Commission 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.9: Regional innovation – most recent year



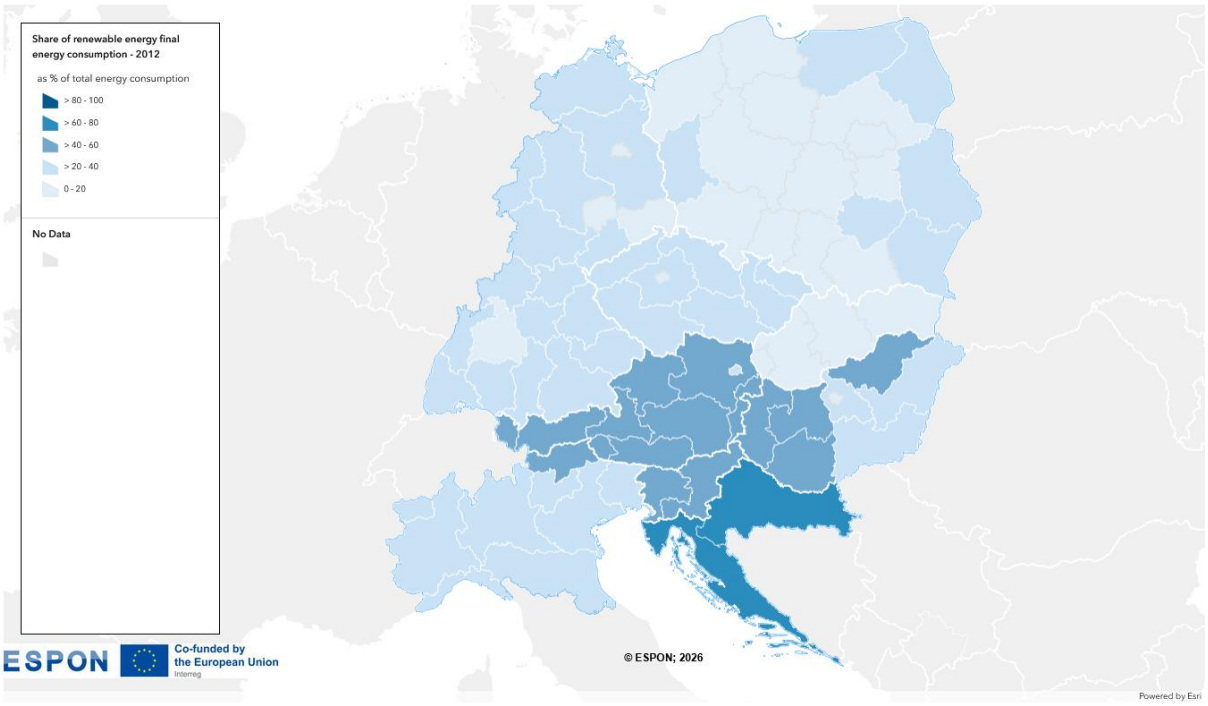
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: European Commission 2025; WIPO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

B.3 Environment & climate change

Share of renewable energy
The indicator depicts the relative share of renewable energy in consumption. The final energy consumption is not measured against the exact same basis for EU and non-EU countries, thus is not 1:1 comparable, nevertheless provides a general indication of the status on regional and country level. A higher share suggests higher energy diversification and security, as well as potential economic opportunities in the green sector. Non-European sources: This indicator measures the share of energy derived from renewable sources—such as solar, wind, hydropower, geothermal, and biomass—in total final energy consumption. The numerator includes the direct consumption of renewable energy sources plus the final consumption of gross electricity and heat estimated to have come from renewable sources, while the denominator is the total final energy consumption of all energy products.
Share of renewable energy on final energy consumption – European sources
▪ Source: ESPON ▪ Temporal coverage: 2002, 2012, 2018 ▪ Unit: % of final energy consumption
Renewable energy consumption – non-European sources
▪ Sources: World Bank/International Energy Agency (IEA) ▪ Temporal coverage: 1990-2021 ▪ Unit: % of final energy consumption

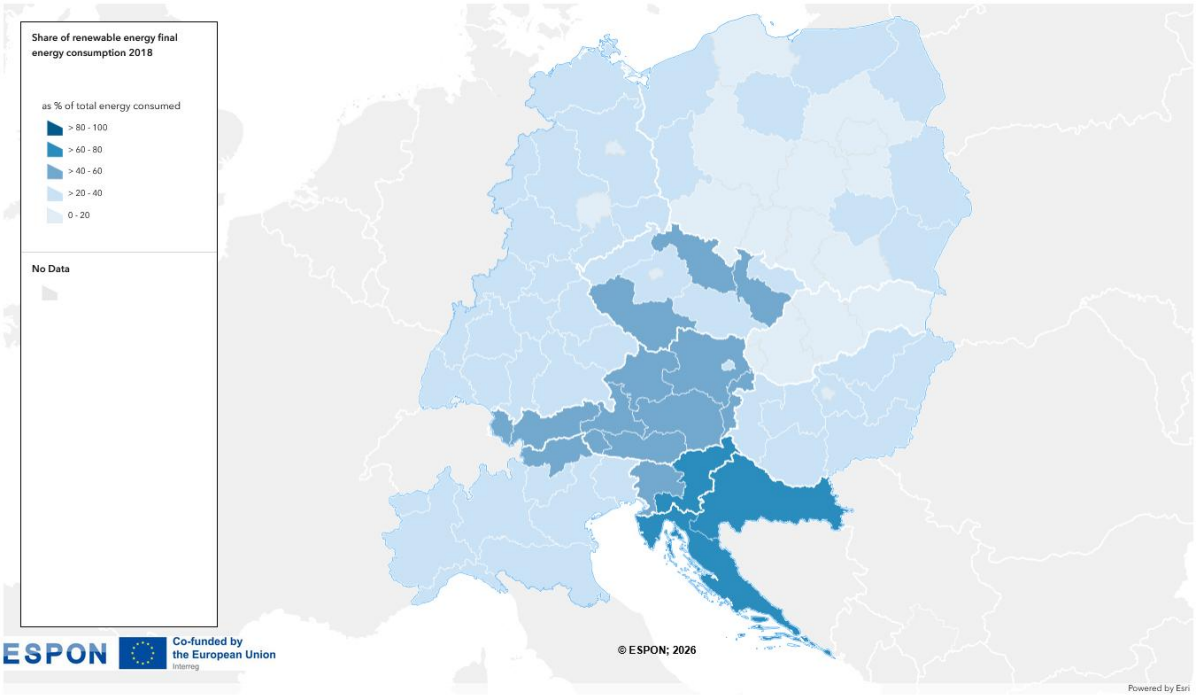
The share of renewable energy in final energy consumption in Central Europe shows consistent spatial patterns between 2012 and 2018, with gradual overall growth. The highest shares were recorded in Croatia, Slovenia, parts of Hungary and Austria, where renewables accounted for over 40% of total energy use. Moderate levels (20–40%) are found across much of Italy, Slovenia, Czech Republik and Germany, reflecting continued investment in renewable infrastructure. By contrast, regions in Poland, and Slovakia are characterised by lower shares of renewable energy, typically below 20%, indicating a continued reliance on fossil fuels and a slower energy transition. While several Polish, German and Czech regions increased their share of renewable energy on final energy consumption in the observed period, some Hungarian regions even are reducing it. Data for Ukraine is only available on country level, and even though there has been a considerable increase since 2010, the country still shows less than half the share of renewable energy compared to the lowest values observed in the Central Europe programme.

Map B.10: Share of renewable energy – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: ESPON 2022; World Bank/IEA 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.11: Share of renewable energy – most recent year

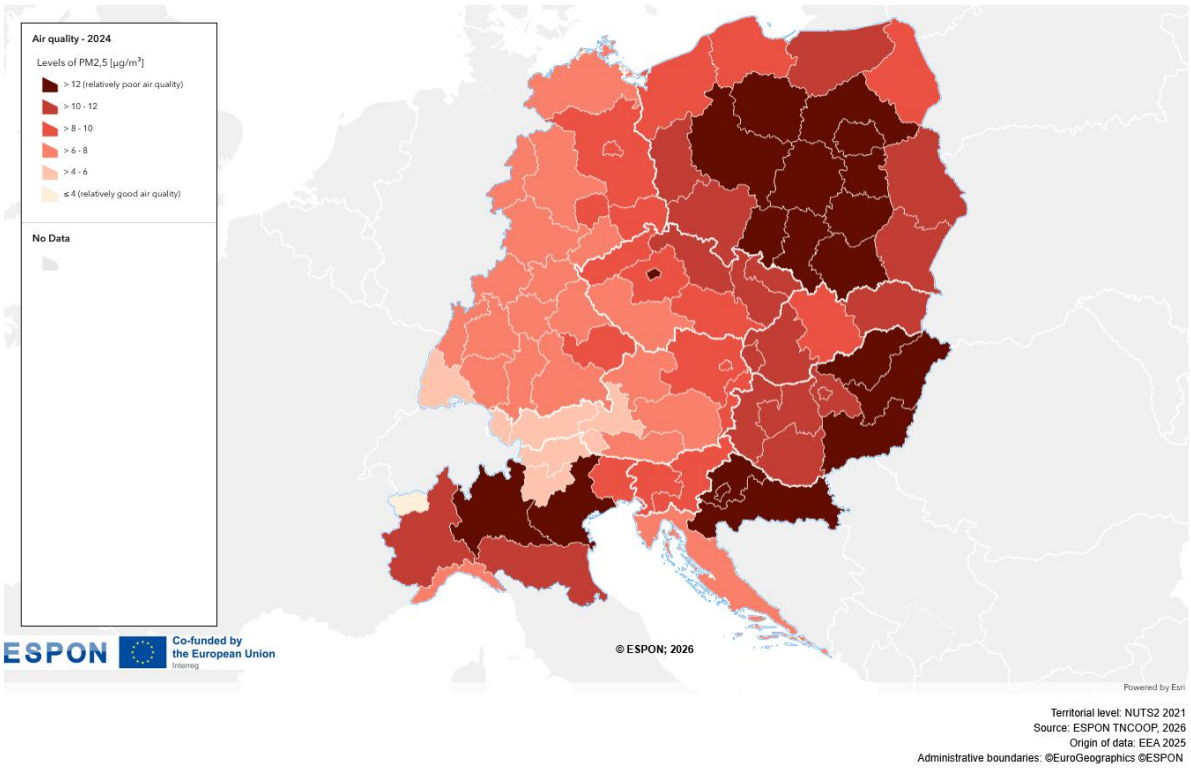


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: ESPON 2022; World Bank/IEA 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Air quality
The indicator provides a comparative measure for air quality on regional level. It is measured as the daily average annualised value for concentration of PM2.5 for the year 2024, thus balancing out weather related and event related spikes in air pollution.
Air quality – European and non-European countries
▪ Source: European Environmental Agency (EEA) ▪ Temporal coverage: 2024 ▪ Unit: micro grams/m³

In the CE cooperation area, air quality remains a major environmental concern, particularly in industrial and urbanised regions across southern Poland, eastern Hungary, northern Italy and northern Croatia. Many of these areas continue to record PM2.5 levels above EU recommended limits. High emissions stem from coal-based energy production, industrial activities, dense transport networks, and residential heating. Western parts of the region, such as Austria and southern Germany, generally exhibit better air quality. Overall, improving air quality is a key territorial challenge for the CE area.

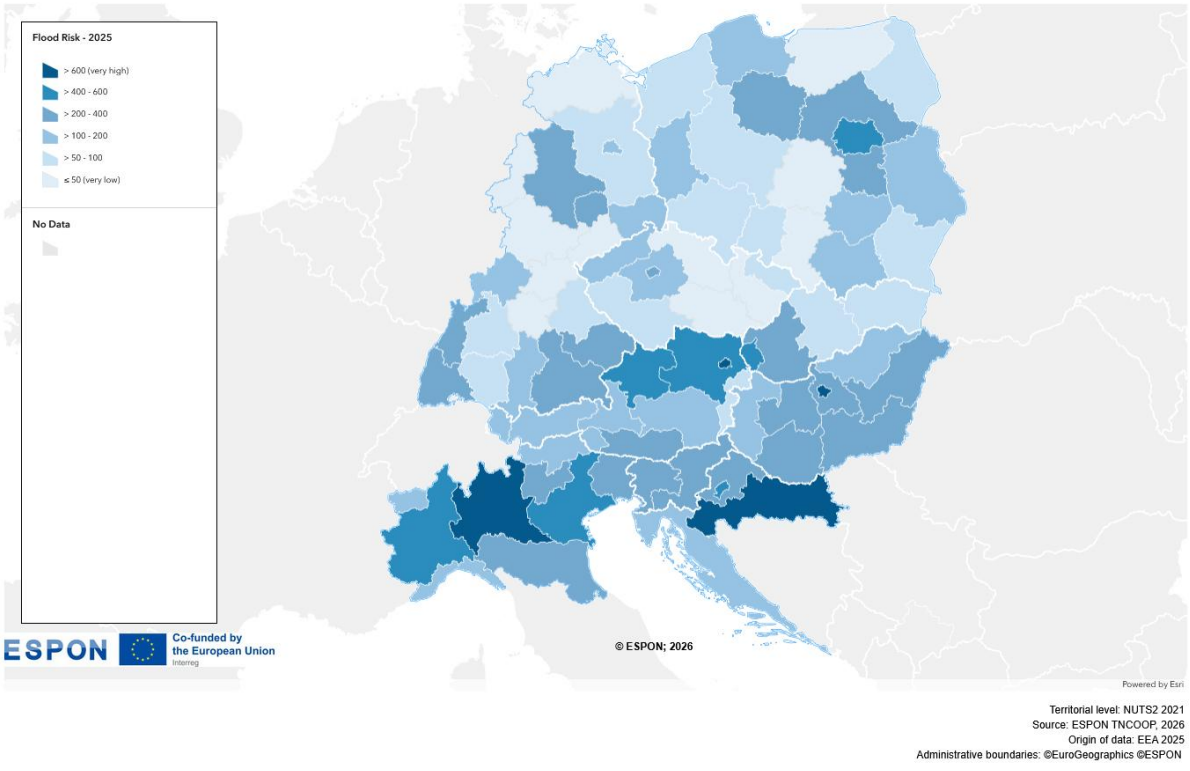
Map B.12: Air quality (Levels of PM 2,5) (2024)



Flood risk
The indicator depicts the potential aggregated flood risk on NUTS2 level. It is based on the River Flood index, calculated for a 50-year flood recurrence value based on maximum river discharge. It is estimated from annual daily maximum river discharge using a Gumbel distribution. The values have been aggregated on NUTS2, however are not crossed with population density or settlements. The data includes projected values up to 2040 due to the long-term nature of flood risk.
Flood risk – European and non-European countries
▪ Source: European Environmental Agency (EEA) ▪ Temporal coverage: 2011-2040 ▪ Unit: Index

Flood risk in the CE cooperation area (on NUTS2 level) varies significantly across regions, reflecting natural and human factors. The highest flood risk levels are found in mountainous and riverine areas in particularly along the Danube and Alpine basins in northern Austria and northern Italy, especially in Lombardy. The Panonska Hrvatska region is also highly affected by flood risk. Moderate to high-risk zones also extend across parts of northern Poland and western Slovakia, where major rivers and dense settlement patterns converge. In contrast, regions in the north and east, particularly in Germany, Poland and the Czech Republic, generally experience lower levels of flood exposure. Ukrainian regions considered in comparison show rather low flood risk values, placed in the lowest or second lowest category of flood risk which is visualised. They are thus in line with bordering regions in the Central Europe programme.

Map B.13: Flood risk (2025)

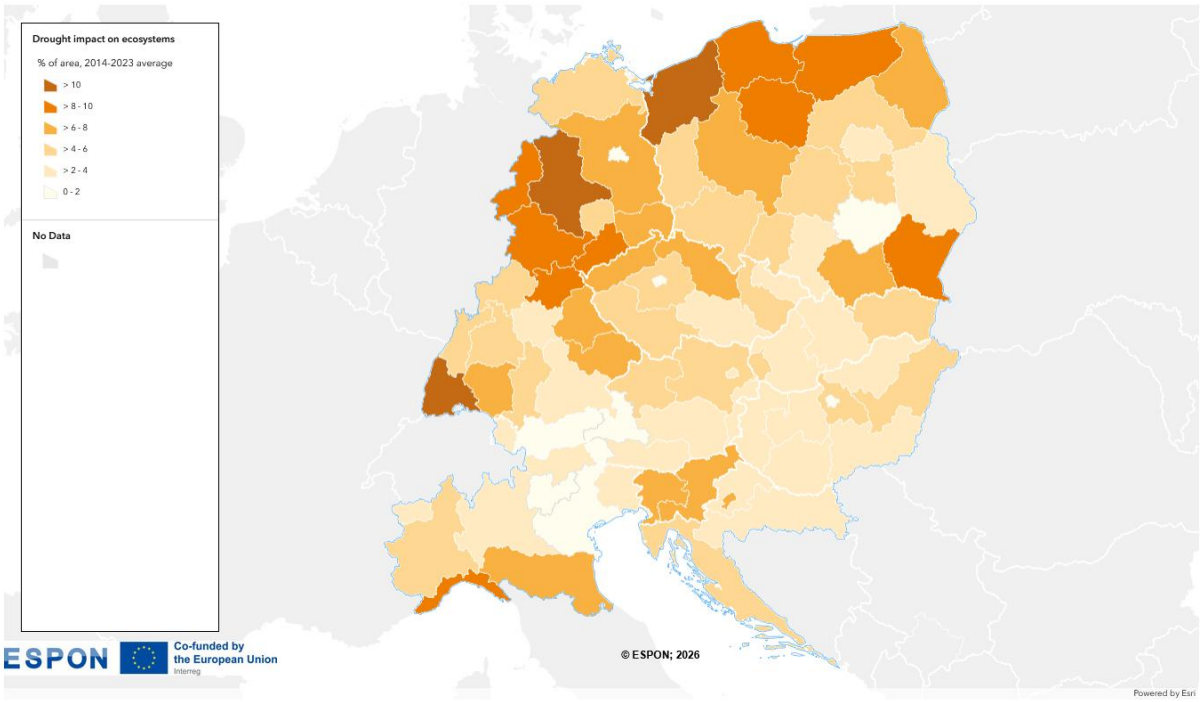


Drought impact on ecosystems
The drought impact is analysed by monitoring anomalies in vegetation productivity in areas with a soil moisture deficit during the growing season. The indicator represents an average drought impact for the period 2014-2023.
Drought impact on ecosystems – European and non-European countries
▪ Source: European Environment Agency, Copernicus Land Monitoring Service, Copernicus Emergency Management Service ▪ Temporal coverage: Change 2014-2023 ▪ Unit: Percentage (of land impacted)

The map shows the impact of drought on ecosystems across the CE cooperation area, measured as the proportion of affected land between 2014 and 2023. The areas experiencing the most severe drought impacts are concentrated in the north and west of the cooperation area, particularly in regions such as Saxony-Anhalt and Freiburg (Germany), Zachodniopomorskie (Poland). On average, more than 10% of land in these areas is affected by drought. Moderate drought exposure (4–8%) is evident across much of central Poland, Slovenia and northern Austria. The lowest impacts are visible in the Alpine regions, especially Carinthia, Tyrol, Trentino and Veneto, where mountainous terrain and higher precipitation contribute to the mitigation of drought stress.

Overall, drought has become an increasingly relevant environmental challenge in Central Europe, particularly in the northern lowlands, where persistent water deficits and rising temperatures put additional strain on ecosystems and agriculture.

Map B.14: Drought impact on ecosystems (2014-2023)

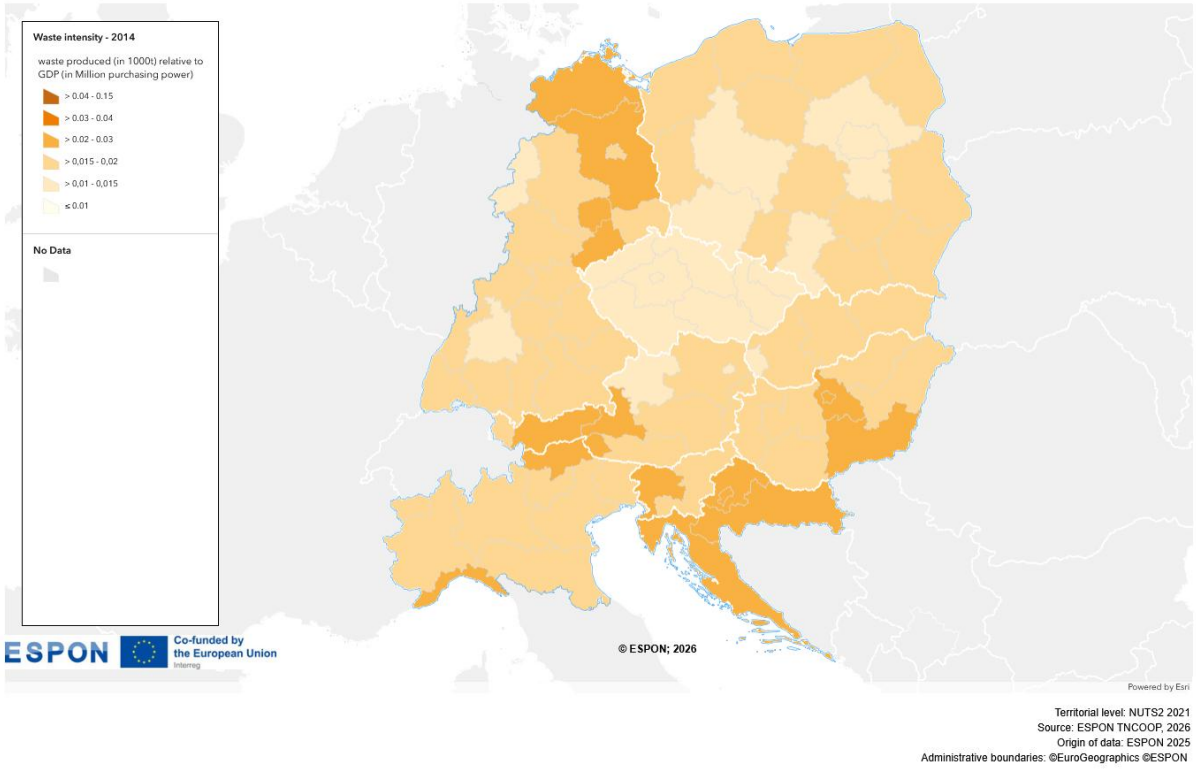


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data:European Environment Agency, Copernicus Land Monitoring Service, Copernicus Emergency Management Service 2025
Administrative boundaries: ©EuroGeographics ©ESPON

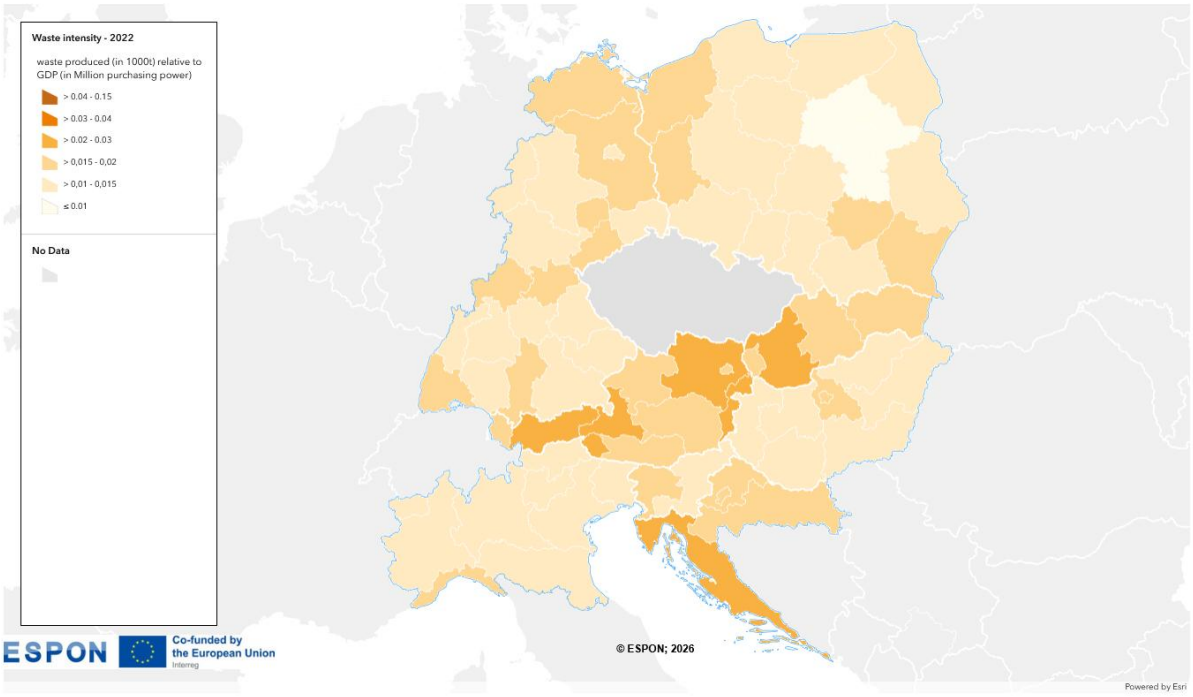
Waste intensity
The indicator measures the waste intensity of the regional economy, depicting the relation of waste produced (in thousand tonnes) relative to GDP (in million purchasing power standard). Municipal waste is gathered by or for municipal authorities and managed through waste disposal systems. It mainly consists of waste produced by households, but it can also include comparable waste from commercial activities, offices, and public institutions. Development over time indicates the progress in decoupling GDP growth from waste production and is thus used as a proxy for circular economy efforts.
Waste intensity – European sources
▪ Source: ESPON ▪ Temporal coverage: 2010-2022 ▪ Unit: Tonnes/EUR

Comparing waste intensity levels in 2014 and 2022, most regions in the Central Europe cooperation area have experienced a moderate decrease. In 2014, higher waste intensity levels were observed in regions of eastern Germany, western Austria central and southern Hungary and throughout Croatia. Noticeable reductions are visible in Poland, southern Germany, Hungary and northern Italy, while several areas such as western Slovakia and Niederösterreich in Austria even display higher waste intensity. Despite improvements, several regions still see comparatively high waste intensity also in the European perspective.

Map B.15: Waste intensity – baseline



Map B.16: Waste intensity – most recent year

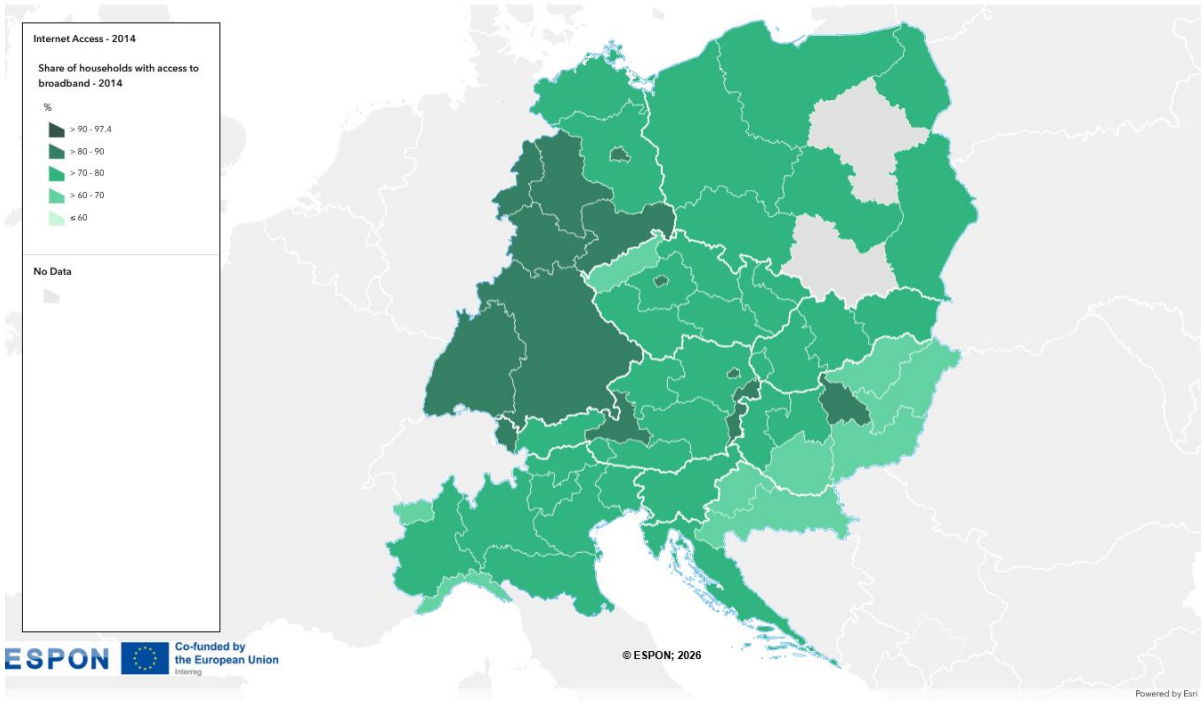


B.4 Digital connectivity & transport

Internet access
The indicator depicts the internet accessibility on regional and national levels throughout the programmes. To account for the different preconditions of EU/EFTA countries and (many) non EFTA countries, not only broadband but general internet access has been selected for some countries. The indicator thus shows the share of households with access to internet in general. Internet access is essential not only for households but also for business developments, however households are used as a proxy due to data availability.
Households with access to broadband – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2006-2021 ▪ Unit: % of households
Households with Internet access at home – non-European sources
▪ Sources: International Telecommunication Union (ITU) ▪ Temporal coverage: 2010-2021 ▪ Unit: % of households

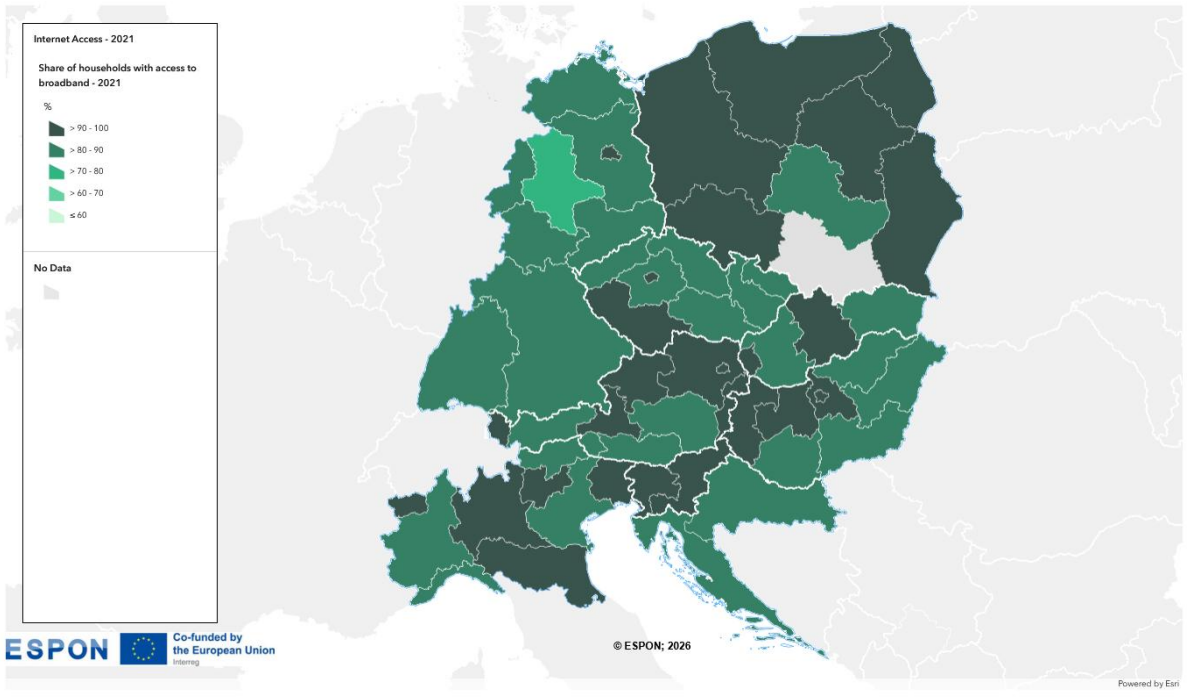
Digital connectivity has improved considerably in the CE cooperation area since 2014, though disparities still exist between and within countries. While Germany was the most connected country in 2014, many regions in Poland, Austria, northern Italy and Hungary showed stronger improvements by 2021, thereby narrowing the connectivity gap. Eastern Germany, particularly Saxony-Anhalt, now has some of the lowest levels of broadband access in the region. Hungary remains divided between its better-connected western regions and its lagging eastern ones. Digital transition thus shows uneven pace across the cooperation area.

Map B.17: Households with access to broadband – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025, ITU 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.18: Households with access to broadband – most recent year

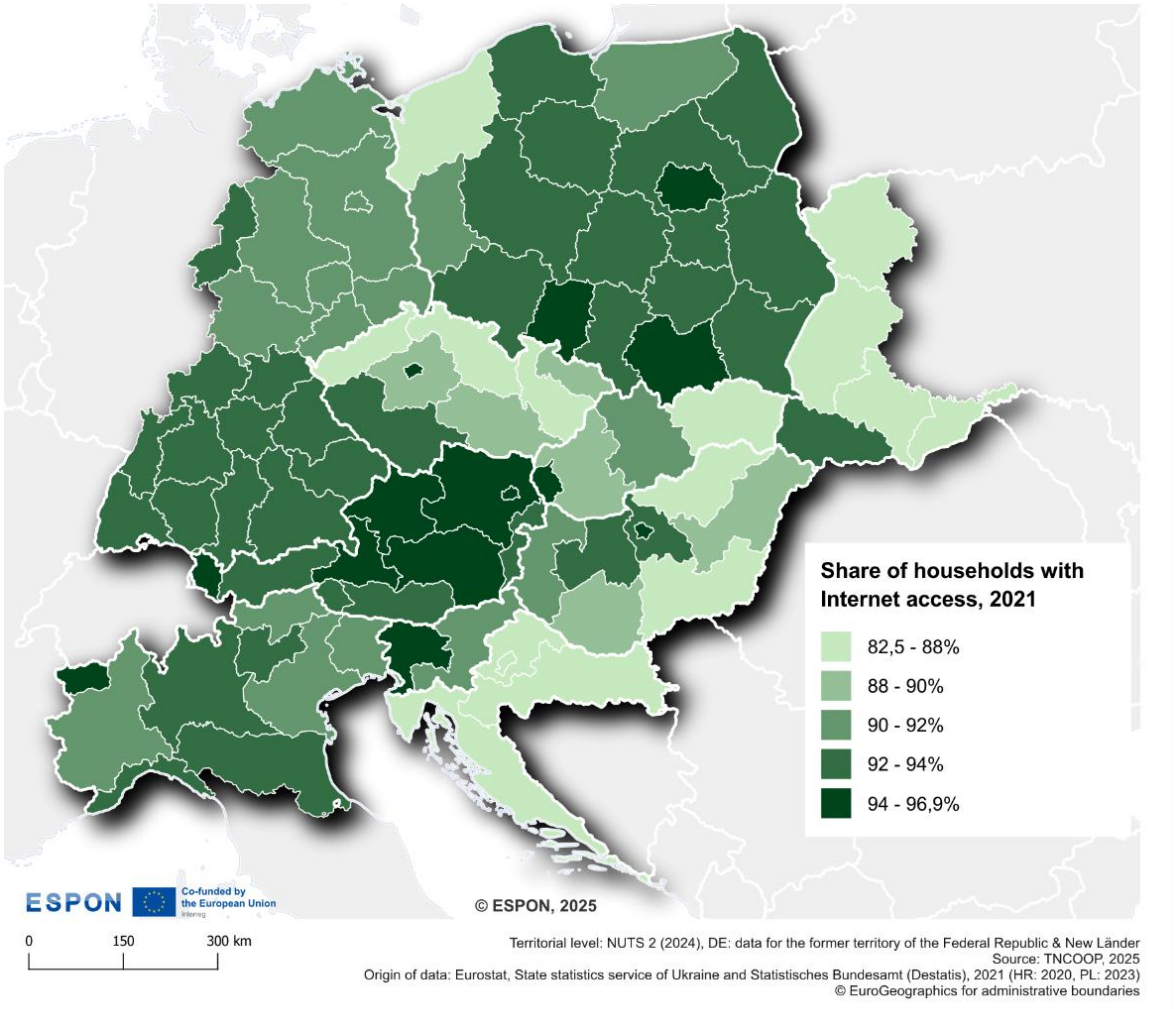


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025, ITU 2025
Administrative boundaries: ©EuroGeographics ©ESPON

The map showing the proportion of households with internet access in 2021 indicates high levels of digital connectivity across the Central Europe programme area overall, with most regions falling between 90% and 94%. Nevertheless, a clear spatial gradient remains visible. Higher shares are concentrated in the western and central parts of the programme area, particularly in Germany and Austria, as well as in

parts of the Czech Republic, Poland and northern Italy, where many regions have values above 92%. By contrast, lower levels of household internet access are more prevalent in the south-eastern part of the programme area, particularly in Croatia parts of Hungary, Slovakia and western Ukraine[38], where several regions fall below 90%. Overall, this pattern suggests that, although internet access is widely established, a moderate digital divide persists, primarily affecting the programme's south-eastern regions.

Map B.19: Share of households with internet access, 2021[39]



Access to major road network
The indicator depicts the general accessibility conditions on regional level derived from the presence of "major roads" understood as highways/motorways and similar categories. It is calculated based on OpenStreetMap (OSM) and shows the percentage of population per NUTS2 unit which lives within a 10 km distance to a major road.
Access to major road network – European and non-European countries
▪ Source: own calculation based on JRC, OSM ▪ Temporal coverage: 2025

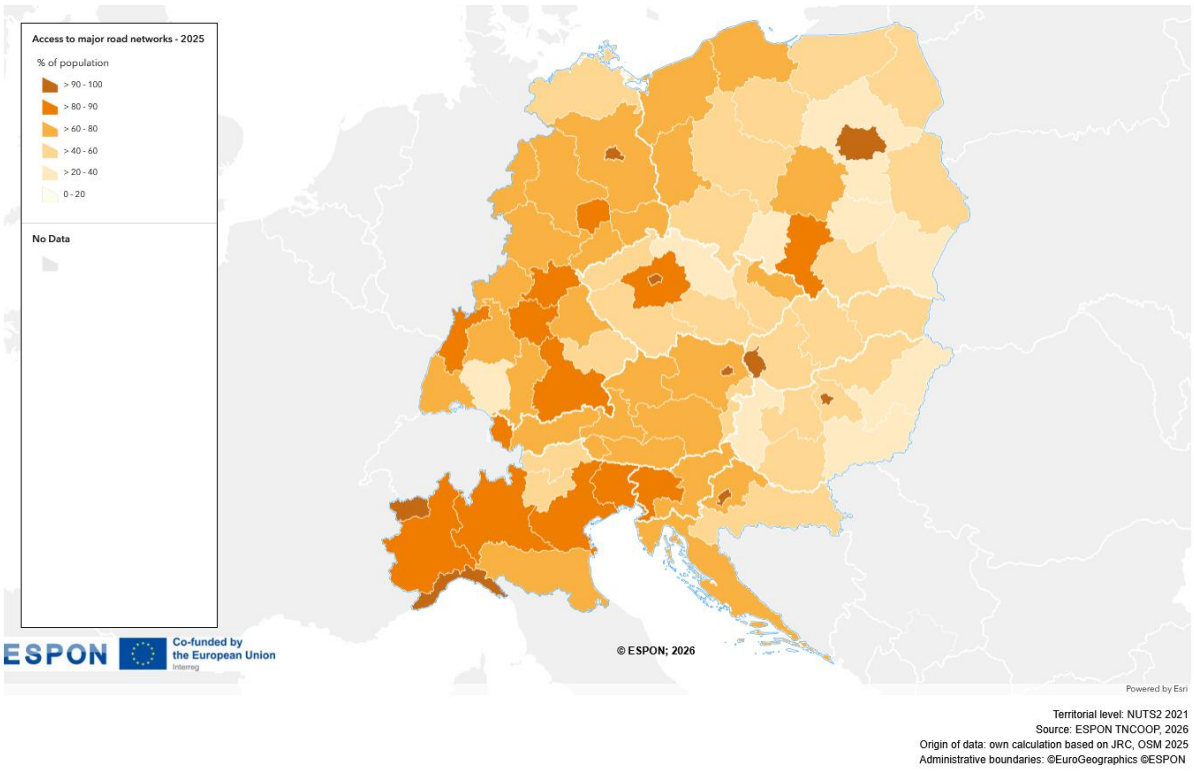
[38] Map B.19 includes five Ukrainian regions investigated for the potential expansion of the programme area

[39] This map includes five Ukrainian regions investigated for the potential expansion of the programme area

- Unit: % of population

Access to major road networks (i.e. highways) in the CE cooperation area is generally high, though considerable regional variation persists. Densely populated and economically strong areas, including capital city regions as well as southern Germany and northern Italy, show the best accessibility, with more than 80% of the population living close to major roads. In contrast, accessibility remains more limited in eastern Poland, northern Czechia, and parts of Slovakia and Hungary, where the share of the population with direct access to major road infrastructure falls below 60%. These disparities highlight the persistent east–west divide in transport connectivity across the region, which even outweighs urban-rural disparities. The disparities are even further widened when incorporating neighbouring Ukrainian regions considered in the analysis. With the exception of Lviv and Zakarpattia, all considered regions show very low shares of the population with accessibility to major roads.

Map B.20: Access to major road network (% of population) (2025)



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: own calculation based on JRC, OSM 2025
Administrative boundaries: ©EuroGeographics ©ESPON

B.5 Sustainable regional development (education, labour market & cooperation)

Employment by economic sectors

The indicators grouped under "Employment by economic sectors" provide insights into the structure and diversity of a region's economy. They highlight the distribution of jobs across various sectors, such as agriculture, manufacturing and services, indicating which activities are central to economic activities. For comparability and practicability, the sectors are aggregated to primary, secondary and tertiary sector in the provided maps.

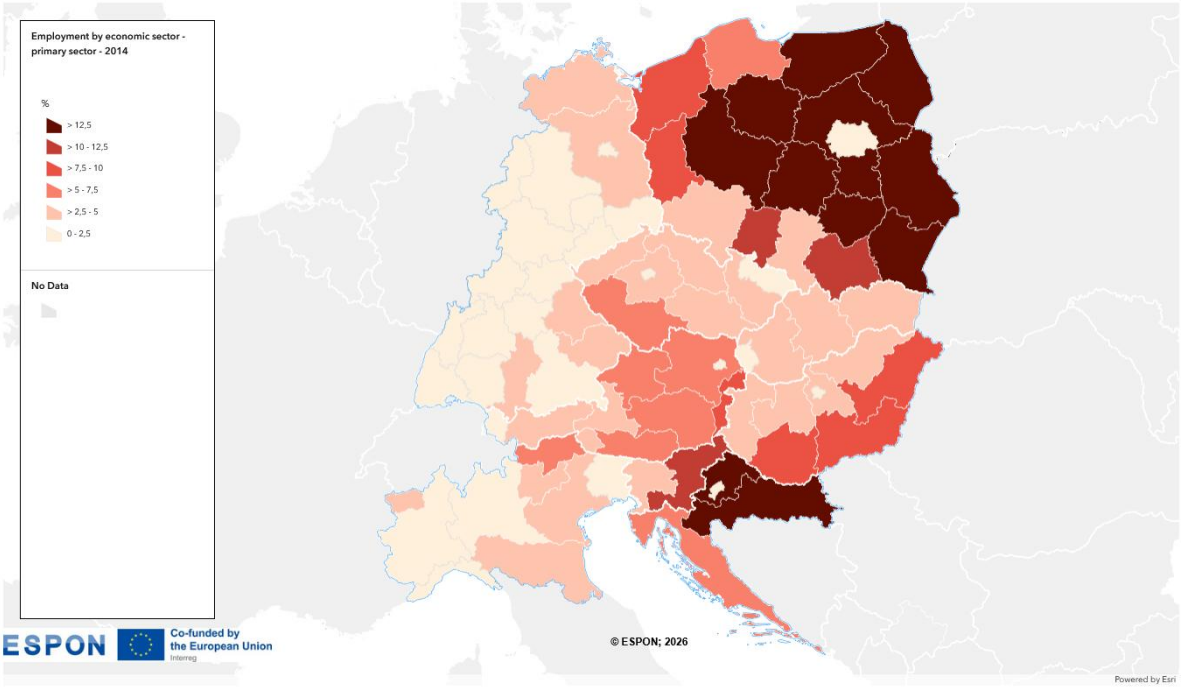
Employment by economic sectors – European sources

- Source: Eurostat
- Temporal coverage: 2010-2024
- Unit: % of total labour force

Employment by economic sectors – non-European sources
▪ Sources: International Labour Organization (ILO) ▪ Temporal coverage: 2010-2024 ▪ Unit: % of total labour force

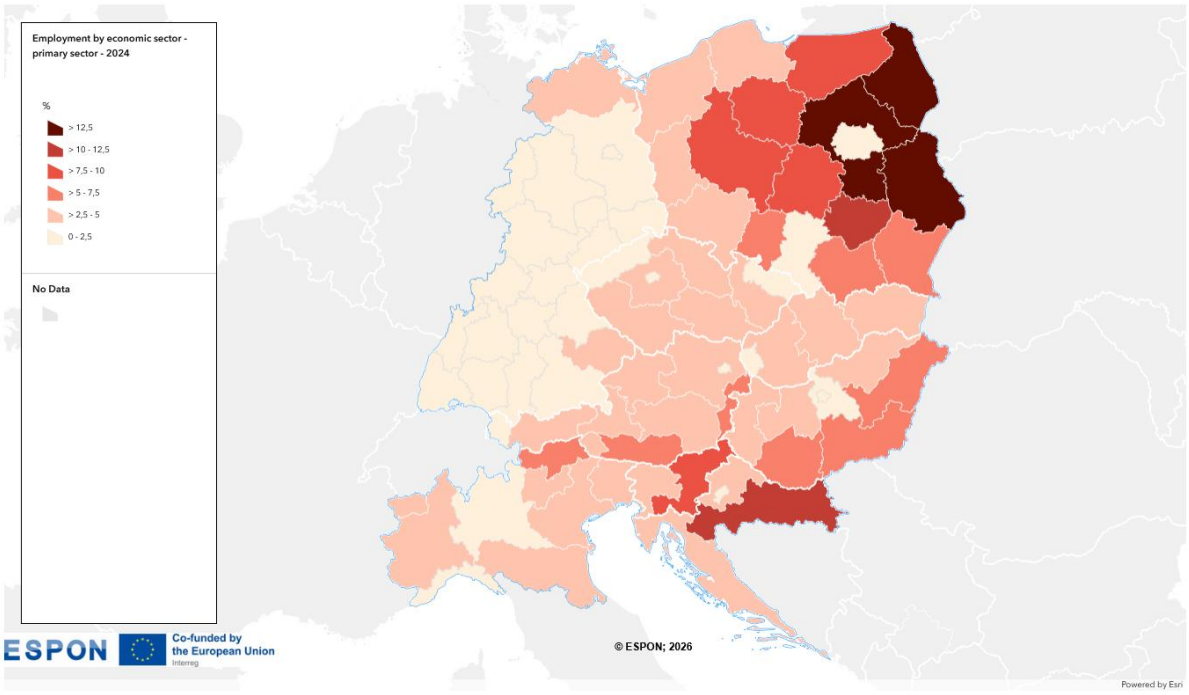
The structure of employment in the **primary sector** across the CE cooperation area shows a consistent decline in the importance of this sector between 2014 and 2023. While agriculture remains a significant source of employment in eastern Poland, southern Hungary and in Panonska Hrvatska (Croatia) where more than 10% of the workforce is still engaged in agriculture, many other regions in Germany, Austria Slovakia, Czechia and northern Italy have shares below 5% or even 2.5%. Despite this gradual convergence, a clear east–west gradient in sectoral employment continues to characterise the region. For Ukraine, despite a slow decrease since 2010, the primary sector still accounts for more than 14% of employment in Ukraine, placing it among the highest values in comparison to all other parts of the programme area.

Map B.21: Employment by economic sector (primary sector) – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; ILO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

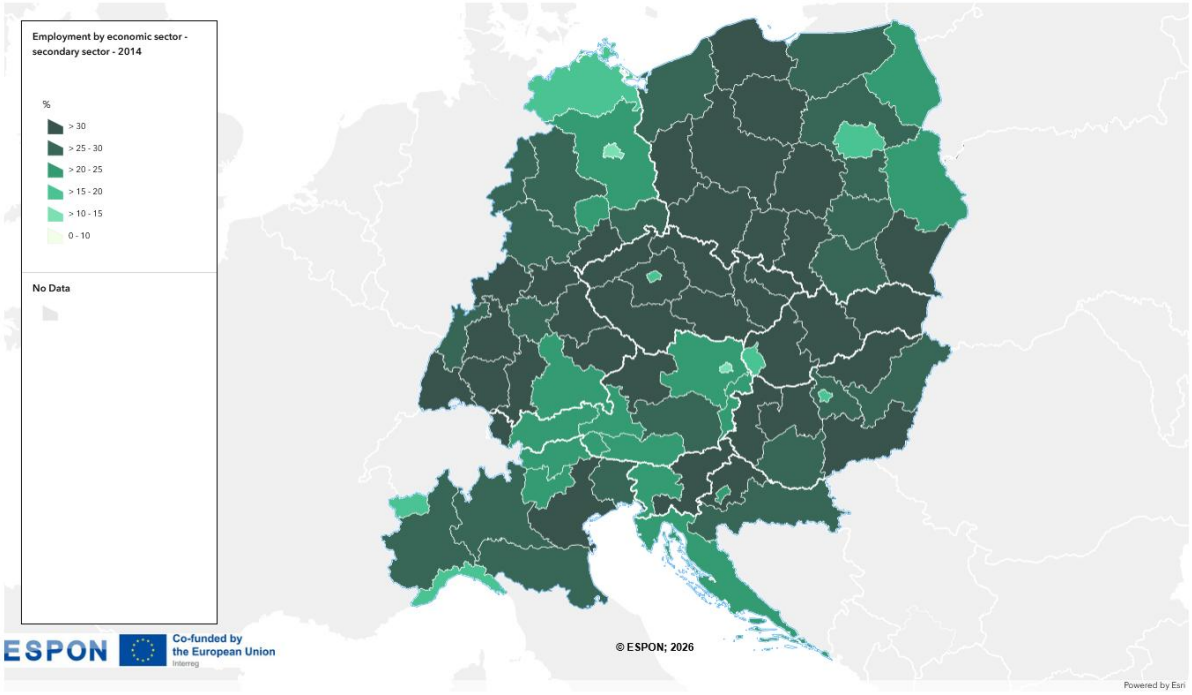
Map B.22: Employment by economic sector (primary sector) – most recent year



Employment in the **Secondary** Sector remains an important part of the regional economy in the Central European area. In 2014, manufacturing and industry accounted for a particularly high proportion of employment in southern Germany, the Czech Republic, western Poland, Slovakia and Hungary. By 2024 Hungary is experiencing a rise in the amount of employment of this sector, while the majority of countries and regions inside this program remained relatively stable.[40] Similarly, the sector in Ukraine remains rather stable, accounting for around 25% of total employment, which is comparable to many regions in Poland, Hungary, northern Italy, and Germany.

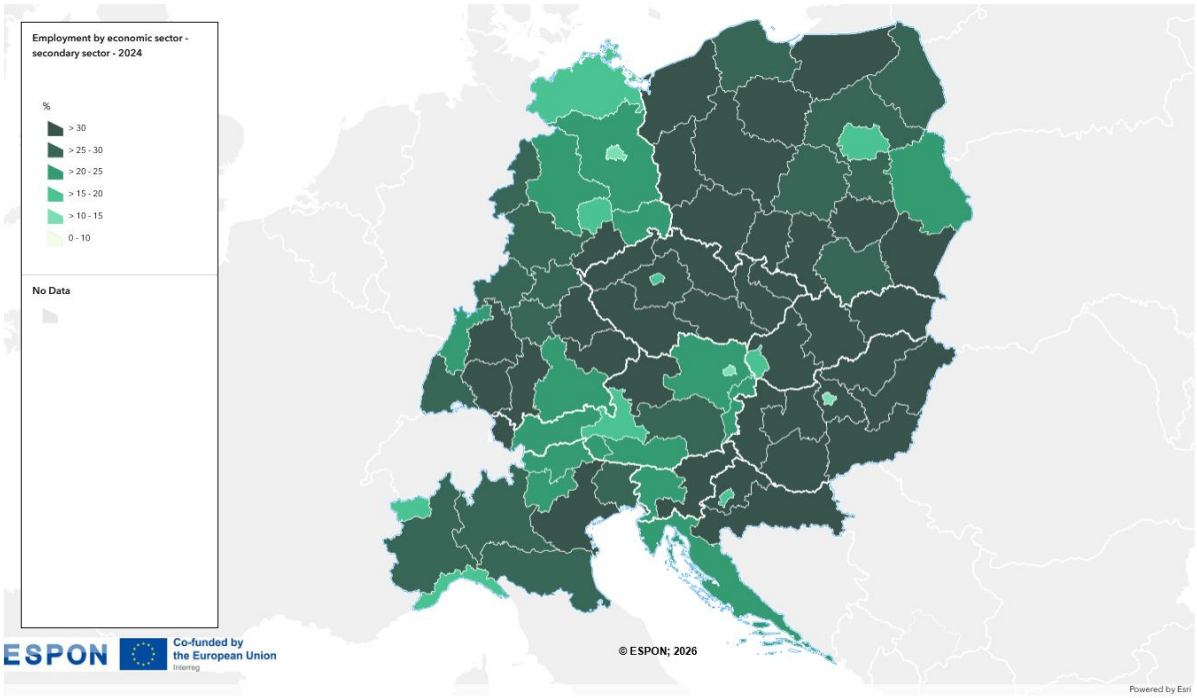
[40] Of note, due to a visualisation error, the Polish regions are not accurately represented. This will be addressed in a next version of the fiche.

Map B.23: Employment by economic sectors (secondary sector) – baseline



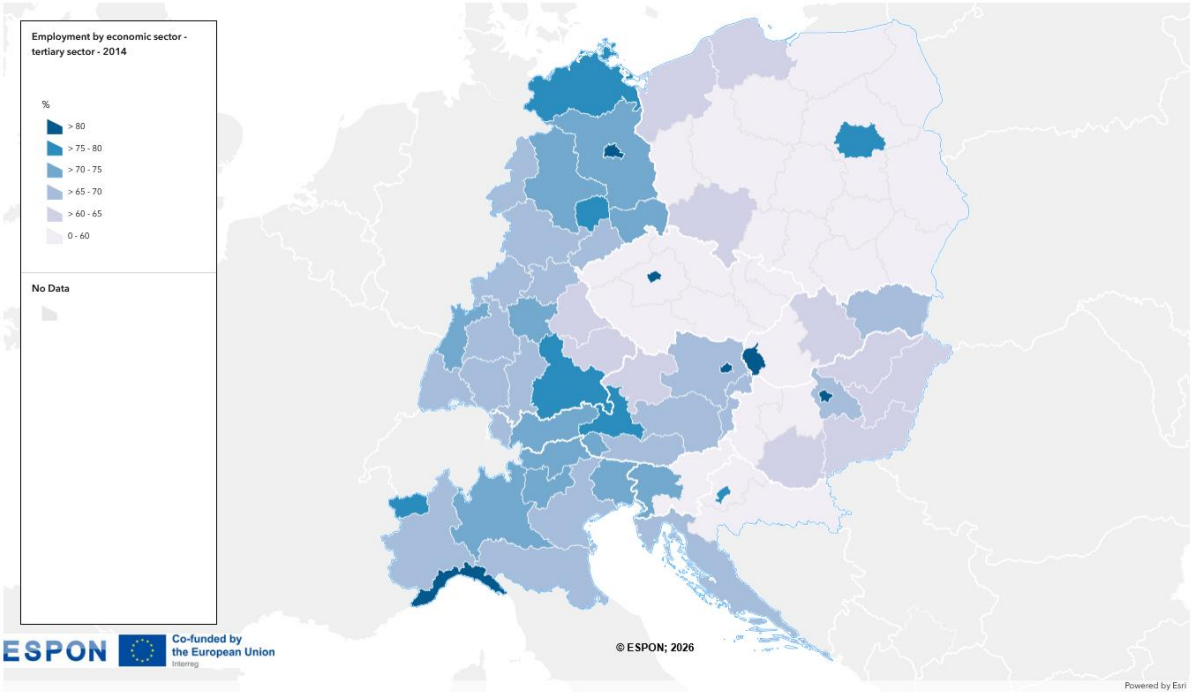
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; ILO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.24: Employment by economic sectors (secondary sector) – most recent year



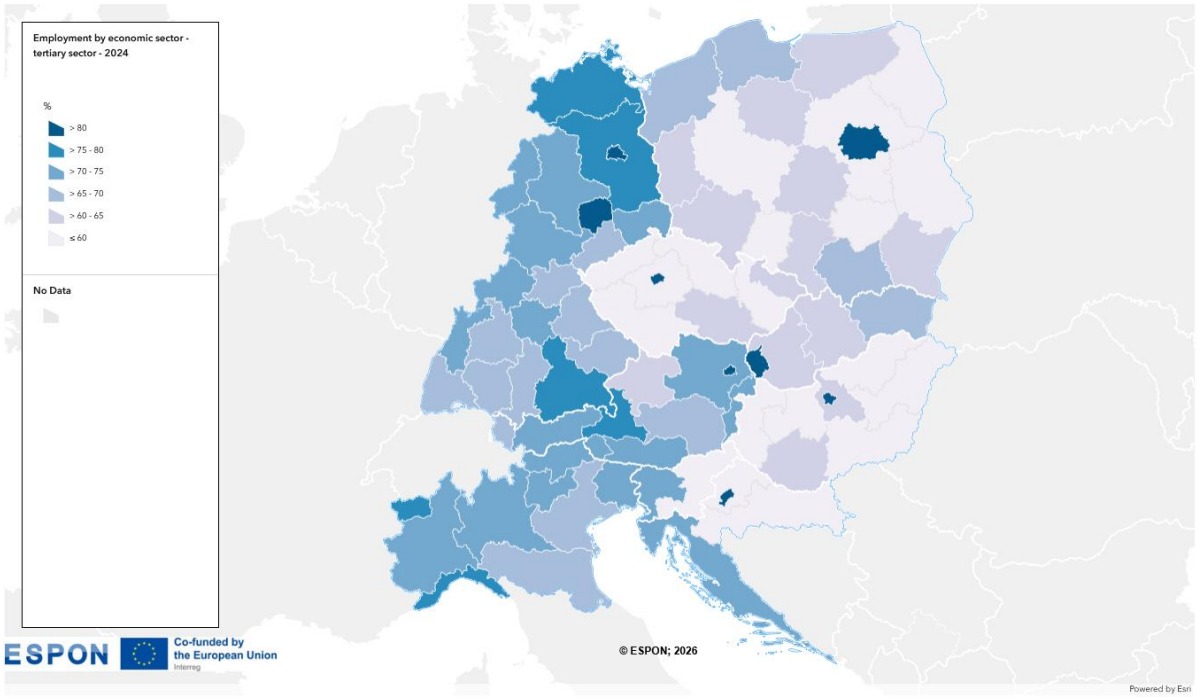
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; ILO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.25: Employment by economic sectors (tertiary sector) – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; ILO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.26: Employment by economic sectors (tertiary sector) – most recent year



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; ILO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Employment in the tertiary sector continues to grow across the Central European cooperation area, further strengthening its position as the main source of employment in almost all NUTS2 regions. Between 2014 and 2024, growth was most visible in metropolitan and economically dynamic regions such as

Berlin, Vienna, Prague and Budapest, where the service sector now accounts for more than 75% of total employment. In eastern Slovenia, a strong shift towards the tertiary sector occurred from 2014 onwards. In contrast, regions in Poland, Slovakia's Bratislava region, and parts of eastern Hungary continue to show lower shares, though gradual increases suggest a slow but steady transition towards more service-oriented regional economies. Some Hungarian regions are among the few showing an actual (small) decline in employment in the tertiary sector in this period. Similarly to the majority of regions within the programme, Ukrainian regions only see growth in the tertiary sector. However, at roughly 60%, this is rather average or even on the lower end, compared to the majority of the regions within the programme.

Education attainment level

The education attainment level of a population indicates the highest level of education completed by individuals within a region. For primary, secondary and tertiary education, the share of the population which has acquired this as the highest level on individual basis is calculated. As the source for non-EU countries does not provide the population per highest acquired education but by generally acquired education, only tertiary education levels are comparable between EU and non-EU countries.

Non-European sources: This indicator shows the number of people of any age group who are enrolled in tertiary education, expressed as a percentage of the total population of the five-year age group following on from secondary school leaving. The gross enrolment ratio counts all students enrolled at a specific education level, regardless of their age. This includes students who are younger or older than the official age range because they started school early, started late, or repeated grades. A value of 100% does not guarantee that all children in the official age group are enrolled in school; some may be out of school entirely, but the ratio appears high due to older students being counted in the total.

Education attainment level – European sources

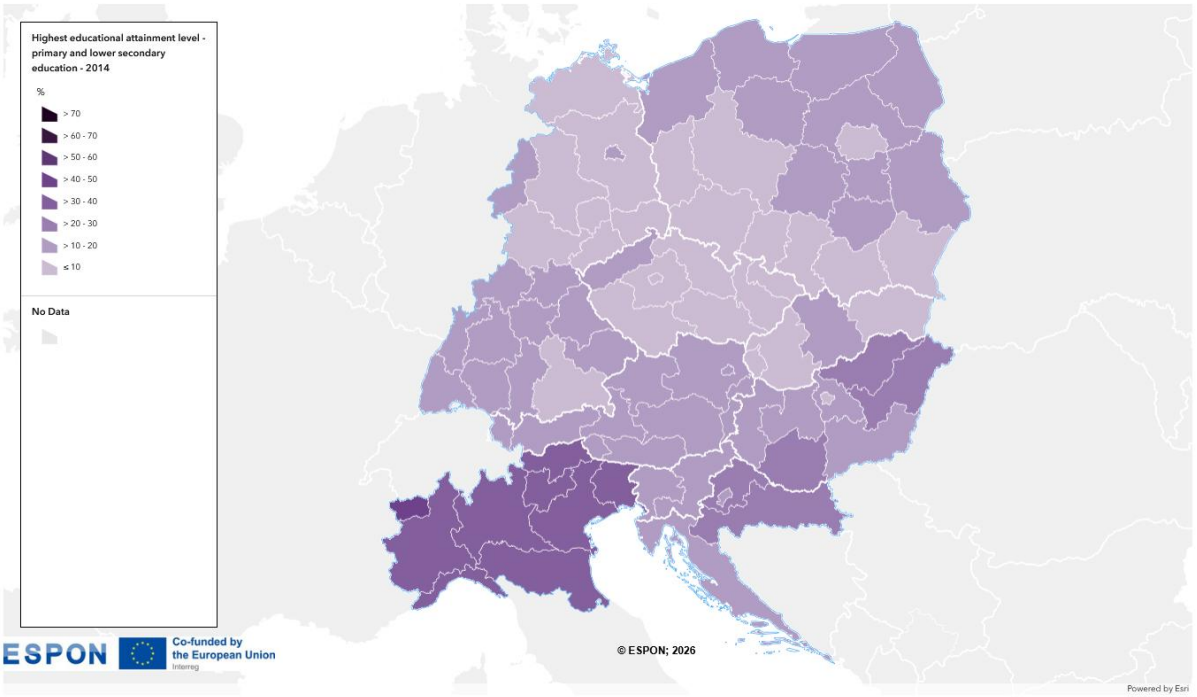
- Source: Eurostat
- Temporal coverage: 2010-2024
- Unit: % of total population

Tertiary education enrolment – non-European sources

- Sources: UNESCO
- Temporal coverage: 2010-2021
- Unit: % of total population

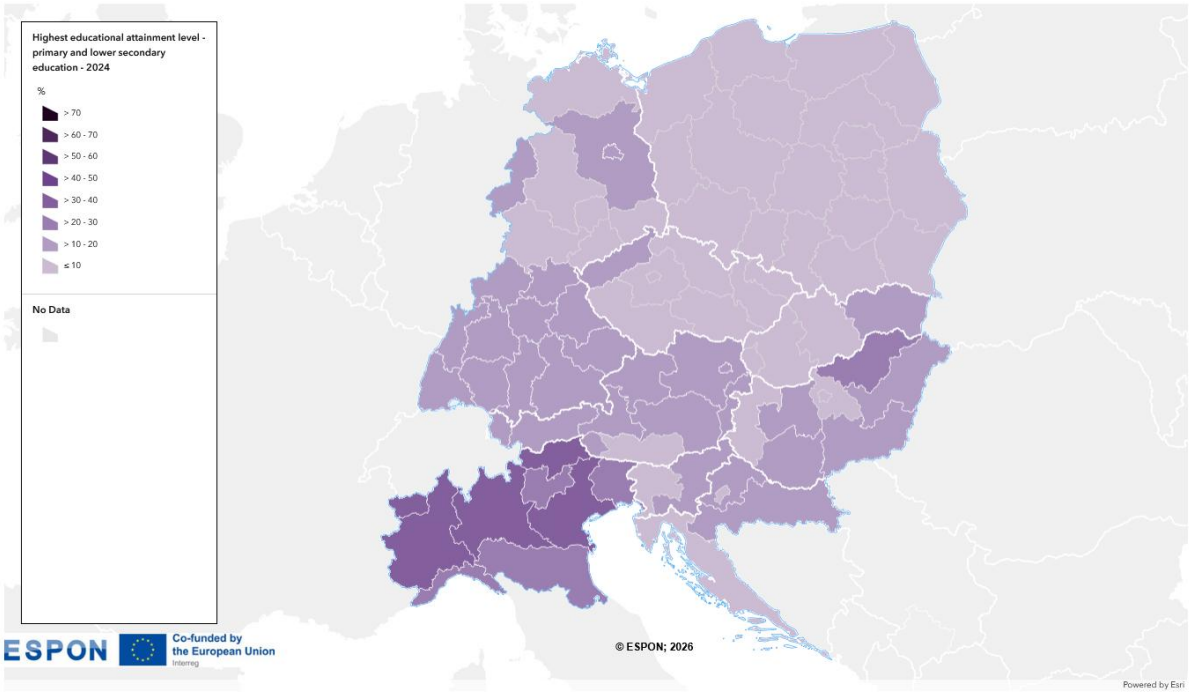
The proportion of people with a maximum educational level equivalent to primary and lower secondary education is low in Central Europe in 2014. In Germany, Poland, the Czech Republic, Austria, and Slovakia, the proportion of the population with this level of education is nowhere above 20%. In Croatia, Hungary and Slovenia, the proportion is slightly higher, but still moderate. The highest figures were found in northern Italy, with the north-western region of Valle d'Aosta having the largest proportion. More recent data shows a decline in the proportion of the population with primary education almost universally. However, northern Italy continues to have the highest figures by comparison.

Map B.27: Education attainment level (levels 0-2) – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.28: Education attainment level (levels 0-2) – most recent year

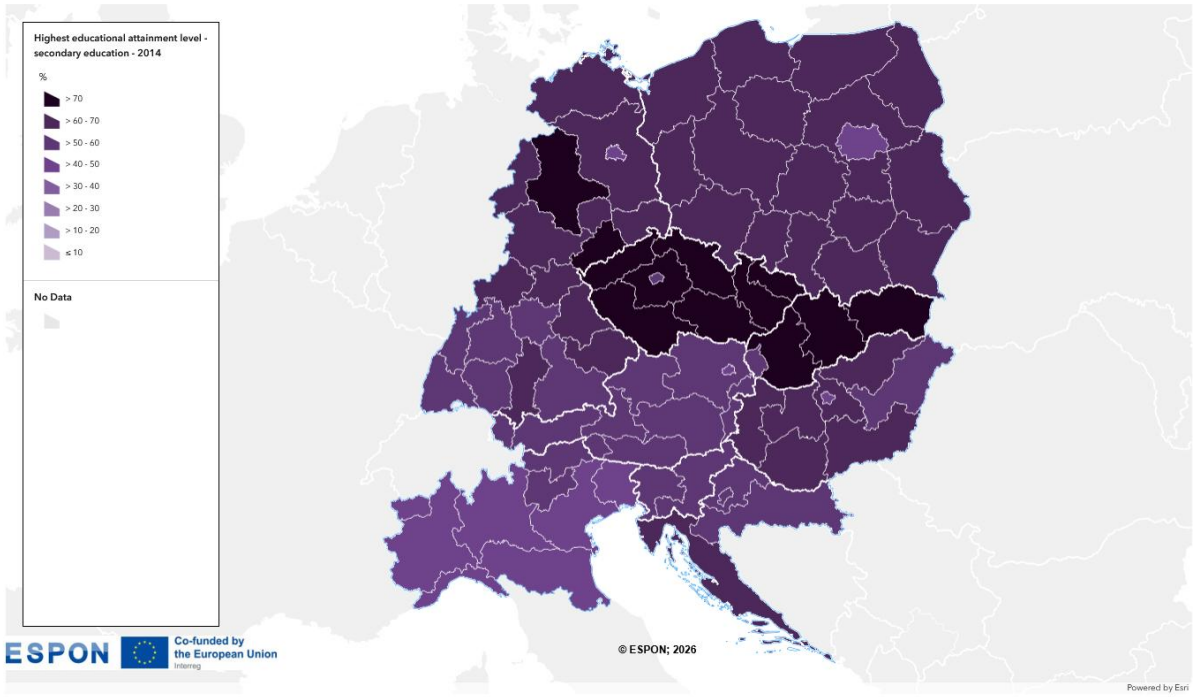


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025
Administrative boundaries: ©EuroGeographics ©ESPON

In 2014, the proportion of population in Central Europe with an educational attainment level corresponding to secondary education was moderate, but on the higher end by European comparison. By 2024 this share reduced throughout the area, mostly as can be seen in the subsequent section in favour of a higher share of people with tertiary education. Notably, Berlin, Prague, Vienna, Warsaw and Budapest

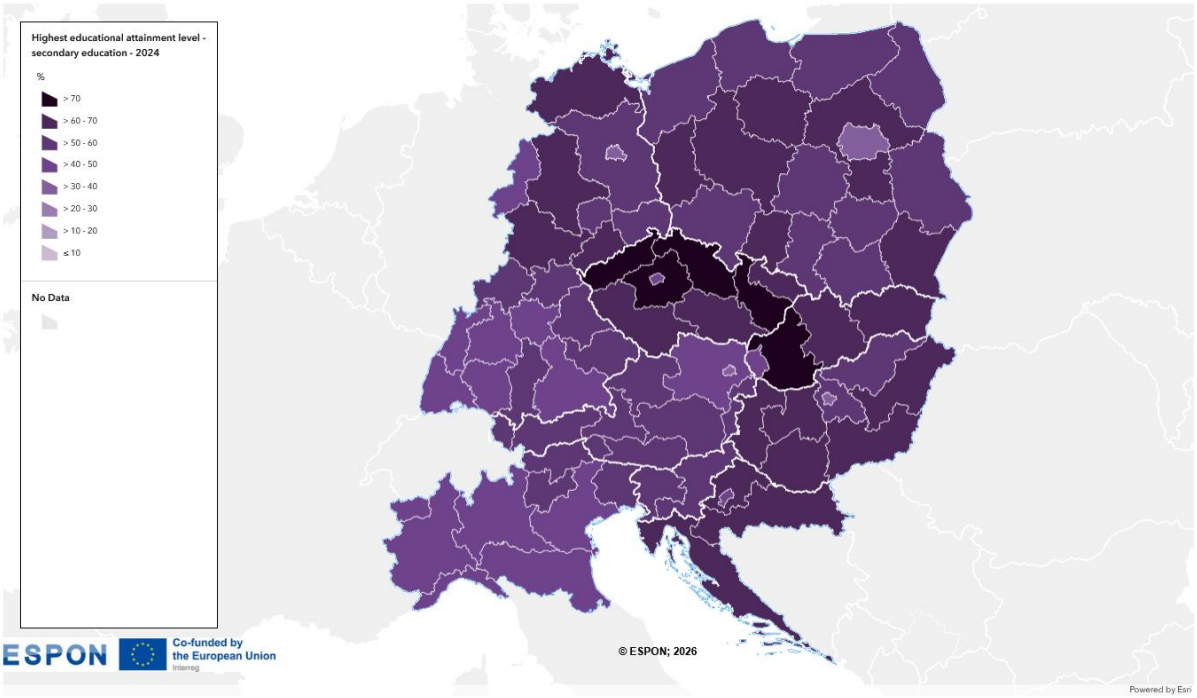
all exhibit lower shares than their immediate neighbouring regions. Northern Italy is the least dynamic part of the programme area and shows no considerable changes throughout the comparison period.

Map B.29: Education attainment level (levels 3-4) – baseline



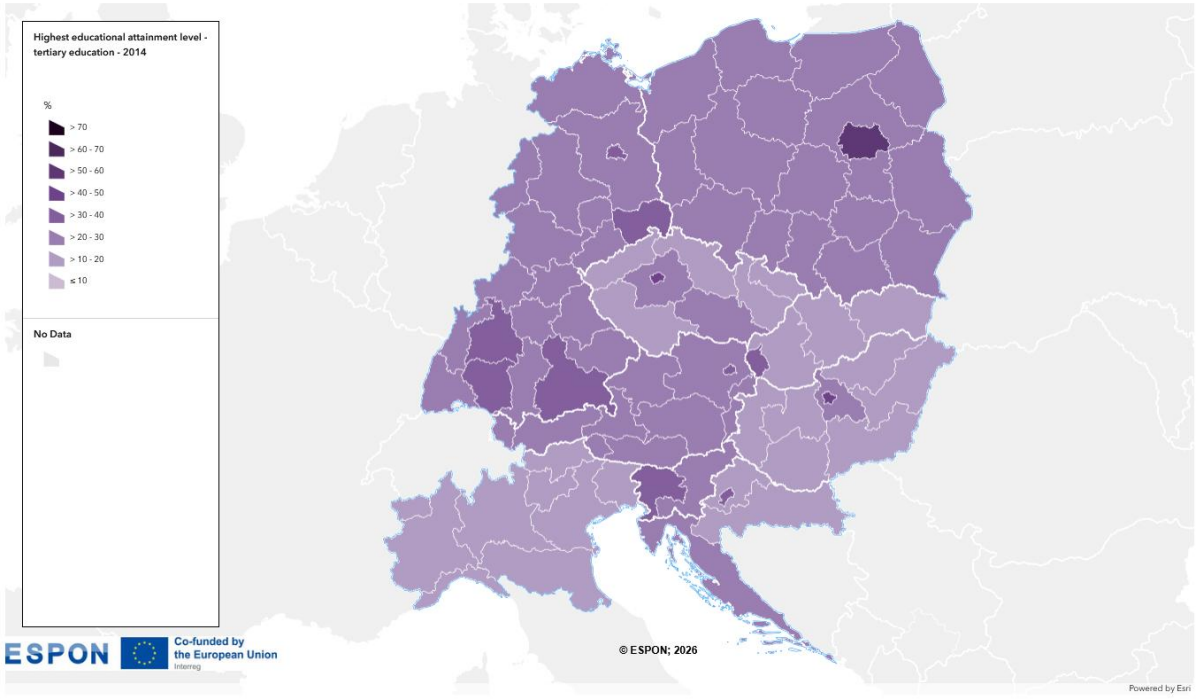
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.30: Education attainment level (levels 3-4) – most recent year



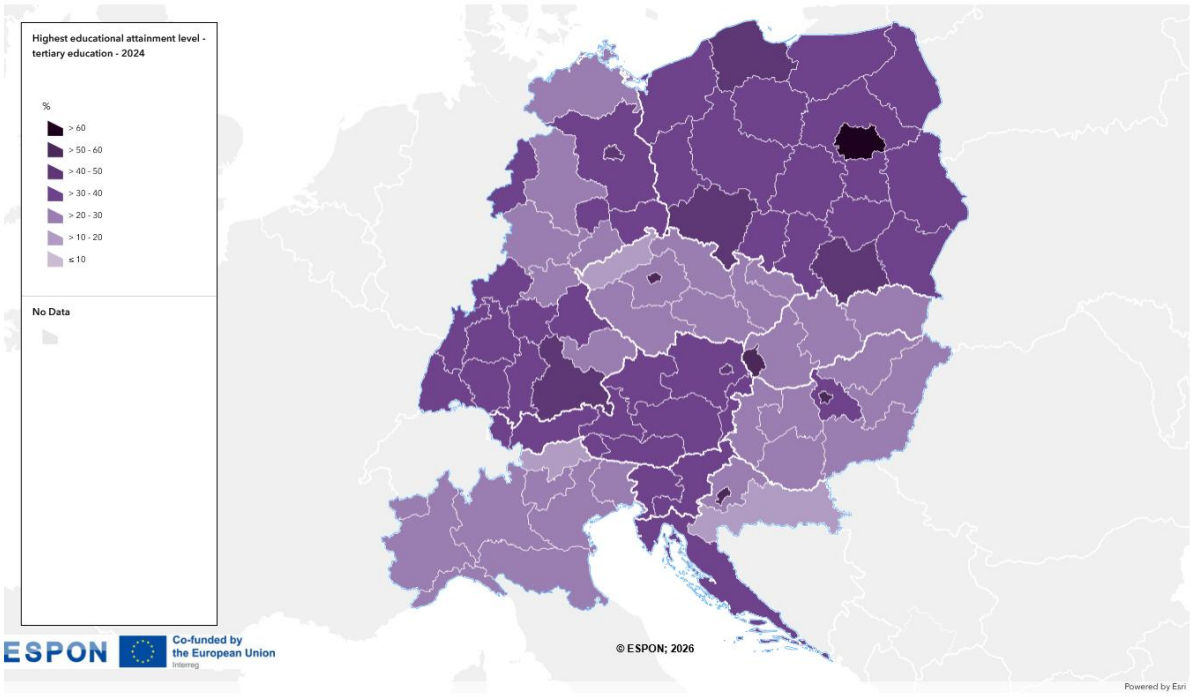
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.31: Education attainment level – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; UNESCO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.32: Education attainment level – most recent year



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; UNESCO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

The proportion of the population that has attained a level of education corresponding to tertiary education is set to rise steadily across Central Europe between 2014 and 2024. Despite the strong regional disparities, there has been a consistent enhancement in the overall level of education. In both years, the

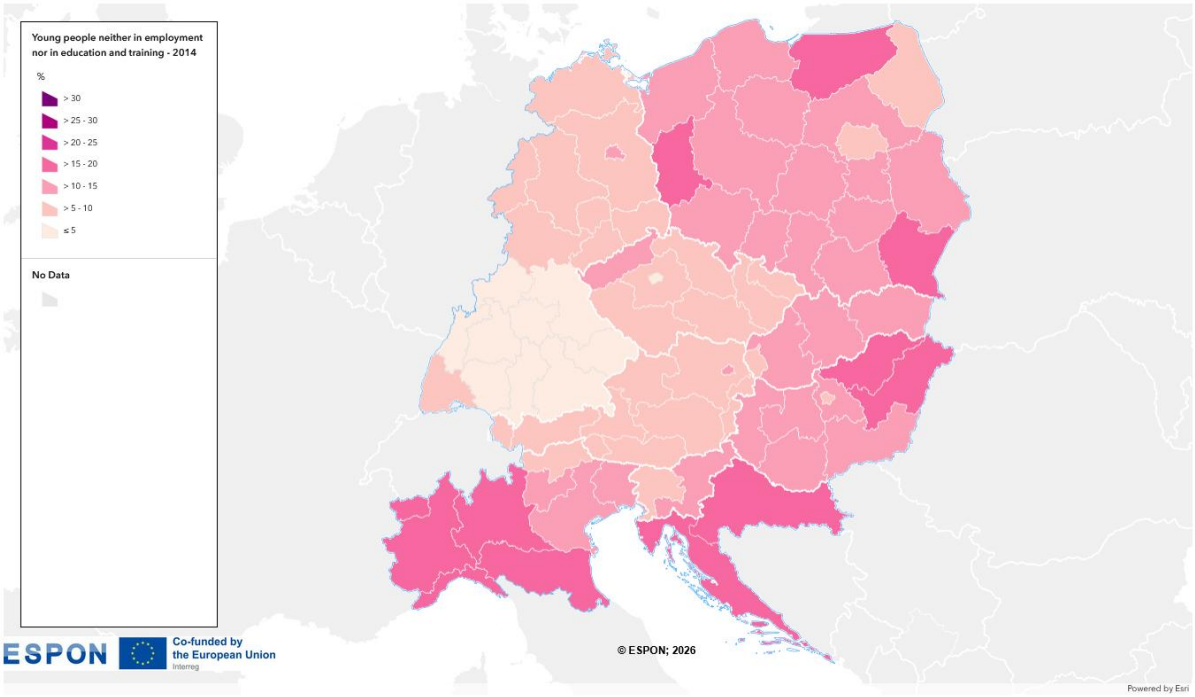
capital regions stand out with particularly high proportions. The metropolitan area around Warsaw is especially notable, with more than 60% of the population holding a tertiary qualification by 2024. On regional level the proportion of the population with a tertiary education is higher in Germany, Poland, Austria, Slovenia, and western Croatia compared to lower levels in northern Italy, the Czech Republic, Hungary, and Slovakia. Interestingly

Young people neither in employment nor in education and training
This indicator represents the young population who are neither employed nor participating in further education or training. Individuals are classified as such if they are not employed and have not engaged in any formal or non-formal education or training in the four weeks leading up to the survey which collected the information. For EU countries and most non-EU countries, "young population" refers to 15-29 year olds. However, for a few non-EU countries the definition of "young population" only includes 15-24 year olds.
Young people neither in employment nor in education and training – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2010-2024 ▪ Unit: % of total population age 15-29
Share of youth not in employment, education or training– non-European sources
▪ Sources: International Telecommunication Union (ITU) ▪ Temporal coverage: various years ▪ Unit: % of total population age 15-24

The proportion of young people who are neither in employment nor in education and training (NEETs) has decreased or at least remained stable across Central Europe between 2014 and 2024, with the exception of southern Germany, where there has been a slight increase.

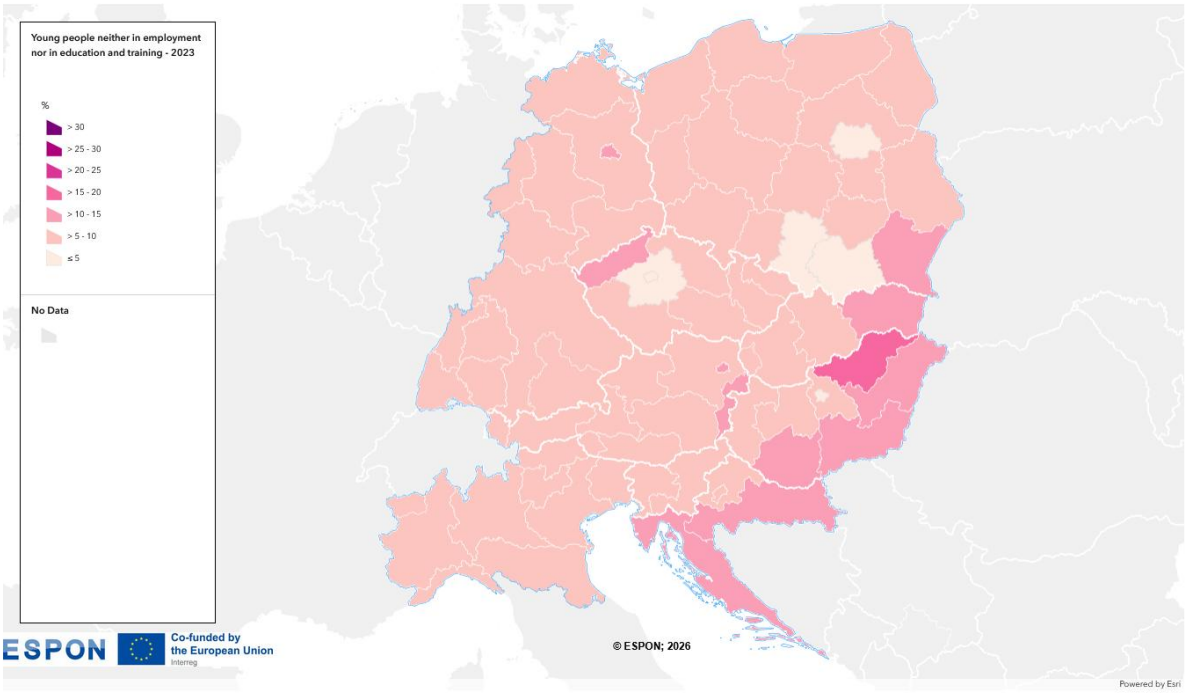
A clear division can be observed in 2014: the western part of the region – comprising Germany, the Czech Republic, and Austria – shows lower NEET rates, while the southern and eastern parts – including Northern Italy, Slovenia, Croatia, Hungary, Slovakia, and Poland – display higher proportions of inactive youth. Likewise, around this time, Ukraine shows a NEET rate which exceeds all involved countries within the programme area. Recent data indicate a convergence of these differences, resulting in a more homogeneous distribution. The metropolitan areas of capital cities stand out from their surroundings, albeit with varying degrees of intensity, thus no clear pattern emerges. However, the majority of regions in Central Europe now show a proportion of NEETs in 2024 from 5% to 10%. A higher prevalence of NEETs is observed along the southeastern border of the Central European region. For Ukraine, no more recent data is available.

Map B.33: NEET: Young people neither in employment nor in education and training – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; ILO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.34: NEET: Young people neither in employment nor in education and training – most recent year

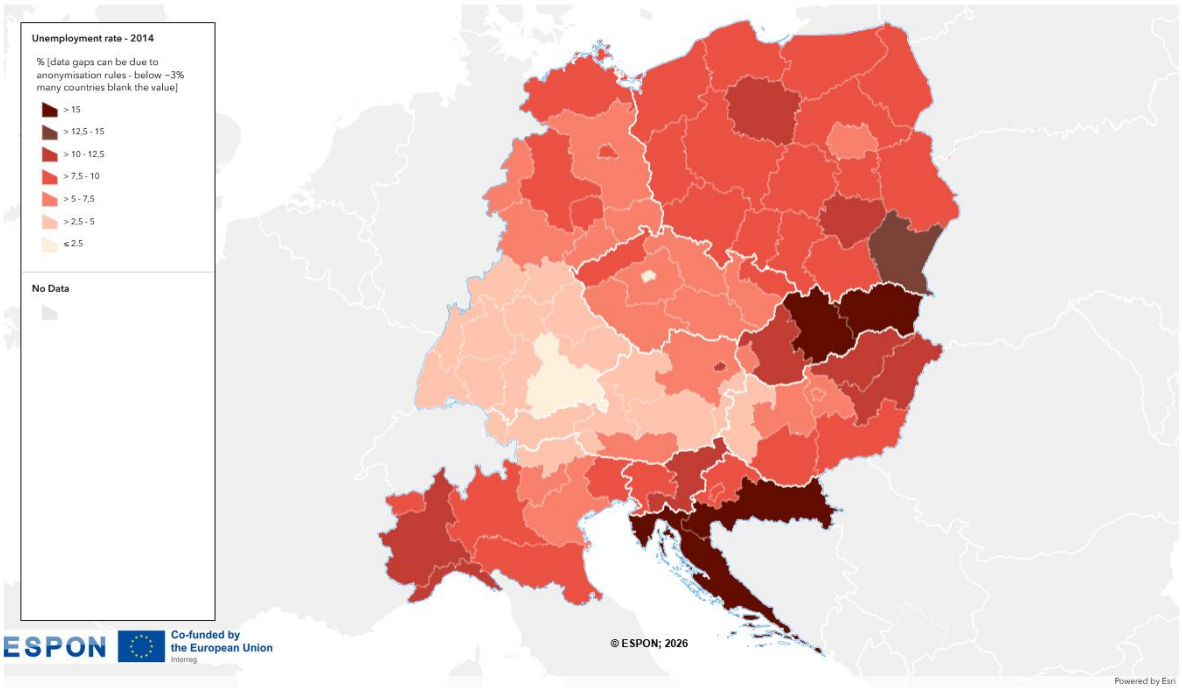


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; ILO 2025
Administrative boundaries: ©EuroGeographics ©ESPON

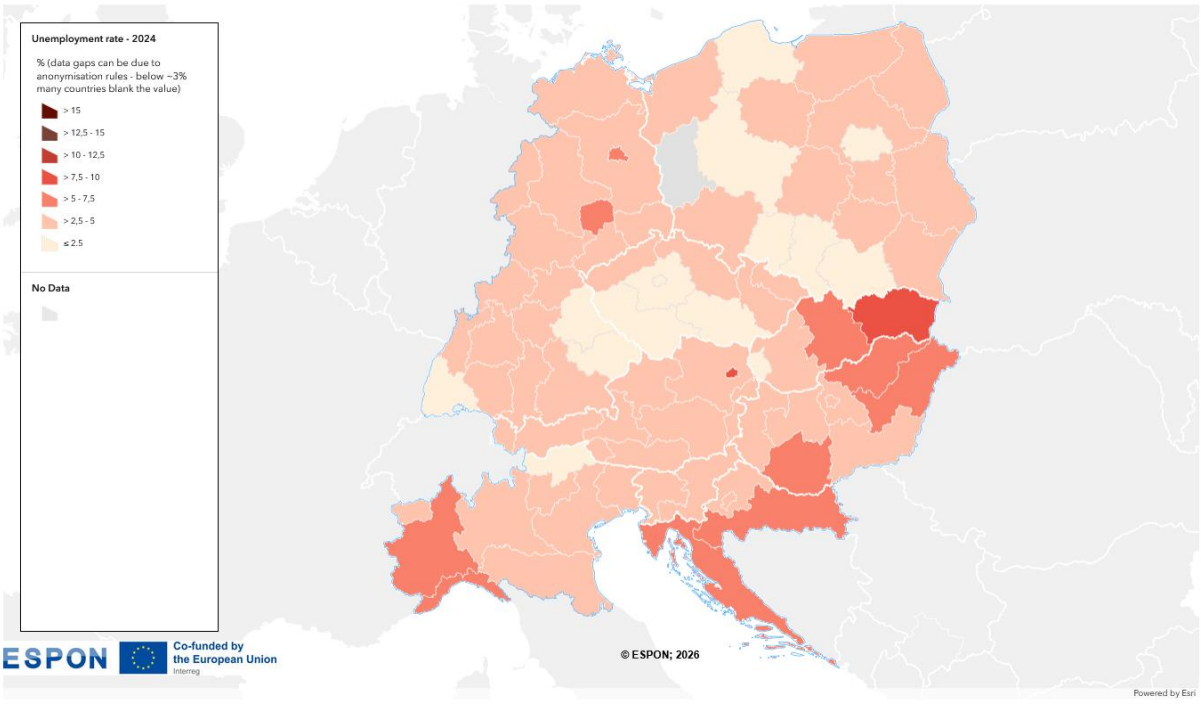
Unemployment rate (total and per gender)
The unemployment rate is a general measure of an economy and usually is calculated as the number of unemployed individuals expressed as a percentage of the total labour force. Unemployment rates are an indicator for economic performance, but also influence a range of other factors such as consumer spending, public spending etc. Several non-EU countries do not indicate if unemployment is calculated against the total labour force or the total population. Nevertheless, it can be assumed usually to be based on the total labour force.
Unemployment rate – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2013-2024 ▪ Unit: % of total labour force
Unemployment rate – non-European sources
▪ Sources: World Bank ▪ Temporal coverage: 2010-2024 ▪ Unit: % of total labour force

In 2014, unemployment levels were low in southern Germany and throughout most of Austria, yet were rising steadily towards the east across the Czech Republic and reaching high levels in Poland and towards the south reaching highest levels in Croatia. The eastern region of Slovakia is particularly affected by high levels of unemployment. Joblessness is also widespread in the southern parts of Central Europe. By 2024, unemployment in Central Europe had decreased significantly overall, and the differences between countries had largely evened out. However, certain regions continue to demonstrate relatively elevated rates, most notably eastern Hungary and Slovakia, northwestern Italy, Croatia, as well as Vienna and Berlin. It is recognizable that major capital regions, including Berlin, Vienna and Warsaw, usually are different from the surrounding regions. However, while Vienna and Berlin demonstrate higher unemployment rates in comparison to adjacent areas, for Warsaw the opposite holds true.

Map B.35: Unemployment rate, total population – baseline



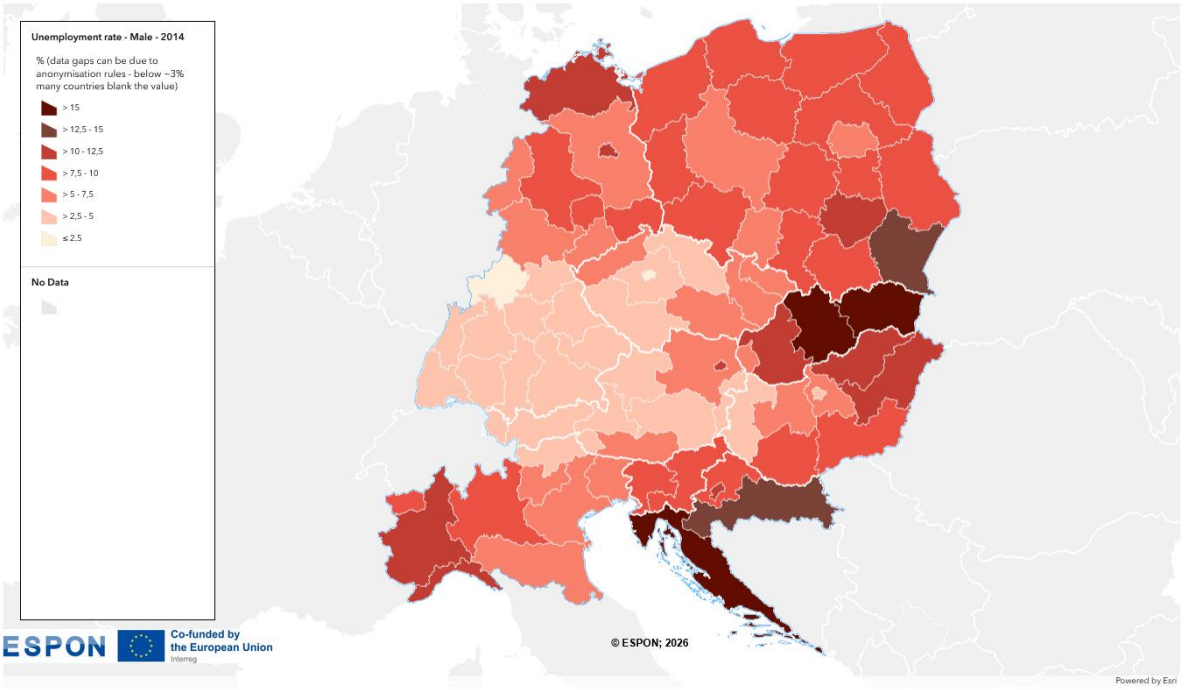
Map B.36: Unemployment rate, total population – most recent year



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; World Bank 2025
Administrative boundaries: ©EuroGeographics ©ESPON

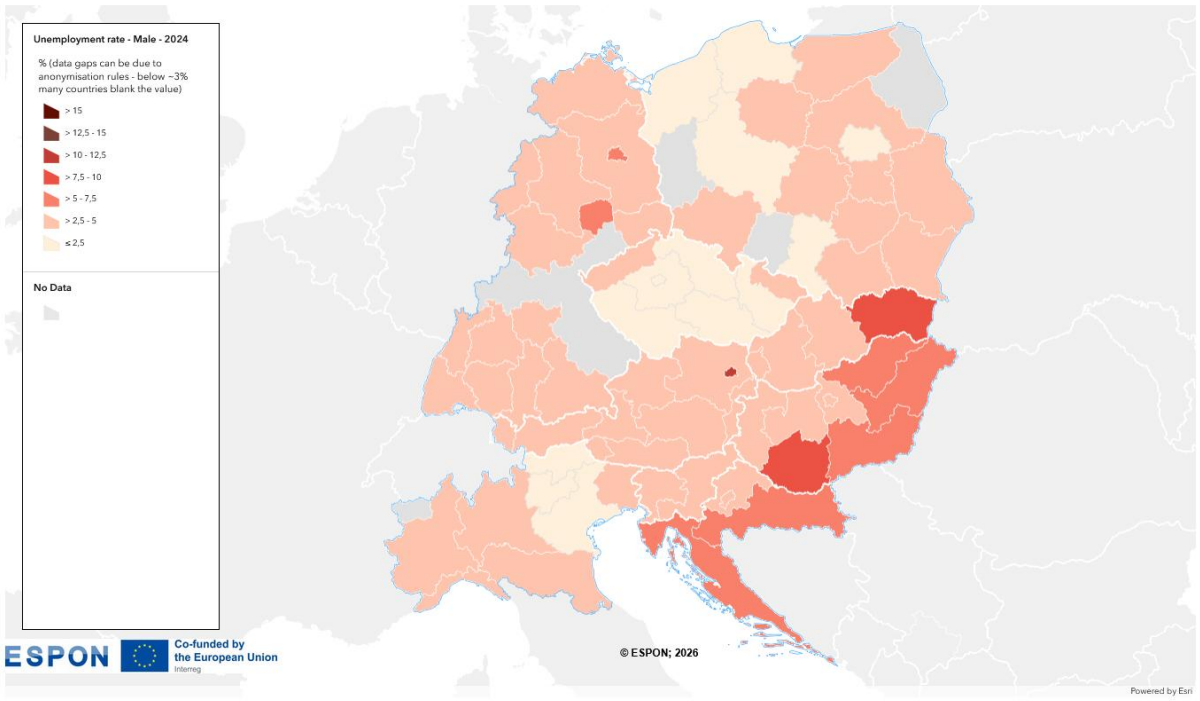
The map of the unemployment rate in Central Europe by gender reveals a pattern that is analogous to that observed in the total population, both for women and men. In 2014, unemployment levels exhibited a gradual increase from central-west to south-east, with particularly high levels recorded in the southern regions. By 2024, the figures had largely equilibrated, with sporadic areas of elevated unemployment primarily situated along the southeastern border of the programme area. Despite the distinct similarities in trend, it is noteworthy that the rate of unemployment remains consistently higher among women than men in both years. A notable disparity in employment statistics has been observed in 2024, particularly in Northern Italy, Croatia, and Hungary, where the female unemployment rate for several regions is considerably higher.

Map B.37: Unemployment rate by gender – male – baseline



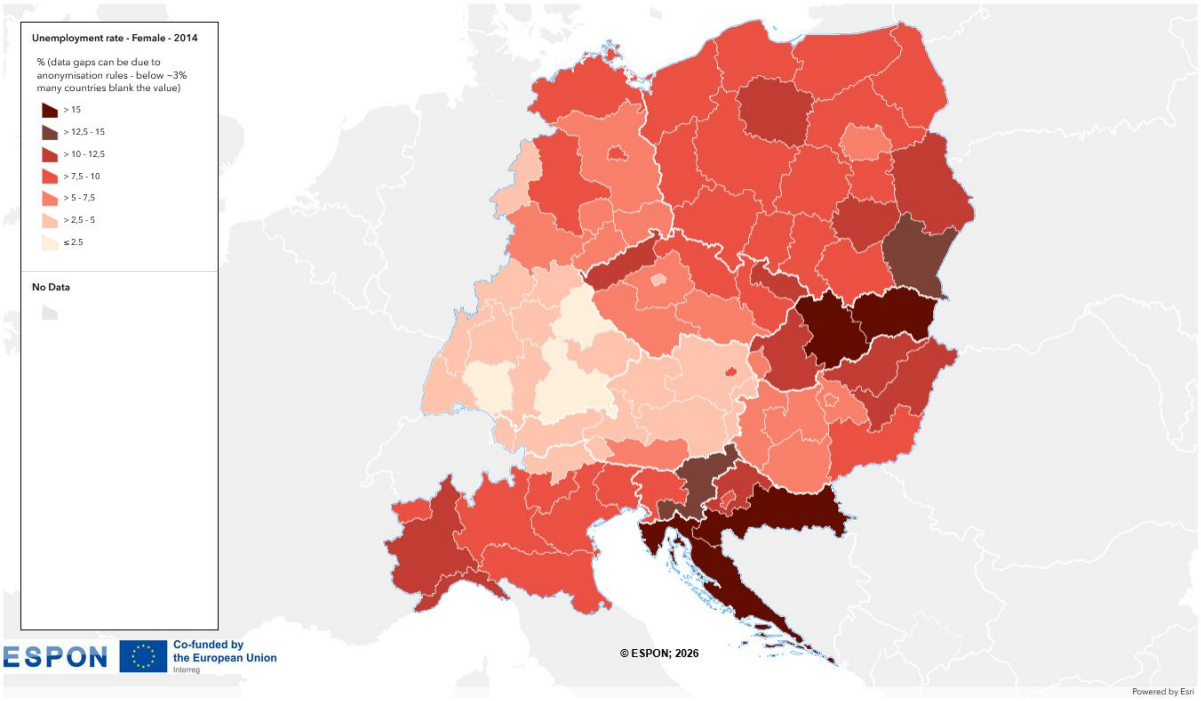
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; World Bank 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.38: Unemployment rate by gender – male – most recent year



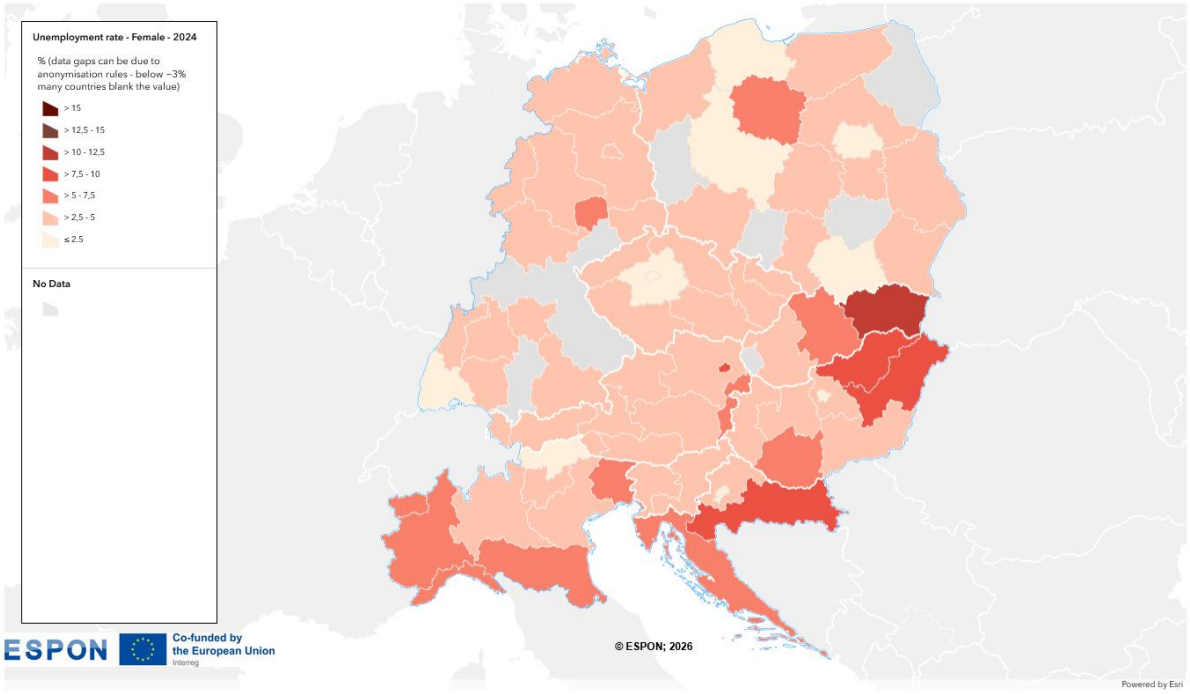
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; World Bank 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.39: Unemployment rate by gender – female – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; World Bank 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.40: Unemployment rate by gender – female – most recent year

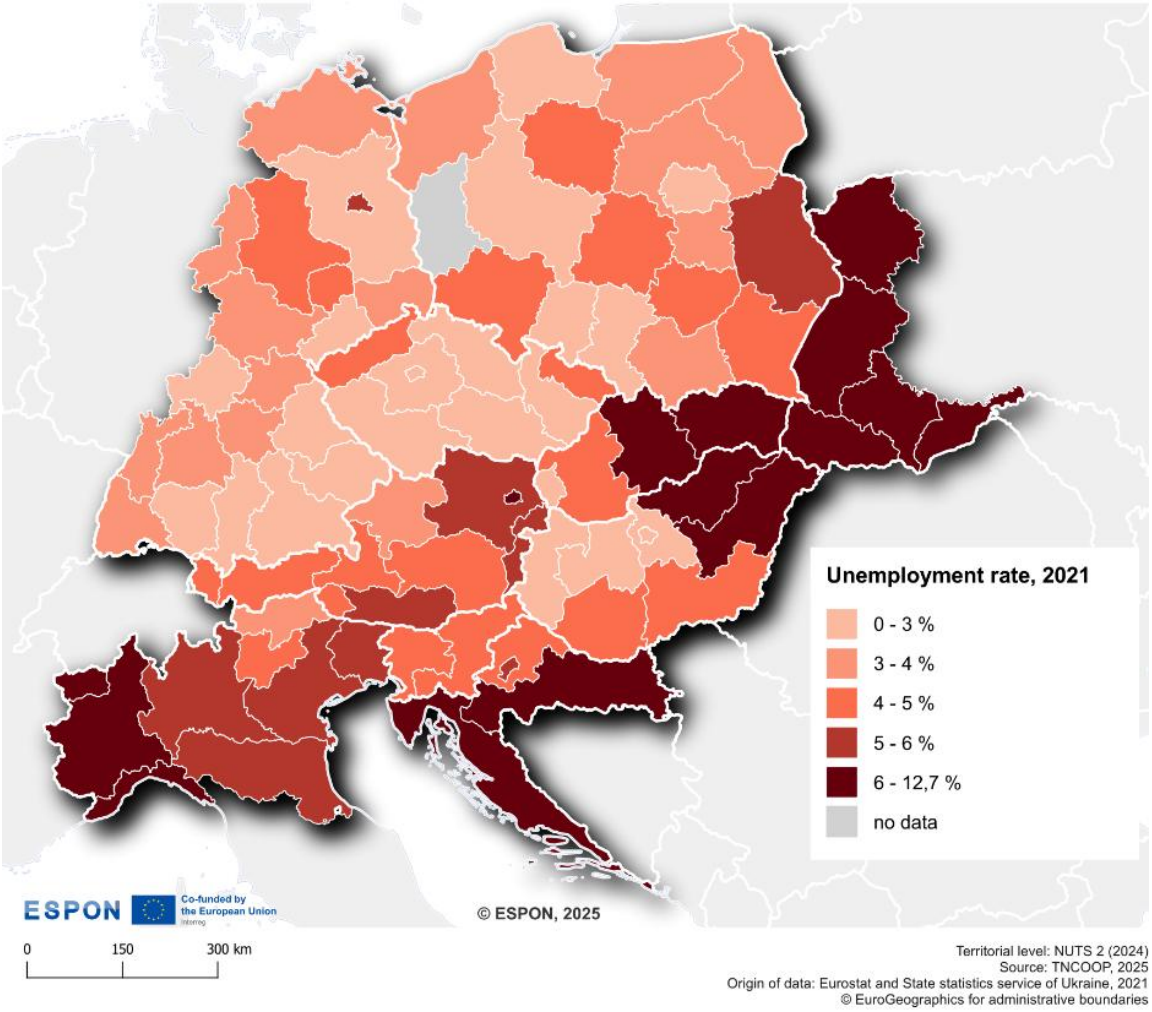


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025; World Bank 2025
Administrative boundaries: ©EuroGeographics ©ESPON

The map of unemployment rates in 2021 shows significant territorial disparities across the Central Europe programme area, with values ranging from below 3% to over 12%. The lowest unemployment levels are generally found in the western and central parts of the programme area, particularly in large areas of

Germany, Austria and the Czech Republic, where most regions fall within the 0–4% category. In contrast, higher unemployment rates are clearly clustered in the south and east of the programme area. Several regions in Croatia, southern Italy, Slovakia, western Ukraine and parts of Hungary have rates above 6%. For the Ukrainian regions considered, unemployment remained relatively stable between 2016 and 2021 (latest year available), however with considerable regional differences. Lviv consistently shows lower values around 8%, while other regions show higher values of up to 13% (Volyn). Therefore, the pattern suggests a broad west–east and north–south divide, with stronger labour market performance in the core and western parts of Central Europe, and higher unemployment concentrated in peripheral and south-eastern regions.

Map B.41: Unemployment rate 2021[41]

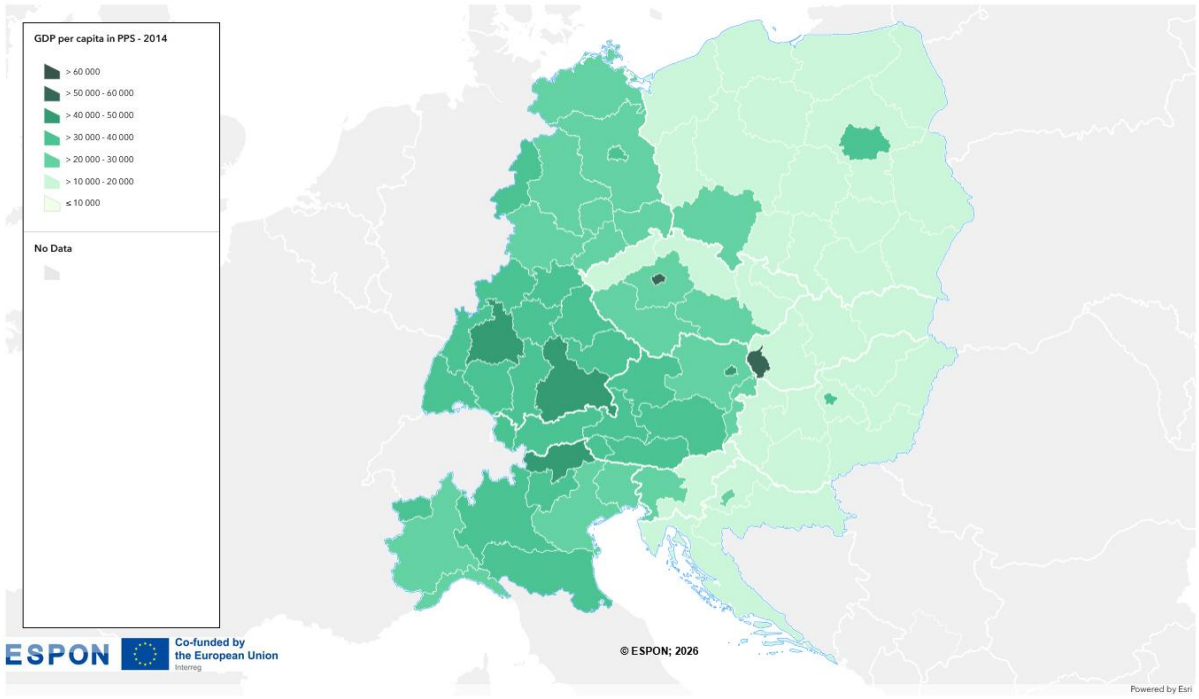


[41] This map includes five Ukrainian regions investigated for the potential expansion of the programme area

GDP per capita (in PPS)
The indicator depicts gross domestic product (GDP) in Purchasing power standard (PPS) per inhabitant. The GDP is calculated by summing the gross value added from different institutional sectors or industries, along with taxes on products and subtracting any subsidies on those products. The artificial currency unit PPS adjusts GDP data to account for price level variations across countries, enabling accurate comparisons of economic performance and living standards between the regions. For those countries for which no PPS calculations are available, an estimation based on PPP data originating from the world bank has been made based on 2024 comparisons of PPP and PPS for EU countries.
GDP per capita (in PPS) – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2010-2024 ▪ Unit: PPS
GDP per capita (in PPS) – non-European sources
▪ Sources: own calculation based on World Bank ▪ Temporal coverage: 2010-2024 ▪ Unit: PPS

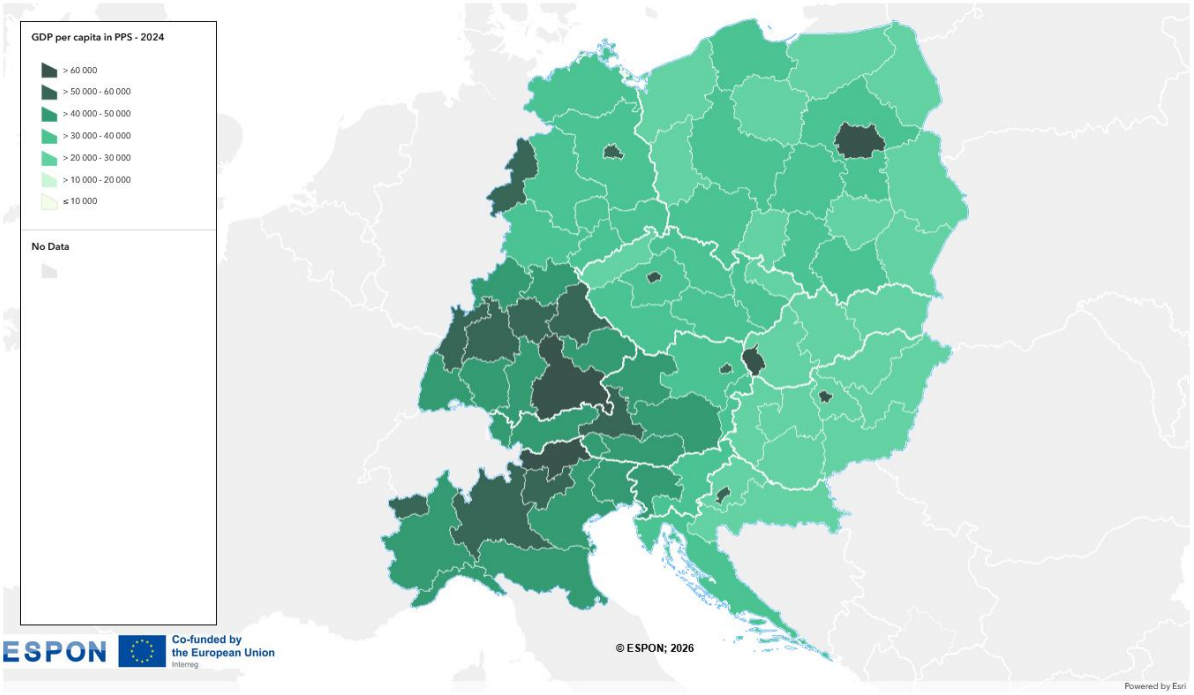
On a broad level, with regard to GDP per capita in PPS, a west-east divide is recognizable in Central Europe, which is manifest even at the national level and persists from 2014 to 2024. However, over time, there has been a general rise in GDP per capita, which also reduced the gap considerably. A comparative analysis of GDP per capita reveals that Northern Italy, Austria, and Germany exhibit higher values compared to the countries in the eastern region. Hungary and Slovakia demonstrate the lowest levels of GDP per capita among the countries under consideration. Poland has experienced the strongest growth. However, an exception to this rule can be seen in the capital cities, which consistently exhibit a higher GDP per capita compared to their surrounding regions and also is among the regions with highest GDP per capita (in PPS) in Central Europe. By 2024, all major metropolitan areas in the programme area show a minimum of EUR 50,000 per capita, with Prague and Warsaw showing the highest values across the entire area considerably exceeding Berlin, Vienna and Munich. The values for Ukraine, at national level, show a series of increases and decreases linked to the ongoing war. Based on the available data, since 2020, a downward trajectory is visible, placing Ukraine considerably below the lowest regional values within the Central Europe programme.

Map B.42: GDP per capita in PPS – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025, own calculation based on World Bank 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.43: GDP per capita in PPS – most recent year

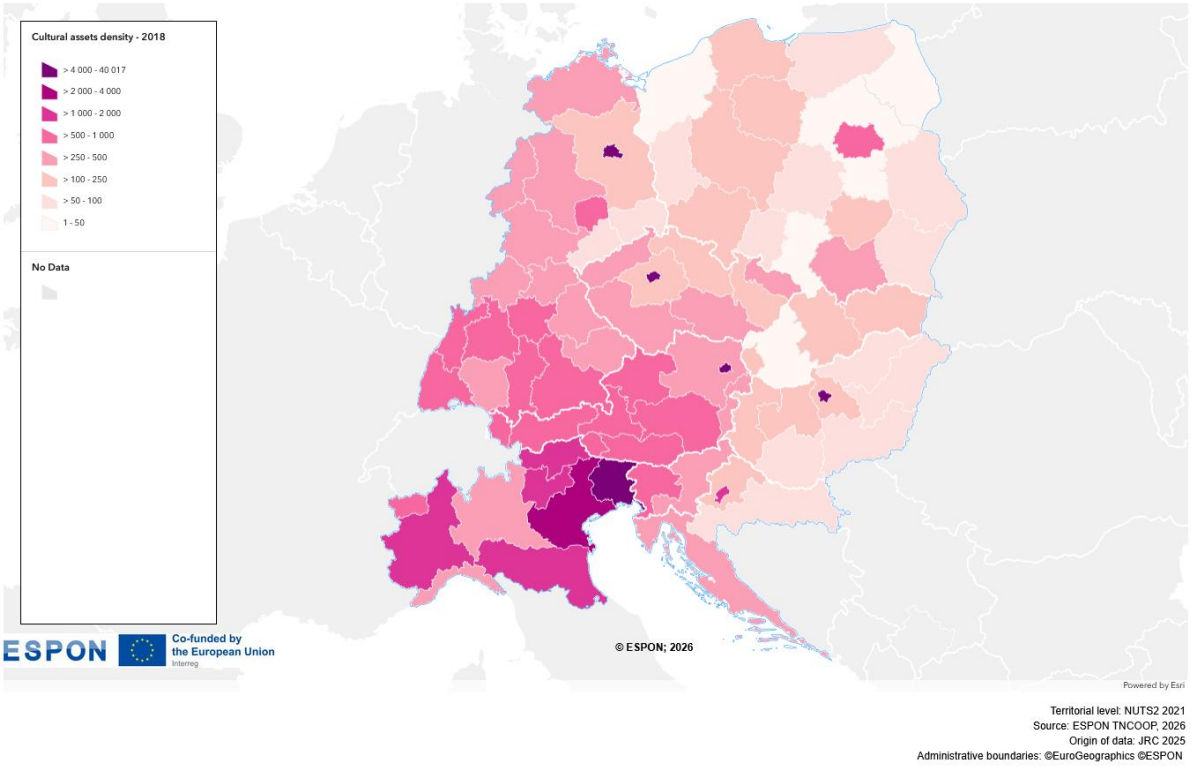


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025, own calculation based on World Bank 2025
Administrative boundaries: ©EuroGeographics ©ESPON

B.6 Cultural heritage & tourism

Cultural assets density
The Cultural Assets Density is obtained as the ratio between total cultural assets and area of a tourist destination. Using data from TripAdvisor, tourist attractions featuring descriptive keywords aligned with those defined by Cultural Gems were selected and included in the analysis (e.g. “Ancient Ruins”, “Architectural Buildings”, “Cultural Events”, “Monuments & Statues”, “Museums”, “Music Festivals”, “Religious Sites”, “Sights & Landmarks”, “Theatres”, etc). Cultural Gems, an initiative developed by the European Commission’s Joint Research Centre, aims to map cultural and creative spaces across Europe. This indicator measures the cultural richness of a given destination, with higher values reflecting a greater concentration of cultural assets per area.
Cultural assets density – European sources
▪ Source: JRC ▪ Temporal coverage: 2018 ▪ Unit: cultural assets/km²

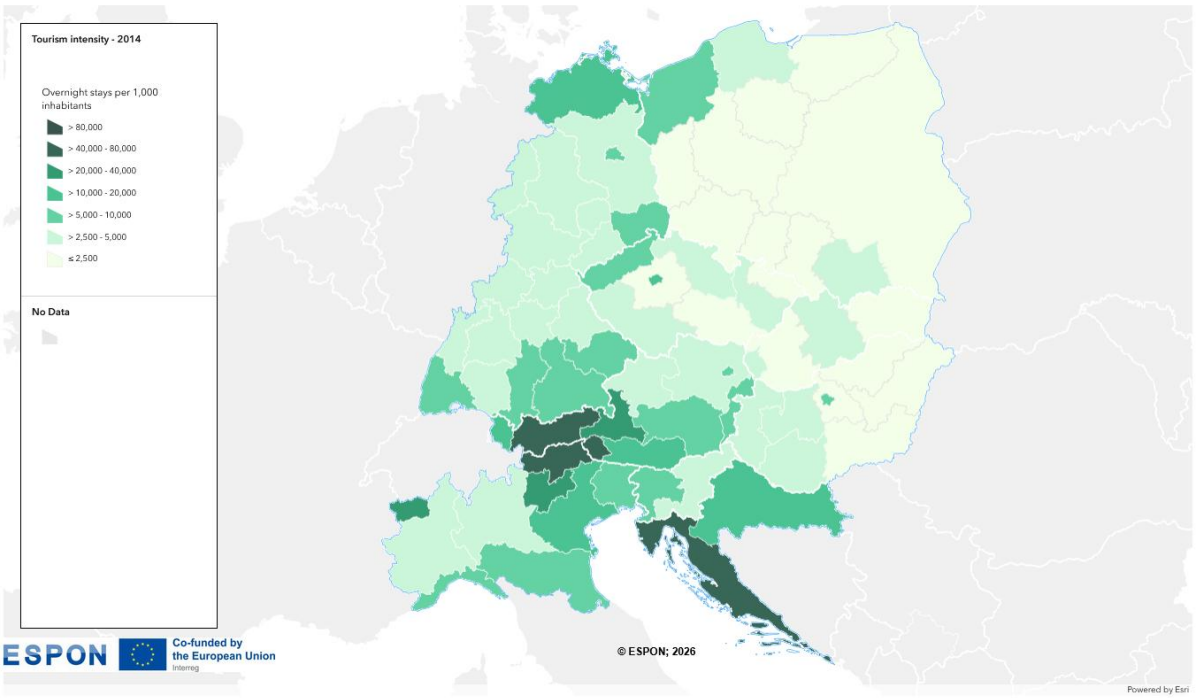
Map B.44: Cultural asset density (number of sites per 100 km²) (2018)



With regard to the density of cultural assets in Central Europe in 2018, there is a notable concentration in the western and southern parts, particularly in countries such as Italy, Germany and Austria, as opposed to those located in the eastern regions, including Poland, Hungary and Slovakia (except again for capital regions). In addition to the capital cities, which are distinguished by their high density, the north-eastern Italian regions of Friuli Venezia Giulia and Veneto are noteworthy for their considerable number of cultural heritage sites. Throughout the programme area, urban areas characteristically exhibit a higher concentration of cultural assets in comparison to rural regions.

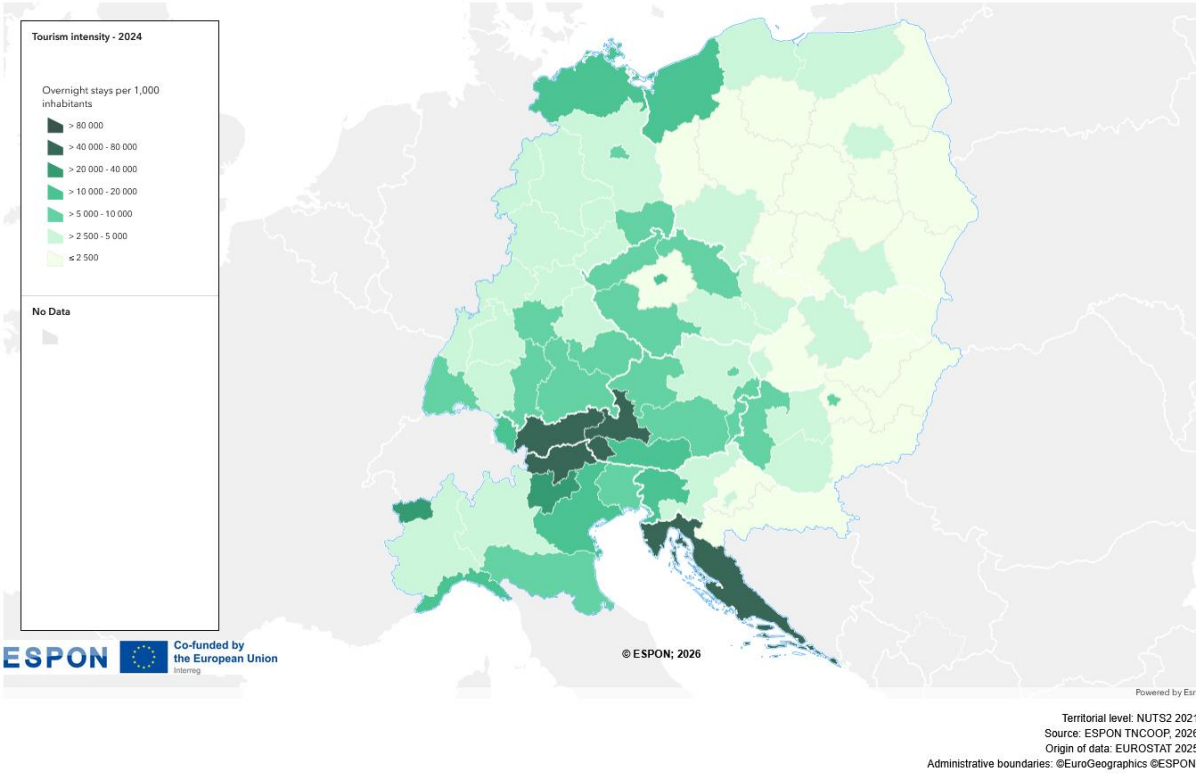
Tourism intensity
This indicator shows the total nights spent at tourist accommodation establishments per thousand inhabitants, thus the "tourism intensity". While generally this gives an indication of the relevance of tourism and also potential pressures linked to it for the local population, the indicator does not take into account seasonality. Therefore, even regions which show lower year-round tourism might face pressures during peak seasons. For non-EU countries, the total number of guests in hotels and similar establishments is provided.
Tourism intensity – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2010-2024 ▪ Unit: nights spent/1,000 inhabitants
Guest in hotels and similar establishments
▪ Source: United Nations ▪ Temporal coverage: 2010-2022 ▪ Unit: number of guests (thousands)

Map B.45: Tourism intensity – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: EUROSTAT 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.46: Tourism intensity – most recent year

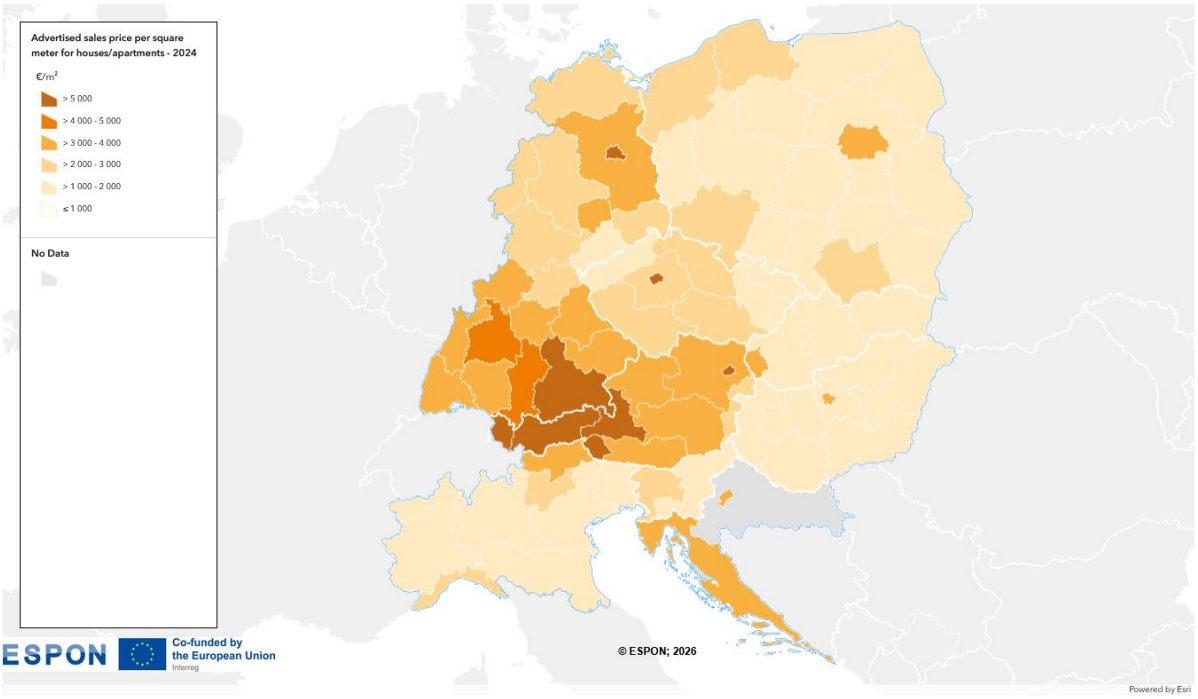


The degree of tourism intensity in Central Europe has undergone only minor fluctuations between 2014 and 2024. Besides capital regions such as Budapest, Vienna, Berlin and Vienna, there are several hotspots of tourism which also remained fairly consistent. Croatian coastline, Tyrol and Salzburg exhibit by far the highest tourism intensity in both 2014 and 2024. The further most consistently popular tourist regions remain the Austrian and Italian Alps, Slovenia, the Croatian coast, and the Baltic Sea along the German-Polish border.

B.7 Housing

Average house/apartment buying price & average renting price
The indicator depicts the prices of renting and buying houses and apartments. It is collected via sparing of online platforms and depicts advertised sales price (including taxes and fees) per square meter for houses and apartments. Values are weighted averages, whereby observations that remain online for longer than average are weighted accordingly
Average house/apartment buying price & average renting price– European sources
▪ Source: ESPON House4All ▪ Temporal coverage: 2024 ▪ Unit: EUR/m²

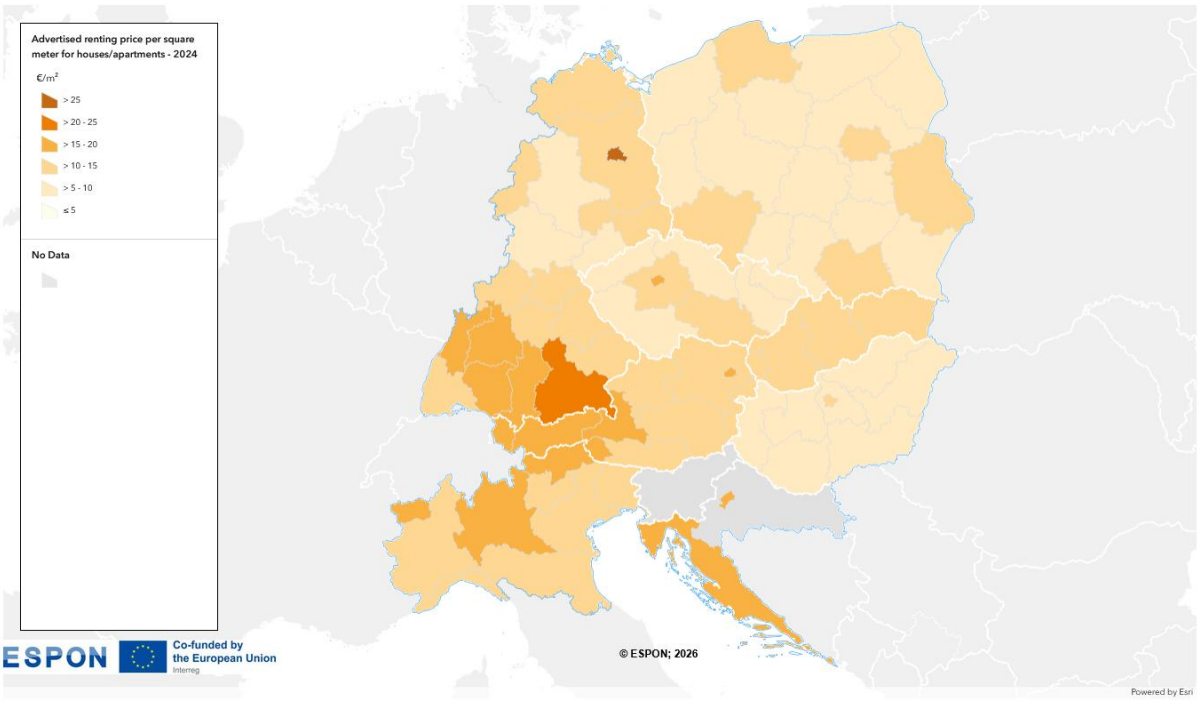
Map B.47: Average house/apartment buying price (advertised sales price, 2024)



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: ESPON 2025
Administrative boundaries: ©EuroGeographics ©ESPON

In 2024, high concentrations of average house and apartment purchase prices in Central Europe were observed primarily in the Alpine region, as well as in southern Germany and the surrounding areas of Austria. Prices are elevated in northern Brandenburg and along the Croatian coast. Northern Italy, in addition to the countries east of Austria – namely Hungary, Poland, Slovakia, and the Czech Republic – exhibit markedly lower purchase prices. Exceptions to this rule are observed in the metropolitan areas, where the cost of housing is considerably higher than in the surrounding regions.

Map B.48: Average house/apartment renting price (advertised sales price, 2024)

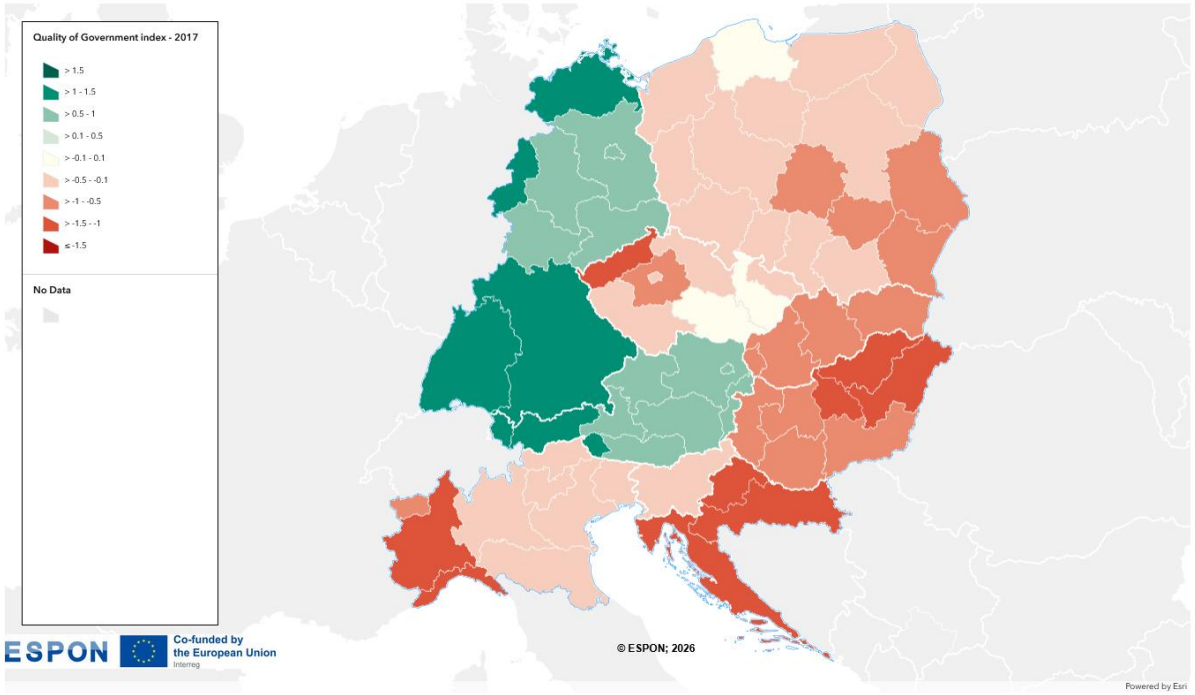


In 2024, the highest average rental prices for houses and apartments in Central Europe are observed in the Alpine region, southern Germany, northern Italy, and along the Croatian coast. However, the highest overall rental prices are observed in Berlin. The lowest prices are observed in Hungary, the Czech Republic, Poland, and central Germany. The map also reveals a clear trend: rental prices tend to be higher in urban areas than in rural regions, except for regions with higher tourism intensity.

B.8 People to people action and engagement

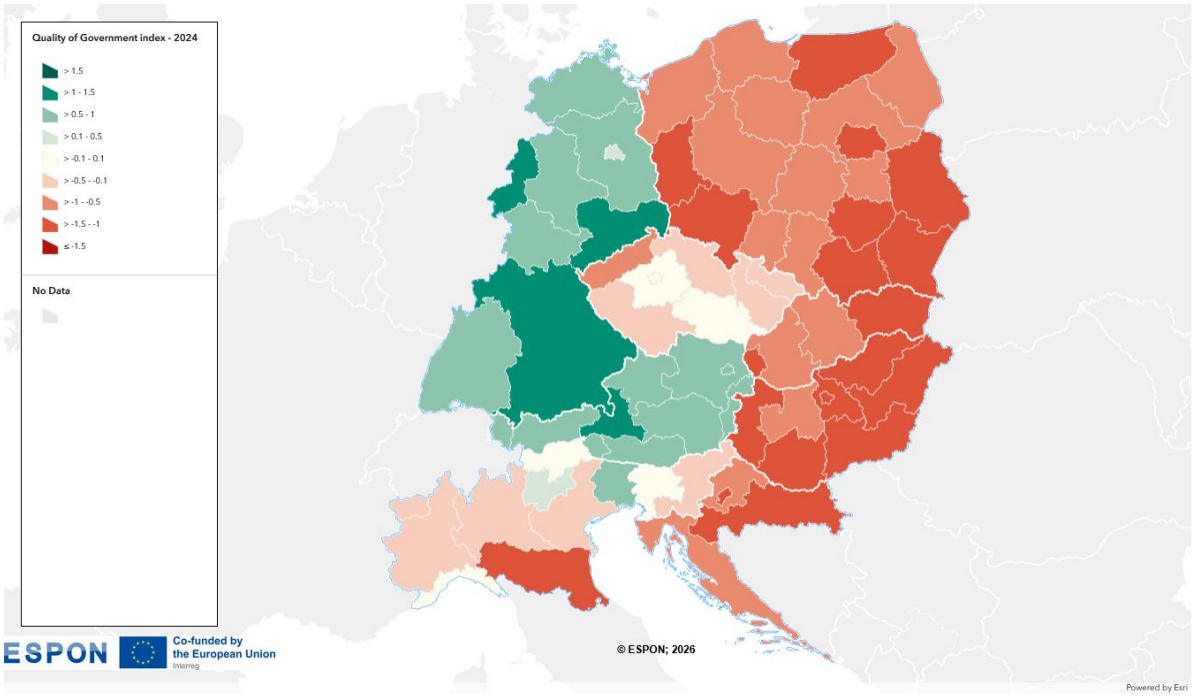
Quality of government
This index focuses on both perceptions and experiences with public sector corruption, along with the extent to which citizens believe various public sector services are impartially allocated and of good quality in the EU. It is survey based and covers the quality, impartiality and corruption perception. Similar indices are collected for other parts of the world, but cover different and not necessarily comparable aspects.
Quality of government – European sources
▪ Source: Charron, Nicholas, Victor Lapuente & Paola Annoni, Monika Bauhr ▪ Temporal coverage: 2017, 2024 ▪ Unit: Index (dimensionless)

Map B.49: Quality of government – baseline



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: Nicholas Charron, Victor Lapuente and Monika Bauhr (2024)
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.50: Quality of government – most recent year



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: Charron, Nicholas, Victor Lapuente & Paola Annoni (2019)
Administrative boundaries: ©EuroGeographics ©ESPON

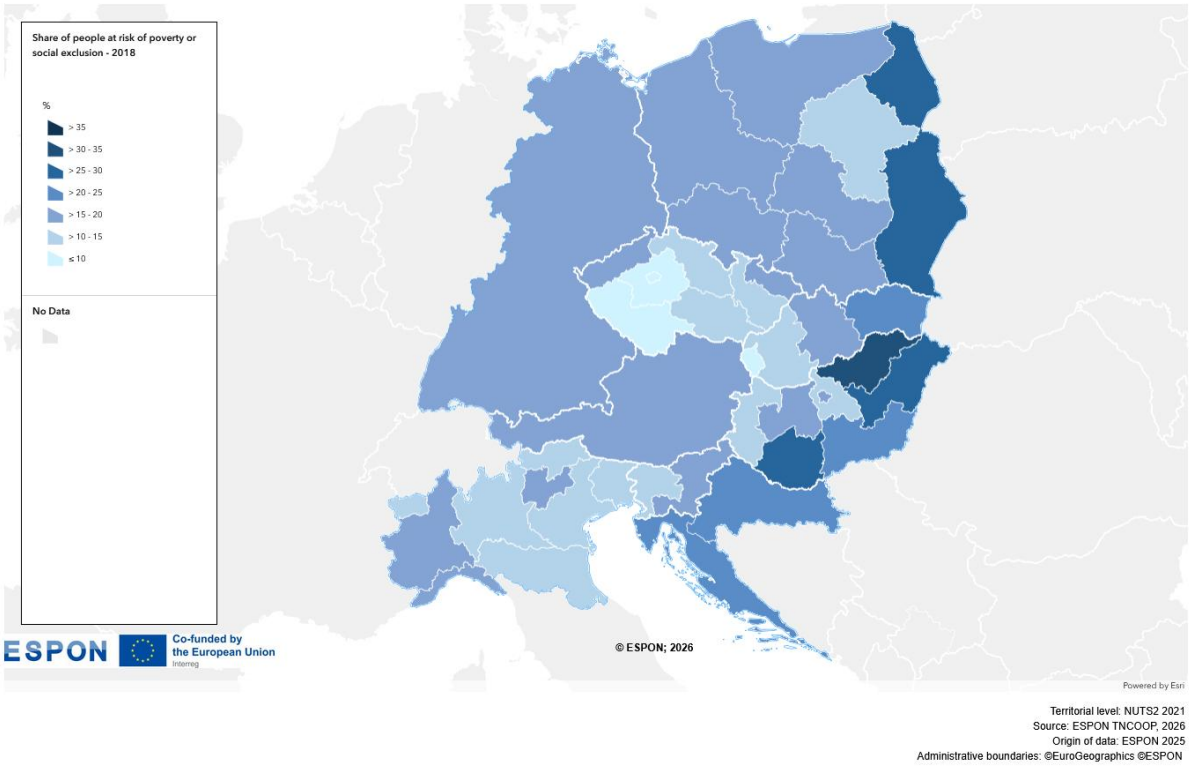
The quality of government in Central Europe as per the indicator assessed underwent a decline between 2017 and 2024, a trend that was particularly recognizable in the eastern part of the programme area, encompassing countries such as Poland, Hungary, and Croatia. While quality has remained fairly stable

in Austria over the same period, Germany also shows several regions declining. Czechia and parts of Italy and Croatia on the other hand could improve in the observed time period. The regions with the highest recorded values are the German federal states of Bavaria and Saxony, as well as Salzburg in Austria.

Share of people at risk of poverty or social exclusion
This indicator depicts the share of the total population which is at risk of poverty or social exclusion. It refers to the total number of individuals who are either at risk of poverty, experiencing severe material and social deprivation, or residing in a household with very low work intensity.
Share of people at risk of poverty or social exclusion – European sources
▪ Source: Eurostat ▪ Temporal coverage: 2015-2024 ▪ Unit: % of total population
Poverty rate – non-European sources
▪ Sources: World population review ▪ Temporal coverage: various years ▪ Unit: % of total population

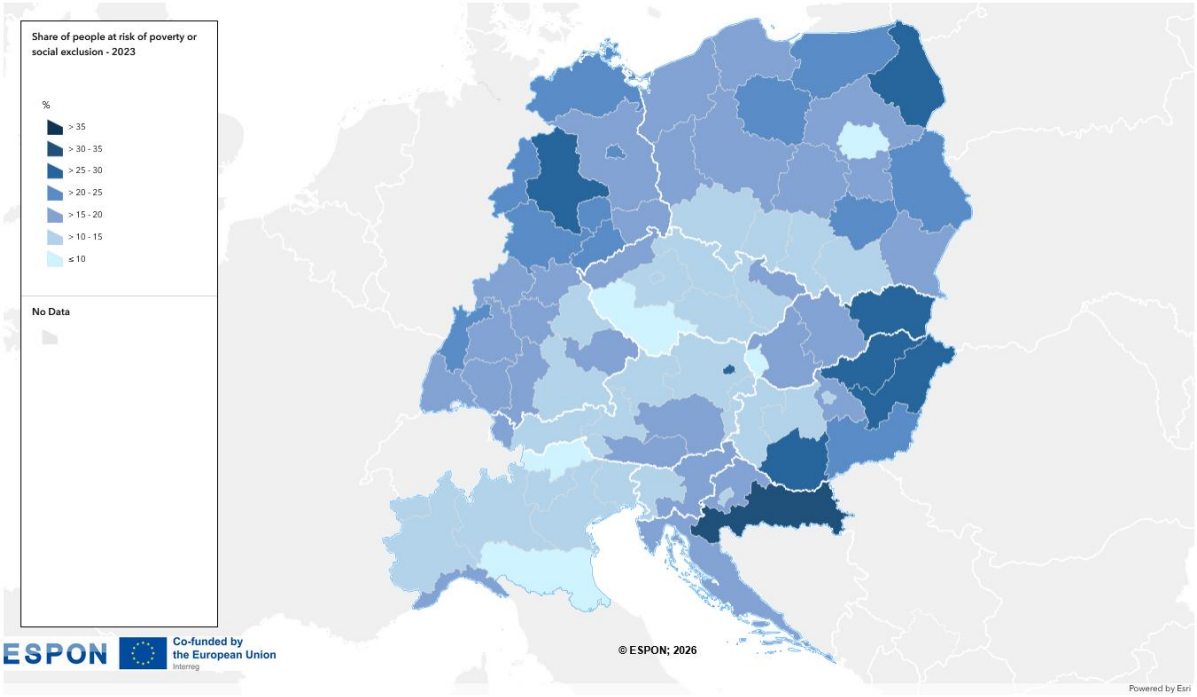
In 2023, the proportion of individuals at risk of poverty or social exclusion in Central Europe is observed to be lowest in the central parts of the region, namely in the Czech Republic, northern Austria, south-eastern Germany, and western Hungary. The share is also low in Italy, and in Warsaw. In the northern and southern regions of Central Europe, the shares demonstrate a medium level and are actually slightly increasing. The highest proportions of potentially affected individuals are observed in the inland regions of eastern Croatia and in northeastern Hungary. In addition to Vienna, Berlin also exhibits elevated levels of individuals at risk of poverty or social exclusion. The sole metropolitan region exhibiting a contrasting pattern is Warsaw, where the share is comparatively low.

Map B.51: AROPE – Share of people at risk of poverty or social exclusion (in %) (2023)



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: ESPON 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.52: AROPE – Share of people at risk of poverty or social exclusion (in %) (2023)

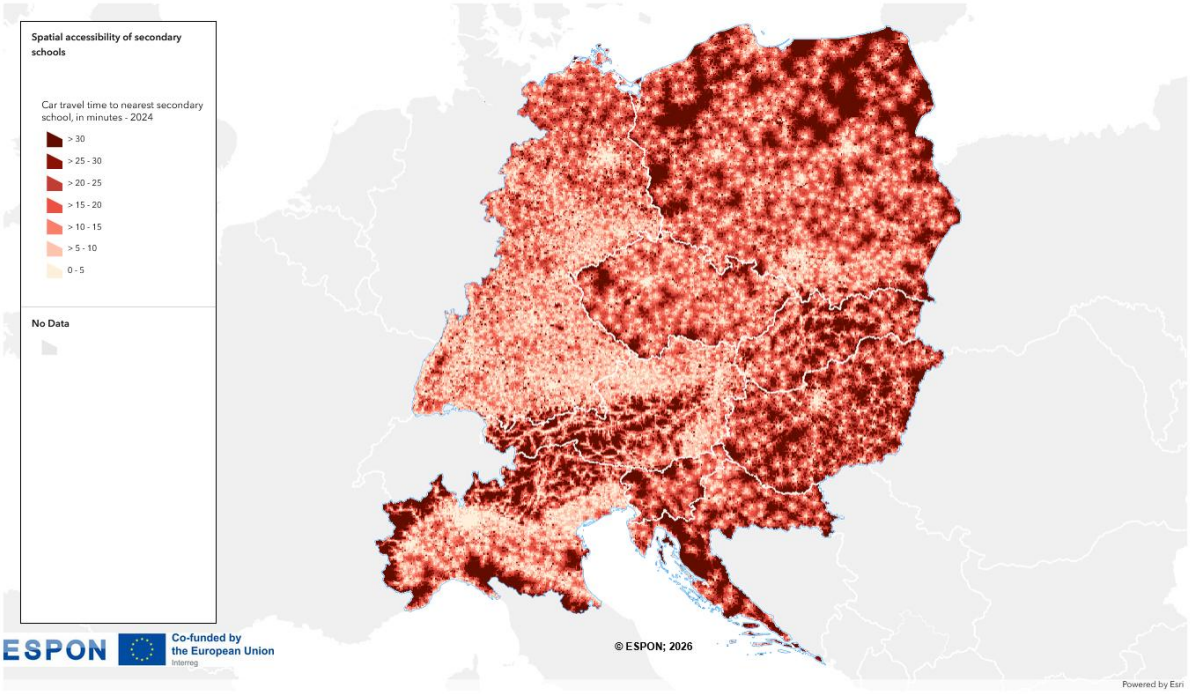


Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: ESPON 2025; World Population Review 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Spatial accessibility – social infrastructure
This indicator depicts the spatial accessibility to a range of social infrastructure, including education, health, public transport, retail and social care. The accessibility is calculated in travel time (by car) to the nearest relevant service (by types).
Spatial accessibility – social infrastructure – European sources
▪ Source: ESPON DESIRE ▪ Temporal coverage: 2024 ▪ Unit: average travel time in minutes

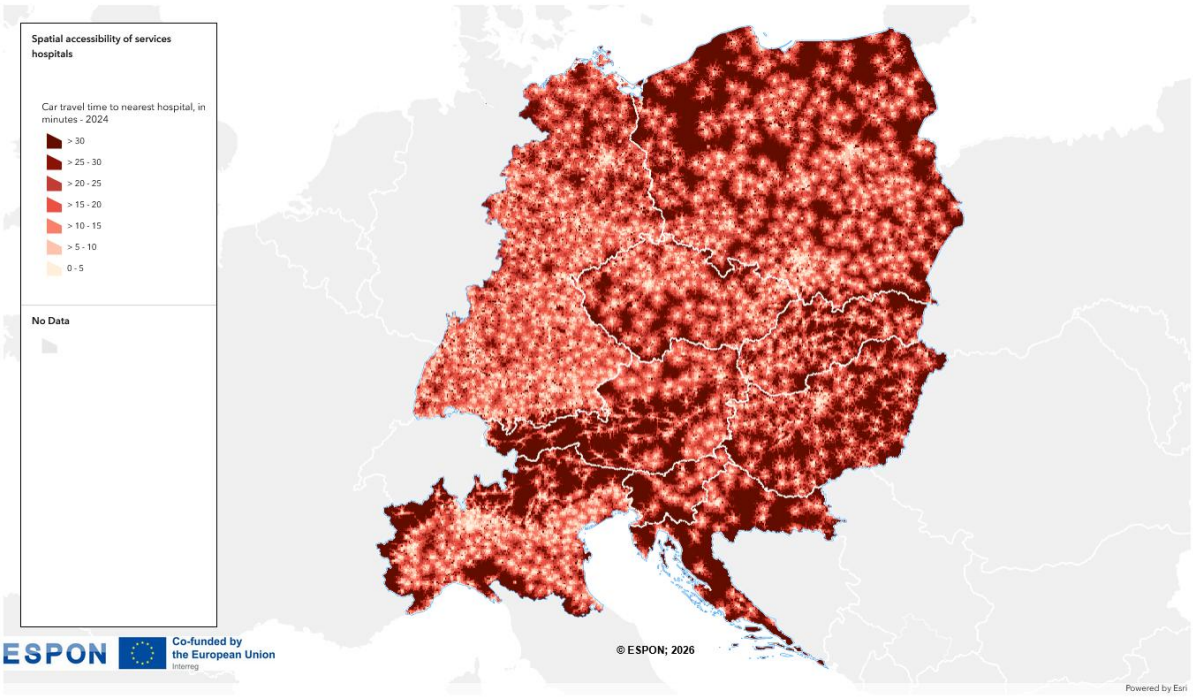
In 2014, the shortest travel times for car journeys to the nearest secondary schools in Central Europe were recorded in Germany (with the exception of the north), parts of Italy and northeastern Austria. In contrast, the Alpine region, the border regions of northern Italy, and the Croatian coast demonstrate a comparatively lower level of connectivity. Furthermore, increased travel times within Hungary and Slovakia as well as the northern regions of Poland experience considerably longer travel times than those in the south. Exceptions to this pattern are shown in the capital cities, which, as metropolitan areas, generally offer at least locally adequate access to secondary schools.

Map B.52: Car travel time to nearest secondary school (in minutes, 2024)



Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: ESPON 2025
Administrative boundaries: ©EuroGeographics ©ESPON

Map B.53: Spatial accessibility: car travel time to nearest hospital (in minutes 2024)



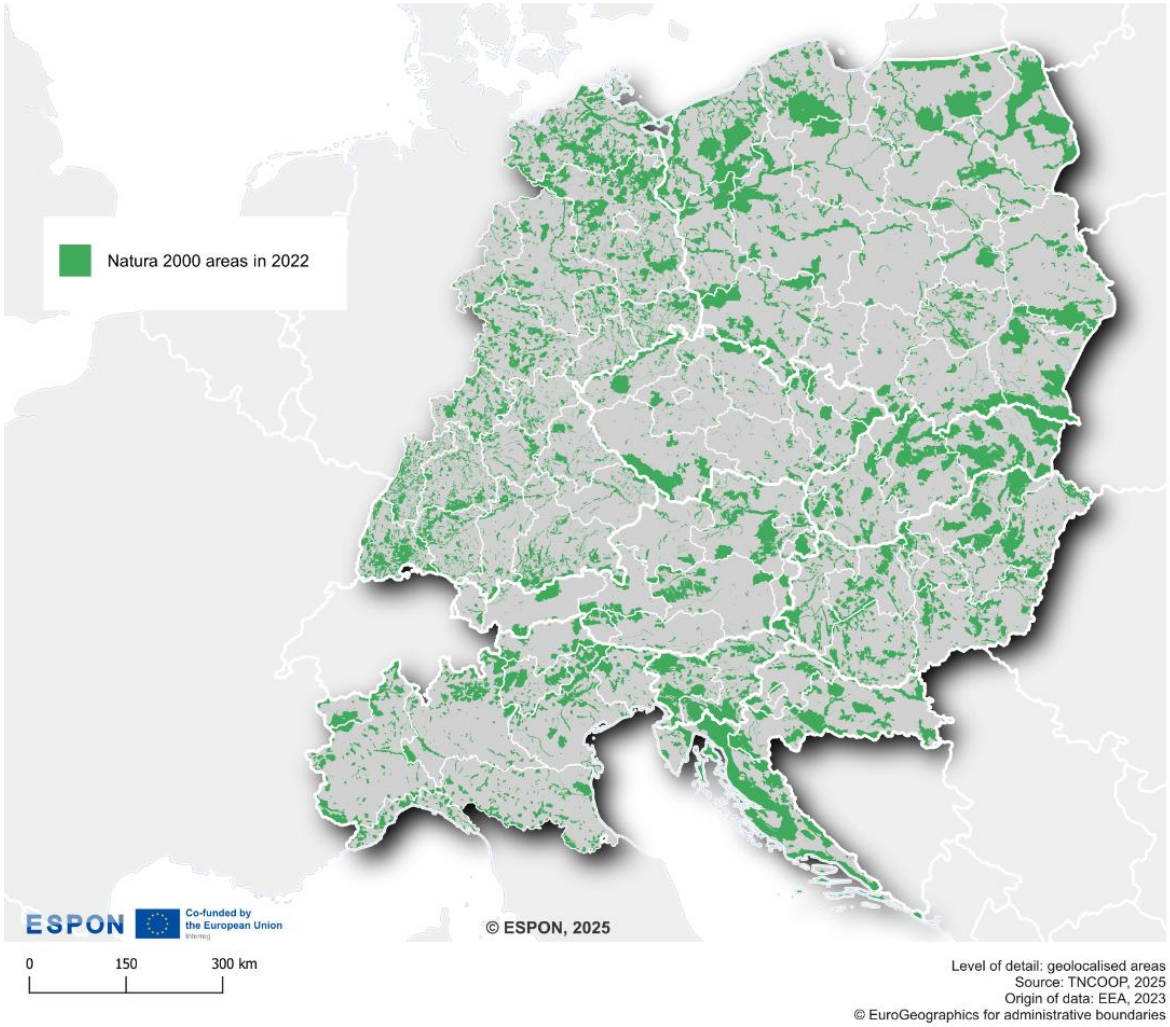
Territorial level: NUTS2 2021
Source: ESPON TNCOOP, 2026
Origin of data: ESPON 2025
Administrative boundaries: ©EuroGeographics ©ESPON

In 2024, the spatial accessibility of hospital services in Central Europe exhibited a comparable trend to that observed in the accessibility of secondary schools. It is shown that the southern and central regions of Germany, in conjunction with the central districts of North Italy, show generally high infrastructural connectivity when compared with other areas within the designated study zone. It is recognizable that

travel times tend to increase considerably (in comparison to secondary school accessibility) in the alpine regions and in northern Poland. Overall, regions exhibiting lower accessibility include northern Poland, Croatia, the Alpine region, and the border areas of northern Italy.

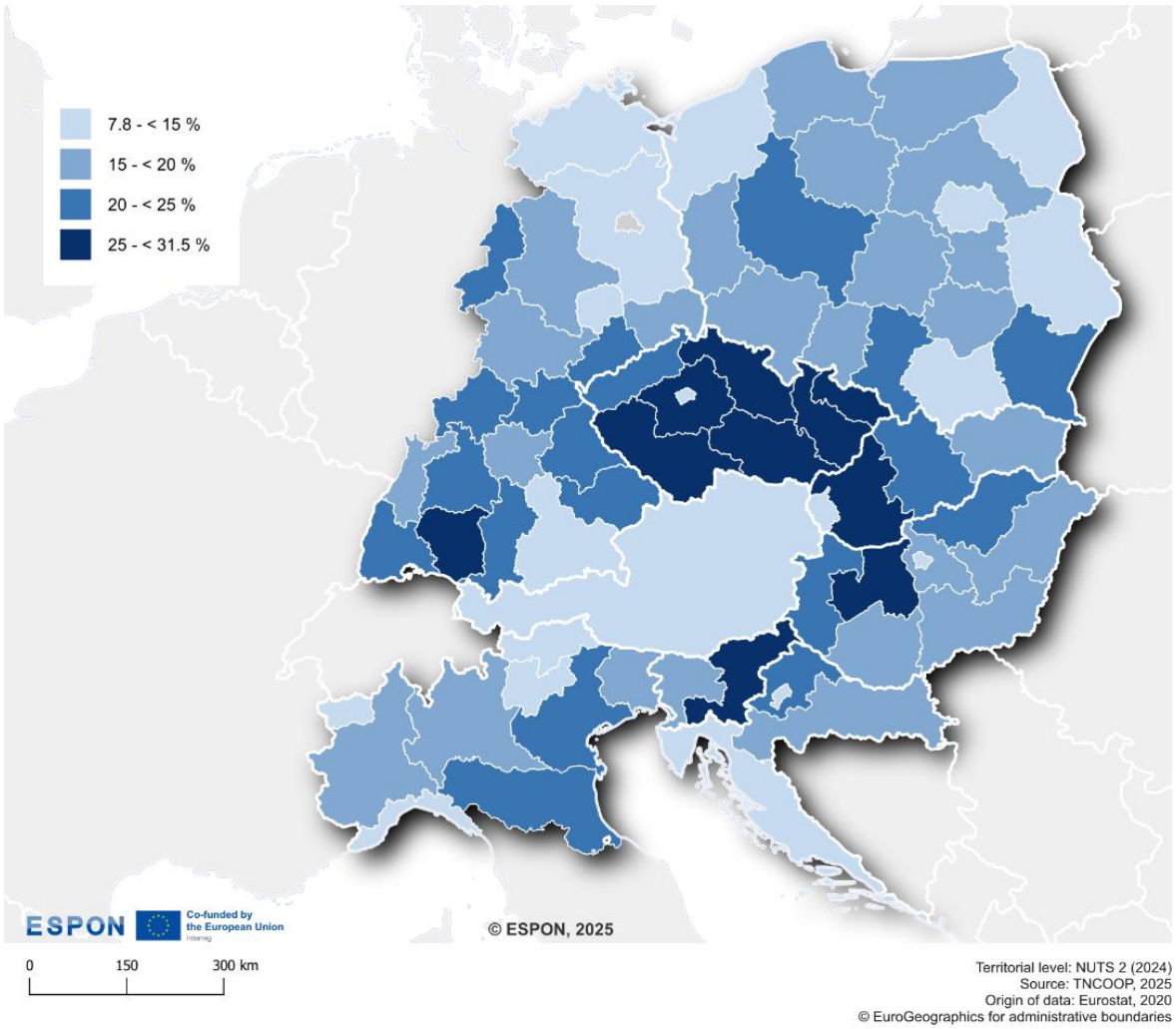
B.9 Programme specific characteristics

Map B.54: Natura 2000 areas (2022)



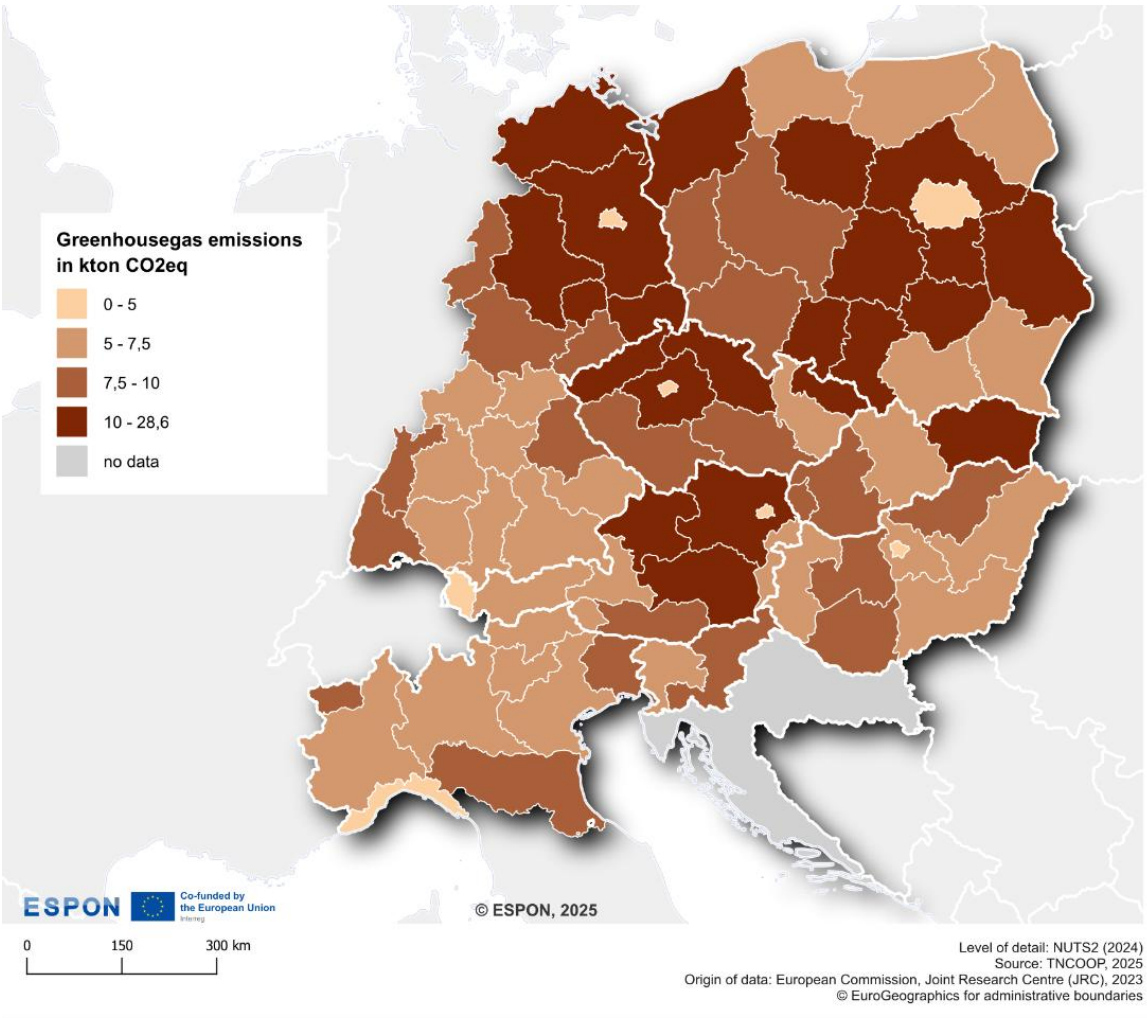
In 2022 Protected areas under the Natura 2000 network are distributed across the entire Central European cooperation area. Particularly dense concentrations can be found along the Alpine arc, the Carpathian foothills, and along river corridors such as the Danube, the Drava, and the Sava. There are also substantial clusters of inland areas in northern Poland, eastern Hungary and along the coastline of Croatia. Mountainous protected areas form an almost continuous ecological belt stretching from the Alps through Slovenia and Croatia towards Hungary and Slovakia, supporting cross-border habitat connectivity. Even though many protected areas actually do end at national borders, a larger perspective reveals coherent protection patterns. However, large lowland areas in central Poland and the Czech Republic have fewer Natura 2000 designations.

Map B.55: Share of employment in the manufacturing sector



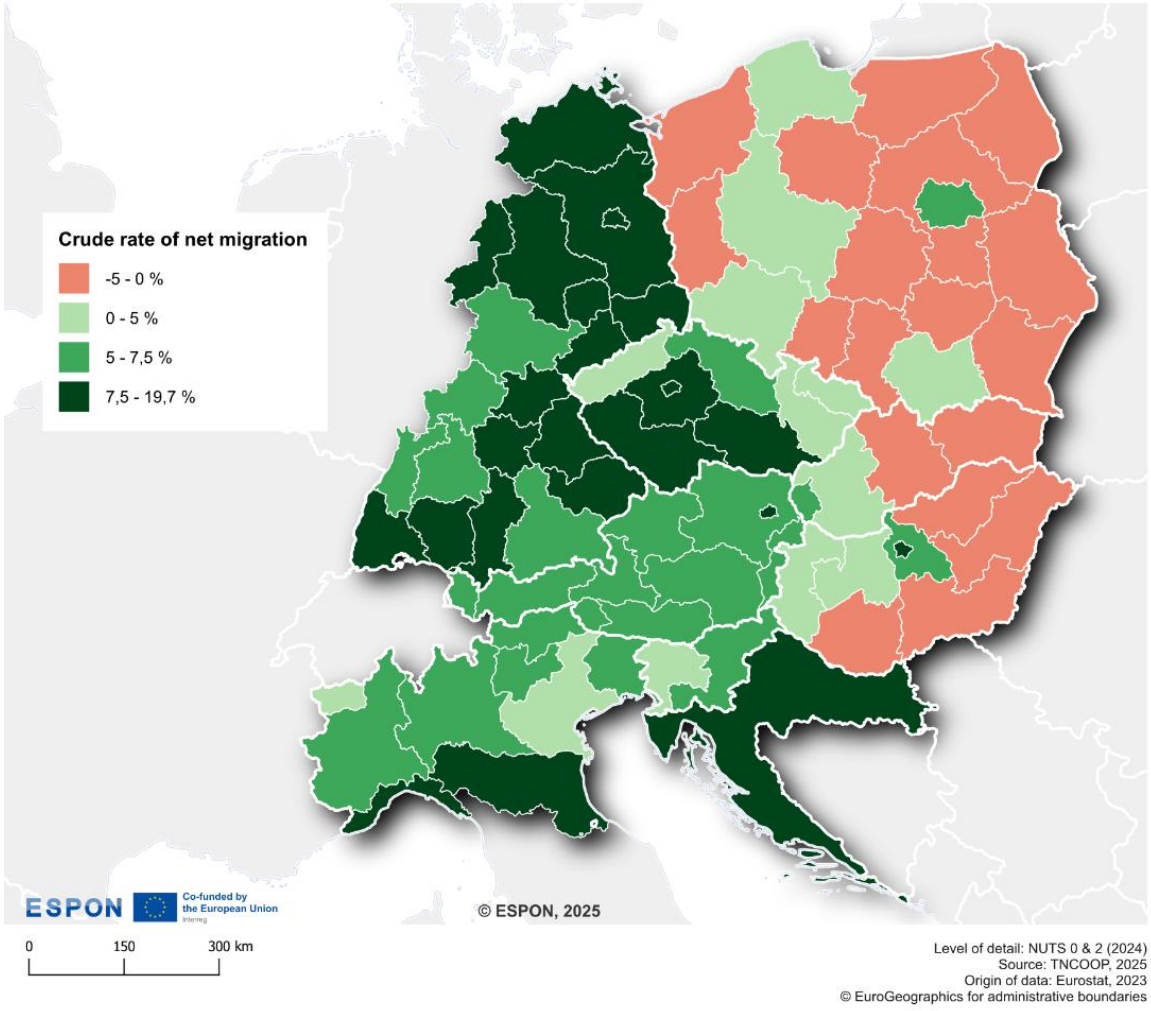
Employment in the manufacturing sector across central Europe shows significant variance across regions. Highest shares by far with over 25% of total employment are recorded in most of Czechia as well as individual regions in southern Germany, Slovenia, Hungary and Slovakia. Naturally, many tourism regions in Croatia, Italy and Austria show a rather low share of employment in manufacturing sector, in line with regional economic priorities. Interestingly, several polish and northern Italian regions show high shares in the secondary sector, but low shares in manufacturing by comparison.

Map B.56: Greenhouse gas emissions 2023



GHG (Greenhouse gas) emissions are unevenly distributed across the CE Programme Area. There are concentrated patterns of high GHG emission rates in eastern Germany, northern Czechia, central Poland and western Austria. These are connected to heavy industry, such as coal extraction in Silesia (Poland), which has been prevalent in the past and still is today. The same is true for the north of Czech Republic and eastern Germany. Lower values are depicted in capital city regions such as Warsaw, Budapest, Vienna, Prague and Berlin, due carbon intensive industries outside the City area, and southern Germany, such as Bavaria, western Austria (Vorarlberg, Tyrol), and northern Italy (South Tyrol). This is mostly due to the physical conditions, such as the Alps. Overall, these regions show a very high level of CO_2 equivalent emissions and play an important role in decarbonisation and the energy transition strategies.

Map B.57: Crude rate of net migration 2023

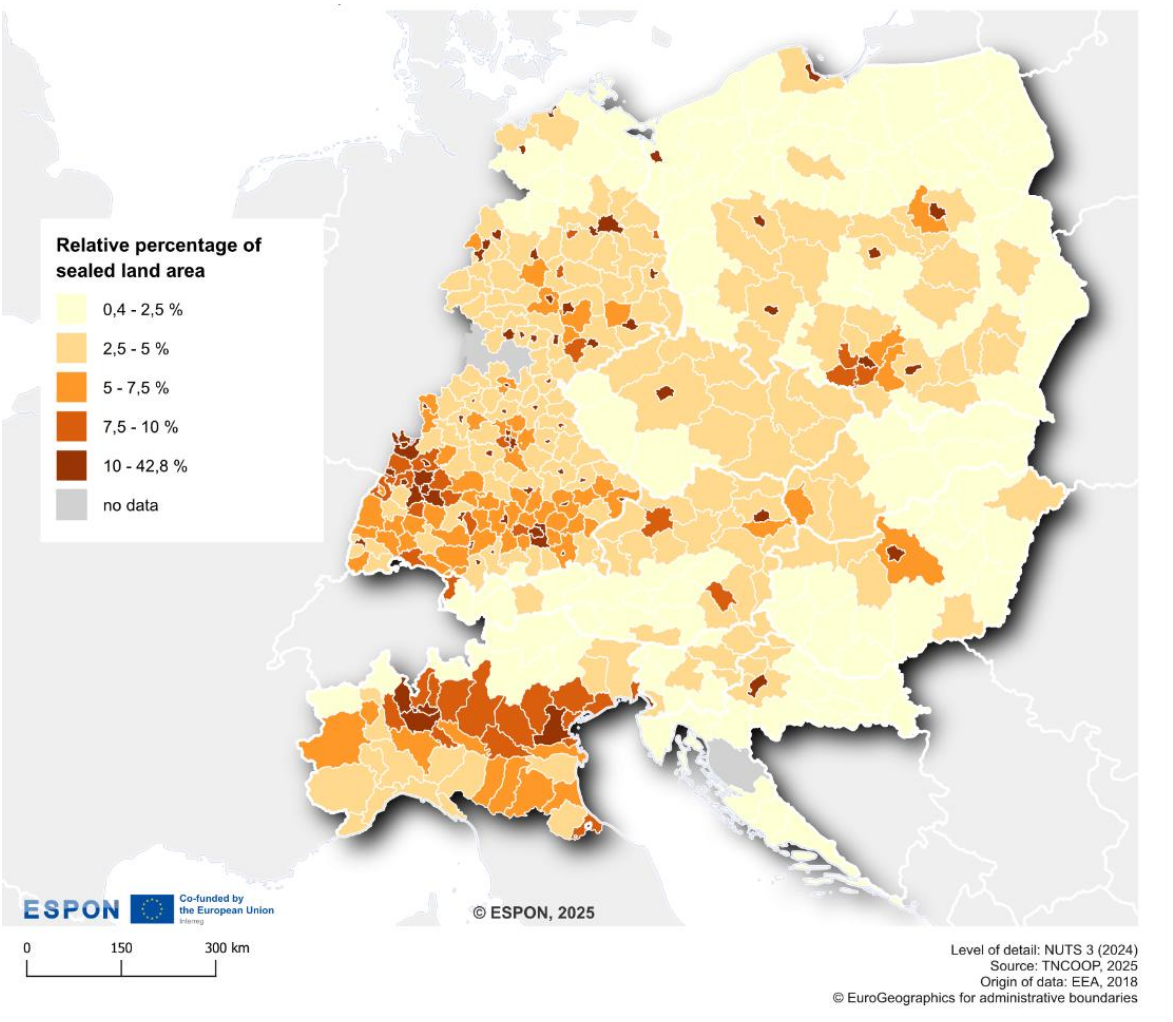


The map shows a west–east divide in net migration patterns across the programme area. Regions in Germany, Austria, Switzerland and parts of northern Italy predominantly experience strong positive net migration, often falling within the highest categories. These regions continue to act as magnets for migrants, reflecting favourable labour market conditions, higher income levels, strong urban networks and an overall high level of attractiveness for both internal and international migrants.

In contrast, large parts of eastern Poland, Slovakia, Hungary and Croatia display negative or only marginally positive net migration. These regions are characterised by ongoing population loss, primarily driven by outward migration, particularly among younger and working-age cohorts. This pattern is particularly evident in eastern and peripheral border regions, highlighting persistent demographic pressures and weaker pull factors.

Several intermediate and capital-region effects are visible. Capital regions and major metropolitan areas in Central and Eastern Europe (e.g. Prague, Bratislava and Budapest) tend to perform better than their surrounding regions, indicating internal polarisation within countries. This suggests that migration is becoming more selective and concentrated, thereby reinforcing core–periphery dynamics rather than leading to balanced territorial development.

Map B.58: Share of sealed areas 2018



The map clearly shows a core–periphery pattern of land sealing across the programme area. High levels of land sealing are concentrated in economically dense and urbanised regions, particularly in southern Germany, northeastern Austria and northern Italy, as well as around major metropolitan areas and transport corridors. These regions are long-established growth and infrastructure hubs.

In contrast, eastern and north-eastern regions (eastern Poland, Slovakia, Hungary and Croatia) exhibit low levels of land sealing, reflecting lower levels of urbanisation and infrastructure density. Capital regions emerge as isolated hotspots within otherwise less sealed territories, indicating strong internal polarisation. Overall, this pattern reflects long-term development trajectories and highlights the challenge of balancing economic growth with sustainable land use.

C Social network analysis

Reading note – Social network analysis

To improve the understanding of cooperation patterns in the programme, a social network analysis of project partners (beneficiaries) has been conducted. The analysis is based on the beneficiary data from the keep.eu database for the 2021-2027 period, with a cut-off date in August 2025. In practical terms, the network analysis shows who (which beneficiary) cooperates with whom (which other beneficiaries), how often and in which broad "theme". Ultimately, this helps identifying:

- The main (most connected) beneficiaries in the programme
- Their cooperation links and relation with other beneficiaries
- Potential multipliers as well as potential gaps in the network

The analysis is undertaken for the programme as a whole as well as per theme (economy, environment, society and governance). These four broad themes are derived from the project themes provided in keep.eu database. Of note, those broad themes do not correspond to the PO or SO a project is assigned to in the programme, but rather to the actual topic of the project stated in keep.eu. The themes provided by keep.eu have been grouped by the project team as follows:

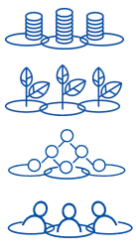
- Under "economy": projects included stated themes such as SME and entrepreneurship, infrastructure, ICT, logistics and transport, labour market and employment, technology transfer etc.
- Under "environment": projects included stated themes such as climate change, biodiversity, waste and pollution, natural risk management, renewable energy, coastal and water management
- Under "society": projects included stated themes such as education, health and social services, social inclusion and equal opportunities, cultural heritage and arts
- Under "governance": projects included stated themes such as partnerships and cooperation, regional planning, cooperation networks

In the visualisations, each "bubble" represents one single project partners of the programme. The colours of the bubble represent the country that the project partner originates from, based on the legend to the side of the network visualisation. The lines connecting the bubbles indicate that the project partners have cooperated in one or more projects. The size of the bubbles represents how many cooperation links the partner has, thus larger bubbles represent partners with more collaboration. Finally, the clustering of the bubbles illustrates the structure of collaboration between partners, i.e. "groups" of bubbles close together usually indicate one common project.

When interpreting the following visuals, a few caveats have to be considered:

- due to the data availability in keep.eu, the analysis is made on programme level. Connections between beneficiaries through other regional networks or even other programmes cannot be taken into account
- the analysis is made with a cut-off date in August 2025. At this stage, depending on the programme, only a limited budget (through the selected projects) is considered, and further developments are to be expected. In addition, depending on the focus of the included calls, the analysis can be skewed towards specific themes which were (potentially) more relevant for early calls in the period
- for some themes and programmes, too few projects have been selected to derive a meaningful network analysis from it. Those figures have been mostly excluded from the analysis.

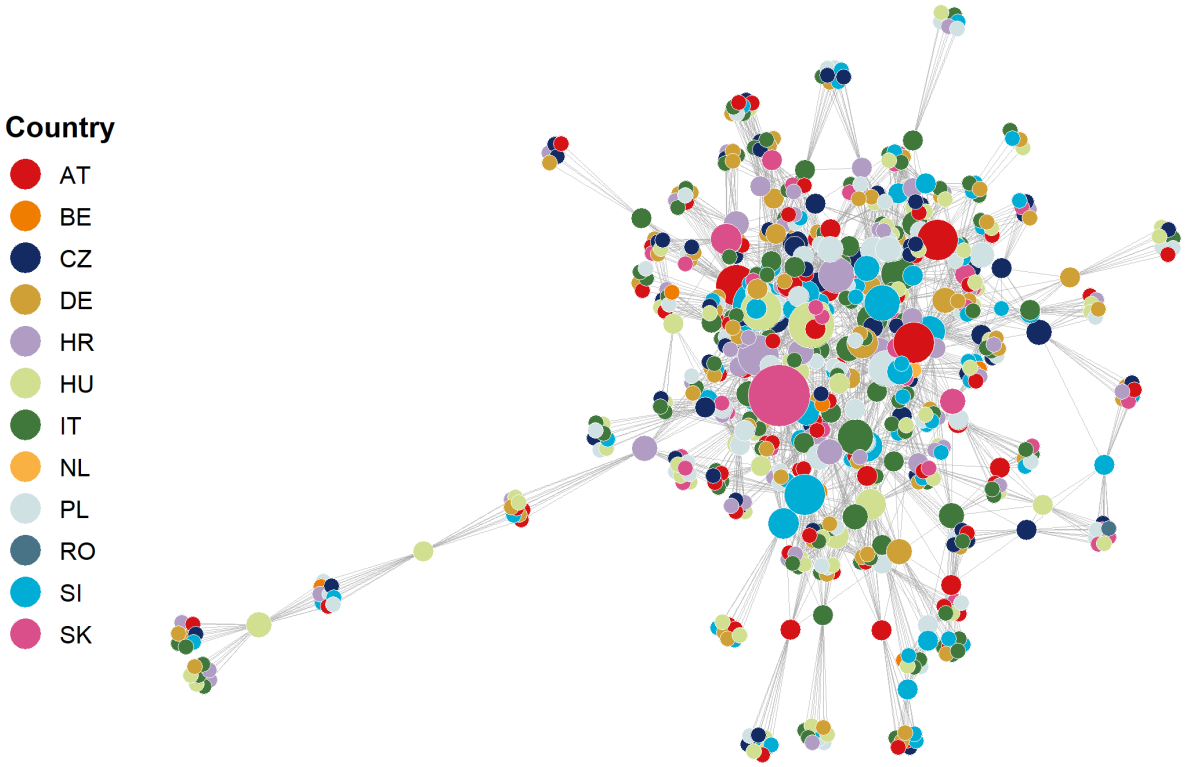
The analysis includes the first two calls of the programme, as the results of the third call were only available after the cutoff data of the analysis. A total of 100 projects with over 1000 partners are thus included in the analysis.



The network visualisation of project partners within the Central Europe programme **across all investigated themes** reveals a largely coherent and clustered network of cooperation between different project partners from all countries involved in the programme.

The central cluster is very densely interconnected and forms a coherent cooperation framework, in which more than 20% of all partners participate in 2 or more projects. Strikingly, all projects are connected through at least one partner to the overall network.

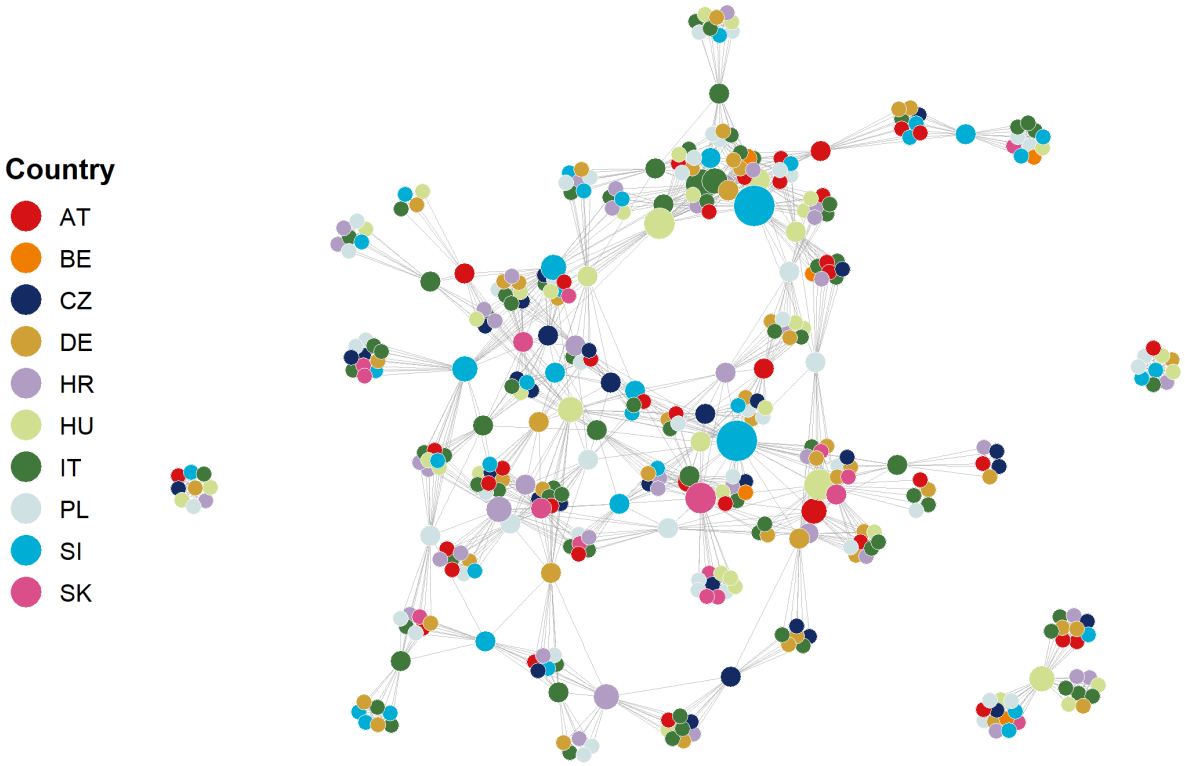
Figure C.1: Network analysis. Theme: all



Source: Project team calculation based on keep.eu

In total 14 strong multipliers (participating in 5 or more projects) are present, 6 of which are universities (Vienna, Kosice, Maribor, Bologna and Ljubljana) while the rest include regional agencies (business, energy, transport) and the Slovene chamber of commerce. The most integrated partners are thus present in Slovakia, Slovenia, Austria, Hungary and Croatia. In most other countries the collaborative environment is dominated by medium- to small-scale partners.

Figure C.2: Network analysis. Theme: economy

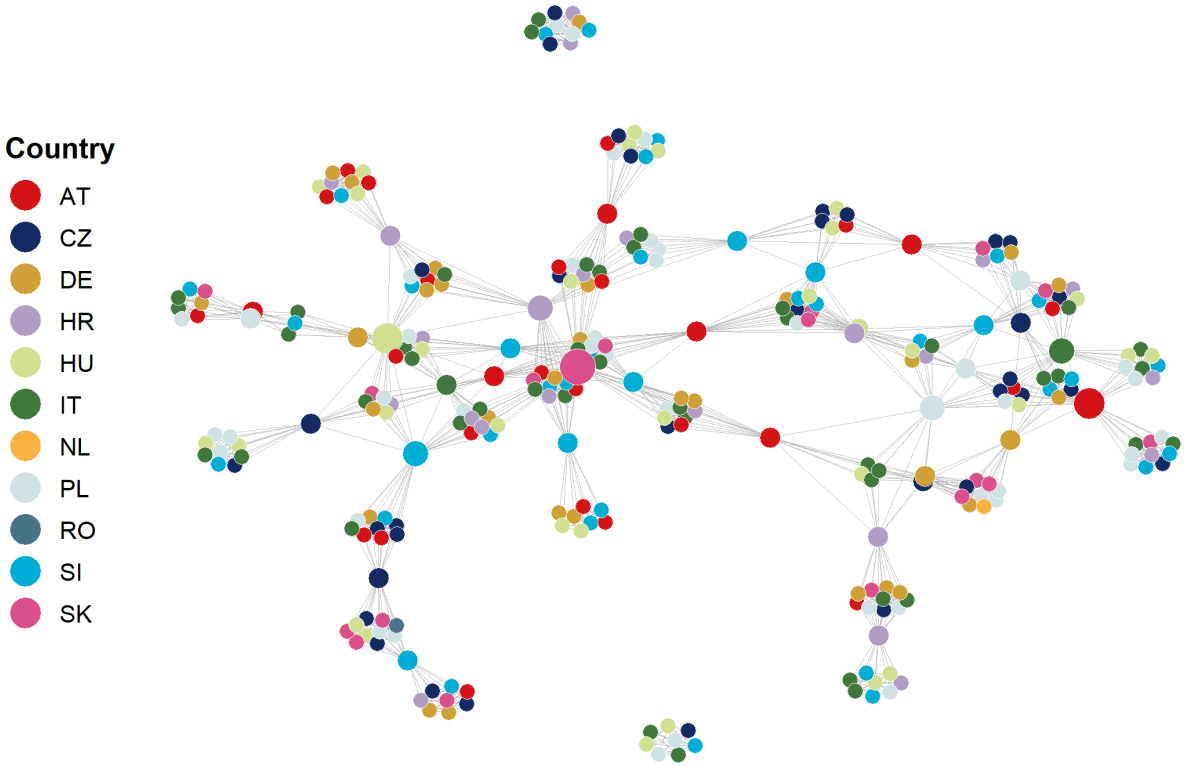


Source: Project team calculation based on keep.eu

Focusing on projects within the **theme of economy**, the network is largely interconnected. Almost all projects show at least one collaboration link with the wider network, and most of the projects show a comparably dense interconnection with each other.

One medium-sized Partner stands out, as it is embedded in three Projects, that form a separate cluster and are not connected to the rest of the network at all. The core network is not carried by a few central partners but rather presents an interconnected structure of small and medium partners. ~15% of all partners show two or more connections. Two organisations from Slovenia, namely the chamber of commerce and the university of Maribor serve as umbrella organisations within the theme and participate in 6 projects each.

Figure C.3: Network analysis. Theme: environment



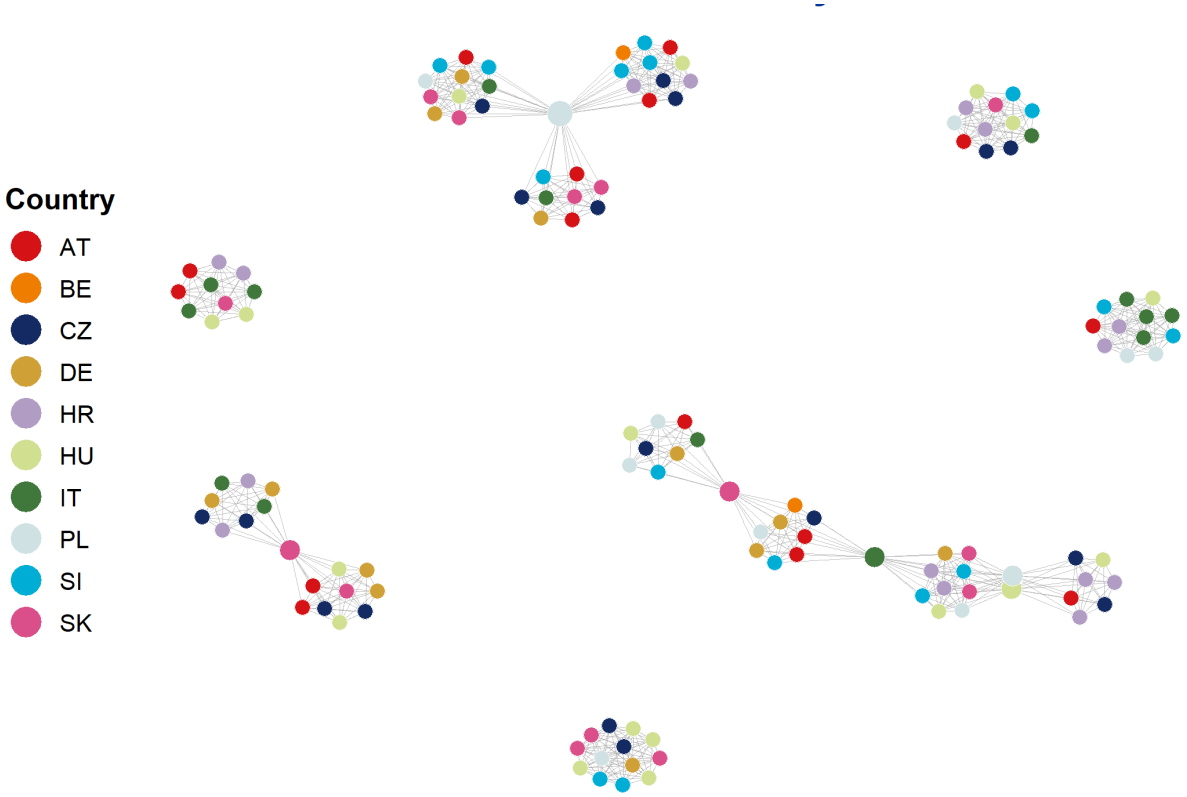
Source: Project team calculation based on keep.eu

The **environment theme** network forms an extensive and well-connected structure, with one main cluster linking partners from almost all participating countries. The network is considerably less dense than for other themes, with only 10% of partners showing 2 or more connections.

As central multiplier the University of Kosice has 5 connections within the theme and also is involved in 5 connections with projects in other themes. Only two projects are isolated from the core network thus the overall configuration shows a balanced collaboration pattern.

Under the theme governance only 5 projects have been selected until the cutoff date (other governance related projects under priority 4 have a stronger thematic focus and thus are assigned to one of the three other themes), the network analysis for this theme did not yield useful results.

Figure C.4: Network analysis. Theme: society



Source: Project team calculation based on keep.eu

Rather disconnected structures are evident in the **society theme.** Three clusters independent from each other are visible together with four individual project clusters. Here no large-scale partner stands out, with the Rzeszow Regional Development Agency (PL) at 3 projects acting as only multiplier. While less than 5% of partners show more than 1 connection, clusters display balanced cross-country participation, as visible from the mixed colours of the nodes

D Comparative thematic funding analysis

The following analysis contrasts funding from the Central Europe programme with funding from all other Interreg B programmes as well as with funding from overlapping Interreg A programmes. An Interreg A programme is considered overlapping as soon as it shares one NUTS2 region with the Central Europe programme, thus the programme area of the considered programmes is slightly larger than the Central Europe programme area. Total funding taken into consideration:

- **Interreg Central Europe** – EU funding: 224 MEUR
- **Interreg B programmes (excluding CE)** – EU funding: 2,109 MEUR
- **Interreg A programmes (overlapping)** – EU funding: 3,154 MEUR

The analysis is conducted based on intervention fields which have been assigned to the 8 dimensions predefined in the project technical specifications. The matching has been done based on intervention field names and definitions but without considering the specific outline of measures by each programme. Furthermore, the approach takes into consideration planned funding, and not already committed or spent funding in order to avoid any bias due to varying progress of programmes, thematic calls etc.

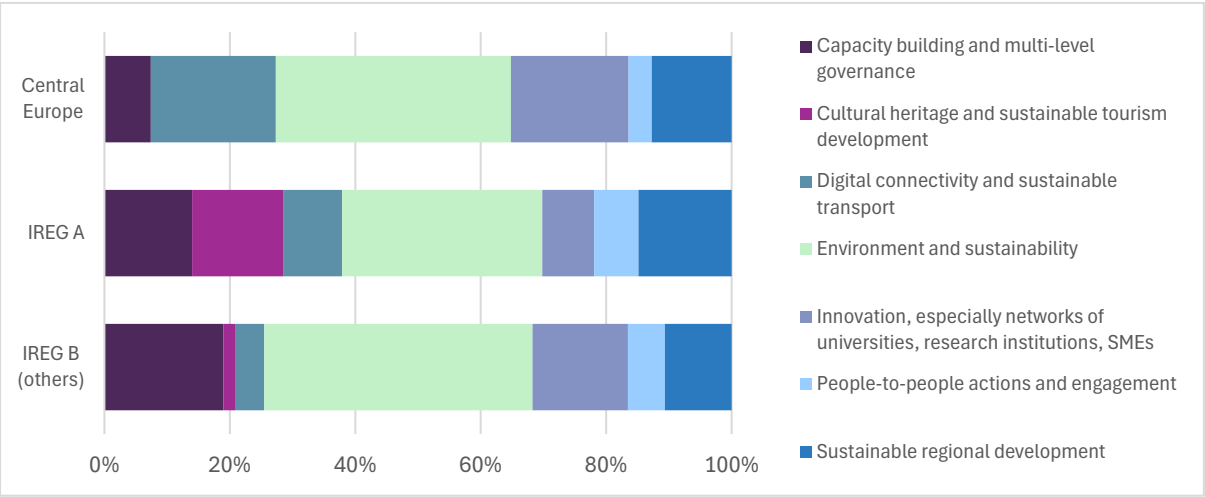
Therefore, the following caveats have to be taken into account when assessing the below information:

- The matching of intervention fields and dimensions is not 100% accurate, as some intervention fields would fit in multiple dimensions, while others (e.g. in the social field) would require different dimensions. Nevertheless, given the preconditions of the project and the predefined dimensions, this was necessary to avoid mismatch between the territorial analyses and the funding analysis.
- The use of intervention fields as common identifier does not take into account all details the programmes might outline when defining a measure. However, intervention fields are a common standard and information on them is available from a harmonised database. Therefore, they are the best possible comparable source for the information sought for.
- Including partially overlapping programmes in the analysis does create a fuzziness in the analyses. However, as several Interreg B programmes only fully overlap with a small number of Interreg A programmes, the analysis was deliberately set broader to outline general thematic overlap without tight geographic constraints.

A comparison of funding focus on the dimensions identified for the project between the Central Europe programme and other Interreg B programmes reveals the following key aspects:

- The CE programme has the biggest emphasis on interventions linked to Environment and sustainability at 37,5% of total funding planned. This is in line with other Interreg B programmes, however the value is lower by approximately 5 percentage points.
- Digital connectivity related funding on the other hand by far exceeds other Interreg B programmes, sitting at 19.9% compared to 4.7%.
- Innovation related funding at 18.8%, People to people action and engagement at 3.7% and Sustainable regional development at 12.7% are close to other Interreg B programmes averages.
- Funding related to Capacity building and multilevel governance and Cultural heritage is considerably lower than for other Interreg B programmes.

Figure D.1: Central Europe programme in comparison to Interreg B programmes and to (overlapping) Interreg A programmes



Source: Project team, based on Open Data Portal, 2025

In relation to overlapping Interreg A programmes, similar patterns on a different scale are visible:

- Interreg A programmes in the area focus considerably less on digital connectivity and Innovation, trailing the Central Europe programme by approximately 10 percentage points in both.
- Interreg A programmes on the other hand place a much higher emphasis on Cultural heritage related actions, exceeding the CE programme by 14.6 percentage points.
- Environmental aspects and sustainable regional development in particular are equally addressed in Central Europe and overlapping Interreg A programmes

Therefore, for some topics, a similar relative weight is put both by the CE programme as well as overlapping Interreg A programmes. Most notable differences are in the field of digital connectivity and innovation which are considerably less pronounced in the Interreg A programmes, and on the other hand culture related aspects which are considerably more pronounced in the Interreg A programmes.

ESPON

Co-funded by the European Union
Interreg

espon.eu

ESPON 2030

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

The ESPON EGTC is the Single Beneficiary of the ESPON 2030 Cooperation Programme. The Single Operation within the programme is implemented by the ESPON EGTC and co-financed by the European Regional Development Fund, the EU Member States and the Partner States, Iceland, Liechtenstein, Norway, and Switzerland.