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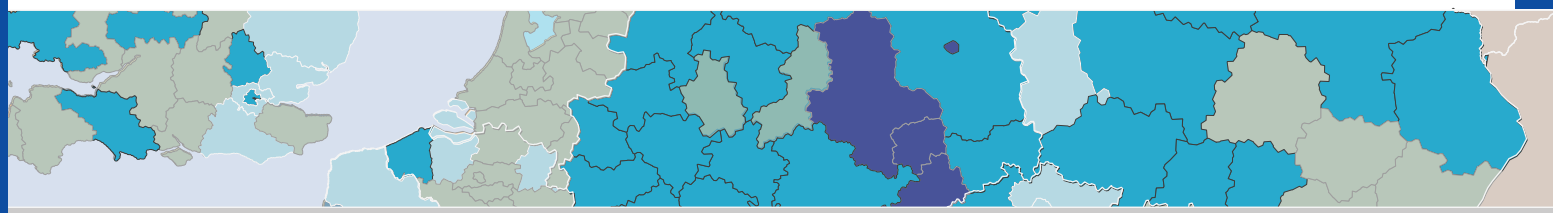

Territorial Monitoring Report

December 2014

Progress towards the Territorial Agenda of the European Union 2020

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Colophon

ESPON 2013 Programme

Coordination Unit
4, rue Erasme
L-1468 Luxembourg
Grand Duchy of Luxembourg
Phone: +352 42 59 91 4700
Fax: +352 42 59 91 4701
Email: info@espon.eu

The present publication was processed by Sandra Di Biaggio, ESPON Coordination Unit, supported by a drafting team involving Erik Gløersen and Jacques Michelet from Université de Genève, Département de Géographie et Environnement, Kai Böhme and Nuno Madeira from Spatial Foresight in Luxembourg.

The publication is based on reports from projects of the ESPON 2013 Programme, in particular on the results of the project on establishing a European Territorial Monitoring System (ETMS). The system builds mainly on indicators and tools developed within ESPON and will serve as a basis for continued monitoring of European territorial trends.

Information on the ESPON Programme and projects, the complete reports and list of partners involved can be found at www.espon.eu.

The ESPON website always presents the latest developments in the ESPON Programme and findings from ESPON projects. It offers the opportunity to consult in detail ESPON publications, tools, project reports and indicators available in the ESPON database.

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1 Introduction and policy context

Monitoring territorial development

European, macro-regional, national, regional and local policy making needs to monitor and consider whether policies deliver according to policy ambitions and aims.

It is important for policy makers to receive evidence on the directions of development, on challenges and opportunities that may require corrections of policies.

To support policy development related to EU Cohesion Policy, and in particular to territorial development and cohesion, ESPON has developed a European Territorial Monitoring System that continuously monitors territorial trends and structures providing information on the regions and cities of Europe.

This territorial monitoring system focuses on key territorial trends affecting European regions, specific type of territories, metropolitan regions, cities and towns in relation to the policy aims and priorities of the Europe 2020 Strategy, EU Cohesion Policy and the Territorial Agenda 2020.

The European Territorial Monitoring System is an online tool for policy makers and practitioners which is publicly available on www.espon.eu.

The ongoing territorial monitoring will be reported regularly in publications on the "State of the Territory", each envisaged with a focus on a particular policy initiative or theme.

This first ESPON monitoring report is focusing on the policy initiative of EU Member States that has established a Territorial Agenda 2020 for the European territory. The agenda includes six policy orientations or territorial priorities for the development of the European Union, which can contribute to the implementation of the Europe 2020 Strategy.

This report casts light on whether the development of the European territory moves in the direction of the policy orientations of the Territorial Agenda 2020.

Progress on the road to 2020

Framing decision making ahead is the Europe 2020 Strategy and the recent Investment Plan for Europe. Both have a territorial dimension and impact, and provide an important context for European territorial development in the coming years.

The Territorial Agenda 2020 links into the smart, inclusive and sustainable growth objectives put forward by the Europe 2020 Strategy. It provides territorial directions and priorities for where and how the growth objectives can be supported most efficiently.

Evidence related to progress made with regard to the priorities of the Territorial Agenda 2020 will certainly support policymakers in Europe to consider priorities and targeted actions that will capitalise the diversity of European territory.

Moreover, as the Europe 2020 Strategy is currently being reconsidered, also in the light of the current crisis, the territorial dimension of making Europe, and the need to exploit the vast diversity of growth opportunities in regions and cities, may benefit from using the European territorial knowledge base built over the last decade.

Current European regional and territorial policy making

EU Cohesion Policy plays an important role for investment and growth and has a clear positive impact on the development of the European territory, its balance and cohesion.

The European Structural and Investments Funds 2014-2020 (ESIF) are closely targeted towards the objectives of the Europe 2020 Strategy. At the same time the single programmes will focus on thematic priorities in order to make best use of local and regional development conditions in their efforts to contribute to the objectives of smart, sustainable and inclusive growth.

The European Commission has in its 6th Cohesion Report brought new insights on social and economic trends in different parts of Europe. As there are clear signs of recovery from the economic crisis, cohesion policy faces new challenges in reviving convergence in income and living standards within Europe.

Macro-regional strategies and territorial cooperation are getting stronger political attention in Europe. There is an increasing awareness that many development challenges and opportunities are more efficiently approached in larger territorial contexts. Indeed, in today's integrated world, individual cities, regions or countries need to consider their wider territorial context as major development trends and opportunities for growth lie outside their territory.

A wide range of European sector policies and policies at national, regional and local level impact the overall territorial structures and the development of Europe's cities and regions. These policies are decisive engines on Europe's road to 2020. Therefore, sensitivity to territorial policy priorities at European level from sector policies will also help in achieving overall aims for the European territory.

Governance and benefits from multilevel networks of decision makers gain increasing policy recognition, both from the European Commission, as well as the European Parliament, the Committee of the Region and other relevant bodies. Multi-level governance brings various sector policies and decision making at various levels together which affect a certain territory, region or city in support of synergetic solutions.

Territorial monitoring and latest evidence based on comparable regional data at European level can here provide important inputs to support a stronger multi-level approach towards 2020 in policy implementation.

The Territorial Agenda for the European Union 2020

The Territorial Agenda of the European Union 2020 – towards an inclusive, smart and sustainable Europe of diverse regions – was agreed by the Ministers responsible for Spatial Planning and Territorial Development in May 2011.

The document identifies six territorial priorities for the development of the European Union:

1. Promote polycentric and balanced territorial development.
2. Encouraging integrated development in cities, rural and specific regions.
3. Territorial integration in cross-border and transnational functional regions.
4. Ensuring global competitiveness of the regions based on strong local economies.
5. Improving territorial connectivity for individuals, communities and enterprises.
6. Managing and connecting ecological, landscape and cultural values of regions.

Since May 2011, Europe's cities and regions have experienced a wide range of trends and impacts, not least related to the crisis.

This makes it highly relevant to take stock on progress achieved and reflect on the policy orientations and priorities set out in the Territorial Agenda 2020 and consider to what degree the recent territorial developments and trends in Europe worked towards the achievement of these strategic orientations.

Such an evidence-based input can support the work of national and European policymakers in understanding the direction of territorial change and consider needs for policy adjustments, and at the same time inspire policy development and promote new policy ambitions that can deliver more harmony, balance and cohesion to the European territory and its citizens.

Structure of this publication

This "State of the Territory" publication builds on the latest ESPON results and relates it to the policy priorities of the Territorial Agenda 2020.

It highlights in the six following chapters the findings of most relevance for policy maker's considerations.

Each chapter focuses of territorial trends for one of each of the six policy priorities of the Territorial Agenda 2020, and starts with a short section on the interpretation of the policy priority. Hereafter, the latest related territorial evidence is presented, in order to support the understanding of to what degree Europe is progressing towards the policy orientation in question.

A range of maps and figures illustrate the text and, when relevant, territorial trends and developments are discussed in different time perspectives, e.g. before and after the current crisis.

The final section of each chapter sums up the territorial observations in light of the policy priorities addressed.

An executive summary is presented before the six individual chapters, including highlights in short of the publication to support an easy uptake by policy makers of key messages presented.

From whom does this report come? What is ESPON?

The ESPON 2013 Programme, the European Observation Network for Territorial Development and Cohesion, was adopted by the European Commission on 7 November 2007.

The mission of the ESPON 2013 Programme is to:

"*Support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory by (1) providing comparable information, evidence, analyses and scenarios on territorial dynamics and (2) revealing territorial capital and potentials for development of regions and larger territories contributing to European competitiveness, territorial cooperation and a sustainable and balanced development*".

The European Territorial Monitoring System (ETMS) developed by ESPON provides continuous territorial evidence on key development trends in European regions, specific type of territories, metropolitan regions, cities and towns in relation to the main policy orientations and objectives related to the TA2020, Europe 2020 Strategy and thematic objectives of the European Structural and Investment Funds 2014-2020.

The European Territorial Monitoring System (ETMS), builds mainly on indicators and tools developed within the ESPON Programme, and which can serve as basis for a continuous monitoring of European territorial trends.

For more information visit www.espon.eu

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2 Highlights for policy-makers

This first ESPON Monitoring Report presents territorial evidence on the progress Europe has made towards the orientations of the Territorial Agenda 2020. It also explores how the recent development trends may have contributed to the achievement of Europe 2020 objectives.

Overall progress has been made in Europe as a whole in relation to the objectives of the Territorial Agenda 2020. However, the economic crisis has hit countries and regions asymmetrically and brought an increasing focus on economic growth building on the strengths of the strongest regions and cities which poses some challenges to cohesion-oriented objectives.

Promote polycentric and balanced territorial development

Polycentric and balanced development has many facets. Recent European demographic trends point towards polarising trends between metropolitan and non-metropolitan regions, rather than reflecting a pattern of a core and a periphery at the European scale.

Until the beginning of the crisis around 2008, European economic development trends show that European regions were moving towards a more balanced development, i.e. territorial cohesion . The economic crisis has interrupted or in some cases slowed down this convergence process by widening disparities between countries and regions in Europe.

Before the crisis, economic growth in second tier cities showed the capacity to level or even outperform the capital cities in several countries making more cites important players in the European economy. Even some small and medium-sized cities contributed significantly to economic progress. This positive trend needs to be ensured and stimulated, for instance by boosting strategic investments in areas such as innovation, human capital and the bio-economy.

In fact, contributing to the creation of more places of higher economic importance is also possible through neighbouring cities and regions that establish a territorial cooperation and join forces across borders in order to reach a higher critical mass together. Several examples of this approach exist within Europe involving cities located in different territorial contexts. Most often smaller cities cooperate, but also larger cities aim today at forming new polycentric cross-border agglomerations with a metropolitan functionality.

Overall, in order to promote places of economic dynamism and service provision in all corners of Europe, the pursuit of polycentric and balanced development, as promoted by the Territorial Agenda 2020, will need special attention in the years ahead and consideration of levers that can revive the positive trends in polycentric and balanced territorial development seen before the crisis.

Encouraging integrated territorial development in cities, rural and specific regions

The increasing population disparities between urban and rural areas in most parts of the Europe may make it an increasing challenge to progress towards this objective.

Between 2001 and 2011, major metropolitan areas and larger cities in many countries concentrated an increasing share of the population. The biggest differences in growth rates between city regions (delineated by the Urban Audit) and other areas can be found in the Nordic countries, Estonia and Bulgaria. In contrast, Italy, France, Luxembourg, Poland, Switzerland and the United Kingdom experienced no significant change in urban-rural balances.

Integrated territorial development in cities, rural areas and areas with geographical specificities is one of the objectives pursued by the Territorial Agenda.

Focusing on mountain areas, demographic trends here are not unique compared to other territories in Europe. In fact, they are quite diverse with some mountain areas growing intensely, while others experience demographic decline. Most mountain ranges also face trends of increasing urban-rural imbalances, but of varying intensity. Many territories with specific geographic conditions such as islands,

sparsely populated areas etc. face a similar diversity of economic and demographic trends as well as in challenges to their biodiversity, exposure to climate change or in their renewable energy potential.

Overall, evidence supports the continued need for integrated territorial development and a more place-based approach ensuring that the unique potentials and challenges of each locality bring added value through coordinated regional and sector policy interventions. Further policy encouragement of integrated territorial approaches seems to be the way forward.

Territorial integration in cross-border and transnational functional regions

The development of cross-border and transnational functional regions aims at helping to overcome negative border effects and make better use of potential synergies and joint solutions across national borders.

National differences in terms of economic and social performance create border discontinuities that may generate specific challenges and opportunities in cross-border regions. With the exception of the Finnish-Russian border, the most important economic discontinuities within the European territory are not between the Europe Union and its neighbourhood. They are to be found between eastern and western EU member states.

These economic discontinuities have accentuated between 2000 and 2012 when measured in absolute terms (i.e. difference in GDP/capita measures in euros). In spite of the fact that EU 13 countries have recorded some of the highest economic growth values between 2000 and 2012, this growth has generated less added-value than the relative slower growth in neighbouring EU15 countries. This is because the GDP values of EU13 countries were considerably lower than those observed in the EU15 in 2000. As a consequence, the incentive to migrate or commute across the borders from EU13 to EU15 has become stronger over the last decade.

By comparison, border discontinuities in terms of child mortality have decreased across Europe and its neighbourhood (except some cases in the Middle East and the Caucasus). This is an indication of a convergence of social conditions and public health situations between 2000 and 2012.

Recent developments suggest that a continued policy focus on cross-border integration and transnational functional regions is necessary for supporting European integration and harvest the development potentials from joining forces. The recent increase in economic discontinuities confirms the need for continued efforts to arrive at high levels of maturity in cooperation across borders in all parts of Europe, in particular in the perception and acceptance of potential benefits of forming functional regions, not only across national borders but also across administrative borders inside countries.

Ensuring global competitiveness of the regions based on strong local economies

The Territorial Agenda 2020 argues that building competitiveness on the basis of strong local economies requires “the use of social capital, territorial assets, and the development of innovation and smart specialisation strategies in a place-based approach”. This presupposes active investments in the human capital and policies to ensure that households benefit from economic growth and are shielded from the effects of economic crises as far as possible.

Changes in the level of education among young professionals reflect investments in the human capital. The share of 30- to 34-year olds holding a tertiary education degree in the EU-28 has risen from 25.1% to 36.9% (+11.8 points) between 2003 and 2013, reflecting a significant progress. The highest growth is observed in Lithuania, Poland and Latvia. However, countries registering growth above 10 points (18 in total) are spread across Europe.

The current economic crisis has led to sharp drops in employment rates, mainly in some regions in southern Europe. At the same time, differences in employment rates between men and women are narrowing in most European regions, notably in Ireland, Spain and Greece, and in the Former Yugoslav Republic of Macedonia, but also in southern Italy and western Turkey.

The evolution of household income after 2008 is an indicator of resilience to the economic crisis. While household incomes dropped in a number of countries hit by the economic downturn (e.g. Greece, Latvia, Spain, Bulgaria and the United Kingdom), they remain stable or even increase in other countries in spite of low or negative growth (e.g. Poland, Lithuania).

Regional GDP trends before and after the crisis suggest that a number of countries outside of the European core area, including Ireland, Spain, southern Italy, Greece, Bulgaria and the Baltic States, have had more difficulties recovering from the crisis. At the same time, regions in southern and eastern Germany, the Czech Republic, Slovakia and parts of Poland have, in addition to Switzerland, Sweden and Norway, maintained relatively high economic growth levels.

Ensuring the global competitiveness of regions based on their local economy is today even more important than before a must for the recovery and future of the European economy.

Improving territorial connectivity for individuals, communities and enterprises

Overall multimodal accessibility has in the last decade improved in large parts of Europe. The highest increase in multimodal accessibility occurred in regions in Eastern Europe. Many Spanish regions have also experienced increases, as a result of a combination of improvements in rail and road accessibility.

However, in terms of accessibility and economic wealth, there are considerable disparities between the core and north of Europe on the one side, and the eastern and southern regions on the other side. This confirms the extent of cumulative effects, whereby regions that have historically been important economic centres have the best transport connections, and continue to perform better economically than other regions.

At the same time, the increasing concentration of population in capital cities and large metropolitan regions may in the largest agglomerations result in increasing diseconomies of urbanisation in the form of congestion-related challenges.

An improvement of connectivity and accessibility within Europe is progressing on a positive note. Investments in transport infrastructure may however only bring economic benefits to territories in the longer term. These investments are nevertheless of strategic importance for bringing improvements for individuals, communities and enterprises in all corners of Europe. In particular, considerations of accessibility and connectivity to other parts of the world seem today to be a necessity in improving further territorial connectivity in Europe. A particular challenge and potential for better territorial balance is to provide broadband access in householdings in more sparsely populated areas.

Managing and connecting ecological, landscape and cultural values of regions

The nature and biodiversity of Europe's regions and cities is a fundamental asset that continues being challenged by urban development and the expansion of built infrastructure. Urban sprawl and soil sealing are increasing around most urban areas in Europe. In parallel, the continuity of green areas is limited, isolating natural biotopes and reducing the qualities of landscapes.

Both soil sealing and the continuity of green areas vary considerably across Europe, illustrating different patterns of land use, settlement structures and population densities. The significant differences between countries demonstrate the potential for exchanges of good practice in view of promoting smart local and regional development practices including ecological and cultural concerns.

For many regions and smaller cities distant from larger cities the amenities related to nature and landscapes, the environment and cultural values represent important development assets.

Still, management and connections of ecology, landscape and culture needs policy attention to create attractiveness and development, and to balance urban development pressures with the need to ensure habitats and biodiversity for future generations.

3 Promote polycentric and balanced territorial development

The following indicators are used to measure progress in relation to balanced and polycentric development:

- demographic trends (net migration and natural growth);
- GDP growth.

These indicators are measured at NUTS 2 level, and considering trends between 2000 and 2012, when necessary distinguishing between the pre- and post-crisis periods. They provide different perspectives on changing patterns of mono- or polycentricity at the national and European levels.

Polycentric and balanced territorial development is one of the priorities defined in the Territorial Agenda 2020 to achieve territorial cohesion in the EU. Polycentric development policy aims at arriving at a better European core and periphery, and avoiding polarisation between capitals, metropolitan areas, and small and medium-sized towns.

Polycentricity has traditionally been approached from two perspectives: (1) in demographic terms, with a focus on population and functions in in cities and metropolitan regions and ; (2) from an economic point of view, seeking to increase economic growth and innovation across Europe.

The present chapter establishes a picture of trends towards more polycentric or monocentric development in Europe, combining demographic and economic aspects. It presents evidence on demographic and economic development between 2000 and 2012. This time frame covers the period, before and after the economic crisis. Therefore, when relevant changes in patterns after the economic crisis are highlighted.

Demographic dynamics across Europe

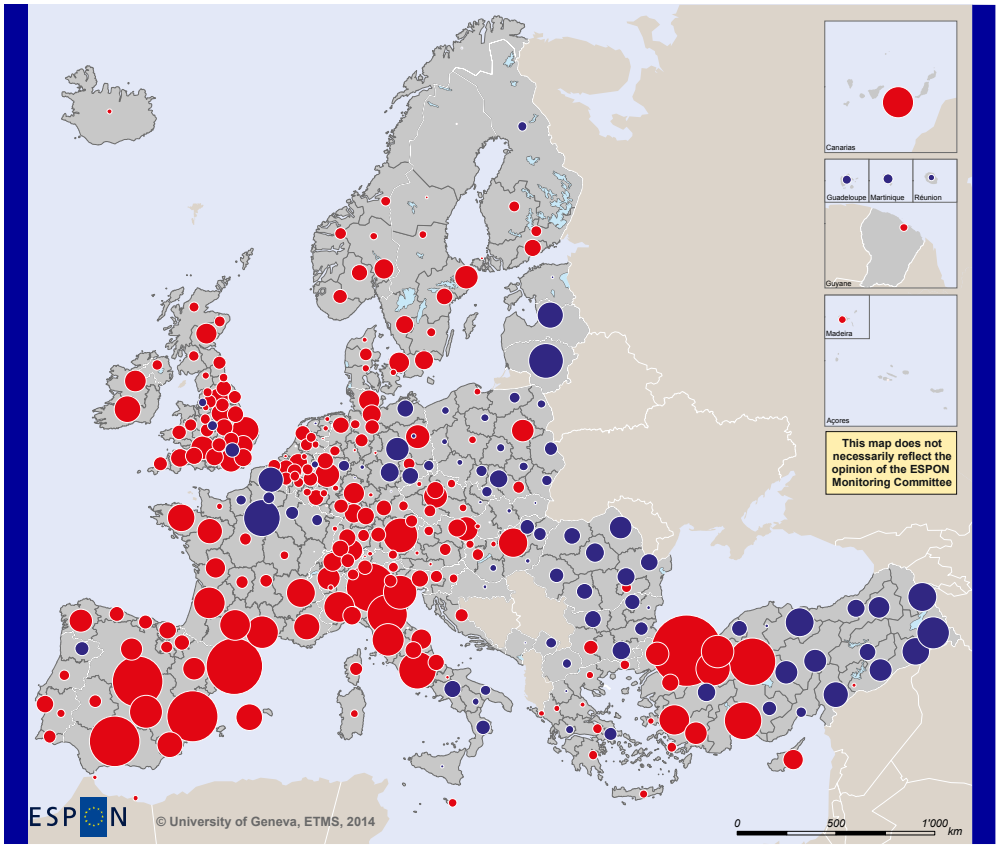
Rather than considering overall population trends, this section analyses natural growth and net migration separately. A region's attractiveness for migrants is not necessarily correlated with a propensity of its population to increase or decrease naturally.

Regarding net migration, there is a polarising trend opposing growing metropolitan regions to the rest of the country in a few Member States: Bulgaria, Romania, Hungary, Slovakia and Poland (Map 3.1). In the rest of Europe similar trends are observed in some large transnational areas:

- a positive net migration along an Atlantic Arc from the United Kingdom to Portugal, throughout the Mediterranean area except for southern Italy and along an axis stretching from the Alps and Central Europe to the Benelux, North-Western Germany and south Scandinavia.

- Territories marked by negative net migration, mainly located in Central and Eastern Europe. In particular in regions stretching from the Baltic States to Bulgaria, and also include the Eastern parts of Germany and of Turkey. North-Eastern France, including the Paris region (Île-de-France) is an exception to mostly positive net-migration values in North-Western Europe.

Map 3.1: Net migration by NUTS 2 regions, 2000-2010



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Regional level: NUTS 2
Source: ETMS, 2014
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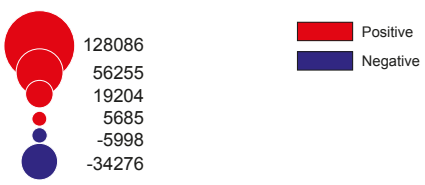
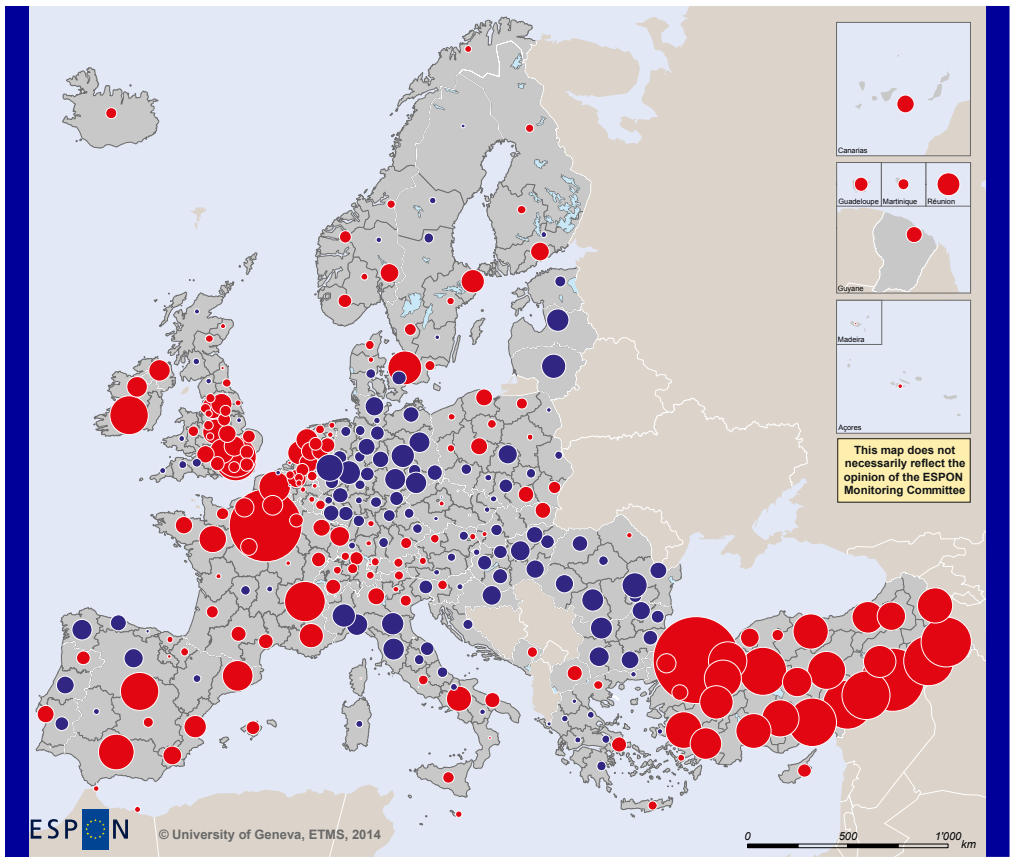
Migration balance
Unit: persons



Regarding natural growth, patterns are quite different from net migration (Map 3.2):

- Most western European regions experience natural population gains, with exceptions in Germany, North Italy and the western Iberian Peninsula outside Lisbon and Porto.
- The largest natural population gains in western Europe are concentrated in France, Ireland and Spain, in the Paris region (Île de France).
- Population gains in the United Kingdom, the Benelux, Switzerland and most parts of Scandinavia are also quite significant.
- Eastern European regions mostly experience natural population losses, except some of Polish regions, Macedonia, Montenegro and some Greek regions.
- Turkey stands out with its strong positive natural growth.

Map 3.2: Natural growth by NUTS 2 regions, 2001-2012



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Natural growth
Unit: persons

151'986
107'222
46'101
17'285
4'266
-2'918
-14'630

Positive
Negative

There are therefore important differences between territorial patterns of net-migration and natural population growth. Between 2000 and 2012, many regions in western Europe combine natural and migratory population gains, while the opposite is true in eastern Europe. This for example concerns eastern parts of Germany, the Baltic countries, Romania and Bulgaria, as well as eastern parts of Hungary.

However, territorial patterns of migration and natural growth are quite distinct in a significant number of regions, especially in western Europe. In peripheral parts of the United Kingdom (Scotland and Wales), northern Italy and western Germany, natural decline is compensated for by positive net migration. Inversely, north-eastern France has negative net migration, but positive natural growth.

It is in this respect similar to southern Italy. Large parts of eastern Germany and of eastern Europe combine negative figures for net migration and for natural population growth. Turkey's western regions recorded the strongest combined positive figures for natural growth and net migration, while the east combines a strong net out migration with natural population growth.

Territorial patterns of economic dynamism

Regional patterns of growth in GDP before and after the economic crisis show distinct patterns across Europe, i.e. between 2000-2007 and 2008-2011, (Map 3.3 and Map 3.4).

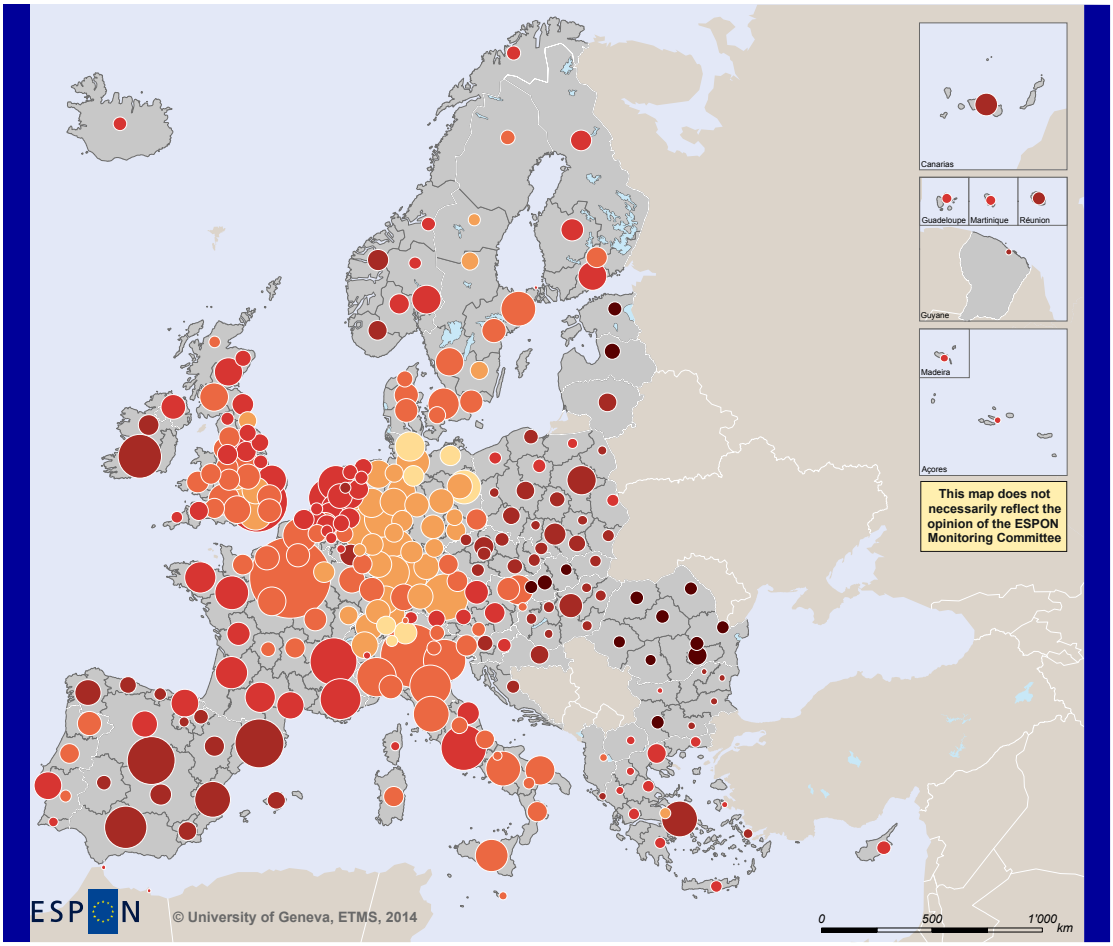
Between 2000 and 2007, the highest growth rates are observed in EU13 and in other countries outside of the European core such as Ireland, Spain and Norway. Romanian regions experience annual growth rates between +15.8% and +18.5% during this period, and the corresponding rate in Estonia is +14.7%. During this period, growth in these countries, as well as in Latvia and Slovakia, was more than three times higher than in the ESPON space as a whole (+4.4%). The only EU13 country with growth levels below ESPON space was Malta (3.5%). High economic growth was also observed in Spain (+7.3% in Catalonia, +7.6% in Madrid), in the Attica region in Greece (+9.6%), in Ireland (+8.5% in Southern and Eastern Region, +9.7% in Border, Midland and Western). Additionally, some countries such as Cyprus, Iceland, Norway and Finland also experience growth above the ESPON space average during 2000-2007.

By comparison, Germany experienced relatively limited growth (+2.5%), with Europe's lowest regional values in Berlin (+1.5%). Values observed in the United Kingdom, Italy, France and Belgium were also below European average.

Overall, there was a significant economic convergence in Europe between 2000 and 2007. European core regions tended to have lower growth levels than those situated in other parts of Europe.

The picture changes dramatically after 2008, when the average growth level in the ESPON space drops to +0.84% as a result of the financial crisis. Latvia, Greece, Ireland have had annual negative growth of more than -3%, reaching between -4.6% and -6% in the three Greek regions of Central Macedonia, Thessaly and the Ionian islands. Other countries experiencing negative growth below -1% per year are Hungary, Romania, Lithuania, Spain and the United Kingdom. There is a small positive growth in Germany, especially in Leipzig, Stuttgart and Berlin/Brandenburg, but also in Austria, Belgium and Slovakia. Positive growth is also observed in France (+1.2%) and Poland (+0.7%). Growth reaches +2.6% in Lower Silesia, on the border to Germany and the Czech Republic.

Map 3.3: GDP growth by NUTS 2 regions, 2000-2007



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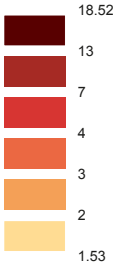
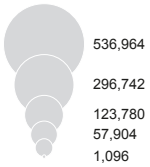
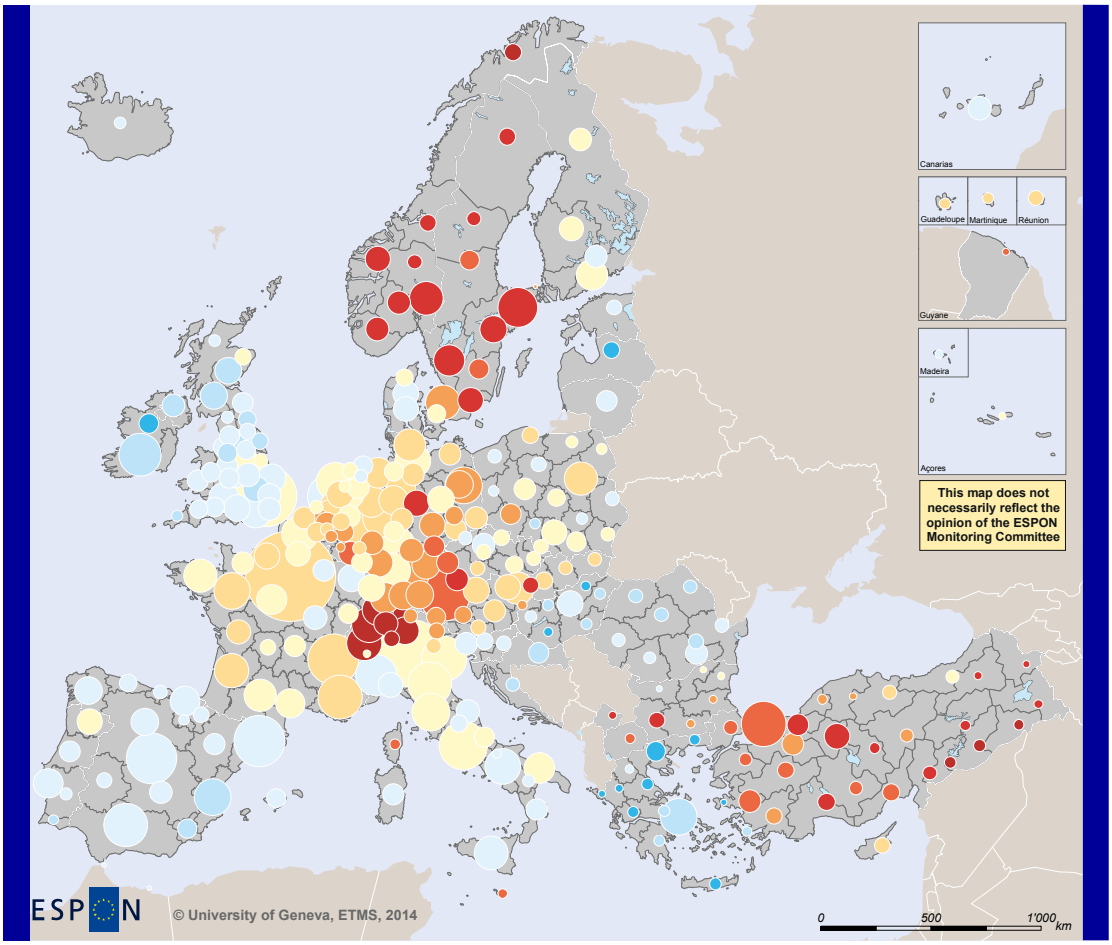
GDP growth from 2000 to 2007
Compound annual growth rate (%)



GDP levels in 2007
In mill. Euros



Map 3.4: GDP growth by NUTS 2 regions, 2008-2010



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GDP growth from 2008 to 2011
Compound annual growth rate (%)

11.41
7
4
3
2
1
0
-2
-3.5
-6.01

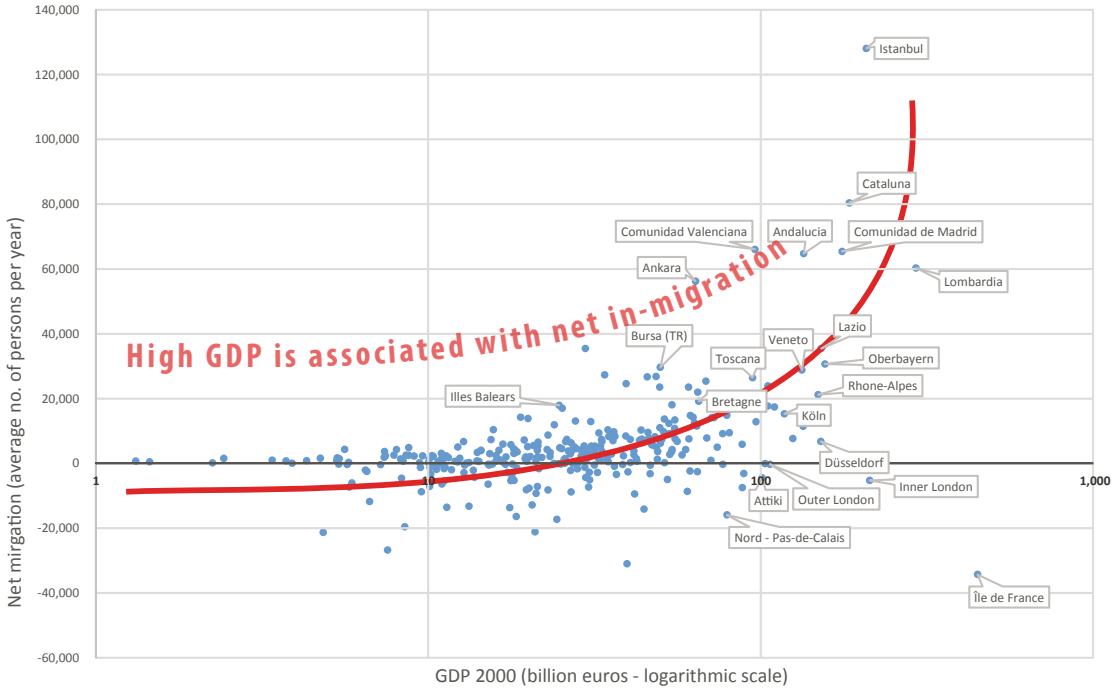
GDP levels in 2011
In mill. Euros

608,648
276,323
125,187
62,350
1,174

This implies that there is a concentration of growth in a European core area extending from Switzerland and southern Germany to the Czech Republic, Slovakia and south-Western Poland to the east.

The highest growth levels are observed in Switzerland, Norway and Sweden. This is partly linked to the evolution of exchange rates, as the value of the euro fell sharply during this period.

Figure 3.1: GDP (2000) and net-migration (2000-2012) by NUTS 2 regions



The graph shows that high levels of GDP at regional level tend to be associated with net in-migration. This is particularly the case in southern Europe (e.g. Italy, Spain, Turkey) and to a lesser extent in Germany. This implies that the economically largest regions continue to attract more people. Contrasts between these regions and the rest of Europe get sharper.

High GDP levels tend to go hand in hand with positive net migration (between 2000 and 2010) (Figure 3.1). In other words, regions with a large number of workers and companies, producing a high total added-value, tend to attract more migrants. This is particularly true for Italy, Spain and Turkey.

There are some significant exceptions: Paris and London do not experience net in-migration, in spite of their high GDP. The attractiveness of these very large agglomerations generate high costs of living and congestion which discourage a significant numbers of persons from choosing them as their place of residence.

At the other end of the scale, Valencia is an example of a region that attracts many in-migrants in spite of its low GDP compared to Madrid, Catalonia and Andalucía. This illustrates the importance of factors of attractiveness that are not associated with high economic mass, e.g. attractive climatic conditions, cultural life or natural assets.

The general trends leads to strengthened contrasts between economic centres and other regions. This strengthens polycentric development at the European level by generating stronger metropolitan regions across Europe. However, sharper contrasts between these regions and the rest of Europe leads to more monocentric development patterns at the national and sub-national levels.

Conclusion

While regions with a high total production tend to have higher levels of net in-migration, high economic growth is not clearly associated neither with migratory gains nor with natural population growth.

For example, East European regions with high growth have experienced out-migration; in spite of sustained relatively high growth rates, the Paris region experiences negative net-migration. Inversely, Northern Italy with a limited or negative growth attracts migrants.

Overall, recent European demographic developments point towards polarising trends between metropolitan and non-metropolitan areas, rather than reflecting a core-periphery pattern at the European level.

However, the notion of a "European core area" helps to understand how Europe's economic growth is organised. During high growth periods (e.g. 2001-2007), Europe's periphery benefited from a relatively fast catching-up process in favour of territorial balance. However, low growth during 2008 and 2010 interrupts this convergence process in favour of territorial balance. At the same time, the European core area that continues to have relatively high growth has extended eastwards to parts of Poland, the Czech Republic and Slovakia.

The evidence suggests that in times of high economic growth there is a development towards a more balanced European territory and convergence between more and less developed countries and regions. Consequently, working towards smart, sustainable and inclusive growth to get Europe back on the pre-crises growth path has in the long-run the potential to also contribute to a more balanced territorial development at the European level.

However, considering the limited perspectives of experiencing the same high growth levels during coming years, the pursuit of polycentric and balanced development as promoted by the Territorial Agenda 2020 will need to consider other levers.

Evidence suggests that the financial crisis has made it particular difficult to capitalise on growth potentials in a number of European lagging regions. This implies that companies of these regions have had more limited resources available to adopt technological and organisational innovations susceptible of improving their productivity.

4 Encouraging integrated development in cities, rural, and specific regions

Integrated development in cities, rural, and specific regions is assessed by observing demographic trends and employment levels at different levels (urban / rural, mountain ranges) between 2001 and 2011.

Population developments and employment levels result from a number of social and economic factors. They therefore offer a synthesis of how successful different territories have been providing an attractive living environment and favourable context for production and commerce.

The Territorial Agenda 2020 stresses the importance of an integrated approach to the development of different types of territories. This implies that the geographic characteristics of each region, e.g. the fact that it may be urban, rural, remote, mountainous or sparsely populated areas, needs to be taken into account by policy instruments seeking to promote development.

This chapter assesses social and economic development in different types of territories. The first part of the chapter focuses on urban-rural integration, while the second part examines the diversity of trends in areas with specific geographical features using mountain areas as example.

Relation between urban and rural areas

The Europe 2020 Strategy aims to reach an employment rate of at least 75% for men and women aged 20 to 64. Because urban areas provide larger, more diverse labour markets and attract a young and highly qualified population, cities may be expected to make a relatively larger contribution to reaching this target. However, social groups that are excluded from the labour market also tend to concentrate in cities. As a result of these contrasting trends, a comparison employment rates in urban and rural areas in 2008 shows quite different patterns from country to country. While cities in many countries tend to have higher employment rates than rural areas, values are similar in a significant number of others (Figure 4.1).

It should be noted that the categories “urban” and “rural” cover a wide range of territorial realities. Some countries are almost entirely urban. Their rural areas have a limited extent and population, and have a relatively good access to cities (e.g. Belgium and the Netherlands. Other countries have extensive rural areas, some of which can be remote or sparsely populated. Similarly, the category “urban” spans from metropolitan regions with population of several millions inhabitants to cities of 50,000 inhabitants. These differences should be taken into account when considering observed patterns.

Employment rates are higher in urban areas primarily in selected EU13 countries (Slovakia, Romania, Bulgaria, Latvia, and Lithuania), Norway and Switzerland. The explanatory factors are different. Economic development has been concentrated in cities in the EU13 countries. This has also been the case in Norway and Switzerland, but these countries have also traditionally pro-active policies to maintain population in towns and rural areas. Significant differences in the Netherlands and Belgium are linked to the fact that these countries are extensively urbanised, and that the category “rural areas” only concerns a limited range of territories.

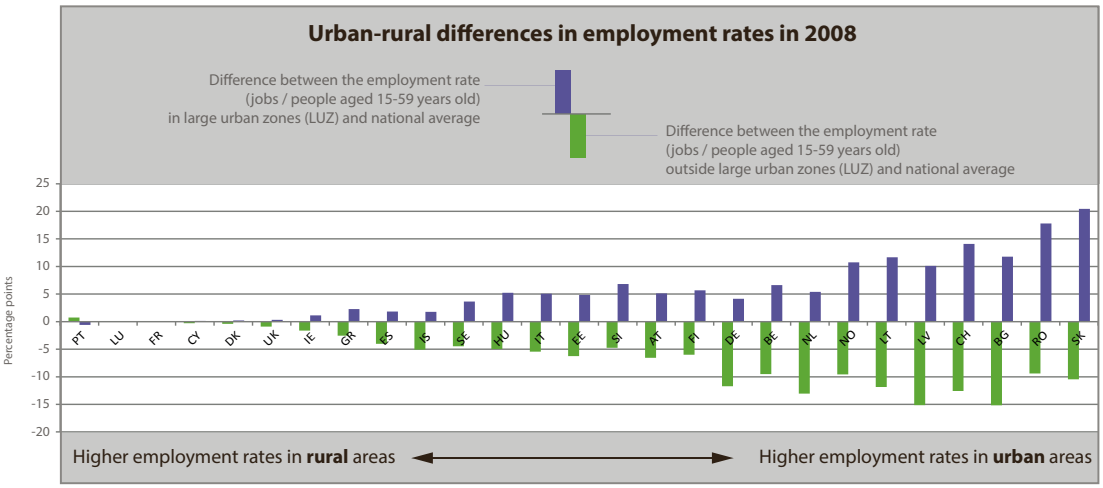
By comparison, there are no significant differences in urban and rural employment rates in Denmark, Cyprus, France, Ireland, Luxembourg, Portugal and the United Kingdom.

This demonstrates that general categories such as “urban” and “rural” are of limited support when seeking to design tailor-made policies to reach the Europe 2020 target of 75% employment. The categories “urban” and “rural” may be useful in some countries, but have different implications depending on the territorial context.

Relatively low employment rates in rural areas do not necessarily trigger a concentration of population in cities (Figure 4.2). High differences between demographic trends in urban and rural areas

between 2001 and 2011 are not associated with high differences in employment rates in these type of regions. This suggests that employment is not the only factor of attractiveness of migrants to cities.

Figure 4.1: Urban-rural differences in employment rates, 2008



In 2008, the gap between employment rates in rural and urban areas was widening, rather than closing. Figure 4.1 shows that, in many EU countries, the highest shares of employment in urban areas are not compensated by rural employment opportunities. This trend is very pronounced across Eastern Europe.

Figure 4.2: Evolution of urban-rural demographic polarisation between 2001 and 2011

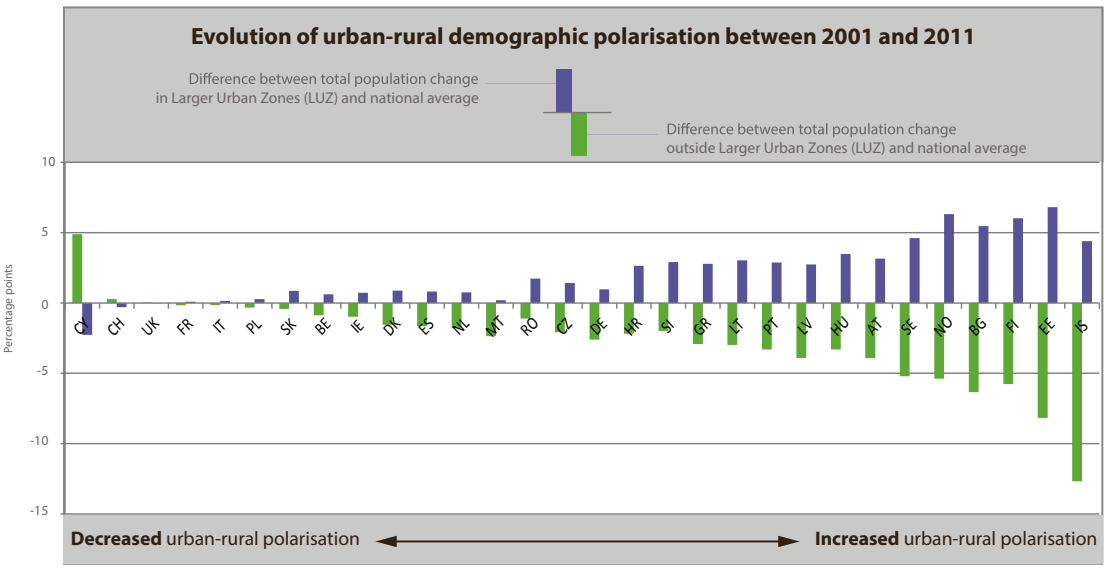


Figure 4.2 compares the difference between total population change in and outside urban areas and the national average for EU countries over the period 2001-2011. It therefore shows the extent of urban-rural polarisation. In more than two thirds of European countries, population growth has been lower in rural areas than in urban centres.

The largest differences in population growth rates between urban and rural areas can be found in the Nordic countries, Estonia and Bulgaria. By comparison, Italy, France, Switzerland and the United Kingdom experience no significant urban-rural polarisation.[1] These countries demonstrate that a stabilisation of the shares of urban and rural population is possible.

The absence of urban-rural polarisation in Poland is particularly striking as Poland has experienced consistent high economic growth throughout the period, also after the economic crisis. Economic growth tends to be accompanied by increased demographic polarisation. For example, a higher proportion of young graduates find employment in the cities where they have studied and therefore settle there; growth sectors also primarily tend to be located in cities. However, the Polish case demonstrates that these trends can be countered by other factors. Therefore, there are examples of good practice from which inspiration could be drawn to limit urban-rural polarisation in Europe.

Demographic trends in mountain areas

The Territorial Agenda emphasizes the need to take into account the development conditions of areas with specific geographical features (e.g. mountain areas, coastal zones, islands and sparsely populated areas). Demographic evolutions of mountain areas over the last decade illustrate the diversity of socio-economic trends in these areas.

Mountain areas cover 41% of Europe, including 29% of the European Union. They are also home to 25% of the population of Europe, and 17% of the EU (2011 figures).

While most mountain areas are predominantly rural, they also include many cities and other large settlements. Thus population densities vary greatly within Europe's mountain ranges.

When considering mountain ranges as a whole, demographic trends between 2001 and 2011 are correspondingly diverse, even if only the Balkans and mountain areas of South-Eastern Europe experience strong decline (-14%). The strongest population growth is observed in the Pyrenees (+15.6%), followed by the Alps and the mountain areas of the Iberian Peninsula (both +6%) and the French Massif Central (+4.4%).

However, these overall trends include important national and regional differences in terms of population growth. For example, between 2001 and 2011 population has grew by around 10% in the French, Swiss and Liechtenstein Alps, but only around 2% in its German and Slovenian parts, 2.7% in Austria and 5.1% in Italy. When distinguishing between areas within and beyond commuting range of large cities (more than 100,000 inhabitants), population decline can be observed in the more rural parts of the Alps in some countries (-1.30% in Austria, -0.53% in Slovenia). Generally, a mountain range with population growth in its urban parts also experiences growth in its rural parts, and inversely. The French Alps stand out with a rural population growth that is higher than in the urban parts. This reflects the particular attractiveness of these areas as living environments.

Considering population trends in a longer time perspective, Alpine demographic growth is the result of a constant trend over five decades (see Figure 4.3). In the Pyrenees, demographic growth has accelerated since the beginning of the 1990s. These positive population developments are mostly observed in mountain areas relatively close to large urban centres. In the case of the Pyrenees, the growth area includes Catalonia, but also Navarra and Aquitaine.

The strong demographic decline in the Balkan and South East European mountain areas correspond to a reversal of previous trends, as population increased in the 1960s and 1970s, and had remained stable from the 1980s to end of the 1990s. The fact that current population figures are below those of 1960 reflects the intensity of recent demographic changes. Similarly, population has declined in the Carpathians since the 1990s. However, this decline is less significant compared to the one observed in the Balkan and South East European mountain areas. Furthermore, it is worth

1 The higher demographic growth in rural parts of Cyprus is due to the fact that these areas include the island's main tourism centres.

mentioning that the Polish Carpathians are growing significantly, both in their rural and urban components, while parts of the Romanian Carpathians experience strong decline. However, within the Romanian Carpathians, there are areas registering population growth.

Overall, there is a strong diversity in demographic development across mountain areas in Europe, reflecting the structure of the national and regional economy and accessibility patterns.

Figure 4.3: Demographic trends in European mountain ranges, 1961- 2011

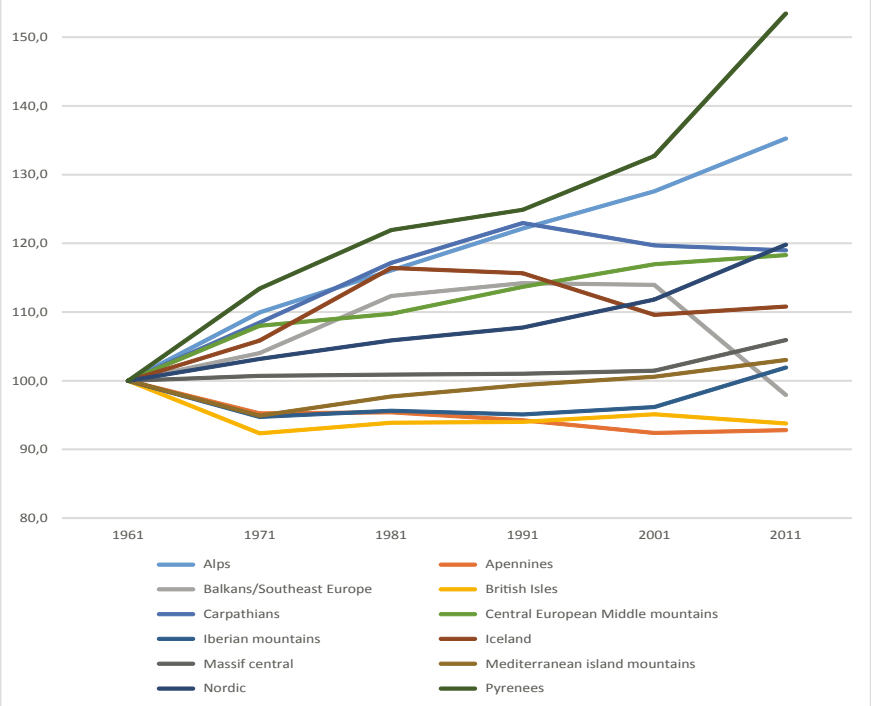
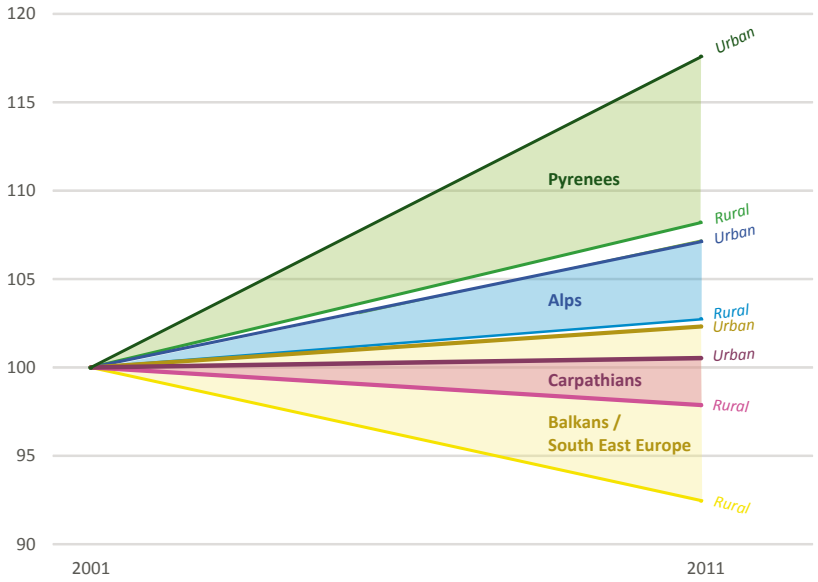
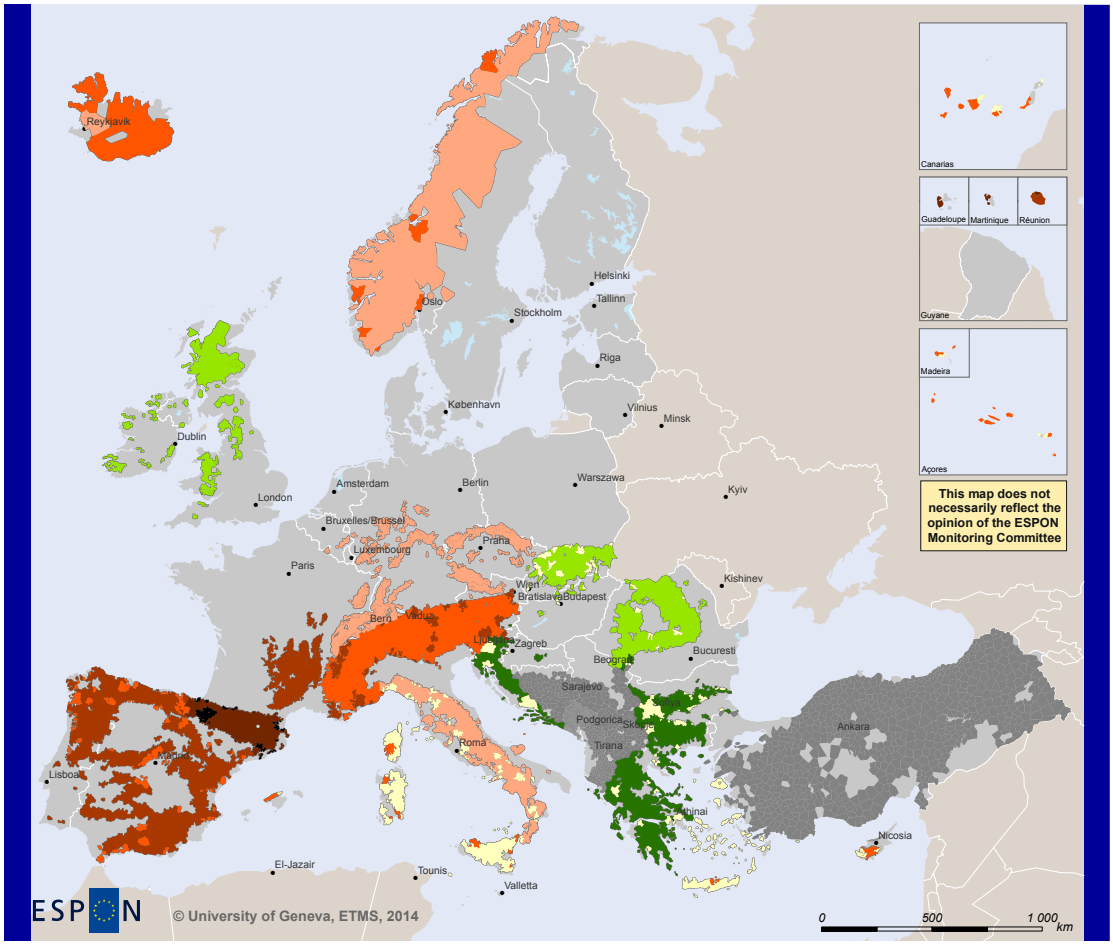


Figure 4.4: Urban-rural polarisation trends in mountain ranges, 2001-2011



Map 4.1: Demographic trends in mountain regions, 2001-2011



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Regional level: Mountain massifs and Larger Urban Zones
Source: ETMS, 2014
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Demographc trends in mountain massifs between 2001 and 2011
distinguishing between areas belonging to Larger Urban Zones and other areas

+42%
+20%
+10%
+5%
+2,5%
+1%
-1%
-2,5%
-3,56%

No data

A number of mountain massifs comprise multiple continuous units (e.g. Massif Central, Caribbean mountain areas). The figures correspond to the mountain massifs as a whole, not their individual units.

This figure compares demographic change within commuting distance of cities of more than 100,000 inhabitants ("urban") and beyond ("rural) between 2001 and 2011 in selected mountain ranges. For this purpose, all values have been normalised according to 2001 population ("2001 population = 100"). It shows that urban polarisation occurs in all mountain ranges, but at very different levels.

Urban and rural mountain areas have experienced contrasted demographic trends between 2001 and 2011. In the Carpathians, and South-East Balkans, the rural parts lose population while the urban parts are growing (Map 4.1). However, the largest differences between urban and rural parts of mountain ranges are found in the Pyrenees, where both the urban and rural parts are growing.

This shows that urban polarisation in mountain ranges takes many different form (Figure 4.4). In the Alps and the Pyrenees, both rural and urban areas register population growth. Growth in urban areas is considerably higher, particularly in the Pyrenees. The Carpathians and Balkans experience population growth in urban areas, albeit at a lower level, and a population decline in rural areas. This evidence suggests that, policies should pay special attention to the most isolated parts of mountain ranges.

Conclusion

Evidence shows significant demographic decline in large parts of Europe during the last decade, and particularly in the most rural and remote areas. Continuous demographic decline in some rural areas imply that they eventually fall below threshold levels to provide public and private services in a cost-efficient way and to have sufficiently large and diversified labour markets.

The long-term solutions to maintain economic activity in "territories facing severe depopulation" as advocated by the Territorial Agenda therefore constitutes a challenge and seems to require increased policy attention to identify and implement.

The diversity encountered within specific types of territories such as "urban", "rural" or "mountainous", "islands", "sparsely populated", etc is that one cannot identify one size-fits-all strategies that could be applied to all territories belonging to each of these categories. However, they are very useful as frameworks for dialogue between European, national, regional and local authorities as part of a multilevel approach to territorial development.

5 Territorial integration in cross-border and transnational functional regions

Territorial integration in cross-border and transnational functional regional is approached by considering levels of maturity in cross-border cooperation and border discontinuities in and around Europe. Levels of discontinuities of GDP and child mortality in 2000 and evolutions between 2000 and 2012 are measured.

With European integration, relations and territorial development actions across national borders have been greatly increased. In terms of business interaction and movements of goods, this does not only concern EU Member States, but also the European Economic Area, (i.e. Iceland, Liechtenstein, and Norway), as well as Switzerland. Equally important is the fact the movements of EU citizens have become easier in the Schengen area, allowing for a greater mobility of the labour force. These policy developments have further encouraged the emergence of cross-border regions that act as interfaces between national political, regulatory, cultural and social systems. While many of these cross-border regions benefit from enhanced flows and exchanges, they also need to address challenging economic situations. Their national components need to adapt to situations where producers of goods and services are more exposed to external competition. Flows of workers across borders can also create different types of tensions, e.g. by challenging wage levels or by concentrating consumption in areas where taxes are the lowest. Cross-border cooperation therefore addresses both challenges and opportunities in the vicinity of borders.

Transnational functional regions reflect different types of interactions across borders. They focus on mutual interdependencies and influences at a wider scale, often across nation states. In the 2007-2013 programming period, thirteen transnational cooperation areas were established to address these issues. Most of these have been maintained in the 2014-2020 period. In addition, a series of macro-regional strategies have been adopted since 2009, e.g. in the Baltic Sea, Danube, Adriatic-Ionian and Alpine regions. In these different contexts, regional and national authorities jointly seek to enhance their global competitiveness, make better use of endogenous potentials, address shared environmental and social challenges and improve their multilevel governance setups.

This section addresses territorial cooperation in different cross-border regions. It compares levels of cooperation maturity in cross-border regions and considers the extent and evolution of discontinuities across borders.

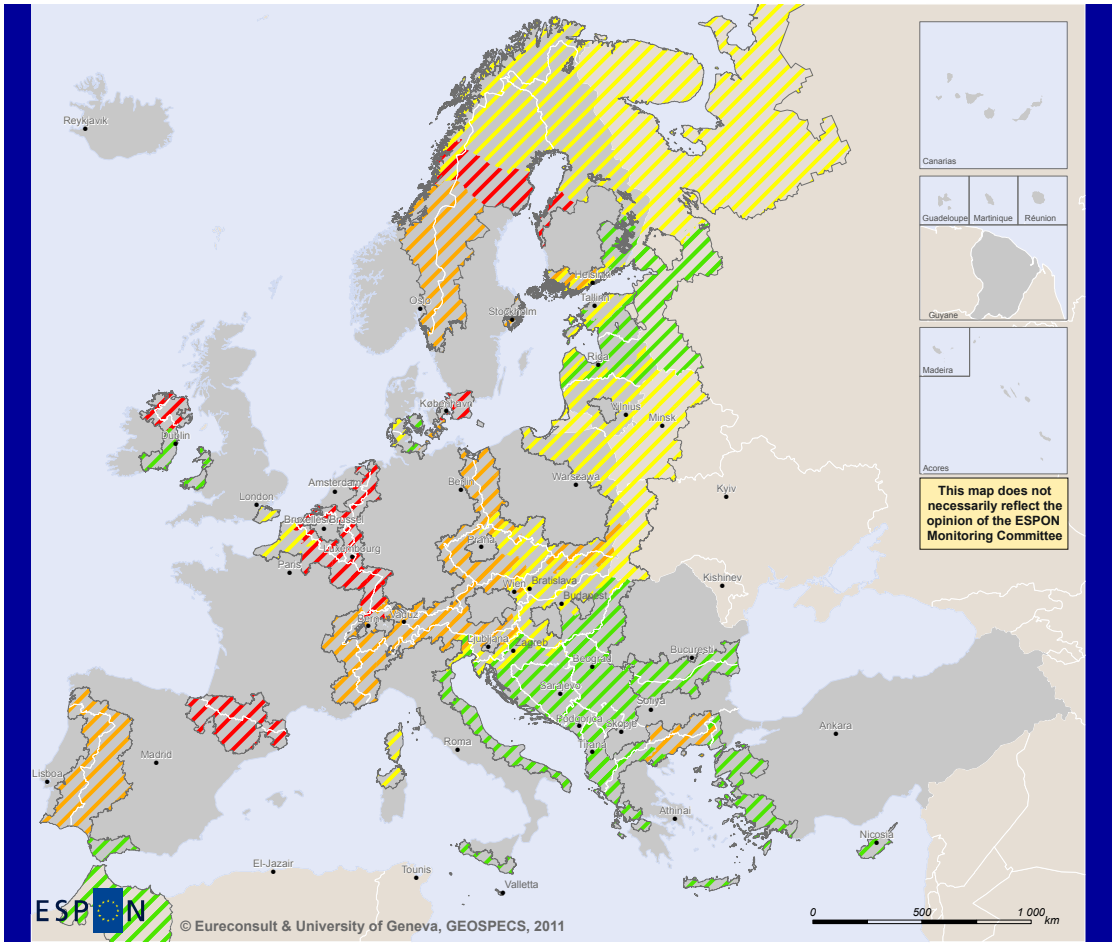
Territorial patterns of cooperation across borders

The main objective of EU territorial cooperation is to overcome the negative barrier effects of borders, maximize potential synergies and promote joint solutions to common challenges. This shall promote harmonious and balanced integration of the EU territory, but also enhance the quality of life for citizens.

Levels of maturity of cooperation in cross-border regions influence the nature of social and economic challenges and the ways in which they can be addressed (Map 5.1). High maturity implies the existence of forums of dialogue and cooperation, and in cases also an established coordination of e.g. transport and public services, shared infrastructures and some degree of integration of economic development. This generates other types of opportunities and challenges to be addressed by policy-makers than in regions with low levels of maturity.

A number cross-border areas along internal EU borders enjoy long-standing cooperation with a very high or high level of maturity. Such cooperation is particularly well-established between Germany, France and the Benelux countries, as well as in the Öresund region, in the Pyrenees and Northern Ireland. These cross-border regions have been object of a number of joint initiatives, both within or in parallel to INTERREG.

Map 5.1: Classification of borders and cross-border areas



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Classification of borders and cross-border areas

- Long-standing co-operation with a very high or high level of maturity
- Long-standing or experienced co-operation with a medium-high level of maturity
- Experienced or more recent co-operation with a medium-low level of maturity
- More recent co-operation with a low level of maturity

The classification of borders and cross-border areas takes into account the 53 INTERREG IIIA programmes established for the 2000-2006 period. It has been developed in the framework of the ESPON GEOSPECTS project, and combines three indicators. These are: (1) number of years of visible and structured cross-border cooperation; (2) nature and quality of the legal instruments used for establishing decentralized cross-border cooperation; and (3) nature and quality of existing cross-border structures established between territorial authorities.

Internal border programmes in eastern Europe and with neighbouring countries of the EU are still in the process of creating a catalyst effect, by providing spaces for dialogue and for concrete synergies. Cross-border programmes are levers to stimulate the dialogue, cooperation and coordination between different levels of governance across borders.

Discontinuities along borders

Cross-border regions can be defined as areas where people and businesses interact across a national border in their daily activities or are otherwise influenced by their proximity to the border. Border effects depend on the nature and extent of differences between countries. These differences can be political, economic, social or institutional. They create a discontinuity along the border.

Differences in GDP offer a synthetic measure of economic discontinuity. Except for the Finnish-Russian border, the main east-west discontinuity is not found along the outer borders of the EU (Map 5.2). It runs between the Nordic and Baltic countries, along the eastern part of Germany and Austria and continues along the borders between Slovenia, Italy and Austria and through the Adriatic Sea to the South.

Despite the fact that countries east of this economic discontinuity registered some of the highest growth rates in Europe between 2000 and 2012, the differences across borders have increased when considering absolute figures. This means that growth in the west has on average generated more wealth per capita compared to neighbouring countries in eastern Europe. The only exception is the Adriatic Sea, where Italy's economic decline has contributed to reduce the discontinuities between the Eastern and Western shores. Economic discontinuities are more generally decreasing along the southern borders of the EU, notably along the Greek-Turkish border.

Within western Europe, contrasts of similar amplitude to the main East-West divide described above are only found along parts of the borders of Norway, Switzerland and Luxembourg. These countries' high levels of GDP per inhabitants create particularly intense cross-border and transnational labour flows. While the discontinuity along the Swiss-Italian, Swiss-French, Luxembourg-Belgian and Luxembourg-French borders have increased, it has decreased along the border between Norway and Sweden.

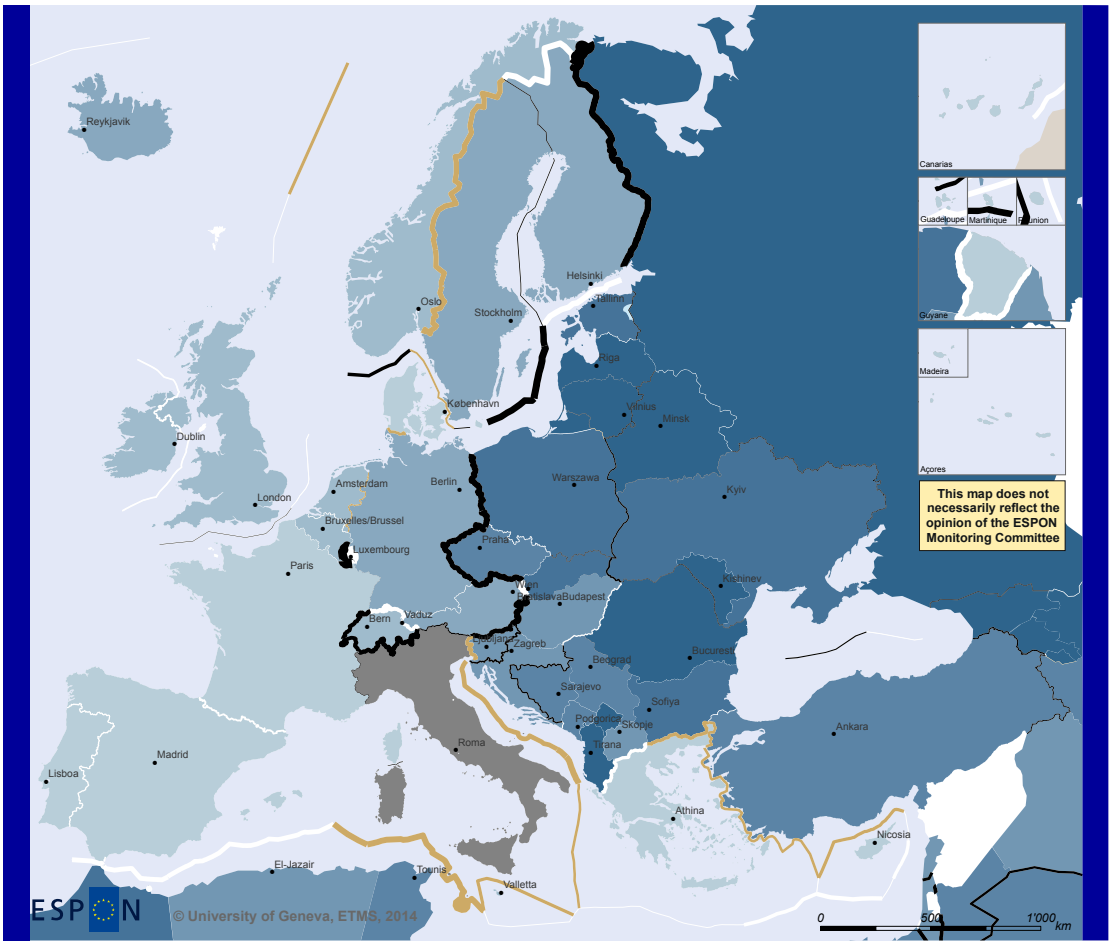
Border discontinuities are not only economic; they can also be social. Addressing social border discontinuities is important to promote inclusive growth, as defined in the Europe 2020 Strategy. Child mortality constitutes an important indicator to measure the performance of the public health system and thus determine the impacts on living standards and poverty reduction.

Child mortality rates decreased significantly in a number of European countries and neighbouring areas between 2000 and 2012. This has led to a decrease in border discontinuities, not only between EU Member States, but also between EU and non-EU Member States (Map 5.3).

In western Europe, child mortality rates have improve significantly over the last decade, e.g. in Norway (fall from 4.9‰ in 2000 to 2.8‰ in 2012), in Ireland (fall from 7.2‰ to 4‰ in the same period) and in Austria (fall from 5.5‰ to 4‰). Improvements in relation to this indicators and in terms of living standards have been particularly important in EU13 countries such as Romania (26.5‰ to 12.2‰), Poland (9.3‰ to 5‰) and Bulgaria (21.1‰ to 12.1‰).

As a result, all child mortality rate discontinuities within Europe and its neighbours have decreased significantly between 2000 and 2012. The decrease of discontinuities along the outer borders of Romania, Albania and Russia, as well as those involving countries in the southern Mediterranean Sea have been particularly important. This positive trend can be seen as a result of economic restructuring and economic growth that these countries have registered during the past decade.

Map 5.2: Evolution of GDP discontinuities in border regions, 2000- 2012



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Regional level: NUTS 0
Source: World Bank, 2014
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GDP per capita
In constant US$ 2005
Evolution in percents from 2000 to 2012

- -7 - 0
- 0.1 - 6
- 6.1 - 1
- 11.1 - 20
- 20.1 - 30
- 30.1 - 50
- 50.1 - 75
- 75.1 - 256

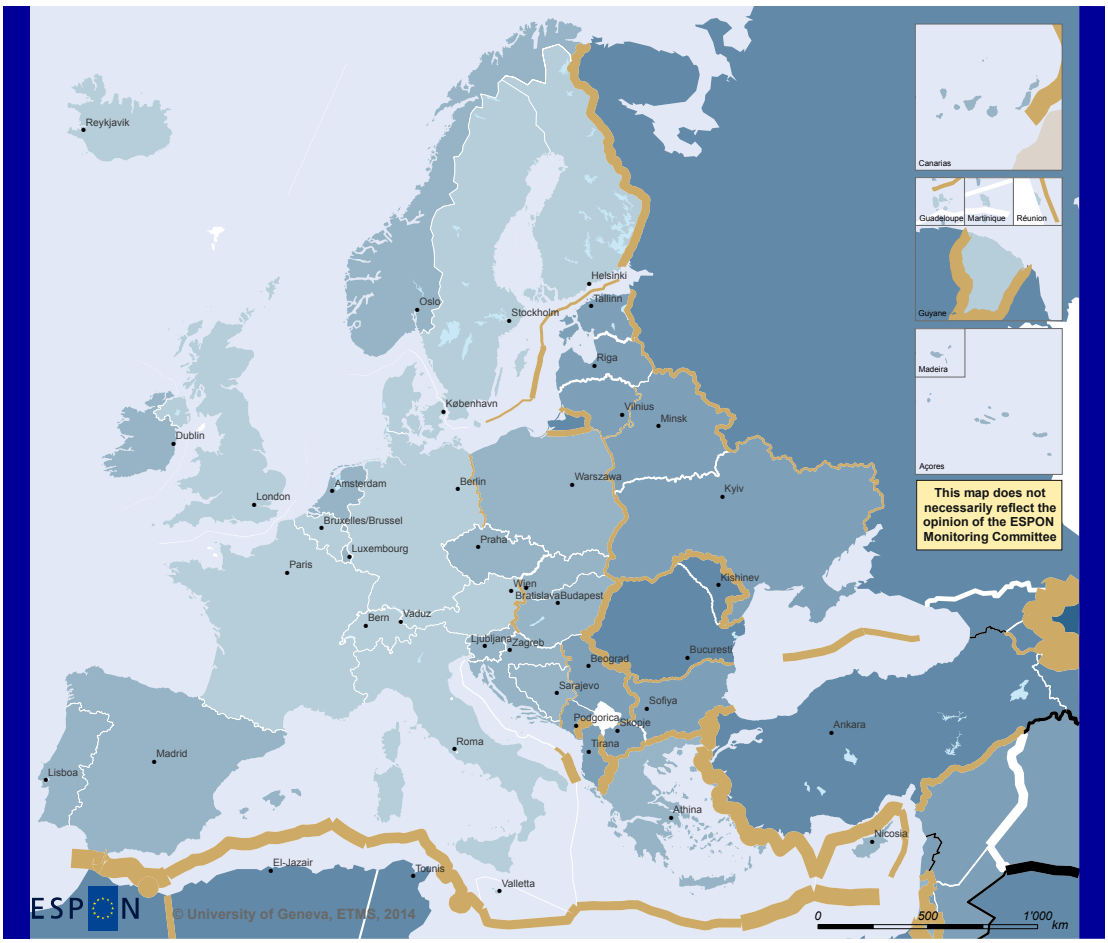
Extent of border discontinuities in 2000
In constant US$ 2005

- 56'000
- 40'000
- 29'000
- 20'000
- 11'000
- 5'500
- 2'500

Evolution of border differentials
Period: 2000 to 2012
GDP per capita in constant US$ 2005

- Decrease (-6'339 - -1'000)
- Stagnation (-999 - 1'000)
- Increase (1'000.1 - 5'890)

Map 5.3: Evolution of child mortality discontinuities in border regions, 2000- 2012



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Child mortality rate under 5 y.o.
Evolution from 2000 to 2012
Death per 1000 live births

- -50.2 - -36.8
- -36.7 - -25
- -24.9 - -12
- -11.9 - -6
- -5.9 - -2
- -1.9 - 0
- 0.1 - 1.4

Extent of border discontinuities in 2000
Death per 1000 live births

- 45
- 30
- 20
- 10
- 5
- 2.5

Evolution of border differentials
Period: 2000 to 2012
Death per 1000 live births

- Decrease (-23.9 - -2.0)
- Stagnation (-1.9 - 2.0)
- Increase (2.1 - 12.8)

Conclusion

Disregarding the border between Finland and Russia, the main economic discontinuities in Europe and its neighbourhood are not observed along the external borders of the EU. They can be found along a north-south axis that runs through the EU.

One could expect that higher average growth in Europe's less strong economies in the period 2000-2012 would have reduced discontinuities along this axis, and thereby reduce tensions in neighbouring border regions. However, this is not the case. In absolute terms, differences in GDP per inhabitant have increased over the period. These differences in absolute figures are relevant when considering the incentive to commute or migrate across a border to find higher wages and standards of living.

This calls for sustained efforts to promote territorial, social and economic cohesion in cross-border regions. Cross-border and transnational cooperation makes a difference in this respect, as illustrated by the achievements of regions that have reached a high level of maturity in this respect after multiple decades of sustained efforts to establish dialogue, coordinate policies and build strategies that support integration and a shared functionality.

6 Ensuring global competitiveness of the regions based on strong local economies

The strength of local and regional economies in the face of global competition is measured on the basis of three indicators at NUTS 2:

- Evolution of the share of 30 to 34 years old with tertiary education between 2008 - 2012
- Change in employment rates among 20 to 64 years old between 2008 - 2012
- Evolution of household income between 2008 - 2011.

The latter of these indicators is particularly interesting to compare with evolutions of GDP in the same period (see Map 3.4).

The Territorial Agenda 2020 underlines that social capital, territorial assets, the development of innovation and smart specialisation strategies and place-based approaches are important building blocks of global economic competitiveness. This implies that skills and resources need to be identified and further exploited. To this end, the Territorial Agenda 2020 argues that human capital, knowledge and know-how should be mobilised. This is the fundament for smart specialisation strategies and the promotion of local and regional entrepreneurial cultures.

The achievement of such ambitions requires that one makes use of assets of each territory. The present chapter explores these aspects by using levels of tertiary education as a measure of regional assets. It then uses employment rates to assess the extent to which regional working age populations are involved in economic production activities. Finally, recent evolutions of household incomes reflect the different ways in which populations of Europe's regions have been affected by the financial and economic crisis.

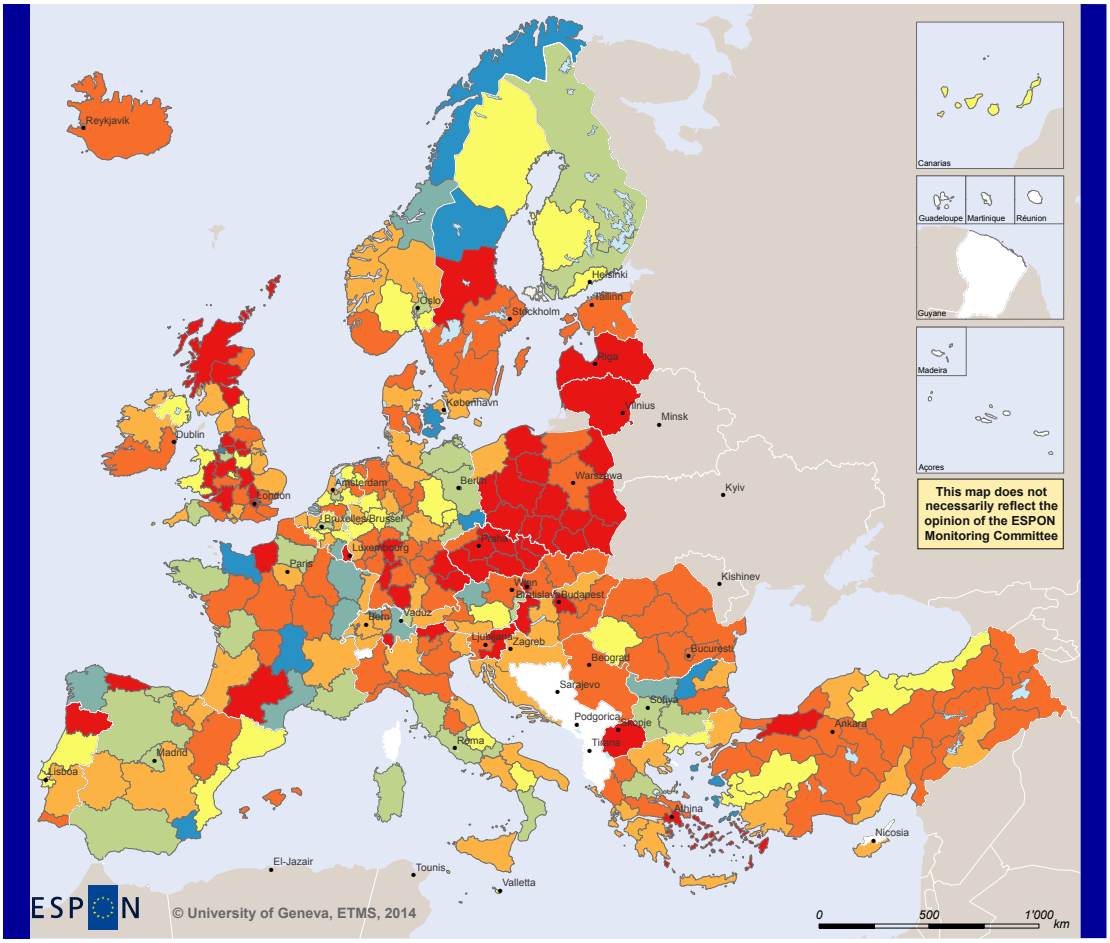
Measuring the strength of local economies

Local human capital is a multi-dimensional notion. Many aspects are difficult to measure, e.g. trust between actors, openness to new ideas and initiatives and entrepreneurial spirit among citizens. Educational attainment is one of the aspects that can be monitored. It reflects the level of investment in higher education, and provides an indication of the capacity of the labour force to meet market demands. Despite the fact that high education profiles in all regions do not necessarily fit with the respective economic structure or employment opportunities, high education generally is presumed to improve the capacity of individuals to adapt to a diversity of professional situations. A larger proportion of persons with tertiary education also makes possible to develop higher added-value economic activities.

Therefore, national and sub-national investments in higher education enlarge employment possibilities and economic development perspectives. Between 2008 and 2012, there has been a considerable growth in the share of population 30-34 year old with tertiary education (Map 6.1). Overall, in Europe this proportion has risen from 31% to 35.7% (+4.7 points) from 2008 to 2012. The limited employment opportunities in the aftermath of the crisis may have contributed to this positive trend, as it encouraged a greater proportion of young people to continue the studies and to postpone their entrance in the labour market.

The increase of young adults with tertiary education was particularly strong in central and eastern Europe. The highest growth was observed in the Czech Republic, Poland, Slovenia, Slovakia, and Hungary, as well as in Latvia and Lithuania.

Map 6.1: Share of population aged 30-34 years with tertiary education, 2008-2012



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Regional level: NUTS 2
Source: ETMS, 2014
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Evolution of the share of people aged 30-34 with tertiary education between 2008 and 2012
In percentage points

-12.7
-4.0
-2.0
0.0
2.0
4.0 ← EU28+3 average = + 4.1 perc. points
8.0
18.3

No data

On the other side, other regions experience significant drops in the proportion of people between 30 to 34 year old with tertiary education, e.g. Basse-Normandie and Auvergne in France (-12.7 and -6.8 percentage points, respectively), Dresden (-6.8 points), as well as in Northern Norway, Mid Nordland (Sweden), Sjælland (Denmark) and Murcia (Spain). Some of these regions are located close to areas with strong growth in the proportions of graduates with tertiary education, which may suggest the attraction of a neighbouring regions in terms of job opportunities and growth.

It should also be noted that the share of young persons with tertiary education varies quite considerably within countries. In the United Kingdom, rates range between 33.3% in Merseyside and 73.1% in Inner London and 60.4% in Eastern Scotland. In Belgium, 34.2% of 30-to 34-year olds have completed tertiary education in Hainaut, against 57.7% in Brabant Walloon. These differences reflect the regional economic structures and respective divisions of labour. This situation poses challenges to economic convergence between regions, as regions with higher proportion of young adults with tertiary education are normally regions with a strong economic structure and offering more job opportunities in high value-added sectors.

Achieving a high employment rate therefore presupposes different types of job creation depending on the region considered. This is one of the policy objectives of the Europe 2020 Strategy, with the target of 75% employment rate among persons aged 20 to 64.

In the EU as a whole there is not considerable progress in this respect since the beginning of the economic crisis. The overall employment rate has stagnated between 68 and 69%, with a weak downward trend. However, this overall figure includes important regional nuances between European regions and cities.

Over the period 2008-2013, the economic crisis has led to sharp drops in employment rates mainly in Southern Europe (Map 6.2). In 10 out of 13 Greek regions, more than 10% of the working age population has changed status from “employed” to “non-employed”. The labour markets in Spain, Cyprus, and parts of Bulgaria, Portugal and Croatia are also strongly affected by the crisis.

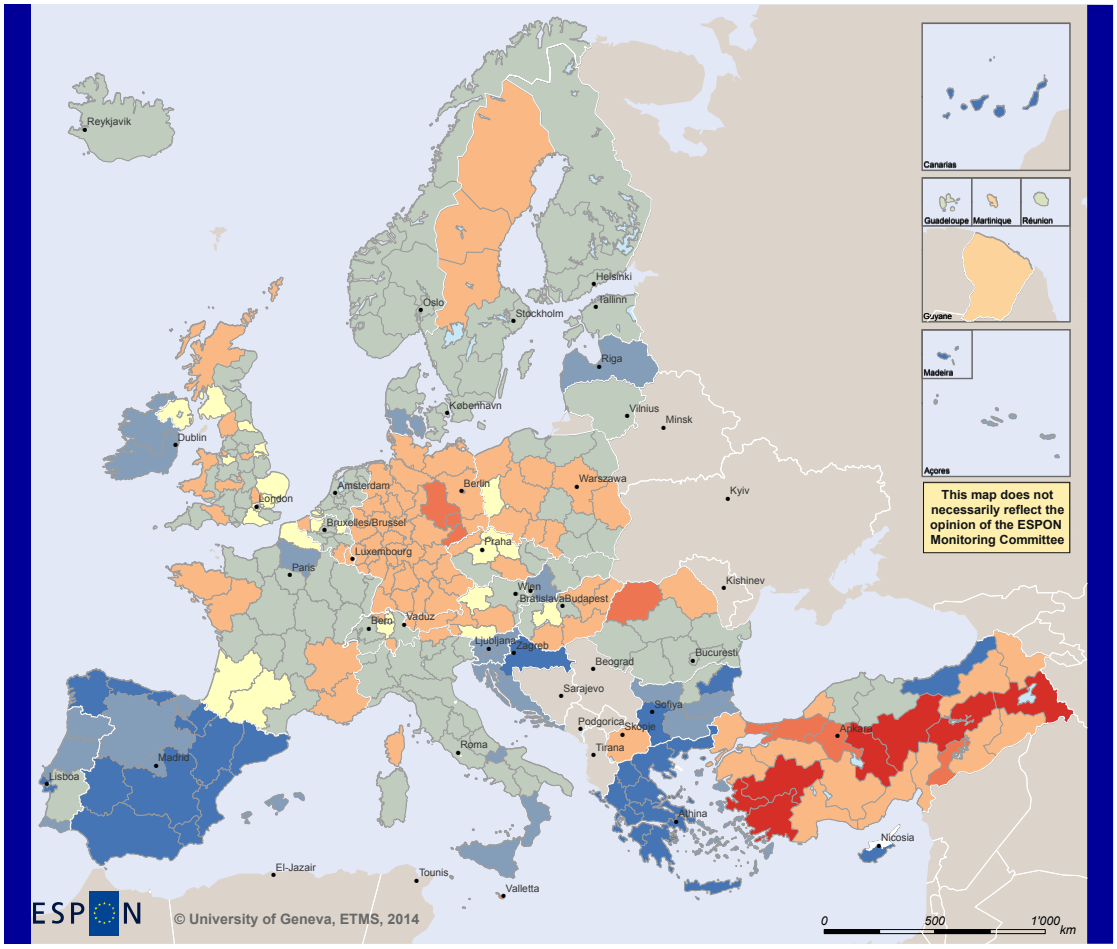
Strong reductions in employment rates have also been observed in Ireland, southernmost Italy, Latvia, southern Denmark, Slovenia and Picardie (France), as well as in western Slovakia.

By comparison, Germany, Turkey, Macedonia and South-Eastern France (Provence-Alpes-Côte d’Azur and Rhône-Alpes) fare rather well, as well as large parts of Poland and a number of regions often considered “peripheral” in their national contexts. The Highlands and Islands and western Wales in the United Kingdom, northern Sweden, Bretagne, Pays de la Loire, Martinique and Guyane in France, western Austria and northernmost Romania are examples of regions experiencing an increase of employment rates.

However, these figures need to be interpreted with caution. In some of these regions, the increase in employment rates may primarily be linked to out-migration and ageing rather than to a dynamic economy. e.g. in eastern parts of Germany and Hungary, North Sweden and the North-East region in Romania.

High employment rates contribute to increase disposable household income levels, even if other factors also intervene. Disposable income reflects the extent to which economic development benefits the inhabitants of each region. However, it should be kept in mind that a significant proportion of the disposable income results from redistribution between regions, e.g. through public employment, transfers of income between family members, social benefits, and other support schemes and pensions.

Map 6.2: Change in employment in the population aged 20-64 years, 2008-2012



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Change in employment rates between 2008 and 2012

Employed persons / Population between the ages of 20 and 64 years
In percentage points

-14.7
-8.0
-5.0
-0.4
+0,4
+5
+8
+15.2

No data

Evolution of disposable income

The economic recession of the past years brought economic challenges to many regions and increase social exclusion.

Between 2008 and 2011, development in household income show greater diversity and bigger differences between European regions than in previous periods (Map 6.3). In particular it shows that some countries and regions have been hit more severely by the economic downturn. Greece, Latvia, Romania and Spain are very illustrative in that regard. In these countries the decrease of income levels can be explained by a decline in employment, lower wages and a significant reduction in public employment. In Thessaly in Greece, households have on average lost almost one fourth of their income (23.7%), and more than 15% in Latvia (16.4%).

The United Kingdom has also experienced severe losses of household income in more peripheral regions such as Northern Ireland (-9%) and North East Scotland (-8.3%), but also in its central regions (-7.8% in Inner London, -6.25% in Outer London). In Ireland, the loss has been significantly stronger in the more urbanised Southern and Eastern Region (-6.7%) than in the rest of the country (-3.5%). Similarly in Italy, a number of high-income regions experience a relatively strong decline in household incomes. This reflects the importance of income redistribution limiting income losses in lagging regions.

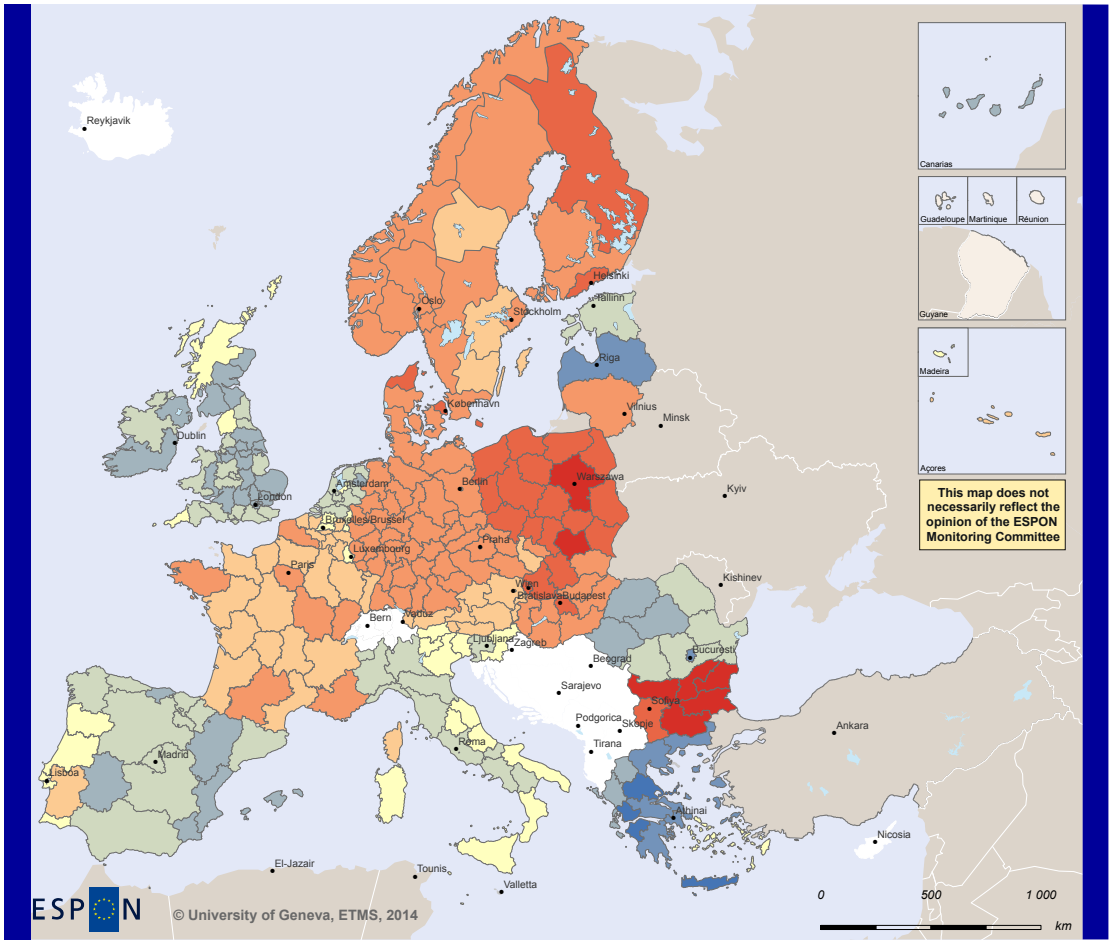
By contrast, Poland and Bulgaria were the only countries where household income registered an increase in all regions. This increase exceeds 20% in some cases. The increase in Poland is all the most striking as the value of the national currency against the Euro fell by around 10% in the second half of 2008, and has remained relatively stable at this low level since. In Bulgaria, growth rates are partly explained by fact that average household income levels are very low compared to the European average. The average household income in Severozapaden (Bulgaria) for example grew from 3,800 to 4,700 euros. This growth occurs in spite of a less positive evolution when it comes to the proportion of young professionals with tertiary education compared to the rest of EU 13.

The starting levels of other “catching-up economies” in eastern Europe, notably in the capital regions of Slovakia and Hungary, are significantly higher. Average household income in the Bratislavský (Slovakia) grew from 14,400 to 16,000 euros. In Közép-Magyarország (Budapest region, Hungary), it increased from 9,100 to 10,600 euros. In general these different trends in the development of household income suggest that the “catching-up” process is not linear, but that it has not necessarily been halted by the economic crisis.

Regions reporting gains in household income can also be found in the Nordic countries, as well as across Germany, Austria, and France. As starting levels are much higher in these regions, growth levels are considerably lower than in Poland or Bulgaria.

Despite of the economic crisis, most European regions register an increase in household disposable income. However, it is worthwhile to make a distinction between those that have experienced contraction or expansion in their labour productivity levels. Comparing household income trends to GDP growth one observes that a number of regions that suffered a reduction in the GDP after 2008 still manage to maintain or increase levels of disposable income per inhabitant (Map 3.4). This is the case of north-western France and eastern Germany. This pattern is related to border effects, notably in the Belgian Province of Luxembourg and in Trier, probably due to income generated by cross-border commuter households residing in these regions but working in Luxembourg. The same applies to cross-border commuters residing in south Sweden but working in the region around the Danish capital city (Hovedstaden).

Map 6.3: Change in household income, 2008 - 2011



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Change in household income measured in euros between 2008 and 2011
In percent

-23.7
-20.0
-10.0
-5
-2
+2
+5
+10
+20
+42.2

No data

Conclusion

As noted in the Territorial Agenda 2020, strengthening EU's human capital is essential to boost global competitiveness. In many EU regions, the share of people aged 30 to 34 with tertiary education is growing. However, there are still considerable variations between and within countries. The widening gap between regional endowments in terms of highly skilled labour reflects their variable capacity to assert themselves in a global competition and attract high value-added economic activities.

In terms of employment, little progress has been made in relation to the target set out by the Europe 2020 Strategy, especially in countries hit by the economic crisis. Increasing employment rates are only found in a limited number of regions in Europe.

Trends in household income show a pattern that is relatively different from the change in GDP. Admittedly, some regions registered both GDP and income growth (e.g. Warsaw in the Mazowieckie region), and GDP and income losses are observed in e.g. Greece and Spain. However, household incomes and many other regions continue to grow in spite of a decline in GDP, e.g. in Finland, Lithuania and large parts of France. These different patterns show that some regions are more resilient to economic shocks than others. Differences in resilience are largely linked to national economic regulation and income redistribution policies.

Overall, the chapter provides evidence of a catching-up process, in which most EU13 regions have a growing share of highly skilled young professionals. A significant number of these regions have also proven to be resilient to experience continued growth of income levels in spite of the economic crisis. These results are encouraging with regards to the contribution of EU13 regions to the Territorial Agenda priority of building strong local economies that are capable of asserting themselves in global economic competition.

However, as illustrated by trends in household incomes and employment rates, the crisis has revealed structural weaknesses in a number of regions, including large parts of southern Europe, the Baltic States and the British Isles.

7 Improving territorial connectivity for individuals, communities and enterprises

Territorial connectivity is observed by comparing levels of accessibility to maritime freight hubs and to flights in and out of the European Union with levels of GDP. This makes it possible to assess the extent to which high GDP is associated with accessibility.

Additionally, this section considers patterns of concentration of population in areas with high accessibility to urban areas and compares regional levels of broadband access.

Accessibility is a precondition for jobs and growth, but also a key factor for economic development and reduction of disparities across European cities and regions. Many Europe's economically high performing regions also are the most accessible. However, this does not imply that accessibility necessarily leads to economic growth. Many European regions are lagging behind despite investments in transport infrastructures.

This chapter explores linkages between accessibility and economic performance in Europe. In doing so, various dimensions of accessibility are considered, in particular physical accessibility at different scales by air and through maritime freight hubs and its relation to economic performance and polycentric development of the EU territory. In addition, accessibility to urban centres and its functions are also addressed and the possible relation to demographic trends is explored. The provision of services in urban centres and their diversified labour markets are important in the daily activities of individuals and companies.

Finally, it is also important to consider accessibility to broadband and its possible contribution to reduce regional disparities and improve access of more remote regions in Europe. Information and Communication Technologies (ICT) can help to overcome geographic distance and connect regions.

Accessibility and economic performance

Accessibility has strongly improved in Europe in the last decades, bringing obvious benefits to more peripheral regions in eastern and southern Europe.

Europe is therefore making substantial progress in improving territorial connectivity for individuals, communities and enterprises.

Accessibility is a key factor to facilitate interactions between individuals, communities and businesses. Good accessibility can offer advantages when it comes to access to raw materials, suppliers, markets etc. Therefore, accessibility is an important prerequisite for regional economic development.

In a globalised economy, access to container ports is an important factor for both imports and exports of goods. For this reason, access to major container ports is of strategic importance. Europe's main container ports are Rotterdam, Hamburg, Antwerp and Bremerhaven. The port of Rotterdam stands out among northern European ports, serving both as a maritime hub and a continental gateway.

Many European core regions have high GDP per capita and good access to ports (Map 7.1). Outside the North Sea Region, regional maritime accessibility levels are associated with particularly high GDP mainly in the Nordic Countries, southern Ireland, the Aberdeen area, Greater London, Île de France, large parts of the Alps (southern Germany, Austria and northern Italy) and in the regions of Bilbao, Madrid, Athens and large parts of the Greek archipelago.

Regions where GDP per capita values are comparatively low considering their access to major container ports are mainly found in eastern Europe (including eastern Germany), Portugal, southern Spain, southern Italy, single areas in the United Kingdom and some regions in the north-east of France. Most of these areas had for various reasons, including economic transition and the economic crisis, GDP/capita levels below the European average in 2010.

Accessibility by air is important for other types of businesses, e.g. advanced services, decision-making functions and tourism. The two major international airports in Europe are London and Paris, followed by Frankfurt, Amsterdam, Madrid, Rome and Munich. Regions close to these airports benefit from comparative advantages for their economic development.

High accessibility to passenger flights in and out of EU27 tends to be associated with high GDP per capita. This is the case for Inner London and Paris (Île de France) (Map 7.2). Their "global city" status, of which high air connectivity is one of the components, grants these cities a number of economic advantages over other regions. In Frankfurt, Amsterdam, Madrid, Rome and Munich, the link between high air accessibility and high GDP is also obvious.

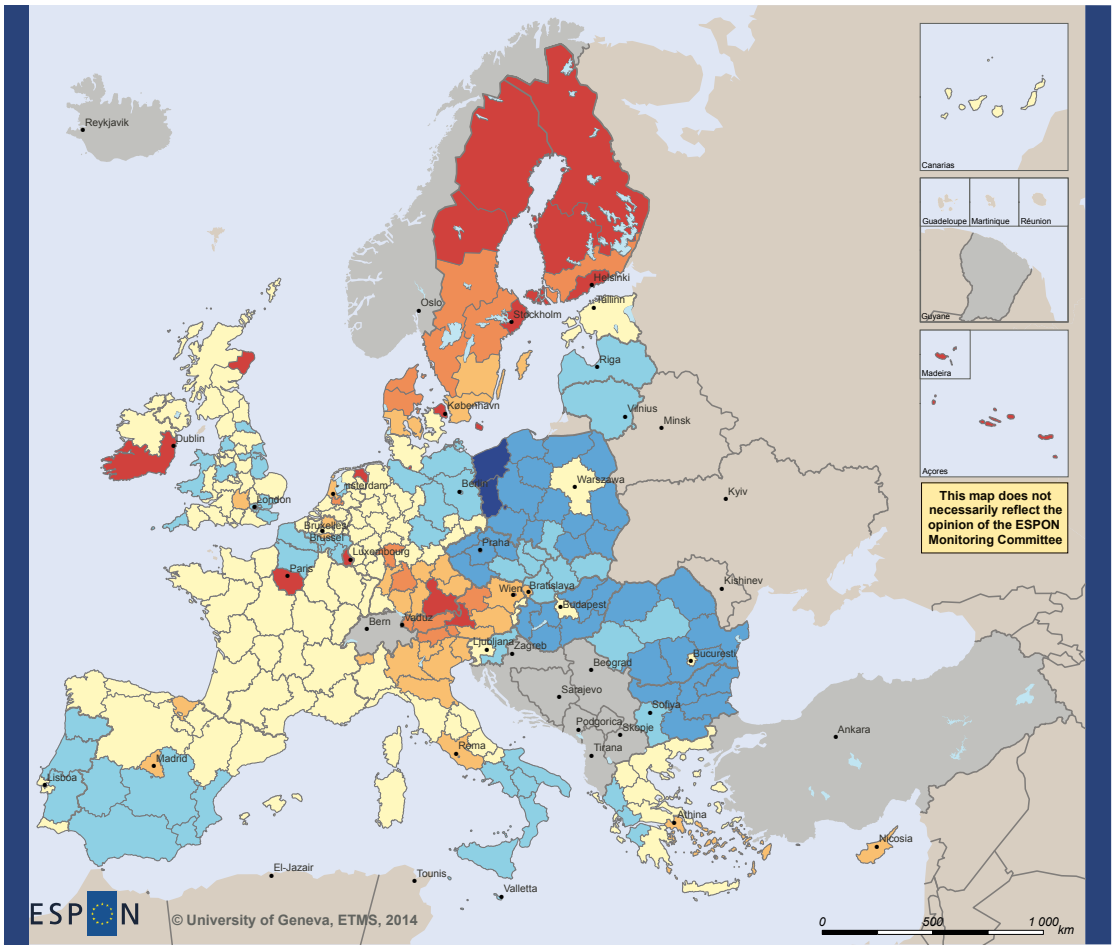
In the rest of Europe high accessibility by air is observed in regions with high GDP. This concerns for example the Nordic countries, Scotland, southern Ireland, the Basque country and Navarre and a number of Alpine regions..

Overall, in terms of accessibility and economic performance, a pattern emerges opposing the core and north of Europe on the one side to the eastern and southern regions on the other. However, high GDP in northernmost Europe and in Ireland confirm that low accessibility does not necessarily limit the potential for growth. The range of economic development strategies that can be envisaged in less accessible regions and localities has been broadened by new Information and Communication Technologies (ICTs). A number of activities within research and development, industrial design and other high value-added services require a minimum level of accessibility to develop.

Trends in accessibility to urban centres

European citizen's daily life is mainly influenced by their access to cities and towns. This determines their access to higher education and employment opportunities, as well as public and private services. Changes in accessibility can in this respect result from different factors: through improvements in transport infrastructure, but also through a concentration of population in the areas with easy access to towns and cities. When areas with low accessibility to cities are losing population, the average level of accessibility to cities increases.

Map 7.1: Global maritime freight accessibility and economic performance, 2010



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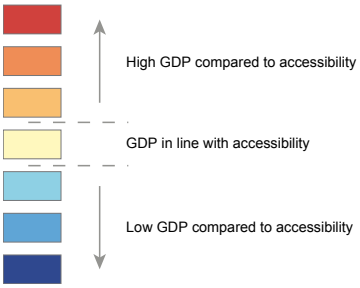
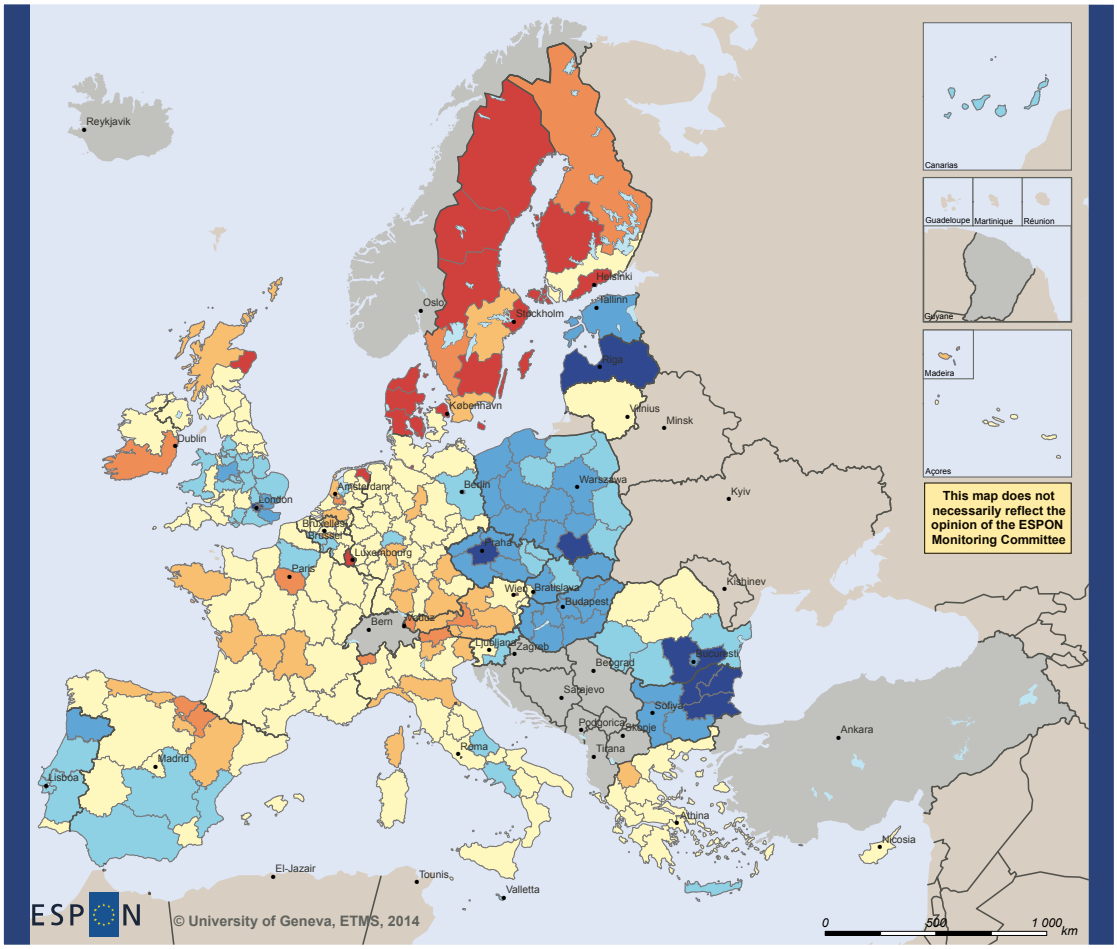
Maritime freight accessibility and GDP/capita
Colours reflect distances to regression line



no data

Map 7.2: Global passenger air accessibility and economic performance, 2010



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Air passenger accessibility and GDP/capita
Colours reflect distances to regression line

High GDP compared to accessibility

GDP in line with accessibility

Low GDP compared to accessibility

no data

On this basis, this sub-section explores accessibility to urban centres and its relation to population growth and population decline in their functional vicinity. This makes possible to understand how concentration of population contributes to increase accessibility to urban centres.

Changes in share of population living in commuting distance to cities with more than 100,000 inhabitants (2001 – 2011) show that population tends to concentrate in the vicinity of urban areas in most European countries (Figure 7.1). However, transfers of population between cities and rural areas between 2001 and 2011 were of limited magnitude. They only concern more than 2% of the total population in Estonia, Finland, Norway, Bulgaria and Sweden. In Estonia, the share of inhabitants living in cities with less than 100,000 inhabitants has also fallen by over 1%. The population has instead concentrated around the capital city of Tallinn. In 2011, 43.4% of the population in Estonia was living within commuting distance to Tallinn. By comparison, a more polycentric pattern can be identified in Finland and Norway, with demographic growth in the capital region and in medium-sized cities (100,000 - 400,000 inhabitants).

In Germany, the share of rural population remains almost stable, but there is also some decline in cities between 100,000 and 750,000 inhabitants. Mainly large cities increase their relevance in terms of population growth. The population therefore prefer to move closer to areas with good access to metropolitan services, instead of intermediate and small cities.

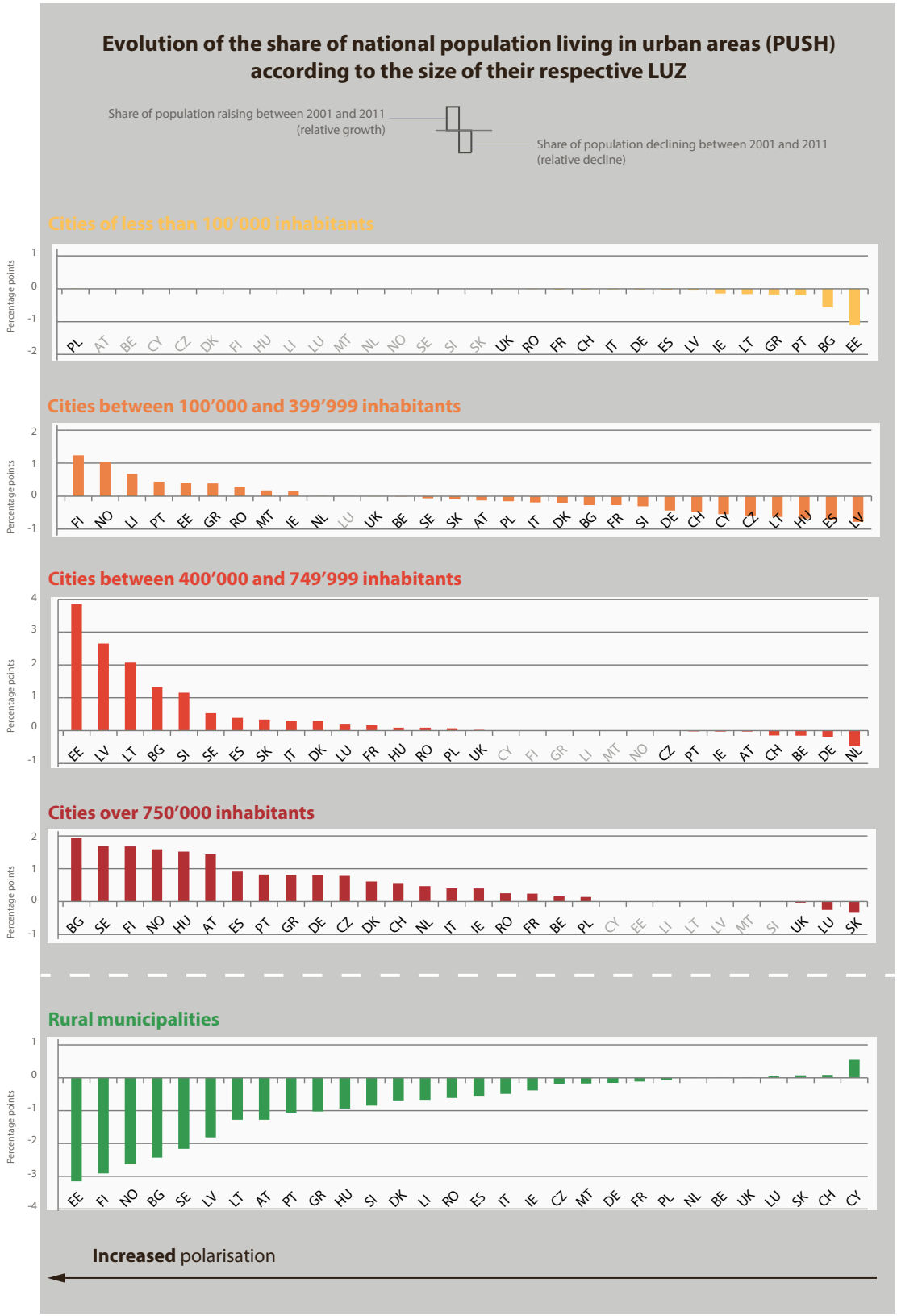
In some countries such as the United Kingdom, France and Romania, the share of population in urban and rural areas remain stable. However, these situations are not comparable: while less than 4% of the United Kingdom's population lives beyond commuting areas of cities with more than 100,000 inhabitants, the corresponding figures are 9% in France and 21% in Romania.

The concentration of population observed in Norway, Finland and Sweden is also linked to the fact that respectively 55%, 44% and 36% of these countries' population lives beyond commuting areas of cities with more than 100,000 inhabitants. There is in other words "rural" population susceptible of moving to a city. High shares of "rural population" are found in a number of other countries outside the core of Europe: Greece (36%), the Baltic countries (32 to 33%), Ireland (31%) and Bulgaria (26%).

Other important component of urban accessibility is related to investments in transport infrastructure, which allows for the expansion of the functional urban areas. However, this poses environmental concerns and challenges as it increases costs and energy consumption.

The objectives of preserving balanced settlement patterns, reducing energy consumption, fossil fuel dependency and improving access to urban areas are partly contradictory and would require a detailed monitoring beyond the scope of the present report. A particularly important issue to be monitored at the European level is the access to public and more sustainable transport. Other possible answers to this challenge are linked to the use of ICTs and teleworking. In this regard, broadband access is an important parameter.

Figure 7.1: Change in the shares of population living within commuting distance of cities of different sizes 2001 - 2011



Broadband access

Information and Communication Technology makes possible to overcome physical barriers linked to distance. As a result, new development strategies focused on this topic can be of great relevance in some regions, especially in remote and isolated regions. Furthermore, E-Services and E-government are important instruments to improve the quality and cost of public and private services across Europe. However, this requires a good level of ICT infrastructures and service for businesses, as well as for households.

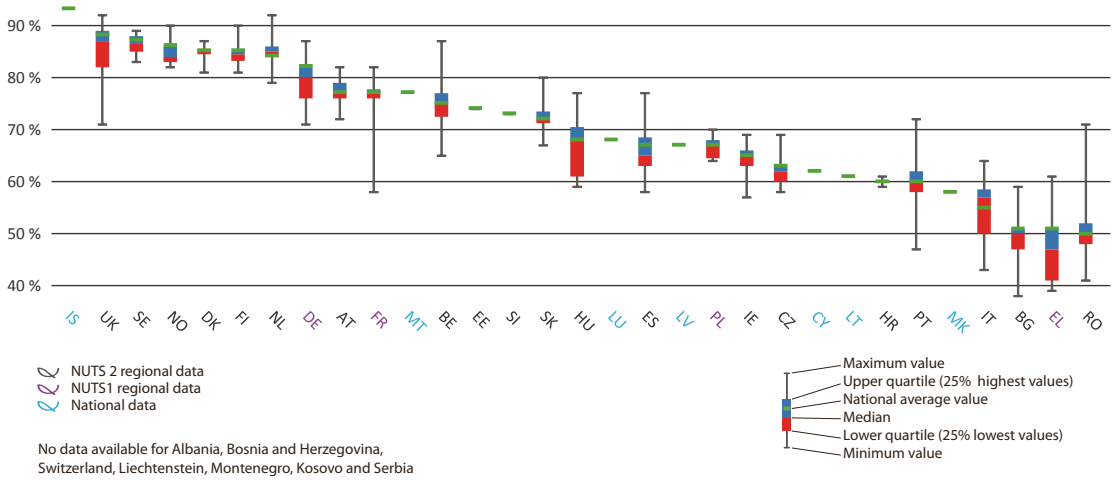
In general, there are important differences in Europe in broadband access of household, mainly between north-south and east-west (Figure 7.2). The Nordic countries show the best coverage in terms of broadband access, despite the fact of having sparse population and settlements spread over a large territory. The United Kingdom scores very highly in most regions in the central parts of the country, but in peripheral regions accessibility to broadbandis relatively low.

Broadband access is not determined by geography, but depends on the ambition and quality of policies seeking to connect more users. This is illustrated by the fact that countries of relatively comparable size and with similar population patterns register different patterns of broadbrand access. For instance, Belgium scores lower than the Netherlands; France scores lower than Germany.

In the European context, the lowest values in terms of broadbrand access are observed in Romania, Greece, Italy, Macedonia and Portugal. In these countries, only approximately half of households have access to broadband.

These figures show that while high broadband access partly compensates low physical accessibility in northern Europe, southern and eastern Europe are lagging behind when it comes to broadband coverage. However, broadband networks are expanding rapidly, and a progressive convergence in terms of access and service is expected to happen. The main challenge on the longer term will be to provide broadband to more peripheral and sparsely populated areas within regions, e.g. through public private partnerships.

Figure 7.2: Broadband access in households at NUTS 2 regions, 2011



The central, red and blue parts of each boxplot correspond to values observed in 50% of regions with "middle values". The top and bottom lines reflect the percentage of broadband access in the best and worst performing regions, respectively.

Conclusion

Overall, accessibility has been improving in large parts of Europe. The highest relative changes of accessibility has occurred in regions in eastern Europe, in Spain, southern Italy, Greece and a number of French regions. These figures indicate that progress is being made with regard to the objective of European integration through improved accessibility in peripheralregions.

In terms of possible linkages between accessibility and economic performance, there is an overall disparity between the core and northern Europe on the one side and the eastern and southern regions in Europe on the other side.

Continued efforts to improve accessibility should consider the possibilities that broadband access can bring to open up to more peripheral regions and less accessibile regions, e.g through TEN-T infrastructure projects and the Digital Agenda.

In many parts of Europe, a progressive concentration of population around larger cities can be observed. Increasing demand for good accessibility to services and the expansion of functional economic areas enhance demographic and economic imbalances. This may pose new challenges in terms of urban accessibility and urban environment in the largest agglomerations.

8 Managing and connecting ecological, landscape and cultural values of regions

Two aspects of ecological balance and landscape preservation are considered:

- Soil sealing which reflects the intensity and form of urbanisation and infrastructure developments. Changes between 2006 and 2009 at the municipal level and 2009 for city regions;
- Continuity of green areas (landscape fragmentation) is important for wildlife and for the preservation of landscape qualities. Comparing green area continuity in city regions reflects some important differences in urban form across Europe.

The present chapter focus on two aspects of environmental sustainability and landscape protection of particular importance from a territorial perspective. The first of these is soil sealing, which corresponds to the loss of agricultural and natural land areas as a result of urban development and transport infrastructure. The European Commission has identified soil sealing as the main cause of soil degradation in the EU. It is said to put biodiversity at risk, increase the risk of flooding and water scarcity and contribute to global warming. The European Commission emphasises that the total surface area of cities in the EU has increased by 78% since the 1950s, whereas the population has grown by only 33%. On this basis, it published Guidelines on best practice to limit, mitigate or compensate soil sealing in 2012.

The second aspect is loss of continuity in green areas (normally referred as "landscape fragmentation"). The fragmentation of green areas by roads, railroads and built-up areas isolates living environments and natural biotopes. It is a major cause of the decrease in many European wildlife populations. In 2011, the European Environment Agency states that it also "prevents access to resources, facilitates the spread of invasive species, reduces habitat area and quality, and subdivides and isolates animal populations into smaller and more vulnerable fractions". Furthermore, loss of continuity in green areas increases exposure to noise and pollution from traffic, and reduces the scenic and recreational qualities of landscapes.

The preservation of landscape qualities is also important from a cultural perspective, as a number of landscapes recognised for their cultural value are challenged by current developments.

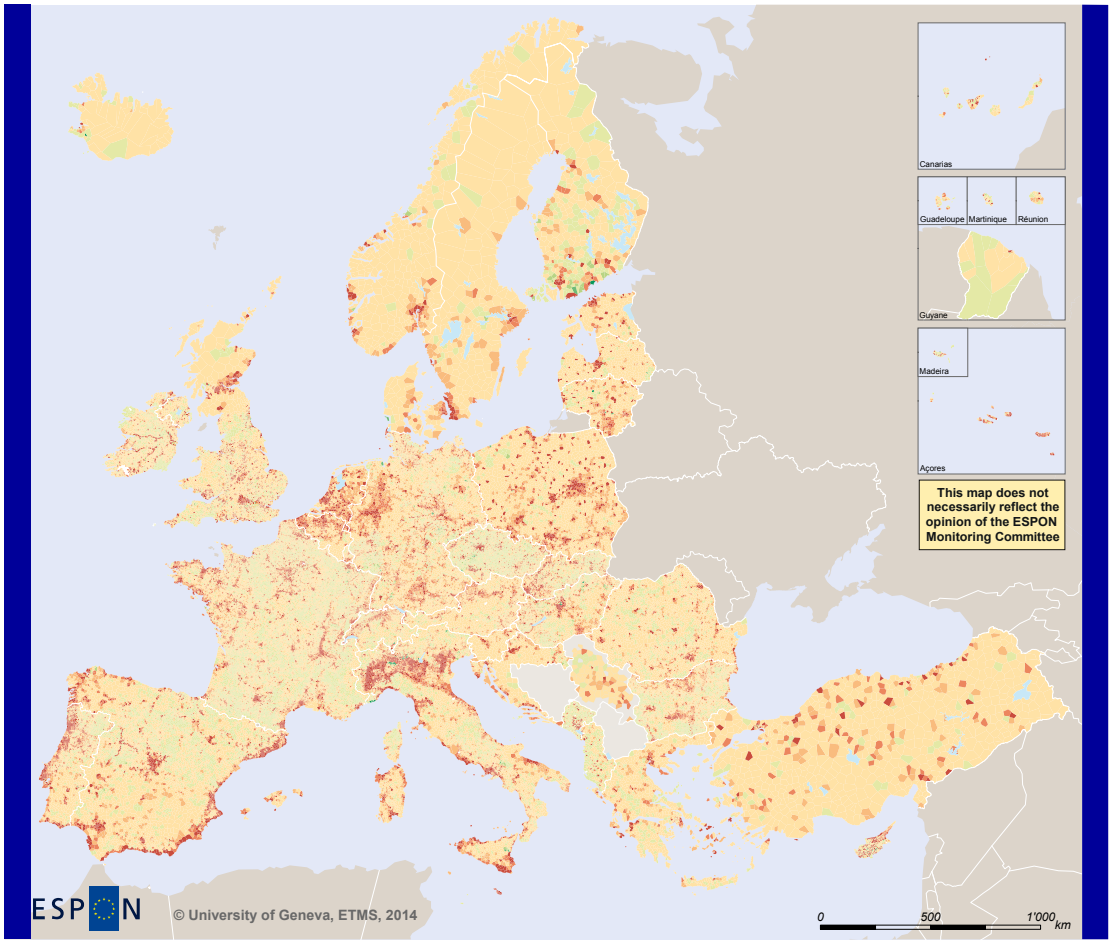
Considering that these phenomena are particularly linked to the expansion of cities and of their influence in surrounding rural areas, the present chapter focuses particularly on degrees of soil sealing and landscape fragmentation in so-called Larger Urban Zones (LUZs). Larger Urban Zones include a densely populated core area with continuous built-up areas, and a surrounding area from which a proportion of daily commuting flows to the core area.

Soil sealing in Europe

Limiting soil sealing is not explicitly mentioned as an objective by the Territorial Agenda. However, this is a component to consider when addressing urbanisation and infrastructure development, preservation of landscapes and formulation of responses to the increased risks of floods and heat waves in a context of climate change. Addressing soil sealing does not necessarily presuppose setting limits to development, but rather implies a promotion of smart local and regional development. For example, brownfields and other types of abandoned areas can be reused. One can also promote more compact cities, and transportation infrastructure requiring less land.

The evolution of soil sealing between 2006 and 2009 in local administrative areas (LAU), shows an increase of soil sealing levels in most of Europe's urbanised areas, reflecting trends of concentration of population in urban areas, and along a series of major transportation axes (Map 8.1). Only few areas experience a significant reduction of soil sealing, e.g. around Helsinki in southern Finland or in some parts of the Ligurian cost close to the French border.

Map 8.1: Change in soil sealing, 2006-2009



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Change in soil sealing (2006-2009)

Percentage point difference between proportion of sealed surface in 2006 and in 2009

-7.40
-0.5
-0.25
-0.1
0
+0.1
+0.25
+0.5
+59.61

No data

Extensive continuous areas registering an increase of soil sealing can be observed. This particular concerns some coastal areas, e.g. the Mediterranean coast of Spain, the coast of Brittany in France, the Swedish side of the Öresund straight and a number of sections of the Italian coast, including the coastlines of Sicily and Sardinia. Most of the Po Valley also experiences an intense and continuous increase of soil sealing. Other areas of extension of soil sealing include the Oxford area West of London, most of the Scottish Central Belt and large parts of Flanders, the Netherlands and the German Ruhr area.

The diversity of areas affected by increased soil sealing reflects both the expansion of urban settlements and economic activity areas, and an increasing land use for recreational purposes and housing, e.g. along coastal areas. However, soil sealing is mainly linked to proximity to urban areas, and it is therefore relevant to compare levels of soil sealing in cities.

Urban sprawl is one of the main factors of soil sealing in Europe, as built-up areas and transport infrastructure are allowed to expand without giving proper consideration to the efficiency of land-use. The highest levels of soil sealing tend to be found in Europe's most populated and dense cities. The concept of "compact cities" has been promoted for decades to try to preserve open spaces also in urban areas. In 2011, the Cities of Tomorrow Report from the European Commission considered that future urban development should "be characterised by a compact settlement structure with limited urban sprawl".

Currently, in a belt stretching from the West Midlands to the German Ruhr area, and including parts of Belgium and the Netherlands, a large proportion of the territory is covered by urban areas with high degrees of soil sealing (Map 8.2).

In southern Europe, cities such as Lisbon, Barcelona, Milan and Naples display a striking combination of a large geographic extent and a high degree of soil sealing. By comparison, Madrid, Marseilles, Rome and Sofia can boast relatively lower soil sealing values.

By contrast, the lowest levels of soil sealing are observed in central Spain and in the Nordic countries (except Helsinki and Copenhagen).

Levels of green area continuity in Larger Urban Zones

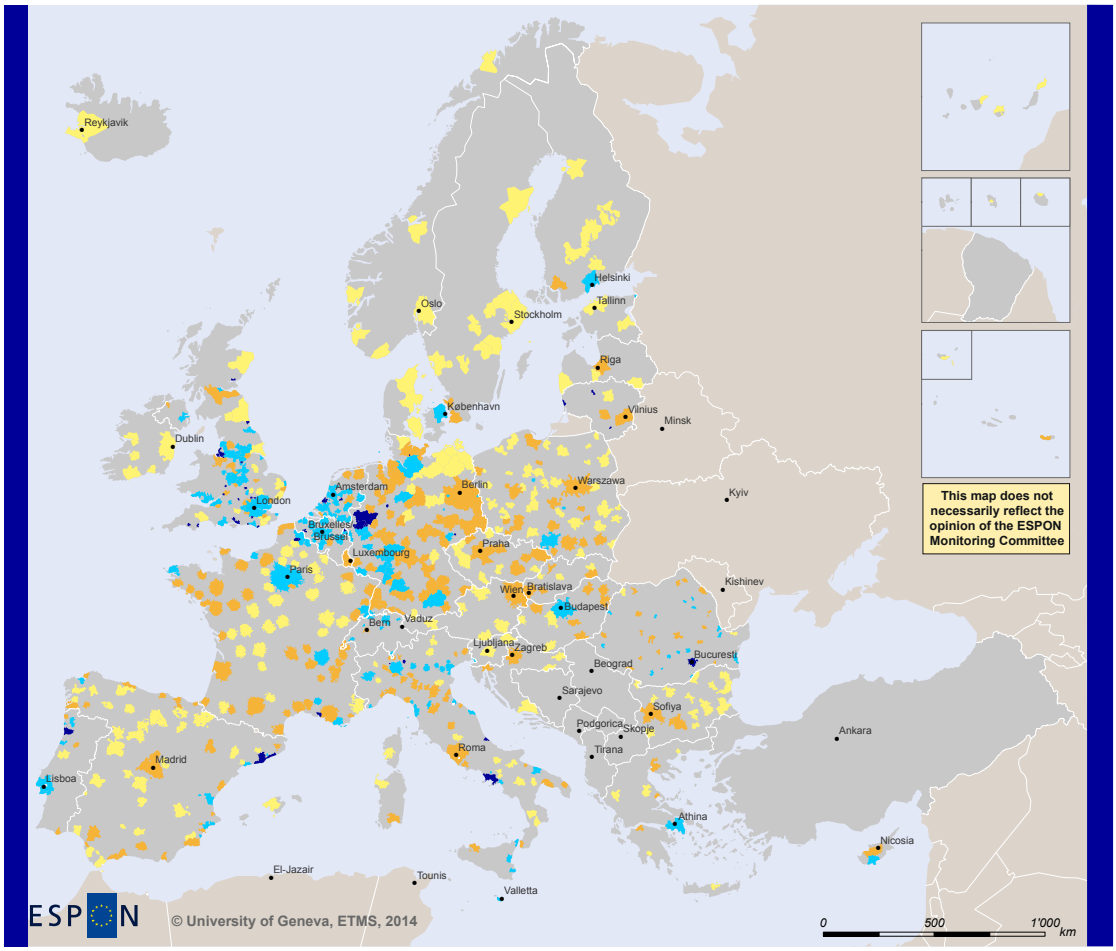
Loss of green area continuity and soil sealing are related, but not necessarily strictly correlated (Map 8.3).

For example, the low levels of green area continuity observed of cities in the West Midlands and in South-East England is relatively low in comparison to their soil sealing values. Levels of green area continuity are also significantly lower in Belgium than in the Netherlands, while soil sealing values are equivalent in these two countries. Green area continuity is relatively well preserved in Athens and Naples, in spite of high soil sealing values. These differences reflect the diversity of urbanisation patterns in Europe, and confirm the potential for exchanges of good practice.

Low green area continuity values are found in the Italian Po Valley (Lombardia, Veneto, and Emilia Romagna regions), in most of France, in southern and western Germany, southern Italy and along the coasts of northern Portugal and Galicia. The lowest values are observed in peripheral parts of Europe.

The relative homogeneity of values within individual countries (e.g. France, Germany) suggest that national urban planning traditions, commuting habits and urban transport policies have a significant influence on the preservation of green area continuity. However, the influence of the geographic setting of cities is also obvious, e.g. the lower fragmentation of Alpine cities in Italy.

Map 8.2: Soil sealing in Larger Urban Zones (LUZ), 2009



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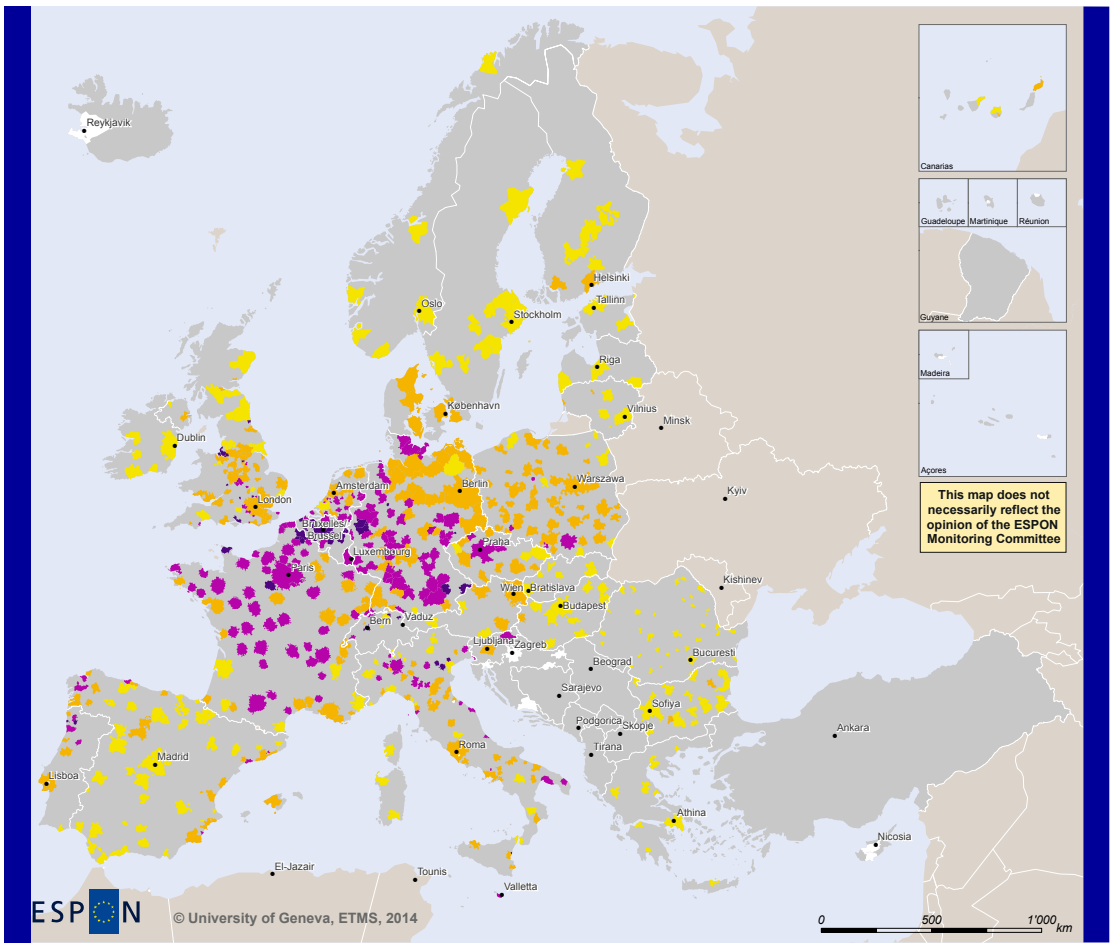
Soil sealing in city regions (2009)
Percentage of area covered by impervious materials (source: ETMS calculations based on EEA data)

0.2
4 Low soil sealing
8
19 High soil sealing
46.4

Map 8.3: Green area continuity (fragmentation index) in Larger Urban Zones (LUZ)



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Green area continuity in city regions (2009)

Index calculated considering motorways, freeways and other major roads
as well as railroads and built-up areas as elements breaking green area continuity.

No data

0.44

15

High green area continuity

56

159

Low green area continuity

909

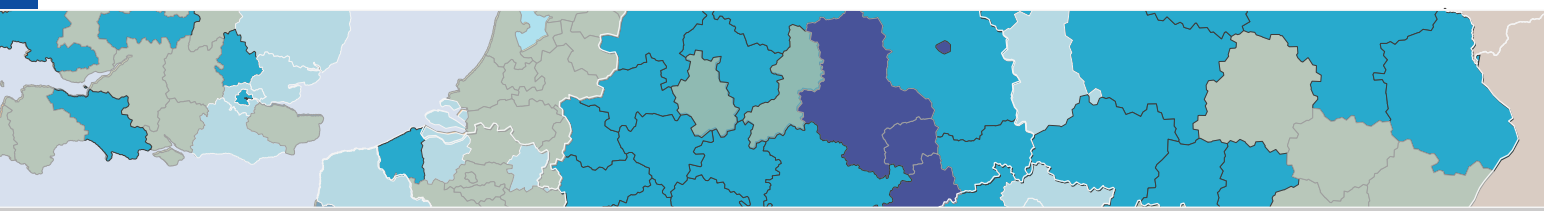
Conclusion

The nature and biodiversity of Europe's regions as important conditions for long-term sustainable environment seems in many places to be under pressure and at risk due to urban development and infrastructure building. Trends in increasing soil sealing and loss of green area continuity in and around a number of European cities are illustrative of this situation.

The Territorial Agenda priority of "a protection and enhancement of cultural and natural heritage" has still to be promoted by actions aimed at preserving valuable landscapes from urban pressures and limiting the extension of built-up areas. The existing differences between countries demonstrate that exchanges of good practice could be of key importance in improving regional and local identity by strengthening awareness and responsibility of local and regional communities.

Glossary

EEA	European Environmental Agency
EFTA	European Free Trade Association
ESIF	European Structural and Investment Funds
ET2050	Territorial Scenarios and Visions for Europe (ESPON Applied Research Project)
ETC	European Territorial Cooperation (Formely the INTERREG Community Initiative)
EU	European Union
EU13	Member States that joined the EU in 2004, 2007 and 2013: BG, CZ, EE, HR, CY, LV, LT, HU, MT, PL, RO, SI, SK
EU15	Member States that joined the European Union before 2004
Eurostat	Statistical Office of the European Union
GDP	Gross Domestic Product
GEOSPECS	Geographic Specificities and Development Potentials in Europe (ESPON Applied Research Project)
ICT	Information and Communication Technologies
LAU	Local Administrative Units
LUZ	Larger Urban Zones
NUTS	Nomenclature of Territorial Units for Statistics
PUSH	Potential Urban Strategic Horizons
PPS	Purchasing Power Standards
SME	Small and Medium-sized Enterprises



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The ESPON 2013 Programme supports policy development in relation to the EU 2020 Strategy, EU Cohesion Policy and the Territorial Agenda for the European Union 2020.ESPON provides territorial evidence that include comparable information on regions and cities, analyses of trends and impacts of policies, scenarios on territorial prospects, data, indicators and tools that can help policy makers and practitioners in applying a European and even wider territorial perspective on the territorial capital and development potentials of their region, city or larger territory.

This Territorial Monitoring Report is a result of the ESPON project on establishing a European Territorial Monitoring System (ETMS). The system builds mainly on indicators and tools developed within ESPON projects and shall serve as a basis for continued monitoring of European territorial trends.

The report focuses on the Territorial Agenda for the European Union 2020, and the policy priorities included in this policy document. It intends to support policy makers in understanding whether the European territory develops in the direction of the policy ambitions decided, or whether there is a need for further policy consideration.

The purpose of this report is to inspire policy making by communicating important findings of the ESPON 2013 Programme on the ongoing territorial dynamics. Policy makers, practitioners and interested researchers, experts and citizens are very welcome and invited to study and use the provided territorial evidence in practice.

All results, data, indicators and tools of the ESPON 2013 Programme are available for free on www.espon.eu.

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