



Facts & Figures
November 2014

Outline of Key European Territorial Dynamics



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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.

Disclaimer: The content of this report is based on the results of applied research projects by transnational teams of research taking part in the ESPON 2013 Programme. As such, the maps and texts do not necessarily reflect the opinion of the ESPON Monitoring Committee.

This publication serves the purpose of providing brief, factual information on a selection of important key figures and main territorial trends affecting European regions, specific types of territories, metropolitan regions, cities and rural regions. It is not pretending to be a comprehensive analysis.

The Facts and Figures booklet outlining Key European Territorial Dynamics is based on the European Territorial Monitoring System (ETMS), a platform developed by ESPON aimed at providing a continuous monitoring of territorial trends and structures in Europe.

The publication follows the structure of the ETMS platform that takes up the five themes, listed below, corresponding to approx. 30 territorial indicators. For each theme, the selected indicators are chosen to reflect the current debate and policy aims related to European Territorial development and cohesion.

1. Economic competitiveness, (innovative, effective, resilient and open economies)
2. Environmental qualities (energy efficiency, managing environmental quality, land and resource potentials)
3. Human capital (people on move, ageing society, skills and education)
4. Social inclusion (creating new jobs for all, living standards / territorial attractiveness, promoting social and spatial inclusion, and efficient modes of service provision)
5. Access to territory and services (state of transport accessibility, intensity and patterns of territorial cooperation, evolution of the digital infrastructure).

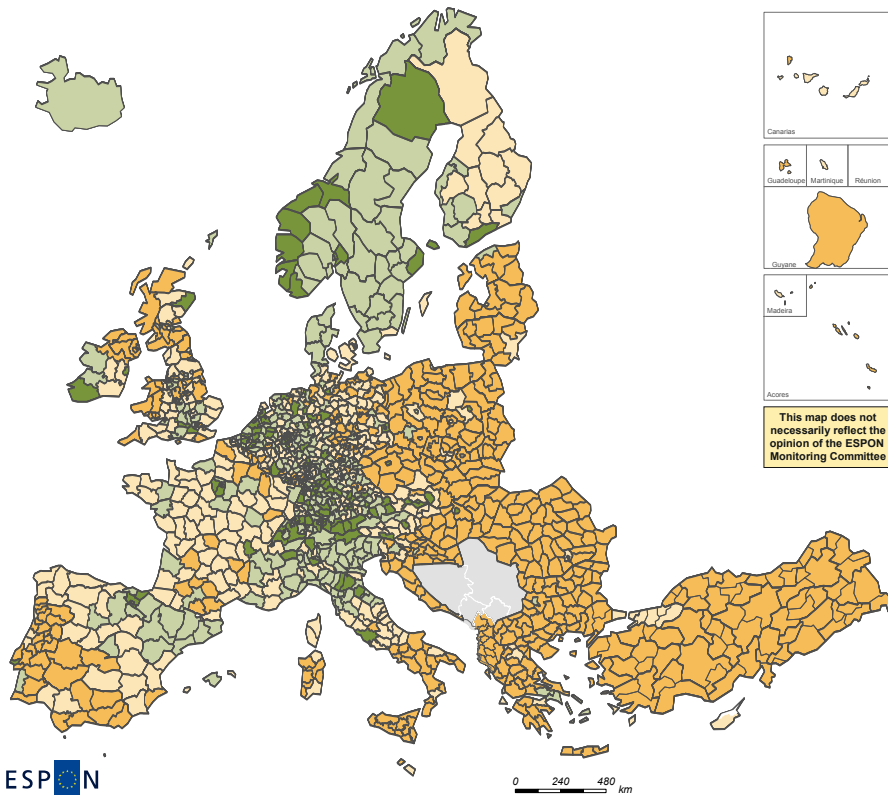
Within these 5 themes the booklet addresses the territorial dimension of the following dynamics:

- Economic growth across Europe
- Labour market and innovation
- Greening of energy sources
- Managing of environmental issues
- Population growth in urban regions
- Ageing in Europe
- Employment for social inclusion
- Social divides
- Connectivity of territories
- Delivery of services of general economic interest

European Territorial Monitoring System - ETMS

The ETMS is a platform providing territorial evidence on the current territorial dynamics of European regions and territories in relation to the objectives and priorities set out in the EU2020 Strategy, the Cohesion Policy and the Territorial Agenda 2020. Monitoring territorial dynamics at different geographical levels and for different types of territories provides policy makers evidence-based information on current development opportunities and challenges across Europe.

GDP per capita (PPS), 2011

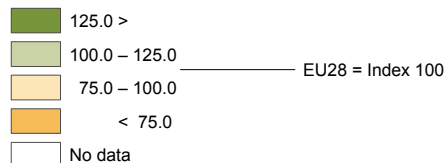


ESPON

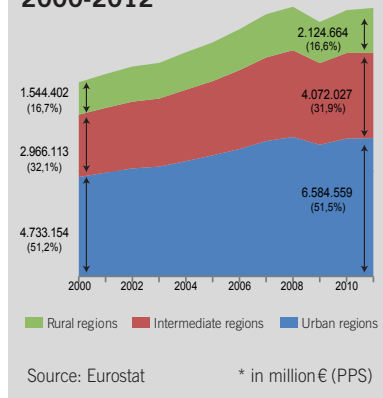
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Regional level: NUTS 3 (IS: NUTS 0)
Source: ESPON ETMS, 2014
Origin of data: Eurostat, NSIs 2014
EuroGeographics Association & UMS RIATE for administrative boundaries
2011 data, except: AL 2009, CH 2010, LI 2008

GDP (PPS) per capita in 2011



Evolution of total GDP* in urban and rural regions in Europe 2000-2012



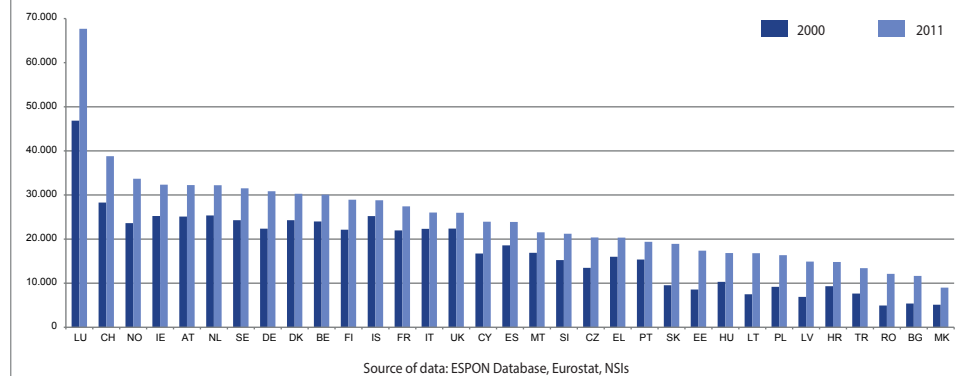
Economic growth across Europe

The economic crisis impacted countries and regions unevenly and the ongoing convergence of regions came to a halt. Southern European countries have been hit the hardest while a few countries like Germany and Poland were largely unaffected. Recovery from the crisis is in progress, however somewhat fragile. Evidence from previous crises suggests that for some regions may take more than a decade to reach the level of GDP and employment as before the crisis.

Urban regions in Europe contribute with 51.5% of total GDP, even though they only entail 42% of the European population in 2012 (Nuts 3, urban_rural typology). Adding intermediate regions, they together make up for 83.4% – of European GDP. This share is growing as a result of increased urbanisation.

One objective of the Territorial Agenda 2020 is to ensure competitiveness of all regions based on strong local economies, rural regions included. If the largest urban areas tend to grow faster than rural or intermediate regions, this results in concentration of economic activities and growing national imbalances in territorial terms.

Evolution of GDP per capita, 2000-2011 (in PPS)



Labour market and innovation

R&D is a headline indicator of the Europe 2020 Strategy's "Smart growth" priority, aiming at combined public and private investment levels to reach 3 % of EU GDP by 2020. Investments in R&D in the long run will help innovation, create new products/services and boost creation of new jobs.

In Europe, investments in R&D are mainly concentrated in Nordic regions and some central-western regions, including R&D investments between 2.5 % and 4 % of the GDP. No regions in the southern and Eastern countries show R&D expenditures above 2.5 %; and many are below 1 % of GDP. This may have long term implication for these regions to participate in a smart and sustainable growth – not least within the new EU ambition of a strong and innovative bioeconomy, aiming at boosting rural regions based on agriculture, forestry and fisheries unless they import innovation from other regions.

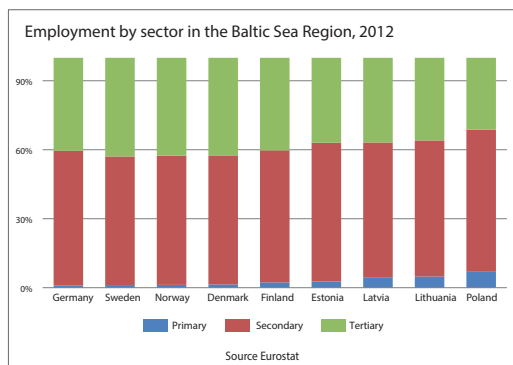
Zooming in on the Baltic Sea Region, in the Eastern countries, agriculture, fishery and forestry still represents more than 4.5 % (in Poland 7 %) of the labour force. In other countries like Sweden, Denmark and Finland this share is stable between 1-2 % (but still slowly falling), while in Germany the share is 0.9 %.

R&D European Regions

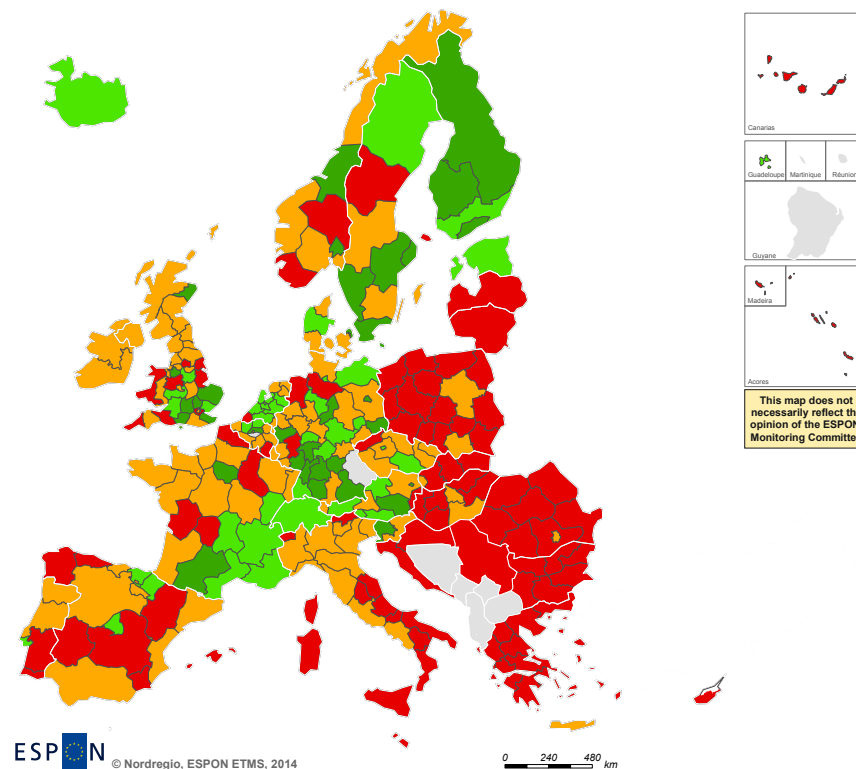
(2011, NUTS 2, R&D expenditure (GERD) % of GDP)

1. Prov. Brabant Wallon (BE) 8.8%
2. Braunschweig (DE) 7.7%
3. Cheshire (UK) 6.6%
4. Stuttgart (DE) 6.5%
5. East Anglia (UK) 5.3%
6. Hovestaden (DK) 5.1%
7. Midi-Pyrénées (FR) 5.0%
8. Tübingen (DE) 4.8%
9. Trøndelag (NO) 4.7%
10. Sydsverige (SE) 4.5%

Source of data: Eurostat



Total R&D expenditure as share of GDP, 2011

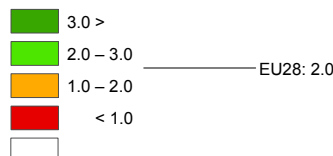


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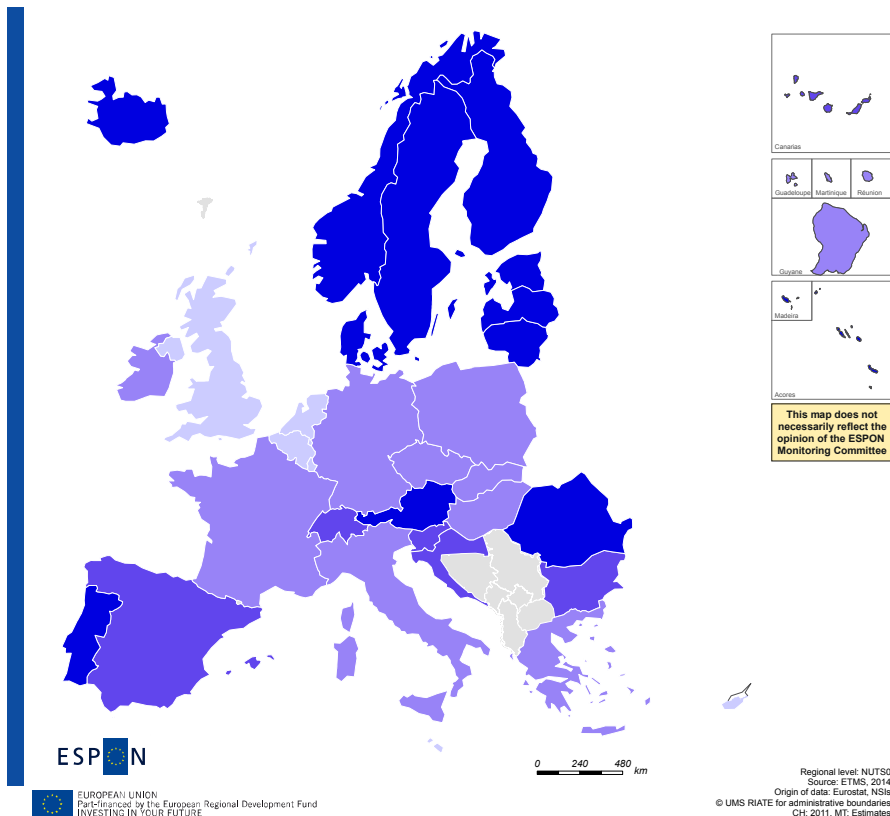
Regional level: NUTS 2 (CH, RS: NUTS 0)
Source: ESPON ETMS, 2014
Origin of data: Eurostat, NSIs 2014
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2010 data, except: FR91 (Guadeloupe) 2009, CH 2008

R&D intensity in 2011

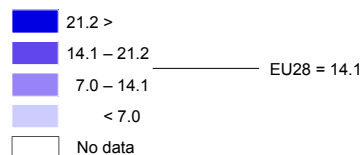
Total R&D expenditure (GERD, in PPS) as a share of GDP (PPS), in %



Share of Renewable Energy in final consumption, 2012



Share of renewable energy in final energy consumption in 2012, % of total



Air pollution in European Cities

(Yearly average 2007-2011, LUZ, Average days per year with particulate matter in the air exceeding the threshold of "PM10")

| | |
|--------------------|-------|
| 1. Timisoara (RO) | 141.5 |
| 2. Sosnowiec (PL) | 124.0 |
| 3. Krakow (PL) | 121.6 |
| 4. Sofia (BG) | 112.7 |
| 5. Craiova (RO) | 112.0 |
| 6. Katowice (PL) | 106.3 |
| 7. Iasi (RO) | 103.0 |
| 8. Padova (IT) | 99.0 |
| 9. Pleven (BG) | 98.2 |
| 10. Nowy Sacz (PL) | 97.4 |

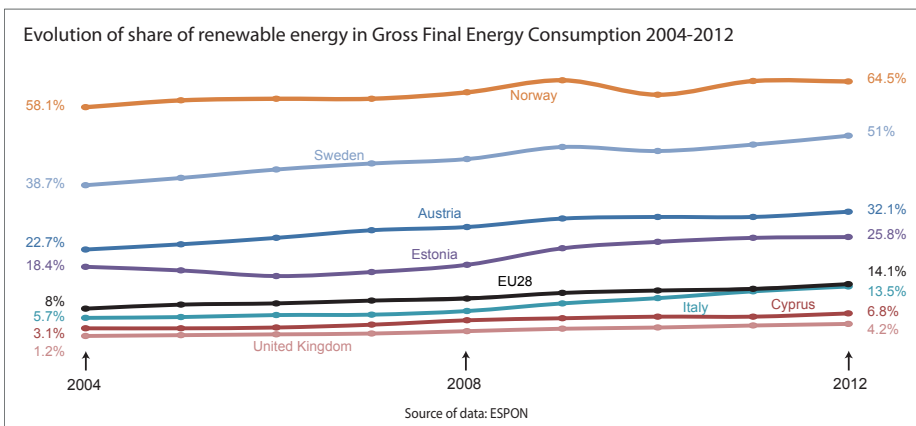
Source: EEA

Greening of energy sources

The Europe 2020 Strategy sets the target at 20% of energy consumption coming from renewable energy sources. Long-term investments in technical innovations, combined with targeted actions by public authorities, individuals and businesses have led to a slow but steady increase in the share of the energy from renewable sources.

Overall, the EU increased the share of renewable energy in the final consumption from 8% in 2004 to 14% in 2012.

Looking closely at national figures, it appears that the Nordic countries, the Baltic States but also Portugal, Austria and Romania have already reached the policy target set for 2020. Other countries, such as the United Kingdom and the Benelux countries are still far from the target. Large countries such as France, Germany, Italy and Poland are currently below the EU average of 14%.



Managing Environmental issues

Climate change, air pollution and soil sealing are aspects of particular relevance to territorial development and sustainable growth. This has been acknowledged by a range of policy documents, including the Europe 2020 Strategy and the Territorial Agenda. It is also reflected in the proposed investment priorities for the ESI Funds 2014-2020.

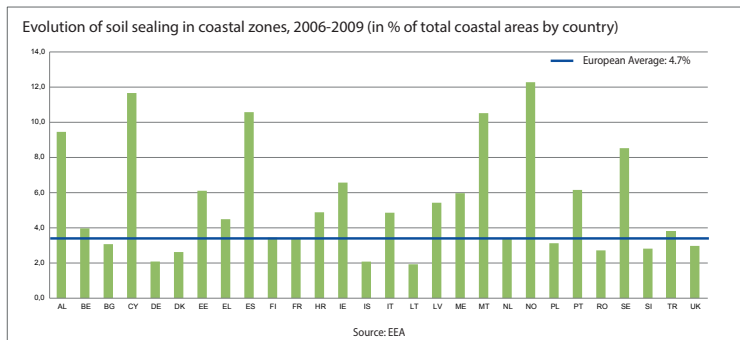
Climate change is a major challenge for Europe. Many mountainous and coastal areas are severely impacted for reasons that vary from coastal storm surges to economic dependency on seasonal tourism.

Central, eastern and northern European regions face virtually no negative impacts or are even witnessing benefits of climate change offering new economic opportunities.

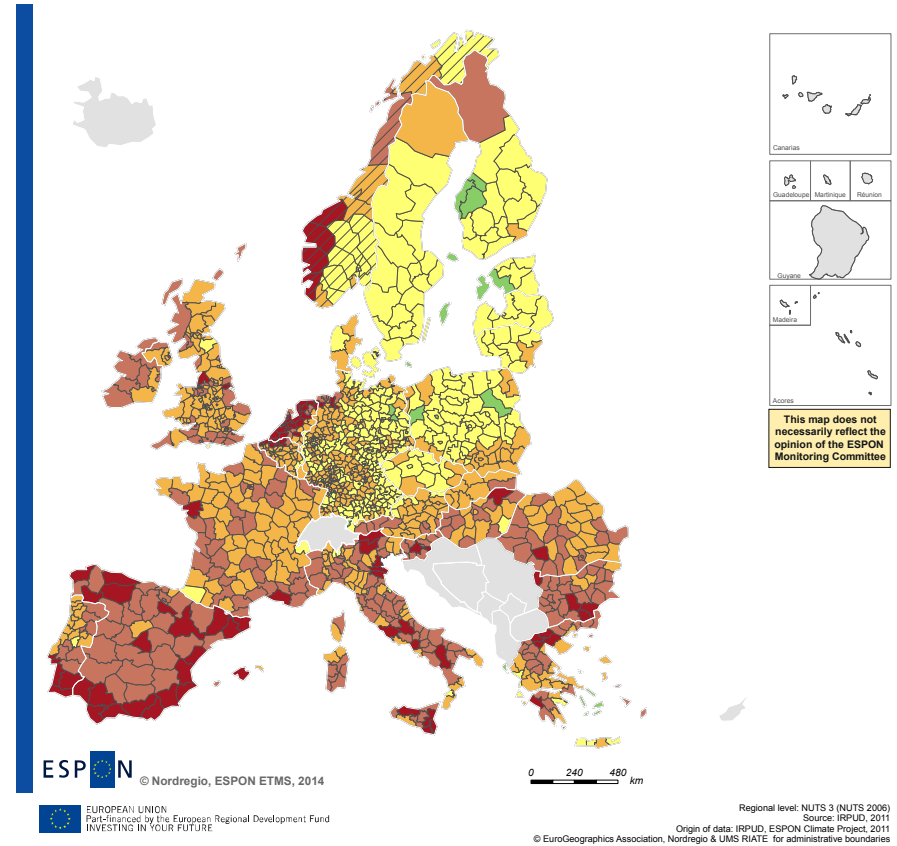
Considering the pattern of varying degrees on impacts, climate change may potentially trigger a deepening of territorial imbalances in Europe by most strongly affecting southern European regions.

Sustainable growth implies also to mitigate the risks inherent to urbanization. Highly industrialised cities of the Eastern EU countries show high levels of air pollution. But many European metropolises face similar challenges.

Finally, high levels of soil sealing decrease possibilities for enjoying the landscape for recreation, limits biodiversity and increase the risk of flooding. Six countries stand out with particularly high increases of soil sealing in their coastal regions: Albania, Cyprus, Spain, Malta, Norway and Sweden.



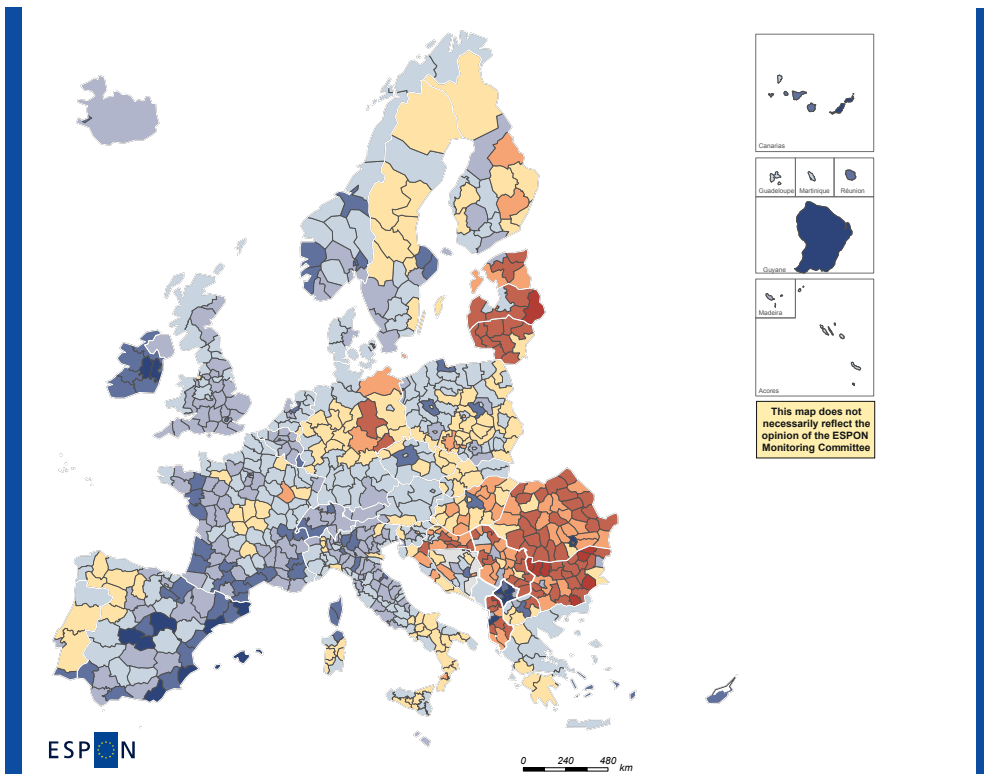
Aggregate potential impact of climate change, 2009



Aggregate potential impact of climate change

- Highest negative impact (0.5 - 1.0)
- Medium negative impact (0.3 - <0.5)
- Low negative impact (0.1 - <0.3)
- No/marginal impact (>-0.1 - <0.1)
- Low/positive negative (-0.1 - >-0.27)
- No data
- ▨ Reduced data

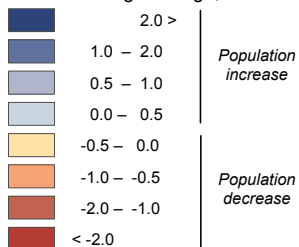
Population Change, 2000-2013



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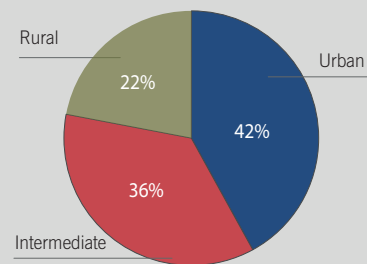
Regional level: NUTS 2/3
Source: ESPON ETMS, 2014
Origin of data: Eurostat, NSIs 2014
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Population change 2000-2013 Annual average change, in %

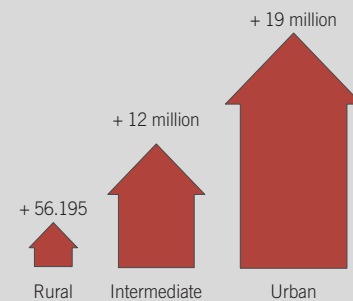


Annual average change 2000-2013, except:
2000-2012: Mecklenburg-Vorpommern (DE), RO, UK;
2000-2010: BH; 2001-2012: AL; 2002-2013: HR;
2002-2010: RS; 2008-2013: TR; 2011-2013: XK

Distribution of population in urban and rural regions in Europe, 2012



Evolution from 1990 to 2012



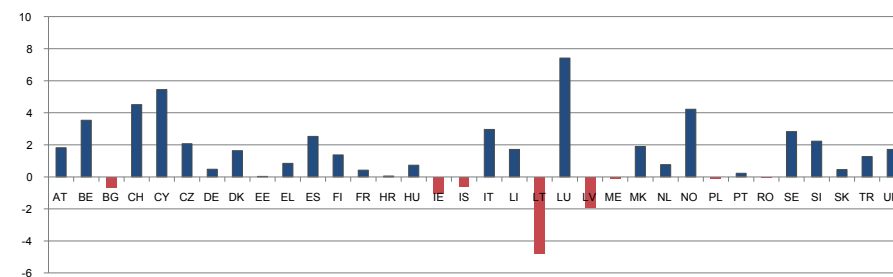
Source of data: ESPON Database, Eurostat

Population growth in Urban Regions

One of the priorities of the Territorial Agenda 2020 is to promote a polycentric and balanced territorial development of the EU as the key element for achieving territorial cohesion. Urban regions concentrate most of the population increase in Europe. However, about 22% of its population lives in rural regions.

The crisis has triggered strong immigration flows that have affected countries and regions from Eastern the hardest. Larger cities and regions in Western Europe, as well as some capital cities in Eastern Europe have received the most. In the short term this points at the need to enhance attention to a long term polycentric and balanced European territory.

Net migration in European Countries, 2007-2012 (in % of total population)



Source of data: ESPON Database, Eurostat

Ageing in Europe

People older than 65 years represented more than a quarter of the active population in Europe in 2012 and 17% of the world population. For the countries and regions that have a high old age dependency ratio, especially in Western and Northern Europe, this certainly introduces future challenges in delivering public services with comparatively less tax income revenues. Notably the birth rate in countries such as Germany, Hungary and Latvia has dropped consistently since the early 1990s and raised the old dependency ratio there.

Educational Attainment in Regions

(2012, NUTS2, % pop. 30-34 with tertiary education in relation to 2007 position)

| | | |
|-----------------------------------|-------|-----|
| 1. Inner London (UK) | 73,1% | +2 |
| 2. Basque Country (ES) | 61,7% | -1 |
| 3. North Eastern Scotland (UK) | 60,4% | +5 |
| 4. Oslo and Akershus (NO) | 59,3% | -2 |
| 5. Brabant Wallon (BE) | 57,7% | -1 |
| 6. Eastern Scotland (UK) | 56,7% | +20 |
| 7. Stockholm (SE) | 56,4% | +4 |
| 8. Copenhagen Capital Region (DK) | 55,7% | +2 |
| 9. North Yorkshire (UK) | 55,0% | +57 |
| 10. Outer London (UK) | 54,4% | +26 |

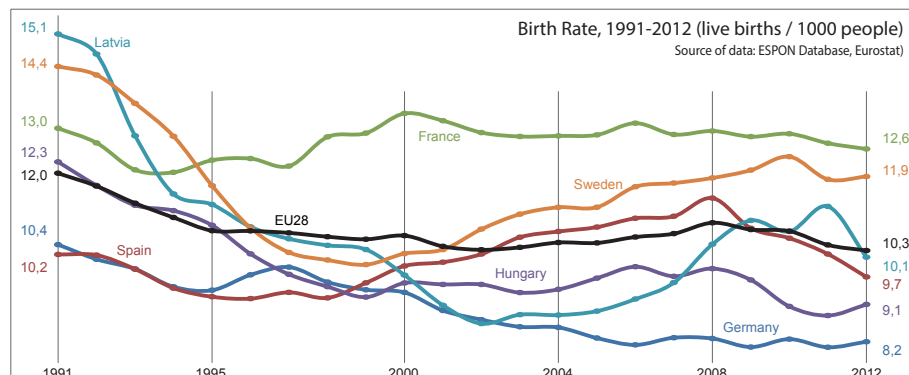
Net Migration in European Regions

(2007-2012, NUTS2, Average net migration)

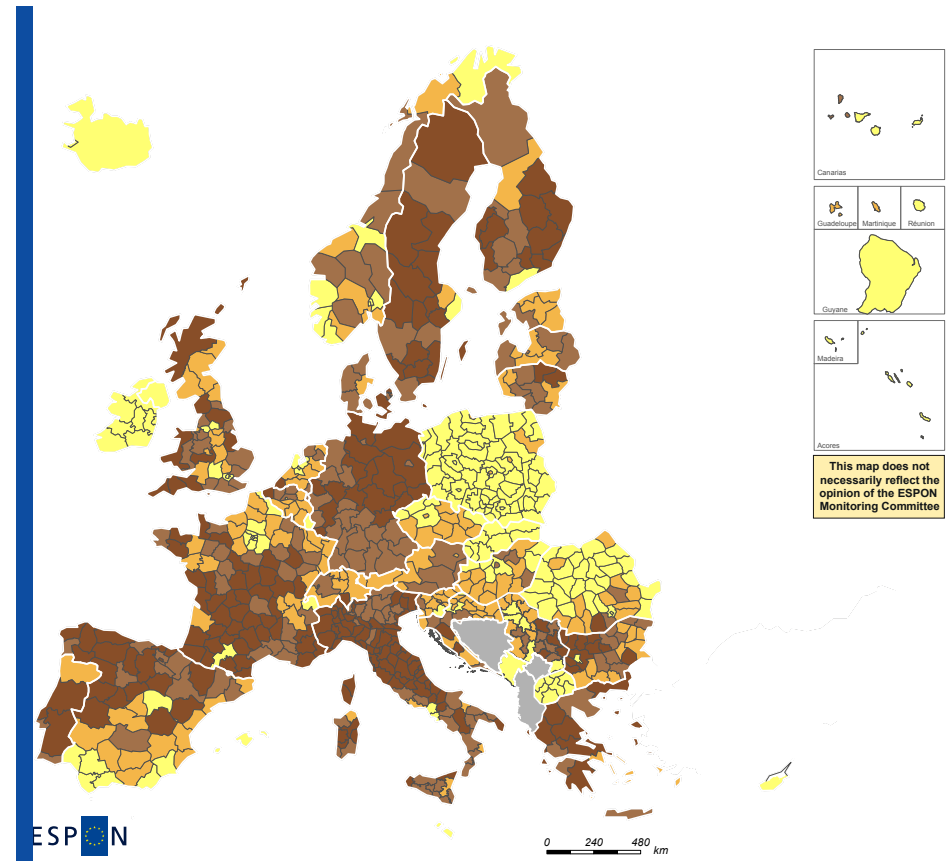
| | |
|-------------------|-----------|
| 1. Roma (IT) | + 41.609 |
| 2. London (UK) | + 33.388* |
| 3. Prague (CZ) | + 28.845 |
| 4. Berlin (DE) | + 27.848 |
| 5. Budapest (HU) | + 27.441 |
| 6. Munich (DE) | + 24.087 |
| 7. Brussels (BE) | + 23.052 |
| 8. Stockholm (SE) | + 21.829 |
| 9. Madrid (ES) | + 21.442 |
| 10. Vienna (AT) | + 19.034 |

Source of data: ESPON Database, Eurostat

* London data available for 2007-2010 only

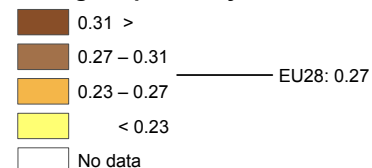


Old Age Dependency ratio, 2012



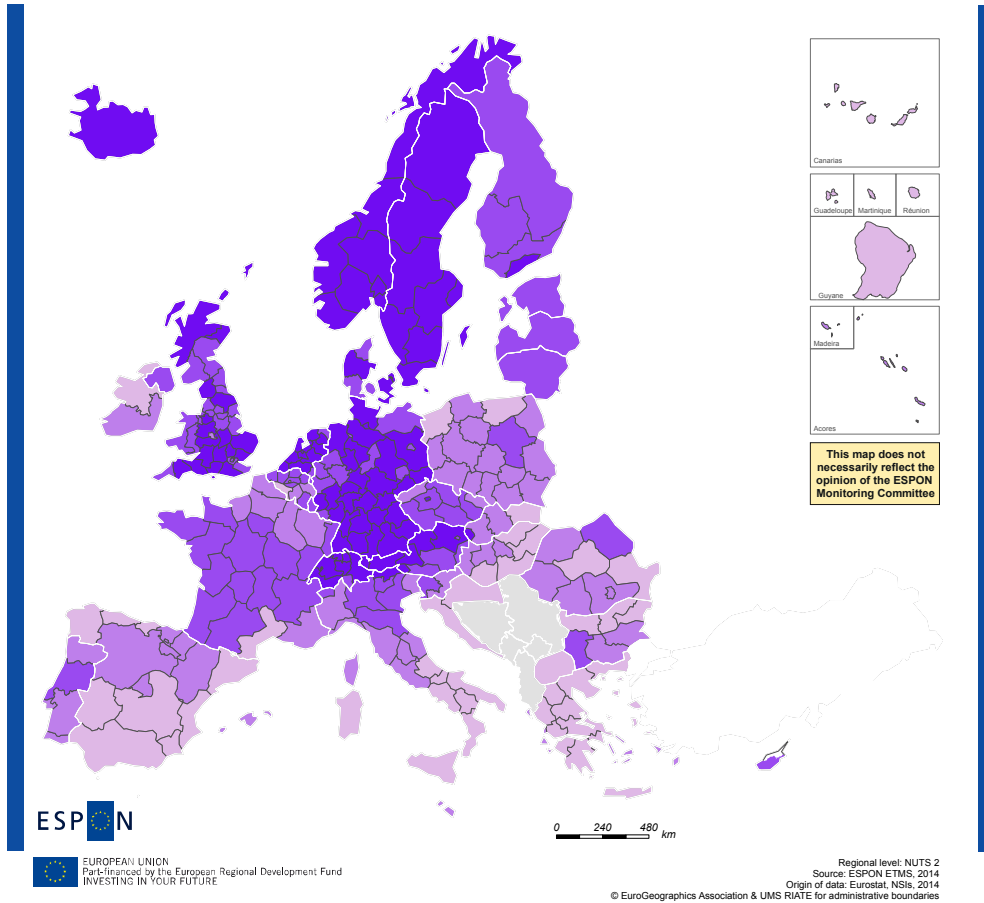
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Old age dependency ratio 2012

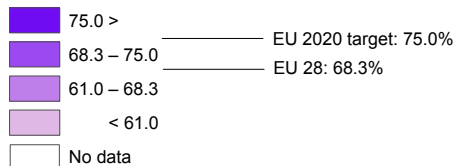


Regional level: NUTS2G (mix)
Source: ESPON ETMS, 2014
Origin of data: Eurostat, NSIs & Nordregio, 2014
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Population aged 65+ years as share of population aged 15-64 years
NUTS2 regions: AT, BE, CH, DE, EL, NL, PT & UK.
All other: NUTS3, 2011 data: DE: Mecklenburg-Vorpommern, UK: Northern Ireland, ES: Illes Balears, Canarias, 2010 data: MT, RS

Employment rate, 2012

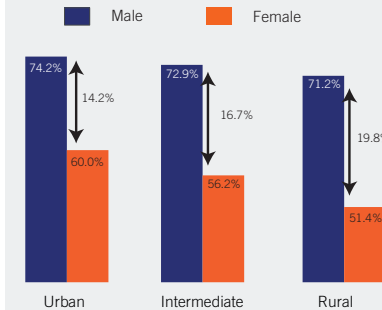


Employment rate in 2012, in %



Employment Rate by Gender in urban and rural regions, 2012

(% of population aged 20-64 by gender)



Source: Eurostat

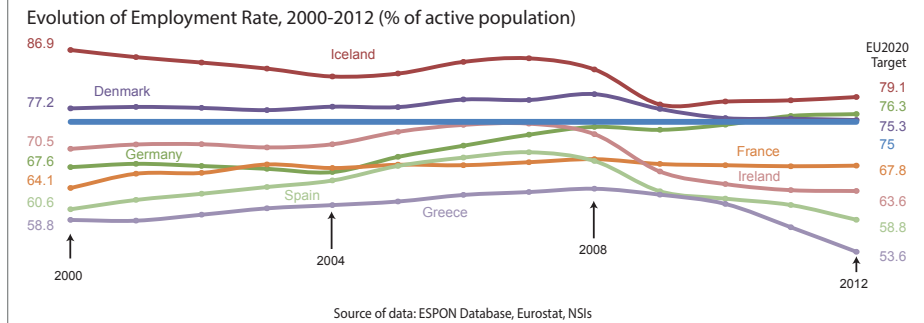
Employment for social inclusion

Employment is one of the headline targets in the Europe 2020 strategy with the goal of 75 % employment rate by 2020. This target has been reached in many parts of the Nordic countries as well as in major parts of Germany, Switzerland and Austria. However, still most European regions have employment rates under 75 %.

In many European countries - such as Spain, Greece and Ireland - the employment rate decreased significantly due to the economic crisis. The employment rate in United Kingdom and France has stayed at a relatively

unchanged level between 2008 and 2012 while employment grew in Germany during the same period.

The gap in employment rates between male and female is still significant although decreasing. Between 2008 and 2012 the decrease was most rapid in regions affected by the financial crisis (e.g. regions in Spain, Ireland and Greece), mostly due to the increasing unemployment. Gender imbalances in employment are generally higher in rural than in urban areas.



Social divides

Promoting inclusive growth requires tackling persistent patterns of social exclusion across Europe. The access of young adults to the labour market has due to the economic crisis become more difficult in many Southern and Eastern European countries, such as Spain, Italy and Greece.

Moreover, a vulnerable part of the labour force is the population aged older than 55. Northern European countries tend to show higher levels of employment for this age group.

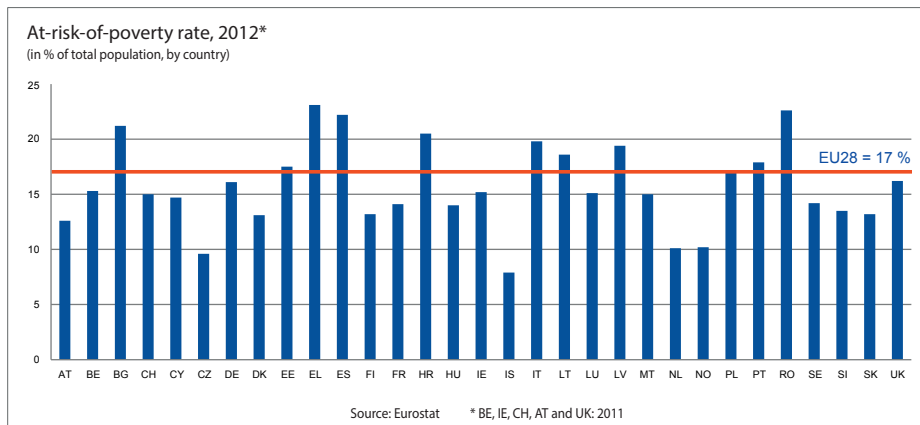
The at-risk-of-poverty-rate refers to the national poverty risk after social transfers. In 2012 the average poverty rate in the European Union was 17 %. The highest share of persons being at risk of poverty were recorded in Greece (23,1 %), Romania (22,6 %) and Spain (22,2 %). The lowest were Iceland (7,9 %), Czech Republic (9,6 %) and Netherlands (10,1%).

Senior Employment in Regions

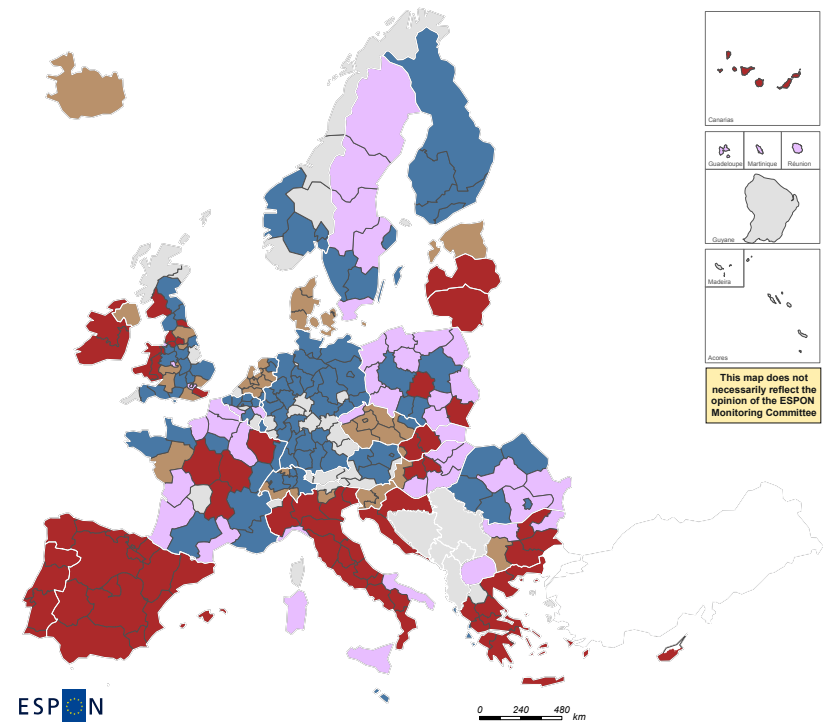
(NUTS 2, 2012, % of persons employed aged 55-64 years)

1. Island (IS) 79.2%
2. Highlands and Islands (UK) 76.4%
3. Åland (FI) 75.9%
4. Zentralschweiz (CH) 75.5%
5. Vestlandet (NO) 75.4%
6. Mellersta Norrland (SE) 75.2%
7. Småland and Islands (SE) 74.4%
8. Oslo and Akershus (NO) 73.9%
9. Ostschweiz (CH) 73.6%
10. Tübingen (DE) 73.5%

Source of data: Eurostat



Youth Employment Rate, 2012



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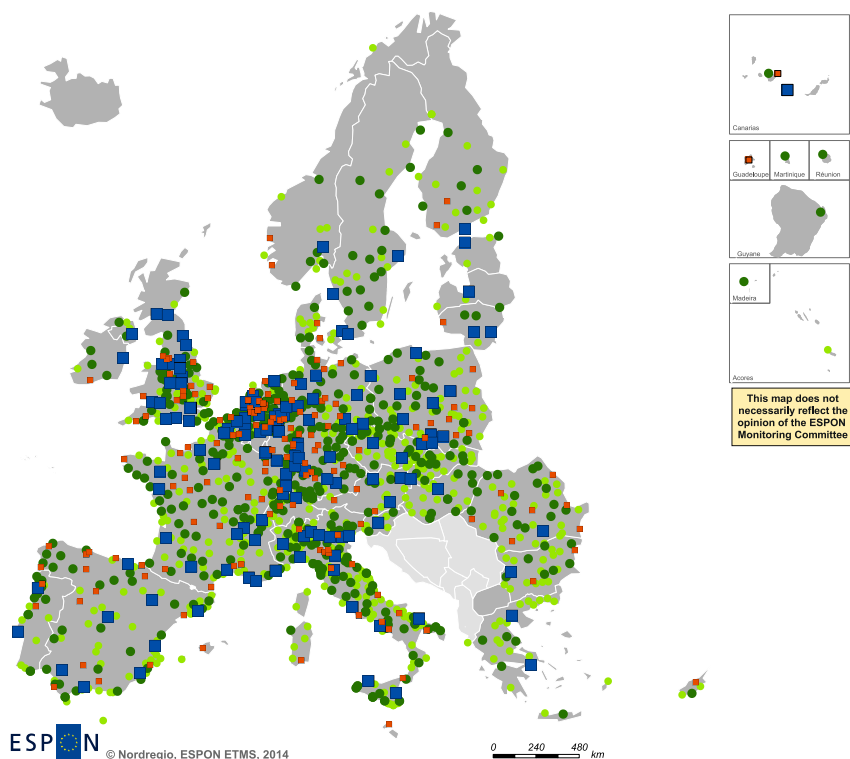
Youth unemployment rate, in %

Unemployed share of active population aged 15-24 years, in relation to:

| | EU28 average 2012: 23.0% | EU28 annual average change 2007-2012: 7.7% |
|-------|--------------------------|--|
| Blue | Below | Below |
| Brown | Below | Above |
| Pink | Above | Below |
| Red | Above | Above |
| White | No data | No data |

- Low youth unemployment and decreasing
- Low youth unemployment but increasing
- High youth unemployment but decreasing
- High youth unemployment and increasing

Functional Urban Areas



ESPON Nordregio, ESPON ETMS, 2014

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Functional Urban Areas, 2006
Source: Urban Audit & ESPON Database (IGAT), 2014
Origin of data: Spatial Foresight, UMS RIATE, 2014
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FUA population, 2006

- 500 000 – 13 000 000
- 250 000 – 500 000
- 100 000 – 250 000
- 50 000 – 100 000
- No data

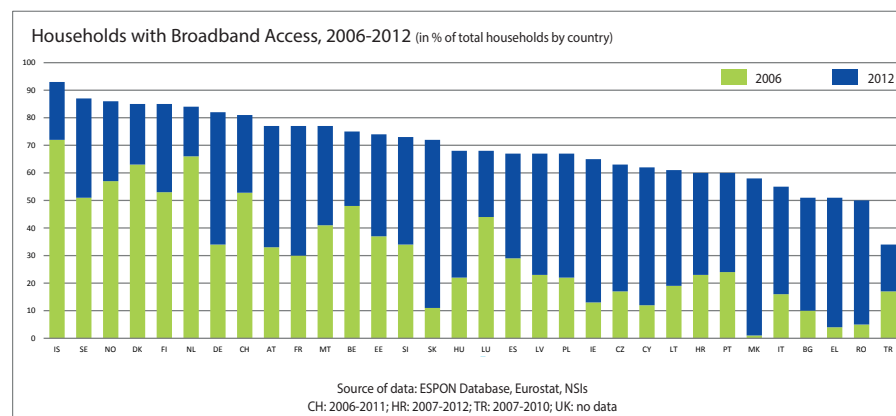
The size and distribution of Europe's cities

Europe's population and businesses are largely based in cities, and the urban regions significantly shape national and European performance. Europe has a polycentric pattern of urban settlements with many cities of different size close to each other which creates markets and employment opportunities.

Metropolitan regions, capital cities and second tier cities all contribute substantially to the European economy and are today linked into international markets. Other cities and towns have economic importance as well, also in providing for the services of general interest necessary for offering citizens good living conditions.

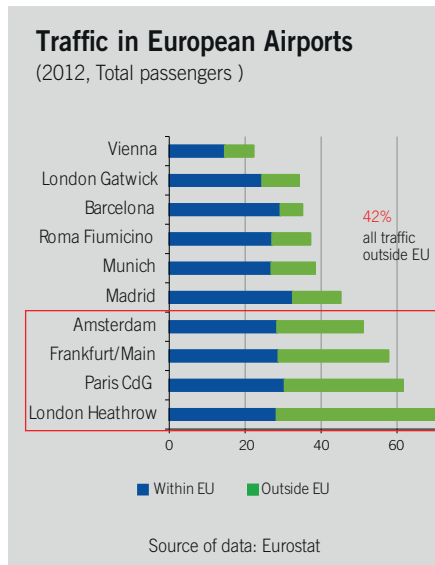
In particular, the concept of Functional Urban Areas, which embrace cooperation within a larger commuting zone are of great relevance to achieve the ambitions of the Europe 2020 Strategy and support balanced territorial development.

The development of e-services is seen as possibility to increase accessibility at world level but also to overcome challenges of specific types of regions in Europe in a smart way. However, this requires long-term investments in ICT infrastructure. The Nordic countries, which have a significant share of remote regions in Europe, have nonetheless the highest coverage of broadband.

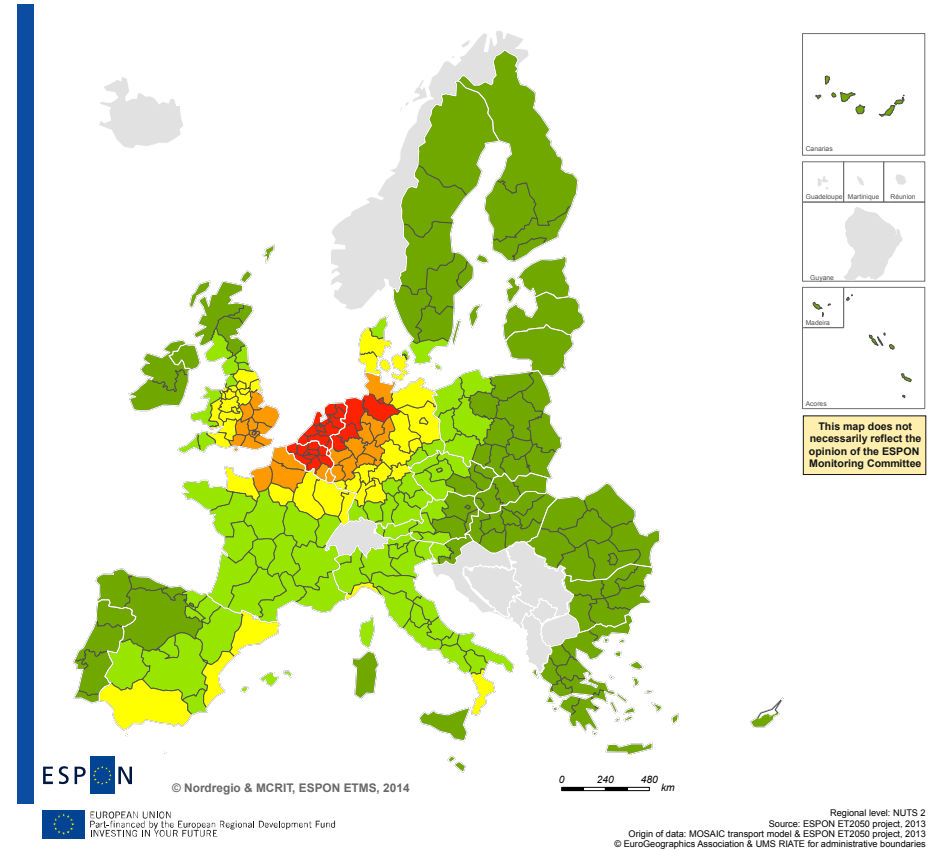


Connectivity of territories

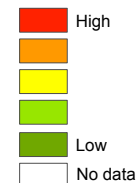
Seaports and airports are necessary gateways bringing people and goods around Europe and to global markets. Having access to international connections is relevant in order to maintain the competitiveness of European firms in a globalising economy. The accessibility pattern in Europe is rather concentrated to key transport hubs located in Central Europe. 42% of the air-traffic with destinations outside the EU is made through the 4 airports: Heathrow, Paris-CDG, Frankfurt and Amsterdam. Likewise, 4 seaports: Rotterdam, Antwerp, Hamburg and Bremen stand for 37% of the container traffic.



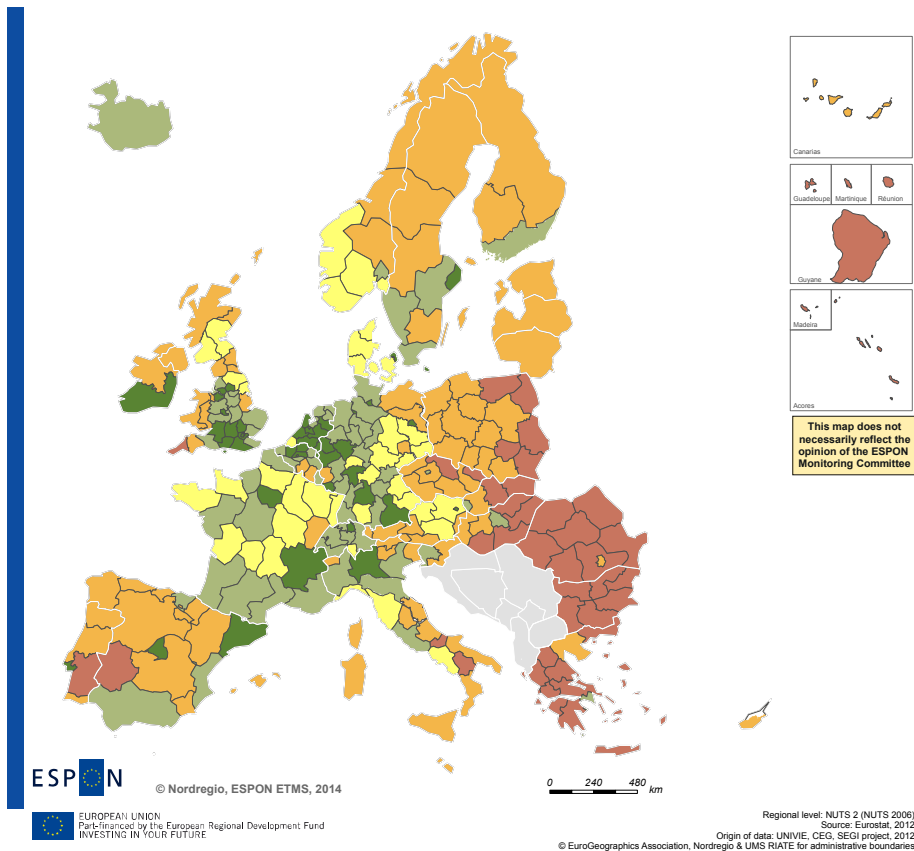
Accessibility to maritime container shipping services, 2013



Global freight accessibility index: accessibility potential to ports with intercontinental maritime transport services



Services of general economic interest, 2009-2010



Typology on Service of General Economic Interest, 2009-2010

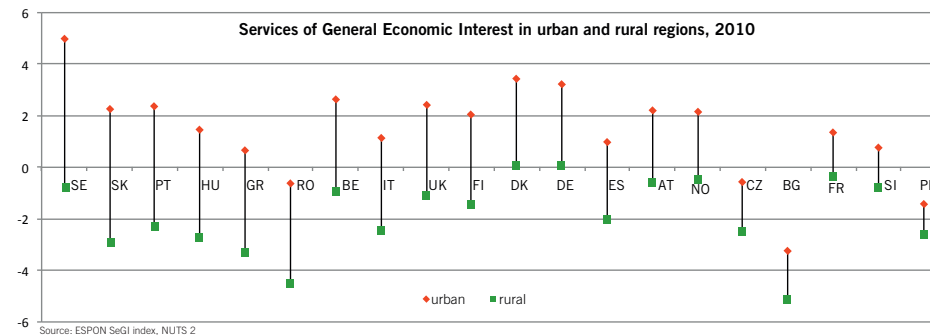
(standard-deviation from European average)

- Below average (-5.2 to -2.5)
- Moderately below average (-2.5 to 0.5)
- Around average (-0.5 to 0.5)
- Moderately above average (0.5 to 2.5)
- Above average (2.5 to 11.2)
- No data

Delivery of Services of General Economic Interest

Accessing economic services of general interest is a relevant pre-condition for people to settle down and businesses to invest. Access to services plays an important role in meeting policy ambitions of a balanced and polycentric European territory.

In this respect the presence of cities and towns, access to transport and ICT infrastructure, business support and public finance often play a decisive role for development. Regions in Western countries show relatively better performance on economic services of general interest than regions in the MS that joined the EU in 2004 and 2007. Urban regions in most countries display higher endowment levels than rural regions and in most countries capital regions are ranked higher than other regions.





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The ESPON Programme is part-financed by the European Regional Development Fund, the EU Member States and the Partner States Iceland, Liechtenstein, Norway and Switzerland. It shall support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory.

ESPON shall support Cohesion Policy development with European-wide comparable information, evidence, analyses and scenarios on framework conditions for the development of regions, cities and larger territories. In doing so, it shall facilitate the mobilisation of territorial capital and development opportunities, contributing to improving European

competitiveness, to the widening and deepening of Europe an territorial cooperation and to a sustainable and balanced development. The Managing Authority responsible for the ESPON 2013 Programme is the Ministry of Sustainable Development and Infrastructures of Luxembourg.

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