

Conference on Transnational Cooperation and Research 12 March 2012 in Reykjavik, Iceland

Part 2:

European Territorial Dynamics Policy, Trends, Opportunities and Challenges



Why a European Perspective in Policy Development?

Challenges for creating Growth and Cohesion:

- **Economic downturn and Crisis:** Asymmetric impact, recovery and unemployment, young generation, regional diversity, innovation towards green, low carbon economy
- **Connecting and changing World:** New emerging markets, era of new strong world economies (China, India, Brasil, etc.), a larger territorial context for Europe, connecting gateway regions and cities
- **Climate change:** Mitigation and adaptation, CO2 reduction, new hazard patterns and new territorial opportunities
- **Demographic changes:** Ageing of the population, internal migration flows and external migration pressures
- **Connectivity and accessibility:** Infrastructure deficits, transport increase, saturation of EU-corridors, environmentally friendly solutions
- **Energy challenge:** Security of supply, alternative energy sources, fluctuation of energy prices, diversity of regional vulnerability
- **EU Enlargement:** Geographic integration, Territorial imbalances, Integration of new territories, their regions and cities

Policy Directions for EU Cohesion Policy

Ambitions for Economic, Social And Territorial Cohesion

- Supporting intelligent, sustainable and inclusive growth
- Place-based, integrated development of regions and cities (promoting a functional area approach)
- Harvesting territorial potentials and converging challenges into opportunities (double track policy)
- Using regional diversity as a strength (tailor made policy mixes unlocking potentials)
- Integration with sector policies (ensuring synergies)
- Cooperation (joining forces exploring comparative advantages and increasing joint critical mass)
- Governance (condition for optimal delivery)
- Evidence-based and result-oriented activities (based on improved strategies, benchmarking and indicators)

Territory and Places: What does Europe want?

Territorial Cohesion a new aim in the EU Treaty

- Harmonious and balanced territory
- Urban drivers of economic growth
- Provision of Services of General Interest
- Connectivity and accessibility improvement (for individuals, communities and enterprises)
- Use of ecological and cultural assets for development
- Attention to challenges of specific types of regions
- Cross-border and transnational functional regions (such as Macro Regions)
- Networking of cities and rural-urban partnerships (neighbours and long distance)

What policy priorities does Europe express?

Territorial Agenda 2020 for the EU:

- Polycentric and Balanced Territorial Development
- Integrated development of cities, rural and specific regions
- Territorial integration in cross-border and transnational functional regions
- Global competitiveness of regions based on strong local economies
- Territorial connectivity for individuals, communities and enterprises
- Managing and connecting ecological, landscape and cultural values of regions

An enlarging territorial context

• World City Network, 2008

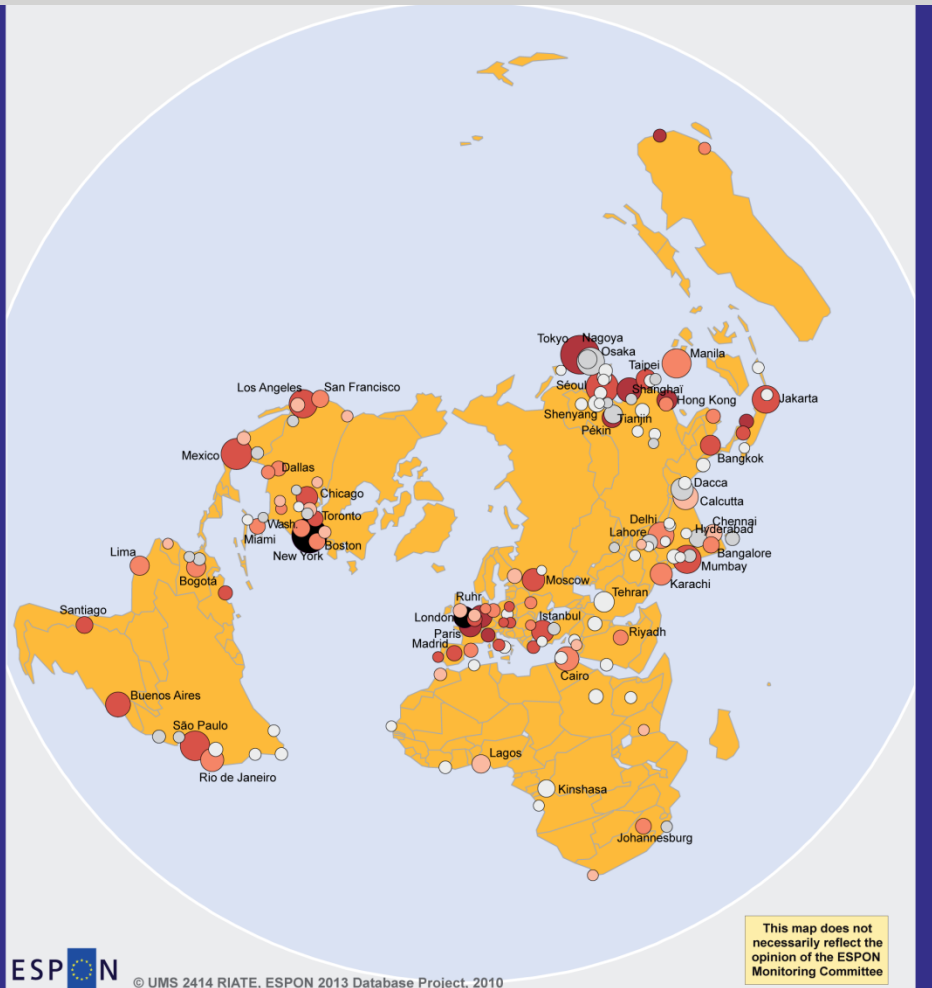
City's integration into the world city network in 2008

- London and New York, clearly more integrated than all other cities
- Other highly integrated cities
- Very important world cities that link major economic regions and states into the world economy
- Important world cities that are instrumental in linking their region or state into the world economy
- World cities linking smaller regions or states into the world economy, or important world cities whose major global capacity is not in advanced producer services
- Cities that have sufficient services so as not to be overtly dependent on world cities (smaller capital cities, and traditional centres of manufacturing regions)
- Other cities

Classification of cities based upon their level of advanced producer services.

Global service centres are identified and graded for accountancy, advertising, banking/finance and law

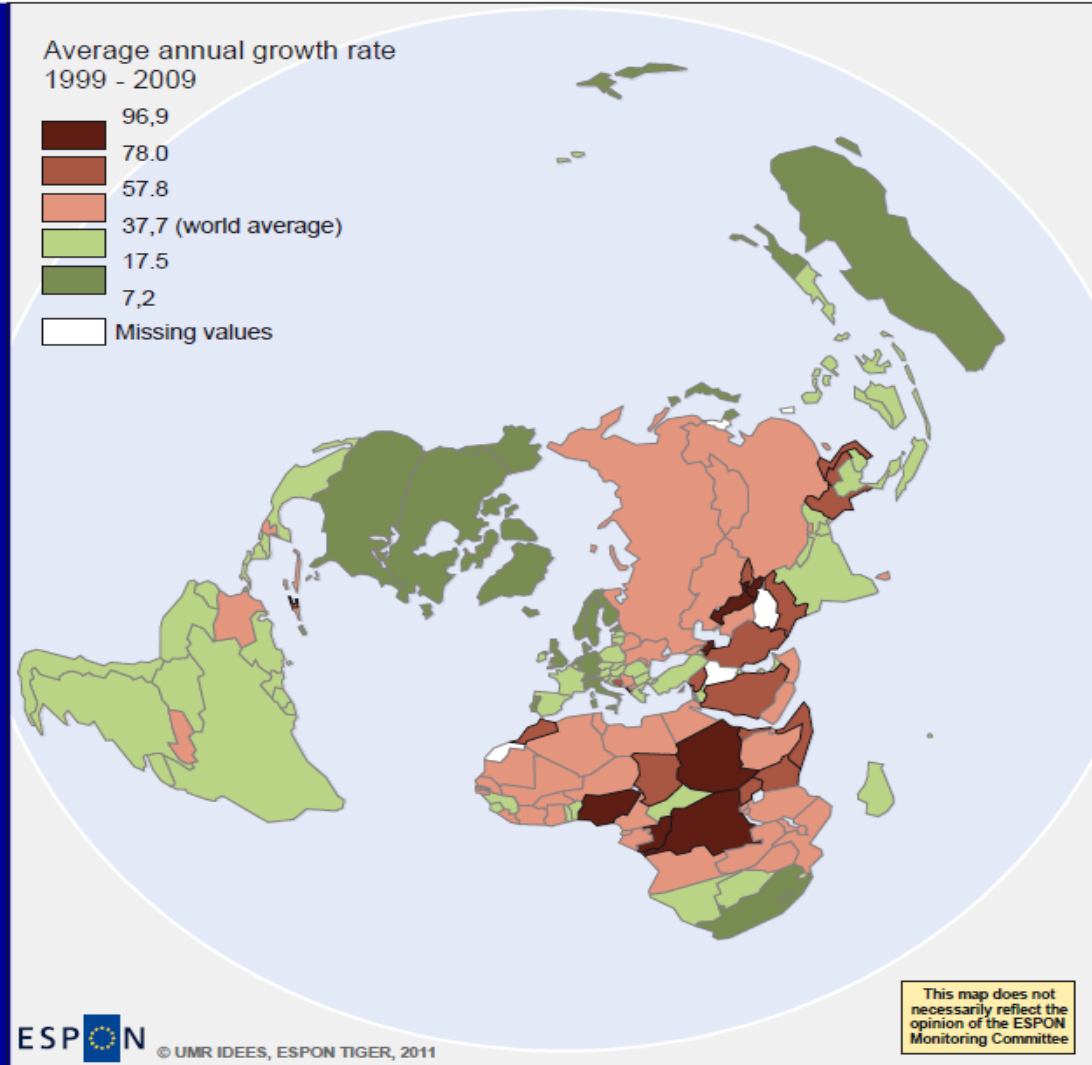
Population of Urban Areas
(million of inhabitants in 2000)



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

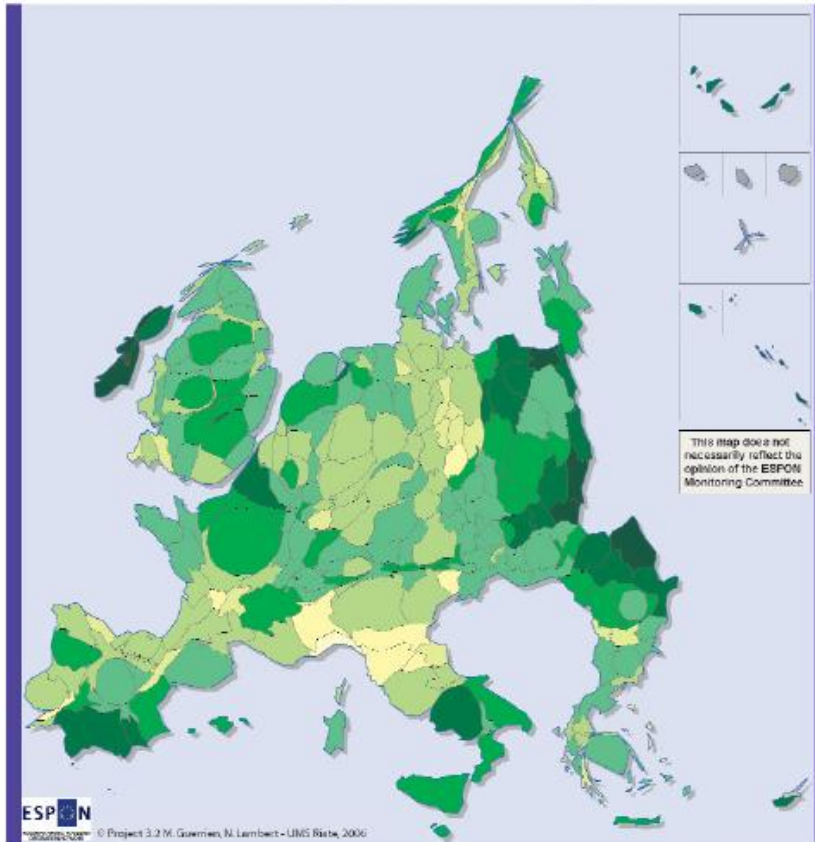
Internet Users in the world, 1999-2009

Average annual growth rate

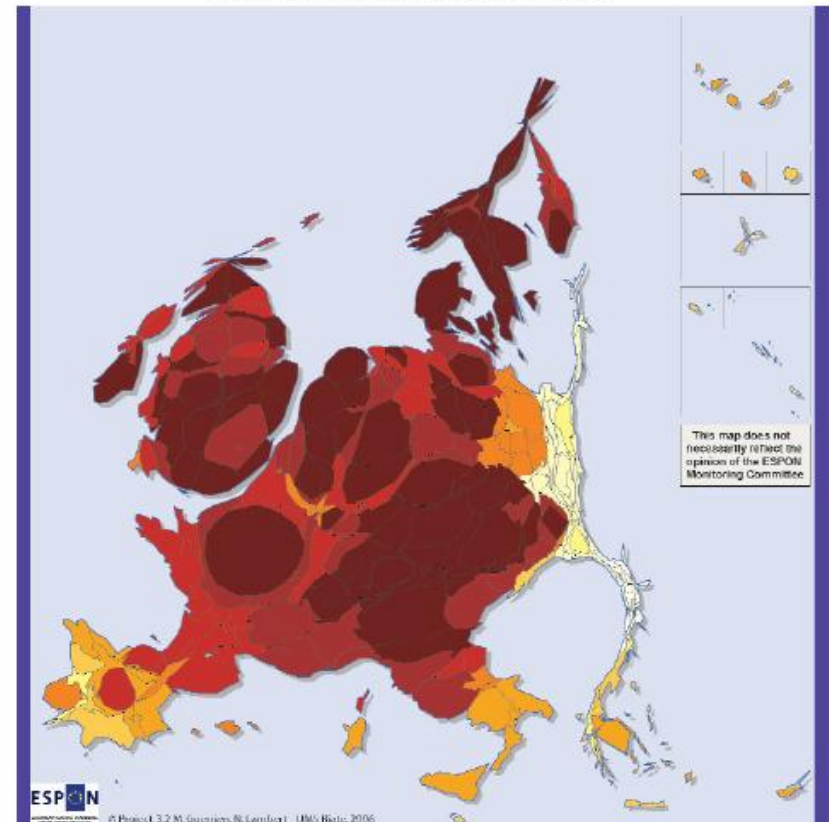


European Cohesion Challenge (imbalances 2000)

Cartogram showing size of regions in terms of population



Cartogram showing size of regions in terms of GDP



Territorial Challenges, Structures, Dynamics and Potentials:




Smart Connected Places

(Economic Drivers, Agglomeration Economies, Rural Diversity, Territorial Cooperation, R&D Expenditure, Technology, Connectivity and Accessibility)

Places driving the European Economy

- Urban places are main drivers of economy
- Functionality the key for success
- Concentration (Pentagon)
- Signs of de-concentration

Functional Urban Areas (FUAs)

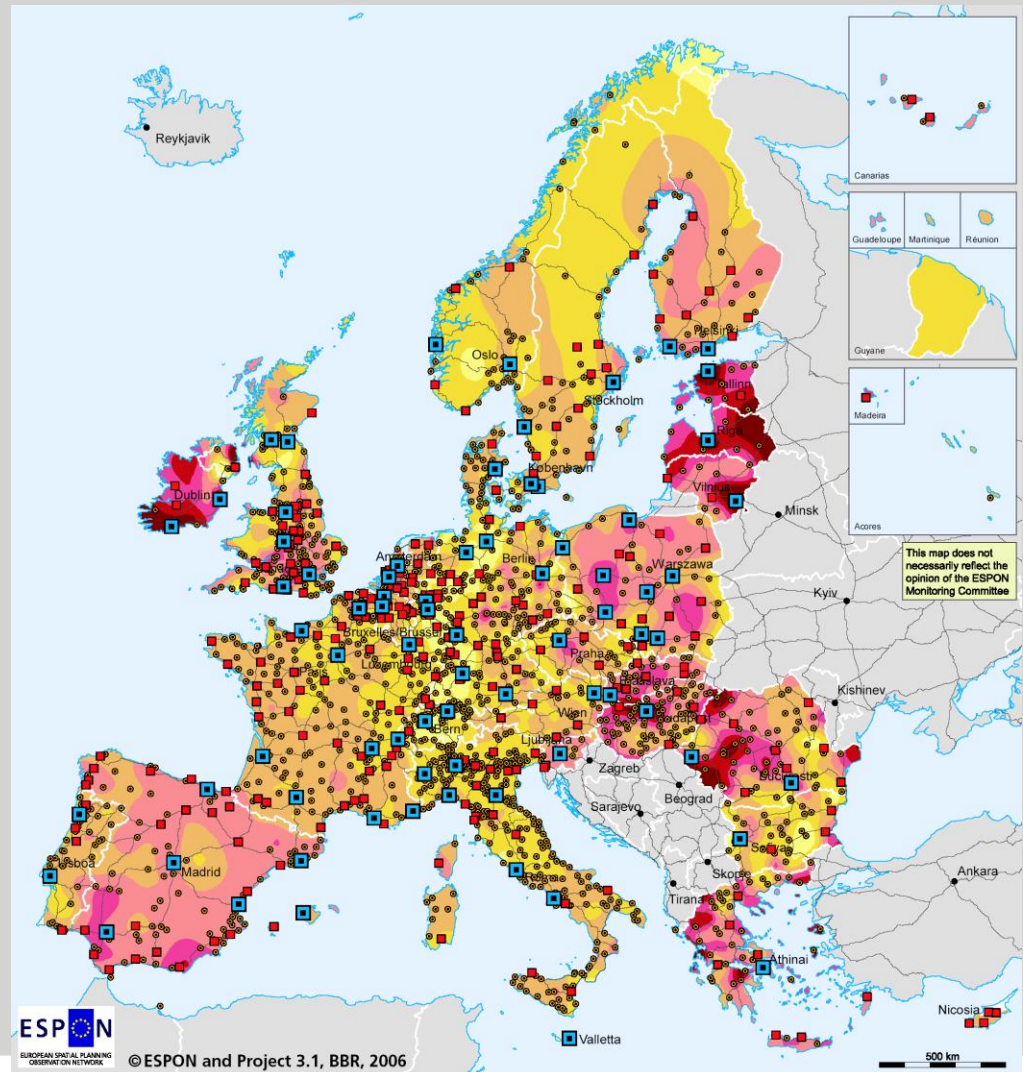
-  Metropolitan European Growth Areas (MEGAs)
-  Transnational / national FUAs
-  Regional / local FUAs
-  Highways of European level

© EuroGeographics Association for administrative boundaries

Regional level: NUTS 3
Origin of data: GDP: Eurostat, MEGA: ESPON 1.1.1 Nordregio

Source: ESPON database

The functional urban areas are an important territorial structure in Europe. An ongoing ESPON Project is doing further work on their classification. New results will be available by the end of 2006.



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European Metropolitan Urban Regions

- Europe's core area: Pentagon
London, Paris, Milano, München, Hamburg
14% territory
32% population
46% GDP
- Dynamic fringes
Barcelona / Atlantic Arc
Vienna-Bratislava
Copenhagen-Malmö
Manchester
- Challenges for many peripheries

Average yearly development of GDP
per capita in PPS 2000-2005 (percent)

GDP growth (relative)
-2,516284 - 2,000000
2,000001 - 4,000000
4,000001 - 6,000000
6,000001 - 8,000000
8,000001 - 10,000000
10,000001 - 12,964394

Metropolitan Growth Area

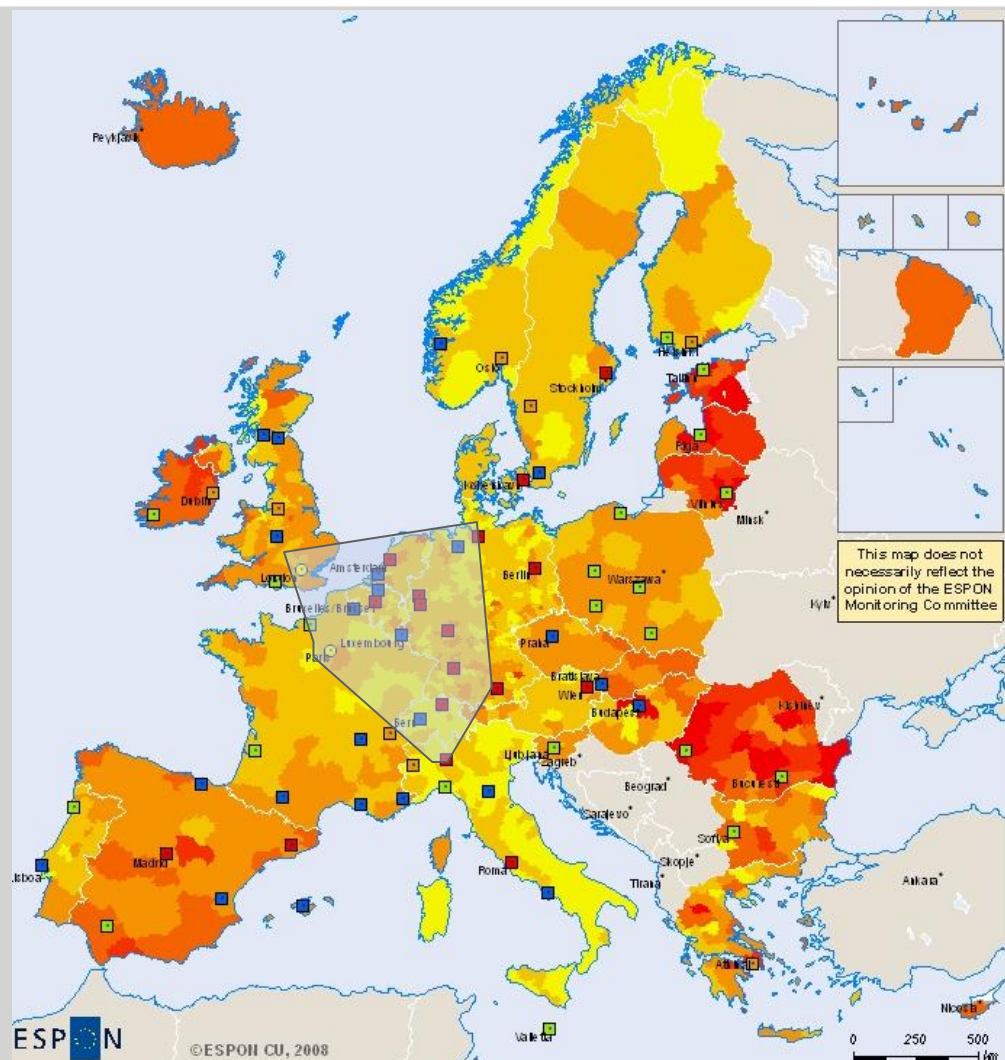
Global City
European City
Strong MEGA
Potential MEGA
Weak MEGA

© EuroGeographics Association for
administrative boundaries

Regional level: NUTS 3

Origin of data: GDP: Eurostat;
MEGA: ESPON 1.1.1 Nordregio

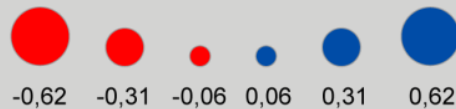
Source: ESPON database



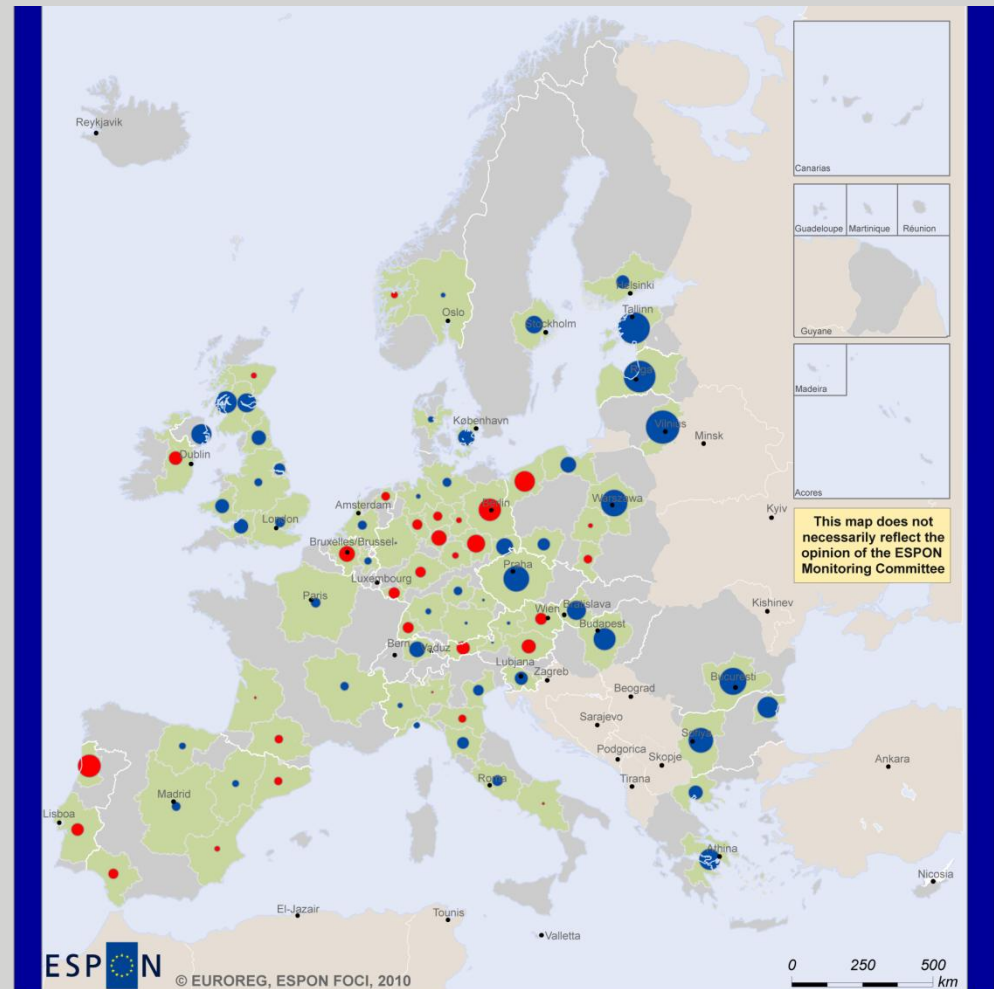
Growth in cities and surrounding regions 1995-2004


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Change in GDP per capita ratio 1995-2004

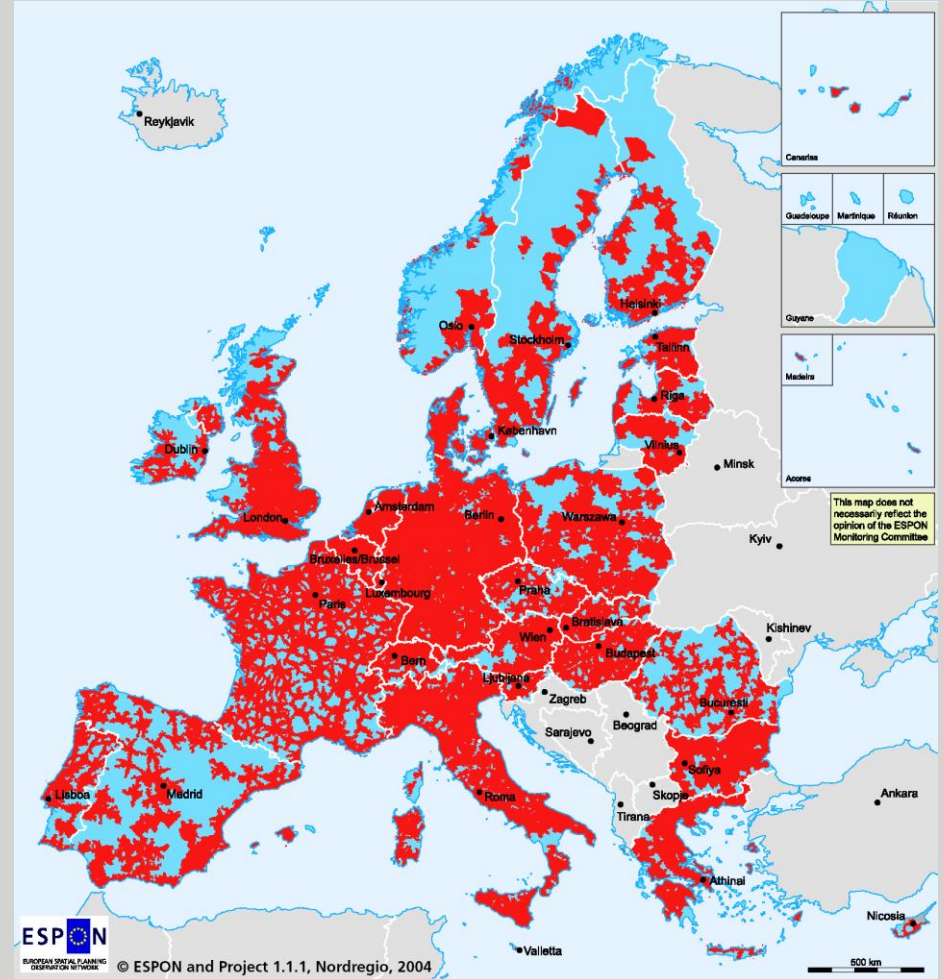
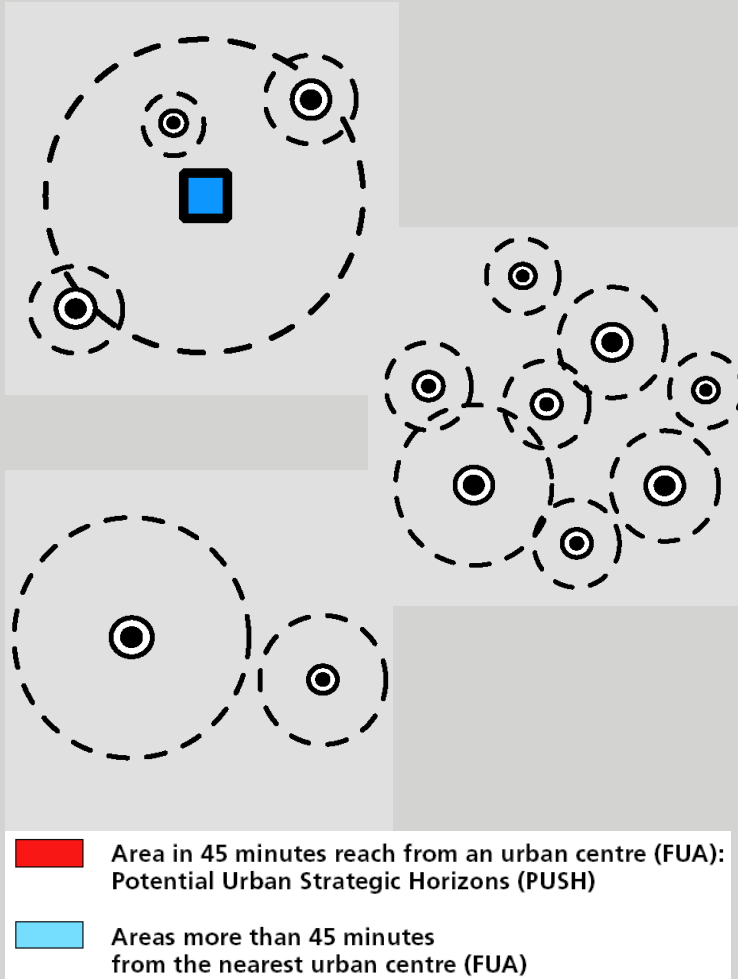


Regional level: NUTS 3
 Source: ESPON 2013 Database
 Origin of data: ESPON Project FOCI
 © EuroGeographics Association for administrative boundaries



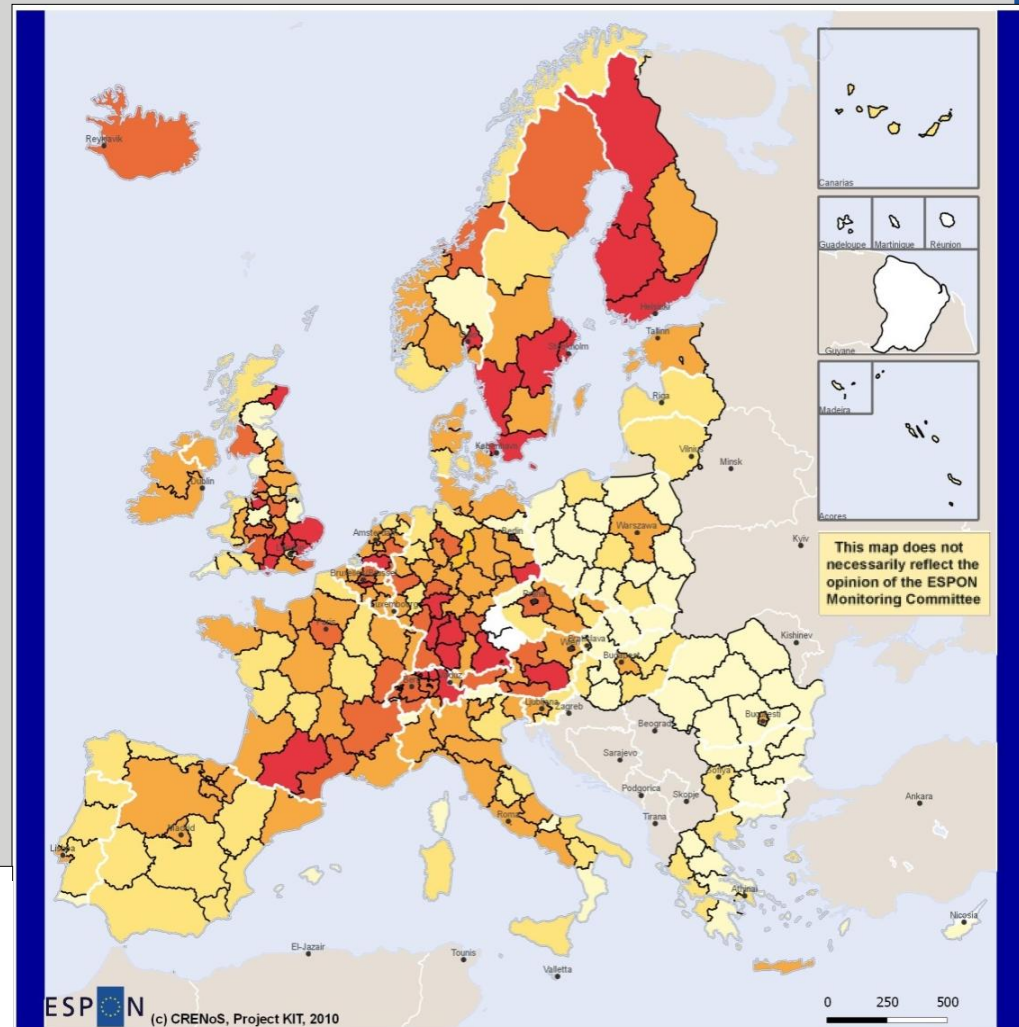
Potentials for Territorial Cooperation

Areas in 45 minutes reach of large urban centres



R&D expenditure of GDP

- The way towards a smart growth, outlined in the EU 2020 Strategy, calls for 3% of the EU's GDP to be invested on R&D.
- Only 11% of the EU territory have reached 3% of R&D expenditures on GDP.
- Successful high-tech clusters in India and China have benefitted of spatial concentration
- A few specialised European research areas?



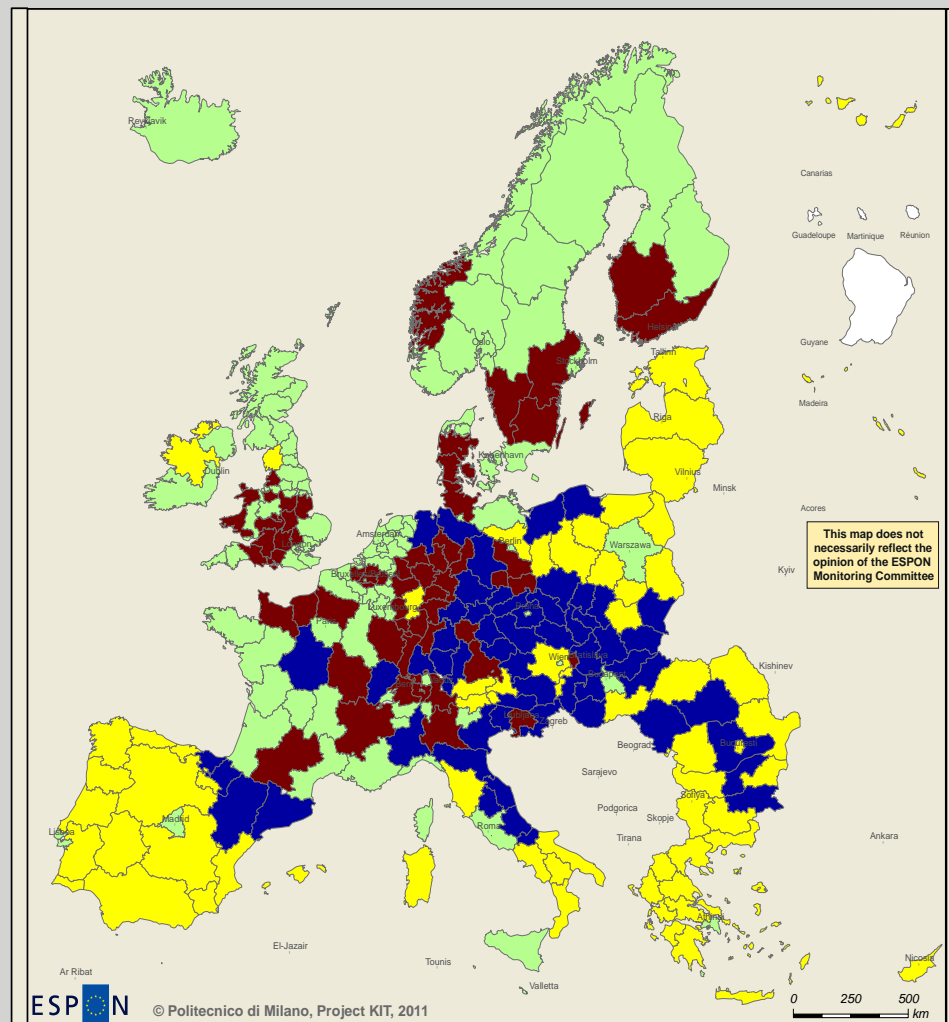
Technologically Advanced Regions

- High-tech plays a key role in the knowledge economy (France, Germany, UK and Scandinavia).
- Scientific institutions (research activities), Innovation (creation of new markets, use of green technologies, reduced labour costs) and Knowledge networking (knowledge diffusion) can boost the knowledge economy.

Technologically-advanced regions

2007

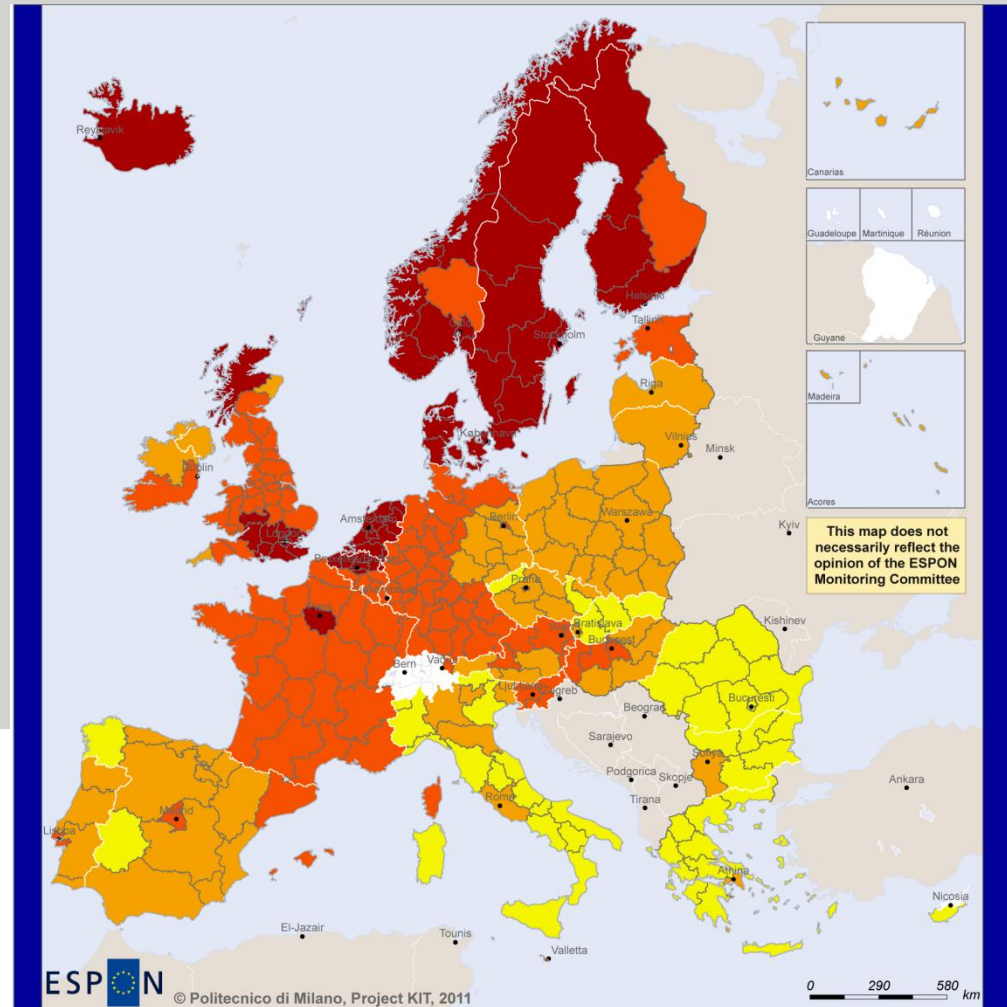
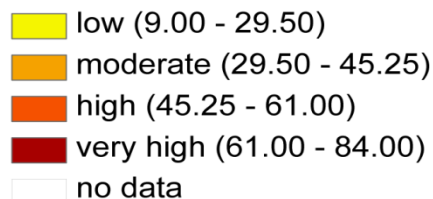
- NA
- Low tech regions
- Advanced manufacturing regions
- Advanced services regions
- Technologically-advanced regions



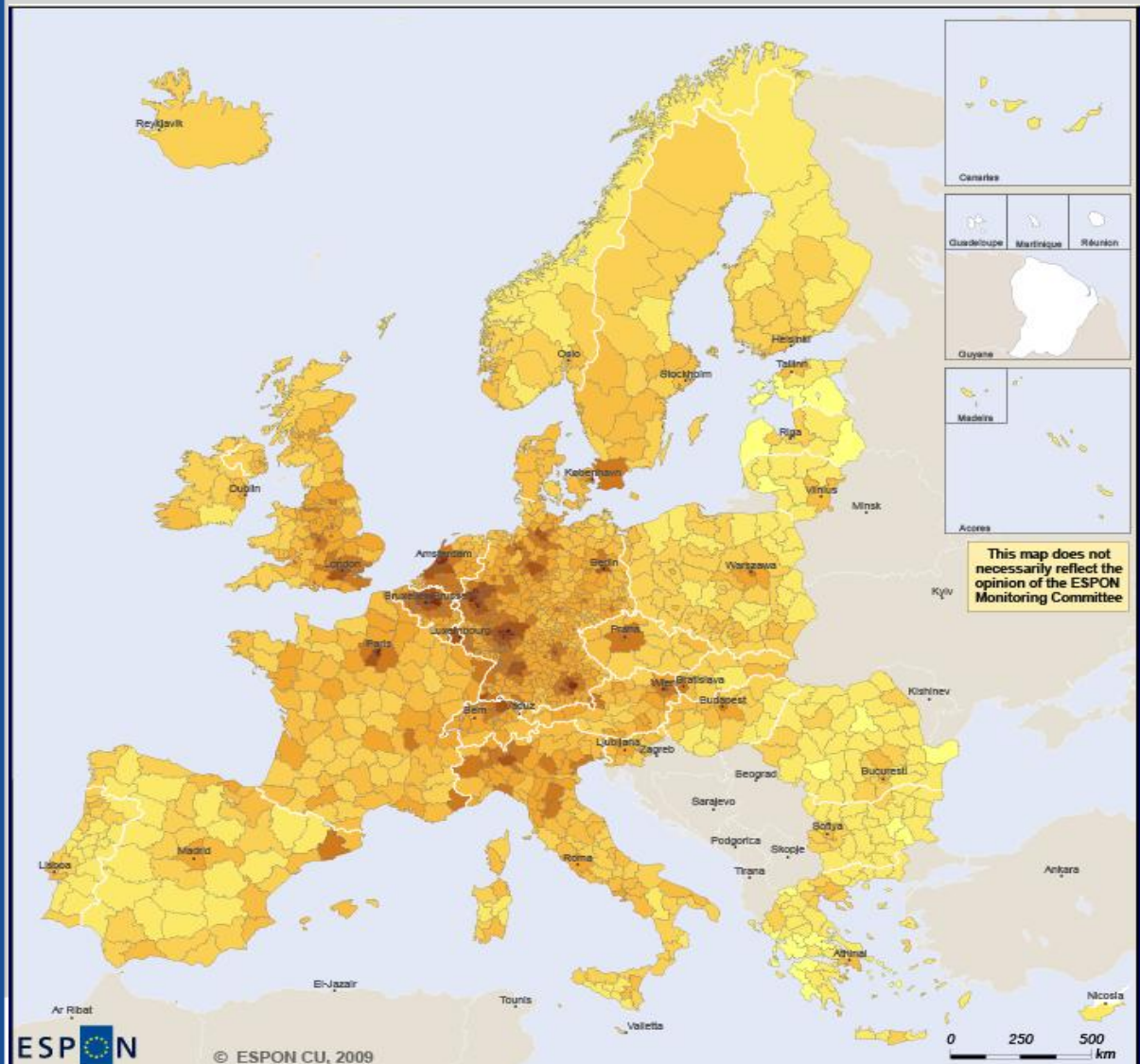
High-speed Internet connection

- Europe 2020 sets a digital agenda aiming at high-speed Internet connections to all European households by 2013.
- By 2020 all households should have access to Internet speed of at least 30 Mbps, and 50% of them should have Internet speed above 100 Mbps.

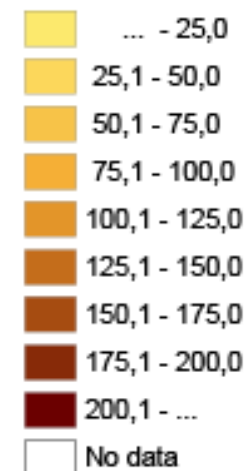
Households using a high speed Internet connection
Average percentage over the years 2006 to 2009



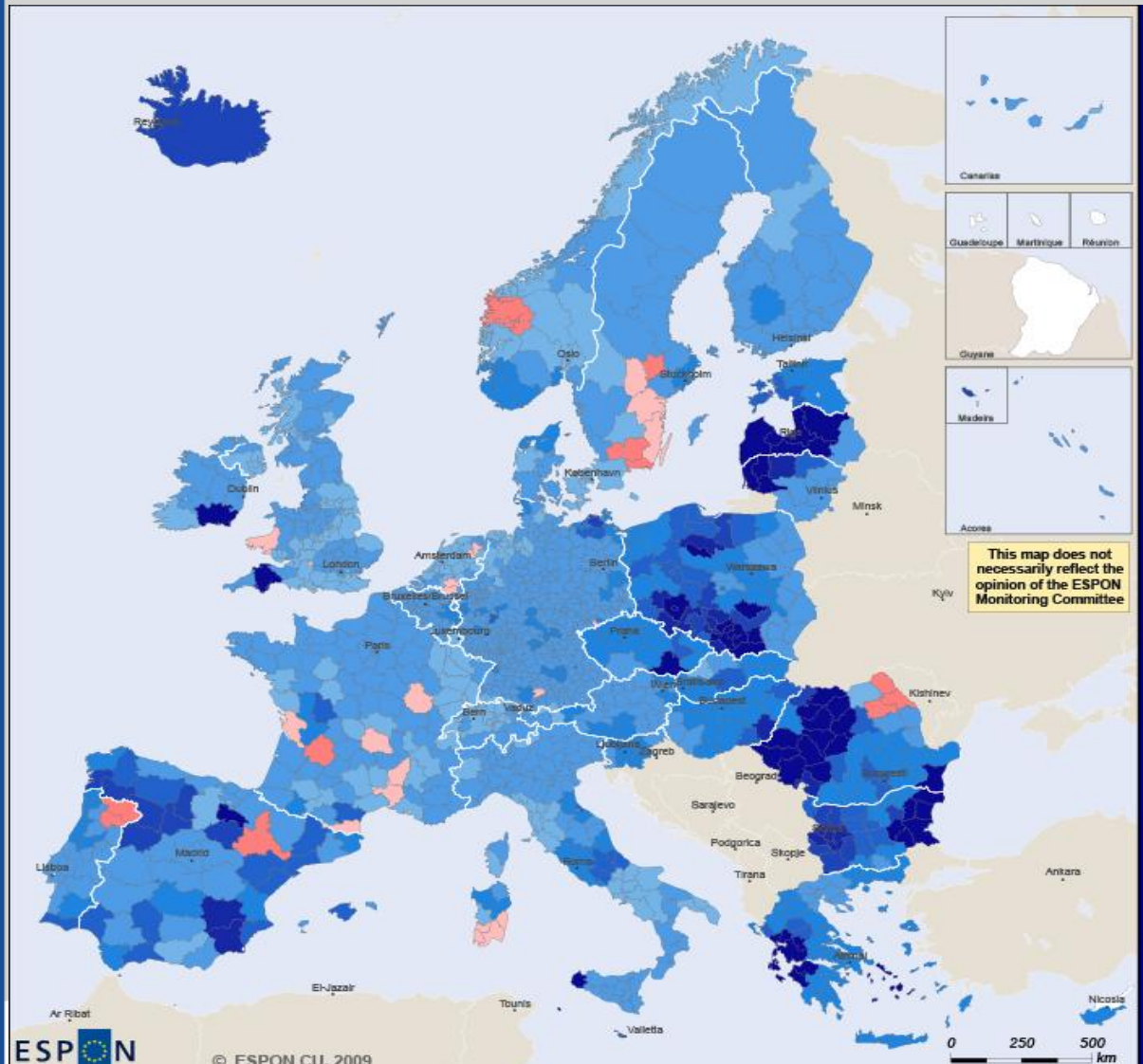
Multi-Modal Potential Accessibility, 2006



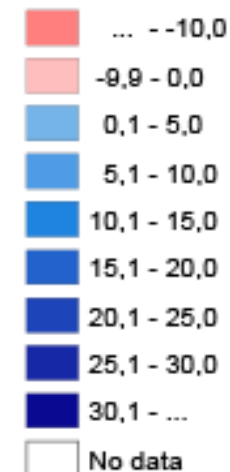
Index
(EU27=100)



Multi-Modal Potential Accessibility 2001-2006



Relative change (in %)
EU27= 8.7%



Territorial Challenges, Structures, Dynamics and Potentials:

Diverse Europe: A Cohesion Challenge

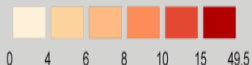
(Unemployment, Demographic Challenges and Migration Flows)

Unemployment in European Regions, March 2010

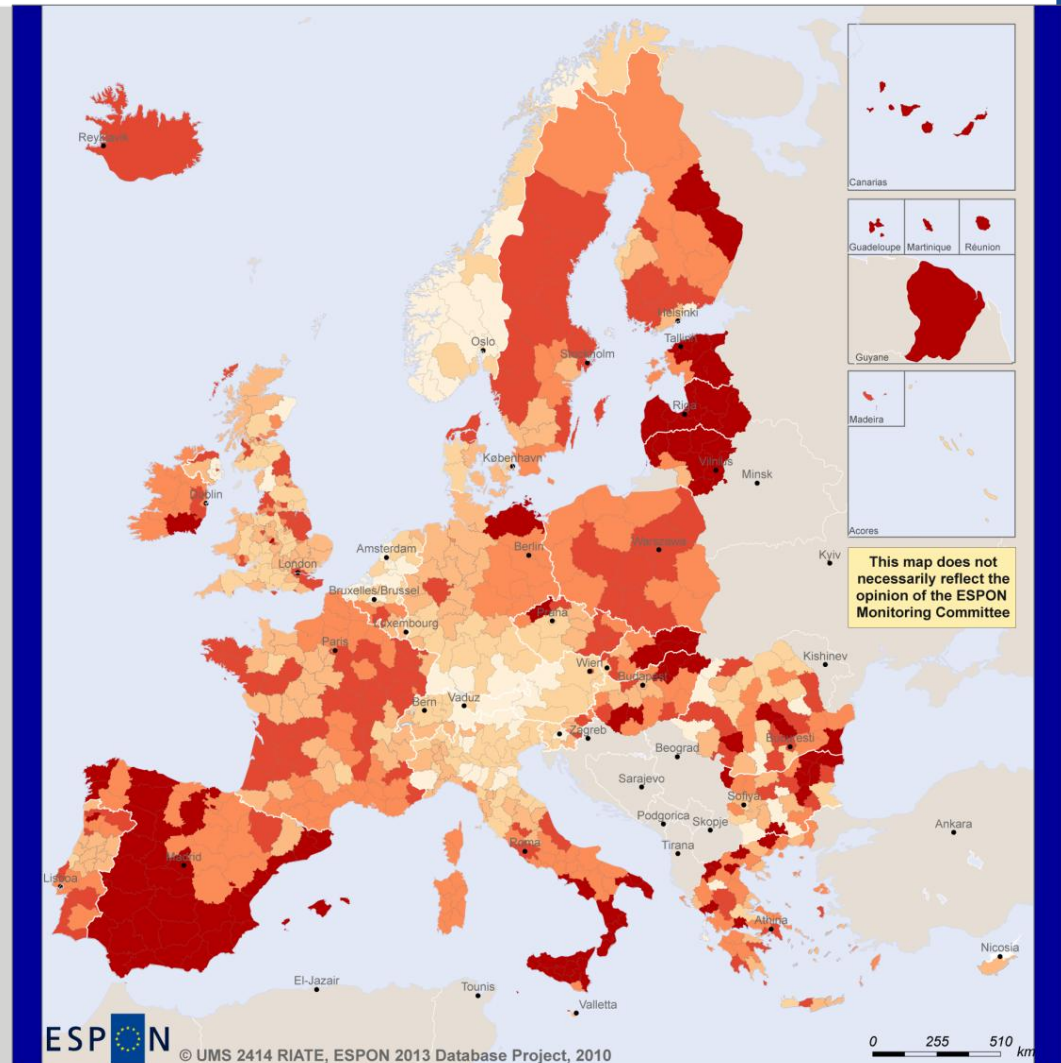
- The economic downturn hit European countries and regions asymmetrically
- Best investment options:
 - Innovation, R&D and training
 - Nano-, Bio-, Info-tech and Cognitive Sciences
 - Green growth and low carbon economy

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Unemployment rate (%)

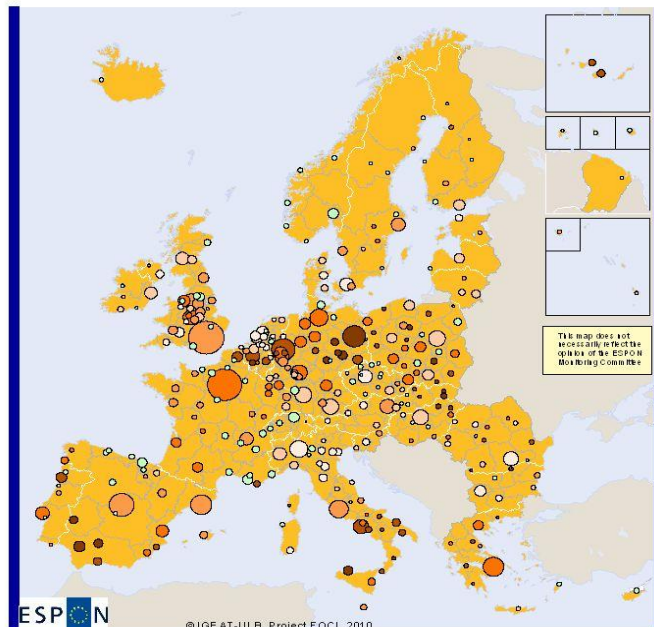


Regional level: NUTS 2-3 (version 2006)
Source: ESPON 2013 Database Project (Regional values 2007 adjusted NUTS0 in March 2010)
Origin of data: ESPON 2013 Database Project, 2009; Eurostat, 2010; Secrétariat d'Etat à l'économie suisse, 2010; Statistics Iceland, 2010; Landesverwaltung Liechtenstein, 2010
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Unemployment rate by Urban Regions (LUZ) in 2007

Unemployment in 2007

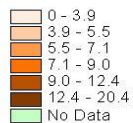


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LUZ are approximated by NUTS3

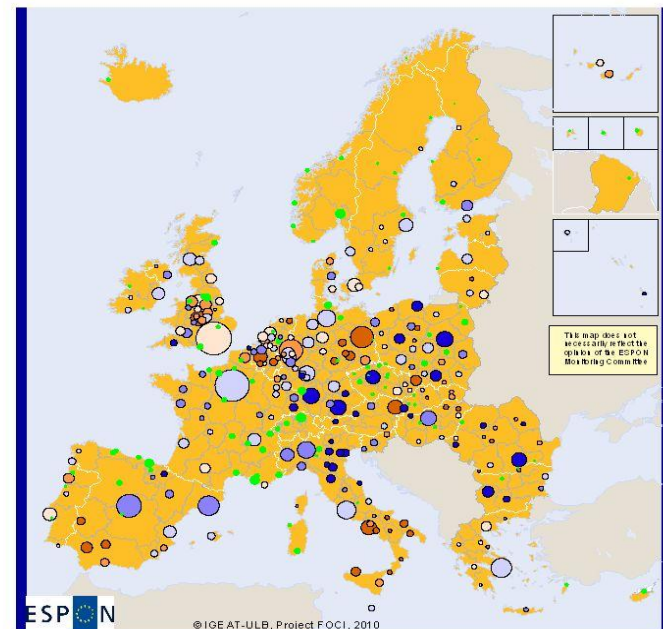
Unemployment rate
%



Source : EU-27 : Eurostat, 2009

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Unemployment relative to national average in 2007



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LUZ are approximated by NUTS3

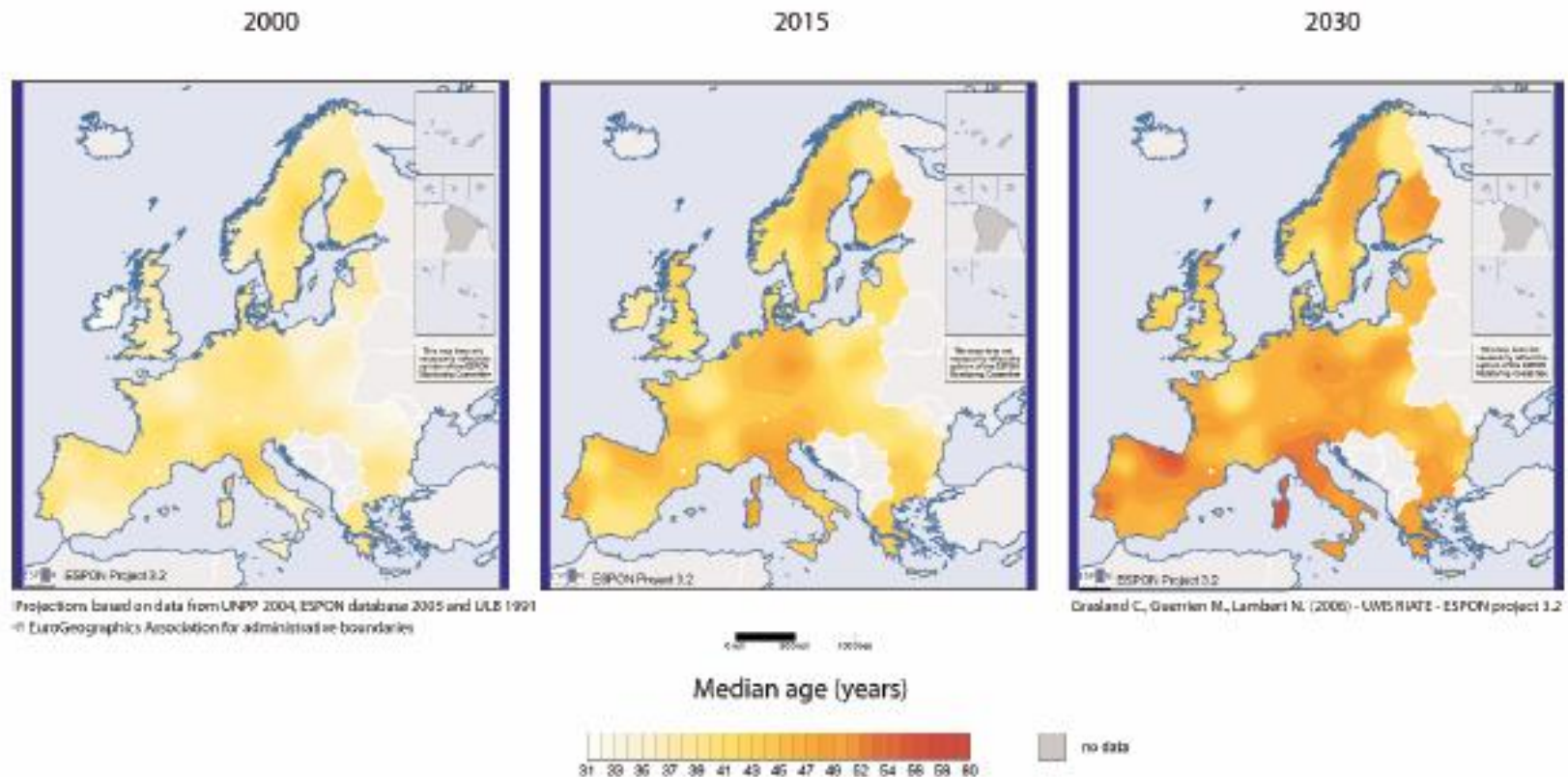
Unemployment rate LUZ/
Unemployment rate country
*100



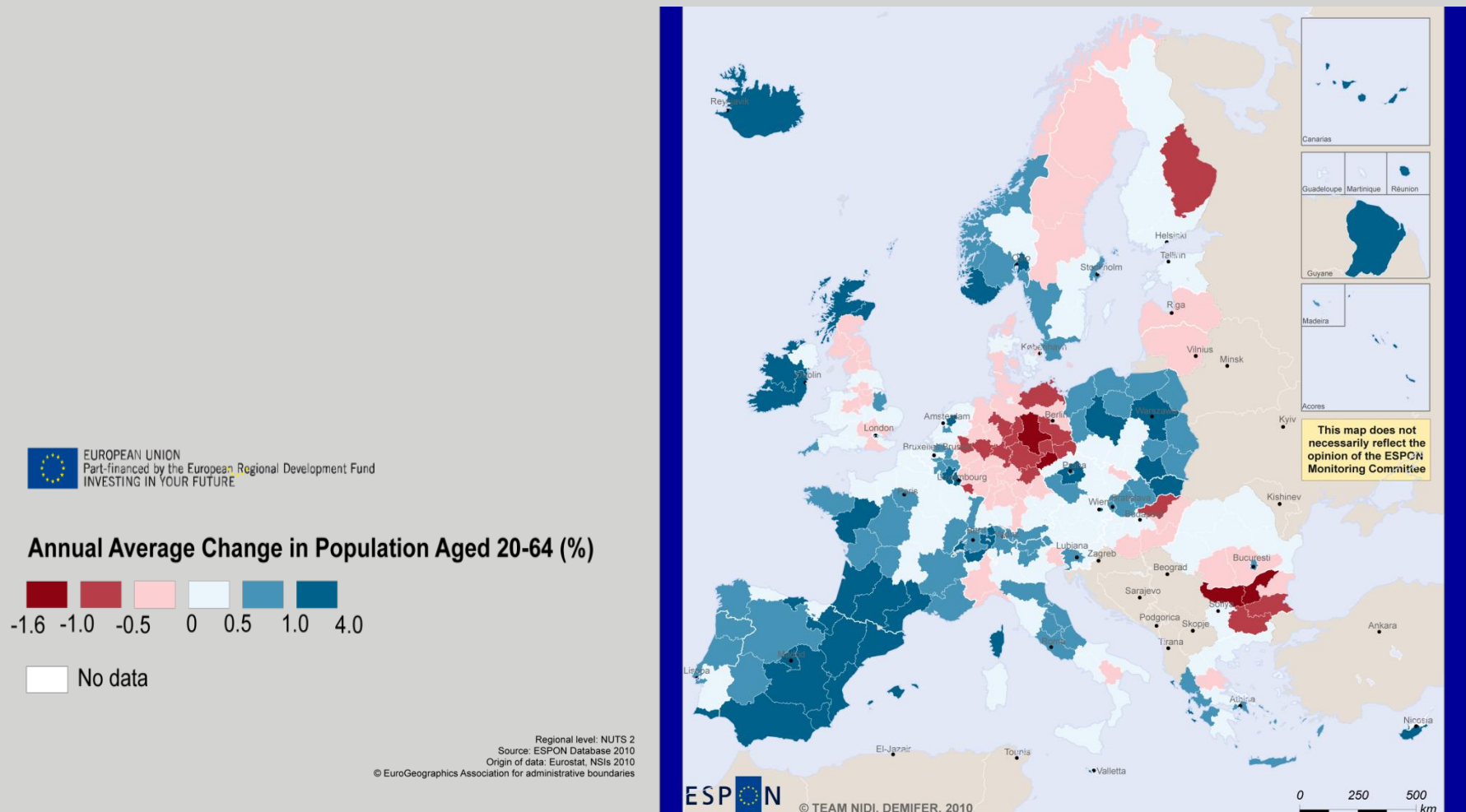
Source : EU-27 : Eurostat, 2009

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Demographic scenario: Population Ageing 2030



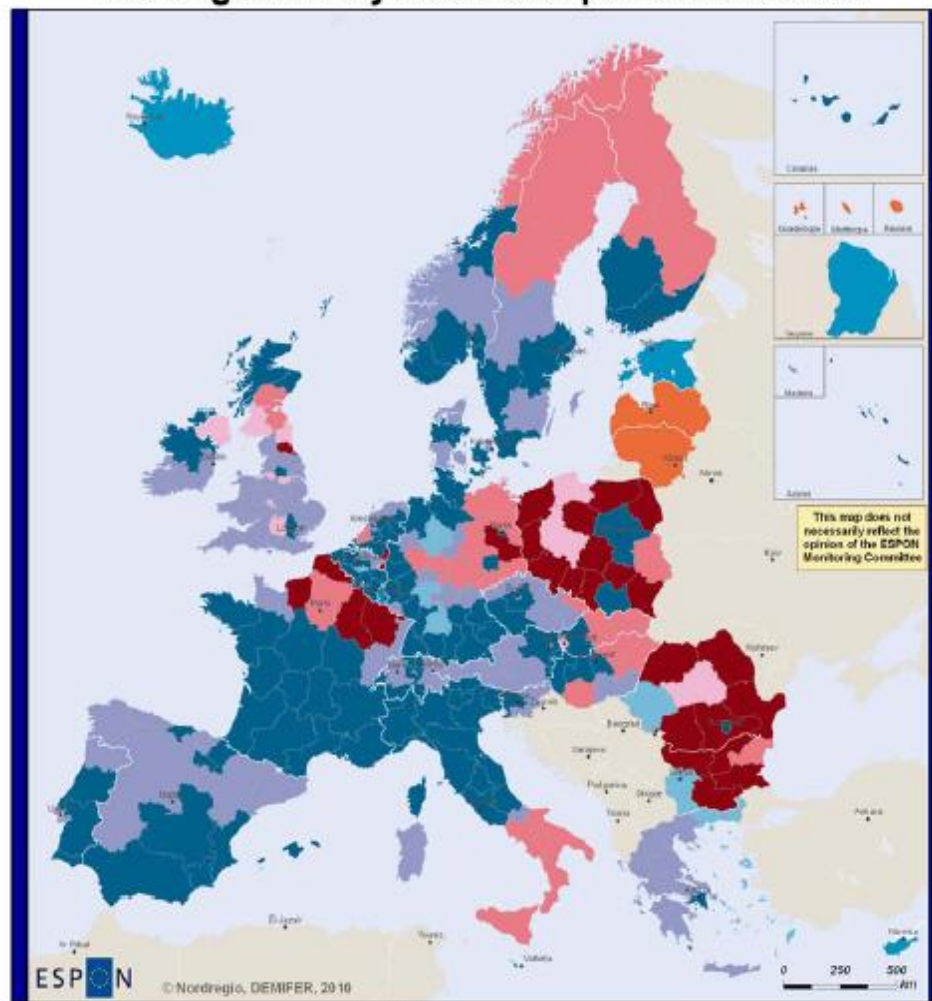
Change in Working Age Population, 2000-2007



Internal and International Migration Balance 2000-2007

- Many urban regions face a negative internal migration balance as a result of suburbanization.
- These urban areas usually attract international migrants (cheap housing, jobs and the presence of a resident migrant population) and expulse older active ones. A clear example is Inner London.

Net Migration by Main Components 2000-07



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Regional level: NUTS 2
Source: ESPON 2013 Database 2010
Origin of data: Eurostat 2009, NISs 2009, University of Leeds 2009
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Total migration: FR 2000-2006; Domestic- & international migration: CH 01-04, DE 02-07, DK 05-07, FR 05, GR & PT 01, IE 02-06, IT 00-05

Internal and international migration balance in the NUTS2 Regions in 2000-2007*

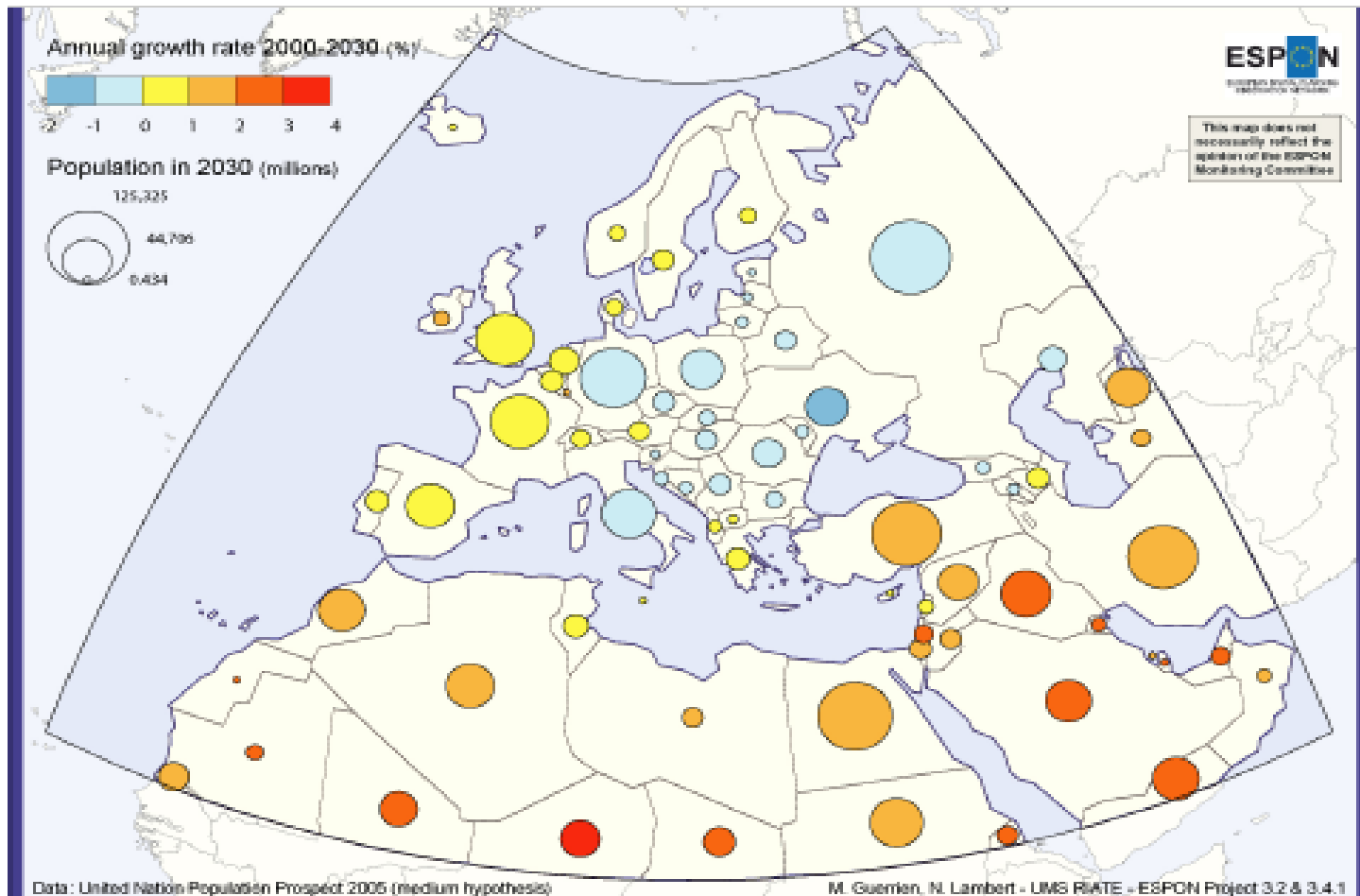
Positive Net Migration	
Positive Internal and International Migration	(112)
Positive Internal and Negative International Migration	(10)
Negative Internal and Positive International Migration	(82)
No Differentiation	(7)
Negative Net Migration	
Positive Internal and Negative International Migration	(12)
Negative Internal and Positive International Migration	(31)
Negative Internal and International Migration	(28)
No Differentiation	(5)

No differentiation between internal- and international migration (Countries with only one NUTS2 region & French overseas regions)

(x) = number of regions per category

Population in Europe and its neighbourhood 2030

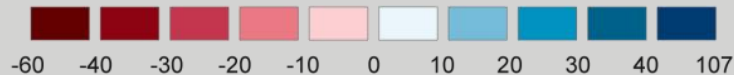
POPULATION IN EUROPE AND NEIGHBOURHOODS IN 2030



Scenario: Impact of migration on population in 2050

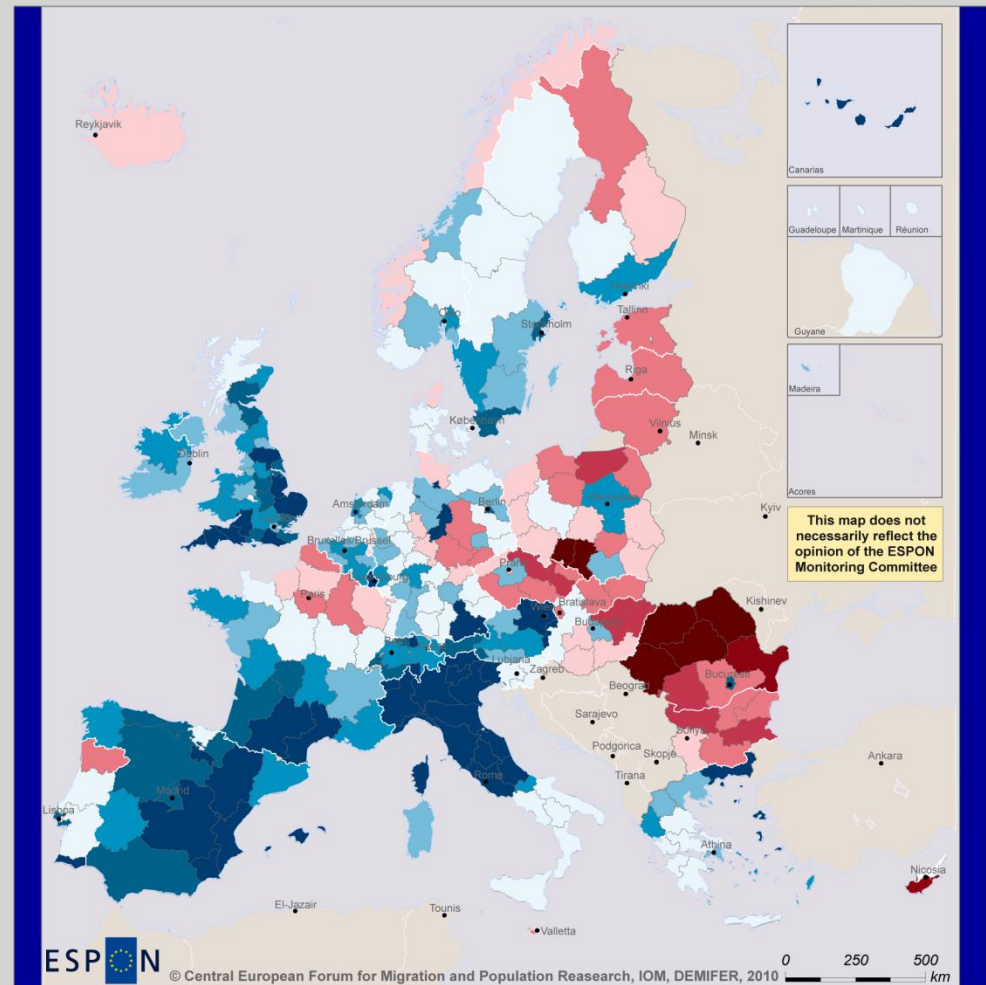
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Impact of migration on population in 2050* Difference in population in %



*Impact of migration on population in 2050. Calculated as the difference in population in the Status Quo and No Migration scenarios in % of the population in the No Migration scenario

Regional level: NUTS 2
Source: ESPON 2013 Database, 2010
Origin of data: Eurostat, NSIs, estimations, 2010
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Territorial Challenges, Structures, Dynamics and Potentials:

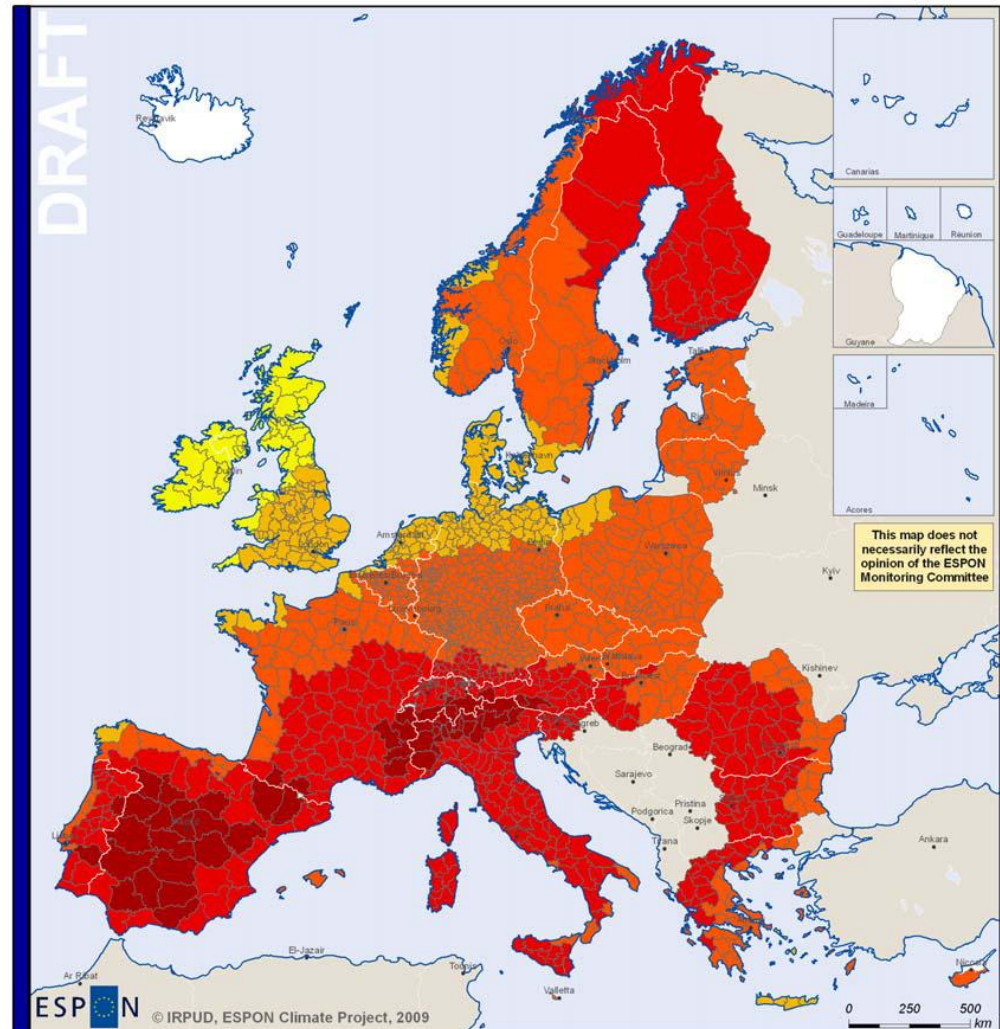
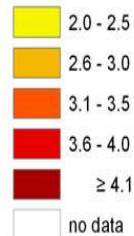
Sustainable Europe

(Climate Change, Energy Dependency and Green Potentials)

Forecast: Climate Impact on Temperature

- Increasing annual temperatures expected between 2 and over 4.5 degrees.
- The north-west exhibits the lowest temperature change.
- Regions in south-west and Alpine regions may have temperature changes of nearly 4 degrees.

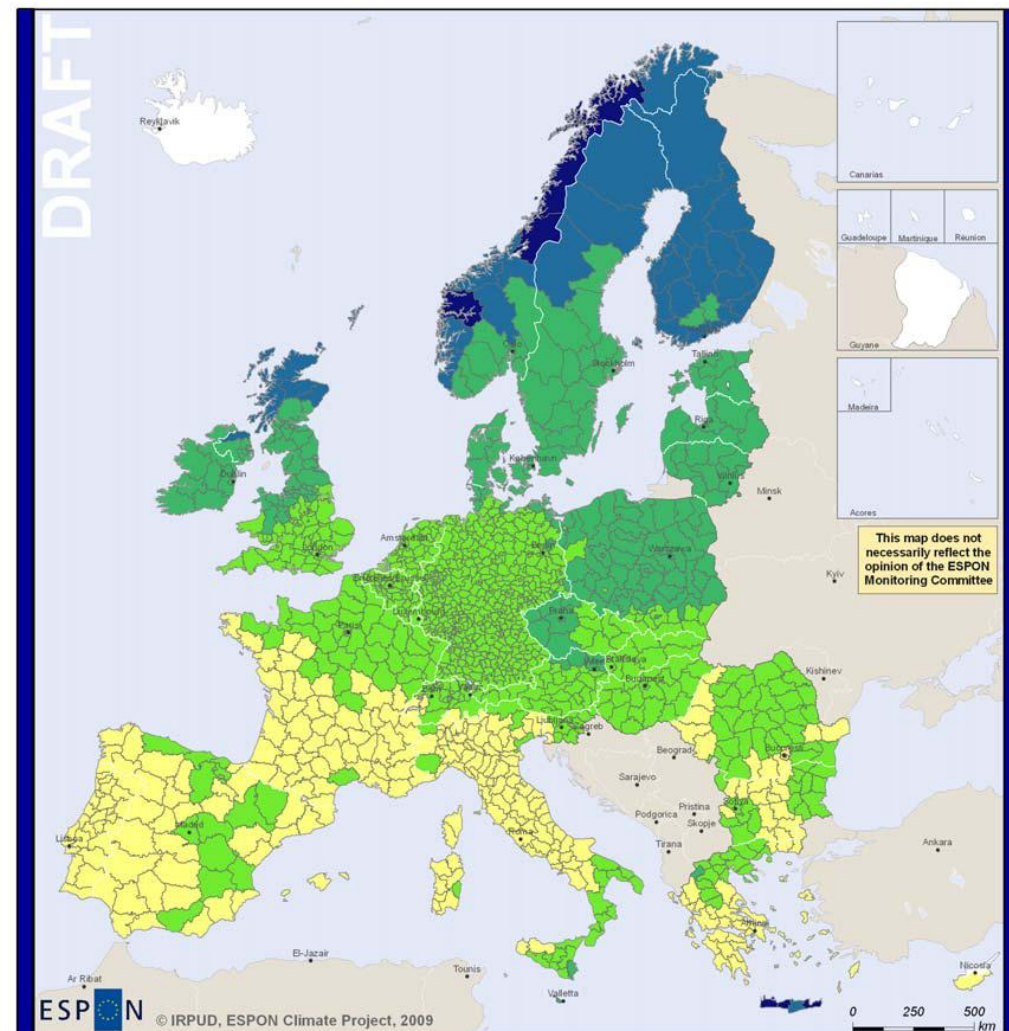
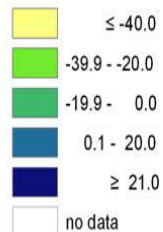
Increase in annual mean temperature (in °C)



Forecast: Climate Impact on Precipitation (summer)

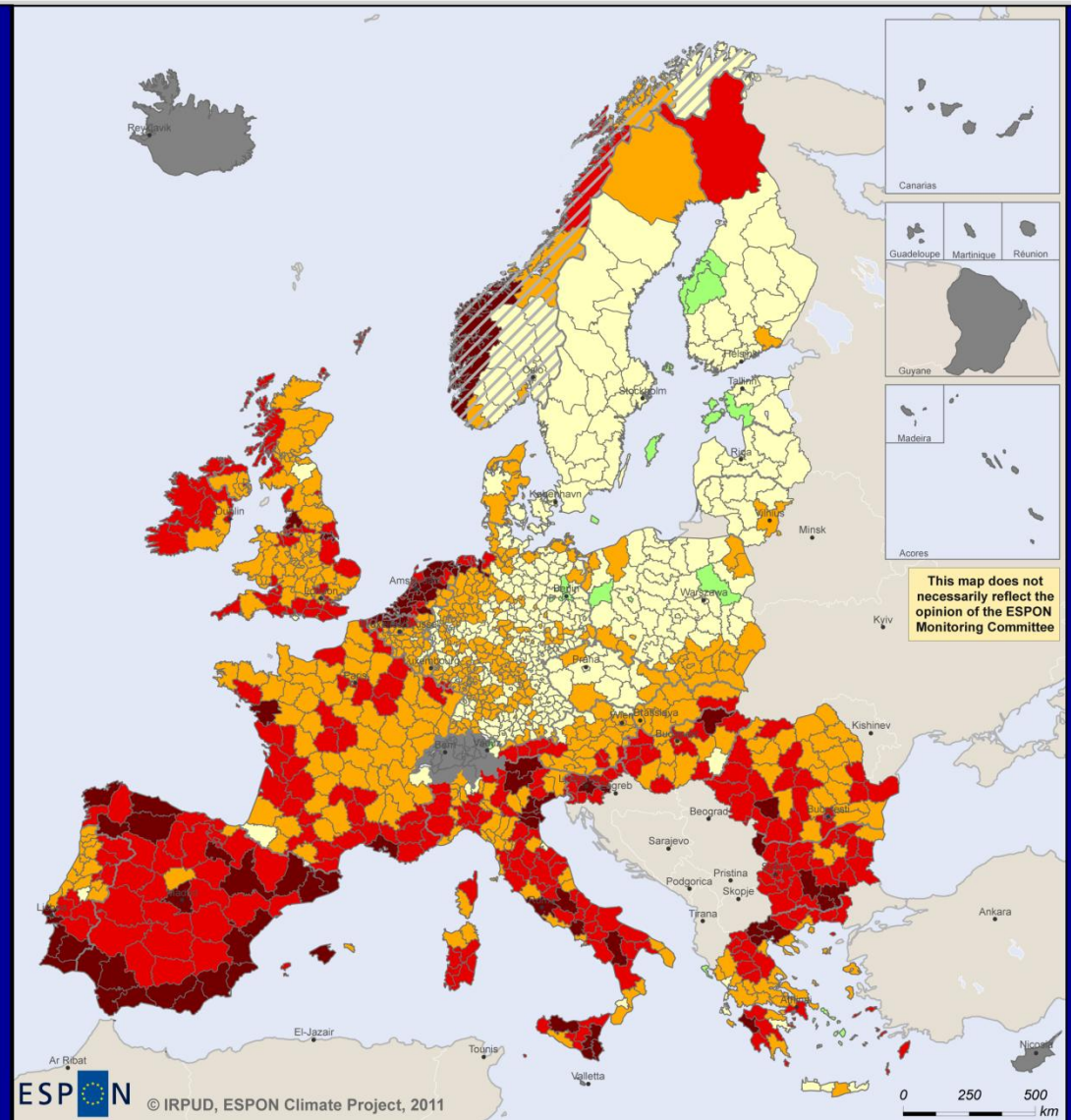
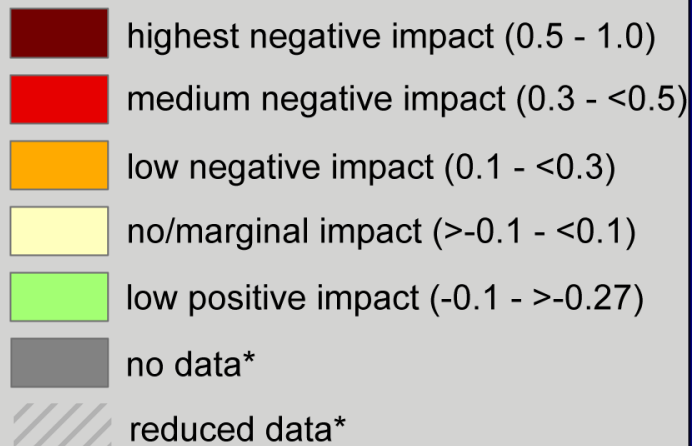
- Northern parts of Europe may experience increases in summer precipitation of up to 40%.
- Regions in France, Portugal, Spain, Italy and Greece are projected to experience the strongest relative decreases in annual summer precipitation.

Change in annual mean precipitation in summer months (in %)



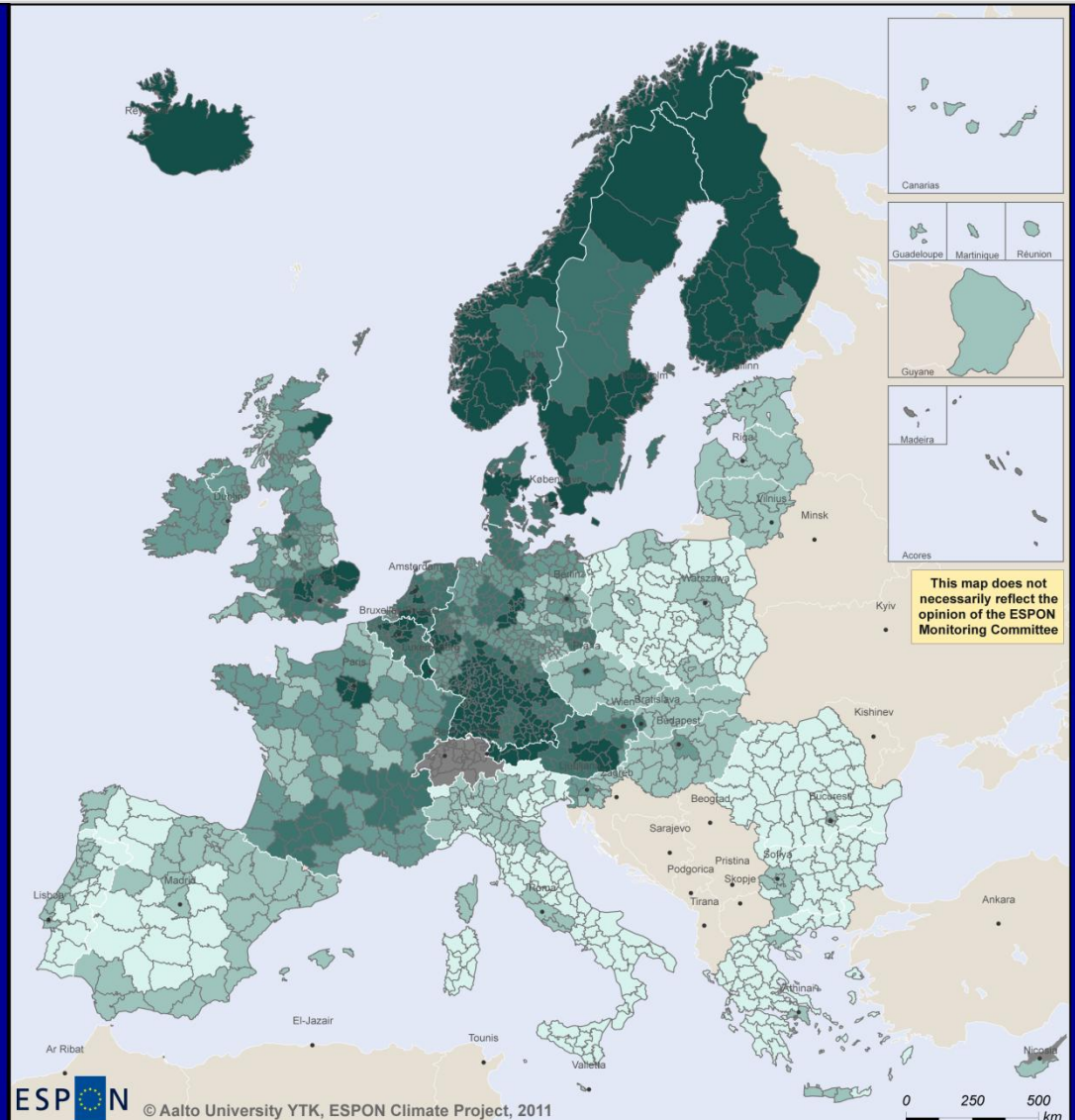
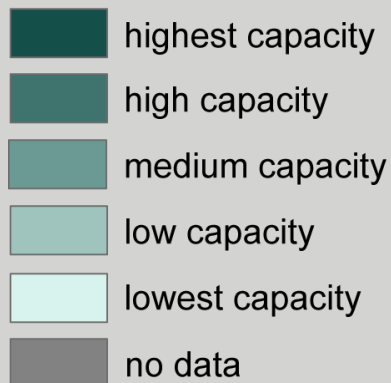
Aggregate potential impact of climate change

Legend



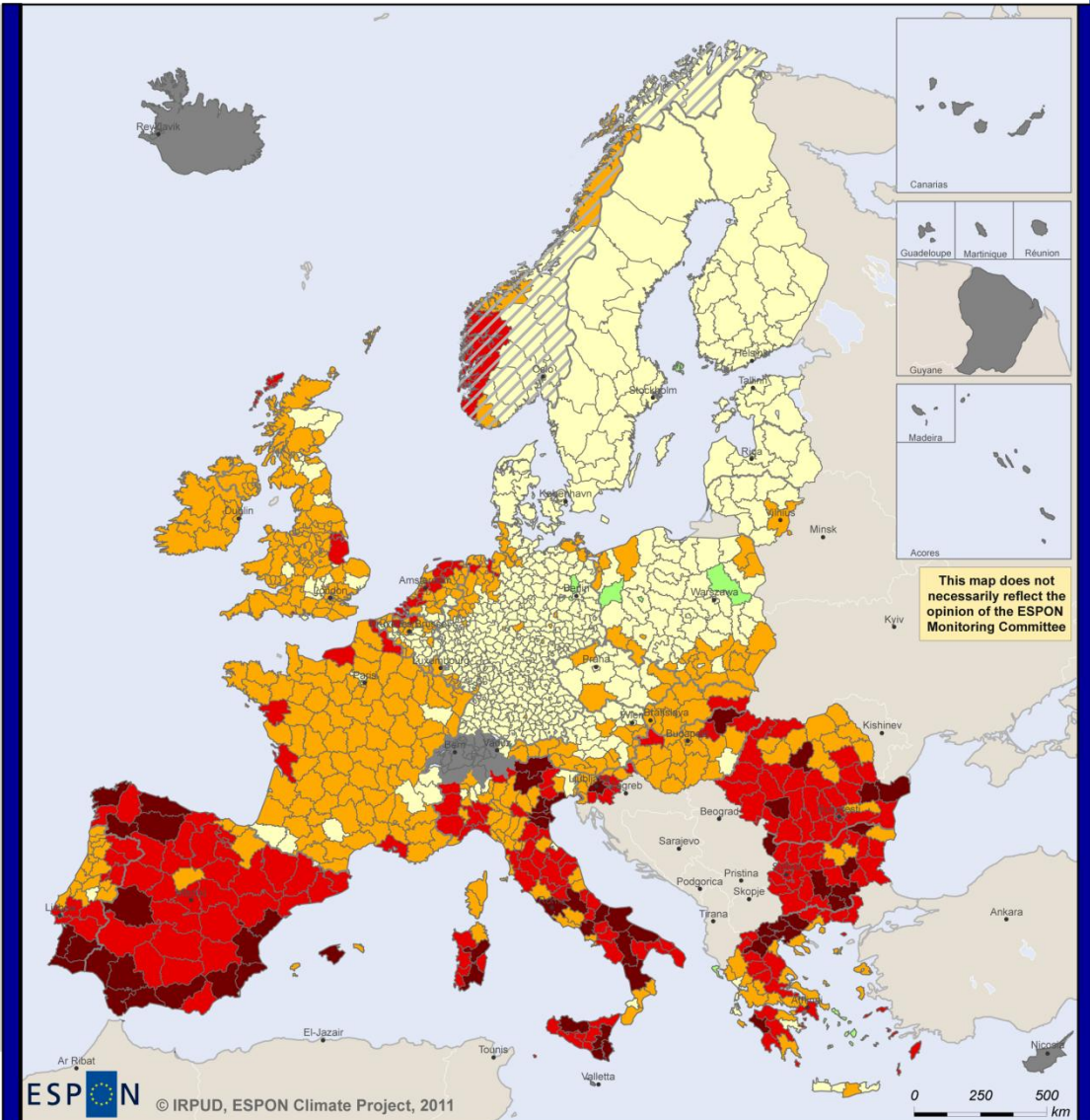
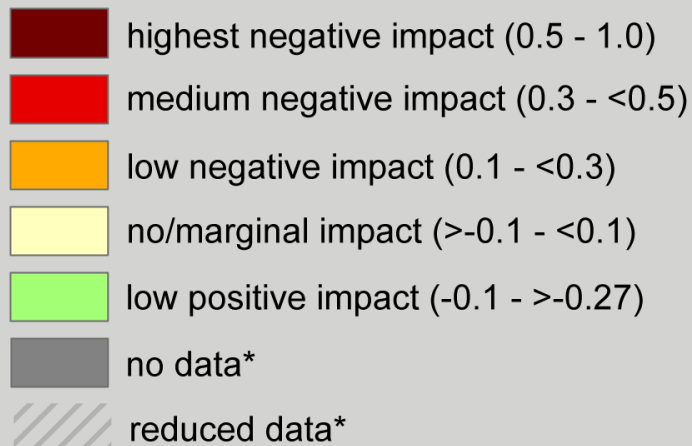
Overall capacity to adapt to climate change

Legend



Potential vulnerability to climate change

Legend

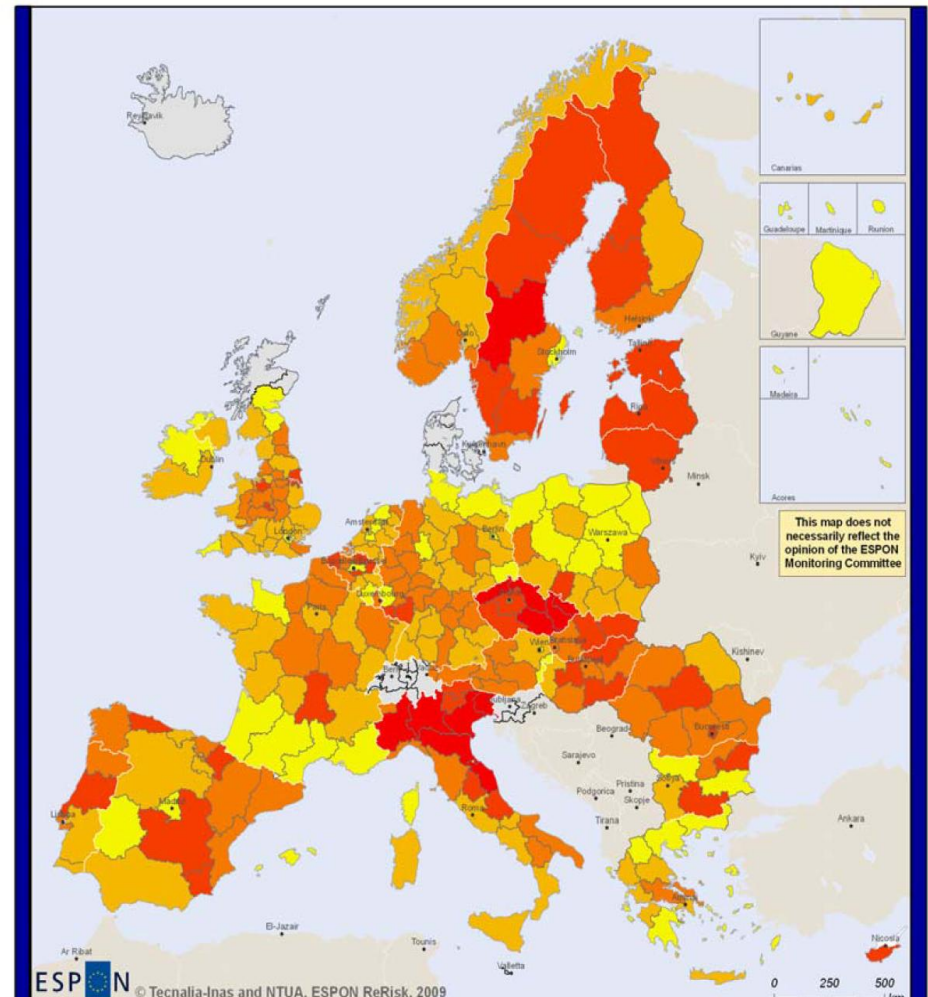


Energy Dependency in Industrial Sector

- The percentage of employment in industries with high energy purchases indicates the regional dependence on industries with high energy spending.
- Values above 10% of employment in industries with high energy purchases were determined to be outliers.
- These are mostly located in Northern Italy and the Czech Republic.



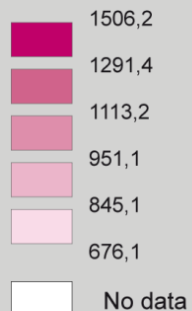
Proportion of employment in industries with high energy spending



Solar Energy Potential

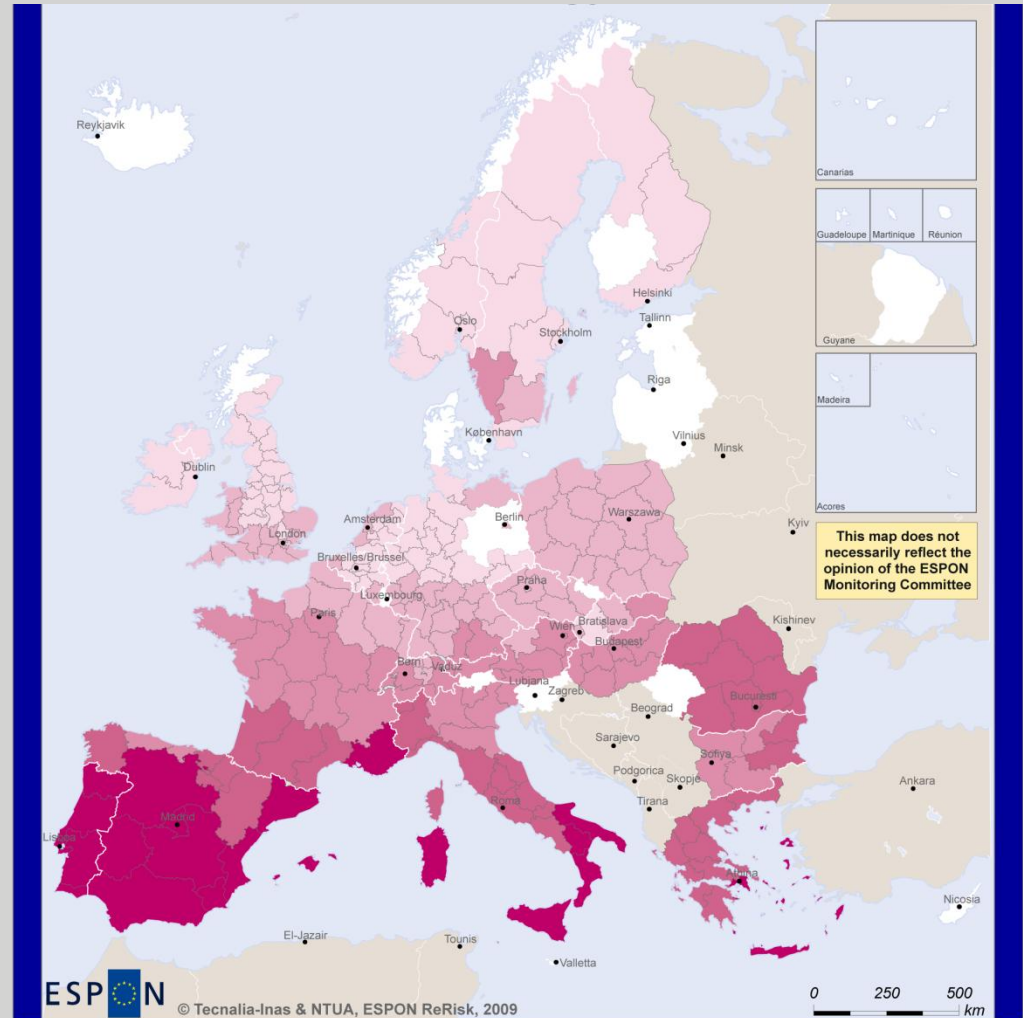

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Solar energy output



Due to the reliability and quality of the datasets behind this map, the Lead Partner of the ReRisk Project decided not to include data collected from other sources than JRC

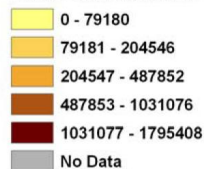
Regional level: NUTS 2
 Source: ESPON 2013 Database, 2010
 Origin of data: JRC, Sunbird Database
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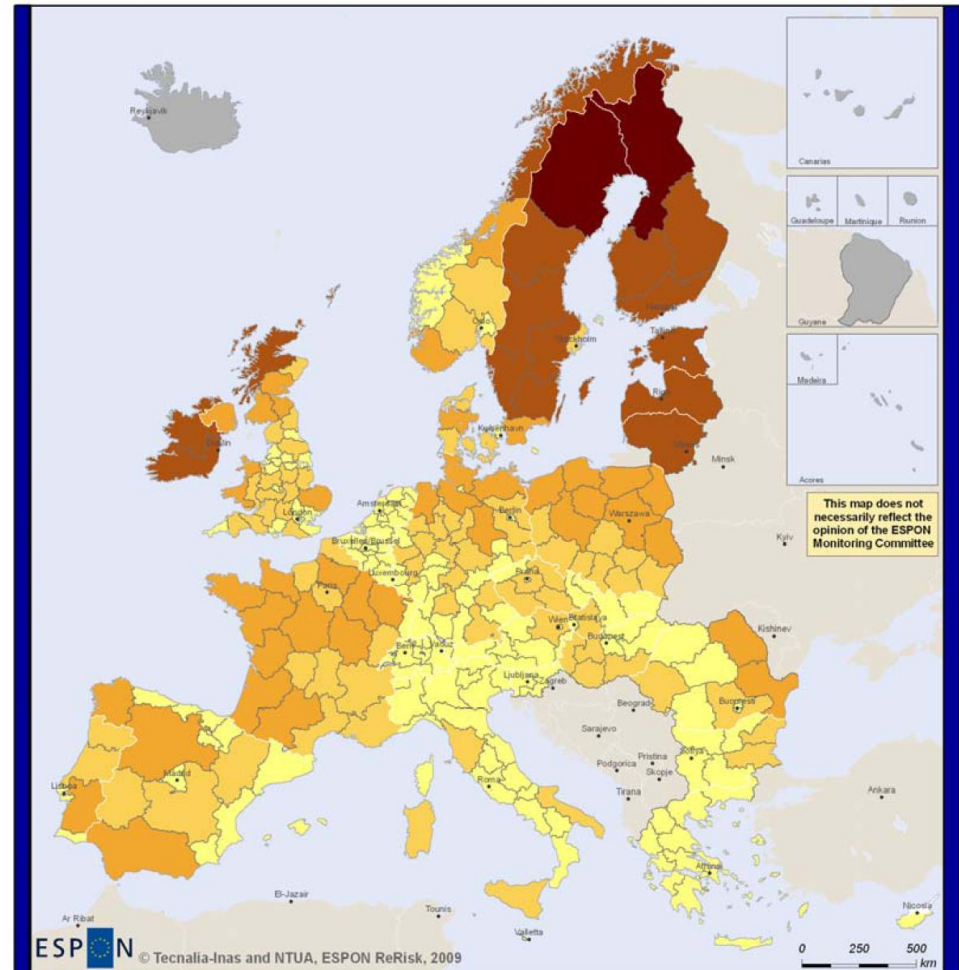
Wind Power Potential

- The production potential of wind power stations, taking into account environmental and other restraints, is concentrated in Northern Europe.
- Finland, Sweden, Estonia, Latvia, Lithuania and Ireland have a significant advantage in this field.

Wind Power Potential



Wind Power Potential



More information

Thank you for your attention on Part 2

Any questions or comments?

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