

Territorial Cohesion – how to tackle a complex vision

Wie geht man mit einer komplexen Vision um?

Evidence from the ESPON 2006 Programme

*Christian Muschwitz
(ECP Luxembourg)*

1. Territory? – Territory!

2. Some Trends...

Economy, Competitiveness

Accessibility and Connectivity

Hazards

Urban and Rural Areas

3. Mega Trends and Scenarios

1. Territory? – Territory!



- Traditionally the European Union uses the term "COHESION" mostly in the sense of economic or social cohesion.
- It is clear that nearly all European sector policies (e.g. agricultural, health, urban, technological policy) have large spatial effects.
- Nevertheless, before ESPON, there was little sensitivity or awareness for a territorial perspective in the EU Cohesion policy.
- This changed for the first time in the Commission's third cohesion report.

Michael Barnier (Foreword of the report):

*"The purpose of this report, the result of work undertaken over the past three years, is to set out the European Commission's vision for the future of Europe's policy to reduce disparities and to promote greater economic, social and **territorial cohesion**."*

In the **Structural Funds 2007-2013**, the Commission and the EU Member States have **included a territorial objective** of cooperation and also strengthened the strategic dimension of cohesion policy in order to ensure that Community priorities are better integrated into national and regional development programmes.

- So for the first time ever, a clear spatial construct entered the European scenery. And it was ESPON results which achieved this!
- It were results of the first working phase of ESPON which were included into the 3rd cohesion report!
- **But before one can speak of Cohesion, in the sense of "minimizing disparities" (or even "leveling disparities"), the status quo must be identified....**

But as always:

for every complex problem, there is one simple solution,
and this is always wrong!!!!

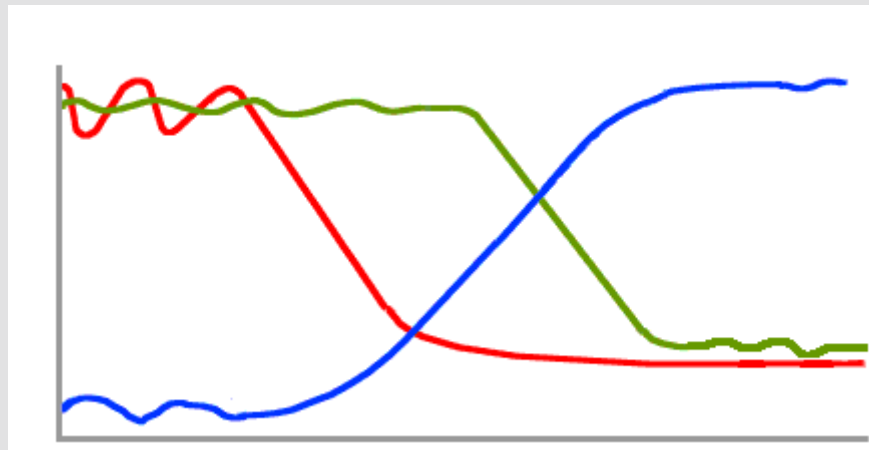
For a complex idea like "territorial cohesion", one has to look
very intense into the details.

And although the "spatial dimension" is an integrative
approach by nature, it does not mean, that one could skip
the **look into the different sectors...**

- Europe is characterized by a rich regional diversity.
- Territorial potentials of Europe's regions are more and more important for competitiveness.
- Territorial imbalances are challenging cohesion.
- Contributions to Lisbon/Gothenborg objectives are feasible from all cities, regions and larger territories.
- Territorial cooperation can create added value.

- Strategic objectives for territorial development include
 - Cohesion and competitiveness
 - Attractiveness for investments
 - Liveability for the citizens
- Evidence on European territorial structures and dynamics inevitable for territorial policy making

2. Some Trends...



Some territorial cohesion trends

- The European core area is spreading geographically
 - The Pentagon is reality (London, Hamburg, Munich, Milan, Paris)
 - 14% of the EU territory generate 46% of GDP, home for 32% of population, takes 75% of R&D Investments (2002)
 - Extending along several corridors

Some territorial cohesion trends

- Several strong urban nodes outside the core
 - Metropolitan urban agglomerations (Madrid, Barcelona, Athens, Dublin, Stockholm, Helsinki, Oslo, Warsaw, Budapest)
 - Small and medium sized cities are important, too!
- Overarching trends and structures stimulate imbalances and challenge territorial cohesion, such as
 - Market forces supporting geographical concentration
 - Imbalances in access and connectivity
 - Disparities between neighbouring areas increasing in parts of Europe

2. Some Trends...

Economy and Competitiveness...



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Functional Urban Areas (FUAs)

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

— Highways of European level
Average yearly development of
GDP per capita in Purchasing
Power Standards in percent
1995 to 2003 *



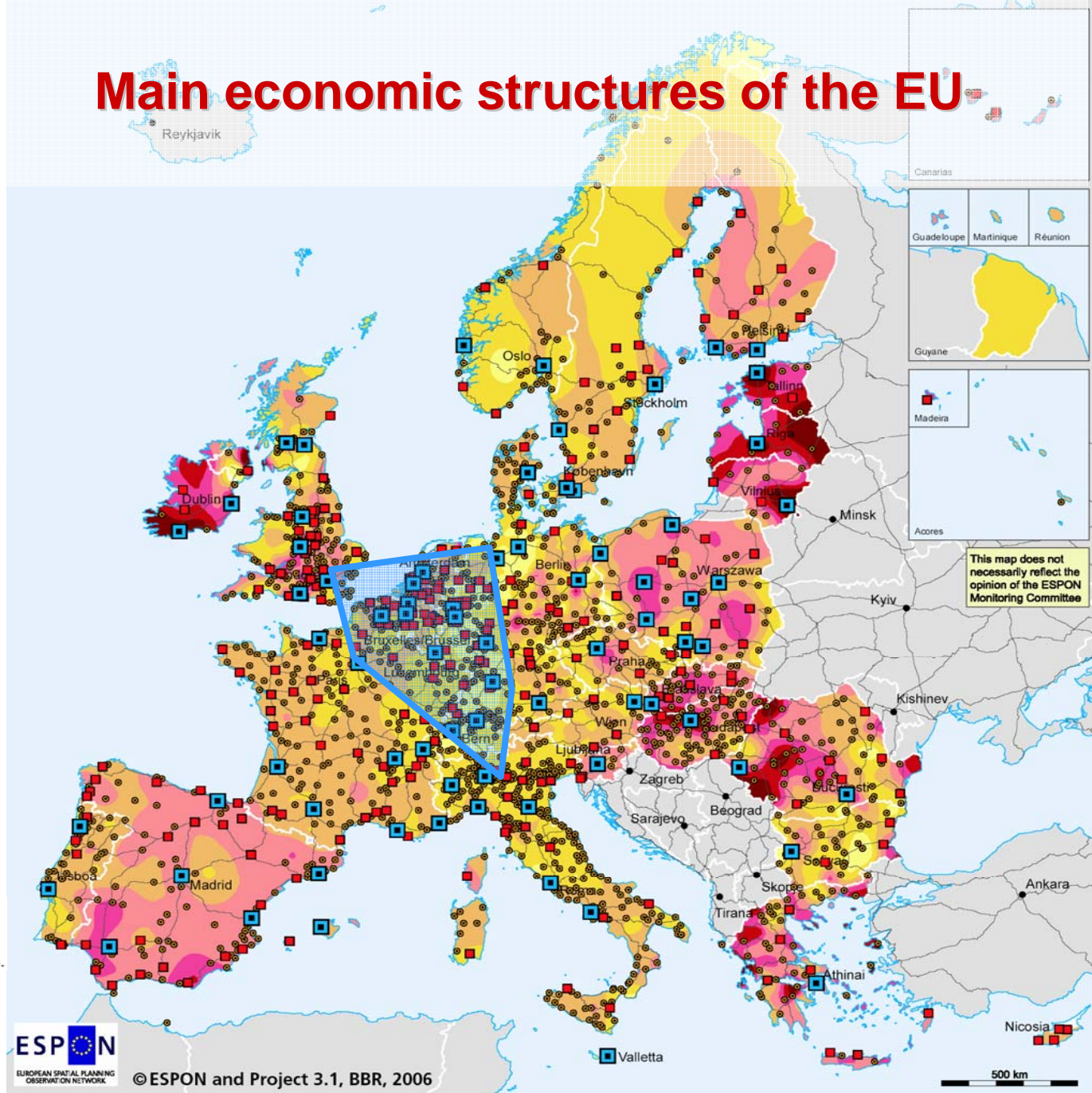
The functional urban areas are an important territorial structure in Europe. An ongoing ESPON Project is doing further work on their classification. New results will be available by the end of 2006.

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

Source: ESPON database

Main economic structures of the EU



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- Contribution to the Lisbon strategy, to growth and jobs
 - Regions' potentials differ
 - For many regions the optional specialisation is not a knowledged based economy

- Accessible urban areas have the best Lisbon performance
 - The core and the north of Europe in the most favorable position
 - Even less urbanised and less accessible areas can do well

- Innovation potential has a distinct territorial pattern
 - R&D and creative jobs weaker in peripheral parts (east, west and south)
 - Metropolitan areas highest on R&D spending

Economic Lisbon Indicators

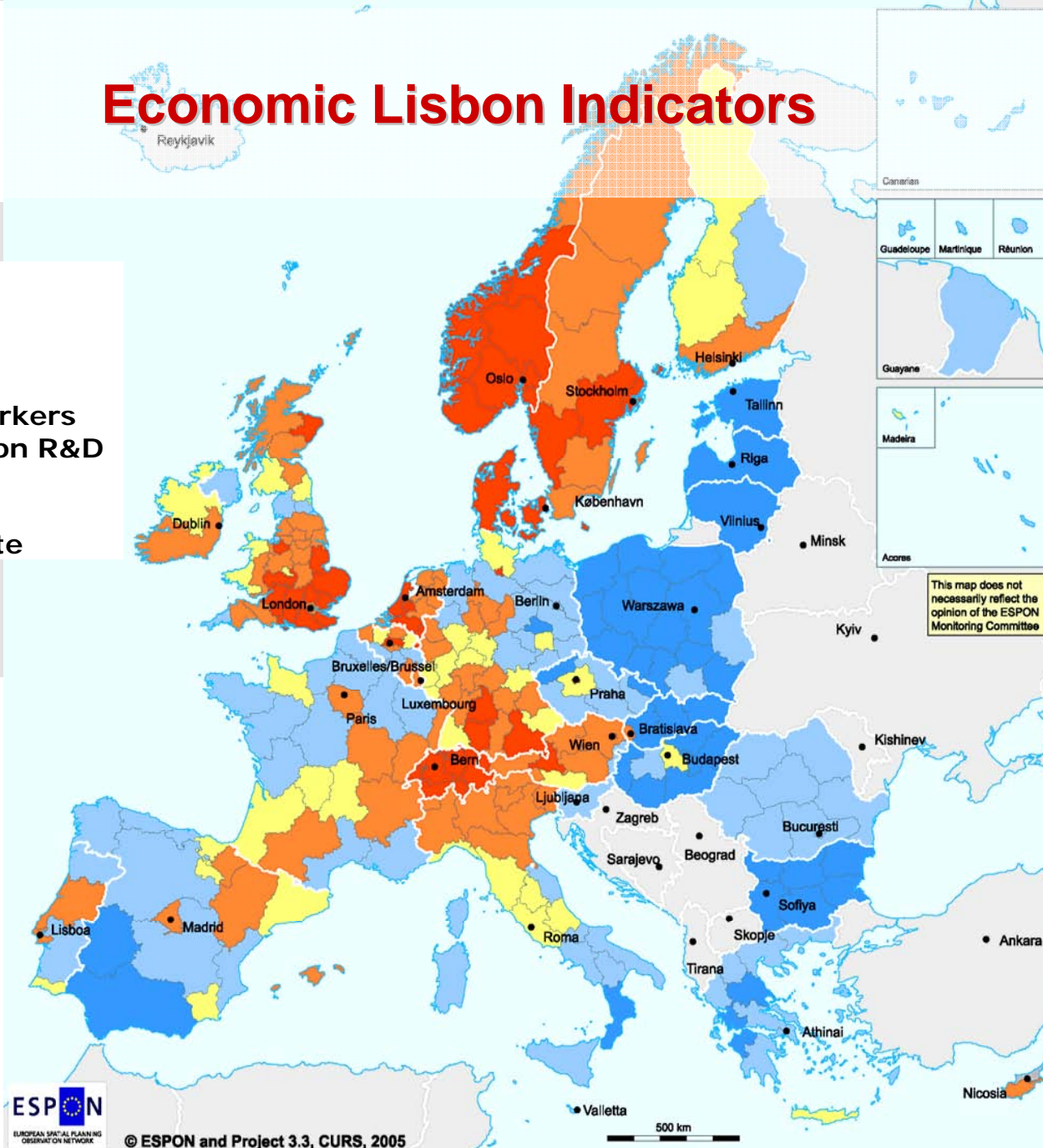
7 out of 14 Lisbon indicators:

- GDP/capita,
- (2) GDP/employed person
- (3) Employment rate
- (4) Employment rate of older workers
- (5) Gross domestic expenditure on R&D
- (6) Dispersion of regional (un)employment rates
- (7) Long-term unemployment rate

Performance

Number of indicators in the upper quartile minus number of indicators in the lower quartile

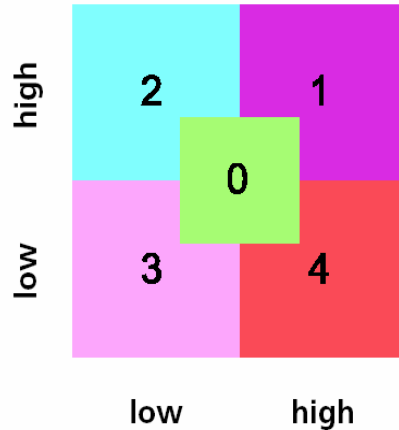
	> 3	Primarily high performance
	1 - 3	
	0	Medium performance
	-3 - -1	
	< -3	Primarily low performance
		No data available



Cultural and creative professions / GDP p.c.

Regional categories

Employment with cultural
and creative professions
as share of active local
population, 2005



GDP per capita, 2001

- 0: Normal values ($x^2+y^2 < 0.752$)
- 1: high GDP & high % of cultural employment
- 2: low GDP & high % of cultural employment
- 3: low GDP & low % of cultural employment
- 4: high GDP & low % of cultural employment

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Regional level: NUTS 2
Origin of data: ESPON Project 1.3.3, CHI
Source: ESPON database



This map does not
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2. Some Trends...

Accessibility...

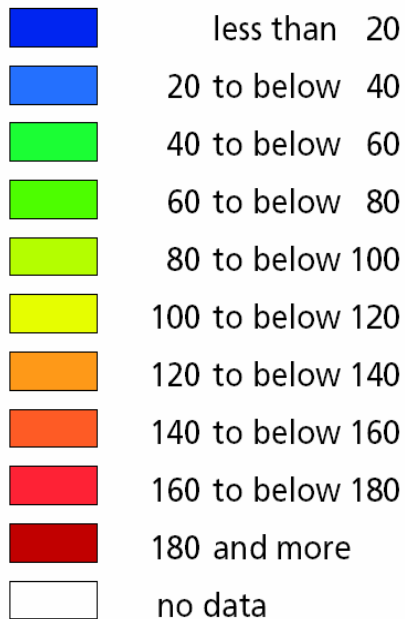


- Multi modal accessibility show a core-periphery pattern across Europe and in many countries (even stronger for road and rail)
- Accessibility is best in the core and for larger urban agglomerations with international airport
- Increasing energy prices will have negative impact on accessibility, particular in rural and remote areas
- ICT connectivity divides Europe north-south, east-west and urban-rural
- Information society roll-out shows considerable territorial variations favouring areas with high population density



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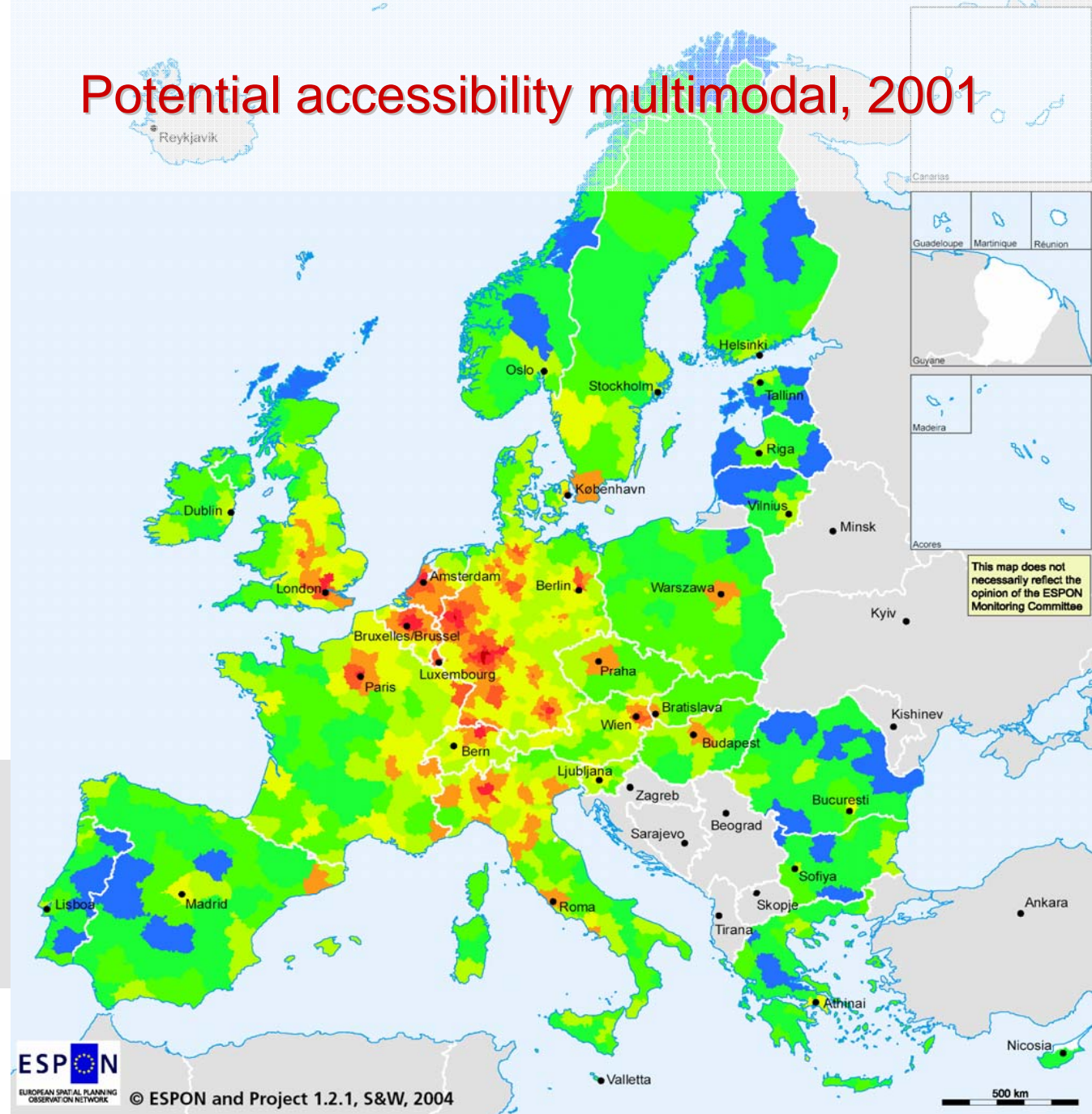
Accessibility index (EU25+2 = 100)



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for the administrative boundaries
Regional level: NUTS 3
Origin of data:
Spiekermann & Wegener (S&W)
Source: ESPON database



Potential accessibility multimodal, 2001



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© ESPON and Project 1.2.1, S&W, 2004

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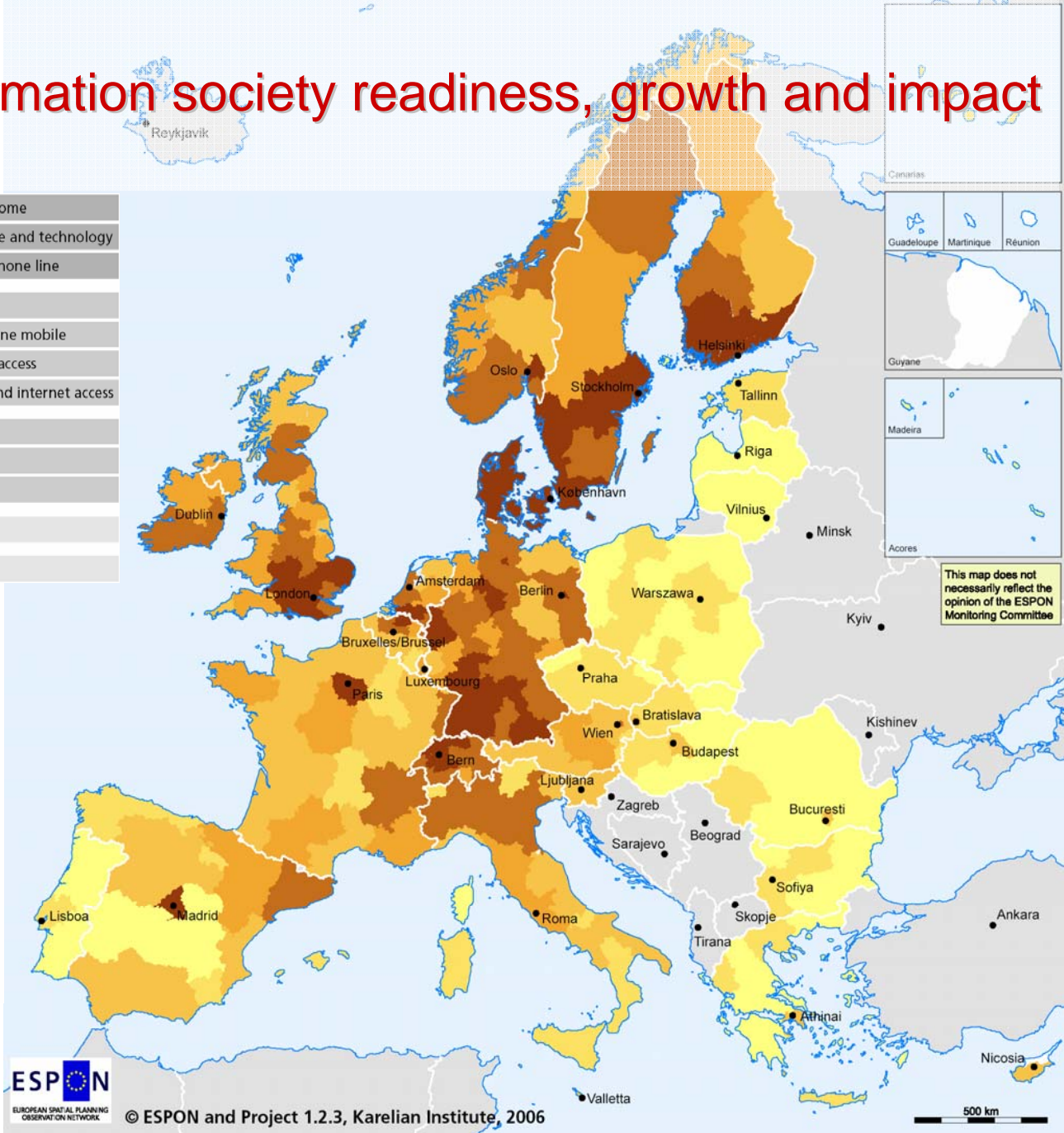
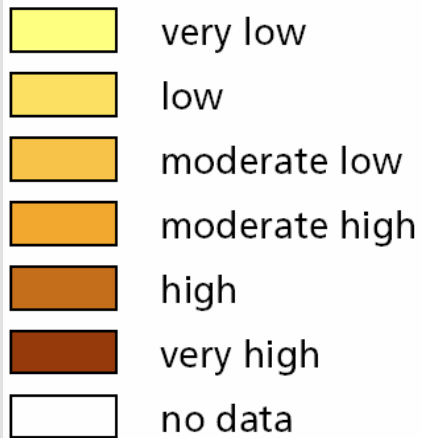


Information society readiness, growth and impact

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IS Readiness Resources and skills for ICT use	Wealth	Households disposable income
	Skills/Education	Human resources in science and technology
	Adoption of basic technologies	Households with a fixed phone line
		Households with a PC
		Households with at least one mobile
	IS Growth Availability and use of ICT technologies	Households
Households with broadband internet access		
Households with fibre backbones		
Businesses		Firms with internet access
		Firms with websites
IS Impact Economic implications of IS	Impact on labour market	Hightech employment
		Innovative activity

Information society index, 2003



2. Some Trends...

Hazards...



- Hazards in general seem not to undermine territorial competitiveness
- For some areas impacts of hazards such as drought create a long-lasting negative impact
- Climate change might influence cohesion and competitiveness, attractiveness and liveability, and a sustainable development in the longer term



Aggregated natural and technological hazards

Natural hazards:

- Avalanches
- Drought potential
- Earthquakes
- Extreme temperatures
- Floods
- Forest fires
- Landslides
- Storm surges
- Tsunamis
- Volcanic eruptions
- Winther and tropical storms

Hazard classification

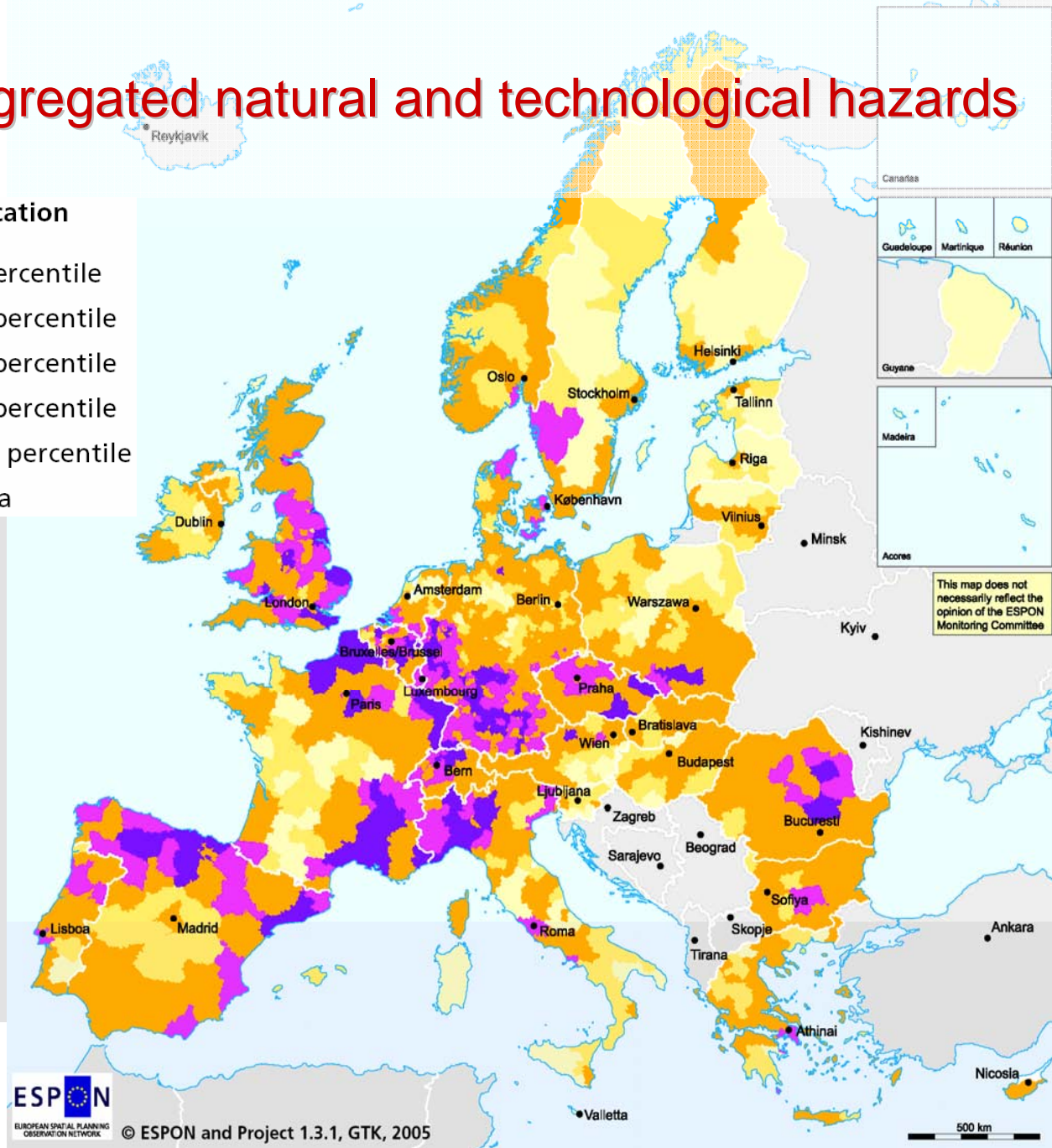
	0-10 percentile
	10-25 percentile
	25-75 percentile
	75-90 percentile
	90-100 percentile
	no data

Technological hazards:

- Air traffic hazards
- Major accident hazard
- Nuclear power plants
- Oil processing, storage and transportation

This map shows the aggregated hazard typology based on 15 hazard indicators. Every indicator gives the value from 1 to 5 depending on the magnitude of the hazard in the NUTS 3 area. For the class "no data" value is 0. These values are then weighted on base of expert opinion (Delphi method questionnaire). At the end the sum of 15 weighted indicators are classified on base of percentile rank. For instance, NUTS 3 areas that belong in 90-100 percentile have their score greater than or equal to 90% of the total of all the summed hazard values.

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for the administrative boundaries
Regional level: NUTS 3
Origin of data: ESPON Project 1.3.1, GTK
Source: ESPON database



2. Some Trends...

Urban and Rural...



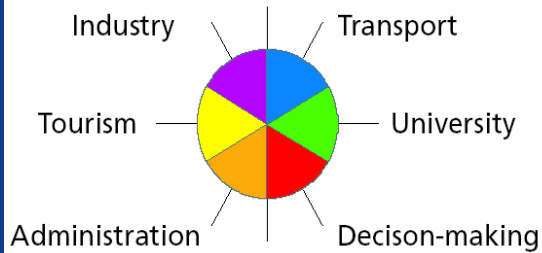
- Urban areas are significant nodes for territorial cohesion and competitiveness at European and national level
- Major metropolitan agglomerations show potential for more polycentricity at European scale as result of their GDP per capita growth
- Many small and medium sized cities can support a balanced national and regional development
- Functional specialisation of cities define their importance in the larger territorial context (more than their size)
- Many options for territorial cooperation exists

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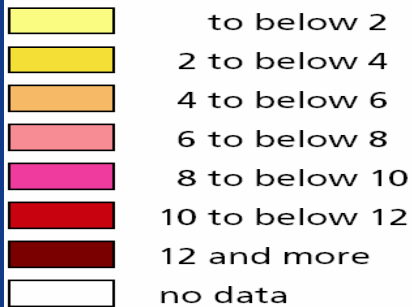
EUROPEAN SPATIAL PLANNING
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Metropolitan European Growth Areas (MEGA) by functional importance of global, European, national and trans-national significance



Size according to average value of related significance of functions

Average yearly development of GDP per capita in Purchasing Power Standards in percent 1995 to 2003 *

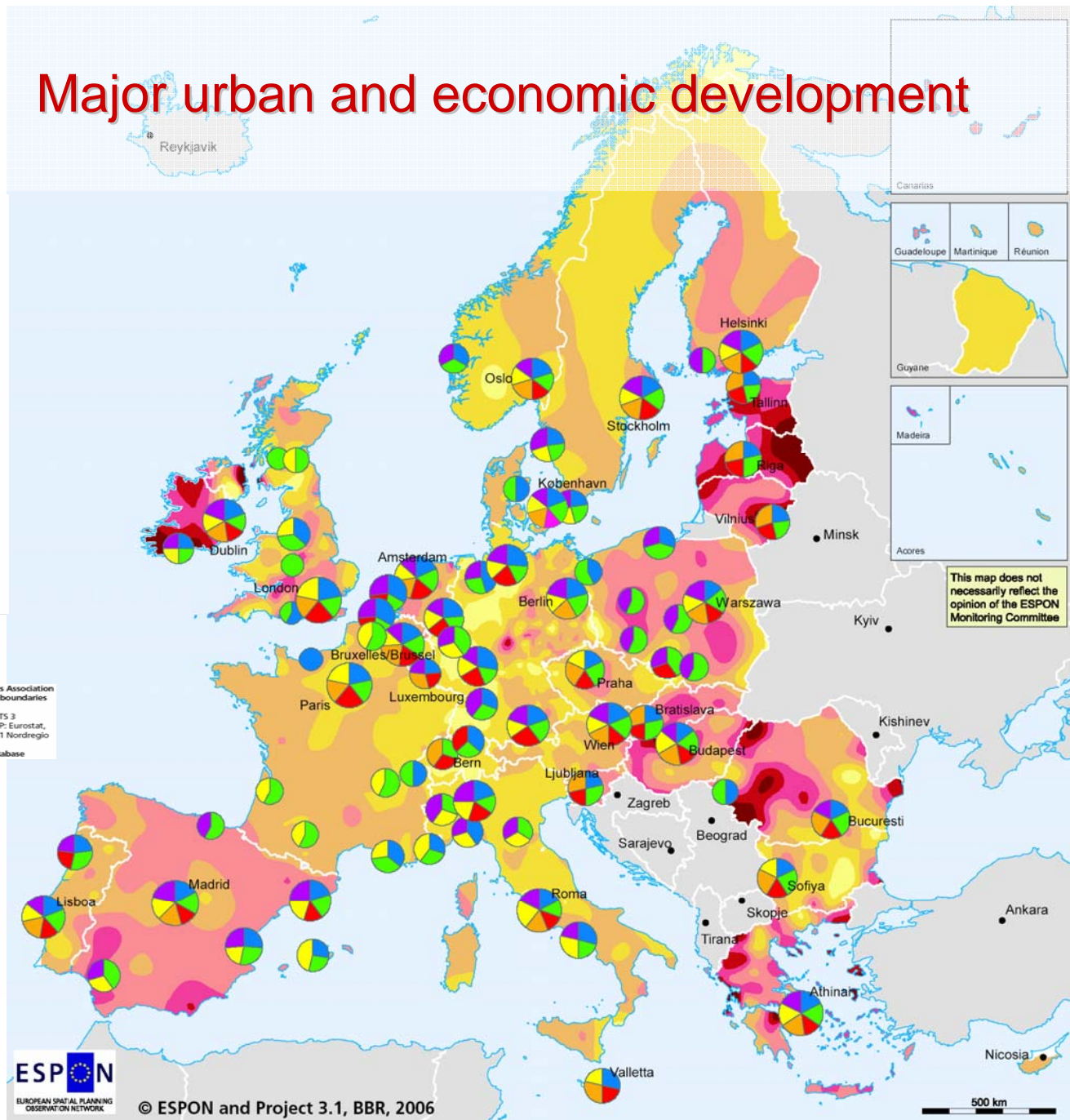


* Romania 1998 to 2003

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Contact Point LU

Major urban and economic development



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

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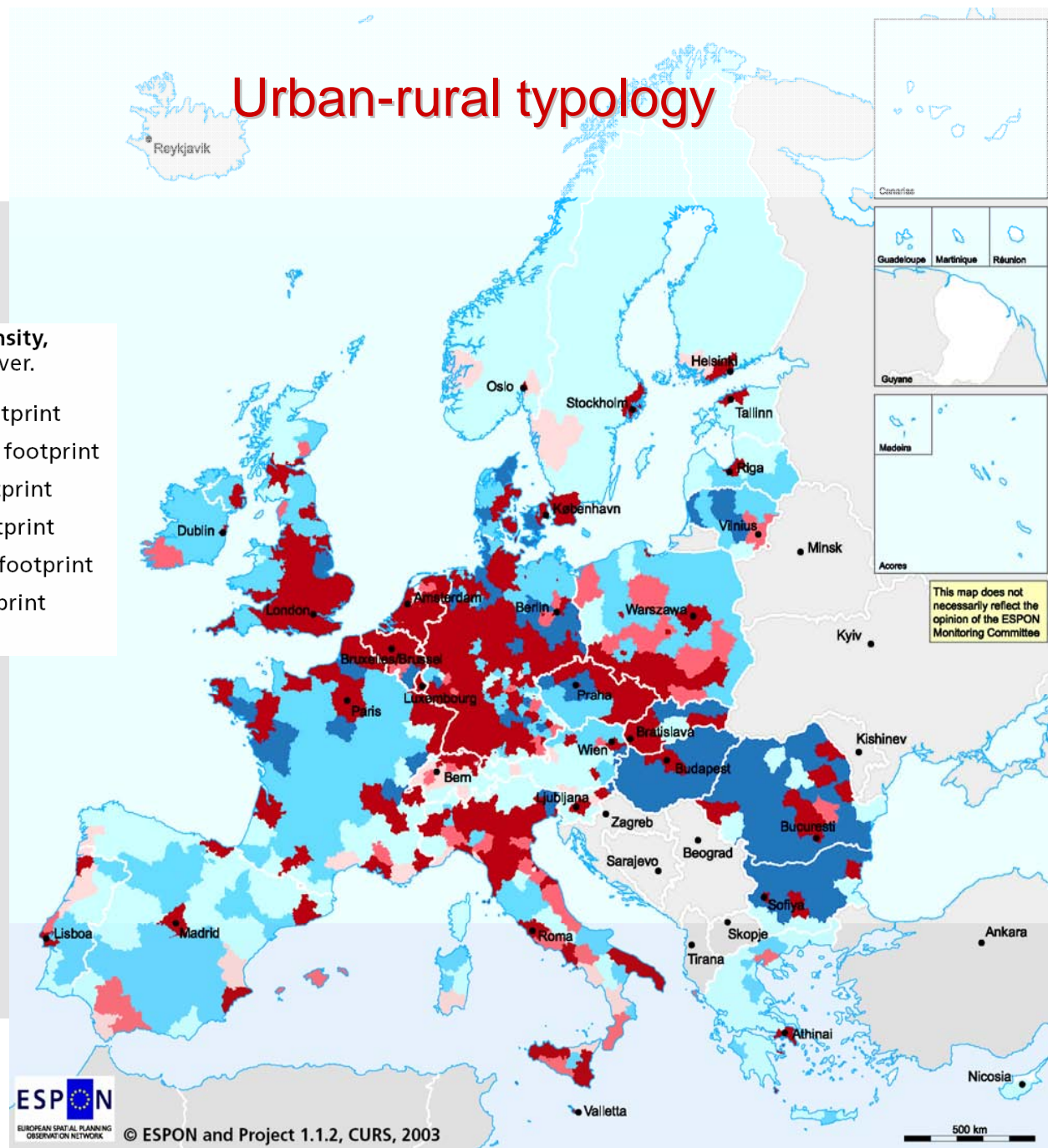
© ESPON and Project 3.1, BBR, 2006

- Huge variety throughout Europe and within Member States
- Rural areas not synonymous with agriculture
 - Rural areas with a strong primary sector
 - Rural areas in proximity to major urban centres
 - Rural areas with small and medium-sized urban development poles
 - Remote rural areas facing decline
- Depopulation is a challenge for many remote rural areas
- The diversification of the rural economy depends also on intangible factors and ability to capitalise on potentials
- Rural-urban partnership is an option in many areas

Urban-rural typology

Urban-rural typology, based on population density, ranking of Functional Urban Areas and land cover.

- High urban influence, high human footprint
- High urban influence, medium human footprint
- High urban influence, low human footprint
- Low urban influence, high human footprint
- Low urban influence, medium human footprint
- Low urban influence, low human footprint
- No data



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

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Origin of data: ESPON Project 1.1.2, CURS; CH and NO: classification on basis of calculations of ESPON Project 3.3
Ranking of Functional Urban Areas (FUAs): ESPON Project 1.1.1, Nordregio
Source: ESPON database

3. Megatrends and Scenarios...

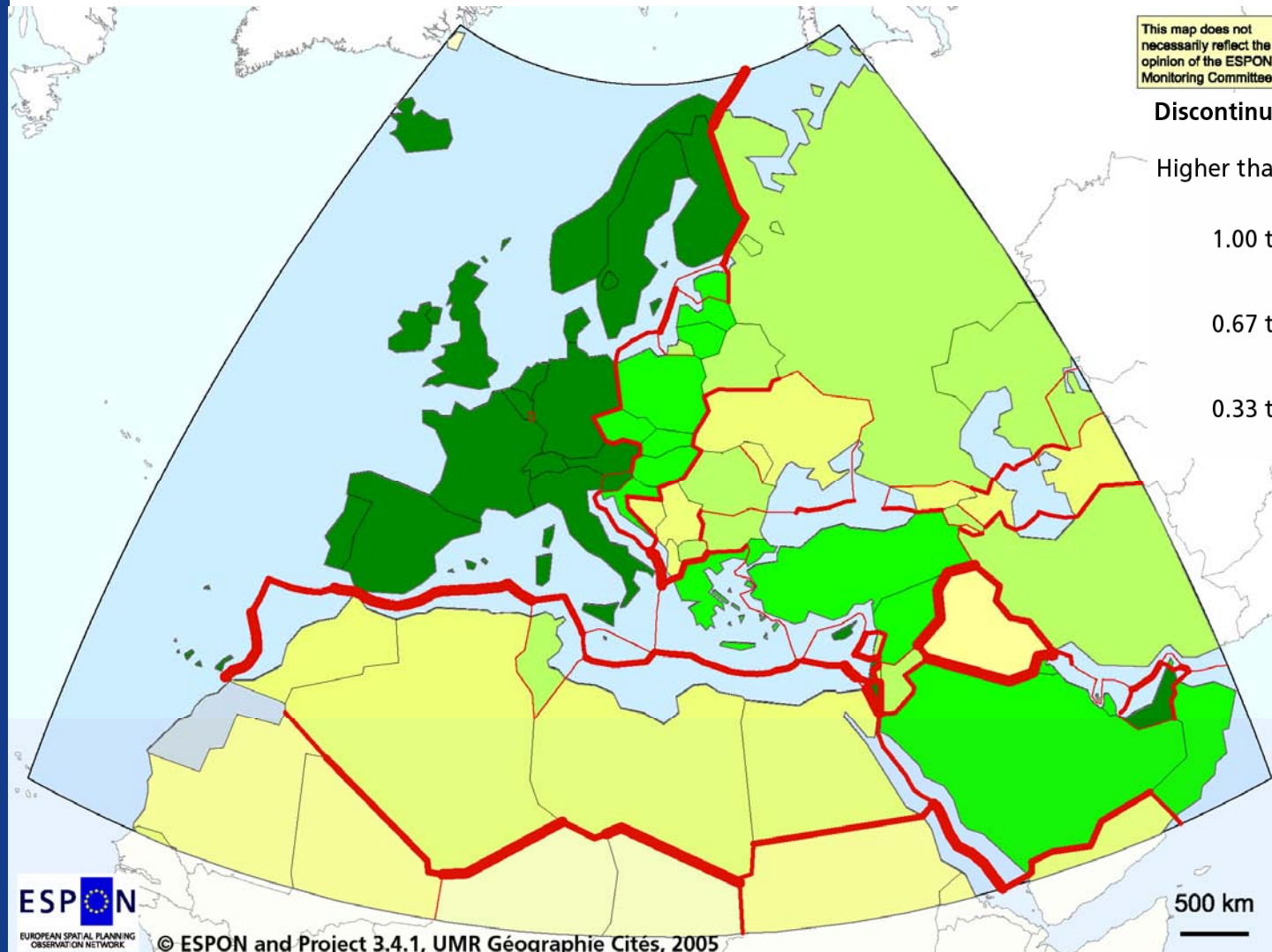


- European Union share of world GDP and population constant due to EU enlargements over time
- Significant disparities exist between Europe and its neighbours which impact trade and migration
- Connections to global networks vary between places
- Only a few European cities have a truly world-wide reach
- Global integration zones in Europe is an option for territorial cooperation


Differences in GDP per capita in Europe and its neighbourhood, 2002

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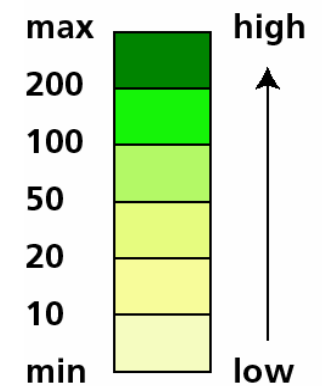
Origin of data: Maddison Historical Database
Source: ESPON database



Discontinuities (relative)

- Higher than 1.33  Very high
- 1.00 to 1.33  High
- 0.67 to 1.00  Medium
- 0.33 to 0.67  Low

Index 100 = World



Mega trends with territorial impact

- Demography: Aging and migration
- Geography: Further EU enlargements
- Economy: Accelerating globalisation, technological development, EU policies emphasising cohesion and/or global competitiveness
- Energy: Increasing energy prices and emergence of a new energy paradigm calling for increased renewable energy production
- Transport: Saturation of euro-corridors, impacts of energy price on mobility and accessibility, technological innovations (fuel cells and hydrogen technology, hybrid cars)
- Climate change: Frequency, intensity and more places affected

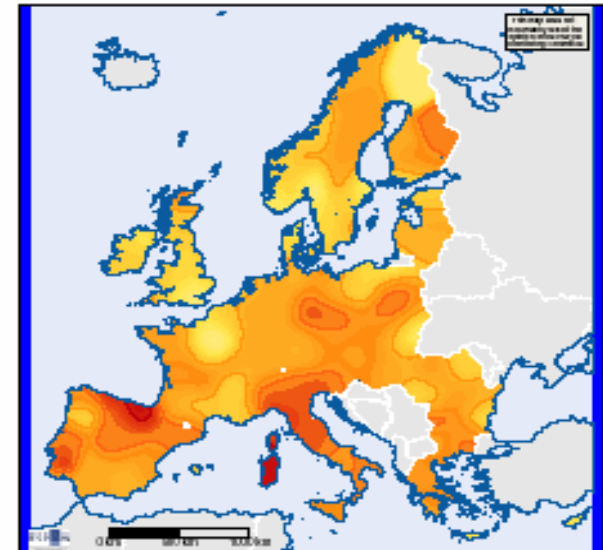
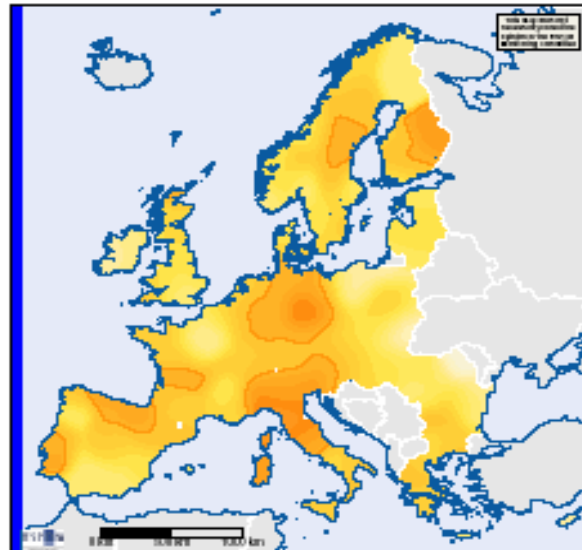
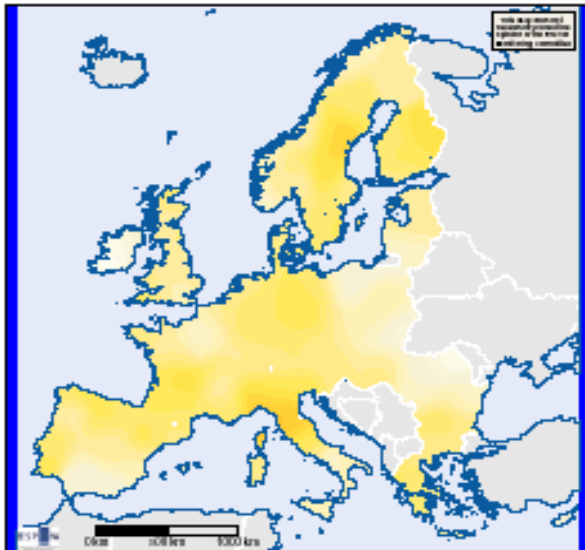
Demographic perspectives 2030

BASELINE SCENARIO

2000

2015

2030



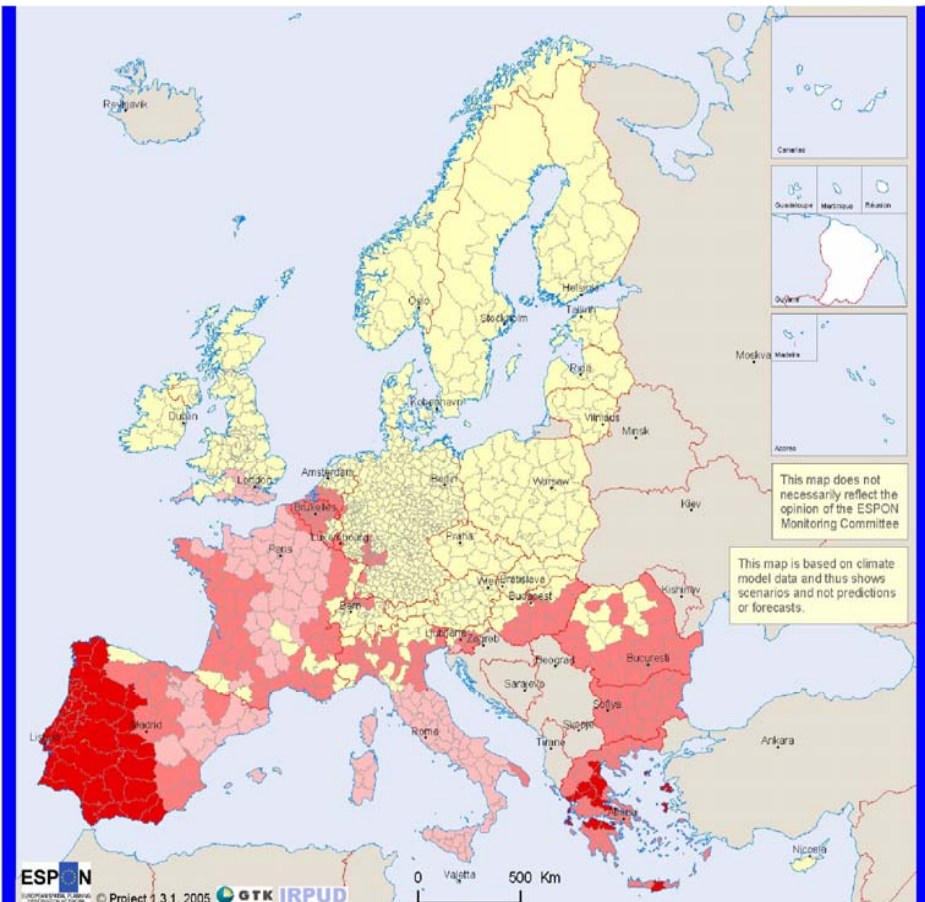
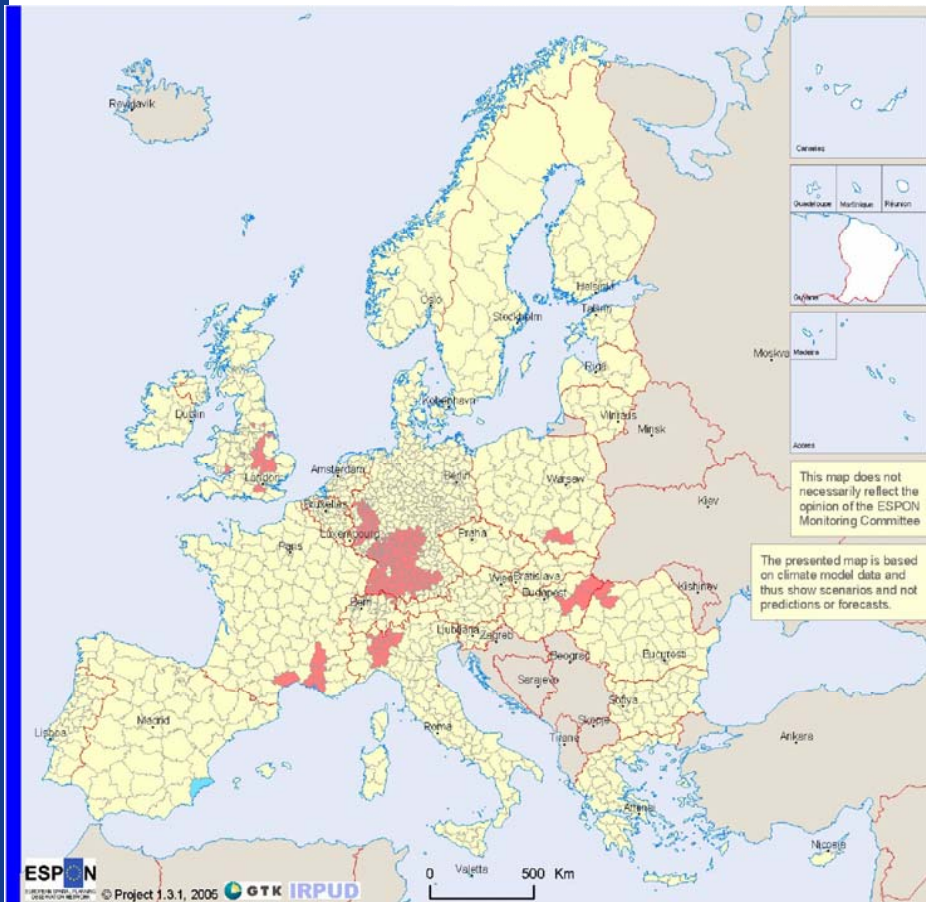
Projections based on data from UNPP 2004, ESPON database 2005 and ULB 1991

Grasland C., Guerin M., Lambert N. (2005) - UMS RATE - ESPON project 3.2

Median age (years)



Climate change: Likely effects on hazard potential



Change of precipitation affecting flood hazard

- No impact on flood hazard
- Increasing impact on flood hazard
- Increasing impact on flood hazard
- Decreasing impact on flood hazard
- No data
- Non ESPON space

Origin of the data: © EuroGeographics Association for the administrative boundaries
 Large flood areas © Dartmouth Flood Observatory
 Flood areas © ESA - Earth Observation - Earth online
 The Prudence project model database
 Source: ESPON Data Base

This map represents the connection between change of precipitation (The Prudence project model database) and flood hazard. Only the highest hazard intensities (4 and 5) are chosen.

Change of dry spell length affecting drought potential

- No impact on drought potential
- Very low increasing impact on drought potential
- Low increasing impact on drought potential
- Moderate increasing impact on drought potential
- No data
- Non ESPON space

Origin of the data: © EuroGeographics Association for the administrative boundaries
 ARIDE final report (2001)
 The Prudence project model database
 Source: ESPON Data Base

This map represents the connection between change of dry spell length (The Prudence project model database) and drought potential, based on precipitation deficit recordings 1904-1995.

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

The presented map is based on climate model data and thus show scenarios and not predictions or forecasts.

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- Future perspectives important for informing policy development related to the development of the European territory
- The European territory of the future is influenced by decisions of today
- The long term future may require re-thinking and innovation in several policy fields
- Different development paths exist depending on the key policy orientation driving territorial development
- An ESPON Report on Spatial Scenarios to be published beginning of 2007

Sketching integrated territorial perspectives

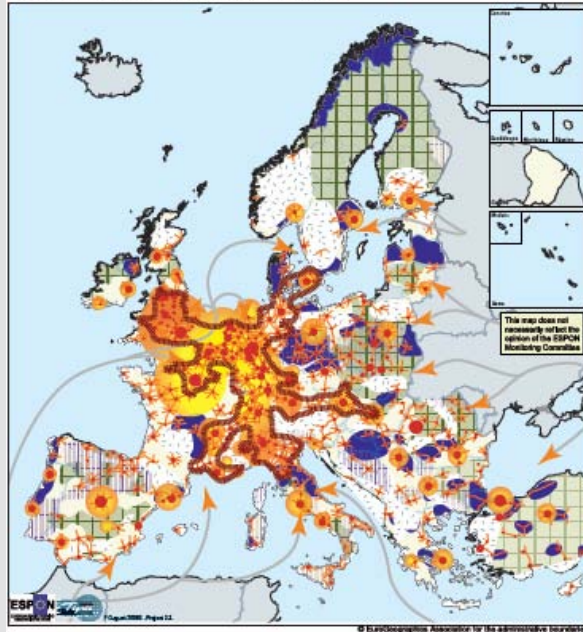
An appetizer

Strengthened policies
for Competitiveness

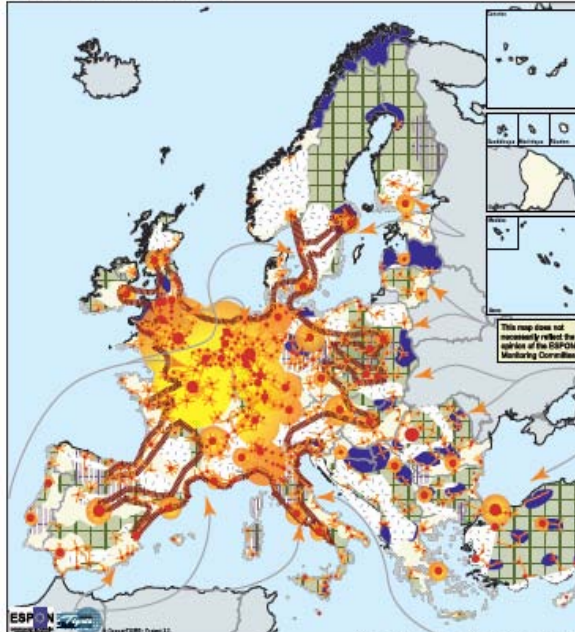
Baseline

Strengthened
policies for Cohesion

COMPETITIVENESS-ORIENTED SCENARIOS - 2030



B BASELINE SCENARIO - 2030



COHESION - ORIENTED - 2030 SCENARIO

