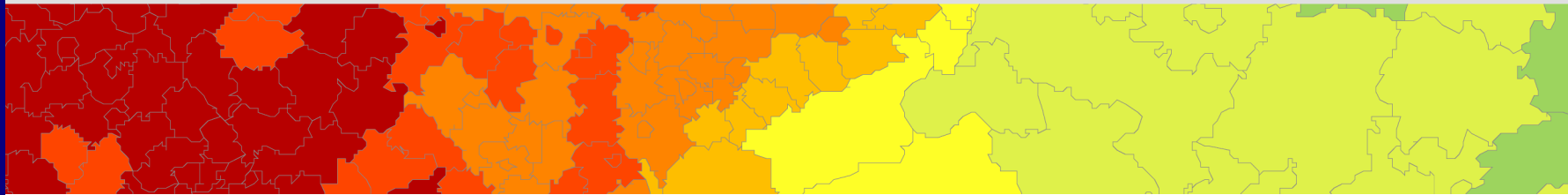




EUROPEAN SPATIAL PLANNING  
OBSERVATION NETWORK



ECP Luxembourg - ESPON Workshop  
14 December 2007

**ESPON 2006 Programme**

## Structure of presentation

- Expectations and objectives of the programme
- Evidence on European territorial development from the ESPON 2006 Programme and key messages to emphasise
- Inclusion of ESPON findings in policy relevant documents

## Expectations of ESPON 2006

- Knowledge on European territorial trends
- Territorial impact of EU policies
- Integrated concepts and tools
- Spatial scenarios
- Policy support (EU and national policies, in particular Structural Funds)
- Operational deliverables (in particular territorial indicators and diagnosis)
- A network and scientific platform for European territorial research

## Objectives of ESPON 2006

- European (and transnational) focus
- Develop orientations for better perception and application of the ESDP
- Contribute to better understanding of enhancement of spatial dimension of EU policies
- Improve coordination of territorially relevant decisions
- Bridge the gap between policy makers, administrators and scientists
- Create network of European “territorial” scientific community

## Territorial cohesion trends

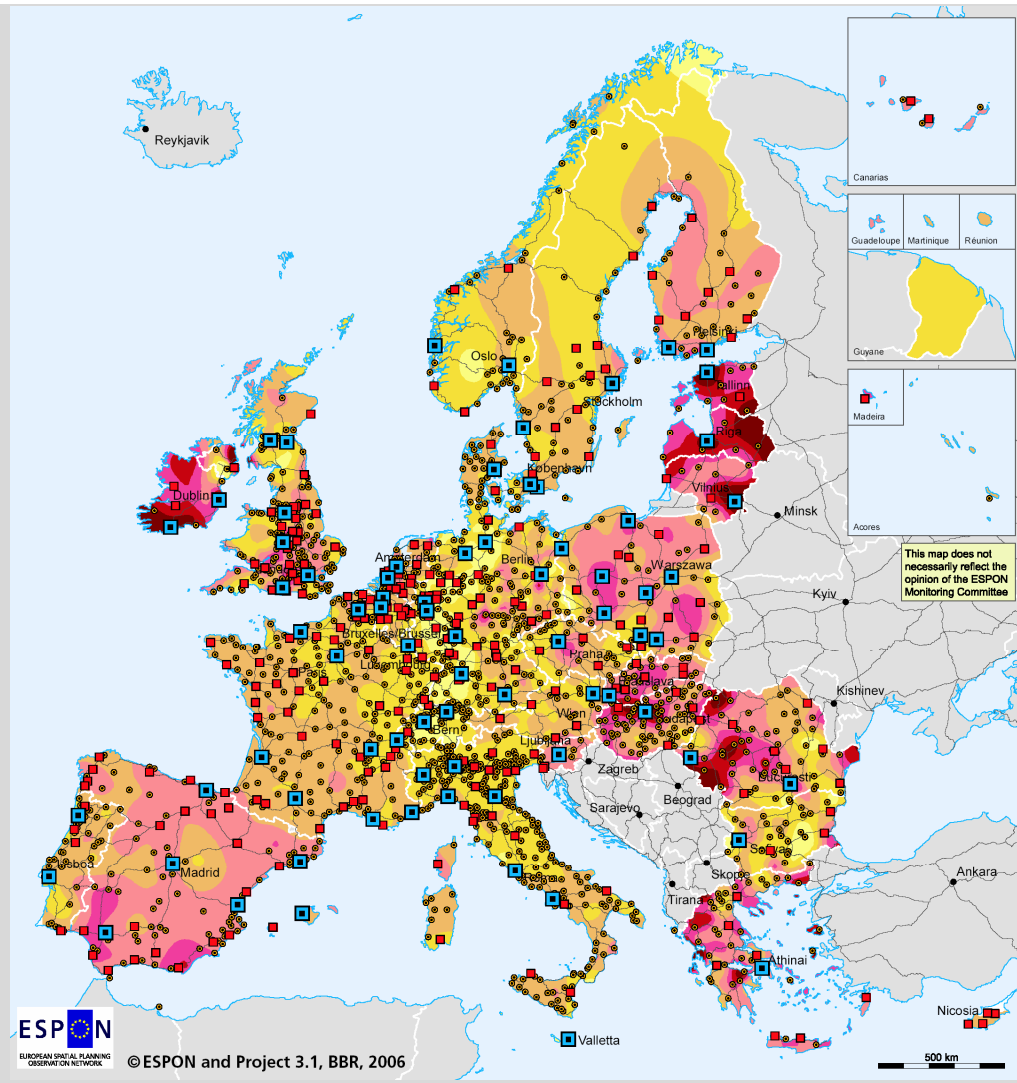
- **Core is spreading** geographically
  - Pentagon is a reality
  - Extending along several corridors
- **Strong urban nodes outside** the core
  - Metropolitan urban agglomerations
  - Small and medium sized cities
- Overarching trends and structures stimulate imbalances and **challenge territorial cohesion**, such as
  - Market forces supporting geographical concentration
  - Imbalances in access and connectivity
  - Disparities between neighbouring areas increasing in parts of Europe

## Main economic structures of the European territory

- **Strong urban nodes** close to and outside the core
- **High GDP growth** in areas with relatively lower GDP level

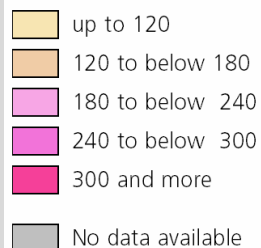
### Functional Urban Areas (FUAs)

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

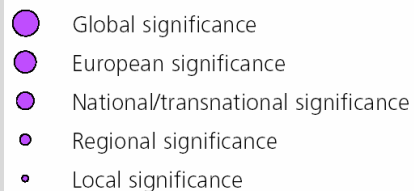


# Major urban areas, their accessibility and significant profiles

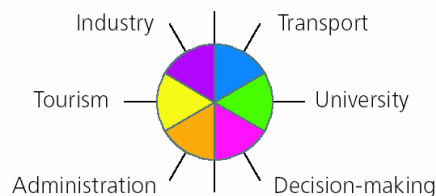
Accessibility to the nearest MEGA by truck - travel time to reach the nearest MEGA in minutes



Decision-making functions outside MEGA's by significance

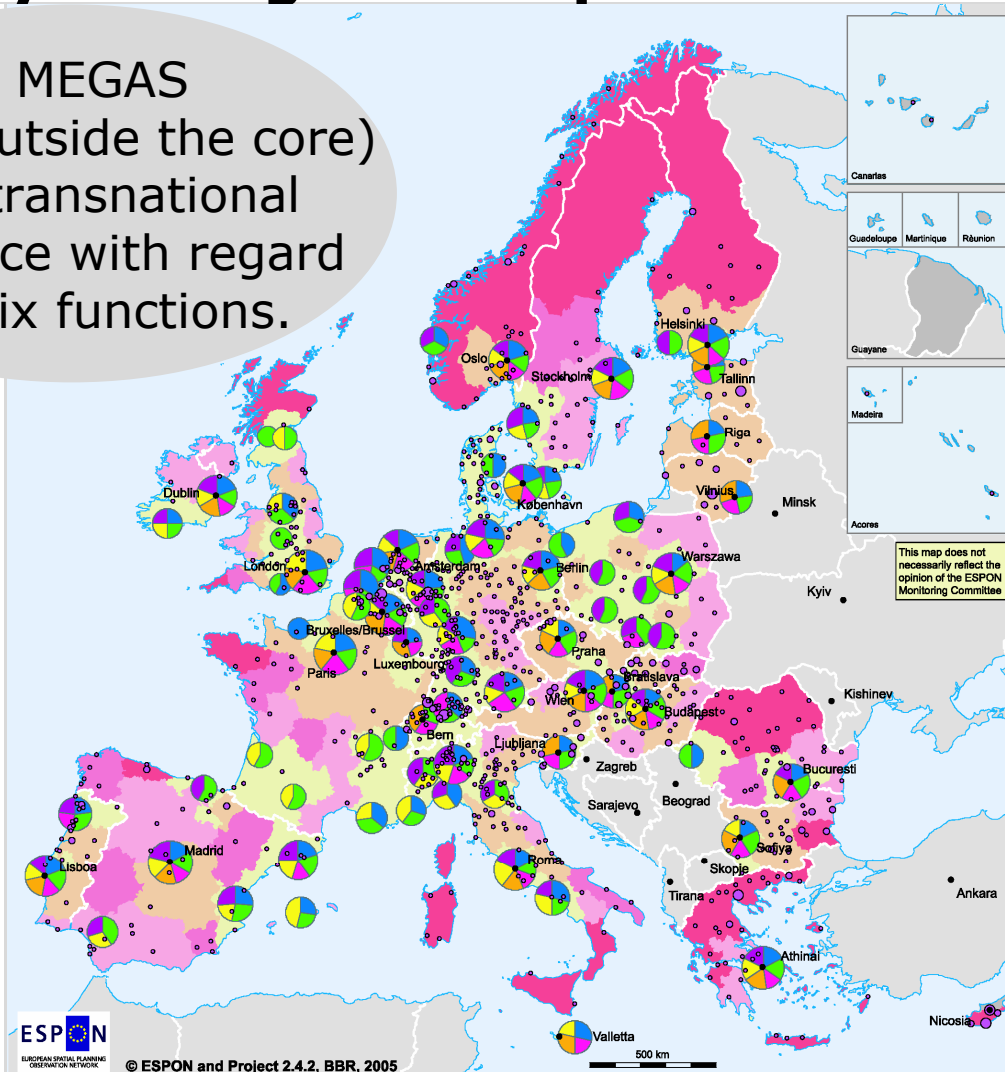


Metropolitan European Growth Areas (MEGA) by functional importance of global, European and transnational significance



Size according to average value of related significance of functions

14 MEGAS  
(mainly outside the core)  
are of transnational  
importance with regard  
to all six functions.



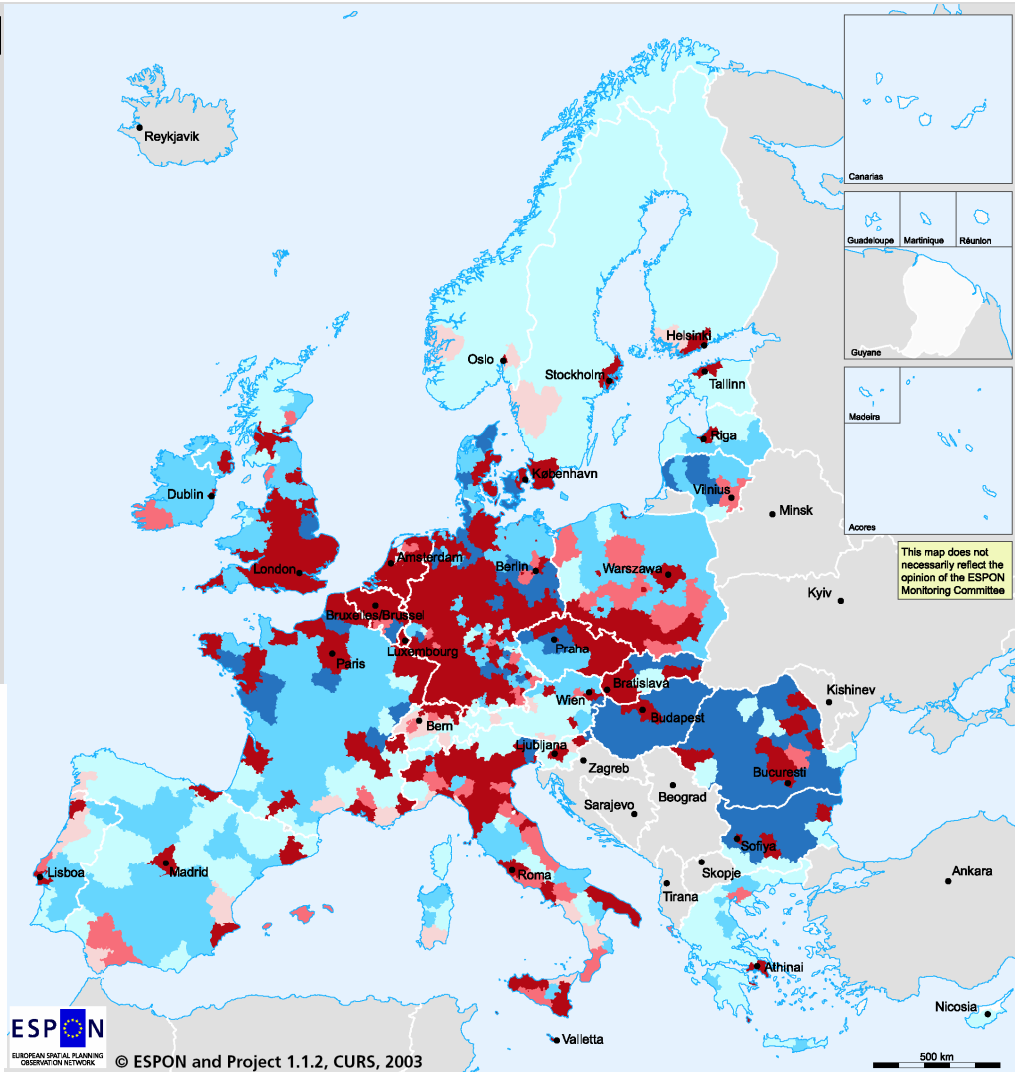
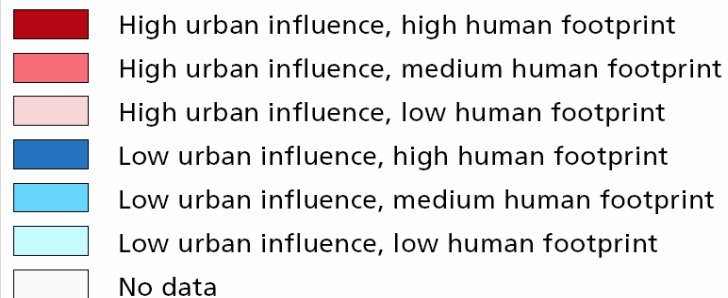
This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

© EuroGeographics Association for administrative boundaries  
Regional level: NUTS 2  
Origin of data: ESPON 1.1.1 Nordregio ESPON 1.2.1 INRETS  
Cyprus: Data for government controlled areas only.  
Source: ESPON database

# Urban-rural typology

- Differences in national and European perception
- Rural areas  $\neq$  agricultural areas
- Different types of rural areas:
  - Urban hinterland
  - Rural development poles
  - Remote rural areas

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





## Increasing competitiveness

- **Lisbon strategy** for growth and jobs
  - Regions' potentials differ
  - Knowledge based economy not best option for all
- **Accessible urban areas** showing best Lisbon performance
  - The core and the North in the most favorable position
  - 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:

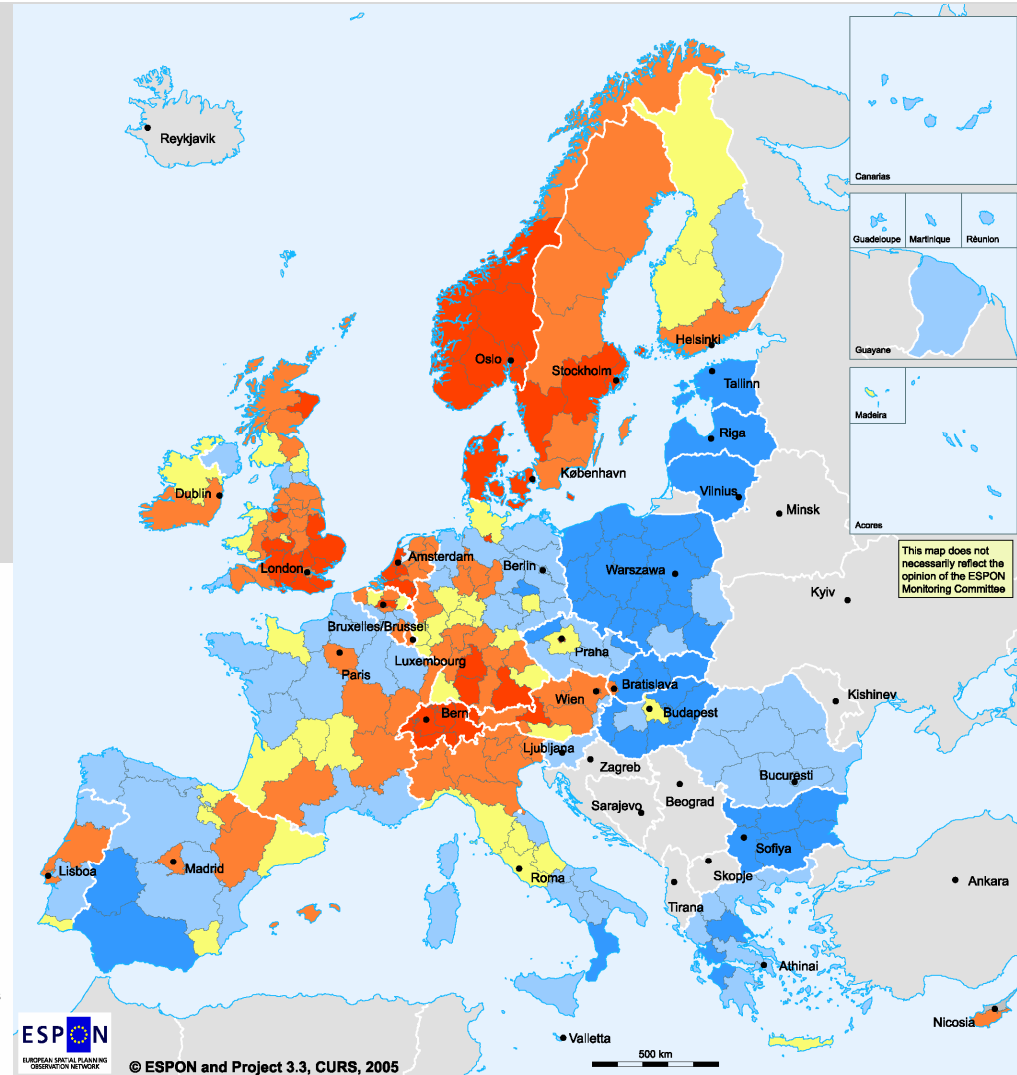
- (1) GDP/capita,
- (2) GDP/employed person,
- (3) Employment rate,
- (4) Employment rate of older workers,
- (5) Gross domestic expenditure on R&D
- (6) Dispersion of regional (un)employment rates
- (7) Long-term unemployment rate.

## 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	

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Regional level: NUTS 2  
Origin of data: Eurostat, national statistical offices  
Cyprus: Data for government controlled areas only.  
Source: ESPON database

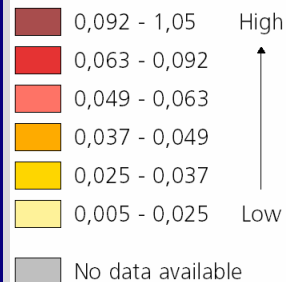


# Cultural/creative employment 2005

(as share of local active population)

- Mainly national patterns
- Finland, Sweden, Netherlands, Switzerland in the top
- Regional variations mainly related to the urban structure

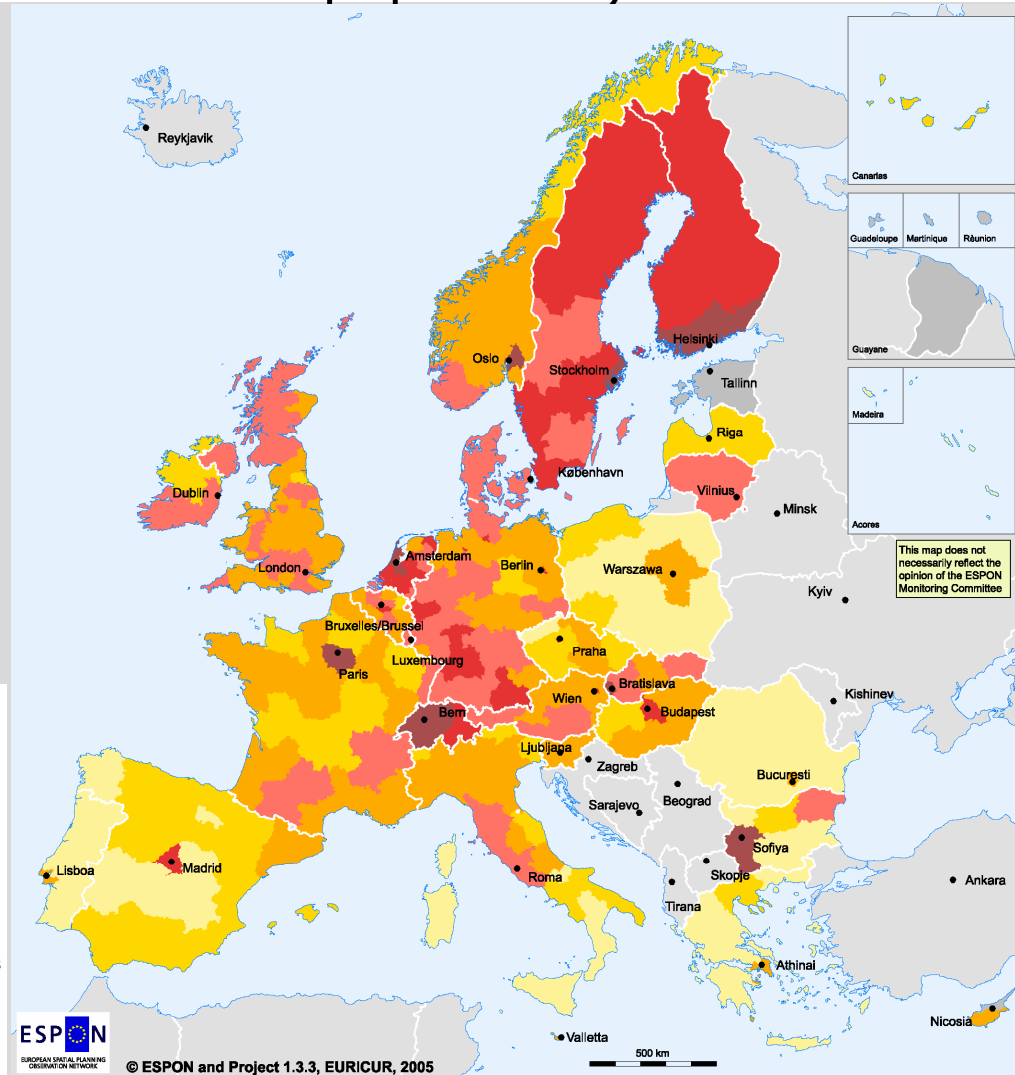
Number of cultural jobs (ISCO 88) as share of the local active population in % - classification based on distribution sestiles



© EuroGeographics Association for administrative boundaries  
Regional level: NUTS 2  
Origin of data: Eurostat

Cyprus: Data for government controlled areas only.

Source: ESPON database

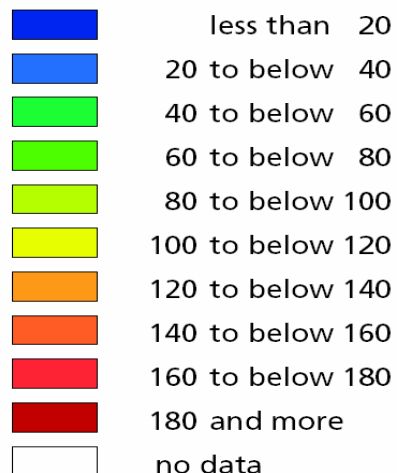


This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

# Potential accessibility multimodal, 2001

- **Core-periphery pattern** of multimodal accessibility
- Accessibility by **road improves outside core**
- Increasing **energy prices challenge accessibility** in rural and remote areas

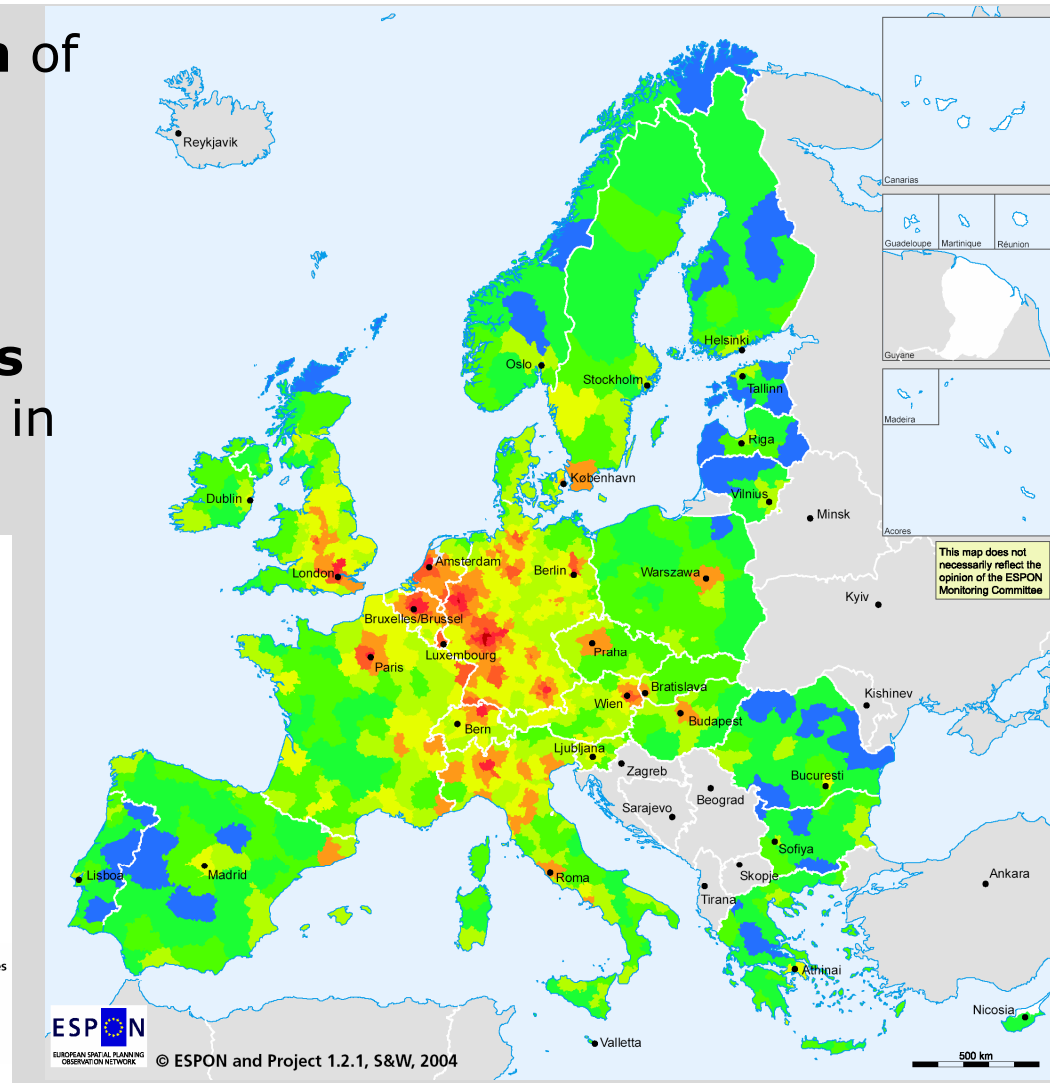
## Accessibility index (EU25+2 = 100)



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for the administrative boundaries

Regional level: NUTS 3  
Origin of data:  
Spiekermann & Wegener (S&W)

Source: ESPON database

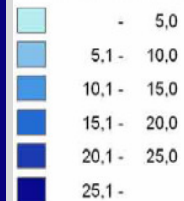


## Absolute change of potential accessibility by road between 2001 and 2006

- Areas close to the core gain most in potential accessibility by road
- Corridors leading to/from the core

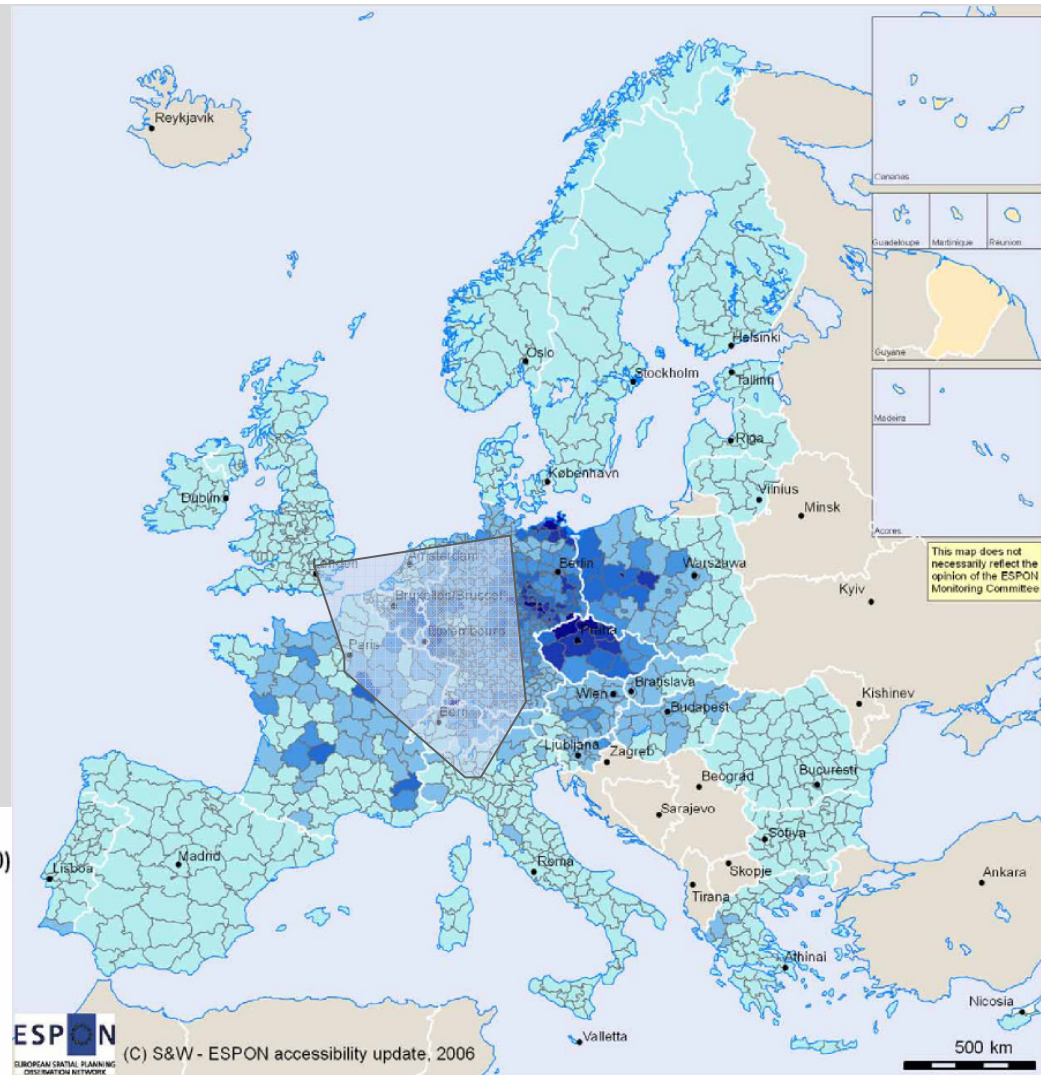
### Potential accessibility

Road, absolute change 2001-2006 (EU27 absolute average in 2006 = 100)



(C) EuroGeographics Association  
for the administratives boundaries

Data sources:  
RRG GIS Database  
S&W Accessibility Model



## Climate change and hazard risks

- Hazards in general do not undermine competitiveness – **not yet**
- Climate change might **tomorrow** have long-lasting negative impacts on
  - Competitiveness
  - Attractiveness of regions and cities
  - Cohesion
  - Liveability
  - Sustainable development
- **Adaptation and mitigation** measures will be necessary
- But: Climate change may also create new development opportunities

# Aggregated natural and technological hazards

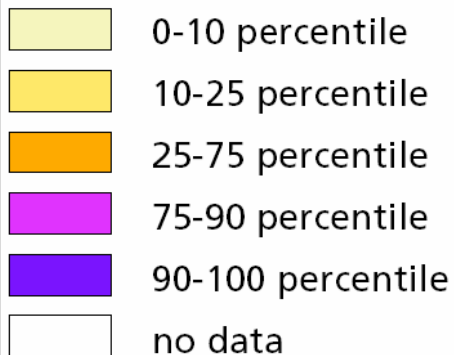
## Natural hazards:

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

## Technological hazards:

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

## Hazard classification

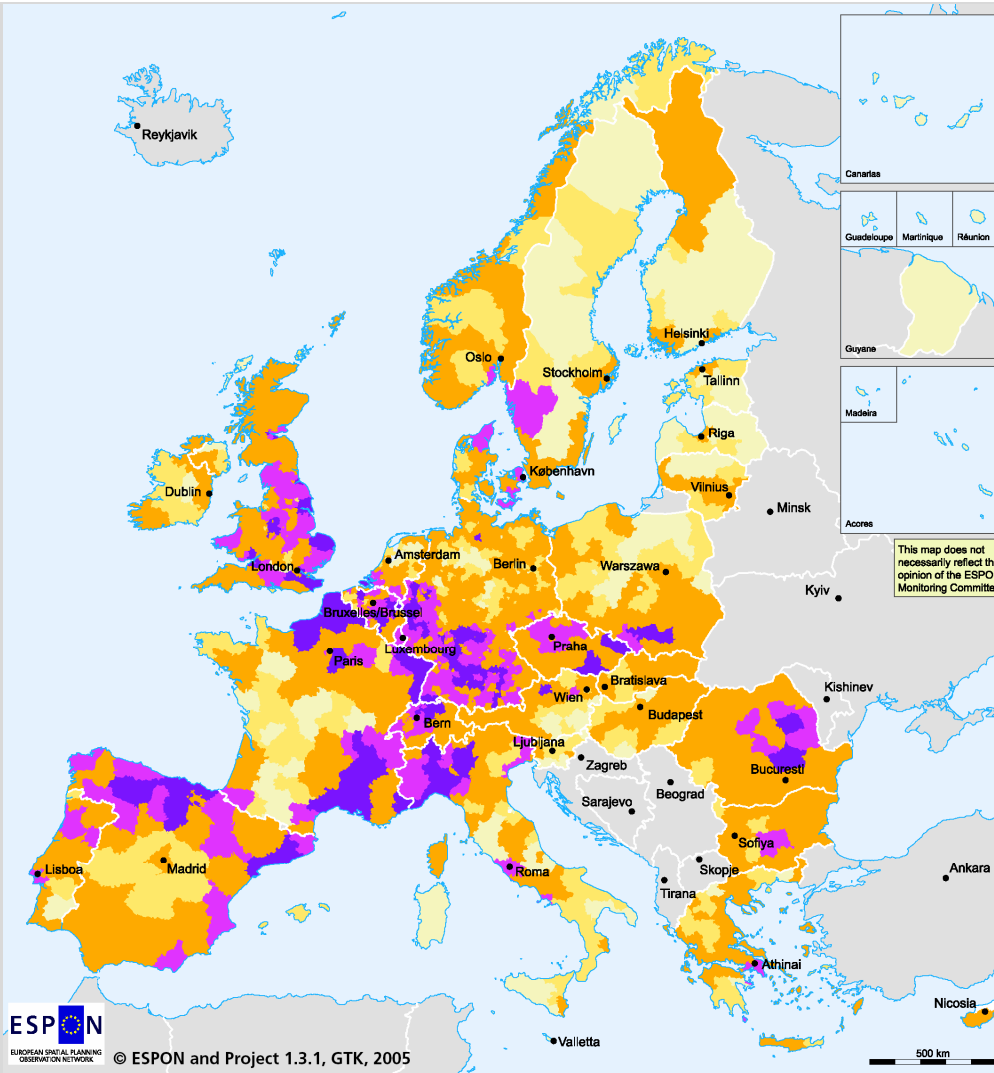


This map shows the aggregated hazard typology based on 15 hazard indicators. Every indicator gives the value from 1 to 5 depending on the magnitude of the hazard in the NUTS 3 area. For the class "no data" value is 0. These values are then weighted on base of expert opinion (Delphi method questionnaire). 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.

© EuroGeographics Association for the administrative boundaries

Regional level: NUTS 3  
Origin of data: ESPON Project 1.3.1, GTK

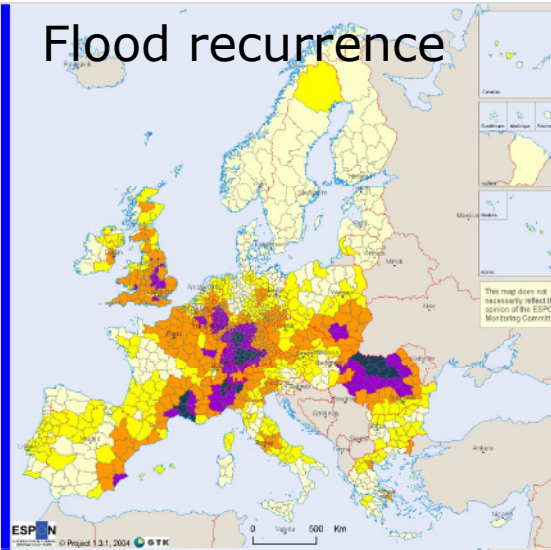
Source: ESPON database



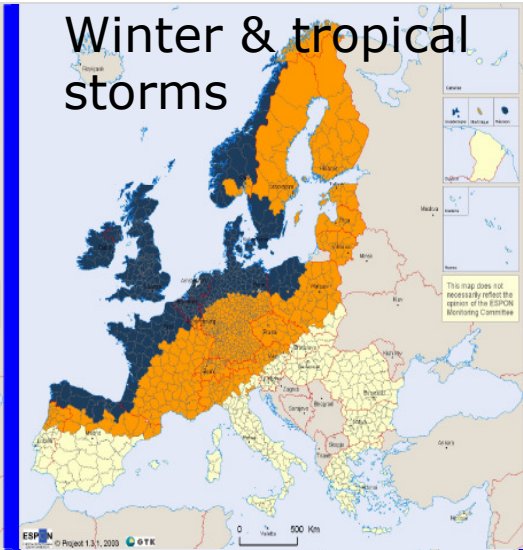
# Natural Hazards

- **Southern Europe:** forest fires and drought hazards
- **Western and Northern Europe:** winter storms, storm surges and floods
- **Climate:** affects frequency, intensity and coverage

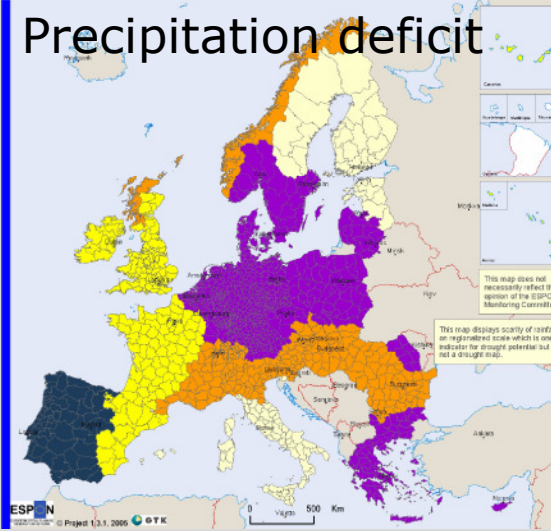
Flood recurrence



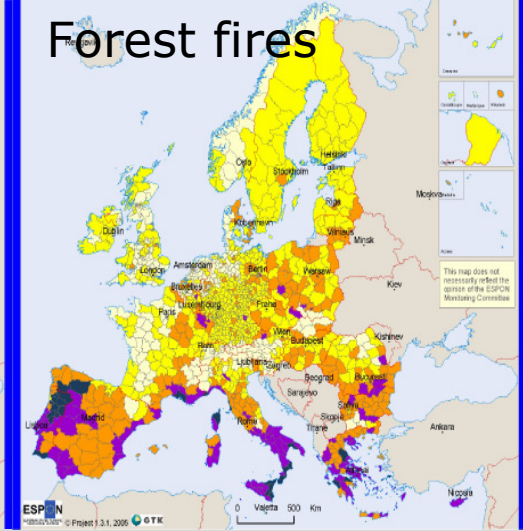
Winter & tropical storms



Precipitation deficit



Forest fires



The classification of the forest fire hazard is based on a combination of the numbers of observed fires per 1000 sq. km 1997-2003 (ESA) and the biogeographic regions map of Europe (BEA).

The number of observed fire per 1000 sq.km 1997-2003:  
1 = No fires  
2 = <1 observed fire  
3 = 1-5 fires  
4 = 5-10 fires  
5 = >10 fires

Biogeographic regions:  
1 = Alpine and Arctic  
2 = Atlantic  
3 = Boreal  
4 = Continental, Black sea, Pannonian and Steppic  
5 = Mediterranean

Origin of the data: © EuroGeographics Association for the administrative boundaries  
Forest fires years 1997-2003: ESA  
Biogeographic regions: EEA

Source: ESPON Data Base

## Forest fire hazard

	Very low
	Low
	Moderate
	High
	Very high
	Non ESPON space

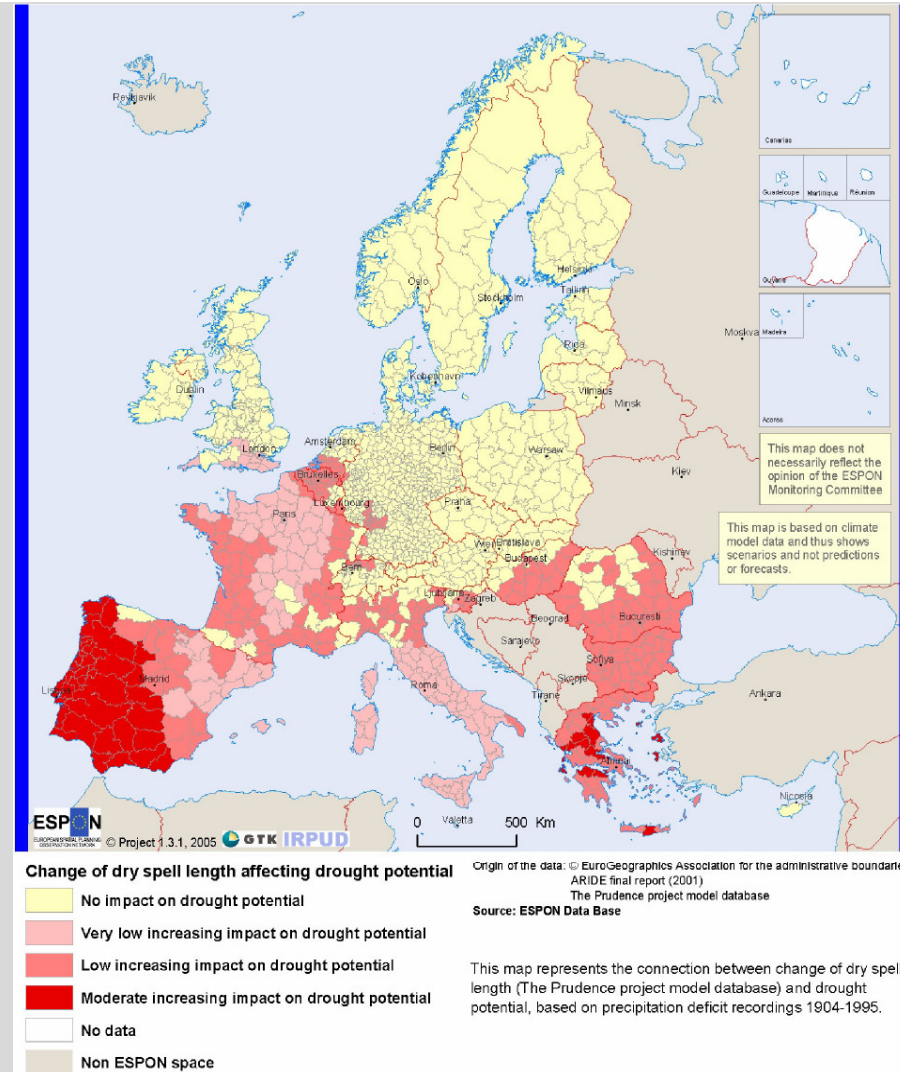


## ESPON 2006 key message: Territory matters

- Rich **regional diversity** of Europe is an asset
- **Territorial potentials** increasingly important for competitiveness
- **Territorial imbalances** challenge cohesion
- Contributions to **Lisbon/Gothenburg objectives** feasible from all cities, regions and larger territories
- **Territorial cooperation** may provide synergies
- **Evidence necessary** for growth and policy making
  - Understand the dynamics
  - Compare to find comparative advantages
  - See opportunities in the larger context

## Main challenges with territorial impact

- **Demography:**  
Ageing and migration
- **Geography:**  
Further EU enlargements
- **Economy:**  
Globalisation & technological development
- **Energy:**  
Increasing energy prices
- **Transport:**  
Saturation of euro-corridors
- **Climate change:**  
New hazard patterns



## ESPON in use

- **European policy documents**
  - EC Third and Fourth Cohesion Report
  - Community Strategic Guidelines
  - National Strategic Reference Framework Documents
  - Territorial Agenda for the EU & Action Programme
- **National spatial policy documents** (Hungary, Denmark, Czech Republic, Poland, Holland, Sweden and more)
- Test by (a few) transnational areas

## More information

Thank you for your attention

Please have a look at:

[www.espon.eu](http://www.espon.eu)

All ESPON synthesis documents,  
final and interim results,  
data and mapping tools  
are available for free