

# Mapping regional competitiveness and cohesion

European and global outlook on territorial diversities

ESPON Briefing 2

March 2006





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# Introduction

Europe faces increased competition from other continents, their nations, regions and cities. To respond to this challenge, the European Union has agreed a strategy to promote economic growth and job creation, known as the Lisbon strategy. It aims to make Europe the world's leading knowledge-economy, based on the principle of sustainable development.

Actions are needed at all levels of government - European, national and regional/local levels - if these ambitions are to be realised. Europe's global competitiveness depends on a multiplicity of actions that can optimise the potentials within its regions, cities and rural areas. All territories possess development opportunities. However, to make sound policy decisions requires evidence, knowledge and understanding of the position of regions and cities both within Europe, and also globally.

ESPON, the European Spatial Planning Observation Network, was set up to support policy development and build a European scientific community in the field of European territorial development. All applied research undertaken by the ESPON programme covers the regions of the 25 EU Member States, Bulgaria, Romania, Norway and Switzerland.

ESPON Briefing 2 presents a selection of results from recent ESPON applied research. It includes 10 maps on important factors of regional competitiveness, and illustrates the diversity of regions and different aspects of development. The maps will be useful in policy development and will prompt further study of the underlying

evidence and indicators used to produce them. They can be looked at in search of potentials for regions and larger territories. However, they can as well reveal challenges for territorial cohesion and balance within the EU.

A world map showing the evolution of the share of world GDP over the past 50 years sets the scene. It is followed by two European maps addressing international competitiveness. One combines seven indicators from the Lisbon strategy, from the official short list of indicators; the other brings together factors that are important in territorial development. These maps indicate the overall European position of regions: these findings should stimulate strategic actions to explore and define potentials and formulate policy options.

Territorial potentials are further analysed by looking at the socio-economic specialisations of regions, encompassing factors such as structural shifts towards the service economy and the importance of cultural and creative jobs within the work force.

Accessibility to commercial harbours is an important concern for territories dependent on connections to the world market. "Motorways of the sea" within the EU are gaining importance in the transport of goods, as the increasing volume of freight on lorries is already causing congestion in some parts of Europe.

There is also growing recognition of the importance of territorial management. This is reflected in first and challenging attempts by ESPON to

study the shift towards governance in Europe. Similarly, the human dimension is as well an important development factor. Research on population development until 2030, summarised in this Briefing 2, reveals regional differences within Europe. The final world map, the United Nations' human development index, shows Europe's strong position overall.

ESPON Briefing 2 aims to enhance the knowledge on the European perspective in shaping the future for their territory. ESPON Briefing 2 is necessarily selective, and uses just some of the data on regionalised indicators in ESPON project reports. Since 2002 more than 30 ESPON projects have been launched, involving researchers from more than 130 institutes throughout Europe. These transnational research teams have undertaken the daunting tasks of finding, analysing, mapping and interpreting spatial data covering the entire European territory.

The ESPON programme includes the European Commission, all EU Member States, Norway and Switzerland as partners. However, it should be underlined that the text and maps included in this ESPON Briefing 2 are results from the applied research and do not necessarily reflect the opinion of the ESPON Monitoring Committee.

# Europe and the global economy

The Lisbon Agenda set out to make Europe the most competitive knowledge-based economy in the world by 2010. Development of GDP over the past 50 years suggests some first conclusions about the development of Europe in relation to the rest of the world.

## Concept/method/measurement

GDP (Purchasing Power Parities, ppp, expressed in constant 1990 US\$) increased between 1952 and 1998 in all 168 countries analysed. However, there were wide variations since some countries' economies grew faster than others. A country's share of the world's increasing GDP depends on the rate of growth achieved by that country in relation to the average global growth. Based on change in country share of the world's GDP between 1952 and 1998, a typology was developed taking into account four different paths of development.

## Interpretation

Some countries achieved strong economic growth, exceeding the global average rates of increase, during the initial period (1952-75), followed by some form of stabilisation (type A). After the mid-1970s increase in oil prices and the beginning of world economic instability, countries such as Libya, Saudi Arabia and Japan were able to maintain a rate of economic development above world trends (subgroup A.1). Other countries, however, suffered much more from the economic recession, but then stabilised their world share of GDP (subgroup A.2). This group includes, among others, Greece, Spain and Turkey, as well as Mexico and Brazil.

In contrast there is a group of countries, which includes China and Indonesia, whose economic growth was relatively poor from 1952-75, but which then achieved more significant growth, in particular in recent times (type B).

Many countries have experienced a continuing decline in their share of the world economy (type C). This has been largely the case in Europe. Some European countries had a slow increase in their share of global GDP followed by a slow decline in that ratio after the economic crises in the 1970s (subgroup C.1). France, Germany, Austria, Finland, Portugal, Norway and Italy fall into this group. In other countries economic growth has been consistently lower than the world trend (subgroup C.2). Ireland, Belgium, Switzerland, Sweden and Denmark, as well as Poland, Hungary, Slovakia and the Czech Republic fall into this group. Moreover, some countries have faced an even lower rate of economic growth and an important reduction of their share of the world economy (subgroup C.3). In Europe the only example is the UK.

Countries mainly from the former Soviet Union and countries that experienced war at the beginning of the 1990s are characterised by a relatively stable share of world GDP until 1980 and by a slow decline during the period 1980 to 1990 (type D). In some countries such as Estonia, Latvia and Lithuania the decline of their GDP between 1990 and 1998 is a consequence of the adaptation to the market economy.

## Conclusions

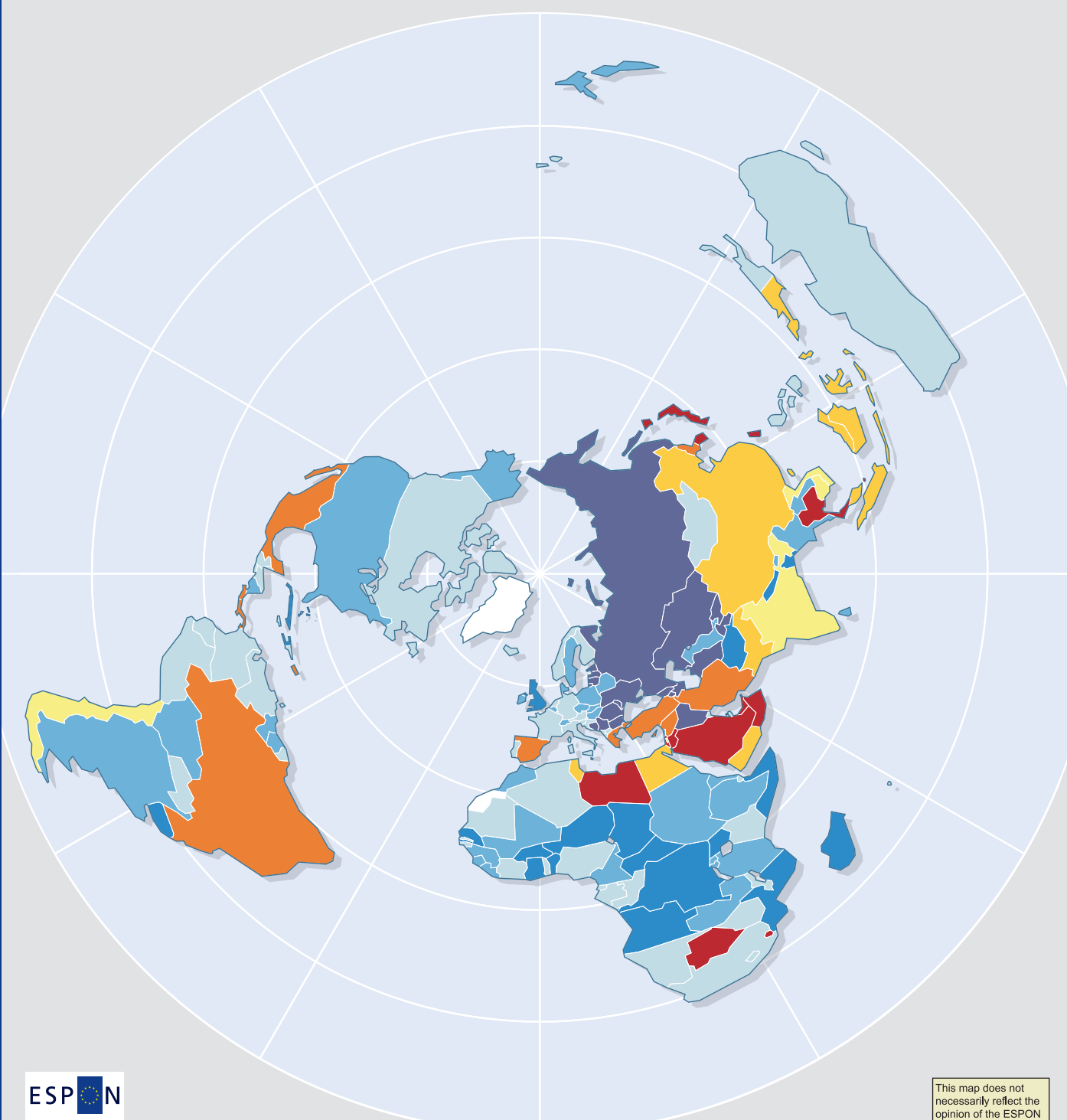
Over the past 50 years, GDP per capita has increased substantially on a world scale. Europe's share of the world's total GDP has declined. However, changes in the share of world GDP partly reflect changes in share of world population. The relative decline in the economic importance of European countries on a world scale has exceeded, or in some cases, been equivalent to the relative decline in their share of world population. Taking into account the demographic aspect shows that GDP per capita may have been growing in Europe as fast as in other parts of the world, since both Europe's share of world GDP and its share of world population have been declining.

Europeans have become richer, but the rest of the world has been catching up. However, there are differences within Europe. Excluding the small countries with exceptional increases (growth by a factor of 15 for Malta), the Mediterranean countries such as Spain, Greece and Cyprus show the strongest successes in relative terms. Less favourable growth rates in GDP in pps are evident in the UK, Switzerland and in Eastern parts of the European Union.

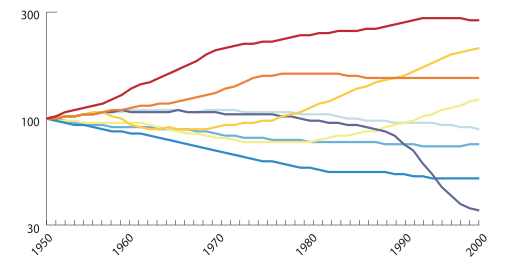
## Evolution of the share of world GDP, 1952-1998

### Typology of evolution of world share of GDP ppp (1952-1998)

- Type A.1 | A. Growth followed by stability
- Type A.2 | A. Growth followed by stability
- Type B.1 | B. Stability followed by growth
- Type B.2 | B. Stability followed by growth
- Type C.1 | C. Regular decline
- Type C.2 | C. Regular decline
- Type C.3 | C. Regular decline
- Type D.1 | D. Stability and brutal decline
- No data available



Index 100 = world trend



Origin of data: Angus Maddison website (2005) - <http://www.ggdcd.net/maddison>

Cyprus: Data for government controlled areas only.

Source: ESPON database

# European regions and the Lisbon Agenda

With the renewed Lisbon agenda the EU aims to improve its competitiveness and to become the world's leading knowledge-based economy. The Gothenburg Agenda stressed that the development path should be sustainable. The success of the strategy can only be judged through clear monitoring. So far monitoring has focused on national figures. However, there is diversity in the potentials of different areas, cities and larger territories of Europe to contribute to the fulfilment of the Lisbon strategy. Evidence and knowledge about differences between regions and within countries is necessary to achieve the Lisbon objective.

## Concept/method/measurement

The European Commission and the European Council have agreed a strategic set of indicators to measure progress of the Lisbon/Gothenburg agenda. Based on this larger set of indicators, a short list of 14 indicators has been developed so that a more concise assessment of achievements vis-à-vis the Lisbon agenda can be measured over time.<sup>1</sup>

In ESPON analysis seven out of these 14 indicators have been merged into one combined indicator in which each of the seven is weighted equally. These seven indicators are (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, and (7) Long-term unemployment rate. For the remaining seven indicators, regionalised data is not available currently. Thus, the analysis of the regionalised Lisbon indicators is focused on economic indic-

ators and does not take into account all aspects of the Lisbon short list, e.g. no environmental indicators could be included.

## Interpretation

There is significant regional diversity within Europe in relation to the economic Lisbon indicators; northern and central parts are generally in a better position than southern and eastern parts.

The combined indicator illustrates that regions with high performance are mainly located in Switzerland, Austria, Germany, the Benelux, UK, Denmark, Norway and Sweden. Roughly speaking, there is a zone of high performance that runs from the Stockholm region, via Norway and Denmark (plus one region in eastern Scotland), through the South-East of England, on through spots in the Benelux countries and Germany, to Switzerland and some regions in Austria.

Regions with above average performance can also be found in Portugal, Spain, Ireland, France, Italy, Finland, Slovakia and Cyprus.

In some countries, urban areas stand out in comparison to their surrounding regions or the rest of the country. This is in particular true for the capital regions of Praha, Bratislava and Budapest, but also evident in metropolitan regions in Belgium, Germany and Spain.

## Conclusions

When regionalised, the short list of Structural Indicators highlights the diversity of strategies that regions have to consider to apply, based on

their inherent potentials, in order to contribute to the Lisbon objective. Promoting a knowledge-based local economy may not be the best strategy for some regions.

A presence of functional urban areas of European significance and a good accessibility (multimodal potential accessibility) appears to affect performance on the combined Lisbon indicator.

However, this first map only illustrates seven out of the 14 indicators of the Lisbon short list: the picture might be different if all 14 indicators could be used. In particular, because the environmental indicators (change in the Energy-intensity of the economy and change in Greenhouse gas emissions) reflect change rather than status, the current picture should be challenged. For most east-European countries both the energy-intensity of the economy and greenhouse gas emissions are high in relation to the size of their economies, and starting from this high level, these countries may necessarily implement reductions that are more substantial than in Western Europe.

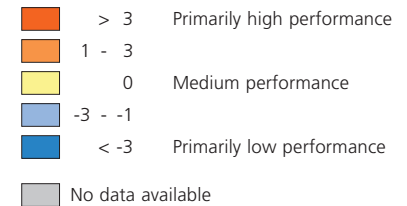
<sup>1</sup> These are: 1) GDP/capita; 2) GDP/employed person; 3) Employment rate; 4) Employment rate of older workers; 5) Gross domestic expenditure on R&D; 6) Youth education attainment levels; 7) Comparative price levels; 8) Gross Fixed Capital Formation/GDP; 9) At-risk-of-poverty rate after social transfers; 10) Dispersion of regional (un)employment rates; 11) Long-term unemployment rate; 12) (Change in the) Energy-intensity of the economy; 13) (Change in the) Greenhouse gas emissions and; 14) (Change in the) Volume of freight transport relative to GDP.



## Economic Lisbon indicators

### Performance

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



### with use of the following indicators:

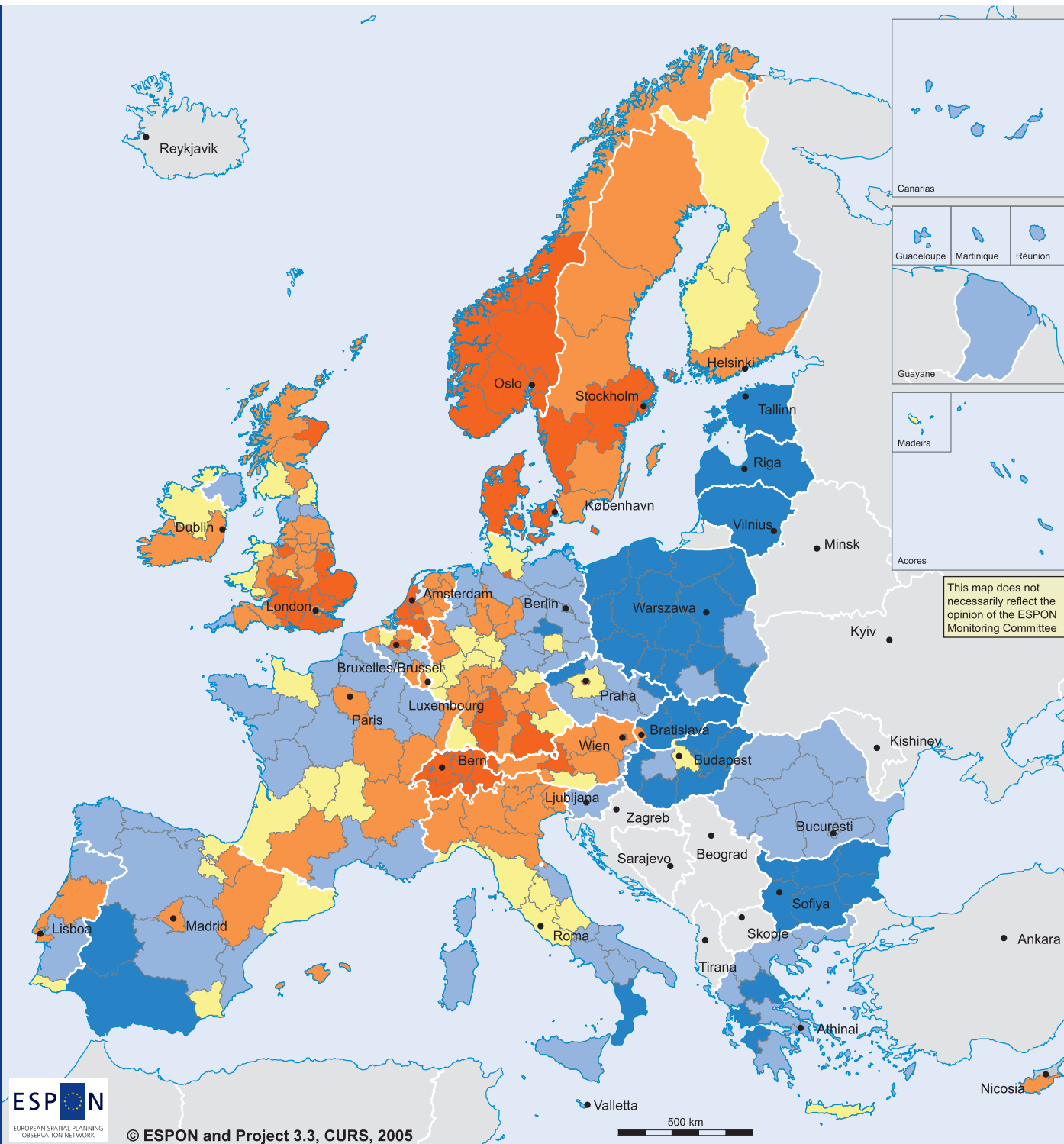
1. Gross Domestic Product in purchasing power standards per inhabitant in 2000 \*
2. Labour productivity: Gross domestic product as purchasing power parities person employed in 2000 \*
3. Employment rate: employed persons aged 15-64 as a share of total population of the same age group in 2000 \*
4. Employment rate of older workers: employed persons aged 55-64 as a share of total population of the same age group in 2000 \*
5. GERD: gross domestic expenditure on research and development as a share of GDP in 2000 \*\*
6. Dispersion of regional unemployment rates: coef ficient of variation of NUTS 3 level unemployment rates within each NUTS 2 region 2003 \*\*\*
7. Long-term unemployment rate: persons unemployed for more than 12 months as a share of the total labour force in 2000 \*\*\*\*

\* NUTS 1 for FR Département d'Outre Mer and DE Brandenburg  
 \*\* NUTS 1 for FR Département d'Outre Mer and DE Brandenburg; IT Bolzano-Bozen, Trento disaggregated from old NUTS 2 regions; UK disaggregated from NUTS 1; BE, CH, IE, NO, SE on the national level; no data for Ceuta & Melilla  
 \*\*\* GR and PT: regional variations on NUTS 0 level  
 \*\*\*\* NUTS 1 for FR Département d'Outre Mer and DE Brandenburg; CH & NO on the national level; no data for Ceuta & Melilla

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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



# Competitive regions

Globalisation makes international competitiveness a key concern in regional development. Bringing together different development factors which illustrate single aspects of competitiveness gives a first impression of the overall international competitiveness of European regions and shows the diversity that exists within the EU territory.

## Concept/method/measurement

Discussion of regional competitiveness focuses mainly on economic strength, labour market and innovation. These factors are aspects of a region's territorial capital and illustrate the potential to respond to challenges of the integrated market. Three types of indicators have been used to create a combined picture of international competitiveness:

- An indicator combining the economic situation (GDP, GDP growth) and restructuring potential (productivity, employment rate, expenditure on R&D, the R&D Business Enterprise Sector, highly educated population).
- A labour market indicator combining unemployment, development of unemployment, youth unemployment, the labour force replacement ratio, employment density and employment in the tertiary sector.
- The functions of European and global significance located in the major functional urban areas, presented according to the dominance of 4 selected functions: (1) decision making (share of headquarters of the top 1500 companies in Europe), (2) administration (EU, national, regional and local administrative centres),

(3) higher education (number of students in higher education institutes) and (4) tourism (number of beds in total and in relation to the number of inhabitants).

## Interpretation

The best position with regard to international competitiveness is in the UK and Ireland, which both combine economic strength and a high restructuring potential. The regional labour market score in both countries is mostly above average. The functional speciality of their major urban areas is mostly oriented towards educating people with high academic skills; only London has dominant urban functions in all four selected fields.

Few regions elsewhere have these characteristics, though in France, Ile de France, the Pays de la Loire and Aquitaine have a good regional setting in these respects. No German regions feature in this category, because of their low level of economic growth.

The Nordic countries are characterised by the concentration of economic strength in the capital regions. The other regions of these countries generally have a high restructuring potential, but a labour market performing below average, particularly in some regions of Finland.

Some countries in the east of the EU, i.e. Estonia, Latvia, Hungary and Slovenia, have growing economic potentials but perform less well on indicators related to the restructuring potential. The same is true for Lithuania, Poland, Slovakia, Greece, Portugal and Southern Italy, where there

are also below average labour market performance. The Czech Republic, Bulgaria and Romania display weaker economic developments trends.






The extent of a territory's restructuring potential seems to be related to the functional diversity of its major urban areas. Development potential is lower where only a functional specialisation of higher importance exists in the major urban areas. This is the case in the capital cities in the Eastern parts of the EU and in Bulgaria and Romania, which to a large extent are dominated by administrative functions only.

## Conclusions

In the core of Europe all types of regions are doing well with regard to both restructuring potential and economic situation, indicating a high potential regional competitiveness. In particular, countries in the core of Europe, Ireland, large parts of the UK, the regions in Western France, Spain, and the capital regions of Norway, Sweden and Finland seem well placed. Economically weaker regions, with deficits concerning their restructuring potential, can be found in most countries, in particular in Central and South-Eastern areas of Germany, Poland, Czech Republic, Austria, Italy, Hungary, Romania, Bulgaria, Greece and Cyprus. Many of these areas also have a labour market classification below the European average. Cyprus, however, differs in this regard from its neighbouring countries.



## International competitiveness

### Economic situation and restructuring potential

-  Economically strong with high restructuring potential
-  Economically strong potential with deficits in restructuring potential
-  Weaker economic trend with high restructuring potential
-  Weaker economic trend with deficits in restructuring potential
-  No data available

### Labour market

Comined indicator value of the Regional Classification of Europe in relation to the regional average of the ESPON countries

-  Below average labour market performance
-  Above average labour market performance

### Dominance of selected functions of national / european and global significance of the ESPON functional urban areas

- University  Tourism 
- Administration  Decision making 

### Economic situation: aggregate of 2 indicators:

- GDP (GDP per capita in PPS 2002) +
- GDP growth (Growth in GDP per capita in PPS 1995-2002, in %) +

### Restructuring potential: aggregate of 5 indicators:

- Productivity (GDP per person employed 2002) +
- Employment rate (Employed population / population aged 15-64 2003) +
- Expenditure on R&D (Expenditure on R&D / Total GDP 2001) +
- R&D Business Enterprise Sector (Personnel / 1,000 active person 2001) +
- High educated population (Highly educated population / total educated population 2002) +

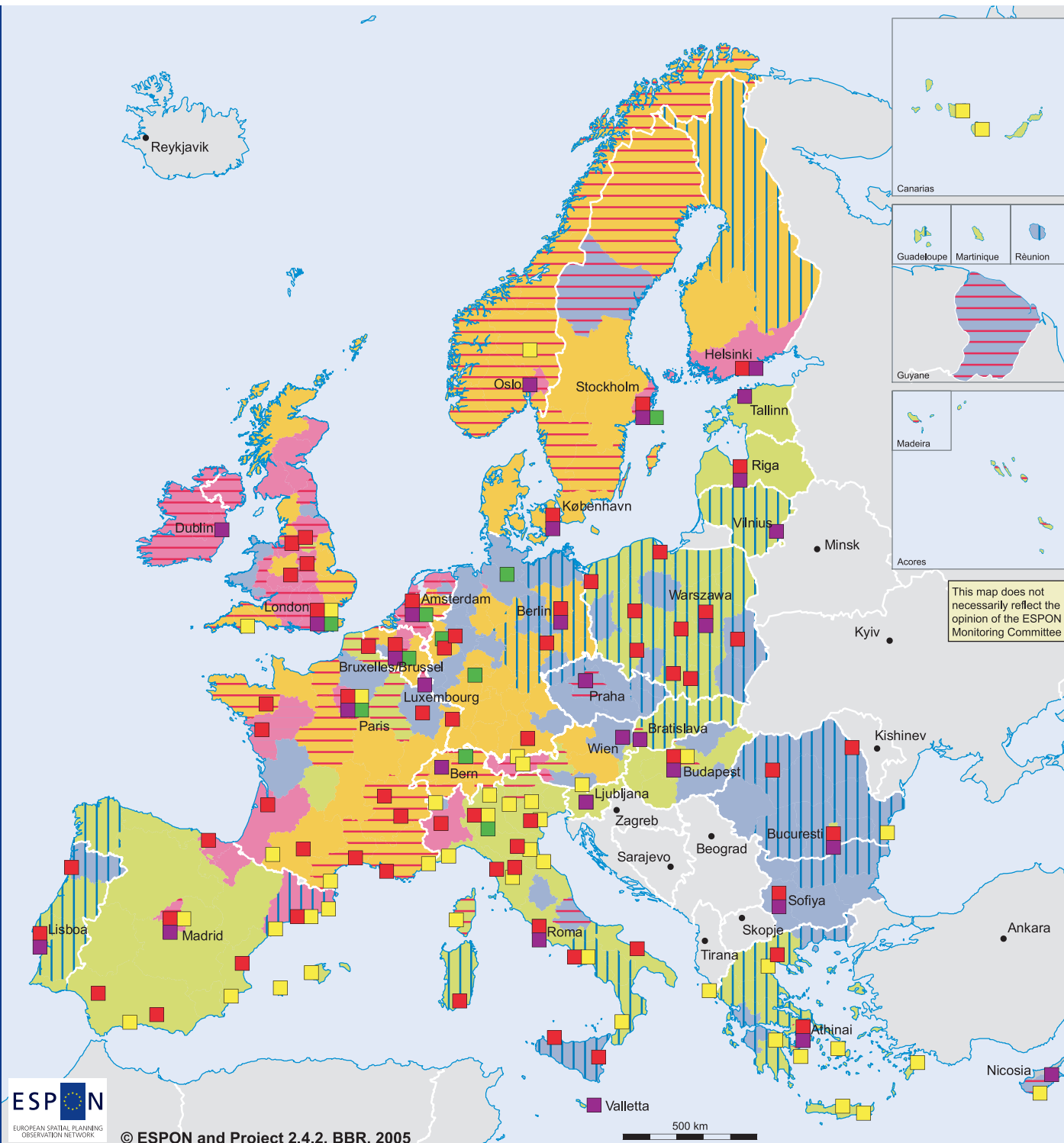
### Labour market: aggregate of 6 indicators:

- Unemployment (Unemployment rate 2003) -
- Development of unemployment (Change of unemployment rate 1999-2003 in pp) -
- Youth unemployment (Unemployed <25 years per 1.000 inh. 15-<25 years 2003) -
- Labour force replacement ratio (Population ages 10-19 / pop. ages 55-64) +
- Employment density (Number of persons employed per km2 2003) +
- Employment in tertiary sector (Share of total employment 2003) +

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Regional level: NUTS 2  
Origin of data: ESPON 1.1.1 Nordregio; ESPON 2.4.2 BBR, own calculations

Cyprus: Data for government controlled areas only.

Source: ESPON database



# Territorial specialisation in the service sector

Specialisation within markets is often regarded as a development strategy to achieve international competitive advantage. Identification of suitable potentials and specialisation has to be built upon detailed local knowledge. However, a European perspective can also stimulate ideas and highlight distinctive features that might be the basis for development projects and territorial cooperation as competition increasingly becomes world-wide. The focus here is on the labour force in the service sector.

## Concept/method/measurement

Analysis of regional specialisation within the service sector combined two elements.

The first step identified which part of the service sector has the largest share in terms of employment, i.e. the concentration of service sector employment into one of its sub-sectors. Data on regional employment in 2004 was grouped into three sub-sectors: (1) services related to wholesaling, retail trades, hotels, restaurants, transport and communication; (2) services related to financial intermediation, real estate and business activities; (3) services related to public administration (including defence and compulsory social security), education, health and social work.

The second step assessed whether a region in 2004 has an above average concentration towards one of the three sub-sectors. For those regions the fastest growing sub-sector was identified. Of course, the sub-sector growing fastest was not necessarily the same as the sub-sector employing the largest share of the labour force. While one part of the service sector may have the

highest total number of jobs, another sub-sector can show the fastest growth in percentage terms.

## Interpretation

The map highlights basically two phenomena.

Firstly, in many regions of Europe service sector employment is highest within public services, in the sub-sectors public administration, education and health and social work. However, there are also regions where wholesaling, retail trades, hotels, restaurants, transport and communication are the leading service sub-sector. This is the case in parts of Spain, Ireland, Northern Italy, Austria, the Czech Republic, Hungary, much of Poland, Latvia and Romania, and Greece, Malta and Cyprus. Services oriented more towards the productive base, such as financial intermediation, real estate and business services, do not dominate in any European region in terms of employment. This reflects the relatively small size of this sub-sector (on average 18%) compared to the other two (37% for trade etc. and 45% for public service etc.). In addition, more local concentrations of these producer oriented services will not show up as data used was related to the geographically rather large NUTS II scale.

Secondly, above average concentration of service employment into one sub-sector can in 2004 mainly be noticed outside national capitals and more urbanised regions. However, there are as well examples, e.g. Lisboa, Madrid, Paris, Budapest, Oslo and Stockholm, where the capital regions do not show an above average concentration, whereas the surrounding regions did. Interestingly, there are only a very few regions in

which the fastest growing sub-sector in percentage terms is also the sector having the lion's share in terms of employment, and thus becoming more specialised. These few regions are located in the UK, France, Belgium, the Netherlands, Germany, Norway, Sweden, Poland, Estonia, Hungary and Greece. In most regions which show an above average concentration of service jobs into one sub-sector, the fastest growing sub-sector in relative terms was normally a different sub-sector, usually financial intermediation, real estate and business activities.

Regions not having an above average concentration of employment within a specific sub-sector of services can be considered as having a more diversified employment structure within the service sector.

## Conclusions

Looking at service provision, Europe includes specialised regions (with an above average concentration of their labour force in one part of the service economy) and diversified regions (with more diversified service economy employment), distributed randomly on the European territory. In many regions the fastest employment growth within the service sector is in financial intermediation, real estate and business activities.




## Regional employment in the service sector, 2004

### Concentration towards one subsector of the service sector, 2004

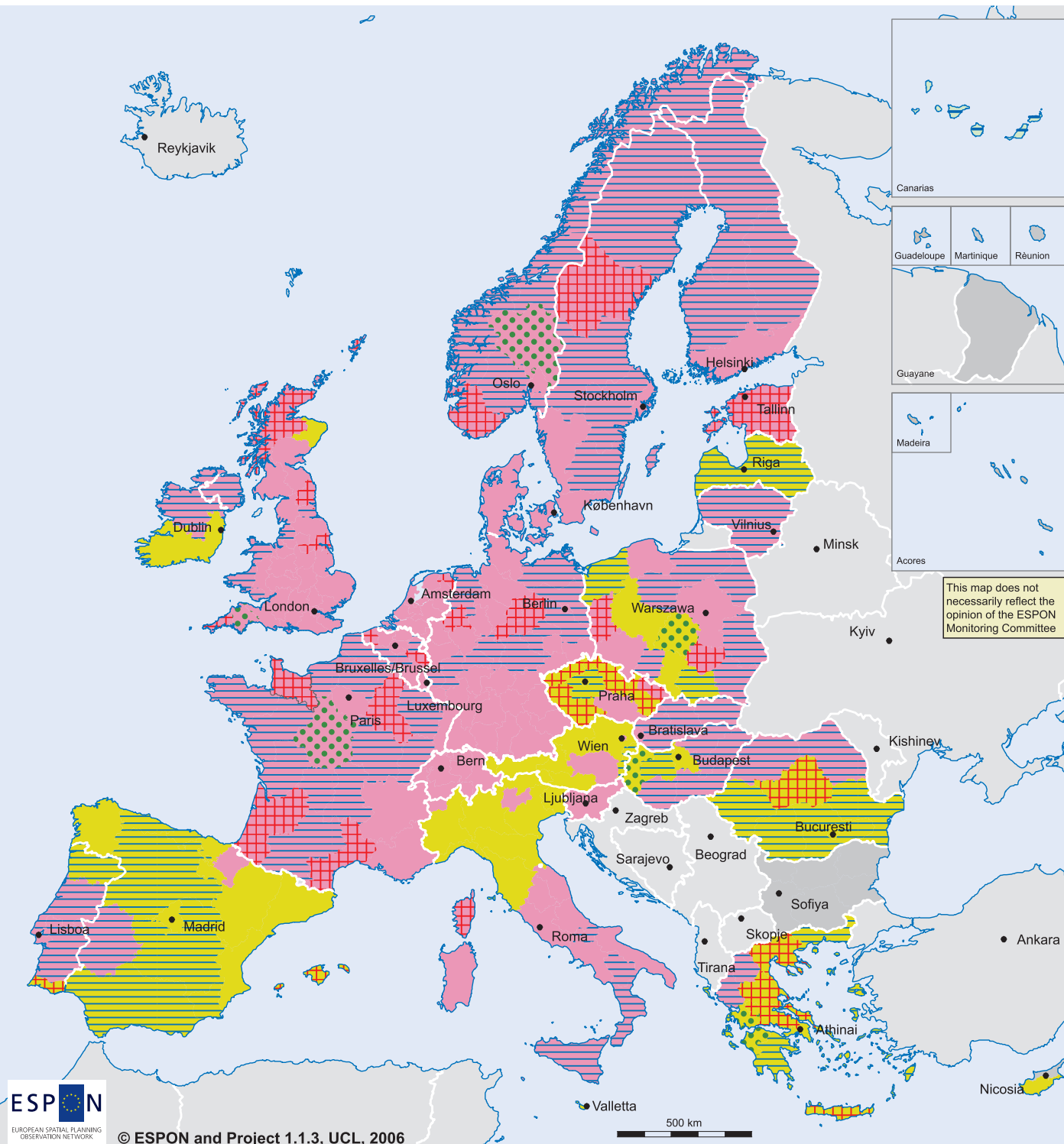
-  Wholesales, retail trade, hotels, restaurants, transport and communication
-  Financial intermediation, real estate and business activities
-  Public administration, education and health and social work
-  No data available

### Fastest growing subsector (1999 - 2004) in regions showing an increased concentration towards one subsector, 2004

According to the Regional Classification of Europe combined indicator value in relation to the regional average of ESPON countries

-  Wholesales, retail trade, hotels, restaurants, transport and communication
-  Financial intermediation, real estate and business activities
-  Public administration, education and health and social work

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



# Cultural and creative knowledge

Current theories of regional competitiveness emphasise the significance of “soft” factors such as human, cultural (knowledge and creativity) and socio-institutional capital, environmental quality, etc. Quality living environments, and access to environmental and cultural amenities are among factors that attract investment and people to a location. A creative work force, including artists etc., has by a number of regions and larger cities been a strategic priority, vital to innovation.

## Concept/method/measurement

The share of local workers engaged in cultural and creative professions is one indication of the extent to which culture and creativity are embedded in local production systems. This is important both as a force for endogenous economic development, and as an attraction to people and investment from outside.

People in cultural and creative professions are employed in various cultural industries, as well as performing culture-oriented tasks in other sectors. This definition follows the international standard classification of occupations (ISCO) database, whose list of cultural professions comprises 88 categories ranging from management of cultural enterprises, architecture, writing, dancing, singing, art teaching, composing, decorating, broadcasting and fashion design, handicraft etc. to the fields of computers, libraries and sociology.

For each region the cultural work force has been calculated as a proportion of the local active population based on ISCO data from the Labour Force Survey 2005. Unfortunately, information on cultural and creative workers for Estonia can

currently only be estimated and therefore the country is not covered in the map presented.

## Interpretation

While a rather surprising diversity exists across Europe as regards to the cultural and creative work force, one dominant pattern stands out. The highest shares of cultural employment can be found in a number of urban regions, many of which are capitals (e.g. Bratislava, Budapest, Madrid, Paris, Praha, Wien) or agglomerations in the Netherlands, Germany and Belgium. Some countries demonstrate a high degree of “creativity” – or capacity to utilise cultural values for strong knowledge-based industries – such as Finland (telecom), Sweden (design and electronics), the Netherlands (media and publishing) or Switzerland (design and architecture).

In more peripheral regions in e.g. Greece, Latvia, Poland, Portugal, Spain, Northern Norway and Southern Italy, rather low percentages of the local active population are employed as cultural and creative workers. Possession of cultural heritage does not guarantee significant regional economic spin-offs, as Italy and Greece demonstrate.

While there are regional variations, in particular related to the urban structure, the share of cultural and creative workers seems to follow largely national patterns. This means that inter-regional difference within single countries is often rather limited compared to the diversity within the overall European picture.

## Conclusions

The share of cultural and creative workers in the

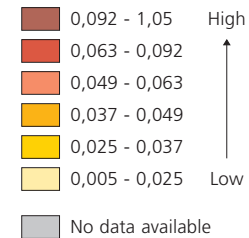
local labour force differs between European countries. The European territorial pattern seems mainly shaped by different national levels.

In addition, a substantial difference exists between rural and urban areas. The more urbanised regions have as expected the best potentials for pursuing strategies of innovation based on a particularly creative, and often young, segment of the work force.

Some areas more than others may take on the idea of creative industries as a motor for economic development and innovation. The same is true in relation to a “cultural orientation”, or the use of local cultural assets as productive activities. However, conclusions should be treated with caution, as creativity and the use of creative potentials in innovation are not confined only to those jobs classified as “cultural and creative professions”.

## Cultural employment as share of local active population, 2005

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



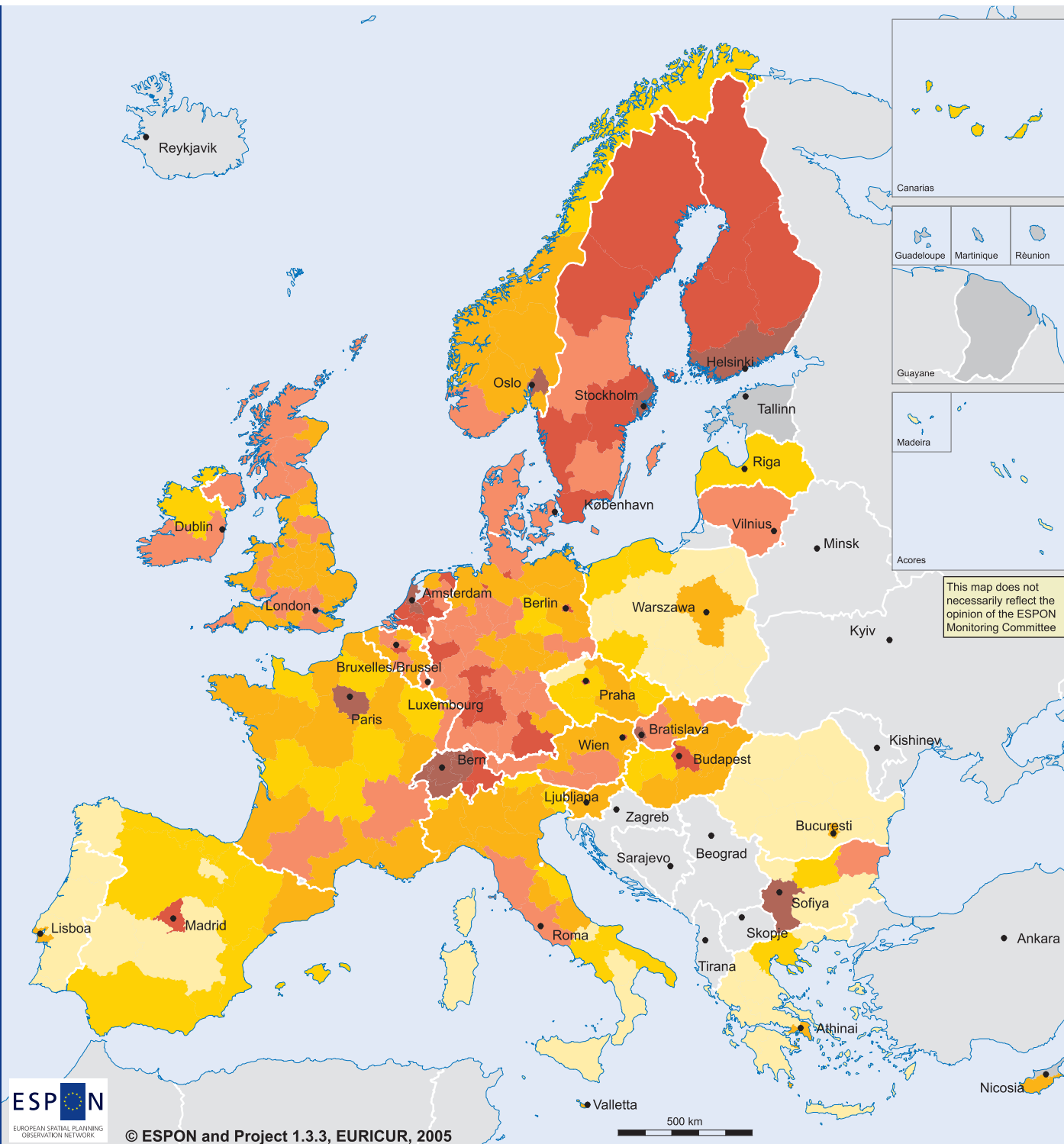
### Professions considered:

Managers of cultural enterprises and institutions; Production and operations managers not elsewhere classified; Managers of small enterprises in cultural activities (cinemas, theatres, art galleries...); Computer systems designers and analysts; Computer programmers; Computing professionals not elsewhere classified; Computer systems designers and analysts; Computer programmers; Computing professionals not elsewhere classified; Architects, town and traffic planners; Art teachers (higher education); Art teachers (secondary education); Archivists and curators; Librarians; Sociologists, anthropologists and related professionals; Philologists, translators; Authors, journalists and other writers; Sculptors, painters and related artists; Composers, musicians and singers; Choreographers and dancers; Film, stage and related actors and directors; Photographers and image and sound equipment operators; Agents and promoters related to cultural activities; Cultural animator; Decorators and commercial designers; Radio, television and other announcers; Street, night club and related musicians, singers and dancers; Clowns, magicians, acrobats and related associate professionals; Religious associate professionals; Travel guides; Fashion and other models; Precision-instrument makers and repairers; Musical instrument makers and tuners; Jewellery and precious-metal workers; Abrasive wheel formers, potters and related workers; Glass makers, cutters, grinders and finishers; Glass engravers and etchers; Glass, ceramics and related decorative painters; Handicraft workers in wood and related materials; Handicraft workers in textile, leather and related materials; Composers, typesetters and related workers; Stereotypers and electrotypers; Printing engravers and etchers; Photographic and related workers; Bookbinders and related workers; and Silk-screen, block and textile printers.

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Regional level: NUTS 2  
Origin of data: Eurostat

Cyprus: Data for government controlled areas only.

Source: ESPON database



# Territorial cooperation, accessibility and functional profiles

Territorial cooperation involving regions and cities is an important means for making better use of endogenous potentials and creating added value for the partners involved. Cooperation can either be based on proximity or profiles. Bottom-up interests and activities are crucial to making cooperation work. However, European-wide analysis of regional proximity and overall comparative advantages can stimulate interest and establish a background for cooperation in a larger territorial context.

## Concept/method/measurement

Interest in cooperating with actors outside “your normal” territory depends on many things. Proximity is important, especially for cooperation within a regional and cross-border context. Functional specialisation and influence are more decisive aspects when considering options for transnational cooperation.

The map brings these two aspects together by putting a strong emphasis on the main metropolitan regions in Europe, the so-called Metropolitan European Growth Areas (MEGAs). As background is shown the accessibility to the nearest MEGA by looking at the travel time, i.e. minutes a truck would need to make the trip. On top is shown the functional importance with regard to the six functions of each MEGA of global, European or transnational significance. The functions considered are transport (i.e. traffic levels at the main airports, and the number of tons handled at major container harbours); higher education (i.e. number of students), decision-making (i.e. its share of top 1500 companies in Europe), administration (i.e. the highest level of

public administration located there), tourism (i.e. number of beds) and industry (i.e. billion of gross value added, GVA). The selection by significance implies that not all cities hosting one or several of these functions, e.g. a university, are represented in the map. The method is currently not considering functions across national borders, which affects a number of Swiss cities as well as other cross-border urban functional regions across Europe.

## Interpretation

With regard to the proximity to the nearest MEGA, the analysis shows that within an enlarged core area of Europe, from most regions the closest MEGA can be reached (by truck) within three hours or less. This enlarged core area is roughly characterised by the cornerstones Dublin, København, Helsinki, Vilnius, Warszawa, Budapest, Roma, Paris and London. Outside this area the proximity to the nearest MEGA is often considerably higher. In particular in Northern Scotland, large parts of the Nordic Countries, Romania, Greece and Southern Italy the travel time by truck to the nearest MEGA can exceed five hours.

In addition the functional characteristics of MEGAs show that only 14 MEGAs (out of the 76 in Europe) are of European or transnational importance with regard to all six functions assessed. These MEGAs are mainly located outside the core of Europe (which could indicate a certain level of complementarity between MEGAs within the core). The 14 are Lisboa, Madrid, Roma, Athinai, Budapest, Wien, Warszawa, Helsinki, Stockholm, Oslo, København, Amsterdam, Bruxelles and Dublin. Smaller MEGAs are often

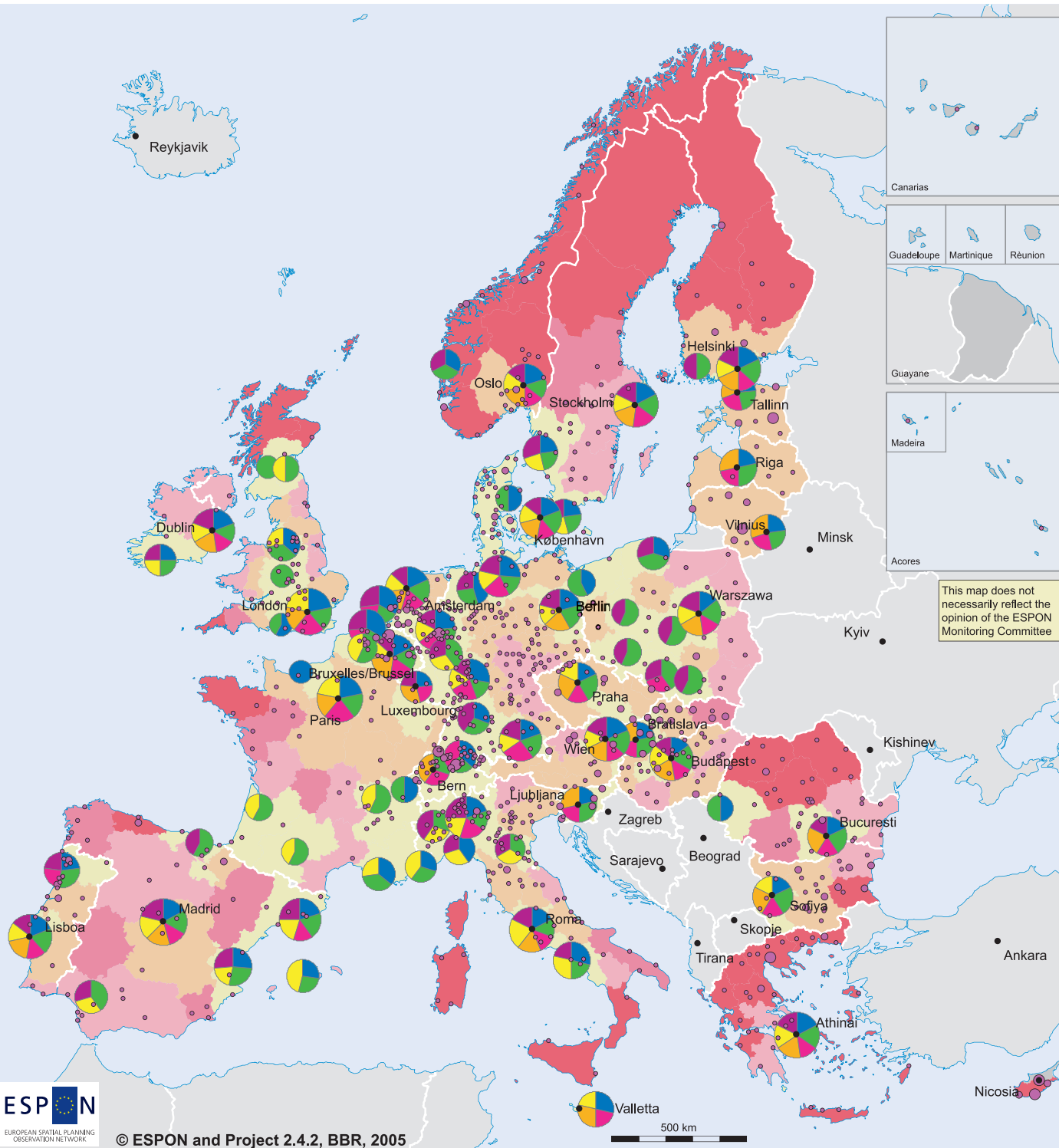
only of European or transnational significance with regard to one or two functions. In Poland, industrial and higher education functions mainly characterise smaller MEGAs, whereas in France tourism and universities are the main functions, while in the UK it is particularly higher education that stands out in the smaller MEGAs.

## Conclusions

Proximity to neighbouring regions and/or the nearest MEGA may stimulate thoughts about possibilities for expanding territorial cooperation. However, thorough consideration should in particular be given to functional aspects and comparative strengths, which could be explored through territorial cooperation, being it in larger geographies and/or between MEGAs. Both complementarity and competition are important factors in shaping a spirit of cooperation between areas. A strategic choice of themes for cooperation is often defining where cooperation ends and competition prevails.

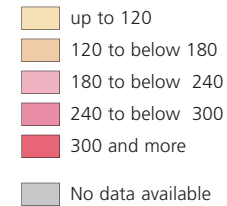
It could be argued that there is a special challenge in forming Global Integration Zones in various parts of Europe, with real scope to strengthen territorial cohesion. MEGAs in cooperation could be the driving force for such initiatives of territorial cooperation, creating growth and jobs. The spatial situation of specific territories such as islands, especially the small island nations of Malta and Cyprus, is significantly different from that of continental territories.



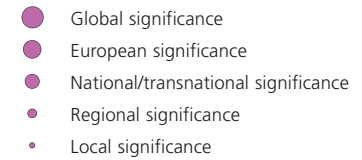


## Major urban areas, their accessibility and significant profiles

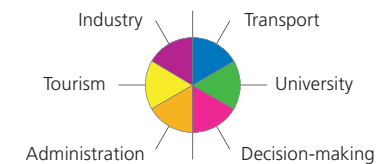
Accessibility to the nearest MEGA by truck - travel time to reach the nearest MEGA in minutes



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

© 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

# Connecting to the motorways of the sea

Goods traded on the global market are mainly transported by sea. Connectivity to commercial seaports is a key issue for Europe's global competitiveness. Ports are hubs in global transport networks that connect the territories in which the goods are produced, further refined and consumed. The relation between ports as nodes in a European transport network and the inland territories to be served is also integral to the concept of "motorways of the sea" that has been developed to address increasing congestion in land-based transport corridors.

## Concept/method/measurement

The connectivity indicator (ICON) measures the minimum access time needed, by car or truck, to travel from one region to the closest transportation hub (e.g. the closest motorway entrance, railway station, commercial port, commercial airport etc.). This indicator also takes into account the utility of the hub, in terms of the services it provides.

Measuring the connectivity of a region to the nearest commercial seaport provides key information on the connections between ports and their hinterlands. Strong port-hinterland connections are obvious potentials for economic development.

Commercial seaports (for roll-on-roll-off and containers traffic) of a capacity between 0.5 to 100 Million tons per year have been considered and their hinterland was demarcated by using accessibility by car, up to a journey time of 3 hours. In addition, the capacity of the port, which gives an indication of the level of maritime services it can provide, was integrated into the

connectivity calculation (i.e. the less services, the lower the connectivity). The combination of these two aspects implies that areas with good access to small ports are perceived as having a lower connectivity. This explains partly the situation in at the western coast of Ireland, in Norway, Denmark and parts of Sweden and Finland, as well as in Mediterranean islands, like Malta, Corsica, Sardinia, and the Balearic islands.

## Interpretation

The map provides an overview of the location of major commercial ports; the red dots indicate the location of the major commercial sea ports.

Coastal regions in the core of Europe, along the English Channel and the North Sea, have the highest connectivity values and the most efficient connections from ports to their hinterlands. This high accessibility to commercial sea ports decreases towards Poland and the Baltic States, because networks of motorways and expressways at present are less developed in the eastern part of Europe. Towards the Black Sea, Romanian and Bulgarian regions have remarkable high levels of connectivity to their sea infrastructure.

Connectivity to commercial seaports is, generally speaking, less pronounced around the Mediterranean coasts and islands. Cyprus and Sicily are exceptions in this respect. In particular, Spanish regions facing the Mediterranean Sea show lower levels of maritime connectivity. This has mainly to do with the maritime services provided as a well-developed coastal road network ensures travel times of less than 30 minutes to one hour to the sea ports. A contrasting pattern

can be seen for the French Atlantic coast, where connectivity is better towards inland regions, but poorer along the coast between ports.

## Conclusions

Transport infrastructures and services are fairly well distributed along European coastal regions, although parts of the more peripheral regions are less well served.

Obvious potentials exist for developing integrated road-maritime transport systems, Short Sea Shipping and "motorways of the sea". However, such developments do not only affect coastal regions near major hub ports: connections matter for exploring the competitiveness of, inland regions, of nodes in the European urban system (major urban and capital regions, etc) as well as for many more rural territories. For areas facing increasing road congestion ways of improving connectivity to sea ports should also be considered. In this context it has also to be noted that this analysis focuses on the interlinkage between road and sea transport, and does not consider rail transport which is a decisive factor for many port developments.

## Connectivity to commercial seaports

### Connectivity

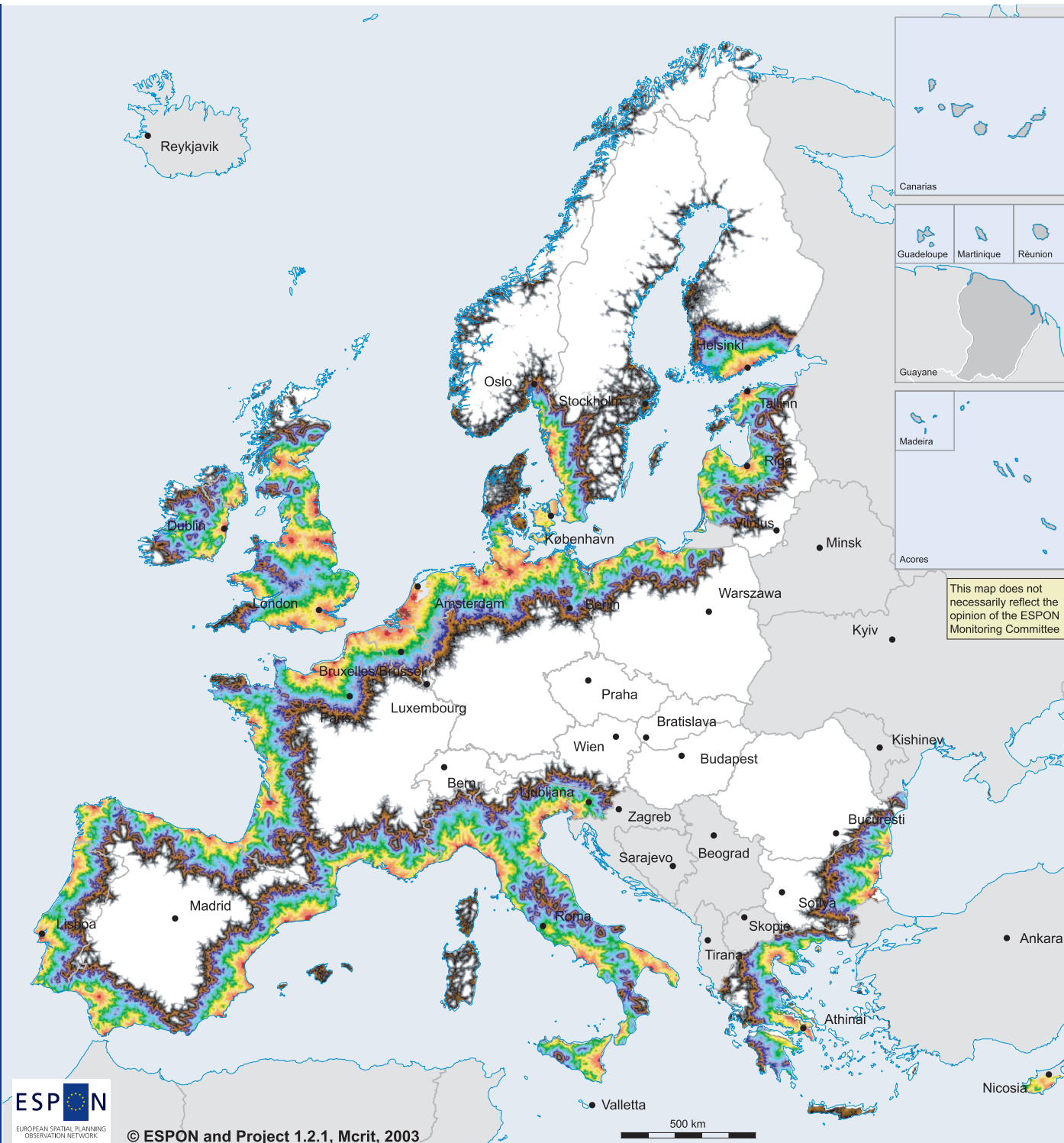


The connectivity indicator measures the time needed to reach a commercial seaport by car, weighted by the capacity of the port considered, from 0,5 (minimum capacity) to 100 (maximum capacity) Million tons per year, diffused according to the speed of the road links into a grid covering all ESPON space by 2x2 km cells.

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Origin of data: ASSEMBLING graph European Commission

Cyprus: data for government controlled areas only.

Source: ESPON database



# From government to governance

New approaches in policy-making and policy implementation are needed to achieve better coordination and integration of policies providing for a more efficient policy delivery. This holds also true for cohesion policies and for the aim of strengthening European territorial cooperation. An improved territorial governance seems to be considered a vital mean for regional competitiveness as well as for the objective of a harmonious and better balanced European territory.

## Concept/method/measurement

“Government” refers in literature often to the dominance of state power, organised through a formal and hierarchical system of public authorities, which to a large degree monopolise policy making and implementation processes. “Governance” as a concept has been coined to reflect the existence of overlapping and complex relationships in these processes, and often marked by:

- a more limited role of the state in managing social and economic trends considering the complex web of actors;
- the involvement of a plurality of actors, external to the political and administrative arena, in a variety of responsibilities of public authorities at different administrative levels;
- the existence and use of more flexible forms of partnerships and networking, across sectors, territories and between territorial scales.

It is obvious that “Governance” is not easy to measure. Purely quantitative approaches would obscure the wide diversity of forms of governance that exist. The approach within applied

ESPON research has aimed at “shaping the profiles” of the 29 countries, with regard to a process of transition from government to governance approaches. Qualitative information on governance processes was collected systematically, through national reviews. Among the information collected, currently 5 indicators were considered most relevant for measuring this shift: (1) the official and explicit acceptance of governance concepts and principles (e.g. endorsement of the White Paper on European Governance, implementation of the Open Method of Coordination, etc.); (2) changes observed in formal government towards governance (e.g. existence of specific reforms, changes in the administrative system towards more accountability, effectiveness and transparency, etc.); (3) experience in participation processes; (4) experience in partnerships; (5) the extent of financial dependence of local government on central government.

The qualitative information collected on these five elements was then translated into numeric tables, given scores, and weighted in order to generate “national scores”. The resulting scores have displayed the three groups of countries shown in the map.

It has to be particularly noted that for Denmark currently only one out of the five indicators has been considered, namely the financial dependence of local government on central government, which shows the relative independence.

## Interpretation

In general European countries seem relatively advanced in the application of governance prin-

ciples and implementation of governance actions. The map is not showing a typology of “governance leading/lagging countries”, but rather a picture of European countries concerning their general acceptance of governance principles, preparing the ground for wider governance application.

Ireland, Sweden, but also Switzerland, Finland, and United Kingdom record the highest values, scoring positively on five (for Sweden and Ireland) or four of the indicators. Hungary and Romania, with the lowest scores, have more traditional forms of government, along with Slovakia, Bulgaria, Estonia, Greece, Cyprus, although these countries have either expressed their official acceptance of governance or show formal changes in their governmental structures towards governance. In the case of Portugal, official acceptance has so far not been recorded, though the country has experience in participation processes and partnerships.

## Conclusions

The map represents a first attempt to display European territorial variation in implementing a governance approach in policy making and implementation. The methodology behind is innovative, based on the statistical translation of qualitative information collected from experts in each country. Results will be further complemented by more in-depth studies as the applied research proceeds.

## Qualitative measurements of governance levels in urban and territorial policies

### Degree of shift from government to governance

- ↑ Advanced (score 4 to 7)
- Medium (score 0 to 3)
- Low (score -7 to -1)

No data available

The above classification is based on the calculation of national scores, ranging from -7 to +7. Each country was given a score on the following 5 indicators (2 having double weight):

#### Official acceptance of governance principles

- 2 Low degree of acceptance and /or still at a stage of initial dialogue
- 0 Indirect acceptance or neutral impact
- 2 Active and explicit acceptance and implementation

#### Changes in formal government in the direction of governance

- 2 No initiatives so far
- 0 Existence of intended reform, or reforms under way
- 2 Existence of specific reform, already implemented

#### Experience with participation processes

- 1 No / Limited experience
- 0 Neutral impact
- 1 Extensive experience

#### Experience with partnerships

- 1 No / Limited experience
- 0 Neutral impact
- 1 Extensive experience

#### Extent of financial dependence of local government on central government

- 1 Dependant
- 0 Fairly dependant
- 1 Independent

© EuroGeographics Association for administrative boundaries  
 Regional level: NUTS 0  
 Origin of data: National overviews ESPON 2.3.2; IRPUD qualitative [S1-S5]

Denmark: Average calculated on the basis of only one indicator.

Cyprus: Data for government controlled areas only.

Source: ESPON database



# Population developments in Europe and around

Demographic development will have a major influence on future territorial development in Europe. It is a key concern for policy makers trying to attract and develop a highly skilled labour force in their regions. The gap between densely populated areas and regions where the population is more sparse and even decreasing has implications for many fields of public policy and for growth and job creation. Likewise, migration and imbalance between EU Member States and neighbouring countries presents important challenges and opportunities.

## Concept/method/measurement

An estimate of population in 2030 was analysed for Europe and its neighbouring countries. The population variation 2000-2030 was studied at country-level, based on the United National Population Prospect 2004 (UNPP, data medium hypothesis). The result is a picture of the estimated population in 2030, showing as well the expected annual change between 2000 and 2030.

## Interpretation

The total population estimated for 2030 for each country is shown by the size of the circles in the map. The expected annual growth rates between 2000 and 2030 are indicated by the colour. Thus the map displays how many inhabitants each country is likely to have in 2030 and to what degree this is an increase or decrease as compared to the situation in 2000.

There are clear differences in annual growth rates between Europe and its neighbours to the South and the East. The Eastern neighbours are expected

to experience a slow population decline, 0 - 1% annually (more in the Ukraine), whereas the Southern neighbours are characterised by population increases which go well beyond the increases expected within EU 25 plus Bulgaria, Romania, Norway and Switzerland. Further south in Africa, beyond Europe's immediate neighbours, there is another group of countries whose annual population increases are even higher – 1 - 3% annually (and even more in Niger) has been estimated by the UN.

Inside the EU, there are clear differences in expectation for the Eastern and Western parts. Most of the countries towards the East are predicted to experience a slow population decline between 2000 and 2030 (0 – 1% per year). Almost all member states east of a line running from Germany, Czech Republic, Slovakia, Hungary and Slovenia to Italy may expect a loss of population. Exceptions from these estimates are Malta, Greece and Cyprus which are expected to have a stable or even slightly increasing population until 2030. Norway, Switzerland and the remaining EU Member States, can expect a population increase of up to 1% a year.

Only two countries within the EU are expected to grow at a higher rate – around 2% annually – and these are Ireland and Luxembourg.

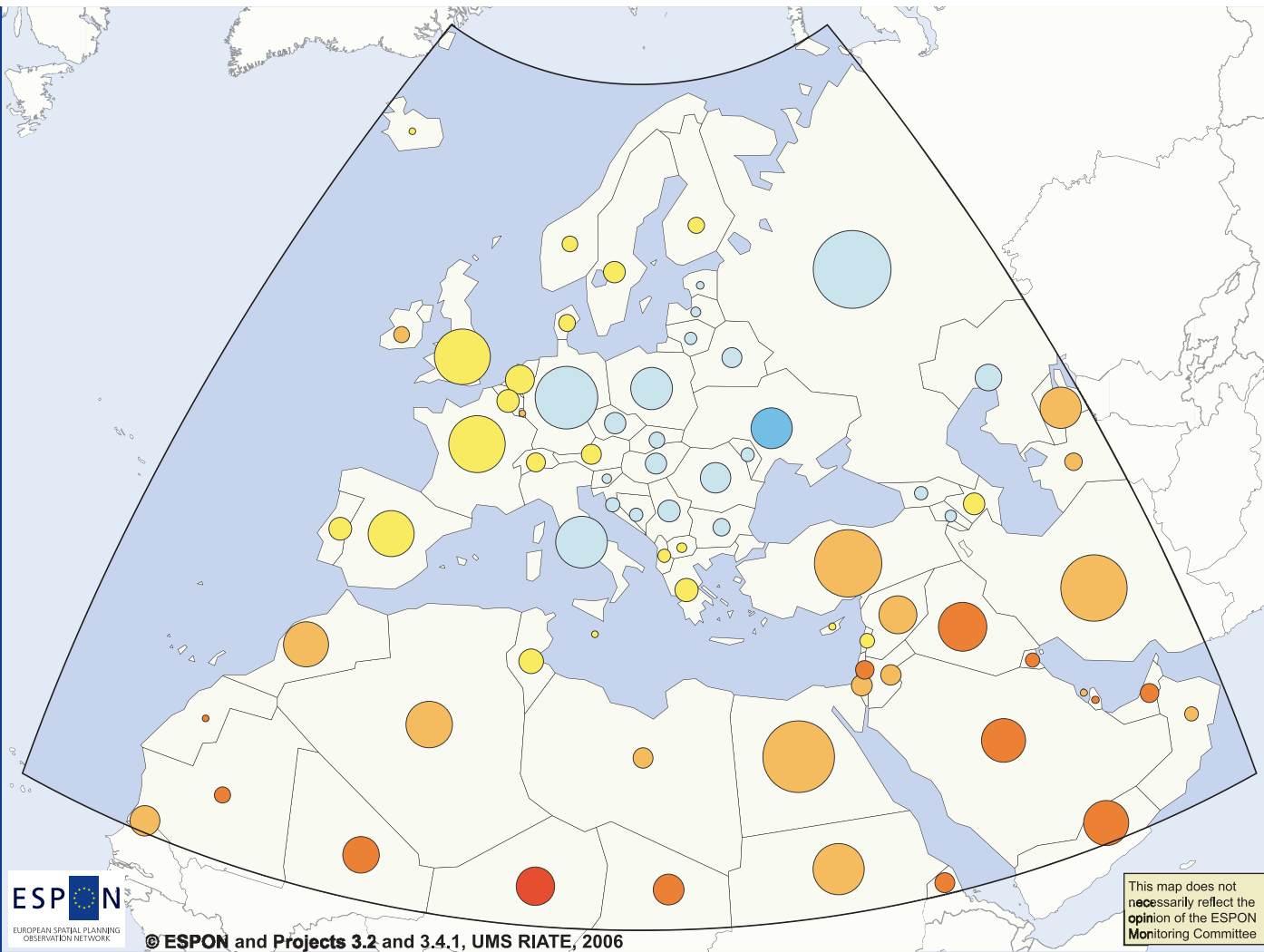
## Conclusions

Significant geographical differences can be seen in population trends up to 2030. There is likely to be slow growth in the west of Europe, Greece, Cyprus and Malta, but a fall in the number of citizens living in the member states in the east of

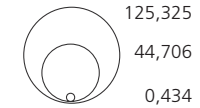
Europe. In contrast, higher rates of population increase are predicted in the South-Mediterranean regions (Maghreb and Turkey), with even higher rates south of the Sahara and in the Persian Gulf. When looking at the distribution of the top 10 countries in terms of population numbers (see table), one can notice that “small” annual increases and decreases result in considerable changes between 2000 and 2030.

Please note that long term forecasts and projections are frequently being updated. The United Nation Population Division regularly revises their population forecasts.

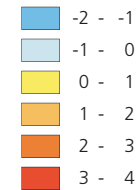
## Population in Europe and neighbouring countries in 2030



Population in 2030 (millions)



Annual growth rate 2000-2030 (%)



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

### Top 10 of most populated states in 2000

Rank	State	Millions of inhabitants
1	Russian Federation	147
2	Germany	82
3	Turkey	68
4	Egypt	67
5	Iran	66
6	France	59
7	United Kingdom	59
8	Italy	58
9	Ukraine	49
10	Spain	41

(EU Member States in blue)

### Top 10 of most populated states in 2030

Rank	State	Millions of inhabitants
1	Russian Federation	125
2	Egypt	107
3	Turkey	94
4	Iran	92
5	Germany	82
6	United Kingdom	65
7	France	64
8	Italy	55
9	Sudan	55
10	Iraq	49

(EU Member States in blue)

Origin of data: United Nation Population Prospect 2005 (medium hypothesis)

Cyprus: Data for government controlled areas only.

Source: ESPON database

# Human well-being

Human well-being is a basic driver for policy-making in regional development and territorial cohesion. The human development index offers a comparative global perspective on the human dimension of development and can thus enrich discussions on the regional aspects of global competitiveness and complement the current focus on (the combined indicator) GDP per capita when assessing progress.

## Concept/method/measurement

The human development index offers an alternative to GDP as a combined indicator of human well-being and provides a useful entry point into information covering different aspects of human development. The human development index of the United Nations measures the average achievements in a country on three basic dimensions of human development: (1) a long and healthy life (measured by life expectancy at birth); (2) knowledge (measured by the adult literacy rate and the combined gross enrolment ratio for primary, secondary and tertiary schools); (3) a decent standard of living (measured by logarithm of GDP per capita in ppp). The index is constructed by the United Nations using indicators that are currently available worldwide.

The map illustrates the human development index at national level, showing a country's status in 2002 with regard to this combined indicator. In addition, the map also highlights the major discontinuities in the world with regard to human development. A discontinuity is defined by the difference in mean between two or more neighbouring territories with regard to their score in the human development index. It has been meas-

ured for land-borders as well as for countries separated by a short maritime distance.

## Interpretation

The majority of European countries have a high level of human development, at the same level as Northern America, Japan, Australia and New Zealand. Portugal and the EU Member States to the East have slightly lower human development levels equal to e.g. Mexico, Chile, Argentina and South Korea. Bulgaria and Romania is one band lower again and fall into the same group as e.g. Russia, Turkey and countries of Northern Africa and the Middle East. Within Europe there is a gradual decrease from West to East, but no major discontinuities of relevance at world scale. From the global perspective, and on these measures, therefore, a high level of territorial cohesion exists within Europe.

The main discontinuity in human development index scores is the border between the European Union and its neighbours on the other side of the Mediterranean Sea. Another major discontinuity is located in the Sahara, between Northern Africa and the Sub-Saharan countries. This double line of discontinuity can induce important flows of migrations (from south to north) or of investment and aid (from north to south), with the intermediate area of Northern Africa strategically positioned as an interfacing territory.

Some other external EU borders are characterised by discontinuities, though these are of low significance on a world scale. These are the Finnish-Russian border, the borders between Greece and its non-EU Member State neighbours, the border

between Italy and Albania, and the borders around Cyprus.

## Conclusions

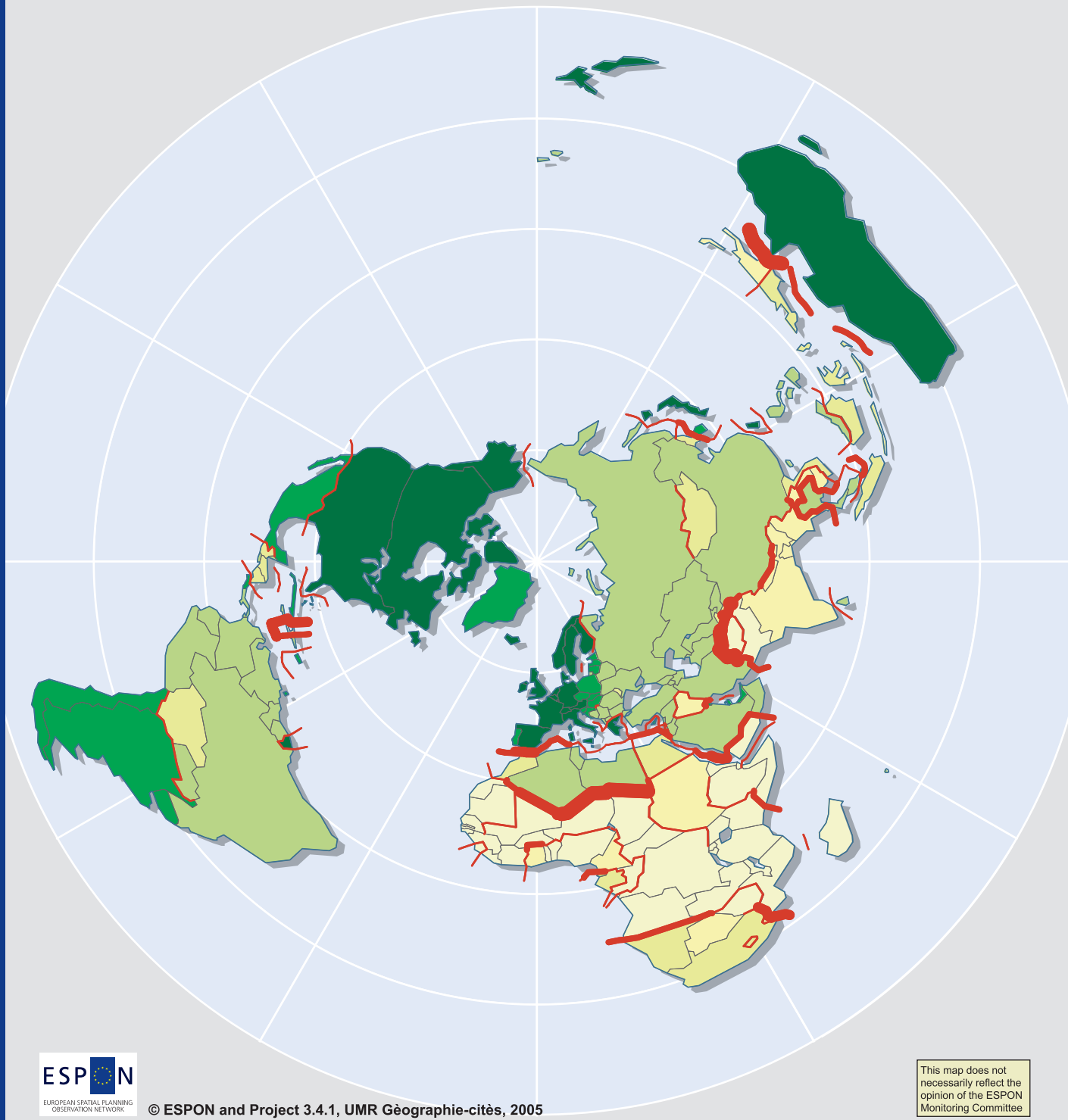
Europe is clearly in the world's top league when considering human development, based on a combined indicator addressing a wide range of aspects that go beyond the purely economic focus of GDP. Even EU Member States that fell short of the highest banding on the 2002 data might reasonably be expected to progress into that category in the near future.

The discontinuities between Europe and its neighbouring countries starkly illustrate the challenges with regard to the human development between Europe and Africa, and highlight the strategic importance of northern African countries as an intermediate zone in terms of level of human development.

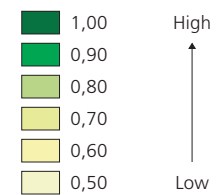
Finally, it is important to keep in mind that for combined indicators such as the human development index, analysis of the different components separately can add detail and deepen understanding. Inside Europe, discontinuities are relatively low in terms of education and life expectancy, but remain important in economic terms, partly reflecting the recent enlargement of the EU.



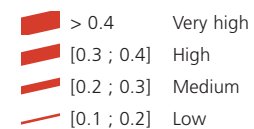
## Human development index 2002 – Global component



### Levels of development



### Discontinuities



# Concluding remarks

The ESPON programme has produced an important amount of new regionalised information and knowledge for Europe. More will come before this programme presents the remaining final results from the applied research projects later in 2006 and beginning of 2007. So far (March 2006) only half of the final reports from ESPON projects have been completed and so the number of interesting indicators will grow.

The moment has therefore come when communication and dialogue based on ESPON evidence is now very important, in order to prepare for the use of results in practice. Targeted dissemination of the ESPON findings will be a priority.

The ESPON programme will intensify communication and dialogue during 2006. The final results of the programme will be provided for discussion, indicators and tools developed in ESPON will become available for interested users. Dialogue will be stimulated through several events and presentations, and more publications are likely to be available.

Strategy and policy development related to territorial development and cohesion increasingly need a European dimension in the analysis. A modern policy-making for regions and larger territories needs to be based on the full picture of potentials, some of which can best be realised through territorial cooperation. By using ESPON results a European perspective can be included when considering potentials, deficits, imbalances, policy impacts etc. in specific territories.

The more complex, combined indicators used in this Briefing 2 for mapping the regional diversity

of Europe need to be accompanied by more simple, thematic maps to maximise the relevance of the data for policy makers and practitioners. The intention is that (1) combined indicators create interest in the European perspective and (2) the thematic maps and indicators make the evidence operational as detailed inputs to policy development.

A succeeding ESPON II programme is foreseen that will take over where the current programme ends. Shaping an ESPON II programme for 2007-2013 has already started, in response to requests from EU Member States and the European Commission for a continuation of the applied ESPON research.

Broad consultation is envisaged to explore the demand for more regionalised information covering the entire European territory and showing the position of regions and larger territories. Existing themes could be probed in more depth, and some new themes could be added. A screening of the interest from policy makers and practitioners for projects including targeted analysis based on ESPON results is also envisaged as part the preparation of an ESPON II programme.

ESPON is supporting an open dialogue and you are most welcome to consult the ESPON website, [www.espon.lu](http://www.espon.lu). All results are accessible there.

You are also invited to give your views and suggestions in relation to this Briefing II by e-mail to [info@espon.lu](mailto:info@espon.lu).





The European Spatial Planning Observation Network (ESPON) is set up to support policy development and to build a European scientific community in the field of territorial development. The main aim is to increase the general body of knowledge about territorial structures, trends and policy impacts in an enlarged European Union.

ESPON Briefing 2 aims to enhance the knowledge and understanding of policy makers and practitioners at all administrative levels by presenting interesting new evidence and information, which can be a lever for further exploration of the European perspective in shaping the future for their territory. ESPON Briefing II is necessarily only a selection of the

results provided by the Transnational Groups behind the applied research, and uses therefore just some of the data on regionalised indicators in ESPON project reports.

More information is available at [www.espon.lu](http://www.espon.lu)