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COMMISSION STAFF WORKING DOCUMENT

Accompanying the

**Green Paper on Territorial Cohesion
Turning territorial diversity into strength**

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1. TERRITORIAL COHESION IN THE MEMBER STATES

In May 2007, a questionnaire was sent by the Commission to each of the Member States in order to see how the concept of territorial cohesion is understood and implemented across the EU¹. Though Member States rarely have a policy labelled ‘territorial cohesion’, most of them have policies, or elements of policies, that they consider to be relevant in this regard.

1.1. Understanding the concept and its key components

Policies related to ensuring territorial cohesion are centred on the sustainable use of specific territorial features which have the potential to reduce disparities and increase competitiveness. In a European context, the objective of territorial cohesion is recognised as complementing, or reinforcing, economic and social cohesion.

The main components of territorial cohesion policy are diverse but there are a few which are common. Respect for territorial diversity, development of territorial potential and territorial competitiveness were reflected – in one way or another – in all responses. There was also a strong consensus on the importance of accessibility (through infrastructure and to public services) as well as of sustainability. The particular features of different places were regarded as important by a third of the Member States. Territorial identity, a sense of belonging to certain places – as an intangible element of territorial potential – was also mentioned.

1.2. Instruments of territorial cohesion policy

Governance plays a major role in ensuring territorial cohesion. Some Member States, referring to the Territorial Agenda, even defined territorial cohesion as a permanent and cooperative process that encompasses the various stakeholders involved in territorial development (territorial governance). *Territorial cooperation*, and networking generally (the aim of European Territorial Cooperation more specifically), is regarded as a key instrument, though the European Grouping of Territorial Cooperation (EGTC) was relatively little mentioned.

The evolution of administrative structures (territorial organisation) is also related to the issue of governance: there are examples of structures crossing administrative and institutional boundaries so as to reflect functional realities better or to pool interests for shared development objectives. In Denmark, local government reform was linked to more coherent spatial planning (the establishment of a planning authority for both urban-rural areas) and in Finland, municipal reform and the reorganisation of

¹ A more detailed synthesis of the questionnaire will be published in the course of 2009.

services was aimed at reducing the cost of supply in peripheral areas and smaller municipalities.

Inter-municipal cooperation and coordination in France

As a response to territorial fragmentation, the State has encouraged the development of links between municipalities. There are two approaches to public-sector measures in France: one is to bring public utilities closer to the people who use them, drawing on the concepts of equity and efficiency associated with the production of services on a commensurate scale (inter-municipal management). The other is regional development, which brings into play the concepts of strategy, participation and competitiveness (inter-municipal projects).

The development of inter-municipal management was accelerated by the law of 12 July 1999 on strengthening and simplifying cooperation between municipalities. As at 1 January 2007, over 91% of municipalities, covering 85.5% of the French population, were part of a municipal grouping with tax-raising powers.

The inter-municipal approach transcends administrative borders to prepare development projects which are important from a geographical, economic and social point of view for a particular area.

Governance-based administrative reform: coordinated economic and spatial development – the Danish example

In the newly reformed regional development structure in Denmark, two parallel partnership processes are in operation:

- regional councils preparing spatial development plans in cooperation with municipal councils, business representatives and other actors, covering all parts of the region

- regional growth forums bringing together representatives of the business community, educational and research establishments and the social partners as well as local and regional authorities and serving as pivotal points for growth initiatives and implementation of the Government's globalisation strategy.

The two processes are linked in that each growth forum is intended to make recommendations to regional councils on support for business development projects as well as to the State on the use of Structural Funds, while each regional councils has to base its spatial development plan on the business development strategy which emerges from the forum.

Territorial aspects of sectoral policies and coordination between these were also mentioned as crucial elements of territorial cohesion. The most “territorialised” Member State policies concern transport, telecommunications, sustainable development and the environment. In some Member States, the cohesion policy programming exercise encourages more attention to be given to territorial aspects in sectoral policies and to better coordination between them. In some cases, sectoral and regional measures complement each other and are coordinated in growth pole programmes. Consequently, polycentric territorial development and the concept of growth poles were also mentioned as important elements of territorial cohesion policy.

Almost all Member States produced some kinds of national spatial plans (Belgium, Spain and the UK were exceptions because of the lack of the competence for these at national level) and these have strong EU influences (e.g. the ESDP and the adjusted time frame for Structural Funds programming). EU cohesion programming apart, spatial planning is considered by many of the respondents the strongest mechanism at national level for coordination between actors in different sectors and

administrative levels (e.g. *schema directeur* – master plan – in the Brussels Capital Region). Limited attention, however, is given to the monitoring of territorial trends and the territorial impact of intervention (with little use of observatories or indicators).

2. TERRITORIAL COHESION IN THE ERDF AND COHESION PROGRAMMES OF THE PERIOD 2000-2006

To improve understanding of the types of intervention financed in different types of region, a study was undertaken to analyse the commitments of ERDF and Cohesion Fund projects in NUTS3 regions². The preliminary results of this study are presented below. Since equivalent information is not available for EAGF and the ESF, the results cover only part, even if the largest part, of cohesion policy.

Aid intensity (support per person) in Objective 1 regions was broadly similar in the 2000-2006 period in metro, intermediate and rural regions close to a city. In remote rural regions, however, where GDP per head was on average well below the EU average, aid was almost double the intensity elsewhere. In the eligible NUTS3 regions outside Objective 1, aid intensity was around 50% higher in rural regions than in the others.

The ERDF and Cohesion Fund, therefore, assisted all types of region and with higher intensities in (remote) rural regions ones, helping them to face territorial challenges and improve cohesion.

Average annual ERDF and CF aid intensity during 2000-2006 in Euro per inhabitant		
	Objective 1 regions	Eligible regions outside Objective 1
Urban region	124	23.8
Intermediate region	115	18.6
Rural regions close to a city	88	29.6
Rural remote regions	183	34.1
Average	118	21.8

Note does not include NUTS3 regions which were not eligible

For the 10 NMS only the period 2004-2007 was considered

Aid intensity under Objective 1 was also high in both mountain and island regions.

Average annual ERDF and CF aid intensity during 2000-2006 in Euro per inhabitant		
	Objective 1 regions	Eligible regions outside Objective 1
Mountain regions	165	23.3
Island regions	167	50.4

² *Final Report - ERDF and CF Regional Expenditure*. 2008 SWECO. The report (as well as the underlying data in a user-friendly and searchable form) can be found at:

http://ec.europa.eu/regional_policy/sources/docgener/evaluation/evaluation_en.htm.

Similar financial data are not available for the current programming period. However, a review of national strategies indicates that few Member States have applied a comprehensive and integrated framework for ensuring that proper account is taken of the territorial context when determining how funds are spent.

3. DEFINITION OF TERRITORIES

The main objective of cohesion policy is to reduce disparities between regions, defined at the NUTS2 level, the level at which eligibility for support (though not for the Cohesion Fund) and the distribution of financial resources is also defined, though operational programmes may be designed at a higher level (either NUTS1 or national).

One of the most interesting ideas arising from the concept of territorial cohesion is that there may be other territorial levels (intra-regional or supra-national) which might be relevant for policy intervention. The second section of the Green Paper is, therefore, based on a more finely defined unit than NUTS2. Indeed, the Green Paper uses different classifications of NUTS3 regions in the analysis of settlement patterns. This section briefly explains how they were created.

3.1. Settlement pattern

The settlement pattern is based on three types of area:

3.1.1. Agglomerations: Urban Audit Larger Urban Zones (LUZ)

All the larger urban zones were defined by Eurostat in cooperation with the National Statistical Institutes. The objective was to find the group of LAU2s (local administrative units at level 2, formerly known as NUTS5) that most closely corresponds to a commuting area or a functional urban area.

The principle is that if a LAU2 has at least 20% commuting to the central city it is included in the LUZ. In some cases, the central city consists of multiple LAU2s, depending on job densities. In dense conurbations, one LUZ may include multiple cities such as in the Ruhr area³.

3.1.2. Cities with at least 100 000 inhabitants

The Urban Audit covers all EU cities with over 100 000 inhabitants. These cities were identified using a harmonised approach across the EU as a whole, taking account of where a city is part of a large LAU2 and where it is spread over multiple LAU2s. As a result, this approach corrects for the distortions created by only allowing for densities (as in the case of OECD) or the size of individual LAU2s (as the case of the UN).

³ For more information see www.urbanaudit.org and ec.europa.eu/eurostat.

3.1.3. *Cities with between 50 000 and 100 000 inhabitants*

The Urban Audit includes 121 towns and cities with a population of between 50 000 and 100 000, but it includes by no means all of them. As a result, data for these cities had to be complemented by another source of information: the urban morphological zones (UMZ), as defined by the European Environmental Agency, supplemented by the disaggregated population grid of the Joint Research centre (JRC) combined with a grid of registered population in Sweden and Finland⁴.

These sources of information enable UMZs to be identified with populations of between 50 000 and 100 000 which are at present not captured by the urban audit. The UMZs⁵ have the same advantage as the urban audit cities in the sense that they enable both cities within a large LAU2 or a city spread over several LAU2 to be identified.

3.1.4. *Small and medium-sized towns*

Small and medium-sized towns with a population of between 5 000 and 50 000 were also identified using the UMZs and population grids as well as by drawing on the ESPON project, "*The role of small and medium-sized towns*"⁶.

The benefit of this approach is that it provides a more nuanced and realistic indication of the share of a population living in an urban area. For example, the *World Urbanization Prospects, Revision 2005* estimates that 73% of the EU27 population lives in an urban LAU2, while the approach adopted here produces an estimate of 57% of the EU population living in cities or agglomerations of over 50 000 and another 14% living in small and medium-sized towns.

3.2. **The OECD Urban-Rural Classification**

The OECD Urban-Rural classification has three steps:

The first step consists in classifying LAU2 as rural if their population density is below 150 inhabitants per square kilometer.

The second step consists in aggregating this lower level into NUTS3 regions and classifying the latter as predominantly urban, intermediate and predominantly rural using the percentage of population living in local rural units.

A NUTS3 region is classified as:

- Predominantly Urban (PU), if the share of population living in rural local units is below 15%;
- Intermediate (IN), if the share of population living in rural local units is between 15% and 50%;

⁴ For more information see "Remote rural regions: How proximity to a city influences the performance of rural regions", *Regional Focus 1/2008*.

⁵ The drawback of the UMZs is that there is very little data available for them because they do not correspond to any administrative area.

⁶ See www.espon.eu

- Predominantly Rural (PR), if the share of population living in rural local units is higher than 50%

In a third step the size of the urban centres in the region is considered:

- A region classified as predominantly rural by steps 1 and 2 becomes intermediate if it contains an urban centre of more than 200 000 inhabitants representing at least 25% of the regional population.

As in the 4th Cohesion Report, predominantly rural regions are divided according to travel time to the nearest city with 50 000 or more inhabitants. If more than half the population lives over 45 minutes drive away, the region is classified as remote, otherwise it is classified as close to a city⁷.

3.3. Metro regions based on functional urban areas

To analyse metropolitan regions using NUTS3 data, metro regions were created based on Urban Audit's Larger Urban Zones (see above). To ensure that the metro regions are sufficiently representative of the wide diversity of cities and their sizes within EU Member States, all of the LUZ with more than 250 000 inhabitants were included.

To identify which NUTS3 regions to include in a metro region, a threshold of 40% or more was used. In most cases NUTS3 regions had far higher shares of their population living inside the LUZ. In a few cases, a NUTS3 region which contain a LUZ of more than 250 000 inhabitants but had less than 40% of their population within a LUZ were added to ensure that all agglomeration over 250 000 inhabitants could be included. (see Map 3.2)

Since this is a functional and not physically or morphological definition, metro regions contain areas with a low population density. As a result, a small number of NUTS3 regions that are classified as predominantly rural by the OECD are included in the metro regions. For example, the metro region of Poznań includes the surrounding region Poznański, which the OECD approach classifies as rural.

More research is required to find an appropriate method to combine metropolitan regions with a classification of rural regions.

3.4. Island Regions

For analytical purposes, island regions are defined as NUTS3 regions composed completely of one or more islands, an island being defined according to the criteria used in the Eurostat publication "*Portrait of the Islands*" and in the DG REGIO study on island regions 2003-2004. These criteria are:

- Minimum surface area of 1 square km
- Minimum distance between the island and the mainland of 1 km

⁷

For more information see Regional Focus 1/2008 "Remote rural regions: How proximity to a city influences the performance of rural regions."

http://ec.europa.eu/regional_policy/sources/docgener/studies/study_en.htm

- Resident population of 50 or more
- No fixed link (bridge, tunnel or dyke) between the island and the mainland
- No Member State capital on the island

3.5. Mountain Regions

Mountain regions are defined as NUTS3 regions with at least 50% of their population living in topographically defined mountain areas, as identified in the DG REGIO study on mountain areas in Europe (2004)⁸.

3.6. Sparsely Populated Regions

Sparsely populated areas are defined as NUTS3 regions with a population density of less than 12.5 inhabitants per square km⁹.

3.7. Border Regions

Internal border regions are NUTS3 regions eligible for cross-border cooperation under Structural Funds 2007-2013.

External border regions are NUTS3 regions eligible for cross-border cooperation under the Instrument for Pre-accession Assistance (IPA) or the European Neighborhood and Partnership Instrument (ENPI).

4. DEFINITION OF INDICATORS

4.1. Combined proximity to natural areas

This indicator is based on the proximity to:

- Bodies of water
- Natura 2000 areas
- Natural areas as defined by CORINE land cover, which includes green urban, leisure and sport facilities, forests, semi-natural areas and wetlands. It does not include agricultural land.

The combined indicator is the average of the three proximity indicators. Each of the three indicators is calculated in a similar way:

- (1) Each 1 km grid cell is assigned a value inversely related to the distance to all natural areas within a radius of 10 km. If the natural area is more than 10 km away the value is zero.

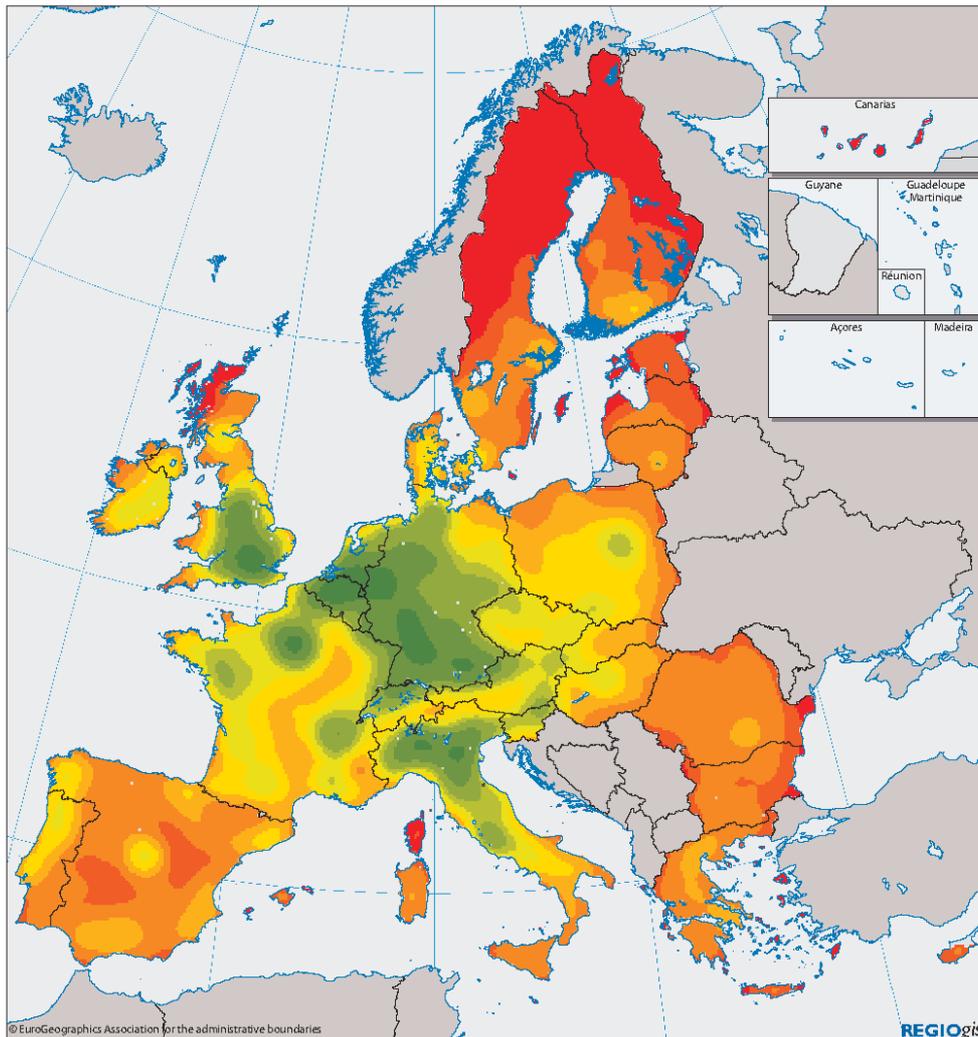
⁸ The classification is based on altitude, slope, local elevation range and temperature contrast.
⁹ See paragraph 30.b of the Guidelines on national regional aid for 2007-2013 (2006/C 54/08).

- (2) Each 1 km grid cell is weighted according to its population to obtain a population weighted average per NUTS3 region.

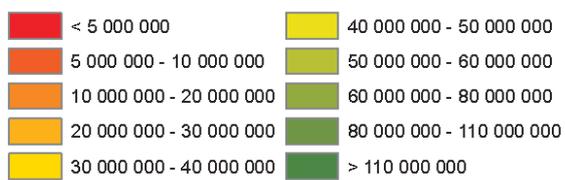
Some grid cells contain both water and Natura 2000 areas or natural areas and Natura 2000 areas in which case they count double since they can be regarded as doubly attractive.

5. LIST OF MAPS

- (1) Potential GDP (PPS), 2005
- (2) Change in GDP per head in PPS at NUTS3 level, 1995-2004
- (3) Urban-rural typology of NUTS3 regions
- (4) Change in the share of GDP of metro regions, 1995-2004
- (5) Authors of EPO patent applications, average 2004-2005
- (6) Proximity to natural areas
- (7) Emission of Particulate Matter 2.5, 2006
- (8) Road efficiency between major urban agglomerations in km per hour
- (9) Accessibility to passenger flights, 2006
- (10) Freight transport, 2006
- (11) Border disparities in GDP per head (PPS), 2004
- (12) GDP per head (€) in EU and surrounding regions, 2004
- (13) Population growth in the EU and surrounding regions, 2000-2005



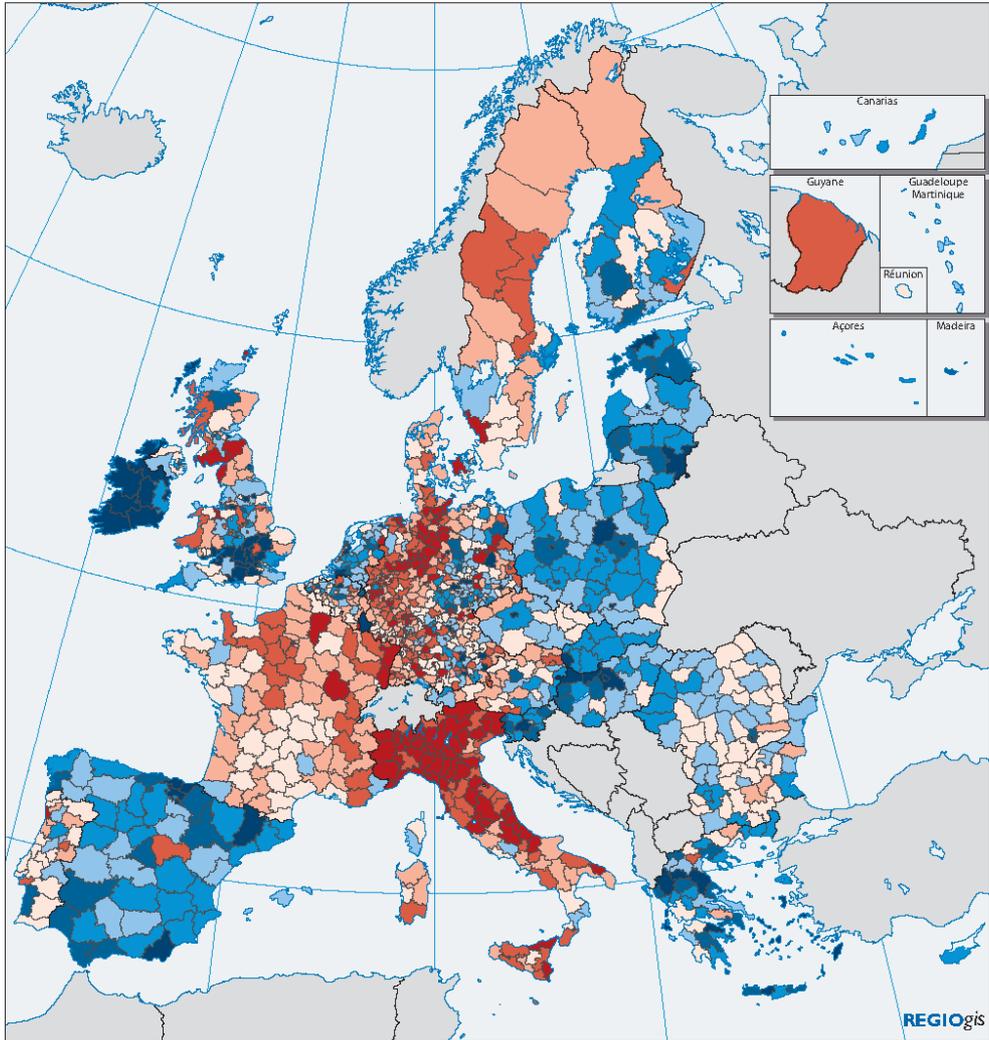
Potential GDP (PPS), 2005



Potential GDP in a neighbourhood of 100 km radius: Inverse-distance weighted sum of local population * local GDP/head (Index EU27=100)

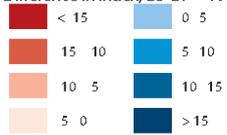
Sources: Eurostat, REGIO-GIS

0 1,000 Km



Change in GDP/head (PPS) at NUTS3 level, 1995-2004

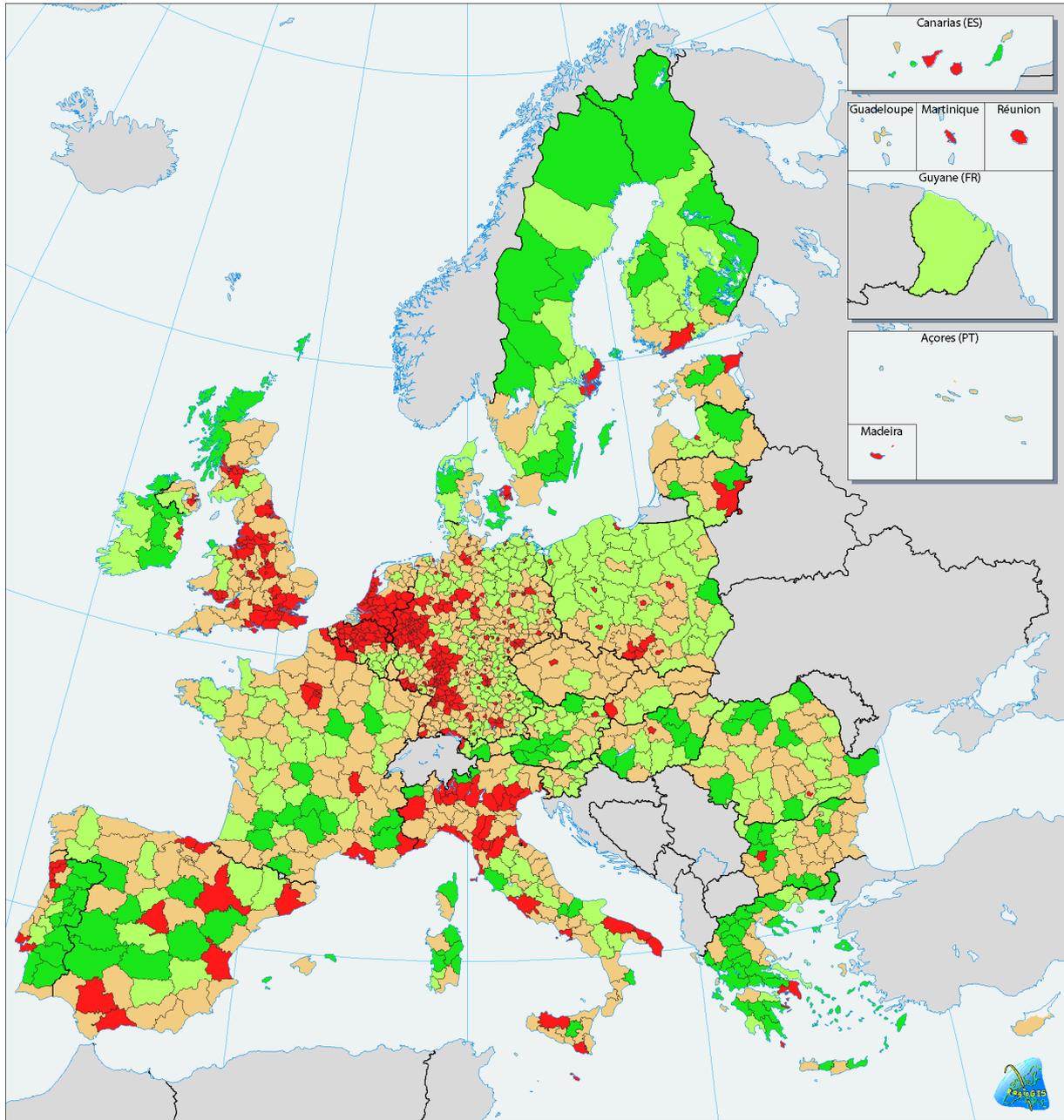
Difference in index, EU-27 = 100



Source: Eurostat



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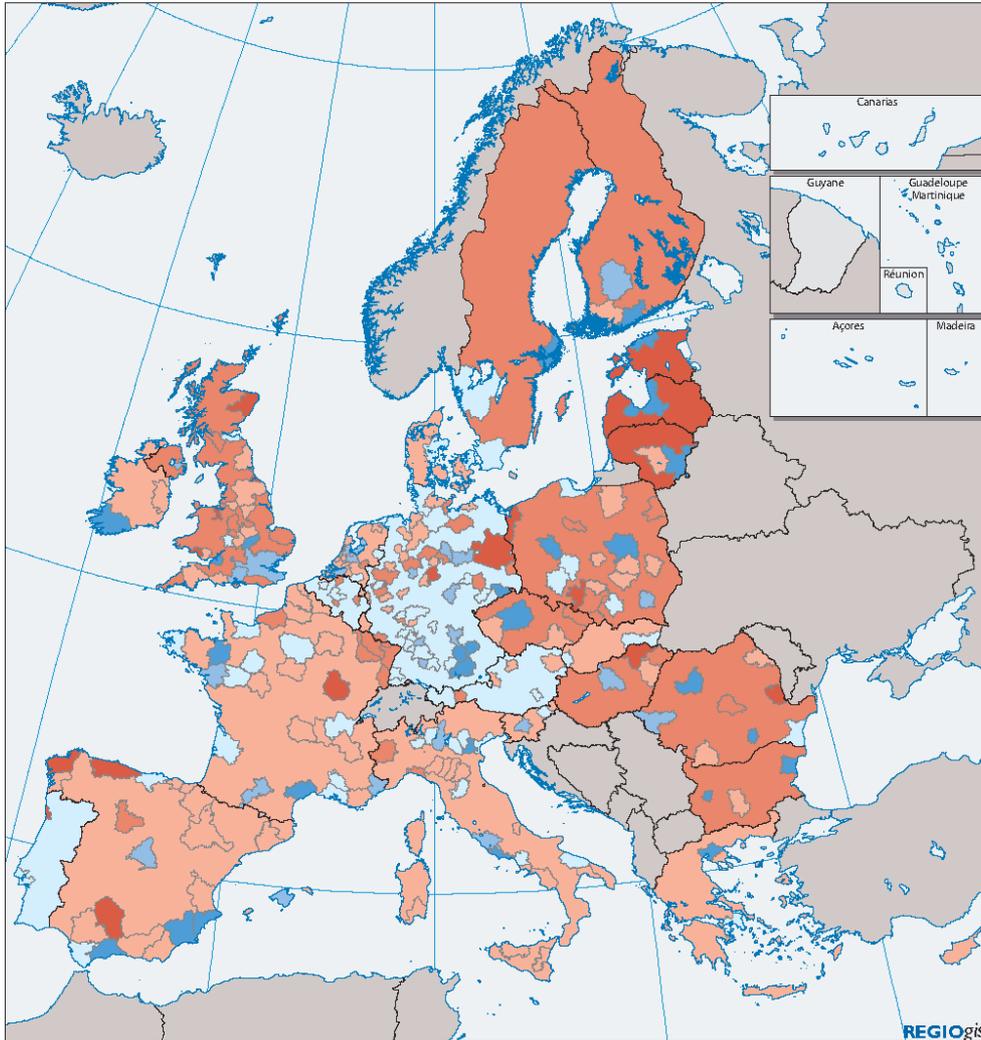
Urban-rural typology of NUTS3 regions

- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions, close to a city
- Predominantly rural, remote regions
- No Data

Close to a city: at least 50% of the population of the region lives at less than 45 minutes travel by road to a city of at least 50000 inhabitants
 Sources: OECD (revised classification 2007), Eurostat, EuroGeographics, EEA, JRC, REGIO-GIS

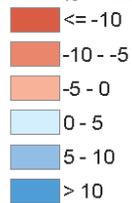


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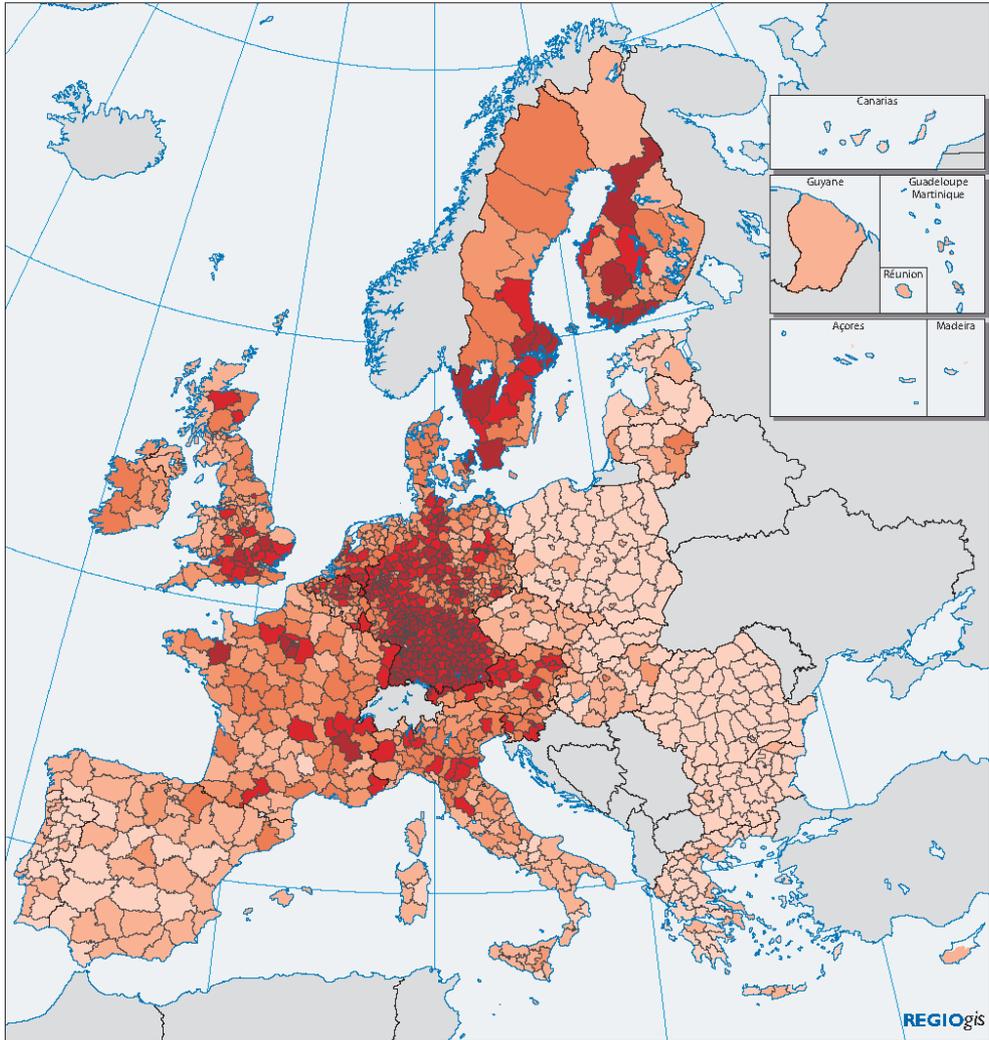


Change in the share of GDP of metropolitan and urban regions, 1995-2004

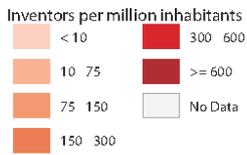
Total % change of regional share



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Authors of EPO patent applications, average 2004-2005



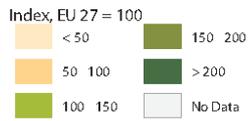
EU27 = 273
 Number of inventors by patent application,
 aggregated at NUTS3 level.
 Sources: OECD REGPAT database May 2008,
 Eurostat, DG REGIO



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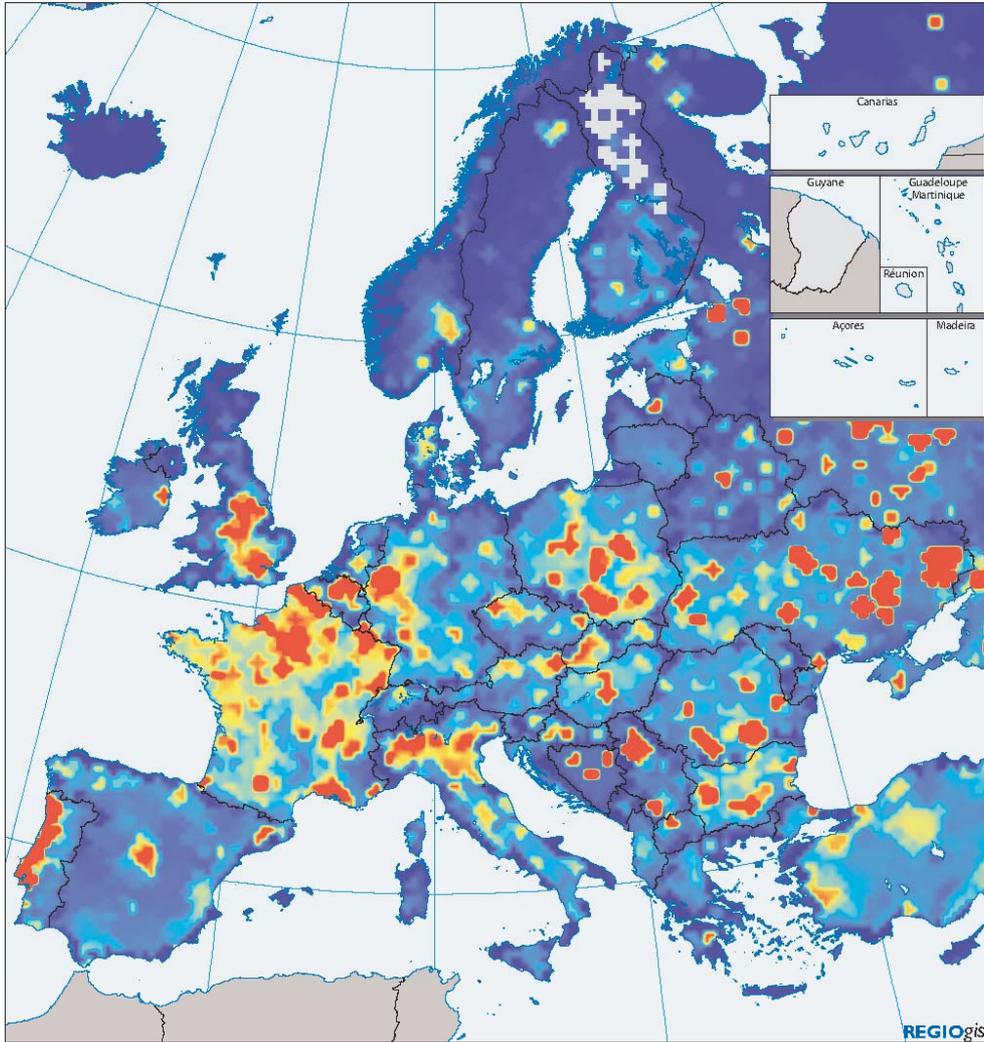
Combined indicators of proximity to natural areas



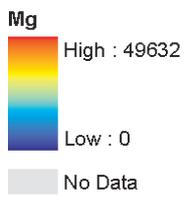
EU27 = 100
 Note: Nuts 3 average proximity measured at the level of 1 km grid cells, and weighted by population
 Sources: CORINE Land Cover 2000 (EEA), Natura 2000 areas (DG ENV), Population disaggregation grid (JRC), analysis by REGIO_GIS



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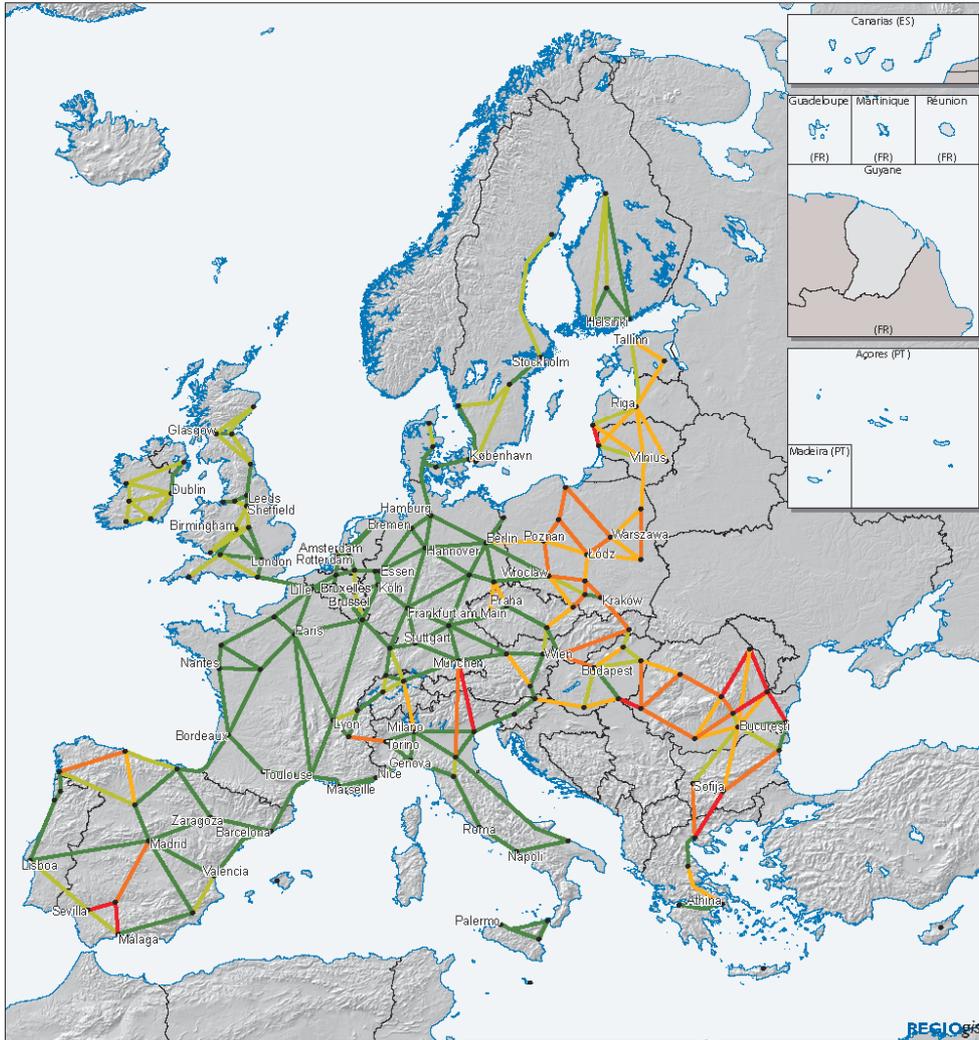
Emissions of PM 2.5, 2006



Source: EMEP



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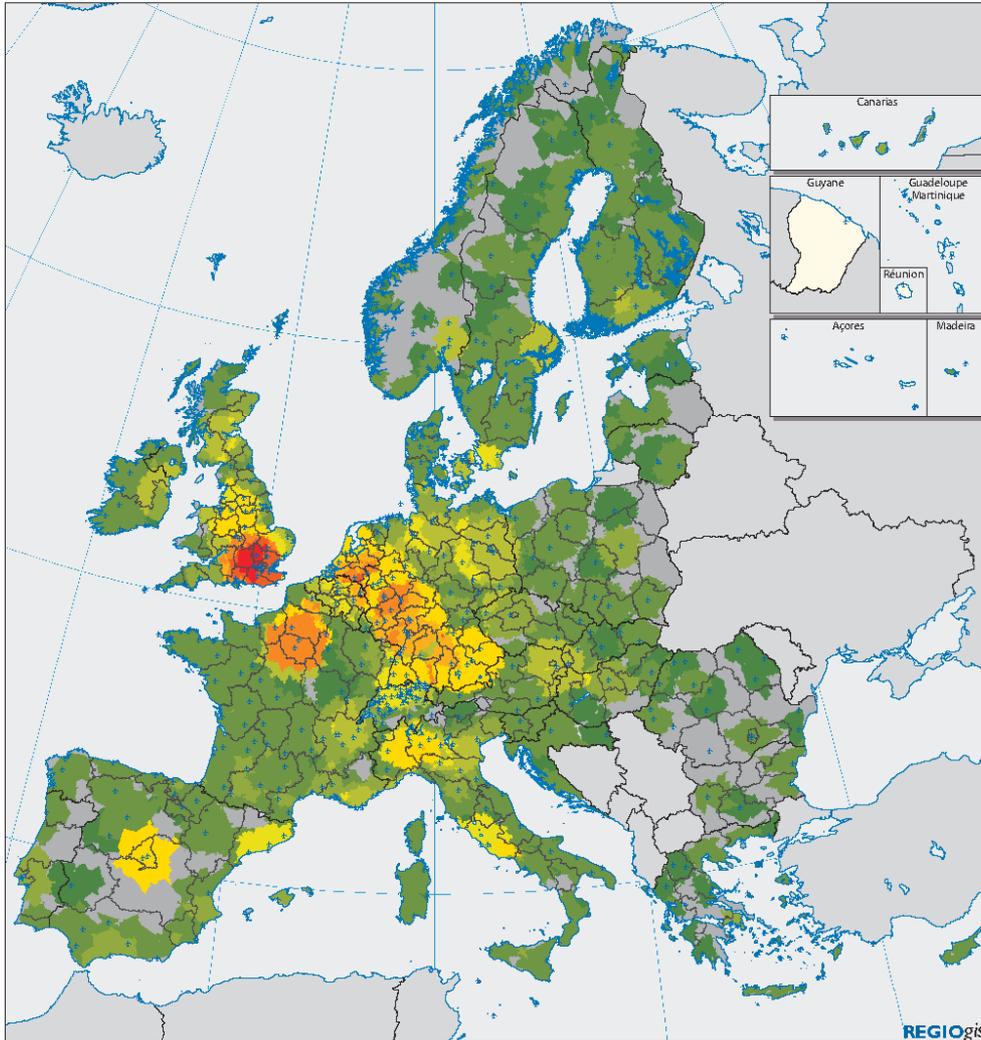
Road efficiency between major urban agglomerations

- km/h
- < 60
 - 60 - 70
 - 70 - 80
 - 80 - 90
 - > 90

Sources: Eurostat, EuroGeographics Association, REGIO-GIS

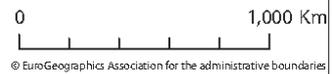


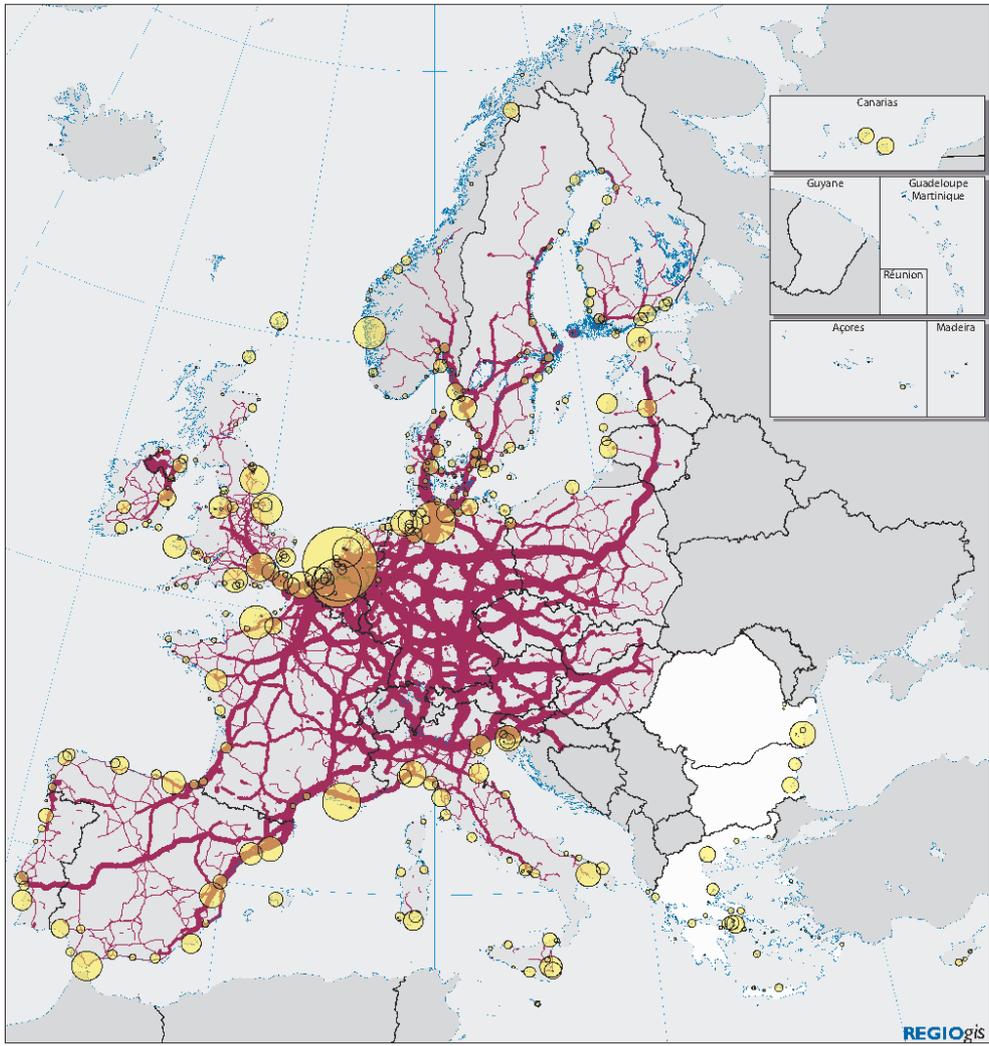
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Accessibility to passenger flights 2006

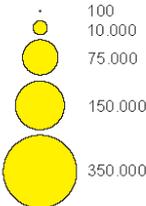
Cumulated daily number of passenger flights available within 90 minutes of travel by road



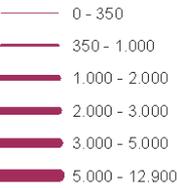


Freight transport, 2006

Goods transport by port (1000 tonnes)



Goods carried by lorries on international trips (1000 tonnes)

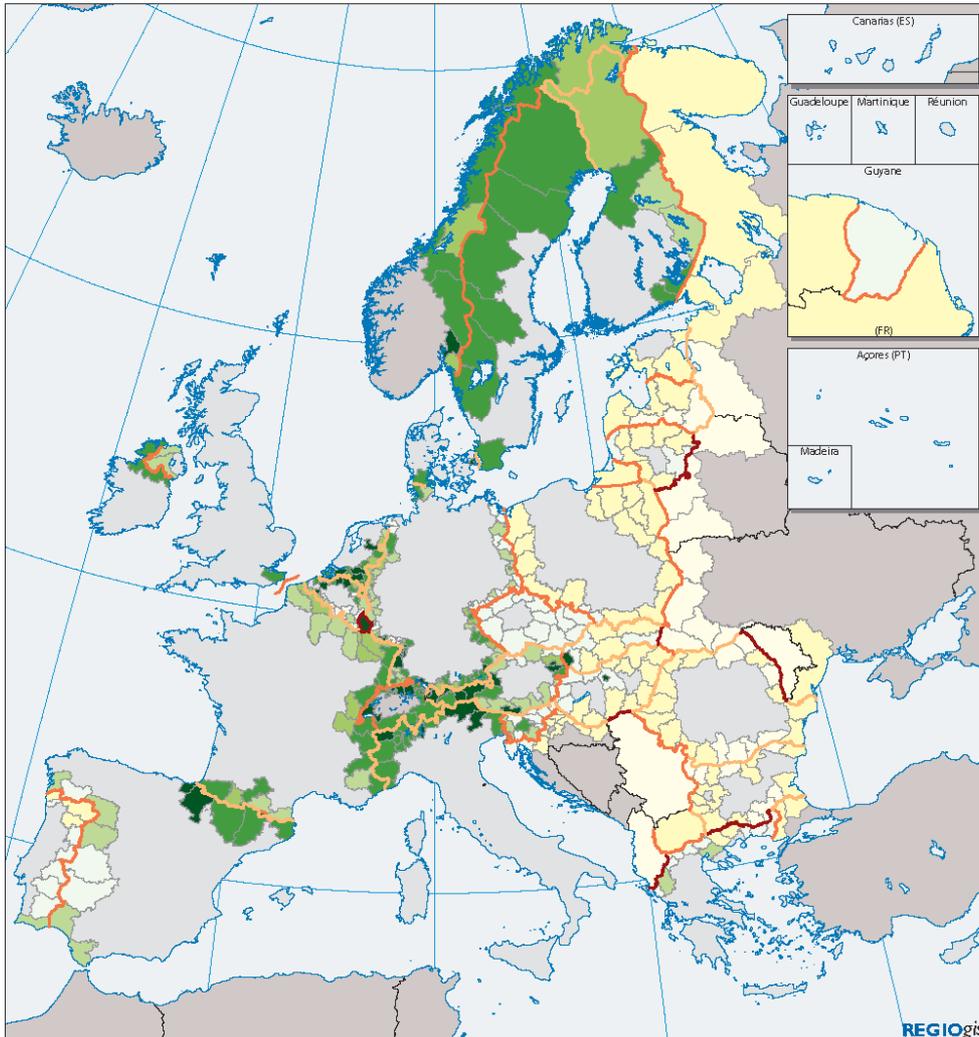


No Data

Source: Eurostat

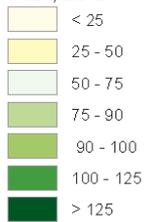


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Border disparities in GDP/head (PPS), 2004

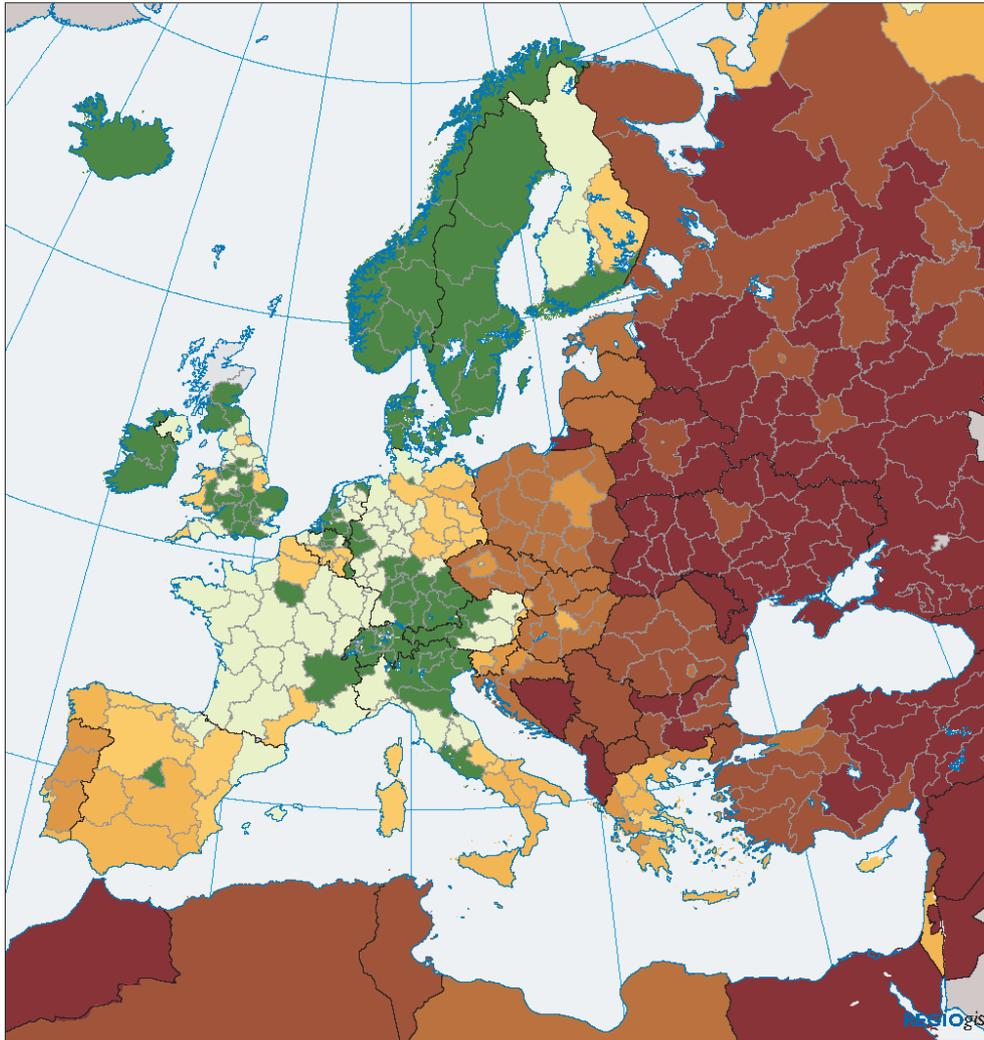
GDP per head (PPS), 2004
Index, EU 27 = 100



Quotient of GDP/head at both sides of the border



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GDP/head (Euro), 2005

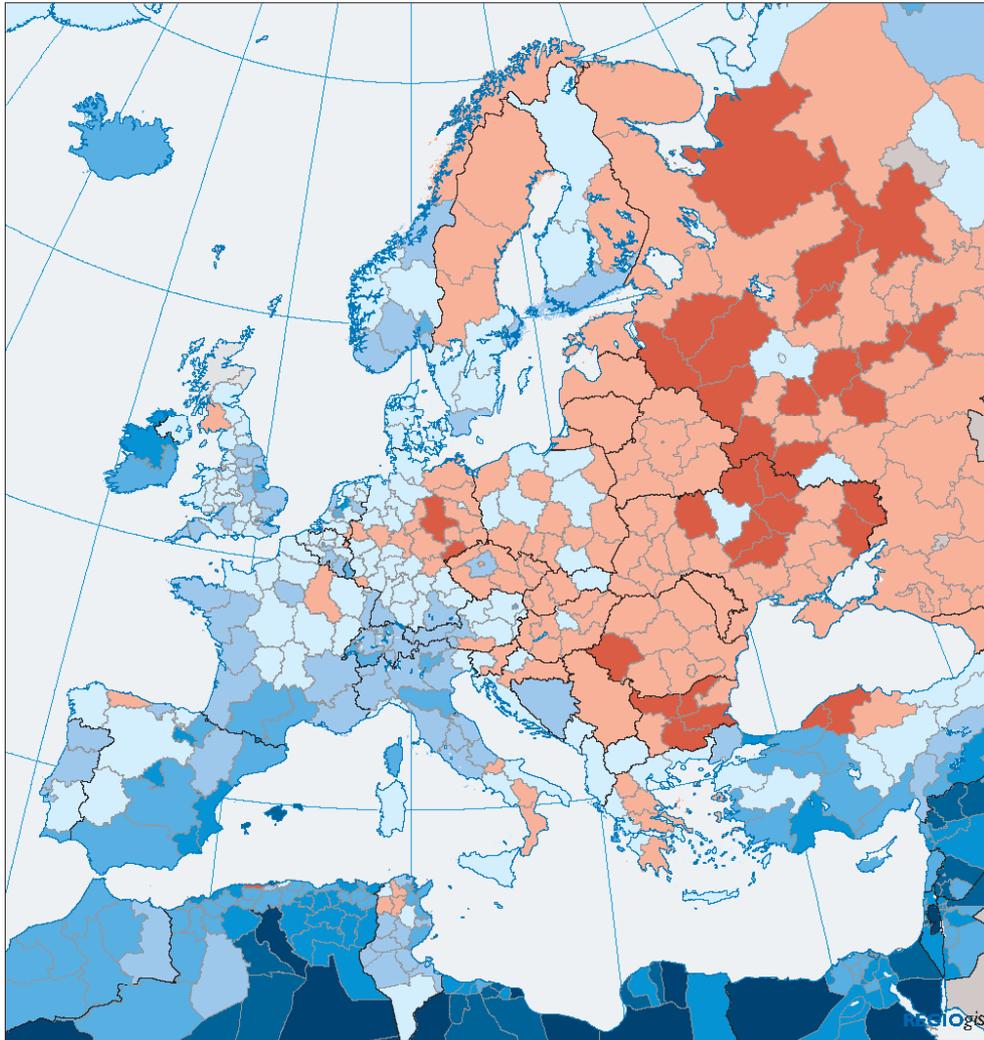
Index, EU-27 = 100

- 0 - 10 %
- 80 - 100 %
- 10 - 20 %
- 100 - 120 %
- 20 - 40 %
- > 120 %
- No data
- 40 - 60 %
- 60 - 80 %

Sources: Eurostat, World Bank, UNSD, NSIs,
 DG REGIO estimates
 AL: 2004; PS, UA, BY: 2003; TR: 2001; RU: 2002

0 500 Km

© EuroGeographics Association for the administrative boundaries (NUTS regions)
 Other administrative boundaries: Global Administrative Unit Layers (GAUL), FAO



Population growth, 2000-2005

Annual average % change



EU, EFTA and candidate countries: NUTS2 level or equivalent
 DZ, EG, IL, JO, MA, SY, TN, LY, BY, UA, RU: GAUL level 1
 Palestine: GAUL level 0
 Other countries: national level

TN, UA: 2003 2007
 EG: 1996 2006
 IL, SY: 1995 2005
 PS: 1997 2005
 GI: 2000 2004
 JO, MA: 1994 2004
 LY: 1995 2003
 DZ: 1987 1998
 RU: 2002 2007

Sources: Eurostat, UNSD, NSI



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 Other administrative boundaries: Global Administrative Unit Layers (GAUL), FAO

6. TABLES REFERED TO IN THE COMMUNICATION

Table 1: Main characteristics of urban, intermediate and rural regions and metro regions

	Urban region	Intermediate regions	Rural regions close to a city	Rural remote regions	Metro regions
Total Population in 2004, in thousands	215,022	184,143	64,516	25,990	289,251
Average annual change in population 1995-2004, in ‰	2.9	3.1	1.0	-1.8	3.2
Share of EU Population in 2004, in %	43.9	37.6	13.2	5.3	59.1
Share of GDP in 2004	57.0	30.5	8.9	3.5	67.1
GDP per head in PPS in 2004, EU27=100	126.7	83.6	71.0	67.8	112.8
Difference in GDP per head (PPS) 2004-1995 in index	0.6	-0.7	0.8	1.9	1.6
Authors of EPO patent applications per million inhabitants, average 2004-2005	393	197	143	44	326
Number of hotel beds per 1000 inhabitants, 2005	19.5	27.6	24.5	51.3	18.6

Table 2: Access to hospitals, universities and passenger flights, proximity to natural areas and particulate matter 2.5µm emissions

	Urban regions	Intermediate regions	Rural regions close to a city	Rural Remote regions	Metro Regions	Internal Borders	External Borders	Mountain regions	Island regions
Share of the population living more than a 30 minutes travel from a hospital, in %	2.6	10.1	21.3	47.8	18.6	14.0	23.2	21.0	31.0
Share of the population living more than a 60 minutes travel from a university, in %	0.8	6.0	17.6	43.6	1.9	9.9	23.2	9.9	17.0
Cumulated daily number of passenger flights available within 90 minutes of travel by road in 2006	1059	475	286	114	812	568	106	330	135
Proximity to natural areas: EU27=100	84	106	114	152	89	115	123	176	170
Index of particulate matter 2.5µm emission per square km in 2006, EU27=100	578	83	42	17	211	47	22	42	15

Table 3: Main characteristics of border regions

	Border regions	Internal Borders	External Borders
Total Population in 2004, in thousands	193,134	172,500	44,538
Average annual change in population 1995-2004, in ‰	1.75	1.79	0.58
Share of EU Population in 2004, in %	39.4	35.2	9.1
GDP per head in PPS in 2004, EU27=100	87.8	91.1	63.3
Difference in GDP per head (PPS) 2004-1995 in index points	0.5	0.2	1.8
Share of GDP in 2004	34.0	31.9	4.8
Number of hotel beds per 1000 inhabitants	29.0	27.6	36.4
Unemployment rate, 2005 in %	9.0	8.9	10.8
Difference in unemployment rate 2000-2005, in percentage points	-0.6	-0.4	-2.1

Table 4: Main characteristics of mountain and island regions

	Mountain regions	Island regions
Total Population in 2004, in thousands	49,332	13,655
Average annual change in population 1995-2004, in ‰	0.7	6.4
Share of EU Population in 2004, in %	10.1	2.8
GDP per head in PPS in 2004, EU27=100	79.4	78.5
Change in GDP per head (PPS) 2004-1995 in p.p.	-1.9	-2.7
Share of GDP in 2004	7.7	2.2
Number of hotel beds per 1000 inhabitants	45.1	87.0
Unemployment rate, 2005 in %	9.5	13.6
Change in unemployment rate 2000-2005, in p.p.	-1.9	-4.9