2. Interactions and challenges between rural and urban areas, depopulation process and role of the rural development policy

2.1. Characteristics of growing urban-rural interdependence (23)

According to the theory of urbanisation differential, all city systems ideally undergo various phases in their development, passing through a complete cycle of urbanisation (polarisation), polarisation reversal and counter-urbanisation. These various stages of urbanisation have been conceptualised in terms of urbanisation (population increase of the city’s core), suburbanisation (increase of the ring, decrease of the core), disurbanisation (decrease of core and ring), and re-urbanisation (increase of core, decrease of ring). The major overall tendency of urbanisation in Europe is actually counter-urbanisation, i.e. a flow of people down the urban ladder from larger to smaller urban settings. This tendency actually underpins ESDP policy options (nr 19 and 21). However, important exceptions to the rule exist in several countries.

In the context of this global cycle, various factors lead to growing urban-rural interdependence:

– as an effect of suburbanisation, the division in town and countryside has either disappeared in many regions or it has become more blurred;
– industries are relocating from urban to rural settings on a large and global scale;
– R & D activities are increasingly located in attractive semi-rural/semi-urban environments in the proximity of large towns;
– agriculture is carried out in an increasingly industrialised fashion, which means that traditional environmental values connected to rural environments are disappearing;
– huge, bulky and land consuming activities are preferably located in places where land is comparatively cheap, i.e. semi-urban or, if possible, rural settings;
– even corporation headquarters are not necessarily situated in cities centres anymore.

Physical urban-rural relations are characterised by a certain degree of stability because the physical world cannot be rebuilt over night. Functional relations on the other hand can be changed over night, given the flexibility of the physical setting to house a multitude of various activities as well as the flexibility of various functions to adapt to various physical setting.

The SPESP Study (24) identified several categories of urban-rural relationships (which are presented in annex….)

Central place relationships are more traditional in character. However, these type of relationships are entrenched with new relationships between urban and rural areas and between urban centres and nodes within rural areas. The picture that emerges is characterised by complex centre-periphery dynamics. Although rural areas play a vital role in everyday life and in the modern economy, these areas are in many ways dependent upon economic activities and facilities located in cities and urban areas. The spatial and ecological footprint of urban areas extends well beyond the city limits. Although some crude forms of domination from the urban areas have disappeared, other softer forms of domination have emerged, such as the transformation of

(23) Cf. ESPON Project 1.1.2. “Urban-rural relations in Europe” led by the Centre for Urban and Regional Studies of the Helsinki University of Technology.

rural areas into consumption landscapes. In many ways the influx of urban activities, for instance ICT companies (information and communication technologies), and new dwellers brings a new dynamism to rural areas. On the other hand, this invasion and succession can push local people out of the housing and labour market. Redefining urban-rural relationships therefore demands new forms of urban-rural partnership.

Growing urban-rural interdependence is subject to various driving forces:

– a major, still relevant criterion for choosing location sites for different activities is the space requirement;
– the pronounced priority given to environmental quality in terms of pleasant living environment for employees and “a good address” for companies as well as good accessibility, since an increasingly important factor in deciding the location of new establishments is the supply of qualified labour;
– some of the existing features of urbanisation (or counter-urbanisation) are caused by overall trends related to development in technology, demographic change and globalisation of markets;
– the current high concentration of immigrants in large metropolitan areas in Europe, which could set in motion the next phase of counter-urbanisation.

A number of consequences also result from growing urban-rural interaction:

– the expansion of commuter catchment areas, brought about by the continuous improvement of traffic systems and which is one of the most striking trends with respect to urban-rural relationships;
– trends in the value of land. The increase of urban-rural integration causes high land use pressure and rising land prices in accessible areas, leading to longer commuting distances as people search for affordable housing in the rural areas. In the regions with high GDP per inhabitant the lifestyle choices of the population may add to the housing pressure in the rural areas – increasing the land use pressure further;
– the emergence of “rurban” lifestyles, indicating the merge between urban and rural lifestyles.

A large majority of regions represents the context within which both urban and rural environments and modes of life coexist. This statement is valid for the

| Ongoing processes in urban-rural interdependence (national examples) |
| Further demographic concentration in and around large urban units; concentration of advanced economic functions in metropolitan areas and larger medium-sized towns (metropolisation) |
| Further demographic concentration in large urban units takes place in southern Italy, in Portugal and also in Finland. Helsinki, Tampere, Oulu and their neighbouring municipalities are the only true growth centres in the country. Forecasts indicate that Helsinki (together with Lisbon in Portugal) will be one of the fastest growing capital regions of Europe. |
| Deconcentration processes |
| The deconcentration process in Germany differs in the West and in the East. The West follows the trend of de-concentration and the rural regions record the highest population gains (process of re-industrialisation and residential preferences for low-density housing). In the East, only suburban rings of metropolitan areas have rising population figures whereas the big cities have the highest decrease. |
| A similar deconcentration process can be observed in the urban regions of France and Northern Italy. |
| In the Netherlands, deconcentration trends are contained by strict land-use control |
| Increase of population in remote rural areas |
| There are few examples of increases of the population in the remote rural areas. This happens however in the case of some accession countries. In Romania for example, part of the retired population, originating from the countryside, periodically or permanently return to their native villages to work the plots of land re-appropriated to them. |
densely exploited centres of Europe as well as for the peripheral areas. It means that urban-rural relations are present - more or less - everywhere on the regional level. A relatively strong urban-rural integration can be found in most of Europe. The extension of peripheral areas with low urban integration is thus quite limited. The sphere of influence from the major cities covers also large areas outside of Pentagon. Parts of Nordic, Mediterranean, Atlantic and eastern European fringe areas lack major cities but in some of those areas a network of regional/local level cities exists instead.

A major migration trend in the central parts of Europe is the main feature related to rural areas. Suburbanisation is not only a characteristic of households with children, but increasingly so with regard to single-person households as well. The driving forces behind this are supposed to be twofold. One the one hand, the rural area is conceived as “close to nature”. On the other hand, the rural context is associated with enhanced community spirit and social relations.

The variety of situations in urban-rural interdependence is however huge in Europe. This is related to the fact that various countries and/or regions are at different stages of the urbanisation cycle. In addition to this, other factors play an important part, such as inter-regional migration, the natural evolution of population, the economic specialisation of urban areas or the socio-economic transition processes taking place in the accession countries.

### 2.2. Territorial typology related to urban-rural interaction (25) (at regional level)

Urban-rural interactions are of strategic importance for regional and spatial development policies. They are however very diverse in nature and for this reason ex-

<table>
<thead>
<tr>
<th>Territorial typology related to urban-rural interaction</th>
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<tbody>
<tr>
<td><strong>High share of artificial surface only</strong></td>
</tr>
<tr>
<td>1. <strong>Urban, densely populated and high urban integration:</strong> only the share of artificial surface above average, population density (and possibly share of FUA population) above average.</td>
</tr>
<tr>
<td><strong>High share of artificial surface and agriculture or “wilderness”</strong></td>
</tr>
<tr>
<td>2. <strong>Urban-rural, densely populated and high urban integration:</strong> share of artificial surface + other types of surface (agriculture or “wilderness”) above average, population density (and possibly share of FUA population) above average.</td>
</tr>
<tr>
<td>3. <strong>Urban-rural, not densely populated but high urban integration:</strong> share of artificial surface + other types of surface (agriculture or “wilderness”) above average, population density below average, share of FUA population above average</td>
</tr>
<tr>
<td>4. <strong>Urban-peripheral, not densely populated and low urban integration:</strong> share of artificial surface + other types of surface (agriculture or “wilderness”) above average, population density below average, share of FUA population below average</td>
</tr>
<tr>
<td><strong>High share of agriculture only or agriculture and “wilderness”</strong></td>
</tr>
<tr>
<td>5. <strong>Rural-urban, densely populated and high urban integration:</strong> share of agricultural land (and possibly “wilderness”) above average, population density (and possibly share of FUA population) above average.</td>
</tr>
<tr>
<td>6. <strong>Rural-urban, not densely populated but high urban integration:</strong> Share of agricultural land (and possibly “wilderness”) above average, population density below average, share of FUA population above average</td>
</tr>
<tr>
<td>7. <strong>Rural-peripheral, not densely populated and low urban integration:</strong> Share of agricultural land (and possibly “wilderness”) above average, population density below average, share of FUA population below average</td>
</tr>
<tr>
<td><strong>High share of “wilderness” only</strong></td>
</tr>
<tr>
<td>8. <strong>Peripheral-urban, densely populated and high urban integration:</strong> Only the share of “wilderness” above average, population density (and possibly share of urban population) above average.</td>
</tr>
<tr>
<td>9. <strong>Peripheral-rural, not densely populated but high urban integration:</strong> only the share of “wilderness” above average, population density below average, share of FUA population above average</td>
</tr>
<tr>
<td>10. ** Peripheral, not densely populated and low urban integration:** only the share of “wilderness” above average, population density below average, share of FUA population below average</td>
</tr>
</tbody>
</table>

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(25) Cf. ESPON Project 1.1.2. “Urban-rural relations in Europe” led by the Centre for Urban and Regional Studies of the Helsinki University of Technology.
Part I: Territorial imbalances, interactions and new challenges in the context of enlargement

tremely difficult to map in any homogeneous way at European level. A typology of 10 groups is set up in the table below, using criteria related to land-use, population density and FUA population.

Another attempt has been made to elaborate a simpler typology and to divide the European territory into three classes according to the intensity of urban-rural interactions:

- Urban areas as well as peri-urban areas highly dependent on cities (26), regrouping the - categories: 1+2+5+8 of the upper table.

- Less densely populated areas with an important share of population dependent upon urban employment (27) regrouping the following categories: 3+6+9;

- Remote rural areas, far from cities with a low share of population dependent upon urban employment (28) regrouping the following categories: 4+7+10.

This regrouping corresponds in fact to the elimination of the distinction between the land uses “agriculture” and “wilderness” (which could be significant for structural policies).

2.3. Identification of areas with shrinking population (29)

A major problem of economic and social cohesion are the remote rural areas, whose revitalisation is particularly difficult. Demographic factors play an important role in this issue. Long periods of out-migration of younger age groups have caused accelerated population ageing resulting now in global shrinking population. (general population trends).

The demographic analysis shows (See Map 7) that of the 133 most declining regions, as many as 64 regions are German, 18 regions are Bulgarian, 8 regions are part of United Kingdom, 6 regions are Romanian and 5 regions are Portuguese. The rest of the 18 countries are represented with 1-4 regions (Austria, Estonia, Spain, Finland, Greece, Hungary, Italy, Latvia, Netherlands, Poland, Sweden). The largest share of declining regions (50-100 percent) and affected populations (40-100 percent) are found in ten countries Latvia, Bulga-
ria, Hungary, Sweden, Romania, Czech Republic, Estonia, Finland, Lithuania and the Slovak Republic (in this order). The countries with extremely low fertility rates are Spain, Italy, Bulgaria, Slovenia, Hungary, the Czech Republic, Estonia and Latvia.

Basically, three types of areas in Europe are confronted with depopulation trends:

- **Urban areas.** In numerous cases, the cores of metropolitan areas and cities are loosing population, quite often to their surrounding areas. Where the process of regional polarisation is occurring, declining and growing areas exist side by side (for instance in Spain, Italy, East-Germany);

- **Industrial regions** characterized by a reconversion process. A number of them are to be found in the EU-15 (Asturias, Euskadi, Lorraine etc.), but the largest number is in the accession countries (Czech republic, Slovakia, southern Poland, Romania, Bulgaria etc).

- **Rural areas.** The most negative change is found in the least densely populated regions in France, Spain and Portugal, the northern and southern parts of Eastern Europe, and in peripheral regions of Sweden and Finland. In the Nordic countries, the less central regions have the most negative development. Examples of depopulation in sparsely populated areas are the Finnish regions of Itä Suomi (- 2.5% between 1995 and 1999), the Swedish regions of Mellersta Norrland (-3%), Övre Norrland (1.9%), the Spanish regions of Aragon (-1%), Castilla Leon (-1.6%). Further details on issues of low populated areas are provided below.

While low fertility rates and population ageing are main causes of depopulation trends in remote rural areas, the ability of these regions to attract and retain inhabitants is related to various factors, such as the improvement of accessibility, the endowment with public and private services and facilities, the enhancement of the natural and cultural heritage, the promotion of economic activities etc. Regional and spatial development policies should primarily address these issues and support the development of small and medium-sized urban centres likely to provide services, employment and amenities. The future regional development programmes will have particular tasks to fulfil in this field in order to increase the competitiveness of rural areas.

The role of the Rural Development Policy(30) should be emphasized. The least accessible regions received, on average, higher levels of support from Pillar 2 in recent

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(26) defined as areas with a population density below average and a share of FUA population below average.
(27) defined as areas with a population density above average and a share of FUA population above average.
(28) defined as areas with a population density below average and a share of FUA population above average.
(30) Cf. ESPON project 2.1.3. “The territorial impacts of CAP and Rural Development Policy” led by the Ardleton Centre for Rural Development Research, University of Aberdeen (UK)
years. Less Favoured Areas (LFA) payments would tend to be higher in regions with lower per capita GDP and higher unemployment rates. Studies of LFA schemes in Austria, Ireland and Scotland do support the argument that such payments have helped to retain low income yielding sectors such as cattle and sheep in marginal areas, and therefore contributed to weaken depopulation trends.

Comparing the total support from Pillar 2 per Agricultural Working Unit (AWU) at regional level (Map 10) with GDP/head at regional level, shows clearly that there is no absolute correlation. While a number of regions with a GDP/head below 75% of EU-27 average receive more than 750€ per AWU (Asturias, parts of Castilla la Mancha and of Andalusia, Castilla y Leon, Alentejo, Algarve, Centro Portugal), other regions in this category receive less than 250€ per AWU (Campania, parts of Sicily). At the other extreme, some regions with a GDP/head higher than 125% of EU-27 average receive more than 2500€ per AWU (large parts of Sweden, Valle d’Aosta, parts of Western Austria) and a large number of regions with a GDP/head comprised between 100% and 125% of EU-27 average.
receive more than 750€ per AWU (Bourgogne, Midi-Pyrénées, Rhône-Alpes, Piemonte, Lombardy, large parts of Austria, southern Germany, large parts of Belgium, south-eastern Finland). A number of them received even more than 2500€ per AWU (Limousin, Auvergne, northern and south-western Finland). There is therefore space for stronger orientation of rural development policies towards areas where strong development need exist.

Summing up Chapter 2, numerous processes are leading to increased urban-rural interdependence in Europe. Most of them are related to the spatial deconcentration of urban functions, in particular from metropolitan areas. There is however a great diversity of regional situations, depending upon the particular phase of the cities urbanisation cycle, but also upon numerous other variables. Consequently, policies addressing urban-rural relations must be diversified. These policies have to take into account differences in population density and degree of urban integration, the character of the region in terms of its urban centres, economic activities as well as its overall physical landscape and potential. Urban functions will be more and more in a position to provide dynamism to rural areas. Regional and spatial development policies as well as the rural Development Policy will have to use this opportunity more efficiently.
3. Regions with geographic handicaps and other constraints

3.1. Mountain areas

There are mountain areas in almost all parts of the continent and most of Europe’s countries have at least some mountains. They are spread across the EU15, covering 1 323 thousand square km, i.e. 40% of the land area with a population of some 67 million, or around 18% of EU 15 population. In Acceding countries mountain areas represent more than 22% of the territory (241 thousand square km) and more than 18% of their population (about 22 million of inhabitants).

The northernmost EU 27 mountains are those in the Scottish Highlands and in Sweden while the southernmost ranges are found in the Mediterranean (i.e. southern Spain, Cyprus and Crete). European mountains also stretch towards the east with the Bulgarian mountain massifs and the Carpathians on the Czech-Polish border and Romania and the west (i.e. Portugal, Spain, Ireland and UK). On the other hand, while the longest chain is found in Scandinavia, the most famous and visited mountain area is situated in the very core of Europe (i.e. the Alps).

The study launched by the Commission, ‘Mountain areas in Europe’ covers EU 15, the accession countries and Romania, Bulgaria, Norway and Switzerland (See Map 8). To delineate mountain areas in a harmonised way several criteria set up, such as altitude (several intervals ranging from 2500m to 300m), slope (to include areas with minor altitudes but with steep slopes and strong local relief and exclude large plateaux) and harsh climatic conditions based on a climatic index, whereby parts of Northern Finland, Sweden and Norway are covered despite their moderate relief.

To describe this wide and large mountainous space and its economic and social characteristics, the level of analysis has to go into more detail and mountains were classified into massifs, as they are perceived and named at national and regional levels. Massifs consist of continuous or nearly continuous groups of mountainous municipalities (31).

Population in decline in many massifs

Mountain areas can be split into four spatial categories, i.e., massifs and three buffer rings (of 10, 20, and 50 km) in order to compare demographic patterns with lowlands. The average population density in massifs is around 50 inhabitants per Km², while in the three buffer rings, respectively 170, 184 and 160 inhabitants/km² is always higher than in the lowlands. Transition areas to mountains offer special location advantages to people. Results also show that total population is generally still declining in mountain areas, though a number of massifs are now attractive territories for population settlements and business.

This is confirmed by the slightly smaller proportions of the young and slightly higher proportions of elderly population in mountain areas both in the EU 15 and in the Accession Countries.

Unemployment quite often higher in the periphery mountains

Unemployment tends to be higher in mountain areas which are the most peripheral, such as the northern parts of the Nordic countries, Scotland, Northern Ireland and the UK, the southern mountain ranges of Spain, Corsica, southern Italy and Sicily. Conversely unemployment is for the most part relatively low in mountain areas near to major industrial urban centres or which have such centres within their borders, such as the areas in Wales, the northern Apennines of Italy and along the northern and southern edges of the Alps in France, Germany and Italy. There are, however, exceptions, such as the Ardennes in Belgium and the Ore

(31) The study operated with NUTS 5 regions.
mountains in the Czech Republic and Germany which have higher unemployment values.

A slower trend of economic diversification

Though further research is required, the conclusions from the analyses which have been carried out suggest that economic diversification from agriculture to services tends to happen at a faster pace in lowland than in mountainous regions, that the existence of large cities in mountain areas or nearby give an important stimulus to industrial activity (or, alternatively, that the wealth of resources in mountain areas can lead to the development of large cities in their vicinity), and that service employment tends to be high in the more prosperous mountain areas, mainly in tourism (such as in the Alps) or in public services in sparsely populated areas (especially in Sweden and Finland).

The table "Mountain areas compared to lowlands in EU15 and accession countries" (Appendix 6) illustrates the socio-economic discrepancies between mountain areas and lowlands and therefore the handicap of mountains.

The relative situation among massifs

An index to classify massifs according to their social and economic capital has been developed. It encompasses the population change and density (high/low), the level of accessibility and the deviation of the employment structure from the average of the study area. The map 'Classification of massifs' displays the results for the five following groups of massifs:

- **The best preconditions**: High access to markets, population growth, high population density (yellow)

  This category corresponds to a group of mountain areas that, with the exception of a few small Portuguese mountain areas, are centrally positioned within Europe. They comprise major urban areas and are generally characterised by a relative economic dynamism.

  Tertiary employment is most over-represented in the French Alps and in Swiss Mittelland. All other massifs in this category either have a strong primary sector (Bohemia, Swiss, German and Western Italian Alps) or major manufacturing activities (e.g. other western German mountain areas, Central and Eastern Italian Alps, England and Wales).

  Proximity to markets has allowed these areas to develop a diversified economic basis, and to have a favourable demographic evolution. Most of these areas are positioned between major demographic and economic centres. The main threat is therefore that their high economic potential may lead to over-exploitation with corresponding environmental impacts.

- **High potential, negative population trends**: High access to markets, high population density, but population decline (brown)

  These mountain areas have not benefited from their proximity to markets in the same way as the previous category. Either nearby dominant cities have not contributed to growth in a wider territorial context (Catalan and Basque mountains) or the mountain area is badly integrated in nearby urban networks (e.g. French Ardennes, Polish and Czech Carpathians). Some of these areas have also been affected by industrial restructuring over the past decades. In the northern Apennines of Italy, low fertility rates at the national level contribute to this classification.

- **Low population density pockets near high population density areas**: High access to markets and low density (green)

  In these areas, topography has had a more pronounced effect on human settlements: they appear as low density "islands" close to high-density areas. The vast majority of these areas in close proximity to major urban centres experience population growth; the only exceptions are the Massif Central and Morvan in France. (It should be noted that demographic trends are not available for the Czech Republic and the UK).

- **Remote with low population densities**: Low access to markets, primary sector over-represented (Blue and Purple)

  One group of massifs in this category with low accessibility to markets has markedly higher proportion of employment in the primary sector than the European average value. These are typically rural massifs, generally with a low population density. There are great contrasts in population trends in these massifs between 1991 and 2001. In extremely peripheral areas of Sweden and Finland, as well as in all concerned Iberian massifs except Serra Algarvia in Portugal and the Iberian System in Spain, populations have decreased. In contrast, all Irish and Greek massifs falling into this category have experienced population increases.

  The other massifs with low access to markets and low population densities have more varied profiles. While the Swedish and Norwegian massifs have very high employment in the public sector, all remaining mountain areas in this category have a large manufacturing sector. These massifs are situated in Scotland (UK), central Spain, northern Greece, Bulgaria, Finland and Sweden.

- **Remote with high population densities**: High density, low access to markets (red)

  Massifs with low access to markets and high population densities are mostly in Southern Europe, surpris-
ingly enough in areas situated further away from the European core than the previous category. Population decline mainly characterises the Italian and Portuguese massifs in this category, while there is population growth in the corresponding mountain areas in Greece, the Canary islands and the Balearic.

The areas with population growth in this category have a very large tourism sector. In all other massifs, with population decline, the primary sector is over-represented.
3.2. Islands and outermost regions

Islands (32) are in general territories with limited possibilities in terms of space, natural and human resources. Island have to achieve openness to outside markets in order to compensate for the weakness of the internal market. This creates a high degree of dependency that increases when the size of the territory and the population numbers are smaller and distances to mainland markets are larger.

The total population of the 284 island territories amounts to about 10 million permanent residents, which represents 2.7 percent of the total EU15 population (33). The Mediterranean islands comprehend 93% of the population above mentioned while the Baltic and Atlantic islands are less populated. Within the Mediterranean islands Sicily, Sardinia, the Balearic, Crete and Corsica account for 85% of the population.

The 119 Mediterranean islands have a total population of about 9.300 thousand inhabitants, which represents 95 percent of the total island population in the EU15. The Italian islands alone have a population of more than 7 millions, which corresponds to 71% of the EU15 island population and to more than 12% of the national total population. A similarly significant size of island population compared to the country’s total is found in Greece. In all other countries the size of the island population compared to the national total is not significant.

In terms of population densities, the highest values – above the EU15 average island population density – are found only in the islands of Spain, Italy and Germany. Only in the case of Spain, however, the average island population density is significantly higher than the national average. The lowest population densities are generally found in the islands of the North and the Baltic Seas. However, in the case of the Finnish and Swedish islands average population densities are slightly higher than national averages. All the smaller Italian archipelagos, and especially Campania islands, Pelagie and Ponza, are among the most densely populated island territories, and so is the British archipelago of Scilly, and the Balearics. Compared to their average national value these archipelagos, and also the Finnish Åland, and the Greek Ionian islands exhibit significantly higher population densities.

Statistical analysis show that there is a population threshold below which demographic indicators tend to decline, and this is a population size of 3 000 to 4 000 permanent inhabitants. The more populous an island is, the higher is the ratio of young population (people under 25 years of age). Here also a population threshold – of around 4 000 to 5 000 inhabitants – applies, of which the young population usually represents at least 30% of the total. Small islands are therefore prone to depopulation and ageing.

The population size of islands is positively correlated with the level of public services available to residents, but it seems that distance from the mainland is not correlated with the level of local public services, due to the fact that islands in general are not considered isolated enough to have local public services and infrastructure when these are available in neighbouring mainland regions. It has been estimated that there is a population threshold of 5000 inhabitants above which the level of locally provided public services and infrastructure is satisfactory. This shows a clear correlation between the level of public services and infrastructure and the demographic size.

The economy of islands is generally centred on one or two activities (in most cases agriculture, fisheries or tourism). Employment rates of islands are below Community average. The economic disadvantages are reflected in higher transport costs, both for people and goods, higher distribution costs and higher production costs. For goods, transport costs are higher due to the fact that islands are dependent on maritime and air transport (more expensive than road and rail for the same distances) to reach the outside market and the fact that the volume of imports is much larger than the volume of exports leading to an impossibility of reducing costs by a two-way traffic. Islands are highly dependent on fuel energy, despite the growth of renewable energy, which has large potential for the future.

Islands are privileged with natural and cultural environments which are nowadays exceptional in the European territory, but these are also fragile and require special attention. Islands isolation has often given rise to original fauna and flora species, both terrestrial and marine. Several types of excessive uses put these at risk. In a limited space the uses of land becomes especially conflicting (expanding urbanisation along the coastal strips). Environmental problems typical in islands are the scarcity of water resources which affects even Nordic islands.

Three possible causes of handicaps were analysed: the population, the physical insularity (geomorphology, climate) and distances to mainland. It results from the analysis that the population threshold is the most constraining factor. Geomorphologic factors bring with
them two types of handicaps: the altitude and the situation within the archipelago. An archipelago represents an accumulation of difficulties where each island represents a unit, so in many archipelagic insular regions connection with the mainland is only feasible through the main island of the archipelago, and the same applies to public services and administration.

Being part of an archipelago is a factor that is found to aggravate the handicap of the island status. The existence of mountainous relief and the often existing seismic activity add particular specificities to these territories. Islands often cumulate these handicaps which make internal transportation and mobility more difficult, while distance to mainland is less important (except for outermost regions). Examples of cumulated handicaps are:

- most Mediterranean islands are mountainous;
- islands belonging to Finland and Sweden are small and thinly populated;
- numerous island territories are archipelagos.

Outermost regions are islands (25 in total), with the exception of French Guyana. Their total population amounts to 3.9 million inhabitants. They suffer from an accumulation of natural constraints, which make it difficult to improve economic and social conditions, not least their remoteness both from economic and administrative centres and the nearest mainland. The furthest away, Reunion, is over 9,000 kms from Paris and 1,700 kms from the coast of Africa, while the closest to land, the Canary Islands, are still 250 kms off the coast. Their remoteness is compounded by their natural features (many are archipelagos, small in terms of land area and population), difficult terrain and climate and prone to natural hazards. For many the nearest markets are areas that lag largely behind in economic development.

The population of the outermost regions (nearly 4 million people) is rather unevenly distributed among the 7 regions. The Canary Islands account for 40% of total population of outermost regions, while Guyana has a share of only 4%. With the exception of Guyana (the Amazonian forest covers 90% of its territory), all other outermost regions are densely populated on average. This is even more remarkable since settled areas are small due to the mountainous character of these regions.

The population of the outermost regions is extremely young, in particular in Reunion, Guyana and Azores with more than 40% of the population below the age of 25 years. Population growth rates are high with the exception of Azores which are facing depopulation and out-migration of population of working age. The level of education attainment is very low in the Portuguese regions, compared to EU15 and EU25. This difference is less striking for at the national level. The Canary islands have a slightly younger population than Spain, and smaller percentage with a high level of education attainment than Spain (and below EU15 and EU25 values).

The outermost regions are confronted with the problem of important amounts of young population wishing to enter the labour market while available jobs are limited in number. This problem will increase in the years to come and policy solutions will become necessary.

The DOM (Guadeloupe, Guyana, Martinique and Reunion) have a low level of development and suffer therefore from high unemployment rates relative to the national, EU15 and EU25 averages. Madeira and Azores are still lagging behind national averages (the latter) and EU values but have minor unemployment rates. The structure of employment shows nevertheless a large agricultural sector highlighting the importance of agricultural and fishing activities in the economic and social conditions. In recent years, the outermost regions are catching up in economic terms, with a GDP growth rate higher than the EU average.

<table>
<thead>
<tr>
<th>Table: comparative change in per capita GDP (average weighted for population)</th>
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<tbody>
<tr>
<td>Average annual growth rate of per capita GDP - PPS</td>
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<td></td>
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<tr>
<td>1995</td>
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<tr>
<td>European Union</td>
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<td>Member States concerned</td>
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<td>Outermost regions</td>
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<tr>
<td>Outermost regions excluding Canary islands</td>
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<tr>
<td>Poor regions</td>
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(\textsuperscript{(*)} Cf. Study “Analysis of the outermost regions of the EU”. European Commission.)
Canary Islands are the exception and show an economic development still below EU15, but only slightly inferior to the national average.

The main handicap of outermost regions is their high level of isolation. In addition to this, other factors have a detrimental effect, such as the average altitude of the territory, the intensity of natural hazards and in various cases the archipelagic character.

A number of outermost regions are among the poorest of the European Union, but also of their own country. Generally however, the outermost regions are in a better economic position than the poorest EU regions.

A catching up process with reference to the EU average was confirmed in recent years. The lower the level of GDP, the stronger the catching up process occurred.

Since the accession of Finland and Sweden to the EU (Article 2 of Protocol 6 to the Act of Accession for Austria, Finland and Sweden) the problems linked to extremely low density population areas have been debated in the context of cohesion policy.

NUTS2 regions with a population density below 10 inh./sqkm are to be found in only four countries of EU25. In addition to the Nordic countries (Finland and Sweden), the French overseas region of Guyana and the Scottish Highlands and Islands belong to this category. Out of the 6 regions concerned, 4 were facing population decline between 1995 and 1999.

| NUTS 2 regions with a population density below 10 inh/sqkm in 1999 |
|----------------|-----------------|-----------------|
| Country        | Population density | Population change 1995-1999 (%) |
| Finland        |                  |                               |
| Itä Suomi      | 9.8              | -2.5                         |
| Pohjois Suomi  | 4.3              | +0.2                         |
| France         |                  |                               |
| Guyane (36)    | 1.9              | +3.9                         |
| Sweden         |                  |                               |
| Mellersta Norrland | 5.4          | 3.3                           |
| Oevre Norrland | -3.0             | -1.9                         |
| UK             |                  |                               |
| Highlands and Islands | 9.3        | -0.5                         |

The most striking example of low population density in Europe concerns parts of the peripheral sub-arctic areas of Finland and Sweden which cover an area of 424 thousand sqkm and have an average population density of 5 inh./km². Some of these areas have an extremely low population density, such as the NUTS3 regions of Kainuu (4.2 inh/sqkm), Lappi (2.1 inh/sqkm), Jamisland Län (2.6 inh/sqkm), Norbottens Län (2.6 inh/sqkm). Remoteness and emigration of the young and more skilled confront these regions with specific problems, although they are rich in mineral, wood and energy resources as well as in natural and cultural heritage.

Modern society needs economic, social and cultural infrastructure and services, the feasibility and profitability of which requires a minimum amount of users. For regions with a population density, the maintenance, modernisation and further development of infrastructure and services poses difficulties to public and private decision makers. On the other hand low level of infrastructure and services reduces the attractiveness of the areas concerned, in particular for young skilled people. Too low a population density is therefore considered a handicap to development and a threat to the conservation of the rich natural heritage of such regions.

Since out-migration still is an important factor of de-population in a large number of regions with low population density, regional and spatial development policies have to strengthen the attractiveness of these regions through better provision of services and em-

(*) Cf. ESPON Project 1.1.4. « The spatial effects of demographic trends and migration » led by the Swedish Institute for Growth Policy Studies (ITPS)

(**) In Guyane, population is concentrated in a few localities. The situation is not comparable with the other low density areas.
Part I: Territorial imbalances, interactions and new challenges in the context of enlargement

3.4. New discontinuities in cross-border areas

With the eastern enlargement, the structure of European borders will change substantially. The length of borders of the EU will increase by 42% (EU-25) and 60% (EU-27). The length of land borders will increase both in relation to the area and to the population. EU enlargement will have significant impact primarily on the economy of border regions, because barriers such as limited market or tariffs which have been eliminated. New challenges and problems will emerge along the new external borders.

The importance of border regions, of cross-border cooperation and of the permeability of these borders will increase. After political changes in 1989/90, cross-border cooperation started with difficulty because of the non-existence of competencies at the regional level in central and eastern Europe. The only competent level was that of municipalities. The political, legal and economic conditions for cross-border cooperation improved substantially after 1995, in particular in the context of administrative/territorial reforms (Poland, Czech Republic, Slovakia, Bulgaria) and thanks to the support of the EU. Nowadays, there are 58 Euroregions or “Euroregion type” organisations in which accession countries participate.

From the point of view of cohesion, a decisive criterion is the size of the gap in economic welfare and development level between the two sides of borders. Previously, the largest gap existed on the external EU border. The income gap between the respective countries was 2:1 on average: in the case of Poland, Hungary and Slovakia it was larger, in the case of Slovenia and the Czech Republic it was smaller. In the case of Hungary and Slovakia, however, the gap at regional level is substantially smaller, because the border brings together the most developed regions of Hungary and Slovakia and the least developed region of Austria, Burgenland.

In recent years, as a consequence of diverging developments, a new gap has emerged along the eastern borders of the accession countries. Today, the former Iron Curtain no longer represents the single largest relative income gap in Europe. Large gaps are found in two border sections (Map 9):

- Between Greece on the one side and Bulgaria, Macedonia, Albania on the other (the quotients in development levels range from 2.5 to 4.5);
- Between Poland, Slovakia, Hungary and Romania on the one side and the Ukraine and Moldova on the other. This gap is even larger than what might be expected on the basis of the respective national GDP figures, as the Western regions are the poorest regions in the Ukraine, in contrast to the spatial pattern of development in the other countries (the GDP ratios range from 1.35 to 2.4).

Though of minor importance, the other aspect of cross-border regional disparity is the employment (or rather unemployment) disparity. These disparities have a pattern, different from income disparities. The largest gaps are in the Balkans between the very high unemployment levels of Bulgaria, Serbia and Macedonia and the substantially lower levels of Greece, Romania and Hungary. The gap measured in differences of points of unemployment percentages ranges from 16.4 to 26.4. Statistically, there is a large gap between the relatively high unemployment levels of Poland, Slovakia and the Baltic states on the one hand and the very low levels in the CIS countries Russia, Belarus and Ukraine. This gap is, however, only a “statistical gap”. The low unemployment figures in CIS countries are the results of keeping former employees on the payroll even if they are not any more practically employed and they receive no wages. The reason is that only this arrangement allows the unemployed access to some social allowances and amenities.
Map 9. The dimension of economic disparities at the borders of the Enlargement Area

[Map showing economic disparities across Europe with different shades indicating levels of disparity.]
Conclusion:

The European Union comprises various types of regions with geographic handicaps and other specific constraints which inhibit their development.

Geographical handicaps basically exist in two types of regions: the mountain regions and the insular regions. In the context of enlargement, both categories of territories will be expanded: the mountainous areas with the massifs of Balkans and Carpets and the islands with two insular states: Malta and Cyprus.

Outermost regions, quite often accumulate these type of handicaps and are characterised by their remoteness from institutional and market access.

As far as mountain regions are concerned, trends show population decline in many massifs as well as high levels of unemployment, in particular in periphery mountains and slower evolution towards economic diversification. The situation varies however widely among the various massifs, though economic activities such as agriculture and industry or tourism require specific adaptations to the terrain and climate of these regions.

In the case of islands, the main handicap is the population threshold. Islands with a population below 3000/4000 inhabitants often show population decline and ageing, mainly resulting from insufficient public services (health, education, transportation etc.). Other insular constraints are linked to geomorphology (altitude, archipelagos) or to the distance to mainland in the case of outermost islands. The insular economy is generally based on one or two economic sectors and the GDP level reflects the peripheral situation of these territories. In the case of outermost regions, a catching up process has been observed in recent years for most of them.

Both mountainous and island regions have a valuable and sensitive environment show a large potential to benefit from sustainable tourism activities...

Other types of territorial constraints are of more socio-economic nature. Areas with low population density have reduced attractiveness by several reasons and because of low level of infrastructure and services and the modernisation and further development of such infrastructure and services raises difficulties for public and private decision-makers a negative cycle can be installed and the depopulation trend is exacerbated. An example are the far north scarcely populated areas.

The main constraint along borders of central and eastern Europe is the discontinuity in economic development. Wide gaps in GDP/head exist across the borders in numerous regions of eastern and central Europe. This type of discontinuity will also exist along external borders after EU enlargement. Low density regions and external borders have in common their very strong peripheral character.