Study on the relevance and the effectiveness of ERDF and Cohesion Fund support to Regions with Specific Geographical Features – Islands, Mountainous and Sparsely Populated areas

First Intermediate Report

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This report has been prepared by ADE at the request of the European Commission.

The views expressed are those of the consultant and do not represent the official views of the European Commission.

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1. Introduction

This First Intermediate Report is the main output carried out by the Team for Task 1: the Literature Review.

In accordance with the Study tender specifications and approved Inception Report, the Literature Review has five main elements, namely:

- **(i)** an analysis of the economic, social and territorial rationale to support islands, mountains and sparsely populated regions;
- **(ii)** an analysis of the assets and potential for growth for each type of territory;
- **(iii)** a review of the obstacles that potentially prevent these types of territories to equal benefiting from the single market;
- **(iv)** a review and analysis of the different territorial policy approaches including governance towards specific territories, including the role of European Regional Development Fund (ERDF);
- **(v)** provide a list of five regions of each type (mountainous, island and sparsely populated) where ERDF interventions were or could be relevant in turning their geographical handicaps into a development asset.

In this regard, this Report is organized into seven chapters. This Introduction is followed by Chapter 2 which discusses definitional issues relating to regions with specific geographical features. Chapter 3 focuses on the theoretical rationale for supporting these territories. Chapter 4 analyses the range of assets as well as obstacles that are apparent in the three types of regions. Chapter 5 explores the linkages between socio-economic performance and territorial policy approaches in the three types of territory which is followed by a discussion of the role of ERDF and the Cohesion Fund (CF) in Chapter 6. Lastly, Chapter 7 presents the selection of 15 regions to be analysed under Task 2.

2. Defining regions with specific geographical features

From the outset it is important to recognise that the regions with specific geographic features - island, mountainous and sparsely populated regions - do not represent a 'standardised' category or definition. There are several levels of analysis required. Firstly, the categories themselves are as much sociological or cultural constructs as geographical or territorial ones, as often definitions and perceptions change depending on regional or national context. Secondly, there are differences within the categories themselves; for example, Sicilia is an island although due to its size and location, the effect of its 'island-ness' is very different to a smaller island, such as Bornholm (Denmark) which is considerably smaller in size and population. In addition, sparsely populated is actually a demographic feature, which in theory, could change over time whereas being an island or a mountain is a fixed, 'natural' geographical feature. Thirdly, some regions belong to more than one category i.e. islands that are also mountainous, such as Corse (France) or Higlands and Islands (UK). In short, defining the territories is far from straight-forward plus the range of features plays out differently in the contrasting contexts. The rest of this section focuses on some definitional points in order to the 'set the scene' for the rest of the Report.

2.1 Islands

Insularity (or 'islandness' which according to Baldaccino, 2004, is freer of negative semantic baggage) is a surprisingly difficult geospecific characteristic to precisely define or measure. There are problems even at the most basic geophysical level (e.g. to include or not islands completely surrounded by water at low tide). On a more serious level, there has been a fierce debate in the literature on whether islands with fixed rail or road links to the mainland should be included as islands or not (see, for example, Baldacchino, 2007a for a view on retaining them, but others do not agree, Planistat Europe, 2003). Besides, there are many different typologies possible for islands as there are different purposes of the research (Dapraetere and Dahl, 2007). Fortunately, when it comes to the social and economic analysis of islands which is the focus of this Study, there is at least a modicum of common ground. For example, it is generally accepted that for socio-economic research it is pointless to include uninhabited small islands, of which there are many within the EU. This then, however, begs the question of just how large (in population terms) an island must become before it is worthwhile subjecting to economic analysis. Again it is generally agreed that there is little point in subjecting the very smallest islands to detailed analysis since where the population numbers only a few tens of people statistical analysis runs into insuperable 'small numbers' problems.

The EU has therefore gradually developed its own definition of what constitutes an island for the purposes of data collection and quantitative analysis, as well as for the purpose of policy formulation. Hence starting with Eurostat (1994) and then in the major study by Planistat Europe (2003) the EU developed the following definition of islands of interest:

(a) Minimum resident population of 50 persons

(b) Minimum land area of $1km^2$

(c) Minimum distance from the mainland of 1km

(d) No fixed link (bridge, tunnel, dyke) to the mainland

(e) No Member State capital on the island.

However, with the accession of Cyprus and Malta in 2004 even this definition had to be changed to "island member states eligible under the Cohesion Fund, and other islands except those on which the capital of a member state is situated or which have a fixed link to the mainland" (Monfort, 2009, p.4), thus keeping out Britain (with London and also the fixed tunnel link to the Continent), Ireland with Dublin and Zeeland with Copenhagen and a fixed bridge link, but incorporating Cyprus and Malta (see Table 1).

Table 1: Classification of EU islands according to their population

Category	Population size	Number of islands
Large islands	More than 50.000 permanent inhabitants	15 islands of which 5 have more than 500.000 inhabitants (Sicilia, Sardegna, Mallorca, Cyprus, Crete)
Medium-sized islands	Between 5.000-50.000 permanent inhabitants	44 islands
Small islands	Between 50 and 5.000 permanent inhabitants	303 islands
Very small islands	Less than 50 permanent inhabitants	228 islands

Source: ESPON, 2010

Data availability and comparability is also an issue. This is a particular problem for within-EU islands where harmonised Eurostat data are drawn upon. The problem of truncation is exacerbated here by the tendency of Eurostat NUTS regions to merge smaller offshore islands with littoral mainland areas. This is true even at NUTS3 level. The inevitable result is not only systematic truncation in the data set but also the exclusion of huge numbers of islands one would ideally wish to analyse.

A recent European Observation Network (ESPON, 2010) report noted that there were 362 EU islands with populations over 50 persons (excluding the outermost regions, but including Cyprus and Malta) and a further 228 with populations less than this (see table 1 below), but analysis could only effectively be conducted with 31 NUTS2 and NUTS3 islands and island groups. Monfort (2009) was able to analyse some 56 NUTS3 island regions, but these included cases where there were more than one NUTS3 region within a *single* island (e.g. Crete, Sicilia) as well as the usual amalgamations of smaller islands into groups for statistical purposes. Moncada et al. (2010) were able to demonstrate that the

EU25+3 (excluding Bulgaria and Romania but including Iceland, Norway and Switzerland) contained an astonishing 5.116 islands (populated and unpopulated), but ended up being able to analyse only 28 islands and island groups).

2.2 Mountains

Defining mountainous areas in Europe is also not a trivial task. There is considerable diversity within the EU between the different types of mountainous regions and it is not possible to define a 'typical' category. The focus here is not to add to the literature that examines the variety of different definitions of mountain areas as a considerable amount of work has already been carried out elsewhere[1]. In short, a range of definitions have been used in different studies on the subject. The definitions need to take into account a range of factors including *topography* (i.e. altitude, slope); *dominant climatic conditions* (i.e. contrasts in temperature); *land use and coverage* – for example, forests are dominant in mountainous areas across Europe, although not in southern Greece, Sicilia and Scotland where moor lands are common. In addition, there is proportionally more grassland in northern whilst arable land is more common in central and southern European mountainous regions. In Scandinavia, due to the location and more extreme climate, there is proportionally more barren land as well as permanent ice coverage (EEA Report, 2010).

The Nordregio (2004) study estimated that mountain areas cover 40 per cent of Europe and include 20 per cent of its population. Moreover, this study developed a set of definitions for mountain areas in Europe on the basis of criteria combining slope, altitude and climatic constraints that were calculated for 1x1 km^2 grid cells across Europe. Interestingly, high altitude is not a sufficient criterion to identify mountain areas, as some mountains go down to sea level. Individual municipalities were defined as mountainous if more than 50 per cent of the grid cells within their boundaries satisfied these criteria (Nordregio, 2004, p. 271).

Several other studies tackle the issue of how to define mountain areas. For example, in 2006, according to the study carried out by Montfort (2009), approximately 39.5 million people, which amounted to 8 per cent of the EU population, lived in mountainous regions (Montfort, 2009). A recent study published by the European Environment Agency, based on data from digital elevation models, derived a figure of 36 per cent of Europe's area as mountainous, which dropped slightly to 29 per cent for the EU27 (EEA Report, 2010).

Overall, then, there is considerable complexity in trying to develop consistent definitions across the whole European continent for mountainous regions and inevitably certain compromises have to be made. Hence, the sociological and cultural dimension is particularly relevant as national, regional and even local perceptions are clearly important and play a role. For example, the general observation or 'rule of thumb' is that the more mountainous a country is, the more restrictive the perception of mountains will be. Thus, Switzerland will tend to have a more restrictive understanding of mountains than a country

[1] This issue has been examined elsewhere. For example, through various ESPON studies including GEOSPECS www.geospecs.eu and Territorial Diversity in Europe: ww.espon.eu/main/Menu_Projects/Menu_TargetedAnalyses/espontedi.html

such as Poland or the UK which are both larger and are less mountainous[2]. On the other hand, there are exceptions as Belgium, for example, does not have a national notion of mountain areas yet the Ardennes plateau does enter in the analyses of mountainous regions in a European perspective (Philippe de Boe et al., 2005).

2.3 Sparsely populated regions

The most comprehensive study on sparsely populated areas (Gloersen et al., 2006) identifies the issue of sparsity in the following terms: "Sparsity characterizes regions where low population densities and dispersed settlement patterns create specific challenges for economic activity and public service provision". In other words, it is the small size of the local economies combined with long distances between them that make the issue of sparsity so specific compared to other types of territories found in Europe. Indeed, only three main areas in Europe can be deemed to be significantly impacted by sparsity: Northern and Eastern parts of the Nordic countries, Northern Scotland and North-eastern parts of Central Spain (between the triangle Madrid-Barcelona-Valencia). Yet, the latter two are relatively smaller geographically speaking; in Scotland, therefore, the focus is more on remoteness and rurality, and in Spain, the focus is on the relation between depopulation and rurality. Only in the Nordic countries is the term 'sparsely populated areas' to be found which is combined with the issue of peripherality, i.e. the remote position from the main domestic and European agglomerations, and harsh cold climate conditions (Gloersen et al., 2006).

In the EU context, the issue of 'sparsity' was introduced via the Accession Treaties of Finland and Sweden to the EU in 1995. Sparsely populated areas (SPAs) understood as "regions with extremely low population density" where initially covered by a specific Objective of Regional Policy, the Objective 6. In the EU vocabulary, 'Sparsity' is translated essentially in terms of low population density. As a matter of consequence, this indicator is used as the main criterion in order to establish if a region can be characterized as sparsely populated or not. In the protocol 6 of the Accession Treaties of Finland and Sweden, the Objective 6 regions were covering regions at NUTS2 level with a population density of 8 persons per km2. As mentioned in the Montfort (2009) study, low population density regions are defined in the Paragraph 30(b) of the Guidelines on national regional aid for 2007–13 (2006/C 54/08)[3] as "areas made up essentially of NUTS2 geographic regions with a population density of less than 8 inhabitants per km², or NUTS3 geographic regions with a population density of less than 12.5 inhabitants per km²". In the Green Paper on Territorial Cohesion, "Sparsely populated areas are defined as NUTS3 regions with a population density of less than 12.5 inhabitants per square km2". The same definition is used in the more recent Fifth Cohesion Report.

Yet, recent research has argued that the case of sparsity is more complex than a mere problem of low population density. Gloersen et al. (2006) object to the relevance of

2 From Geospecs project, Handbook of Territorial Diversity, 2010
3 http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/c_054/c_05420060304en00130044.pdf

'population density' as a pertinent stand-alone indicator for identifying the areas that fall under the labelling of sparsely populated areas. Indeed, their argument is that the main issue of sparsity relates to the lack of 'critical mass' available at the local level for the labour markets to function properly. In that respect, they propose the 'population potential' indicator, which is the total population available within a 50km radius, as a more relevant criterion for identifying sparsely populated areas across the European territory, the 50km radius representing a proxy for the daily commuting distance (calculation is based on grid cell and municipal population data). Gloersen et al. (2006), therefore, argue that "the appropriate method for delimitating sparsely populated areas is to use the proportion of each region characterized by population potentials below a certain threshold, rather than average population densities." Applying the same threshold of 12.5 inhabitants/km^2 show a more nuanced picture of where such sparsely populated areas can be found in Europe: in the Northern and Eastern parts of the Nordic countries, in the Highlands and Islands region of Scotland and in Central parts of North East Spain.

The Green Paper on Territorial Cohesion (2008), and the study produced by Monfort (2009), has shown that other regions of Europe have as well low levels of population density. These areas are especially found in Northern Scotland and Central Spain. Yet, national regional policies in the UK and Spain do not seem to make reference to them as 'sparsely populated areas'. In Scotland, sparsely populated areas are often called **remote rural**[4] territories, thus referring both to the difficulty to access them (remote) and the structure of the economy (rural), which are areas with a greater than 30 minute drive time to the nearest settlement with a population of 10,000 or more. The term **fragile areas**[5] is also used in policy-related analysis, which refers to the specific vulnerability of these territories, by combining demographic indicators (density and decline), socio-economic indicators (unemployment and income support) and accessibility indexes (access to services). The fragile areas characterisation already takes the stand that the challenges of sparsely populated areas are due to the synergies between several negative trends, and not only a single one.

In Spain, which is another country where sparsely populated areas have been identified, the equivalent term used by Regional Development Policy documents is **zonas desvitalizadas** (i.e. less favoured areas). Population density is used first in order to distinguish rural areas from urban areas, but also for distinguishing different sub-categories of rural areas. These less-favoured areas are described as rural areas to be revitalized are those with low population density, dominance of agricultural activities, low levels of income and considerable geographical isolation or difficulties of territorial integration. Although the former, implicitly refers to the notion of 'population potential' it does not do so explicitly. The latter approach also presupposes an integrated approach to the characterisation of sparsely populated areas. The issue of depopulation, if not explicitly used as a variable for identifying sparsely populated areas, are tightly connected to the general development paradigm: sparsely populated and depopulating areas are almost the same. Academic

4 See for instance http://www.scotland.gov.uk/Publications/2005/09/08115837/58393

5 See for instance http://www.scotland.go.vuk/Resource/Doc/320175/0102396.pdf as well as http://www.highland.gov.uk/NR/rdonlyres/267DCD97-B9B0-4BF3-BE1C-15D662186C48/0/fragile_paper.pdf

studies on sparsely populated areas in Spain have focused essentially on access to services (Escalona-Orcao and Díez-Cornago, 2007). Actually, in order to capture the differences in the sparsely populated regions across the EU, both Nordic as well as the Spanish and Scottish cases has been chosen for the selection of 15 regions to be further analysed in Task 2.

Having discussed some of the issues involved in defining territories with specific geographical features, the next section focuses on the theoretical rationale for supporting them.

3. The theoretical rationale for supporting regions with specific geographical features

There are two elements to the theoretical rationale for supporting regions with specific geographic features. First, there is the question of *why* to intervene in these territories. In other words, to what extent do the specificities justify an intervention logic that differs from the majority of other regions across the EU. Second, then, there is the question of *how* public interventions should be designed and implemented to intervene in the range of territories in question.

Insights from economic theory on public intervention are particularly relevant for the question about the reasons for intervening in the specific territories. Firstly, the concept of m*arket failure* is pertinent as it refers to situations in which the allocation of goods and services by a free market is considered as not efficient. Market failures are often associated with information, non-competitive markets, externalities or public goods. The existence of a market failure is often used as a justification for government intervention in a particular market (Arrow, 1969; Gravelle and Rees, 2004). Even if one assumes the presence of an open, competitive set of markets for goods and factor services, freedom of choice, and information availability, the existence of important externalities implies that markets alone cannot yield an efficient allocation of resources (not efficient being defined as situations that can be improved upon from the societal point-of-view), Krugman et al. (2006).

Government intervention is then needed to:

- provide public goods which would not otherwise be available, at least not at their social optimum level;
- compensate for missing markets;
- supplement the market which on its own cannot provide the right set of incentives for private decisions;

Other market failures exist that are more directly linked to the functioning of markets. For example, the existence of uncertainties, and in particular risk aversion, is another factor leading to sub-optimal private decisions: a high uncertainty level linked to a significant risk aversion severely limits the level of private investment. Reduction of uncertainty or greater risk-neutrality may be one objective of the public intervention. Given the specific geographic context of the regions, therefore, the issue of market failure is particular pertinent. For example, there are relatively higher levels of risk and uncertainty attached to investments in the three types of territory due to the range of climatic, natural and other features such as remoteness. Arguably, then, there is greater need for public intervention in these territories to overcome such market failures.

Secondly, the existence of externalities is another element of the rationale behind public interventions. Certain measures taken by one party will have effects on other parties without any compensation, these include:

- Positive externalities: others benefit from the effects for which the responsible party receives no compensation (*e.g.* spin-offs and outcomes investment in R&D) with the result that the market *under-provides* that good;
- Negative externalities: others suffer the effects for which the active parties do not pay compensation with the result that the market *over-provides* that good.

Another practical concept that may help determine the relevance of public investment is the *magnitude of the externality* at hand: the 'stronger' the externality the higher the benefits or spill-overs of public intervention or investment. The larger the external benefits the less likely it is that private agents will invest in the goods concerned and the more important will be the role of the Government. This raises two other questions: *When is investment spending best done by the government itself? When should public funds be used to support investment by the private sector?* A key motive may be that of ensuring that benefits in practice reach all possible users and are not concentrated on a limited number (guaranteeing the non-excludability of services).

In the context of the three types of territory, it is fair to say that the specific characteristics such as remoteness or small size contribute to a reduction of the range of positive externalities that can be created. In other words, private sector investments in the terriotories are likely to be relatively smaller in the first instance due to the higher levels of risk and hence the level positive externalities will be significantly smaller compared to other territories in which potential spillovers are likely to be higher.

Thirdly, another important point to bear in mind for the rationale to support the three types of territory is that fact they are home to relatively large amounts of 'natural' resources, which in turn are actually public goods that need to be protected and preserved for future generations. Public goods are characterised by two key properties:

- *non-rival* consumption: consumption by one individual does not detract from consumption by others;
- *non-excludability:* no-one can be excluded from the consumption of the good.

Public goods also differ according to the scope of their application:

- *local:* benefits are enjoyed only by those in the locality (air quality, landfills);
- *national:* benefits are enjoyed by the entire national economy or society;
- *global:* benefits extend to all countries, people, and generations (atmosphere, sea level, communicable diseases).

In many cases public goods exist not in their original forms but as social constructs, largely determined by policies and other collective human actions. In the context of the three territories, then, public goods (or quasi-public goods) could be defined as natural habitats, forests, rivers and particular cultural environments etc. Clearly, in the majority of cases,

such 'natural' public goods are available for consumption by all so it is vital that policies are made to promote the sustainable use of such goods.

Lastly, another element of the rationale for supporting the three types of territory relates to another area of economic theory – endogenous growth theory - which has become fashionable in recent years. As stated by Arrow (1962) endogenous growth is fuelled by learning-by-doing (incurring no cost at the firm-level). According to Stough (1998) "(…) learning leads to knowledge, leads to an endogenous and unique but continuously renewed skill base that in turn ensues or results in sustainability and growth". According to the concept of endogenous growth, as the "skill or knowledge base of a regional labour force is perpetually enhanced from within, it becomes a continuous internally created source of competitive advantage (or monopoly power) for a regional economic system" (Romer 1986, 1990; Lucas 1988, 1993).

The renewed focus on endogenous growth theory has led to a new paradigm in economic approaches to dealing with uneven regional development based on the so-called New Economic Geography (Porter, 1990; Krugman, 1991a), which highlights essentially the importance of clustering and agglomeration in helping to drive processes of economic development. Moreover, the role of institutions and governance is also emphasised as playing a key role in helping to shape strategies for economic development at the local and regional level. The importance of such processes for economic development has been highlighted in the work of Amin and Thrift (1994) on 'Institutional Thickness', as well as in the recent debate on the importance of 'organizational proximity' in economic geography (Boschma, 2005).

The New Economic Geography and endogenous growth approaches are particularly pertinent for the regions with specific geographical features because they are arguably, by definition, less able to benefit from agglomeration economies due to issues relating to size, remoteness and accessibility. In addition, the concept of clustering is something that is hard to develop in a territory that is sparsely populated. On the other hand, another key point to emphasise is that islands, mountainous regions and sparsely populated regions do have some inherent *advantages* which may offset (either partially or fully) their inherent *handicaps*. This will be discussed further in Section 4 below. Actually, the scenario is mixed as most EU regions with specific geographical features present both a mix of constraints or 'disadvantages' and assets or 'advantages', the relative combination and intensity of which can led them to perform better or less well. The Monfort (2009) paper clearly shows how the economic performances of the different categories of regions vary considerably both within and between each category. As a consequence, Montfort argues that a case by case approach is required to analyse the support required.

In this regard, building on the New Economic Geography and endogenous growth theory, debates about the importance of the need for a so-called 'place-based development strategy' have emerged, especially in the context of EU Regional Policy. This can be defined as:

> "A long-term strategy aimed at tackling persistent under-utilisation of potential and reducing persistent social exclusion in specific places through external interventions and multilevel governance" (Barca, 2009).

The is potentially very useful for the regions in question because the focus is on identifying strategic regional actions, promoting the supply of integrated goods and services, tailored to specific territorial contexts which in turn can trigger institutional changes. In addition, the potential value of a 'place-based' approach has also become increasingly recognised within rural development policy across the EU. The shift in policy has arguably led to a 'new rural paradigm' in which the focus is on investments rather than subsidies in rural areas as well as the integration and coherence of different sectoral policies to improve the effectiveness of public expenditure (OECD, 2006). The next section deals with the issue of territorial specificities in more detail for each of the three respective types of territory.

4. Exploring assets and obstacles in regions with specific geographical features

The consideration of the very existence of inherent assets or advantages in these regions recently led to a subtle but important shift of terminology and emphasis when considering the EU strategies for these regions and designing their policies. Whereas these regions were used to be called regions 'with structural handicaps', a terminology still included in the EU legal texts – such as in the Declaration 30 on island regions annexed to the Amsterdam Treaty, or in the Article 174 of the Treaty on the Functioning of the European Union (TFEU)[6] - there has been a slight shift to 'specific geographical features', as used in title for this Study. This shift, however, is a relatively recent one and can be traced back to the beginning of the present EU programming period, as illustrated by the Green Paper on Territorial Cohesion (2008), in which there is a point about (p. 4), "the growing awareness of the need to frame development strategies around the particular assets of territories" in a context where eligibility for support is principally determined at the regional level (this issue is discussed further in Section 6).

In this regard, a hypothesis is that both 'assets' and 'opportunities' along with 'handicaps' or 'obstacles' are actually interlinked. Thus, it is vital to examine such features holistically in order to reap both the benefits of certain 'assets' as well as mitigate or overcome some of the negative effects of these inherent features. For this reason, a SWOT[7] approach has been adopted in order to try to tease out the range of different features in the three territories. Moreover, it is important to recognise that there are not only differences in the characteristics themselves but also in the intensity and impact that they have territorially. Notably, there are *inherent* or *quasi-inherent* characteristics on which the population has little or no influence in the short to mid-term, and even *ad infinitum* in some cases. In the latter case, these could be described as *natural* constraints, as opposed to *structural* ones, since structural obstacles can be addressed and indeed, changed or reversed, in the longer run, provided appropriate policies are implemented, whereas natural characteristics, such as the geographical remoteness of an island, simply cannot. Whilst *a priori* the three geographic categories of regions do not necessarily share many common points at the geographical level per se, there are certainly commonalities and these in turn also lead to similar socio-economic outcomes and consequences.

The next sections explore in more detail the respective specific geographical features of three territories, examining each one in turn. This is followed by a fourth which provides a summary of the common issues between the three territory types.

6 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:115:0047:0199:EN:PDF
7 SWOT: Strengths, Weaknesses, Opportunities and Threats

4.1 Islands: analysis of assets and obstacles

An important feature of EU islands is that they typically exhibit a combination of different specific geographical features. To begin with, many islands are parts of clearly distinctive *archipelagos*. Islands which are part of archipelagos may face particular challenges which individual, relatively isolated islands do not. This situation is sometimes referred to as 'double insularity' which creates challenges that are not comparable to any situation on the mainland (e.g. Bardolet and Sheldon, 2008, argue that in archipelagos tourist product life cycles can be foreshortened). In addition, access to transport services is related not only to physical distance but also to complex trip schedules. For example (an extreme one indeed), the inhabitants of the small island of Lipsi (in the South Aegean Region of Dodecanese) face only a very limited number of services locally which severely constrain their options whenever they need to travel off the island. If for example the mayor of Lipsi wants to travel to Brussels for a meeting of European mayors the shortest route involves firstly a ferry within the archipelago to Kos, followed by a flight to Athens and further flight from Athens to Brussels. This involves more than a single day even if there is no interruption of the service (more often for the high speed boats) due to bad weather.

As discussed earlier in Section 2.1, an important distinction to make is that within the EU there are both 'small' as well as 'large' islands. Although both exhibit similar characteristics there is no single consensus theory of economic growth and development of the two types of island economies. In addition, it may well also be the case that *different* theories may apply for smaller islands as distinct from large islands. Concentrating first on *small* islands (i.e. the vast bulk of within-EU islands), an interesting feature of the growth theory literature is that most of the major *regional* growth theories, (as discussed in Section 3) are almost irrelevant for small islands (see Armstrong and Taylor, 2000, and McCann, 2001 for a detailed survey of the main theories of regional growth). Small islands typically lack both the minimum factor endowments (land, labour and capital) and also the critical mass of businesses and innovative capacity necessary for cumulative types of growth processes to develop.

On the other hand, while most growth theories have little relevance for small islands, *social capital* theory may well have some useful things to say for small islands where cohesive communities and close personal networking may lead to 'good' social capital. Secondly, it is possible that in particular for *craft industries* a limited amount of industrial clustering is possible. A good example of this is the jewellery and craft cluster on the Orkney Islands of Scotland, where a combination of highly distinctive culture and a buoyant tourism market have led to craft clustering (see Copus et al., 2000, on the jewellery cluster and McAulay and Fillis, 2005, on the wider Orkney craft industry sector).

In terms of inherent characteristics, remoteness is key issue for the majority of small EU islands. Many are located in the Mediterranean (especially in the Aegean and Ionian seas), in the northern Baltic and off the north and west coasts of the British Isles. They are therefore a very long distance from the core regions of the EU. Moreover, we need to be careful to distinguish between *remoteness* (geographical distance – often measured as great circle distance) and *accessibility* (i.e. presence or absence of direct transport links). It is perfectly possible for an island to be positioned close to the mainland, or even to a major

national capital city, and yet lack direct or regular transport links (Armstrong and Ballas, 2009). More elaboration on this will be given in the SWOT analysis (see Annex 1a and 1b).

In terms of large islands, interestingly, regional economic growth theory is extremely hazy indeed on thresholds of regional size (however it is measured – population, GDP etc) at which a particular theory becomes relevant. However, for big islands such Sicilia, Sardegna, Crete and the like, there is no doubt that one or more of the mainstream growth theories listed earlier can potentially become valid. It might be argued that there is little point in selecting any large islands whatsoever for detailed case study analysis, however, in practice there is great merit in selecting large islands as well as small islands as case studies for the following reasons:

- Some very large case study islands are needed if the degree to which 'islandness' SWOT characteristics permeate up the size distribution is to be identified (i.e. how big does an island have to be before it is no longer exhibiting 'island-ness' characteristics?).
- Virtually all of the big island regions in the EU are actually archipelagos. This is self-evidently the case for regions such as the Balearic Islands (three main islands) and Voreio Aigaio (five main islands). It is, however, also the case for large islands such as Sicilia and Sardegna. Sicilia, for example, comprises not only the main island but also no fewer than four groups of small offshore islands (Egadi Islands, Eolie Islands, Pelagie Islands and Pantellaria). Cases such as Sicilia offer outstanding opportunities for detailed analysis of the implications of being islands within an archipelago whilst also simultaneously examining the implications for smaller offshore islands in archipelagos where there is a dominant main island.
- Even where the main island is simply so large that any offshore islands are virtually insignificant (e.g. Corse, Sardegna) the fact that these islands are invariably also highly mountainous means that their populations and business communities are internally fragmented. The various sub-component elements of their economies are therefore likely to face conditions much more like smaller islands (in terms of relevant growth theories and SWOT features) than had they not been mountainous. In the case of the Scottish Highlands and Islands region we have not only various offshore island groups and mountainous fragmentation but also sparsely populated areas too.

Section 7 discusses in more detail the choice of the 15 regions for Task 2. However, the list contains both large islands – Sicilia, Corse and the Balearic Islands as well as the smaller islands of Borholm and Voreio Aigaio.

4.1.1 Island SWOT analysis of constraints and opportunities

As with the discussion of appropriate growth theories for islands in the previous section, the review of the literature for the SWOT analysis will begin by considering smaller islands first before turning to how the SWOT will need to be amended for the big island case studies. The following SWOT analysis is therefore derived from the literature review on small islands - the vast bulk of the islands literature. It is synthesized in Annex 1. These elements should be interpreted as a first attempt only and individual case studies may well produce results different from these broad generalisations.

Since the *traditional* (i.e. historical) research literature tended to highlight the *problems* faced by small islands, the focus will be first on *weaknesses* and only then on 'strengths, 'opportunities' and 'threats' within the SWOT framework.

Weaknesses

Transport (multidimensional) costs:

Transport costs unsurprisingly loom large in the islands literature. It seems self-evident to most people, on and off islands, that transport costs must be not only important but perhaps also the single most important weakness facing island economies. Immediately obvious are the additional *transhipment* costs all islands face, and issues such as disruption due to adverse weather are also intuitively obvious.

The literature, however, cautions us against such over-simple interpretations of the transport costs. To begin with, the challenges posed by insularity differ between freight and passenger transport, between the different modes of transport (maritime, air, road), and between on-island and off-island transport. Secondly, transport *costs* are multidimensional, i.e. not limited to 'monetary' costs: Baldacchino (2006a: pp 857) tellingly notes that, far from being solely a cost issue, "transport is often a triple problem of choice, time and price for islanders".

Taking freight transport first, it is possible to develop a more comprehensive classification of the different challenges posed for islands (Armstrong et al., 1993):

(a1) Transhipment costs, including time costs (at origin and destination ports or airports).

(a2) Line-haul costs, including time costs. These follow a 'taper principle' for most maritime and air transport routes and hence rise, but at a diminishing rate, with distance from the mainland.

(a3) Higher insurance, packaging and damage-in-transit costs. These are interrelated as each can be traded off against the other.

(a4) Uncertainty arising from bad weather and mechanical disruption.

(a5) Inability to fully exploit both vehicle and port/ airport economies of scale as a result of low freight densities.

(a6) Restricted choice. The small scale of import and export flows greatly reduces the number of origin and destination ports/airports direct accessibility (often only a single route). This not only restricts choice, but also gives rise to:

(a7) Monopoly or oligopoly in sea and air transport provision.

(a8) Asymmetric freight flows. Consumer products are almost all imported by small islands. They are, moreover, almost invariably higher bulk and lower value than the exports (since island businesses tend to specialise on high value/low bulk products to reduce export transport costs). The result is much higher import volumes than export volumes and hence with many vehicles or containers returning empty, transport costs are effectively doubled for small islands.

Some attempts at measuring the wider multidimensional costs related specifically to island accessibility have been made in the past, for example the Eurisles (1996, 2002) approach of measuring 'virtual distance' – applied to Greek islands by Spilanis et al. (2005). A popular

accessibility multi-modal index has been developed recently by ESPON (2006b), but it was not adapted to islands since it did include train, car and plane but not boats. By the same token, more recently still the EUROISLANDS project (ESPON, 2010) provides estimates of attractiveness based on three indexes respectively measuring direct, indirect and assets attractiveness[8].

An interesting, but under-researched issue is on how many of the various transport challenges are faced by *passenger* transport rather than freight transport (an exception being the EUROISLANDS project). Of the eight separate transport challenges listed above, no fewer than six apply not only to freight transport but also to passenger transport[9].

Diseconomies of scale and diseconomies of scope (including missed localisation and agglomeration economies):

The traditional literature places considerable emphasis on the problems posed by the small domestic market of most islands for producers (especially manufacturing establishments, but also for some service sectors such as tourism and retailing). The small domestic market is likely to prevent producers attaining minimum efficient scale (MES) (Kuznets, 1960; Selwyn, 1980; Bhaduri et al., 1982; Salmon, 1997; Streeten, 1993).

Nor is there solely a problem with plant or 'internal' scale economies. The lack of a critical mass of firms or people also makes it very difficult for islands to enjoy a full array of economies of scope, localisation economies (i.e. within a single sector) or agglomeration economies (i.e. across many sectors).

This has two clear implications:

- Economic activities which by nature are based on large economies of scale are more or less out of reach for small islands. It is thus no surprise that islands' GDP breakdown by activity typically exhibits a stronger share of services and a lesser share of industrial sectors when compared with bigger continental economies, since most service sectors are less dependent on scale economies (with some exceptions such as cruise tourism). The classically well developed service sectors in small islands (including small island states) are tourism and offshore finance in addition to non tradable services such as construction, commerce and the public (non commercial) sector.
- Since many island markets are not very large, in many cases private firms can only be attracted with subsidies and in order to preserve some form of competition the government must manage related markets through tenders which impose public services obligations in exchange for the subsidies granted. These managed markets are called 'quasi markets' in public economics.

[8] The Direct Attractiveness Index comprises parameters directly affected by insularity, such as accessibility and agglomeration economies (based on population size). The Indirect Attractiveness Index comprises parameters such as human capital quality, information society penetration, R&D activities, social capital components, governance quality and employment and career perspectives. Finally the Assets Attractiveness Index incorporates both natural and cultural assets (such as specific habitats and endemic species, monuments, historic sites, landscapes and seascapes).

[9] The ones which do not apply to passenger transport are packaging & damage-in-transit (a3) and asymmetric flows (a8).

Uncompetitive environment for businesses:

The inability to exploit economies of scale and scope does not just imply higher unit costs. Few producers means a weak competitive environment within the island in any given sector, one of the four key elements in Porter's 'diamond' of factors vital for successful industrial clustering (Porter, 1990). Hence not only will the firms which exist be too small to be efficient, but the small market is also likely to inhibit both cost-reducing competition and modern industrial clustering (Baldacchino and Fairbairn, 2006).

Resource constraints:

The small islands literature has traditionally highlighted the importance of severe resource limitations. Islands can, of course, be either rich in natural resources or poor, and hence in this sense resource endowment can be either strength or a weakness. However, when it comes to other factors of production, notably land, labour and capital, the balance of probabilities is one of limitations on small islands rather than abundance. Small population size places strict limits on the size of the overall local labour supply, and also on the different types of human capital available. The domestic labour supply can be enhanced by either temporary (e.g. seasonal) or permanent in-migration and many islands develop policies in this respect. So too can capital stocks through Foreign Direct Investment and the like (Read, 2008). However, strategies to encourage inflows come with important social and economic costs and hence there are strong limits on how far the in-migration route can be taken.

Vulnerability:

As a result of the previous weaknesses, especially the ones related to diseconomies of scale and scope combined with higher transport costs, most small island development strategies must by necessity be based on *niche market specialisation*, which are most often to be found in services markets.

In extreme cases an island can end up being dependent on a single exporting industry (e.g. fishing, tourism) and become a mono-activity economy. Niche market specialisation should not be assumed to be always bad – it underpins great prosperity for some islands, and might indeed be the sole development route for many. On the other hand, its undesirable implication is concentration leading to economic vulnerability.

Niche specialisation can make an island vulnerable to sudden shifts in the terms of trade for the key products, and other external factors to can have a sudden impact (e.g. changes in international treaties, political crises). The danger of vulnerability is made worse by the fact that islands are often over-dependent not only on the exports of a single or small number of products, but also because the number of key export markets is usually small, often the just the larger country of which they are part, or in the case of former colonised islands globally, the former metropolitan power (Bertram, 2003). Economic performance for islands can also be affected from exogenous shocks related to local climate or volcanic events, or from political disruption emanating from the mainland (Atkins et al., 2000; Briguglio, 1995; Briguglio and Galea, 2003).

Niche specialisation and vulnerability are distinctive features of small island economies. As in any other developing economy, economic success requires specialisation away from low valued added traditional sectors (typically in agriculture). However, in a small island

economy context, there can never be much diversification and this leads to a high export concentration (coupled with a high export/GDP ratio, being higher the smaller is the economy; Salmon, 1997).

Poor social capital:

As shall be shown later, social capital may on balance be stronger on islands rather than weak. This is because of tight communities, closer inter-personal networking and cultures of transparency and working cooperatively together in the face of adversity (e.g. among fishing communities). However, in some cases the smallness and familiarity may topple over into 'clientalism', particularly where small elites of business owners effectively take over the government of small islands and seek to use this power to preserve local monopoly powers, a situation described as a 'rent-seeking society' in the development economics literature. It can therefore also be a weakness.

Demography:

No doubt one of the greatest weakness facing islands in the EU is a demographic one – out-migration. This is true of many small islands around the world, but is a particular problem within the EU. The loss of migrants, invariably younger and more educated persons, can give rise to a serious double-problem of *falling* population and an *ageing* population. Where this occurs an island can go into a spiral of decline of worsening economic opportunities followed by further out-migration. In extreme cases islands can become wholly depopulated. In less extreme cases a sustainable, but very low level of economic activity is the result (Connell and King, 1999; King, 1999a, 1999b; Connell, 2007).

A whole series of further weaknesses can flow from substantial net out-migration. These include over-dependency on migrant *remittances* (Poirine, 1997, 2006), the attraction of retirees making the age pyramid even more imbalanced (Warnes and Patterson, 1998), and over development of *second-home ownership (*see Marjavarra, 2007, for an excellent case study of second home ownership on three Swedish islands close to Stockholm, and Hall and Müller, 2004; Coppock, 1977; Cross and Nutley, 1999; Gallent et al., 2005; and Mueller, 2002 for detailed analysis of the many problems of excessive second home ownership). It should be noted, however, that second-home ownership is not always the problem it is usually portrayed, as Paris' (2006) study of the phenomenon on the island of Arran shows. Moreover, there is also some evidence internationally of some islands developing economic niches as stepping stones for migrants seeking to move further into Europe (e.g. Lampedusa, Malta, Canarias; King, 1999a, 1999b; Bianchi, 2000).

Strengths

Natural resource endowments:

As noted earlier, islands can be either well endowed with natural resources or poorly endowed. This characteristic is therefore either strength or weakness.

In some cases, as with oil and mineral resources, the endowment can lead to considerable gains in income, wealth and employment (e.g. oil and the Shetland economy). Most EU islands, however, do not have such endowments. The most common endowments are therefore: (a) fish stocks and (b) natural environment resources attractive to tourists.

There has been some debate on whether small islands can suffer from 'Dutch disease' problems where a large and very valuable natural resource endowment is present. Within-EU islands do not have their own local currencies, a vital pre-requisite for the classical 'Dutch disease' case. However, one element of the classical 'Dutch disease' phenomenon does exist for some small islands – where one sector starves other sectors of scarce island factor resources. Nowak and Sahli (2007) and Holzner (2011), for example, argue that over-reliance on tourism can trigger factor scarcity elsewhere in the economy in a way that looks very like 'Dutch disease'.

The textbook solution to problems of 'Dutch disease' is to create some sort of heritage fund to mop up windfall gains, to be spent in the future when the resource runs out. Without doubt the best example of this in the EU is the Shetland Islands of Scotland where such funds have been established and are being used to protect the fishing and agriculture sectors in the face of an influx of oil revenues (Butler and Nelson, 1994; Brookfield et al., 2005; Coull, 2006).

Environmental endowments and cultural distinctiveness:

Let us take these together, even though they represent very distinctive sets of resource endowments. One of the greatest of all strengths of EU islands is their 'green' resource endowments. In particular, their very 'islandness' means they are likely to have an inherently attractive *marine* and *coastal* environment. This is much more than just good beaches, although island with good beach endowments have particularly beneficial strengths for tourism. The whole marine/coastline endowment, irrespective of the quality of beaches, has proved to be extremely attractive for tourists of all types, and above all for modern types of niche tourism and recreational activities (e.g. game fishing, 'cold water tourism', walking, bird watching etc).

To the 'green' environmental endowments must be added two further endowments of particular importance for islands: cultural and built environment distinctiveness (Baldacchino, 2005, 2007a). Most islands, almost by definition, have very distinctive, frequently unique, cultural endowments. They are based upon literally 'insular' communities and cultures, often but by no means only fishing and sea-faring based. The unique cultures are also frequently reflected in highly distinctive and attractive built environments not only in island towns and villages, but also across the rural landscape. These cultural and built environment endowments combine with green environment advantages in particular to stimulate tourism and recreational niche market opportunities.

***Export niche markets*:**

Perhaps the greatest strength of island economies if their ability to successfully exploit niche markets. Paradoxically, as stated earlier, this arises from the many weaknesses faced by islands, especially the small size of the domestic market for goods and services, their restricted factor supplies and higher transport costs they face. They have no choice but to specialise.

Islands can discover and exploit niche markets in potentially any sector. In practice, however, within-EU islands, unlike their sovereign global counterparts, cannot develop strong offshore finance centres. Only a few within-EU islands have significant financial services industries and most of those have developed them for historical or derogation

reasons (e.g. Åland Islands in maritime insurance for historical reasons). None are offshore finance centres – in Europe these all lay outside the EU (e.g. Channel Islands, Isle of Man).

Islands have traditionally exploited agriculture (e.g. seed potatoes on the Isle of Man) or fish and fish product niche exports. Some too have been able to develop limited manufacturing niches (especially craft products such as the Orkney jewellery cluster discussed earlier, or the craft ceramics and glassblowing industries on Bornholm, but see also evidence for industries such as brewing and 'bouquet beer' on islands; Baldacchino, 2010).

It is, however, in tourism *par excellence*, that within-EU islands have developed niche export markets, sometimes resembling mono-culture (King, 1993). In this respect they mirror the situation in many global island small states (McElroy, 2003). Indeed, as Monfort (2009, p. 6) has shown, in islands "the latter [i.e. rise in service sector employment] is much higher than in the rest of the EU, reflecting the importance of the tourism industry for island regions".

As the tourism industry has expanded, particularly in higher income regions of the world such as the EU, growing wealth has led to a rapid expansion not only in the amount of tourism and recreational activity but also in a huge new variety of types of specialist niche tourism markets. 'Conventional' (or 'mass') tourism, typically annual summer vacations of two weeks and more, remains the bedrock of the tourism sector on many EU islands, particularly 'sun and sand' tourism. 'Sun and sand' mass tourism remains the dominant market in regions such as Voreio Aegio, Corse and the Balearic Islands. Elsewhere, there has been some decline in the traditional mass tourism market over time (e.g. Scottish Highlands and Islands and Bornholm), and new tourist niches have had to be developed. Some of the fastest growth rates over time have occurred in shorter-period tourism (especially day-trip, weekend and one-week tourism), in cruise tourism (one of the fastest growing of all in recent years) and in the many highly specialist types of 'alternative' tourism (e.g. ecotourism, agric-tourism, cultural and heritage tourism, winter tourism, nautical tourism and other forms of sports tourism, wildlife tourism, game fishing and hunting tourism, religious tourism and many more – for different typologies of tourism niche markets see Pearce, 1995; Shaw and Williams, 2002; Cooper et al., 2008). Islands need to be careful not to move too quickly away from mass 'sun and sand' tourism towards new niches. A salutary example is the attempt in 1999 to introduce a tourist eco-tax on Mallorca (Balearic Islands) to provide funding to develop more 'green' tourism. This caused a significant loss in tourist flows and was quickly repealed. Mallorca continues to attract over 6 million 'sun and sand' tourists per annum.

Another growing group of niches attracting increasing attention and of particular interest for northern and western EU islands has been called 'cold water tourism' (to distinguish it from the more usual 'warm water tourism'; Baldacchino, 2006; Gössling and Hall, 2007). Good examples of 'cold water tourism' are arctic and Baltic islands cruise tourism (Thomson and Thomson, 2006). Iceland is by far the biggest beneficiary of this type of tourism with over 60,000 cruise tourist visitors per annum, but the northern Baltic also benefits from extensive island archipelago cruises. Cold water tourism is, however, about much more than cruising in cold water seas. Many new niches in 'extreme tourism' are now developing in and around cold water islands, particularly in Denmark, Sweden and Finland. These include activities such as ice fishing, ice hotels, snowboarding, sea kayaking and the

like. The Luleå archipelago in Sweden's Gulf of Bothnia has attracted research attention as a cold water tourism destination (Baldaccino, 2006c), but islands along the length of the Baltic and round into the North Atlantic have begun to develop the opportunities for this kind of tourism (e.g. ice fishing in Finland's Pernaja archipelago, and Smogen off Sweden's western coast; Aronsson, 1997; Viken, 2006).

Tourism and recreational activities are therefore likely to figure prominently in most of the island case study development strategies. In an island context they can be characterised as follows:

- They represent perhaps the single most important source of niche specialisation in EU islands. However, great variety can exist in both the variety and extent of dependence on tourism (see Spilanis et al., 2006 for a classification of different types of Greek island tourism).
- Economic impacts on income and employment are strongly beneficial, but are accompanied by adverse social effects (e.g. crime, seasonal and casual employment, low wages, and loss of control to off-island owners) and environmental degradation. Buhalis (1999), for example, identifies how Aegean island mass tourism has increased crime and anti-social behaviour, damaged local family and community structures, weakened agriculture by drawing off available labour supplies and led to major environmental degradation. These themes are echoed in the many studies of tourism on EU islands (e.g. see Andriotis, 2003; Apostoulopolos and Gayle, 2002; Buhalis and Fletcher, 1995; Briguglio et al., 1996; Coccossis, 2001; Gössling, 2003; Gössling and Hall, 2005; Ioannides et al., 2001; Lockhart and Drakakis-Smith, 1996; Peterson, 1990; Prurier et al., 1993 and Tsartas, 1992). The estimated costs of overcrowding in small island tourism economies, where they have been calculated, can be very high (Santana-Jiménez and Hernández, 2011).
- The sector can be a very volatile one, thus contributing to island vulnerability.
- The rapid emergence (and subsequent decline) of new tourism niches (e.g. ecotourism, game fishing, extreme sea sports tourism; Baldacchino, 2006c) favours islands with good social capital and flexible governance systems. Even islands with strong mass tourism have found it profitable to target new niches (Spilanis and Vayanni, 2003).
- Not all tourism niches are available for small islands. In particular, cruise tourism exhibits very large economies of scale and requires very heavy infrastructure investment which puts it beyond the reach of most islands.

Strong social capital:

As noted earlier, social capital may be strength as well as a potential weakness for islands because of their strong communities and cultures of cooperative working (Richards, 1982). Sadly, only a limited amount of work has been done on the social capital of islands and much more research needs to be done. On balance social capital on islands is probably a strength rather than a weakness for most islands (Baldacchino, 2005), as Boissevian's study of Bremes in Norway and Malta has shown (Boissevain, 1974). Some have also argued that good governance plus islands as places for innovative and creative governance changes in a globalising world has resulted from the generally 'good' social capital exhibited by islands (Anckar and Anckar, 1995; Warrington and Milne 2007). For the purposes of this study,

however, the jury is still out. Social capital can be either a strength or weakness depending on the individual case (see below for an example).

Three Scottish islands groups of Orkney, Shetland and the Western Isles

A good example of how strong social capital, allied with local government boundaries focused on the islands themselves and not shared with the mainland, comes from these three Scottish islands groups. In 1975, two separate tiers of local government were established in Scotland (as elsewhere in the UK in that year): regional and local councils, each with separate sets of powers. However, as a special concession the three main islands groups of Orkney, Shetland and the Western Isles were granted separate islands councils of their own which effectively combined the powers of both regional and local councils (a precursor to what are now Unitary Authorities in the UK). This was done despite the fact that the three islands have populations greatly below those of the other regional authorities in Scotland. In 1994 the two tier distinction was abolished and replaced by 32 Unitary Council Areas in Scotland, with again the three island groups retaining their separate status. Nevertheless, between 1975 and 1994 it can be seen that the three islands councils were stronger than mainland local councils and, moreover, their island interests were (and still are) not diluted by being merged with mainland littoral areas within their local government areas. This is not the case for many other Scottish islands (e.g. Skye and other Inner Hebridean islands).

Just how valuable a degree of local autonomy with boundaries confined just to the islands themselves can be is borne out by the case of the Shetland Islands. The discovery of offshore oil there in the 1970s gave the local islands council the opportunity to negotiate directly with the oil companies concerning the development of the Sullom Voe oil terminal on the islands (under the auspices of the Zetland County Council Act of 1974 and subsequent negotiations). Despite essentially not having any powers other than those available to other Scottish mainland regional/local councils, the Shetlands Island Council was able to strike deals which led to the establishment of revenue flows from the oil industry which were used to establish heritage funds directly or indirectly administered by the council (i.e. the Shetland Reserve Fund and the Shetland Charitable Trust). The former alone has reserves of £216m. The money is partly held as a reserve for future contingencies and also for investment in new and expanded business and charitable activities.

The Shetland negotiations with the oil industry, and their subsequent relationships have come to be seen by many as an exemplar case of how even a quite weak island government, so long as it acts wholly with island interests at heart, can both work positively with external resource companies, but also use the resulting funds to establish a sensible balance between the resource (oil) sector and other more traditional sectors (especially fishing, fish farming and agriculture in the case of the Shetland Islands (Coull, 2006; Butler and Nelson, 1994; Brookfield et al., 2005).

In summary, whilst the SWOT analysis (see Annex 1a) for small islands is applicable, in large part, to large islands there are apparent differences (see Annex 1b). The principal differences between a small island SWOT and a large island SWOT are as follows:

(a) Looking across the full set of strengths, weaknesses, opportunities and threats set out in Annex 1b the overwhelming balance of probabilities is that the influence of the distinctive 'island-ness' characteristics will weaken as the size of the island increases. A key feature of any very large island case study should therefore be to analyse closely exactly in what ways 'islandness' influences continue to be felt, and how policy has had to adapt to these.

(b) **Strengths.** The key differences between small and large islands here are:

- Large islands may be much less export-led/niche market economies and more likely to have some industrial clusters and be more diversified. The balance struck between these two very different growth strategies will be a key part of the large island case studies.
- Large islands will have extra strengths in the form of greater potential for within-island sourcing of inputs, lower business costs as a result of ability to exploit economies of scale in transport and utilities (though still higher than the 'mainland').
- Large islands may be able to attract large economies of scale sectors (e.g. cruise tourism).

(c) **Weaknesses.** The key differences here are:

- Three of the multidimensional transport costs facing islands are eased for big islands.
- Big islands are likely to be less vulnerable, in several different ways, from small islands.
- If, as is very likely, the case study big islands are also mountainous, internal fragmentation of the geography may well mean that differences from the small island case are nowhere near as extensive as one might expect.

(d) **Opportunities.** These are likely to be very similar for both the small and large islands.

(e) **Threats.** The main differences here are:

- Big islands are generally likely to be less vulnerable to climatic change impacts on the economy.
- Big islands are less likely to be hit by future higher education, low R&D and out-migration trends.
- Big islands can cope better with environmental degradation and loss of cultural distinctiveness, especially if also geographically large.

Having outlined the complex range of issues surrounding assets and obstacles for islands, the next section focuses on mountain regions.

4.2 Mountains: analysis of assets and obstacles

Having previous acknowledged the diversity of mountainous regions across the EU, the aim here is to explore the range of specific geographic features that are dominant in different areas across the EU.

Population density:
The scenario is a complex one and it is difficult to generalise, however, there are several common demographic traits. Firstly, Europe's mountainous regions tend to often have lower average population densities, certainly lower than non-mountainous areas, mainly because of their unsuitability for human habitation stemming for extreme climates, topography or a combination of both. The exceptions to this are Hungary, Slovenia and Poland.

Secondly, the massifs with the lowest population densities (<25 inhabitants/km^2) are the French Pyrenees, certain Spanish ranges, the Nordic countries, Scotland, and Ireland. The highest densities (>125 inhabitants/km^2) are found in most of the mountains of Germany, the Basque Country and Catalunya in Spain, Sicilia, and Mittelland, the Sudetes, northern Slovakia, and northern Slovenia (Nordregio, 2004). The influence of large urban centres is a key factor in influencing population dynamics and there are also considerable differences between different massifs (EEA Report, 2010).

Thirdly, between 1991 and 2001, the general trend in population change and population density was either stable or positive in north and central Europe, with some exceptions. In Eastern Europe, depopulation is the norm. In the Mediterranean region, no clear pattern can be discerned. For nearly all countries, depopulation was higher in mountain than in lowland areas (the exceptions to this were Germany and the UK (England and Wales). In particular, between 1991 and 2001, depopulation rates were highest in Corse, Sicilia, and the central Apennines of Italy. Conversely, during the same period, certain mountain areas actually had overall relative population growth, for example, in much of the French Alps, the mountains of Murcia (Spain), Slovenia, western Austria, and parts of Germany and Italy (Nordregio, 2004).[10]

Accessibility and peripherality:
Clearly, accessibility is an important, multi-faceted issue for all mountainous regions, which encompasses a range of factors, including distance to/from main markets, provision of public services, infrastructure development including transport and ICT. This is an overall issue of peripherality – geographic, socio-economic and political - although the extent and intensity of the different factors does vary according to geographical location in terms of distance, altitude etc. For example, in terms of distance to large cities in order to access a range of key services, the EU mountainous areas that are especially disadvantaged are the Highlands of Scotland, Corse, Sardegna, Crete and other Greek islands. Of course, peripherality does not just mean access to services and markets, but also importantly to centres of political power, which include regional centres as well as capital cities, where a significant number of public policies that impact upon mountainous areas are formulated.

This concept of political peripherality, therefore, is useful in order to focus on the issue of governance and how different mountainous areas operate and function in contrasting regional and national political systems. For example, such problems of political peripherality may be counter-balanced by strong regional government, (e.g., in Bavaria, northern Italy, Spain, and Scotland).

The existence of sufficient transport networks is a key element in helping to reduce the effects of peripherality. However, once again, the scenario of transport provision is a mixed one within and between EU mountainous regions; for example the Alps, Apennines southern Bavaria are relatively well served with motorways, railways as well as being closer to important transit routes. Of course, a key constraint is clearly the additional cost and complexity of building, as well as maintaining, major road, rail and other infrastructure projects (such as airports) in mountainous areas with the range of topographic and other constraints. Similarly, access to public services such as health and education is, in part, restricted because of the lack of transport networks as well as the fact that settlements in mountainous areas can be widely dispersed across large geographic areas, which means that people have to travel greater distances. This point is further exacerbated for access to higher education institutions because of the relative lack in mountainous regions, which is also a critical constraint to development. In addition, the density of major hospitals (with >300 beds) in mountain areas is significantly lower than in lowland areas (Nordregio, 2004). In short, accessibility is closely correlated to infrastructure provision, which is strongest where population density is highest in mountainous areas. Of course, once again this results in a mixed scenario with some regions benefiting more than others across the EU.

Source of environmental assets:

Mountainous regions are home to a range of environmental assets which are crucial to the European ecosystem. These can be grouped into four main areas:

1) As 'water towers' supplying much of the continent's water, especially in summer, and as sources of hydroelectric power. For example, mountainous are home to over a quarter of existing power stations in Europe (EEA Report, 2010);
2) As centres of diversity, both biological and cultural. For example, in terms of protected areas designated as Natura 2000 sites, 43 per cent is in mountain areas, compared to 29 per cent for the EU as a whole. These sites cover 14 per cent of the mountain area of the EU (Nordregio, 2004);
3) for providing opportunities for recreation and tourism, based on natural attributes and cultural heritage;
4) Because of their sensitivity to environmental change, as manifest in the melting of glaciers. Indeed, the wealth of environmental assets also means that mountainous regions are at risk from climate change as well as other natural hazards and risks, such as flooding or indeed droughts (EEA Report, 2010).

Evidence suggests that the climate of Europe's mountains has changed over the past century, with temperatures and snowlines both rising whilst precipitation has tended to vary regionally (EEA Report, 2010). Of course, there is considerable discussion about the suitability (or not) of the data available to examine climate change, which makes it difficult for policy makers to draw specific conclusions about future trends. Nevertheless, given their geographical and environmental importance, it is likely that any future changes in climate will have a potentially more marked effect on villages and communities in mountainous regions which in turn will require specific public policies to respond to such changes.

4.2.1 Mountainous region SWOT analysis of constraints and opportunities

Mountainous regions in Europe are important for several reasons. Firstly, mountains cover a significant proportion of both territory and population; indeed it is interesting to note that a number of the newest entrants to the EU are mountainous, such as Slovenia, Slovakia, Bulgaria and Romania. Secondly, mountains not only provide valuable natural resources, for example, agriculture, mining and forestry but are also key elements in the overall European ecosystem providing freshwater, biodiversity, resilience to natural climate changes as well cultural heritage. Nonetheless, increasingly these different elements are faced with a range of threats and challenges from global climate changes, which affect mountainous regions, to different extents across Europe. Thirdly, although mountainous regions are diverse in terms of their geographic, demographic and socio-economic structures, they do have certain characteristics that are common to the majority of them, such as relatively low accessibility, higher costs of infrastructure development and increased socio-economic peripherality. For this reason, the following SWOT analysis of mountainous regions (see Annex 2) is a useful tool as it allows some light to be shed onto the respective points of comparison, similarity and differences within this category.

In terms of *strengths*, rich natural assets, vital tourist activities and strong economic performance in the agricultural sector characterise mountainous regions. Indeed, it is precisely the link between the natural environment, in its different forms, and their socio-economic 'uses' that constitutes the main income source for the majority of mountainous regions. For example, opportunities derive from tourism activities, the development of hydroelectric power stations or the sustainable exploitation of forestry and agriculture. The example below from the Centro region of Portugal, a region chosen in the 15 for Task 2 (see Section 7), is a good example of how natural assets can be developed and harnessed, using public funds, to create an innovative tourism project.

Interregional collaboration in Tourism and Culture, Centro (PT)

Covilha, positioned in the mountain region of Beira (Portugal), was specialised in wool production since the 12th century. The industrial crisis led the university, town and museum to initiate the ERDF pilot project 'Arquotex' in order to establish European wide information network on Old Worlds textile industry heritage. The museum provided a documentation centre and four partner regions which also have textile traditions (Catalonia/ Spain, Provence-Alpes-Côte d' Azur/France, the region of Cork in Ireland and the West Midlands/United Kingdom) joined the Portuguese mountain town to realise this project. In cooperation they hope to build up sort of 'European textile tour'.

Source: http://atelier.laine.pagesperso-orange.fr/resourcesenglish.htm

However, it is precisely the link between 'nature' and 'economy' that is also the source of *weaknesses* for mountainous regions. Indeed, what might be construed as strengths in certain regions can actually be a weakness in others, depending on the geographical intensity of the particular feature or the ways in which public policy and funding is used e.g. local development schemes to promote tourism. For example, in certain regions, upland terrains can create significant barriers to growth stemming from problematic issues such as restrictions to access and additional costs related to their geographic position (such as low accessibility being one of the main sources of difficulties). In addition, progress in terms of investment in human capital is often limited according to the geographic position, which is exacerbated because some mountainous areas are also, in fact, classified as sparsely populated regions. Out-migration, especially of younger people, is a related threat.

The other point is that such weaknesses, without adequate intervention, can become possible 'threats'. Moreover, sometimes certain assets can also pose *a threat*, which is most definitely the case with the (over-)economic reliance on one activity such as tourism, which for a many mountainous regions is a vital source of income. However, tourism may be affected by 'external' factors such as climate change, which may lead to slight changes in seasonal weather patterns or indeed natural risks, such as flooding or avalanches, which can significantly impact upon the tourist potential of certain areas. The issue of natural hazards and risk seems to be a perennial problem for certain regions, with several examples in recent years of real catastrophes including forest fires in Greece, flooding in the Czech Republic and northern England. All of which contrive to create social and economic havoc for the regions affected. The example below is a southern German case to prevent natural risks and hazard through the sharing of information between different stakeholders.

Successful Risk Management in the Alps (DE)

The Alpenforschungsinstitut (Alpine Research Institute, AFI) in Garmisch-Partenkirchen promotes on behalf of the Bavarian State Ministry of the Environment and Public Health acknowledged key issues to facilitate the successful management of natural risks. In that regard, the documentation offers a helpful tool to communal decision makers in mountainous regions.

Firstly, following the invitation of the Ministry alpine experts initiated recommendations for an integrated risk management Ministry in 2009. Afterwards the outcomes were tested in two case studies. As the last stage, in 2010 Immenstadt (Bavarian community) tested the new online tool 'RiskPlan' in cooperation with action force and other local stakeholders.

This tool was developed by Swiss engineers and arranges local as well as regional data to pragmatic decision guidance. According to AFI, 'the results of all three steps assist risk managers in facing the effects of climate change and encourage successful risk communication'. They are part of the project AdaptAlp (supported by the EU-Alpine Space Programme) in cooperation with the Bavarian State Ministry of the Environment and Public Health (scheduled until June 2011).

Sources:http://www.alpenforschung.de/newsdetail-37,http://www.riskplan.admin.ch./ http://www.adaptalp.org/

Fourthly, mountainous regions do have *opportunities* in areas where progress can be made such as the preservation of human capital. However, the key point is that turning 'handicaps' or weakness into 'opportunities' is not a trivial task. It requires well-balanced public policies that help to foster a variety of sources of economic growth through investment in different sectors of the local or regional economy as well as in education and public services. Furthermore, as is discussed in subsequent sections, 'place-based strategies' aimed at increasing the attractiveness for investment in activities such as tourism whilst at the same preserving the natural environment are the most important policy objectives for mountainous areas. The example below from the region of Steiermark another region selected for Task 2) is particularly useful because it shows how regional innovation can be nurtured, with the use of ERDF, in a mountainous region that is relatively distant from Europe's economic core.

Fostering Innovation in Steiemark (AT)

The project 'Technofit Pro' presents cooperation in the region of Steiermark between three universities and the largest R&D institution. These three partners agreed on supporting small medium sized enterprises (SMEs) in regard to advice, mentoring and technology transfer. The reommendations are aimed to support SMEs which usually are not involved in innovative processes in order to encourage them to use the full potential of all support provision. The aim of this project was to broaden the regional innovation basis and 'to address the specific needs of SMEs established in peripheral regions of Steiermark with no or little experience in the field of R&D'.

The approach has been titled as *active knowledge transfer* and was used since the 90s in single regions. However, due to the cooperation between the *city Graz and the region Steiermark* linked to the EU programme 'Regional Competitiveness Steiermark 2007-2013' it is now possible to expand it to Steiermark as a whole.

In 2010, the project was announced as a 'best practice' in "Investing in our regions - 150 examples of projects co-funded by European Regional Policy". The cooperation still exists as 'Arge Science Fit' and carries on to support SMEs.

Source: http://www.sciencefit.at/, http://www.arge-technofit.tugraz.at/

Opportunities also exist in terms of governance and the development of specific strategies to promote socio-economic development in mountainous regions. An excellent example is the following from the Rhône-Alpes region in France, which is also a region chosen for further analysis in Task 2:

Rhône-Alpes: a mountainous region with a specific strategic plan

With 65% of its territory classified in a mountainous zone and 73% classified in a massif zone shared between three massifs (Jura, Alpes and Massif Central), Rhône-Alpes belongs without doubt to the mountainous region category.

In this regard, the region decided to create a specific regional development policy through the adoption of a "Regional Strategy for the mountains" in December 2006. Considering the important diversity of the massifs, the strategy aims at promoting partnerships and cooperation between massifs and border countries on this thematic.

The strategy is declined around three strategic axes: i) open up the mountains to the external and reinforce solidarities within the massif, ii) make it a territory of excellence for sustainable activities, iii) preserve and valorize resources of inhabited territories. It is composed of 13 strategic orientations and is declined into 70 actions.

Source: http://www.massif-central.datar.gouv.fr/index.php?rubrique=645

Finally, it is important to point out that around half of the EU's the mountainous regions are also border areas. This fact presents both a threat and opportunity in itself. On the one hand, it may hinder the effectiveness of public policy as border regions are often remote from central government influence. On the other hand, it may increase the possible ways of developing joint solutions such as cross-border cooperation, the sharing of best-practices, innovation flows, education, training and other flows of intangible assets (Pretterhofer-Moertlbauer, 1999). In this regard mountainous regions, need to be analysed on a case-by-case basis in order to find out the main territorial and socio-economic issues, such as being a border and mountainous region.

4.3 Sparsely populated regions: analysis of assets and obstacles

There is not a unified conceptual framework to which the issue of economic development in sparsely populated context can relate to. However, as discussed in Section 3, economic development in such areas clearly challenges the development paradigm proposed by the New Economic Geography (Krugman, 1991a), which highlights essentially the importance of agglomeration forces in the economic development processes. In the academic and policy discourse, development in sparsely populated areas also confronts the emphasis given on cluster approaches (Porter, 1990), aiming at reinforcing the interactions between economic agents located in close proximity. In that respect, Gloersen et al. (2006) claim that it is reasonable to infer that the benefits of agglomeration and central location define what is missing from the economic environment of both sparsely populated and peripheral regions, explaining the academic gap in the conceptual framework related to economic development in sparsely populated settings.

As a matter of consequence, several main disadvantages associated with sparsity or peripherality can be brought to the forefront (based on Gloersen et al., 2006):

- *Increased cost of material inputs, due to higher transport costs*: in traditional economic geography, transport costs are seen as the main cost related to industrial location (e.g. Weber 1909). The main assumption is that being located far away from either material inputs or customers engenders a higher transport costs for a firm. However, more recent literature softens this claim as businesses in remote areas do not seem to have higher transport related costs (Chisholm, 1995)
- *Absence of agglomerative advantage*: New Economic Geography theorists (Krugman, 1994) conceive economic development as a cumulative process, assuming that larger business environments tend to grow faster.

- *Attenuated possibility for creating 'innovative milieu'*: the importance of interactions between co-localized firms has been seen as an important foundation for several strand of research dealing with 'Industrial Districts', 'innovative milieu', 'regional innovation systems' and 'learning regions'. Firms located in sparsely populated areas are not enough numerous and close in order to develop such interactions. Yet, effective business networking is believed to act as a possible substitute to the lack of agglomerative advantages (Johansson and Quigley, 2004).

To this framework, one could add two main conceptual debates that may help framing the potential economic development processes in sparsely populated areas:

- *Small-scale economies*: the small size of the local economies in sparsely populated areas implies that the economic actors need to be more open and seek interactions with actors located outside the region. This reference to 'openness' as a main feature of small-size economies stems from the literature on small island states (Read, 2004). And as Gloersen points out, the relative isolation of local economies in sparsely populated areas likens to a certain extent the isolated position of islands;
- Social capital: the lack of physical proximity between the regional actors is overweighed by a strengthened sense of trust and proximity based on shared institutions. This fits closely with the ideas about 'institutional thickness' as discussed in Section 3 (Amin and Thrift (1994); importance of 'organizational proximity' in economic geography, Boschma, 2005).

In terms of their dominant characteristics, as is further examined in Annex 3, sparsely populated regions have a combination of both assets and obstacles. Several key points emerge. For example, they do not only suffer from population scarcity related to their geographical position but also from the resulting economic vulnerability related to their high dependency and exposure on volatile market forces. This condition is often fostered or the result of relatively scarce transport infrastructure, the higher costs of (basic) services including access to ICT. As is the case with the other types of territory, the threats for sparsely populated areas often mirrors simultaneously their opportunities i.e both are interlinked. For example, the balance of gender and age distribution can be both a threat as well as an opportunity as out migration of young people is a threat leading to an ageing population whilst the lower population densities can also actually attract inwardly mobile groups in search of higher quality environments and a 'closeness' to nature as well as 'footloose' business people and potential investors. Similarly, although basic services are relatively more costly to provide, targeted investments in ICT can have a positive effect on the expansion of markets as well as giving a helping hand to other sectors such as tourism and the science and innovation sector.

4.3.1 Sparsely populated region SWOT analysis of constraints and opportunities

The SWOT table[11] (see Annex 3) and the analysis of the development trends and opportunities of Sparsely Populated Areas, both in the Nordic countries and in the rest of Europe (Scotland, Central Spain), show that there is not a 'mechanical' relationship between sparsity and (1) the level of development of the regions and (2) the model of development that resulted historically from the territorial structure. The economic strength of Nordic sparsely populated areas, with an economy based on traditional resource-demanding activities, such as mining, forestry and fishing makes those territories more vulnerable to fluctuations in external demand.

The recent Fifth Cohesion Report synthesizes the main challenges of sparsely populated areas in the following terms: The small size of their populations generally implies that public service provision in these areas is more expensive. Several of the regions are experimenting with e-services to provide good access to services efficiently. Hence, the issue of access to services is the prime challenge connected to sparsity from the European policymaking point of view.

The two main dimensions of sparsely populated areas highlighted in the Nordic context are (1) the peripheral location in national and European terms and the long distance between settlements, and (2) the demographic dynamics that shape and impact the territory. The link between the two is often investigated through the lens of *commuting* or *access to services* (See for instance Sandow, 2008; Sandow & Westin, 2010; Lundmark, 2006). Clearly, a perceived obstacle is about the capacity of these territories to be part of wider networks. This issue is treated by studies both in terms of 'hard', transport network infrastructure (Solvang & Hakam, 2010) as well as softer innovation and knowledge networks (Virkkala, 2007).

In the national policymaking arena, territorial development strategies aiming at connecting the various local labour-markets and thus providing a greater pool of jobs and a better match between supply and demand in terms of employment are sought. In Sweden, the concept of regional enlargement (*regionförstoring*) is seen as the main strategy ensuring the sustainable development of its sparsely populated areas. The recently built Bothnia railway (*Botniabanan*) between the cities of Umeå and Örnsköldsvik for instance creates a larger regional labour-market in the North of Sweden.

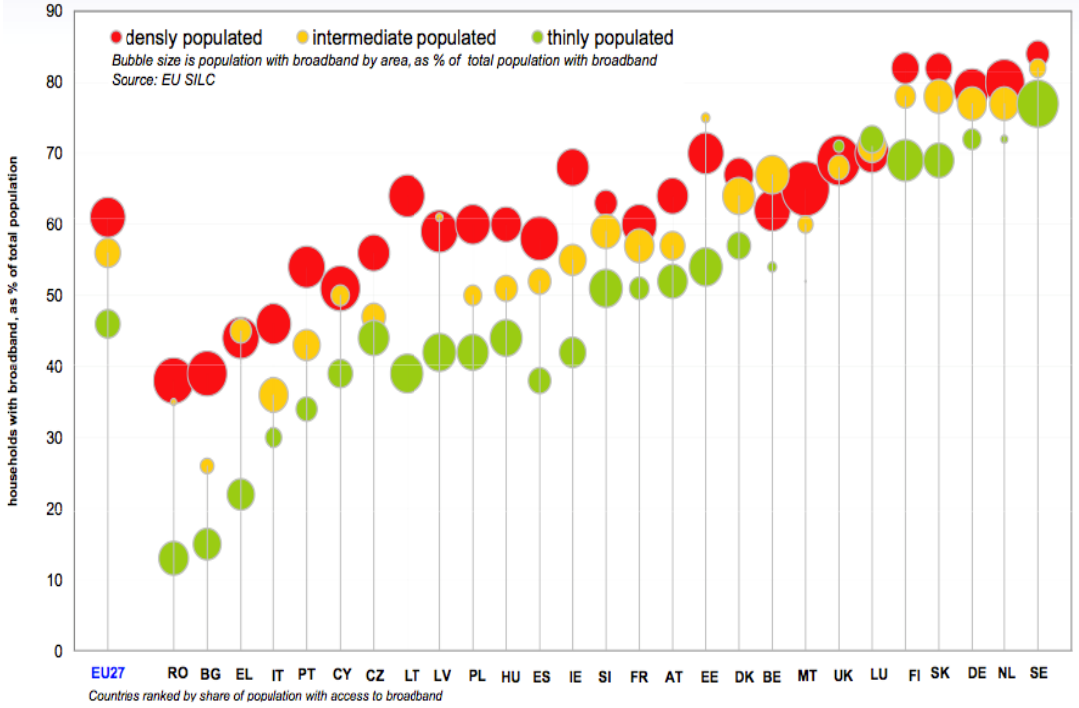
In Spain, the importance of access to services, and especially to health care services, has been the main focus of researchers in regional studies when investigating the specificity of sparsely populated areas (Escalona-Orcao and Díez-Cornago, 2007).

Since their emergence in the 1990s, the development of ICT has been a cornerstone to national regional policy in the Nordic countries as a way to foster the integration of all

[11] Based on results of the Nordregio study (2008) 'Development perspectives for Northern Sparsely Populated Areas: Opportunities and Challenges'.

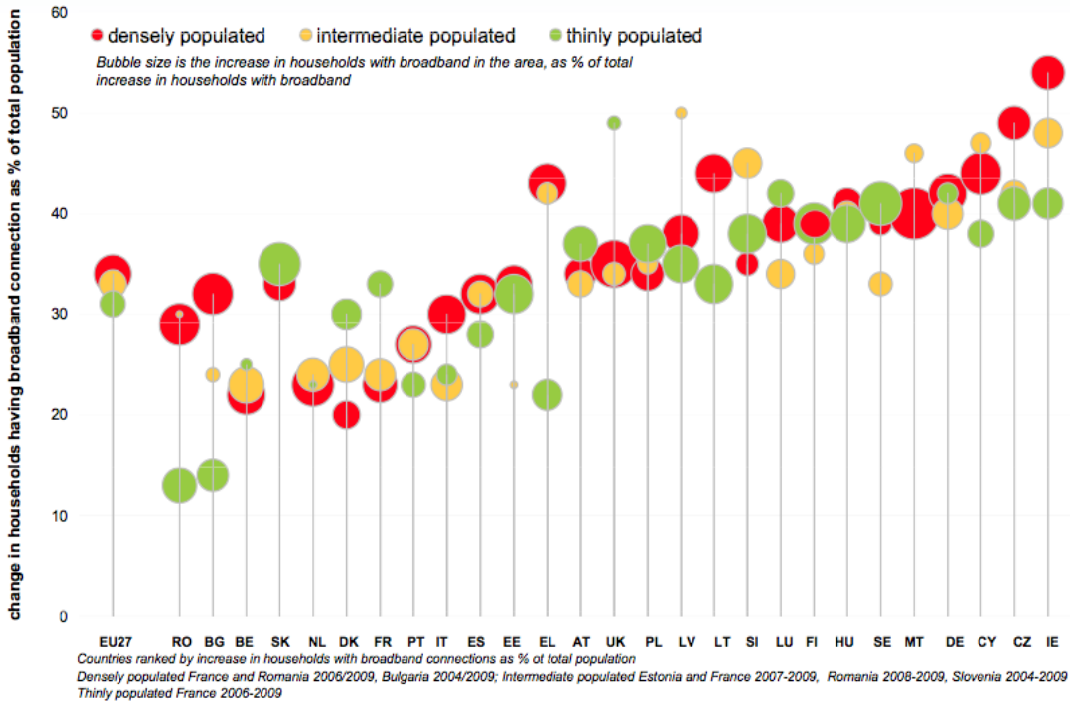
regions, including the most peripheral and sparsely populated ones, in the global economy. For instance, for the attribution of licenses to operators for the exploitation of mobile networks, almost the entire population (98% - 99%) is required to be covered. In practice, it means that the operators need to develop ICT networks even in the parts of the country where it would be less profitable otherwise (extensive physical networks needed and few customers). As a result, and as shown in the Fifth Cohesion report, despite the extensive coverage of sparsely populated areas in Sweden and Finland, the two countries belong to the countries that have the best overall coverage (despite sparsity) and the least differences between densely populated areas and sparsely populated areas (see Figure 1).

Figure 1: Households with broadband by degree of urbanization, 2008



Source: Eurostat

Figure 2: Increase in household broadband connections, 2005-2009



Source: Eurostat

Yet, since their accession to the European Union in 1995, Finland and Sweden have been able to use the funding available to their regions, and especially the ones belonging to the Objective 6, through European Programs, as a complement to this focus of national regional policy. Consequently, many projects undertaken in the sparsely populated areas of Finland and Sweden targeted the development of ICT infrastructure (See part 4 for more concrete examples).

Long distances to the main European market are a limiting factor for developing exchanges with economic actors located in the sparsely populated areas. These long distances imply a higher cost of transport for the transportation of goods and reduce the possibility for the actors in the sparsely populated areas to meet face-to-face with other potential business partners, for instance for seeking capital or fostering knowledge exchanges.

The next section focuses more specifically on the comparisons and differences between the three regions in terms of the respective SWOT analyses (as shown in Annexes 1-3) for the three types of territory.

4.4 The common elements in the SWOTs for the three territories

The aim of the SWOT analyses is to provide an insight into some of the key issues in terms of *strengths, weaknesses, opportunities* and *threats* in order to compare and contrast the cross-cutting themes in each of the three territories. Of course, they do have limitations because, in some instances, *strengths* observed in one region in relation to a specific characteristic (e.g. small community leading to a good social capital), can become exactly the opposite, i.e. a weakness, in another region (e.g. small community leading to strong clientelism and collusion). In other words, care has to be taken in making generalisations about the commonalities and differences in terms of obstacles and opportunities for growth. Nevertheless, the SWOTs do reveal some interesting points of comparison, which are further elaborated upon below.

Strengths

Examination of the three sets of SWOT analyses and the literature review findings of Sections 4.1, 4.2 and 4.3 shows that a number of key common strengths but also differences can be identified:

- Significant numbers of regions have strong 'natural resources' assets. This is particularly the case for the mountainous regions and sparsely populated regions, and less so for the islands, but some islands do have mineral and oil resources and all have fish stocks of some kind;
- All three categories enjoy strong 'green' environment endowments, although these are not *universally* to be found (e.g. environmental degradation in some islands, mountain areas and sparsely populated areas;
- All three categories have highly distinctive cultural and social identities. This has proved to be important for tourism and recreational activities. Indeed, tourism, both of the more traditional types but also new niches is of growing importance in all three categories.
- Community cohesion and good social capital are stressed as being important in all three categories.
- Quality of life makes all three categories attractive to certain types of in-migrants, even though all three face overall adverse demographic trends.
- There are, however, some major differences in terms of 'strengths'. Islands, for example, are much more likely to have to rely on higher value added niche specialization (in agriculture and manufacturing as well as within tourism), whereas for mountain regions and the sparsely populated region natural resource endowments and traditional sectors such as agriculture and forestry, mining and manufacturing play a bigger role. The latter have better IT networks and air accessibility than mountain regions and islands as well as abundant 'green field' land and industrial sites advantages in contrast to most islands and mountain regions.

Weaknesses

- Problems of transport and accessibility are common to all three categories. Not all of the challenges are common to all three categories. Transport costs, for example, are higher in all three cases and this impinges on business competitiveness and residents' cost of living, but challenges such as damage in transit, vulnerability to weather, asymmetric freight flows etc are not communalities;
- Small local markets and the range of challenges posed by these, including not only problems in exploiting scale and scope economies of various types, but also localization economies, agglomeration economies and difficulties of developing modern industrial clusters and regional innovation systems are widespread in all three categories;
- Difficulties in accessing and the cost of utilities, public services and infrastructure is a common feature in all three categories. The precise problems vary, but the theme is found across all three sets of regions;

- Economic vulnerability to exogenous shocks is also a common feature in all three sets of regions. The ecosystems too are highly vulnerable to damage;
- Outmigration, particularly of younger persons and an ageing population dominate the weaknesses associated with demography in all three sets of regions;
- Poor access to Universities is a shared weakness (with some exceptions);
- Main differences are: (a) islands, especially smaller ones, are more likely to develop clientalism and poor social capital; (b) mountainous regions are more likely to lie along borders than the other two types; (c) most sparsely populated regions are particularly remote from core EU markets and Universities.

Opportunities

- Key development opportunities stressed for all three types of region are (a) openness to globalization and the opportunities presented by innovation and ICT developments; (b) tourism and recreational activities, although the precise types vary from one type of region to another; (c) attractiveness to economically dynamic 'lifestyle' migrants; (d) further possibilities of natural resources exploitation and preservation;
- The main differences are (a) the opportunities from border locations, especially for mountains; (b) biological and cultural diversity advantages in islands and mountain regions; (c) renewable energy 'laboratory' opportunities in some islands.

Threats

- All three types of region face major climate change problems, although these differ (e.g. threats to wilderness areas in sparsely populated regions, sea level change in islands and extreme weather threats in the mountain regions);
- All three sets of regions face major demographic threats, with out-migration of young persons and ageing populations being a common theme. Once again, however, this threat does differ somewhat (e.g. out-migration of females in the sparsely populated regions);
- Dilution of cultural distinctiveness is a common threat, particularly where there is substantial in-migration or second home ownership;
- Continued poor access to Universities and specialist education is also a common threat;
- A major issue in all three regions is the thinning out of population in peripheral areas/smaller islands and increased population concentration within regions.

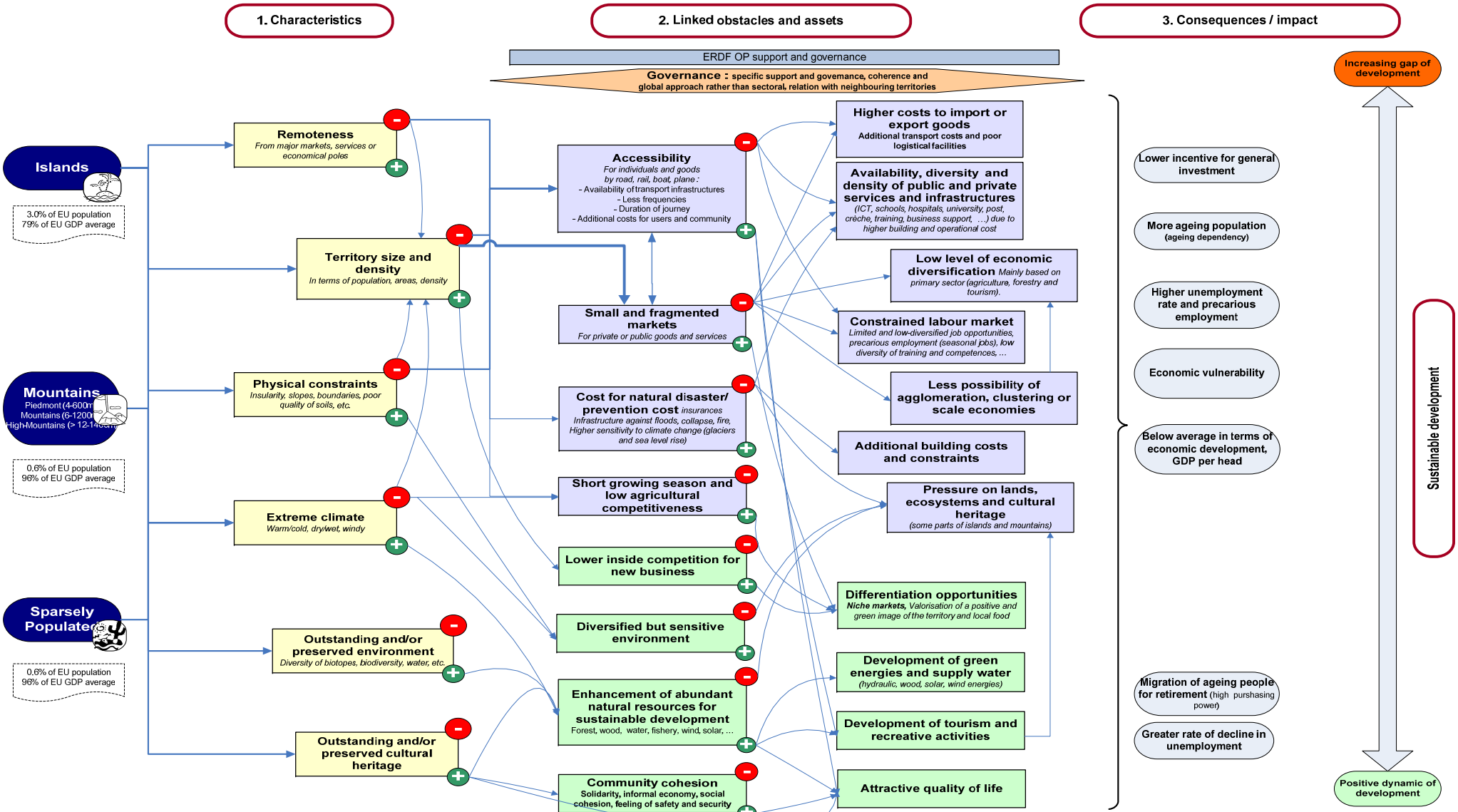
The next section provides some overall conclusions about the analysis of assets and obstacles for the three territories.

4.5 Conclusions

As shown in Figure 2 below, the analytical framework developed for this Study aims to try to capture some of the common issues that are prevalent in the three types of regions, as well as the range of intensities and impacts that emerge. It shows that the three geographical categories of regions concerned do present some inherent characteristics such as *remoteness*, *small size*, *extreme climate*, and so on that remain mostly out of reach of human action – this is why we call them *inherent*. In other words, they are "natural" (i.e. mostly given by nature) and cannot be altered in the long run – in this sense they are different from structural features that can be changed through time thanks to an appropriate long term policy. At best, policies can accommodate natural constraints, not change them. These inherent characteristics lead, then, to specific sets of constraints and assets for development, depending on their specific intensity and mix and on the quality of the governance and policy-making setting of the territory in question, and from there to (relatively bad or good) economic performance. There is a causal chain, from inherent characteristics to the individual set of constraints and opportunities shaped by regional development policies, then to social and economic performance.

Building on this framework, some of the main common characteristics of three territories are discussed in more detail below.

Figure 3: The dynamics of economies with specific geographical features



1) Remoteness

Remoteness is most often considered as geographical distance, as was illustrated in some of the island examples. Indeed, as for size, what matters most is *economic distance*, not the simple geographical one, since the two are not perfectly correlated. The costs of accessibility to and from a place depend at least on two elements: its nature and its peculiar location. As for the former, insularity implies some discontinuity (and no alternative choice) of transport mode, with some strong implications in terms of multidimensional transport costs. As for the latter, location matters a lot since the unit price of transport will depend much more on the possibilities to reap (or not) economies of scale and competition benefits, both of which requires large volumes to materialize. This is logically unexpected in the most remote and smallest territories, especially island ones and above all archipelagos which might end up with very expensive costs of accessibility (except for a few exceptional cases.

As discussed, islands can be very remote or very accessible depending on which insular territory we are talking about, including its size - distinguishing between big, medium and small islands (ESPON, 2011) and taking into account archipelago specific related issues of 'double insularity'. Even allowing for methodological limitations, accessibility indexes developed through the ESPON Atlas (2006) or EURISLES (2002) projects clearly show that islands, as a group, have relatively lower accessibility compared to the European average. The same holds true for some mountainous areas and probably for some sparsely populated ones, but to a much lesser extent in general. Some of the mountainous or sparsely populated areas are even rather central in their Member State territory (e.g. Castilla La Mancha), and/or very close to some big agglomerations (e.g. Rhone Alpes with respect to Lyon, the third largest city in France with a population of 475.000 inhabitants in 2010). Both of these regions are selected for further analysis in Task 2.

2) Territory size and density

The regions vary greatly in their size (however this is measured). This is particularly the case for the islands, many of which are very small indeed, but this is also an issue for the mountain regions and sparsely populated regions. A vitally important implication of this for the case studies is that the distinctive characteristics of what may be termed 'islandness', 'mountainous' and 'sparseness of population' are likely to become diluted as population size/density and economic size increase. At some point (or threshold) the regions will become so large and/or have a population density significant enough that they exhibit virtually identical socio-economic traits to any other type of EU region. In other words, it is difficult to generalize on this issue and a case by case basis needs to be applied. For some of the territories, small size (or very small size) of the local economy is an inherent characteristic, but not for all concerned territories.

3) Given geophysical constraints, resource endowments and environment

Geophysical features here are defined in the broadest sense to include physical constraints such as slopes, boundaries, poor quality of soils, etc. as well as climatatic conditions (warm/cold, wet/dry, windy, etc). Again, in different ways, each of the three territories is faced with specific inherent characteristics which can strongly impact (or not) the economic development process. As discussed, some territories have limited resource

endowments whereas others have an abundance of natural resources. The ways in which such resources are used is also a key point of comparison.

4) Outstanding and/or preserved environment and cultural heritage

As a result of their relative isolation or reduced accessibility, the territories most often have developed some specific community 'feelings' with their own communication 'codes' and sense of belonging/togetherness. For example, 'islandness' is often considered at the sociological/psychological level as bringing some sense of greater independence of mind and behaviour among its people (Selwyn, 1980). This also can holds true for community leaving in harsh conditions (e.g. cold climate) or having harsh working conditions linked to the nature of their particular work (e.g. fishermen). As illustrated in the related section on islands, these specific 'sociologics' can imply both advantages (e.g. a strong community cohesion) but also weaknesses (propensity to collusion or even corruption, lesser reactivity in face of the need for change, etc.). Clearly, these effects evolve through time, with some specific migration dynamics and/or some human interventions with regard to infrastructure. For example building a bridge from the mainland to an island can not only lead to the fact that the area will not be anymore considered as an island with regard to the EU definition (as discussed in Section 2.1), but that the sense of being 'islanders' may progressively diminish.

5) The combination of characteristics: what cumulative effects?

All three sets of regions have found their weaknesses to have been exacerbated by the fact that they have inherently internally fragmented populations, urban centres and business communities. These are inherently caused by different physical geographies – archipelagos for the islands, topography within mountains (creating 'island valleys') and sheer space (distance) between communities within the sparsely populated areas. Moreover, in all three sets of regions the coincidence of other geographical characteristics tends to exacerbate the extent of internal fragmentation. Hence if an island is also mountainous the degree of internal fragmentation is exacerbated. Similar effects occur when any pair or all three of the characteristics exist in any one region. It is for this reason that a range of examples (see Section 7) has been chosen to be analysed further in Task 2 to try to capture the diversity of features across the EU.

It is clear from the above analysis of each inherent characteristic taken individually that the intensity of each characteristic varies strongly both within and between each of the three territories with specific geographical features. As a consequence, if for a given area, we consider a single characteristic (eg: size of the local market), we may end up with the observation that this area is closer to a 'standard' situation. However, the reverse might be true for another area. In addition, what also matters, is the mix (or combination) of characteristics in each specific territorial case. Indeed, having a small local market size may not be a constraint if the concerned territory is well connected to neighboring markets or the EU as a whole. Conversely, if the concerned area has both a small local market and faces high accessibility costs then benefitting from an enlarged market may not be an option. For each of the territories with specific geographical features, therefore, it is hard to assess both the intensity of each characteristic as well as the combination of characteristics,

which makes it very difficult to draw ex-ante conclusions about the existence (or not) of a specific socio-economic setting in any given territory.

Having discussed in some detail the different assets and obstacles in the three types of territory, the next section turns to a discussion of the socio-economic impact of these as well as the related policy approaches that have been adopted to try to overcome them.

5. Socio-economic performance and territorial policy approaches

This section focuses upon the socio-economic performances of the three types of region, exploring the ways in which the range of specific geographic features play a role in driving patterns of regional development. Indeed, evidence suggests that what unites all three territories is the enormous *variation* within each category in terms of socio-economic performance. It is vital, therefore, to explore the role of territorial policy approaches in order to analyse the extent to which governance and institutions matter in helping to shape the very different socio-economic trajectories. The key point is that economic performance of any particular region with specific geographical features will vary with the quality of its policy-making, including the policies aimed at mitigating specific constraints, specialisation policies, and so on. In that regard these economies do not differ from any other economies: after all, authorities of any economy shape their own destiny. The very fact that economic performances may vary, over any given period of time, according to both the particular set of specific geographical circumstances and the quality of the policies that have been implemented helps to understand why the regions under the scope of this Study present such divergent socio-economic scenarios.

Each of the three territories will be discussed in turn to explore their respective socio-economic performance as well as the range of territorial policy approaches adopted in each.

5.1 The case of Islands

5.1.1 Socio-economic performance

Previous EU commissioned studies on islands tended to focus on aspects of the socio-economic development of islands which represent problems rather than advantages (e.g. Planistat Europe, 2003). The very limited empirical evidence available for EU islands also seems at first sight to support the 'islands as problems' viewpoint. The Planistat Europe (2003) study, for example, estimated for the island regions of EU15 for which data were available that GDP (at PPP) was only 72% of the EU average, while a more recent estimate suggested that 93% of EU islanders live within regions with a GDP per capita below that of the EU average (Eurisles Website, 2006). More recently still, Monfort (2009, pg 6) calculates that "in 2006 the average GDP for the island regions was about 79 per cent of the EU average (…) and the unemployment rate was (…) 11.6 per cent in 2007 compared to the EU average of 7.5 per cent". However, enormous care must be taken in interpreting such broad averages and in analysing the fragmented and frankly rather low quality available data.

Islands occupy the full range of per capita income values. The statistical evidence of huge variation and lack of systematic low performance is overwhelming (e.g. Armstrong and Read 2000, 2003a, 2003b, 2004; Baldacchino, 2006b; Bertram and Karagedikli, 2004; Poot, 2004; Bertram and Poirine, 2007). The average unemployment of EU island regions stands

at 11.6% in 2007 compared to 7.5% for the EU 27 (EU, 2009, p.8), with some large dispersion of rates (e.g. Sicilia, Sardegna, Kerkyra, Zakynthos, the Dodecanese and Corse performing worse, while Åland and generally the Nordic islands perform better.

5.1.2 Territorial policy approaches

In terms of territorial policy approaches in islands, it is apparent that the role of national government policy is the key player in terms of funding and strategies for economic development. At the EU level there is no specific policy for islands. In fact, there are three main types of governance arrangements:

(a) Own local governments with unusual degrees of political and economic autonomy, which is applicable to a very small group of EU islands. One example is the Åland Islands of Finland[12];

(b) Own local government whose boundaries are coterminous with the island or island group (i.e. no overlap of the local government boundary with the mainland littoral). Even though such local governments (e.g. Balearic Islands of Spain, Corse) have similar powers to those on the 'mainland', their ability to focus what policy levers they have solely on island issues without being distracted by 'mainland' concerns means that they can develop distinctive highly-focused policies and also more effectively use their lobby power with both the national government and the EU;

(c) Local government areas shared with the mainland littoral. Here the island communities must compete on virtually all policy matters with the mainland littoral parts of the local government area. Mainland and island communities often have very different concerns and issues and hence very different needs for government action.

It is very rarely the case in the EU that one finds national government islands policy handled separately via a specific government ministry or through some quasi-autonomous organisation (e.g. a development agency specifically for the islands). Much more typical is the case where islands benefit from special treatment but within a pre-existing system of government ministries.

This overlap of islands with non-island areas in governance arrangements can occur either for elected regional/local governments or for cases of quasi-autonomous governance arrangements. Take, for example, the Danish island of Bornholm. This has separate *county* and *municipal* status prior to 2007. In 2007, however, it became integrated into *Region Hovedstaden* (the Copenhagen Capital Region), thus sharing powers with the littoral region at this particular level of government. However, at the next tier down (municipalities or *kommunes*), Bornholm was allowed to retain its separate single municipality status during the 2007 reforms, reforms which saw many of the smaller municipalities being amalgamated. Hence Bornholm has powers shared with the littoral (the capital city no less!) at the regional level, but has been given the privileged status of an insular municipality government (responsible for business services, business development policies and cross-municipal business cooperation). Moreover, the 2007 reforms also saw the establishment of six regional growth forums (*regionale vækstfora*), whose powers include the important regional development strategy formulation. Once again Bornholm was given the special

[12] Note that the Åland (NUTS2) region (FI 20) has not been selected among the 15 regions for Task 2.

privilege of a separate regional growth forum of its own, despite having a population of only 42,000 persons, by far the smallest of the six forums, the others being North Jutland, Zealand, Central Denmark, South Denmark and the Copenhagen Capital Region (minus Bornholm) (see B7 Baltic Islands Network, 2007; Billing, 2010; Danish Enterprise and Construction Authority website).

Below are three contrasting examples of governance types for islands:

Islands and government administrative boundaries:

The case of Greece

Greece has always, because of its many islands, provided examples of almost all possible permutations involving arrangements between island and littoral regions. The Kallikratis reforms which came in on 1 January 2011 have shown just how diverse the arrangements can be. Under the new administrative system Greece has been divided into 13 *peripheries*, sub-divided into 325 *municipalities* in total. The 54 *prefectures* which pre-dated the new system have been retained but only as sub-units of the peripheries. Voreio Aegio is an archipelagic region with its capital at Mytilene on Lesvos. The five sub-units are Chios, Ikaria, Lemnos, Lesvos and Samos. Even though this new periphery region is the smallest of all 13 new peripheries (with a population of just over 200,000 persons), the islands have not been merged with any Greek mainland areas. By contrast, the new *periphery* of Thessalia, with its inland capital at Larissa is responsible for the four Sporades Islands (one of five sub-peripheries) of Alonissos, Skiathos, Skopelos and Skyros. These islands represent only a small part of a very large, mainland-dominated administrative unit. Kriti, on the other hand, is an island which is a *periphery* in its own right.

The case of Spain

The Spanish case is a much simpler case in which the main island groups (Canarias and Balearic Islands) are not merged in with mainland littoral regions. This is almost certainly a reflection of the particular geography of Spanish islands, forming two discrete groups well away from the mainland, a situation very different to Greece. The 17 Spanish regional *autonomous communities* contain the Canarias and Balearic Islands as separate entities. Moreover, the Balearic Islands are privileged in that they are one of only seven *autonomous communities* which are also a single *province* (there being 50 *provinces* in total). The Balearic Islands as a whole therefore have considerable control over island affairs unrestricted by littoral concerns. However, since the capital is at Palma on Mallorca, the same cannot be said for the individual islands within the Balearic Islands since these are divided into 67 *municipalities* at the next tier down.

The case of Scotland

An EU example of shared governance in a quasi-autonomous body is in Scotland. There have been regional development agencies in Scotland since the mid-1970s in the form of the then Scottish Development Agency (now Scottish Enterprise) and the Highlands and Islands Development Board (now Highlands and Islands Enterprise). The Scottish case is particularly interesting as at first sight it would appear that we have a development agency with a specific islands remit, but as Highlands and Islands Enterprise (HIE) name makes clear the islands remit is shared with mainland mountainous (and sparsely populated) areas. Once again we see that islands are rarely treated by national governments in isolation from other regions. Nor is the HIE in Scotland the only part of the governance system engaged in assisting the islands - most of the other Scottish government ministries in Edinburgh are also engaged in policies targeted at the islands. In EU countries typically the most heavily engaged ministries tend to be agriculture (and/or rural affairs), fisheries, tourism, environment and transport. Interestingly, unlike the case for mountain region policies there are no countries in the EU having significant numbers of offshore islands where island policies are absent.

Different EU member states have developed very different policies designed to assist their island economies and communities. It is possible to classify national policies into three main types:

1) **Reactive strategies.** These are policies designed to compensate for handicaps and structural difficulties. These types of strategies are to be found amongst the very earliest islands policies in the EU, especially those aimed at offsetting higher transport costs and transport disruption. In most countries island reactive policies have gone well beyond just addressing the transport problems and now typically seek to offset higher costs of many different types, and for both businesses and individuals.

   By far the most visible and widely practiced use of national policies to offset higher island costs has been applied to transport costs (both freight and passenger transport, and also on both sea and air transport). These types of transport subsidies have attracted derogations from both EU and national competition policy rules, particularly those associated with *lifeline services* and public service obligations – PSOs - Bennett, 2006; Chlomoudis et al., 2007).

Subsidised sea transport: the Scottish islands and Bornholm

Subsidised sea ferry routes have long been a feature of both UK and (since the creation of the Scottish Parliament) Scottish Government policy towards the many Scottish islands. These subsidies have continued unabated for many decades. Currently, the Scottish Government heavily subsidises the three main shipping lines serving the Scottish Islands (Calmac Ferries, Northline Ferries and the Shetland Line). Indeed, it is the main owner for the first two of these. Subsidies are available principally for operating costs, but route and port infrastructure is also heavily subsidised on Scottish island routes. Various methods have been used in the past to develop logical methods for arriving at appropriate subsidies. In many member states attempts are made to estimate how much higher the costs are compared to mainland land transport and the difference is then partially or wholly covered by a subsidy. Scotland is currently piloting a newer and more sophisticated method of estimating the appropriate level for fare and tariff subsidies - the road equivalent tariff (RET) method. This seeks to estimate the subsidy such that sea routes do not cost passengers and freight users more than an equivalent distance road journey would cost (McQuaid et al., 2006). In many EU member states, however, the subsidies are simply based on historical precedent. Detailed research on Scottish ferry subsidies suggests that such subsidies can have a major impact on economic development for island economies, both on the passenger side (e.g. improved tourism flows) and via freight transport (Begg, 1996; Greig and McQuaid, 2005; Scottish Office Industry Department, 1993).

The Danish island of Bornholm is a particularly interesting case of subsidisation of sea ferry routes for two reasons: The central position of Bornholm in the southern Baltic sea has meant that it has developed ferry links not only with Copenhagen and Køge (in the Copenhagen Capital Region of which it is part region), but also with Germany, Poland, and most important of all with Ystad in southern Sweden. This has raised issues of whether subsidies should be given for links with countries other than the same nation state. In the case of Bornholm the ferries are a mixture of subsidised 'non'-commercial' (lifeline) routes and commercial routes. Interestingly, the Ystad route is subsidised even though the connection is with Sweden. This practice is not universal in the EU (e.g. Corse ferries from France are subsidised by the French government but not those from Italy). Bornholm is one of only a few cases in the EU where subsidised ferries (together with improved transport technology – fast catamaran services) have offered the opportunity to allow off-island daily commuting to take up better employment opportunities. The fast ferry service to Ystad has allowed residents to exploit the Øresund Bridge from Sweden to Denmark as a combined sea and bridge commuter run into Copenhagen (Dahlström et al., 2006). Direct ferry commuting from Bornholm to Copenhagen is not possible.

2) **Proactive strategies.** Unlike the case for mountain regions, proactive strategies for islands tend not to seek for *diversification* of the economy, except for the very largest islands such as Sardegna. Most small islands, as we have seen, by necessity must rely on niche specialisation. However, in most EU states the proactive strategies seek to *stimulate new economic activities*, with a view to replacing traditional niche sectors (e.g. agriculture, mass tourism) as they die out. A good example of this is

the help given for aquaculture on many EU islands, a new sector designed to replace declining sea fishing.

3) **Sustainability strategies**. As with mountain regions, many islands now have special policies designed to focus on environmental sustainability. This is partly to protect the 'green' environment assets so vital for the key tourism and recreational sectors (beaches, landscape etc), but also because the environment now offers excellent opportunities for new industries (e.g. tidal and wind power).

   Starting from a very low base, sustainable development strategies have emerged in the last 15 years or so as a major category for island economies. There are three main reasons for this: (a) islands have both valuable 'green' resource endowment but also highly fragile and vulnerable environments and hence sustainability is vital for their long term prosperity, (b) islands by virtue of their bounded and insular nature make excellent laboratories for seeking environmental sustainability, and (c) there has been a growing realisation that sustainability policies can of themselves generate entirely new economic niches.

Denmark's 'Renewable Energy Island': The Case of Samsø

The island of Samsø is a small island of some 114 km^2 and 4,300 persons lying in the Kattegat some 15 km off the coast of Jutland. Since 1997 it has emerged as one of the most famous cases of an EU island which is seeking to reduce its net carbon emissions to zero. In 1997 the island won a Danish national government competition to become Denmark's first 'Renewable Energy Island'. The model of energy sustainability controlled and run by the local community but supported by government subsidy and advisory services has become one which is now being widely copied elsewhere. In the period since 1997 Samsø has developed a renewable energy strategy based on a combination of wind-powered turbines (some 30 now built) combined with a strong policy of energy conservation and the building of three new straw and woodchip burning district heating systems. Bioenergy and rapeseed oil sources for vehicles and offsetting transport diesel and oil burning with wind powered generation have been applied. Samsø is also interesting in that whilst agriculture (vegetables and fruit for export) and tourism remain the two dominant niche sectors, a small but growing niche of 'energy tourism' has been pioneered by the Samsø Energy Academy (2007) located on the island and attracting mainly energy industry professionals.

Similarly, the EUROISLANDS project (ESPON, 2010) proposes a strategy aiming to turn handicaps into opportunities, with reference to islands' specificities and to the guidelines of the 2020 European strategy. Priorities are the following proposed ones:

- **Quality islands:** In spite of the consequences of size and insularity (small market, low accessibility), there are various examples where islands' products based on local resources and know-how are competitive. This success can be extended to services' production such as tourism, instead of consuming the islands' limited resources for a

mass activity. New knowledge, innovation and skilled human resources are prerequisite for the success of such a strategy that has to be niche 'oriented'.

- **Green islands:** is a priority linked with the limited natural resources of islands; the strategy lies on reduced use of resources such as water, land, energy and a recycling of waste produced both by enterprises and the local population.
- **Equal opportunities islands:** is a priority linked with the goal for equal access of all European citizens to Services of General (Economic) Interest (SGI) -which are a *sine qua non* condition for quality of life and competitive entrepreneurship- as expressed initially in the European Spatial Development Perspective. The relevance of SGI for economic, social and territorial cohesion is underlined in the Lisbon Treaty (Article 14 and Protocol 26).

There are good practices of islands having implemented actions coming under the above priorities; their success has until now localized and isolated results with limited impact on the overall state of the islands. The most important reasons seem to be:

- Such actions usually address indirect attractiveness issues only partially and therefore seem to create necessary but not sufficient conditions to change existing trends;
- An overall strategy supported with specific policies, national or European is missing.

5.2 The case of Mountainous regions

5.2.1 Socio-economic performance

The main finding that emerges from the literature is that mountainous regions vary considerably both in terms of their economic structure and overall performance (Price, 2010; Dax, 2008). This point is best summarised by the quote below taken from the Fourth Report on Economic and Social Cohesion (2007, p. 57):

> "Although most mountain areas share common features such as sensitive ecosystems, pressure from human settlement and problems of accessibility, they are in fact extremely diverse in terms of socio economic trends and economic performance. For example, population remained relatively stable in northern and central Europe, while it decreased in Eastern Europe. In the south, some areas experienced growth, others decline. Similarly, traditional activities have tended to decline in some areas, while tourism has expanded, promoting economic development and providing job opportunities to the younger generation which was no longer obliged to leave in search of employment. In other mountain areas, however, productivity and employment have remained low and have shown little tendency in recent years to catch up".

Furthermore, Montfort's (2009) work clearly echoes this point stating that, in 2006 GDP per capita for mountainous regions was at 77 per cent of the EU27 average, which was a decrease of just over 1 per cent since 2000 (see Table 2). In addition, as Table 1 indicates, compared to islands and sparsely populated areas, mountainous regions actually underperformed as their relative GDP per head index declined by 1.3 percentage points

between 2000 and 2006. Moreover, the difference in economic performance, measured by GDP per head, within mountainous regions is really quite marked. For example, it ranges from 25 per cent in Kardzhali in Bulgaria to Heidelberg in Germany which has a figure of 78 per cent above the EU's average. A similar picture emerges for unemployment with considerable disparities ranging from a figure of 21.6 per cent in Ilm-Kreis (in the eastern German region of Thüringen) to 2.2 per cent in Belluno (located in the northern Italian region of Veneto) (Montfort, 2009).

Table 2: Statistics comparing production and growth in regions with specific geographic features

Region	Production and growth	
	GDP p.c. (PPS), index EU-27 = 100	Change in GDP/per capita index, (percentage points)
	2006	**2000-2006**
Mountainous	77.0	-1.3
Islands	79.2	3.3
Sparsely populated	96.0	0.5
EU-27	**100.0**	**-**

Source: Eurostat, adapted from Montfort (2009)

Of course, to some extent, this scenario of contrasting socio-economic performance is perhaps not surprising given the range of territorial and geographical realities that exist across the EU and, as discussed, the related problems of developing common definitions for mountainous regions (Price, 2003; Price at al., 2004; Treves et al., 2002). Nevertheless, the aim here is to try to explore the similarities in economic structure and performance both within and between mountainous regions in order to tease out some of the main socio-economic drivers.

In terms of similarities then, on average, unemployment rates in mountainous areas are higher than the EU27 average; in 2007, the figure was 8.2 per cent compared to an EU average of 7.5 per cent (see Table 3). The scenario is complex however, as relative levels of unemployment are high in the most peripheral areas; conversely, the lowest rates are generally in massifs near or including major urban industrial centres (EEA Report, 2010). Several other points are worthy of note here.

Firstly, EU mountainous regions tend to have a higher share of employment in the primary (including mining) and agricultural (including forestry) sector (in 2004, 14 per cent of labour force compared to 7 per cent at the EU level) compared to other areas (see Table 2). The mountainous areas with a dominant primary industry profile are concentrated in southern Europe (e.g., Bulgaria, Spain, French Pyrenees and Massif Central, Corse, Sardegna, Sicilia and southern Italy) and Poland (EEA Report, 2010).

Secondly, employment in the industrial sector (in 2004, 30 per cent compared to 25 per cent at the EU level) is also relatively higher. Again, this varies between mountainous areas with, for example, northern Spain and southern Germany having higher levels of employment in the secondary sector (Nordregio, 2004). However, the scenario is complicated because it depends on which industrial cities are included in areas defined as mountainous; for example highly industrialised massifs include the mountains of the Czech Republic, Slovenia, Slovakia, Bulgaria, the German Black Forest, the Italian central Alps, the Macico noroeste (Portugal), the Catalan range, the Spanish Pyrenees and the UK apart from Scotland (Nordregio, 2004).

Thirdly, the regions have a slightly lower share of employment in the service sector compared to the EU average (in 2004, 57 per cent compared to 68 per cent at the EU level). Even though this figure is relatively lower for mountainous region, the importance of the service sector, especially in relation to tourism and recreational activities, is particularly important in some regions which have a preponderance of Winter sports, for example, in the French Northern Alps, which are relatively wealthy. On the other hand, it is apparent that service sector employment is also relatively high in declining mountainous regions, where public service provision is the main employment activity, for example in northern Norway (Nordregio, 2004).

Table 3: Comparisons in Labour Market statistics in regions with specific geographic features

Region	Labour market					
	Annual average change in employment, %	Employment by sector (% of total), 2004			Unemployment rate (%)	Change in unemployment rate, (% points)
	2000-2004	Agriculture	Industry	Services	2007	2000-2007
Mountainous	0.20%	14%	30%	57%	8.2%	-3.6
Islands	2.00%	7%	20%	74%	11.6%	-7.0
Sparsely populated	-0.01%	8%	24%	68%	8.2%	-2.4
EU-27	0.20%	7%	25%	68%	7.5%	-1.7

Source: Eurostat, 2004

In terms of ICT development and access, mountain areas have relatively less access compared to other EU regions. The difficulty, however, is getting access to available and reliable data at the lower geographical scales. For example, Table 4 below shows that for the four mountain regions selected below the percentage of households with internet access is way below the EU average. The situation is really stark in the Centro region of Portugal, one of the 15 selected regions for Task 2, which has less than half of its households having internet access.

Table 4: Percentage of households with (broadband) internet access, 2010

MOUNTAINOUS REGIONS	% of households with internet access
Steiermark (AT)	63
South-East (FR)	65
Východné Slovensko (SI)	54
Centro (PT)	45
EU-WIDE	
European Union (27 countries)	70
European Union (25 countries)	72
European Union (15 countries)	73

Source: Eurostat, 2011

Overall, then, the economies of EU mountainous areas reflects two things – both the dominant national employment structure as well as the respective geographical and territorial context. It represents, therefore, a complex picture with some regions having a stronger reliance on the primary sector and in particular natural resources; this is especially the case in southern and Eastern Europe. Whilst other regions rely more on secondary or service sector jobs, again depending on their location as well as their respective national context.

5.2.2 Territorial policy approaches

The socio-economic diversity in mountainous regions raises particularly complex issues about how best to develop policies to assist regional development. Mountainous regions across Europe have been the focus of a range of different policy approaches for a considerable length of time. Actually, the first national laws protecting mountain areas were introduced in the Alpine countries during the late 19th century through national legislation. Indeed, these countries were also the first to develop trans-national policy approaches to tackling problems in mountain regions through the creation of the International Commission for the Protection of Alpine Regions in 1952 (EEA Report, 2010).

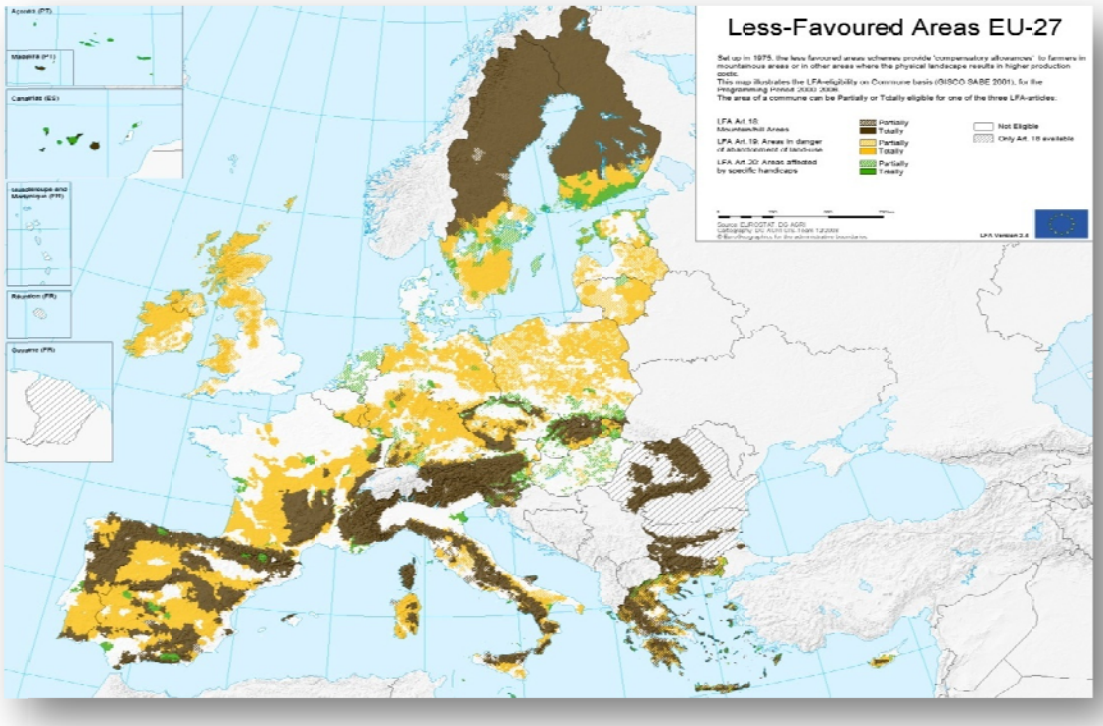
At the European level, a key date was 1975 when the European Economic Commission (EEC) first implemented a Directive on mountain and hill farming in so-called less-favoured areas (LFAs). The aim was to address the challenges for farming and agriculture, through a system of direct payment to farmers in these regions within the framework of the Common Agricultural Policy (CAP). Since the list of less-favoured areas as originally outlined in the Directive 75/268/EEC had undergone various criticisms and amendments, the European Commission answered this debate with a counter action in January 2010 with repeal of the current list of LFAs as laid down in Article 39 of Regulation 1698/2005.

Originally based upon a French system of support in mountain regions, the support for LFAs is still in force today and covers both mountainous and non-mountainous areas (see Map 1). These are:

- Article 18, **Mountain Areas** are characterised as those areas handicapped by a short growing season because of a high altitude, or by steep slopes at a lower altitude, or by a combination of the two. Areas north of the 62nd parallel are also delimited as Mountains;
- Article 19, **'Intermediate' Less Favoured Areas** are those areas in danger of abandonment of agricultural land-use and where the conservation of the countryside is necessary. They exhibit all of the following handicaps: land of poor productivity, production which results from low productivity of the natural environment, and a low or dwindling population predominantly dependent on agricultural activity;
- Article 20, **Areas Affected by Specific Handicaps** are areas where farming should be continued in order to conserve or improve the environment, maintain the countryside, preserve the tourist potential of the areas, protect the coastline.

The interesting point is that the map of eligible Less-Favoured Areas covers a significant number of regions with specific geographic features.

Map 1: Location of Less-Favoured Areas across in EU-27



Source: Eurostat, 2011

Since the 1990s, there has been a significant increase in the number and range of policies, from the all tiers of government – local, regional, national and European - targeted towards

mountainous regions. Most recently, Article 174[13] of the Treaty on the Functioning of the European Union (TFEU) set an important precedent because it specifically mentioned strengthening territorial cohesion as well as mountain regions (and others with specific geographical features). The fact that a European Treaty makes explicit reference to such territories illustrates that the issue of their socio-economic development is clearly important. Indeed, there are a range of EU policy and funding initiatives that impact upon mountain regions, including agriculture and rural development, forestry, regional and cohesion policy, environment, nature conservation, biodiversity and transport and infrastructure. The key point, however, is that the policy and governance scenario remains somewhat complicated as different legislation is focused at several spatial scales and on different sectors so it is not straightforward to evaluate the 'sum of the parts' of these different policy interventions in mountainous regions.

In summary, it is possible to delineate four types of category of policy approaches that have been adopted by different countries across the EU (EEA Report, 2010; Price, 2010). These are:

1) **Countries where no mountains policies can be identified**: this includes countries without mountains or with few or low mountains, or indeed countries, such as Greece and Slovenia, which are in fact largely mountainous;
2) **Sectoral policies**: this groups includes most countries with 'middle' range mountains and as well as most newer EU Member States; the main sectoral policy is agriculture;
3) **Multi-sectoral policies:** this is the case for Austria, Germany, and Spain, where mountain policies are addressed through multi-sectoral approaches which go beyond a specific focus on just agriculture, as in the case above. The broader policy remit includes measures related to addressing economic development issues, including mainly tourism, infrastructure and the environment;
4) **Specific legal and constitutional approach:** this is the case in France and Italy[14] in which integrated policies to enhance the development of mountain regions have specific legal status focused on improving sustainable development. This includes a range of policy tools, legal definitions of mountain areas, usually in terms of altitude and, often, slope; the delineation of massifs; mountain-specific legislation; and specific programmes to encourage research and training.

Thus, there is certainly *no 'one size fits all' policy approach* that has been adopted in all EU mountainous regions. This raises a number of questions about how best to assess the role and impact of the different public policies as well as the interactions and complementarities between them, in different territorial contexts. A useful insight in this regard focused on

[13] Article 174: In order to promote its overall harmonious development, the Union shall develop and pursue its actions leading to the strengthening of its economic, social and territorial cohesion. In particular, the Union shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions. Among the regions concerned, particular attention shall be paid to rural areas, areas affected by industrial transition, and regions which suffer from severe and permanent natural or demographic handicaps such as the northernmost regions with very low population density and island, cross-border and mountain regions.

[14] In France: creation of Massif Commissariats (1973) and the Mountain Law with delimitation of massifs (1985). In Italy (1948), the Constitution refers to a special policy for mountain areas; followed by other provisions including the Mountain Communities (1971) and a Mountain Law in 1994.

the different types of strategies that have been adopted in EU mountain areas (Nordregio, 2004). Interestingly, the categories are actually similar to the ones adopted in the islands:

- **Reactive strategies** which compensate for handicaps and structural difficulties; these are most common in newer EU Member states, as well as Spain and Portugal and usually have a primary focus on the modernisation of agriculture;
- **Proactive strategies** which are targeted primarily at a diversified mountain economy, and recognise the crucial importance of good accessibility; these are most common in Austria, France, Slovenia.

The example below from southern France is an interesting case of how regions have developed joint strategies to overcome common issues in mountain areas:

Multiregional Operational Programme 2007-2013 in France

The multiregional operational programmes in France are a new initiative of the current programming period. There are four multiregional programs in the country, two of them linked to a mountainous massif: the Alpine massif and the Central massif, involving several regions. They have been developed in order to tackle specific problematic that goes beyond the regional scale.

During the 2000-2006 programming period, some experiments were already in place: some extensions of regional DOCUP have supported the development of multiregional initiatives. In the Massif Central, it was included in the operational programme of Auvergne. Some conventions were signed between regions that has now been formalized and written down in the national law.

Following these experiments, and taking into account lessons learnt during the 2000-2006 period, the "Alps region" and "Massif Central", both coming under the Regional Competitiveness and Employment Objective, has a total budget of respectively 72 million Euros and 101 million Euros. The aid provided by the European Union under ERDF amounts to respectively some 35 million Euros and 41 million Euros.

These two programs aim at overcoming specific difficulties of these massifs together with enhancing their attractiveness. Indeed, the programme for the Alps region highlights the specific advantages of the region (beauty of the landscape, the closeness of nature, the quality of the forests, the proximity of recreational areas and the presence of large towns in the surrounding, etc.) but also the disadvantages (relative isolation from Italy, incomplete transport networks, etc.). In this light, the regional authorities have set out a strategy based on three priority objectives: i) increasing in a sustainable manner the competitiveness of the valley systems around medium-sized mountain resorts, ii) managing natural hazard specific to mountains, iii) developing the use of wood-based energy and other renewable energies.

New form of governance system was put in place in order to manage the 2007-2013 programme between the different regions. Indeed, for example, the Central massif

multiregional programme covers 6 different French regions. In this region, the prefect of the region of Auvergne is the coordinator and managing authority. A Committee of the Massif has been set up and aims at defining the objectives and to specify the actions to be taken. Particularly, it facilitates the coordination of public actions in the Massif and the organization of public services. It is composed of 83 members spread into three colleges: i) a college of elected people, ii) a college of the economic activities (representative of consular public institutions, professional, tourist and union organizations) and iii) a college with representative of associations, parks managing organizations and qualified persons in the domain of the mountain. A permanent commission has also been created.
Source: http://www.massif-central.datar.gouv.fr/index.php?rubrique=645

- Sustainable strategies which focus more on environmental issues and the role of mountains in responding to urban demands for 'natural' environments with opportunities for outdoor recreation; these are most common in some industrial and urbanised countries including Sweden and the UK;

This classification is useful because it illustrates how policy approaches to tackling the range of challenges faced in mountainous regions really do vary. Several strategic issues need to be borne in mind by policy makers when trying to promote socio-economic development in mountain regions. These include:

- safeguarding the natural resources of mountain areas in ways that will sustain their vital ecosystem functions;
- addressing permanent natural handicaps to sustainable development linked to topographic and climatic barriers to economic activity and/or peripherality;
- tackling socio-economic structural factors relating to demography, production and growth, labour market dynamics and accessibility that impede economic development and social cohesion (EEA Report, 2010);
- the need to encourage and foster greater inter-regional cooperation between mountainous regions through intra-territorial marketing, workshops and networking (Alfare, L. and Ruoss, E., 2007; Bausch et al., 2005; Briquel, 2006).

The combination of diverse territorial contexts with both varied economic structures and performance has contributed to a multi-dimensional and multi-sectoral approach to policy and strategies in mountainous regions across the EU. This diversity really does demand the creation of policies developed to address specific issues, some of which are common to all mountain regions, however the intensity and impact really does vary. The key point is that increasingly territories need to work together beyond local, regional and national boundaries in order to share common policy approaches and strategies. For this reason, ERDF has an important role to play in mountainous regions across the EU, combining both regional specificity and the opportunity to work within a broader European framework.

5.3 The case of sparsely populated regions

5.3.1 Socio-economic performance

The level of GDP per capita in the Northern Sparsely Populated Areas of the Nordic countries is above the EU average (between 100 and 125 per cent of the EU27 average: Northern Sweden, 115 per cent Northern Finland, 102 per cent and Eastern Finland, 88 per cent). For other EU sparsely populated areas; in Spain, those NUTS3 regions are located across 3 regions, Aragon, Castilla y Leon and Castilla La Mancha. Aragon has a GDP per capita representing 114 per cent of the EU average, Castilla y Leon 101 per cent and Castilla-La Mancha 82 per cent as of 2007. Lastly, in the UK, the Highlands and Islands (Scotland) region has a GDP per capita that represent 87 per cent of the EU average (Fifth Cohesion Report).

Consequently, most of the European regions that are identified as sparsely populated perform around or above the European average. However, the fact that the NUTS2 regions contain both very sparsely areas and urban areas (e.g. Umeå, Luleå, Oulu, Aberdeen or Zaragoza) distort the perception of 'performance' as measured in GDP per capita, as most of the 'performance' occur in the urban areas.

When it comes to growth rates, the change between 2000 and 2007[15] shows the following growth rates for sparsely populated regions: Northern Sweden: 2.13; Northern Finland: 3.28; Eastern Finland: 2.41; Highlands and Islands: 3.73; Aragon: 2.37; Castilla y Leon: 3.00; Castilla-La Mancha: 1.80: EU27 average: 1.8 (Fifth Cohesion Report).

All of the sparsely populated regions have performed above the EU average (see Table 5). Furthermore, some regions, such as Northern Finland or Highlands and Islands, belong to the top EU performers, and especially the top performers in the former EU15. This in line with the conclusion that sparsely populated regions remains close to the EU average and that they generally have converged towards the EU average (Monfort, 2009). Consequently, on average and in general, sparsely populated regions cannot be said to be lagging in terms of economic performance in regard to the European context.

[15] Growth of GDP per head in real terms, 2000-2007

When comparing the regional and national level, however, the picture changes somewhat. For example, the level of GDP at current market prices in sparsely populated regions was under the national level in 2007. Data retrieved from the Eurostat database shows, in the case of Castilla la Mancha that the overall regional GDP was 77 per cent (18.200 Euros) of the national level (23.500 Euros) in 2007. The pattern was echoed in the Scottish region of Highlands and Islands with a GDP just below 75 per cent (25.000 Euros) of the UK national level (33.500 Euros). In the case of Finland, Ita-Suomi's GDO of 25.600 Euros was 73 per cent of the national Finnish GDP figure of 34.000 Euros. On the other hand, more comparable results with the national picture, were achieved by Övre Norrland, which had a GDP figure of 33.900 Euros, 94 per cent of the Swedish GDP of 36.200 Euros. Similarly, Sterea Ellada's GDP of 18.300 Euros in 2007 represented 92 per cent of the national Greek GDP figure of 20.200 Euros.

Table 5: EU Sparsely Populated Regions at NUTS2 level

Nuts code	Region name	Unemployment rate* 2008 (%)	Emplomyment rate** 2008 (%)	Populationwith tertiary education*** 2007 (%)
	EU27	7,0	70.4	24.3
ES	**Spain**	11.3	68.3	29.2
ES24	**Aragón**	7,1	73.8	32.1
ES41	**Castilla y León**	9,5	68.2	30.6
ES42	**Castilla-La Mancha**	11,6	66.5	21.8
FI	**Finland**	6,4	75.8	36.6
FI13	**Itä-Suomi**	9,0	68.3	29.5
FI1A	**Pohjois-Suomi**	8,5	71.7	33.3
GR	**Greece**	7,7	66.5	22.6
GR24	**Στερεά Ελλάδα**	8,5	65.6	14.5
SE	**Sweden**	6,2	80.4	32.0 (p)
SE33	**Övre Norrland**	6,6	77.5	30.0 (p)
UK	**United Kingdom**	5,6	75.2	32.0
UKM6	**Highlands and Islands**	3,0	77.5	35,1

* % of population 15 years or over

** % of population between 20 to 64 years

*** % of population between 25 to 64 with tertiary education

(p) provisional value from Eurostat

Source: Eurostat, 2011

In terms of employment rates (see Table 5 above), the sparsely populated regions (at NUTS2 level) also show a mixed scenario in which rates vary from each other. Yet, the dispersion is not only due to regional disparities, but also to differences in terms of overall employment structure between countries. For example, four sparsely populated regions have rates above the EU average (Aragon in Spain, Pohjois-Suomi in Finland, Övre Norrland in Sweden and Highlands and Islands in Scotland). On the other hand, three regions have rates below the EU average: Castilla y Leon and Castilla-La Mancha in Spain

and Itä-Suomi in Finland. At the national level, only two regions, Aragon (Spain) and Highlands and Islands (UK) have employment rates higher than their respective national context.

As for unemployment, most of the regions are positioned near the EU-average (only two sparsely populated regions have unemployment rates below the EU average (Övre Norrland and Highlands and Islands) but show, in the meantime, gaps between regional and national levels. Again the differences with the European average are mainly due to differences between countries, as for instance Finland and Spain have a higher unemployment rates on average, compared to Sweden and the UK.

Finally, as for education level, only two sparsely populated regions (Castilla-La Mancha and Sterea Ellada) show a proportion of the population aged 25-64 having a tertiary level education that is below the EU average. Consequently, one can conclude that the main indicators of social performance show a rather favourable picture of the social conditions in the sparsely populated regions across Europe. However, yet again compared to the national context the scenario is mixed with some regions having higher figures such as Aragon and Castilla y Leon (Spain) Highlands and Islands (UK), whilst the others perform less well compared to their respective national context..

When looking at the more detailed demographic trends, however, empirical evidence shows that the demographic processes taking place in the most sparsely populated areas of Europe may have long-term impacts on the regeneration of the regional labour-markets. By using the data available at NUTS3 level, as well as the delimitation of sparsely populated areas proposed in the Green Paper on Territorial Cohesion, one can highlight important differences between sparsely populated regions in terms of population change and net migration in a mid-term period (2001-2007) (see Table 6).

Table 6: EU Sparsely Populated Regions at NUTS3 level

NUTS CODE	NUTS NAME	Total population change 2001-2007	Net migration into NUTS3 regions 2001-2007[16]
EU-27	European Union	3,6	2,9
ES242	Teruel	9,24	13,50
ES417	Soria	3,06	7,33
ES423	Cuenca	9,16	11,98
FI131	Etelä-Savo	-6,90	-3,26
FI133	Pohjois-Karjala	-4,04	-2,29
FI134	Kainuu	-9,95	-7,69
FI1A2	Pohjois-Pohjanmaa	6,86	0,36

16 Fifth Cohesion Report: Net Migration into NUTS3 regions, 2001-2007 (p. 84, 86); Net migration (Eurostat Indicator definition): Net balance between immigration to and emigration from an area, expressed as a number of persons.

FI1A3	Lappi	-5,56	-5,48
SE312	Dalarnas län	-1,37	1,47
SE321	Västernorrlands län	-2,03	0,83
SE322	Jämtlands län	-2,93	-0,10
SE331	Västerbottens län	1,11	1,04
SE332	Norrbottens län	-3,16	-1,49
UKM61	Caithness & Sutherland and Ross & Cromarty	1,50	3,75
UKM63	Lochaber, Skye & Lochalsh, Arran & Cumbrae and Argyll & Bute	1,31	5,94
UKM64	Eilean Siar (Western Isles)	-6,28	0,02

Source: Fifth Cohesion Report

The sparsely populated regions of Spain have witnessed strong positive population change, essentially bolstered by positive net migration pattern. This is especially the case for the provinces of Teruel and Cuenca. In Northern Scotland, two regions have positive population change (but below the EU average) and one region has been shrinking by 6.3 per cent: for the two former regions, net migration was positive and above EU average, while for the latter net migration was almost null.

In the sparsely populated regions located in the Nordic countries, the situation concerning demographic trends is much less favourable. In Finland, only the region of Pohjois-Pohjanmaa show a positive population change from 2001 to 2007 (6.9 per cent), combined with a mildly positive net migration. The other Finnish sparsely populated regions all show a strong depopulation trend combined with a strongly negative net migration. In that respect, the trends highlight the polarization processes that are occurring in the sparsely populated areas of Finland towards the Oulu agglomeration (located in Pohjois-Pohjanmaa).

In Sweden, the county of Norrbotten show as well a negative trend on both indicators, but less pronounced than in the Finnish case. The county of Västerbotten witnesses a mildly positive population change and net migration over the period, but both below the EU average. In the Swedish case too, the polarization processes from the sparsely populated areas towards the regional centres, and especially Umeå (Västerbotten) is marked.

A recent study on development perspectives in the Northern Sparsely Populated Areas (NSPA) (Gloersen et al., 2009) has highlighted the importance of traditional industries for the regional economies: manufacturing, mining, forestry, fishing, energy production. New innovative processes are introduced in the traditional economic activities, in order to make them more efficient and productive. However, the downside of these rationalization processes is the lesser importance of those industries with regards to employment. This is an important paradox of regional development in the Northern Sparsely Populated Areas: while the performance of traditional industries, often driven by large internationalized firms, provides an important source of revenue for the region (e.g. with many SMEs

working as subcontractors to the big companies), they have less impact on the local and regional labour-market than it used to have.

Yet, the study has also pointed out at the presence of R&D centres across the Northern Sparsely Populated Areas. Most of the R&D activities are located in the more urban parts of such regions, such as Umeå, Luleå or Oulu, but also smaller R&D centres, with niche-activities, are located throughout the Northern Sparsely Populated Areas.

The presence and exploitation of natural resources has been a key driving force for the development of the sparsely populated regions of the Nordic countries. Yet, it is fair to precise that these traditional economic activities (forestry, mining, fishing and energy production) have been instrumental for the development of the national economies of Sweden and Finland. Consequently, the importance of those sectors for the national economies is (still) significant.

5.3.2 Territorial policy approaches

In terms of territorial approaches, each level of governance plays a specific and important role in the development of policy responses for sparsely populated regions.

- **Regional level:**

The coordination of sectoral policy initiatives is mainly operationalised through the elaboration by regional authorities of regional development strategies. These strategies focus on overcoming the specific challenges of the respective regions, for instance, matching the development in transport infrastructure with the needs of regional businesses and individuals, for enhanced accessibility and mobility.

In the recent ESPON study on Territorial Diversity (Nordregio et al., 2010), the importance of regional and local level of governance has also been highlighted:

> "Regional or county Plans are available for all regions in each of the three countries covering the North Calotte area (Finland, Norway and Sweden). For the elaboration and implementation phase of those plans, the County authorities are central actors as their role is to lead the process and to federate other relevant actors to create stronger intra-regional synergies. Economic Growth and Employment are central themes in the regional plans, often reflecting the national priorities. Strategies also acknowledge the fact that the economic competitiveness of the region needs to support small scale business in rural areas, in order for it to be sustainable in the long run. The elaboration of the regional strategies engages the most important regional actors in each county: regional federations of businesses, labour unions, regional chambers of commerce, but also universities and research centres that are seen as an important link between public action and private sector (Triple Helix model)."

As highlighted in the ESPON study on Territorial Diversity (TeDi), policy strategies aiming at 'turning handicaps into opportunities' need to involve local stakeholders: "The central

element in the differentiation of 'TeDi areas' capacity to take advantage of economic opportunities on the basis of a strategy of balanced, harmonious and sustainable development however lies in their respective capacity to formulate and to implement locally adapted measures targeting key obstacles to growth."

As highlighted in the same study, the capacity for the regional and local stakeholders to turn the assets from their geographic specificity into a development opportunity ought to be based on the synergy between three pillars:

- *Human capital*: fostering the entrepreneurial and learning capacity in the region, enabling a more flexible and adaptive local labour-market and economy;
- *Natural resources/geographic position*: use of the geographic position to act as interface territory, especially across the internal and external borders of the EU, combined with the exploitation of natural resources of global or European interests;
- *Institutional context/Governance structure*: tailored-made policy responses can only be efficiently elaborated and implemented through the local knowledge of the regional stakeholders.

Lastly, a grouping of Nordic regional stakeholders in has proved that it is possible for local and regional stakeholders to gather together and to propose clear ideas for the future development of the sparsely populated regions. The Northern Sparsely Populated Areas Network has financed a foresight process enabling to bring together regional stakeholders from Northern Sweden, Northern and Eastern Finland as well as Northern Norway and to propose a 'roadmap' enabling to focus on development opportunities, instead of focusing on handicaps.

- **National and European level**

At the national level, the policy responses are mainly related to targetted labour-market reforms and to foster a better business environment in the fields of entrepreneurship and innovation. Although the fundamental problems of sparsely populated areas seem to be shared in different parts of Europe (Nordic countries, Scotland, Spain, and maybe other regions), there is no joint approach to date in order to tackle this issue on a pan-European basis.

Firstly, there are no studies that provide a pan-European approach to define and characterise sparsely populated areas. The closest to this was attempted by the Nordic institute Nordregio, which promoted a pan-European approach for delineating sparsely populated areas across Europe, with a more targeted analysis of the specific Nordic conditions.

Secondly, there is no pan-European organization whose *raison d'être* is to bring forward the arguments for having an integrated, pan-European policy approach to sparsely populated areas, as it is for mountain areas (Euromontana), islands (Islands Commission of the Conference of Peripheral and Maritime Regions) or even border-regions (Association of European Border Regions). The closest to such an organization is the Northern Sparsely Populated Areas Network, but it is Nordic in nature and can hardly be the seed for a pan-

European organization. Having said that, a dedicated intergroup at the European Parliament was set up in 2010, which provides a platform for MEPs to "debate and reflect on the new approaches and perspectives brought by the Lisbon Treaty for specific territories. Intergroup discussions will evolve around the Cohesion Policy (the territorial cohesion), the coordination of sectoral policies (CAP, Environment, Energy, Transport, Small and Medium Sized firms, and Research) and governance issues (multilevel governance and macro-regional strategies)."[17]

Within the Nordic context, the European level is especially important in terms of setting the agenda for regional policy initiatives within the Member States. In addition, the recognition in the Treaty of Lisbon of territorial cohesion as a main objective for the EU community, as well as the emphasis in its Article 174 of the need to take particular attention to "to regions which suffer from severe and permanent natural or demographic handicaps such as the northernmost regions with very low population density and island, and mountain regions" provides a policy framework for elaborating and implementing policies at the national and regional levels (Nordregio et al. (2010).

In terms of specific policy areas, regional stakeholders in the Northern Sparsely Populated Areas increasingly see tourism as a possible opportunity for the sustainable development of their region and as a "vector for territorial development" (Nordregio et al., 2010). The attractiveness of such regions for tourism relies on the experience of wilderness, which is unique on the European continent. Moreover, the large availability of uninhabited land is an asset for the development of activities that are land-consuming. Yet, it has become clear that a strategic investment in tourism requires a multi-sectoral approach. Indeed, the development of touristic activities necessitates investments in various sectors: construction (of hotels), transport (with airports and local busses connecting to places), hotel and restaurant (for the accommodation of guests), retail services… Moreover, the development of tourism is often associated to the development of a *territorial brand*, able to connect the territory itself with products and heritage. In that respect, the regional stakeholders-led strategic initiative *Northern Sparsely Populated Areas Foresight* has identified tourism as a strategic component of the development strategy for the whole area (see the extract below)

[17] For more information, see: Intergroup 174 Homepage http://intergroup174.com/

Northern Sparsely Populated Areas Foresight, EU Strategy 2020

VISION 2020

The NSPA has a thriving tourism industry, both as a wilderness and outdoors experience destination for foreign visitors and as an area considered attractive by nationals.

Tourism is used a complement to other types of activities, ensuring a maintained viability in a number of small and remote locations. Regulatory and fiscal arrangements to promote these types of multi-activity have been adopted.

The improved coordination between actors from various sectors, including transport, hospitality, culture and the experience industry, have transformed the tourist's experience of the regions and improved their attractiveness.

Policy measures

- Sharing good practices within the NSPA in terms of place marketing, event and experience based tourism

- Further developing joint tourism routes and products across national boundaries in the NSPA

Source: Gloersen, 2009

In the Nordic countries, proactive policies concerning the development of ICT infrastructure has enabled the most remote and sparsely populated areas to be part of the global economy. As a result, the difference in Sweden and Finland between the population coverage of broadband service is marginal, compared to the difference found in other countries (Fifth Cohesion Report and the example below).

The role of ERDF in ICT in the sparsely populated areas

The ERDF has played an important role for the development of necessary infrastructure in the sparsely populated areas, especially regarding transport and ICT. For instance the project "Broadband for the Far North" (Övre Norrland, Objective 1 2000-06) has enabled the outermost regions of Northern Sweden to access broadband. It has had practical implications for education, health and industrial research. It has enabled over 300 villages in Norrbotten to have broadband and once the work has been completed at the end of 2006, 93 per cent of the regional population will have access to broadband. (DG Regio homepage). In the Finnish region of Itä-Suomi, the ERDF project "Wireless Access for Rural Areas" (Objective 1 2000-06) aimed at improving the access of remote rural areas to broadband services. Today, nearly 98 per cent of households and businesses in the 14 municipalities concerned are eligible for high-speed Internet access, compared to only 74per cent when the project was launched in 2004.

In Övre Norrland, the thematic focus of the ERDF is on Innovation and Accessibility, the latter with particular emphasis on better internal connections (regional enlargement) and ICT. For the Finnish regions of Johjois-Suomi and Itä-Suomi, the main focus is on development of business activity, promotion of innovation and networking, as well as the improvement of regional accessibility. In Northern Sweden, ERDF co-financing is used as a financial support for developing business network initiatives targeted to regional small businesses, in cooperation with regional and municipal authorities. The aim is to support the small firms located in Northern Sweden in developing business relations with partners outside the region. The initiatives Kvarken Global Business, Nordic Business Link and RUG are cross-border Interreg projects. Other initiatives such as Swedish Lapland, Design Västerbotten and Globac are funded through the ERDF fund.

Source: http://ec.europa.eu/regional_policy/atlas2007/index_en.htm

Another key policy response in the Nordic countries has been the development of universities and polytechnics in the sparsely populated region. Now the cities of Oulu and Umeå have become big university towns. But the development of decentralized universities, such as the *MittUniversitetet* or *Akademi Norr* in Sweden, with several small venues spread across the region, ensures that a larger share of the population is in reach of a tertiary education facility. A similar policy has been also implemented in Northern Scotland with the University of the Highlands and Islands decentralized in several campuses.

Finally, Regional Innovation Policies focusing on *incremental innovation*, i.e. the improvement of the production processes in already established local economic activities, and using the Triple Helix model is high on the agenda of Nordic stakeholders. Incremental innovation enables the local economies to grow while still keeping their economic comparative advantage and identity. Overall, although the policy responses are the same as those developed in all European regions (eg ICT, education, innovation), the key point is that their implementation is tailored-made to overcome the territorial handicaps, especially the distance between actors sparesly populated regions.

Below are some interesting examples of policy initiatives developed in the Nordic sparsely populated regions (excerpt from Gloersen, 2009):

Transforming the industrial heritage of Västernorrland into a resource

The ISKA project in the Swedish county of Västernorrland sought to actively use the heritage from two centuries of development in the manufacturing industries as a basis for new initiatives in fields such as research, experience industry, cultural tourism and technical development. The project ran from 2000 to 2005. Vätsternorrland is a county dominated by big export companies with a steadily diminishing workforce. The population identifies with these types of activities, creating situations where it is sometimes difficult to propose alternative development paths. In the ISKA project, Industrial heritage is being actively used as an instrument to federate a local associations, businesses, interest groups, politicians and civil servants. The project has had significant direct effects, creating some 30 new companies and 80 new jobs; more importantly, it has contributed to challenge traditional thinking considering growth as synonymous with large-scale operations and manufacturing industries. Is has helped demonstrated that the cultural heritage can provide a basis for an improved economic viability of local communities.

Source: http://www.iska.nu

Energy research and development in the Northern Sparsely Populated Areas

Piteå, a city with energy intensive paper mill industries and a long tradition for waste energy recuperation, has had a research and development centre for renewable fuels with focus on combustion, gasification and biorefining processes since the lates 1980s. This centre, ETC, works collaboration with private companies and public and academic institutions, and focuses on ash related issues, industrial combustion, small-scale biomass combustion and gasification of biomass. In Joensuu, the Wood Energy Net Wenet functions as a competence centre within the field of efficient and sustainable use of local wood energy resources. It assists companies with initial evaluation of potential, concrete investments for building up energy plants and their fuel supply chains, as well as education and transfer of knowledge. A large solar energy industry processing silica and quartz has been established in Norway since the 1990s. There are research facilities and production plants all over Norway, but Nordland is nonetheless emerging as the most important county with extraction in Tysfjord, and processing activities in Drag, Glomfjord and Narvik. Many of the companies established in these locations are world leading within their niche.

Source: http://www.etcpitea.se; http://www.wenet.fi; http://www.recgroup.com;

http://www.solarcellrepower.com; http://www.norcryst.no

Promotion of innovation in the Northern Sparsely Populated Areas

Regional authorities in the Northern Sparsely Populated Areas promote innovation on the basis of alliances between research environments and knowledge intensive industries. The few examples presented here are only illustrations of the types of initiatives taken throughout the Northern Sparsely Populated Areas.

In Northern Norway, the Norinnova Company has been created to commercialise new technologies and research based business ideas. The connection with research environments is strong, especially as the University of Tromsø is the main shareholder. The ambition is both to create new sectors of activity in Northern Norway and to reinforce existing ones. Since 1993, over 30 companies have been established, with 350 to 400 new jobs in high technology related sectors.

In the Oulu region, a new Alliance Agreement between the pivotal actors of the innovation system was reached in February 2009. This implies that the Centre for Internet Excellence (CIE), the Printed Electronics and Optical Measurements Innovation Centre (PrintoCent), the Martti Ahtisaari Institute of Global Business and Economics (MAIGBE), the Centre of Expertise in Water Industry Cluster (CEWIC) and the coming Centre for Wellbeing Technology will invest in shared resources and infrastructures and create the mechanisms for joint procurement. Within carefully specified areas, the parties will also profile themselves as a group. The agreement also involves the City of Oulu, the University of Oulu, and the Oulu University of Applied Sciences, Technical Research Centre of Finland and Technopolis Plc.

In Umeå (Västerbotten), the three Uminova innovation, Uminova science park and Uminova invest together promote innovation in the region with personal through personal support, networks, a creative environment and risk capital. The focus is on business ideas of researchers, employees and students of the Umeå University and hospital, as well as on innovative ideas developed by companies in the region. Together with the Umeå Biotech Incubator, Uminova has encouraged the development of the biotechnology cluster in Umeå, which currently comprises almost 50 companies. Most of these are organized in UmeåBio, the Umeå Biotech industry organisation.

In Joensuu, the Regional Development Company, JOSEK contributes to consolidate and diversify the economic structure, promote the competitiveness, and improve the operating conditions of local business life in an increasingly international environment. The primary means of reaching these objectives is through enhanced cooperation. The new Russian trade project it has launched in the beginning of 2008 offers an example of organisational innovation in the NSPA. Launched in cooperation with other regional development actors, the North Karelian Economic Developmental Russia Programme shall promote business ties between Russia and Finland, provide solutions to the service needs of companies, and encourage North Karelian companies to extend their operations into the Russian market. The project also aims at creating and establishing a new provincial model for corporate services and developing the logistics position of the Niirala border-crossing point. *Source: http://www.norinnova.no; http://www.oulu.fi/ajankohtaista/uutiset/2009A/innovaatiokeskittymasopimus.html; http://www.uminova.se; http://www.ubi.se; http://www.umeabio.org; http://www.josek.fi/eng/?ID=1518*

5.4 Common socio-economic issues and territorial policy approaches

The discussion of the different socio-economic performances discussed in each of the three territories clearly illustrates the diversity of regional development trajectories, which are very much in line with the findings of Monfort (2009). Moreover, each category contains within it some of the best performing and worst performing regional economies within the EU. This in itself is evidence that despite the many and distinctive challenges faced by these types of regions, many of the regions have either managed in some way to offset the challenges faced or else have strengths which compensate for their inherent challenges. As discussed earlier, there is 'no-one size fits all' approach to understanding the impact of the various specific characteristics in the different territories.

The role of governance and policy, then, is clearly an important element and as discussed above in each of the three sections on respectively islands, mountainous and sparsely populated areas, it is useful to distinguish between three main territorial approaches:

1) **Reactive strategies** that are usually aimed at mitigating the specific 'obstacles';
2) **Proactive strategies** aimed to stimulate the emergence of new innovative sectors with a higher value added and/or develop new governance approaches;
3) **Sustainable strategies** which focus on environment protection and valorisation, as exemplified by the concept of 'Green Island'.

Clearly, the three strategies are interlinked. As for the distinction between *reactive* and *proactive* strategies, some parallels can be drawn with the two twin concepts of vulnerability and resilience[18], although without equating policies to reduce vulnerability with reactive measures on the one hand and policies to develop resilience with proactive strategies. Actually, any successful attempt at diversifying the economy with new innovative sectors (under a proactive strategy) will both reduce economic vulnerability (by reducing sector concentration) and enhance resilience (the economy will benefit from several different 'engines' – if one is affected, another one can still move forward). Similarly, some reactive policies aimed at reducing accessibility costs might be helpful – or even decisive as a prerequisite – for the development of new markets, e.g. to enhance tourism with a small airport in the remote islands of an archipelago; or developing better roads links and ICT connectivity in remote mountainous regions.

From this analysis then, it is clear that a single territorial approach to EU regions with specific geographical features is certainly not appropriate nor feasible given the heterogeneity of situations, including their inherent characteristics combined with their diverse comparative socio-economic performances. In addition, this is also true for each of the three territorial types taken individually: again, the heterogeneity of situations and performances within each of them (islands, mountains and sparsely populated areas) is also too diverse to justify the rationale for having such specific support. Ultimately, what matters for a region's economy is not belonging to one (or several) of the three territorial

[18] As developed in the literature on Small Island Developing States (Briguglio and Galea, 2003)

types per se, but the intensity and mix of the inherent characteristics it is exposed to (e.g., size and remoteness, as well as the specific advantages and opportunities). Indeed, each individual set of characteristics leads to a series of constraints and opportunities that can be radically different from one area to another, with a positive or negative impact on socio-economic performance.

In this context, regional development strategies and policies clearly have a very important role to play. Thus, as mentioned previously, the main conclusion is that the best option is to follow is a case-by-case approach, and that specific support is justified only for areas where the mix and intensity of the characteristics appears to have strongly negative developmental effects. This is precisely why ERDF and the Cohesion Fund (CF) play potentially such an important role in regions with specific geographical features. They provide a range of intervention tools that can be tailored to the specific territories themselves, dealing with a range of inherent characteristics. The role of ERDF and the CF is focus of the next section.

6. The role of ERDF and the Cohesion Fund in regions with specific geographical features

This section provides an overview of the role ERDF and the Cohesion Fund (CF) in regions with specific geographical features. It is worth underlining here that both are two of the main financial instruments designed to facilitate the achievement of the objective of social and economic cohesion provided for in the Treaty. Both, however, have slightly different remits – the role of ERDF is to provide assistance and support primarily to the EU's less developed regions, but all regions are eligible whilst the CF is a structural instrument that finances up to 85 per cent of eligible expenditure for major projects mainly involving the environment and transport infrastructure. It is focused on the least prosperous Member States of the Union whose Gross National Product per capita is below 90 per cent of the EU-average. It is important to note here that ERDF and the CF do not operate in isolation from other EU as well as domestic funding streams and it is precisely the complementarity between them, in particular localities, that can help to drive changes in economic development. The complementarity with other such funds is not discussed here in any detail however the issue will be developed further in the Second Intermediate Report in the context of the analysis of the 15 selected regions.

The two most recent programming periods are the focus for this study i.e. 2000 to 2006 and 2007 to 2013. Importantly, there were several key differences in the objectives and priorities between the two periods, which are of significance here. Firstly, for the 2000-2006 programme, the key point is that in Objective 1 regions *all* areas were eligible for support. However, in Objective 2 regions, eligibility was based on a system of *geographical zoning* to identify eligible areas which resulted in a detailed map for each Member State. This form of spatial targeting was effective in focusing support in those areas most in need. However, it also meant that in certain regions, particular parts of a town or village were eligible whilst adjacent areas were not.

For the current ERDF programming period 2007 to 2013, however, a number of changes were made to the shape and focus of the policy. Firstly, the policy shifted towards a greater emphasis on promoting competitiveness and innovation, in line with the EU's Growth and Jobs Agenda, across ALL of Europe's 271 regions. Secondly, an important distinction from the previous programme is that there is *NO* territorial zoning of eligible areas in the Regional Competitiveness and Employment objective i.e. relative wealthy areas in a particular town or city can receive support in line with the strategic focus of the overall regional programme. Thirdly, in order to ensure that regional programmes deliver in these areas a system of so-called *'earmarking'* of funds was introduced. Basically, this is a way of targeting funds for investments directly linked to strengthening regional competitiveness including research and innovation, skills, business services, major European infrastructures and greater energy efficiency. Understanding the implications of this shift in strategy and implementation between the two respective programming periods for regions with specific geographical features is one of the key elements of this Study. For this reason, as is discussed in Section 7, the 15 regions selected for Task 2 cover a range of objectives in

order to try to tease out some of the differences in strategy and focus. It is also important to point out, as the next section discusses, certain regions with specific features currently receive extra financial assistance.

6.1 The role of territorial cohesion in geographically specific territories

In recent years, there has been increased attention and focus on the issues of *territorial cohesion* across the EU. The Green Paper on Territorial Cohesion (2008) was a key document in that regard because it helped to shed some light on defining the issue as well as the role of ERDF in helping to tackle the range of challenges. Moreover, it is important to say that prior to the policy debates about the concept of territorial cohesion, there was relatively much less attention paid to the role of ERDF and the CF in geographically specific territories. Of course, such territories did receive significant support and investment from European funds, not just ERDF, prior to that, however, the advent of the policy discussions surrounding territorial cohesion really heralded a new phase for such regions.

In particular, the Green Paper (2008) states that:

> "Territorial cohesion is about ensuring the harmonious development of all these places and about making sure that their citizens are able to make the most of inherent features of these territories. As such, it is a means of transforming diversity into an asset that contributes to sustainable development of the entire EU".

Furthermore, the importance of territorial cohesion was underlined in the Community Strategic Guidelines both for Rural Development as well as Cohesion Policy as well as in the Treaty on the functioning of the European Union, which for actually set out territorial cohesion as one of its objectives. Article 174 of the new Treaty stipulates that:

> "Particular attention should be paid to rural areas, areas affected by industrial transition, and regions which suffer from, severe and permanent natural or demographic handicaps such as the northernmost regions with very low population density and island, cross-border and mountain regions."

Another important policy development since the current regional programmes were negotiated and agreed was the introduction of the **Europe 2020**[19] strategy. This is an attempt by the European Commission to prioritise the EU's sustainable socio-economic future based on the three main themes– **smart, inclusive and sustainable** growth. First, **smart growth** requires investments in innovation to encourage the growth of the knowledge economy. Second, **inclusive growth** aims to tackle barriers to employment and integration (education, skills, health, housing, social inclusion etc). Third, **sustainable growth** focuses on the roll-out of high-speed internet and ICT, the development of smart transport and energy infrastructures, measures to foster energy efficiency and renewable energies, green public procurement and well functioning administrations.

19 Source: http://ec.europa.eu/eu2020/index_en.htm

The challenge, however, for the implementation of Europe 2020 is to overcome the distinct territorial differences that exist across the EU. In other words, there exist strong differences in the opportunities, vulnerabilities and risks for regions from the contemporary challenges of the globalisation and the economic downturn, demographic change and social inclusion, climate change and energy. In particular, the last point is pertinent for the regions with specific geographical features because of the relative risks from flooding, extreme weather or natural disasters potentially resulting from changes in climate. For these regions, the support of both national and European funds is crucial to help them to develop integrated and tailored solutions to meet such challenges as well as create future opportunities. As the next section discusses, territories with permanent geographical features have benefited from an increase in the maximum Community contribution.

6.1.1 Specific provisions for geographically specific territories

In the context of ERDF for the current programming period, a number of areas facing natural and geographical handicaps are eligible for specific treatment in terms of funding and approach. Again, it is interesting to note that several of these regions have been selected in the 15 regions for Task 2. These are listed in Annex II, Additional Provisions of the ERDF General Regulation[20] and include:

- 18. The NUTS2 regions of Itä-Suomi and Madeira, while keeping the status of phasing-in regions, will benefit from the transitional financial arrangements laid down in paragraph 6(a);
- 19. The NUTS2 region of the Canaries will benefit from an additional envelope of 100 million Euros over the period 2007 to 2013 under the transitional support referred to in Article 8(2);
- 20. The outermost regions identified in Article 299 of the Treaty and the NUTS2 regions fulfilling the criteria laid down in Article 2 of Protocol No 6 to the Treaty of Accession of Austria, Finland and Sweden will, in view of their specific constraints, benefit from additional funding from the ERDF. This funding will amount to 35 Euros per inhabitant per year and will be in addition to any funding for which these regions are otherwise eligible;
- 29. France will receive an additional allocation of EUR 100 million over the period 2007 to 13 under the Regional competitiveness and employment objective in recognition of the particular circumstances of Corse (30 million Euros) and French Hainaut (70 million Euros).

In addition, a number of measures are listed in the General Regulation that are particularly designed for use in regions with handicaps: for example, concentrating investments in improving accessibility, promoting and developing economic activities related to cultural and natural heritage, promoting the sustainable use of natural resources, and encouraging sustainable tourism. Moreover, there are other flexibilities that regions can benefit from in order to tailor ERDF interventions in their respective territories. For example, Article 52 (see below) is another potentitally important tool for regions with specific geographical features:

[20] http://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/pdf/2007/general/ce_1083(2006)_en.pdf

Modulation of the contribution rates of the General ERDF Regulation:

The contribution from the Funds may be modulated in the light of the following:
(a) the gravity of the specific problems, in particular of an economic, social or territorial nature;
(b) the importance of each priority axis for the Community's priorities as set out in the Community strategic guidelines on cohesion, as well as for national and regional priorities;
(c) protection and improvement of the environment, principally through the application of the precautionary principle, the principle of preventive action, and the polluter-pays principle;
(d) the rate of mobilisation of private financing, in particular under public-private partnerships, in the fields concerned;
(e) the inclusion of interregional cooperation as referred to in Article 37(6)(b) under the Convergence and Regional competitiveness and employment objectives;
(f) under the Regional competitiveness and employment objective, the coverage of areas with a geographical or natural handicap defined as follows:

(i) island Member States eligible under the Cohesion Fund, and other islands except those on which the capital of a Member State is situated or which have a fixed link to the mainland;
(ii) mountainous areas as defined by the national legislation of the Member State;
(iii) sparsely (less than 50 inhabitants per square kilometre) and very sparsely (less than 8 inhabitants per square kilometre) populated areas;
(iv) the areas which were external borders of the Community on 30 April 2004 and which ceased to be so on the day after that date.

The key point is that it is up to the Managing Authorities in the respective regions concerned to take the necessary programme management steps to actually benefit from such derogations as listed in Article 52. This is a point that will be addressed further in the Study in Tasks 2 and 3 in order to assess the take-up (or not) of such tools to better tailor ERDF interventions in particular territorial contexts. Before that, however, as the next section discusses, it is important to analyse the ways in which ERDF has been used in the three types of territory to assess the extent to which differences emerge compared to other regions across the EU.

6.2 Analysing the role of ERDF for the period 2000-2006 and 2007-2013

The analysis of ERDF was carried out for the three types of territory and by field of intervention (1 and 2 digits expenditure categories) for the 2000-2006 ERDF and Cohesion Fund (CF) programmes.

It is based on two main sources of information:

- The database of ERDF and CF Regional Expenditure for 2000-2006 programming period at NUTS3 level[21] carried out by SWECO in July 2008 at the request of the DG Regio (hereafter referred to as the SWECO database); and
- The classification of NUTS3 regions by type of specific geographical features as listed in the annex of the ToR for this Study[22].

The SWECO database was based on final commitments rather than effective spending. The former were more suitable for the establishment of a comparable database given the fact that not all payments had been made at the time that the database was created. In addition, the analysis focuses on Objective 1, Objective 2 and Cohesion Fund commitments, at NUTS2 and 3 levels, as Urban and Interreg programmes are outside the scope of the Study.

Structural Funds: Areas of Intervention by category and sub-category

1. PRODUCTIVE ENVIRONMENT
11 Agriculture
12 Forestry
13 Promoting the adaptation and the development of rural areas
14 Fisheries
15 Assisting large business organisations
16 Assisting SMEs and the craft sector
17 Tourism
18 Research, technological development and innovation (RTDI)
2. HUMAN RESOURCES
21 Labour market policy
22 Social inclusion
23 Developing educational and vocational training not linked to a specific sector 24 Workforce flexibility, entrepreneurial activity, innovation, information and communication technologies
25 Positive labour market actions for women
3. BASIC INFRASTRUCTURE
31 Transport infrastructure
32 Telecommunications infrastructure and information society
33 Energy infrastructures (production, delivery)
34 Environmental infrastructure (including water)
35 Planning and rehabilitation
36 Social and public health infrastructure
4. MISCELLANEOUS
41 Technical assistance and innovative actions

[21] In the SWECO study, the main body of commitment data collected (80%) was received at NUTS 3 level. For the remaining data, different approaches (statistics and models) were used to establish information on the NUTS 3 levels.

[22] Note some approximation was made due to the fact that SWECO study was based on 2003 NUTS classification and whilst the classification of the regions in the three territories is based on 2006 NUTS classification which may be slightly different for some of the regions.

The SWECO analysis allows us to compare and contrast the ways in which ERDF and CF were used in the three types of territory compared to the rest of the EU regions. Moreover, it provides us with an interesting insight into some of the differences in strategies that emerge between the different types of regions in terms of the main expenditure categories for the period 2000-06. Of course, it is difficult to extrapolate the findings into the current period because the data is not available to the same extent. The first question of the analysis is listed below:

Question 1: Did the specific territories receive proportionately more European funds relative to their population size?

The aim was to compare the share of population[23] living in the three territory types with their relative share of ERDF/CF spending in 2000-2006. The analysis shows that overall the three types of territory did receive relatively more than their population size:

- For mountainous regions: 14 per cent of the spending 2000-2006, for 8 per cent of the EU population
- For islands: 5.8 per cent of the spending for less than 3 per cent of the population
- For sparsely populated regions: 1 per cent of the spending for 0.6 per cent of the population.

This is a fairly crude indicator but nevertheless it does provide some 'headline' figures about the amount of ERDF and CF funding that the three types of territories received. It also shows that over a fifth of the total of the funds (ca. 30 billion Euros) were committed to the three types of territory combined. Clearly, a significant amount of money which shows that the relative need of the territories was relatively high compared to other EU regions. As the next section discusses, there are proportionately more Objective 1 or 2 regions that are either mountains, islands or sparsely populated.

Question 2: Which funds or programs intervene, and in which proportion according the types of regions?

As Table 7 shows below, it is significant to narrow the analysis in order to make a clear distinction between Objective 1 and Objective 2 regions in the three types of territory. This step reveals further interesting points.

Firstly, whereas Objective 1 accounts for 66 per cent of EU regional support (ERDF+CF), it represents 75 per cent in mountainous and 71 per cent in sparsely populated regions as well as significant 90 per cent in islands. In the latter case, less than 2 per cent of the funding was committed to Objective 2. All in all, this indicates the relatively lower level of socio-economic performance within and between these three types of territory.

[23] The population data for the three territories is taken from Montfort (2009). However, there are limitations since it includes Romania and Bulgaria, which were no beneficiaries in the 2000-2006 programming period as well outermost regions which are out of the scope of this Study.

Secondly, interestingly, the share of Cohesion Funds transferred to islands and moutainous regions is lower than the EU average. At the EU level, these funding commitments amounted to 20 per cent of the total amount for the 2000-06 period (ca. over 30 billion Euros) whereas the table shows 16 per cent for mountainous regions, 8 per cent for islands and almost 22 per cent for the sparsely populated areas.

Thirdly, in regard to the Cohesion Fund distribution at the European level the investments are largely in the area of basic infrastructure, followed by productive investments: within the basic infrastructure expenditure (approx. 30 billion Euros) slightly below half of the financial support was partioned to transport infrastructure and the rest to environmental infrastructure. Similar commitments were made in mountainous regions, whereas in regard to islands the focus was almost entirely on environmental infrastructure. Interestingly, the contrary was the case for sparsely populated regions as a relatively higher proportaion (37.8 per cent) was committed to productive investments.

Table 7: Comparison of ERDF and CF commitments in islands, mountainous and sparsely populated regions

	In '000 Euros				In % of the total			
	Cohesion funds	**Objective 1**	**Objective 2**	**Total**	**Cohesion funds**	**Objective 1**	**Objective 2**	**Total**
Total (All EU regions)	**30.772.715**	**100.464.657**	**21.080.504**	**152.317.875**	**20,2%**	**66,0%**	**13,8%**	**100,0%**
Total 1 Productive environment	-	*32.924.760*	*12.538.937*	*45.463.696*	*0,0%*	*21,6%*	*8,2%*	*29,8%*
Total 2 Human resources	-	*2.373.934*	*564.944*	*2.938.879*	*0,0%*	*1,6%*	*0,4%*	*1,9%*
Total 3 Basic infrastructures	*30.634.214*	*63.496.840*	*7.498.024*	*101.629.078*	*20,1%*	*41,7%*	*4,9%*	*66,7%*
Total 4 Technical Assistance	*138.501*	*1.669.123*	*478.599*	*2.286.222*	*0,1%*	*1,1%*	*0,3%*	*1,5%*
Total (All EU NUTS3 Mountain regions)	**3.532.089**	**16.011.872**	**1.843.884**	**21.387.845**	**16,5%**	**74,9%**	**8,6%**	**100,0%**
Total 1 Productive environment	-	*5.219.941*	*1.090.025*	*6.309.966*	*0,0%*	*24,4%*	*5,1%*	*29,5%*
Total 2 Human ressources	-	*166.855*	*24.108*	*190.963*	*0,0%*	*0,8%*	*0,1%*	*0,9%*
Total 3 Basic infrastucture	*3.522.032*	*10.345.231*	*688.777*	*14.556.041*	*16,5%*	*48,4%*	*3,2%*	*68,1%*
Total 4 Technical Assistance	*10.057*	*279.845*	*40.974*	*330.875*	*0,0%*	*1,3%*	*0,2%*	*1,5%*
Total (All EU NUTS 3 Islands regions except OMR)	**672.012**	**7.996.507**	**148.624**	**8.817.143**	**7,6%**	**90,7%**	**1,7%**	**100,0%**
Total 1 Productive environment	-	*2.732.170*	*75.863*	*2.808.033*	*0,0%*	*31,0%*	*0,9%*	*31,8%*
Total 2 Human ressources	-	*26.953*	*2.973*	*29.927*	*0,0%*	*0,3%*	*0,0%*	*0,3%*
Total 3 Basic infrastucture	*671.951*	*5.042.713*	*67.329*	*5.781.993*	*7,6%*	*57,2%*	*0,8%*	*65,6%*
Total 4 Technical Assistance	*61*	*194.671*	*2.459*	*197.191*	*0,0%*	*2,2%*	*0,0%*	*2,2%*
Total (All EU NUTS3 sparsely populated regions)	**341.255**	**1.130.144**	**107.519**	**1.578.918**	**21,6%**	**71,6%**	**6,8%**	**100,0%**
Total 1 Productive environment	-	*547.904*	*49.242*	*597.146*	*0,0%*	*34,7%*	*3,1%*	*37,8%*
Total 2 Human ressources	-	*23.462*	-	*23.462*	*0,0%*	*1,5%*	*0,0%*	*1,5%*
Total 3 Basic infrastucture	*341.255*	*541.499*	*56.774*	*939.528*	*21,6%*	*34,3%*	*3,6%*	*59,5%*
Total 4 Technical Assistance	-	*17.279*	*1.503*	*18.782*	*0,0%*	*1,1%*	*0,1%*	*1,2%*

Source: SWECO database, 2000-06 period

The next section refines the analysis further by focusing on specific fields of interventions.

Question 3: What are the differences between fields of intervention for Objective 1 and 2, between islands, mountainous and sparsely populated regions

This part of the analysis focuses on the different fields of intervention (FOI) for Objective 1 and 2. The aim is to explore the extent to which commonalities are apparent between the three types of territory (see Table 8) as well as to look at the differences and similarities of Objective 1 and 2 regions more generally. In this regard, it is important to recognise the differences in the types of intervention eligible in Objective 1 and 2; clearly, there are dissimilarities between them, although, as discussed earlier, the majority of the regions are actually eligible for Objective 1. In addition, Table 9 provides data from the current programming period for the three types of territories.

Firstly, for Objective 1 regions, the main FOI's are respectively *Transport Infrastructure, Environmental Infrastructure, Planning and Rehabilitation* as well as *Assisting SMEs and crafting Sector.* These four combined make up over 70 per cent of the commitments for 2000-2006. There are some differences worth noting, however, in comparison to the three territory types:

- Both the islands, and especially the sparsely populated regions, invest proportionally more than the average of the other Objective 1 regions in the *productive environment* than in *basic infrastructure*;
- Compared to Objective 1 regions generally, the three territories invest relatively more in the FOIs *Assisting SMEs and crafting sector, Tourism* and *Telecommunication and Information society;*
- Overall, the FOI profile for mountainous regions is the closest to the Objective 1 profile for all regions. The islands are slightly different in that *Planning and Rehabilitation* as well as *energy infrastructures* are relatively more important whilst less was committed to *transport infrastructure.* The sparsely populated regions are characterised by proportionately more commitments in the field of *RTDI* and *transport infrastructure.*

Secondly, for the Objective 2 regions, in general, the main FOI's are respectively *Assisting SMEs and crafting sector* (31 per cent), *Planning and rehabilitation* (17 per cent), tourism (10 per cent) and RTDI (10 per cent). The points of relevance are:

- Unlike the situation in Objective 1, the islands, and especially the sparsely populated regions in Objective 2 region invest proportionally more than the average than for other Objective 2 regions in the *basic infrastructure* than in *productive environment.*
- Certain FOIs were proportionally more important in terms of commitments for the three territories compared to Objective 2 regions in general. These were:
  - Environmental infrastructures (between 10 to 22 per cent compared to 5 per cent for all Objective 2 regions);
  - Assisting large business organisation (between 7 to 16 per cent compared to 5 per cent for all Objective 2 regions);

  - Telecommunication infrastructures (between 3 to 12 per cent compared to 2,9 per cent for all Objective 2 regions).
- Conversely, other certain other FOIs were proportionately less important in the three territories compared to Objective 2 regions generally. These were:
  - Assisting SMEs and the craft sector (between 12 to 27 per cent compared to 31 per cent for all Objective 2 regions);
  - Planning and rehabilitation (between 6 to 14 per cent compared to 17 per cent for all Objective 2 regions).

- In the mountainous regions, there were relatively higher commitments made in tourism (16 per cent compared to 10 per cent) and energy infrastructures (2 per cent compared to 0.8 per cent) ;
- For the islands, interestingly, tourism was relatively less important compared to Objective 2 in general with only 5 per cent compared to 10 per cent. Similarly, transport infrastructure was relatively less - 4.6 per cent compared to 7.7 per cent ;
- In the sparsely populated regions, relatively higher commitments were made in *social and public health infrastructure* (9 per cent compared to only 1.9 per cent in Objective 2 regions in general).

In summary, there are certain similarities in the ways in which the funds are committed both within Objective 1 and between Objective 1 and 2 for the three types of territory. For example, in Objective 1 there is less support in the three territories for *Assisting large Business organisation* whilst proportionally more for A*ssisting SMEs and Craft sector* compared to Objective 1 regions in general. Clearly, this is linked to the territorial and geographical context of the three territories which are different than the others. Furthermore, the territorial variable is relevant in explaining the relative differences in other FOIs such as *Tourism, RTDI, Energy Infrastructure, Environmental infrastructure, Planning and Rehabilitation and Social and public health infrastructure.*

Table 8: Comparison of ERDF and CF commitments by fields of intervention in islands, mountainous and sparsely populated regions

share (in %) by fields of intervention	EU	EU	EU	EU	EU	EU	EU	EU
Types of regions		Mountains	Islands	Sparsely populated		Mountains	Islands	Sparsely populated
Eligibility of region	Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 2	Obj. 2	Obj. 2	Obj. 2
Fields of intervention		**M**	**I**	**SP**		**M**	**I**	**SP**
11 Agriculture	0,1%	0,1%		0,9%	0,2%	0,0%		
12 Forestry	0,0%				0,1%	0,0%		
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,0%	0,7%	2,5%	2,1%	5,5%	
14 Fisheries	0,1%	0,2%	0,4%		0,0%	0,0%		
15 Assisting large business organisations	5,8%	4,8%	3,5%	3,4%	5,1%	12,9%	16,4%	7,0%
16 Assisting SMEs and the craft sector	9,6%	12,6%	16,1%	19,2%	31,2%	18,2%	12,7%	27,1%
17 Tourism	2,9%	4,5%	7,7%	3,7%	10,2%	15,9%	5,0%	10,4%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	3,7%	9,3%	10,1%	10,0%	11,5%	1,2%
21 Labour market policy	0,1%	0,0%	0,0%		0,1%			
22 Social inclusion	0,1%	0,0%	0,0%	0,0%	0,7%	0,1%		
23 Developing education and vocational training	1,5%	0,8%	0,3%	1,6%	1,4%	0,6%	2,0%	
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%			0,4%	0,6%		
25 Positive labour market actions for women					0,1%			
31 Transport infrastructure	34,0%	33,6%	22,9%	39,1%	7,7%	6,0%	4,6%	8,6%
32 Telecommunication infrastructure and information society	3,2%	3,9%	5,0%	4,9%	2,9%	3,0%	6,0%	12,3%
33 Energy infrastructure	1,0%	1,0%	1,7%	0,3%	0,8%	1,9%	0,5%	1,1%
34 Environmental infrastructure	19,3%	17,3%	17,0%	8,2%	5,2%	10,6%	22,6%	15,2%
35 Planning and rehabilitation	10,1%	10,7%	15,1%	5,8%	17,0%	14,6%	8,7%	6,5%
36 Social and public health infrastructure	4,2%	4,6%	4,2%	1,7%	1,9%	1,1%	2,9%	9,1%
41 Technical Assistance and innovative actions	1,4%	1,5%	2,2%	1,2%	2,3%	2,2%	1,7%	1,4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Total 1 Productive environment	*25,1%*	*26,7%*	*31,5%*	*37,2%*	*59,5%*	*59,1%*	*51,0%*	*45,8%*
Total 2 Human resources	*1,8%*	*0,9%*	*0,3%*	*1,6%*	*2,7%*	*1,3%*	*2,0%*	
Total 3 Basic infrastructure	*71,7%*	*71,0%*	*65,9%*	*60,0%*	*35,6%*	*37,4%*	*45,3%*	*52,8%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*2,2%*	*1,2%*	*2,3%*	*2,2%*	*1,7%*	*1,4%*

Note : significantly more, more , equal, less, significantly less in comparison to corresponding average Objective 1 or Objective 2 regions.
Source: SWECO database, 2000-06 period

Table 9: ERDF Annual Implementation Reports, 2009

Economic vs. Territory (EU 27 + CB)	Mountains		Islands		Sparsely and very sparsely populated areas		Total
00. Not applicable	1.714.582	0,0%	46.177.707	0,2%	213.434.948	0,8%	**27.093.539.078**
01. Agriculture, hunting and forestry	1.446.722	0,7%	1.164.790	0,6%	2.202.827	1,1%	**205.832.345**
02. Fishing			589.645	6,2%	0	0,0%	**9.535.837**
03. Manufacture of food products and beverages	591.408	0,2%	623.700	0,2%	3.067.978	1,0%	**295.929.957**
04. Manufacture of textiles and textile products	607.195	0,5%	658.970	0,5%	110.361	0,1%	**133.889.401**
05. Manufacture of transport equipment	35.500	0,0%	952.926	0,3%	192.698	0,1%	**362.199.690**
06. Unspecified manufacturing industries	10.043.416	0,2%	34.509.816	0,7%	19.695.281	0,4%	**5.193.153.608**
07. Mining and quarrying of energy producing materials	88.181	0,2%	212.630	0,6%	530.162	1,5%	**35.590.696**
08. Electricity, gas, steam and hot water supply	3.471.137	0,9%	23.828.932	6,4%	1.403.390	0,4%	**374.034.123**
09. Collection, purification and distribution of water	13.547.486	0,4%	63.917.897	1,9%	56.698.423	1,7%	**3.414.430.753**
10. Post and telecommunications	1.762.809	0,6%	9.432.566	2,9%	2.834.171	0,9%	**319.800.151**
11. Transport	68.367.196	0,7%	145.603.307	1,4%	1.007.721.123	9,9%	**10.206.605.280**
12. Construction	30.641.261	0,4%	53.490.566	0,8%	18.408.975	0,3%	**7.091.419.998**
13. Wholesale and retail trade	186.557	0,0%	1.161.987	0,1%	3.631.528	0,5%	**775.796.427**
14. Hotels and restaurants	6.910.618	0,8%	12.351.145	1,4%	15.129.242	1,7%	**884.686.869**
15. Financial intermediation			8.084.398	0,6%	0	0,0%	**1.443.966.229**
16. Real estate, renting and business activities	1.388.022	0,1%	2.168.257	0,2%	3.722.659	0,3%	**1.217.824.686**
17. Public administration	33.728.861	0,4%	54.167.848	0,7%	58.977.670	0,7%	**8.179.106.151**
18. Education	13.465.411	0,2%	92.432.056	1,1%	38.336.856	0,5%	**8.223.669.537**
19. Human health activities	504.047	0,0%	51.249.058	2,2%	8.035.334	0,3%	**2.363.175.123**
20. Social work, community, social and personal services	22.813.975	1,1%	26.564.229	1,3%	6.286.852	0,3%	**2.012.939.924**
21. Activities linked to the environment	44.629.543	1,0%	71.583.620	1,5%	138.929.003	3,0%	**4.658.225.380**
22. Other unspecified services	75.333.278	1,0%	203.440.340	2,7%	46.850.162	0,6%	**7.543.468.563**
Total	**331.277.205**	**0,4%**	**904.366.390**	**1,0%**	**1.646.199.643**	**1,8%**	**92.038.819.806**

Source: European Commission, DG Regio, 2011

Having analysed the role of ERDF and the CF in the three territory types, the next section turns to the choice of 15 regions that has been made for further analysis under Task 2.

7. Final list of proposed 15 regions to be analyzed under Task 2

Building on the analysis carried out in the previous section, the aim here is to select regions that are representative of some of the different issues relating both to ERDF as well as those listed in the earlier sections of this Report relating to 'assets' and 'obstacles'. Given the real diversity within the three respective types of territory, it is not feasible to choose a definitive sample of 15 regions that are 'representative'. In other words, there is no 'typical' type of island, mountain or sparsely populated region. As will be discussed further in the following sections, the selection has been made based on several criteria in order to establish a list of regions that provides an interesting mix of different aspects both of geographical specificity as well as the ways in which ERDF and the CF have been utilised.

7.1 Initial selection methodology and proposal of preselected 15 regions

As detailed in the Inception Report, we initially considered that any proposal for the list of 15 regions should:

(i) include both Objective 1/Convergence and Objective 2/Regional Competitiveness and Employment regions,

(ii) be equally representative of the three categories of region, i.e. five regions of each type (island, mountainous and sparsely populated areas),

(iii) be established at NUTS2 level given data availability constraints, while keeping in mind that analysis of case studies under Task 3 is to be undertaken at NUTS3 level as many of these areas cover only some part of the territory of NUTS2 regions (see the tentative list of regions annexed to the tender specifications[24]).

(iv) include as far as possible at least one NUTS2 region for each Member State covered in the list of NUTS3 regions annexed to the tender specifications;

(v) preferably comprise NUTS2 regions that include several NUTS3 regions as listed in the annex so as allow for intra-NUTS2 comparisons;

(vi) take into account data availability.

Next, in order to develop a rigorous approach, the criteria of relative growth performance of all listed NUTS3 regions with respect to the growth performance of the NUTS2 regions to which they respectively belong was used. The idea was to observe, through time, the *relative* performances of NUTS3 regions, taking their respective NUTS2 (broader) region as a benchmark, so as to capture regional growth trend *singularities* at the NUTS3 level, while roughly controlling for national convergence (or divergence) effects.

[24] More precisely it was made of around 200 NUTS 3 regions, including more than 150 mountainous ones, around 40 island and 14 sparsely populated ones.

After some statistical analysis was carried out (see the Inception Report), a typology of NUTS2 regions was developed with four main categories, all to be represented in the list of 15 regions in a balanced way:

1. NUTS2 regions with NUTS3 regions with growth performance mostly higher from their NUTS2 one[25].
2. NUTS2 regions with NUTS3 regions with growth performance mostly lower from their NUTS2 one[26].
3. NUTS2 regions with NUTS3 regions with growth performance mostly similar to their NUTS2 one[27].
4. NUTS2 regions with NUTS3 regions with growth performance mostly dispersed around their NUTS2 one[28].

Note also that the requirement to have 5 regions of each type (island, mountainous and sparsely populated areas) did limit the possible choices, when taken into account alongside the other above-mentioned criteria; however this was also eased by the fact that several regions belong to more than one geographical category i.e. there is substantial overlap between the three of them. Table 9 below recalls the initial *pre-selection* of 15 regions as proposed in our Inception Report.

Table 10: Overview of the 15 initially preselected regions

REGION CODE	REGION (NUTS2) NAME	MS	GDP per capita 2007 (€)	index over EU27 average 2007 (24 900€)	Total Growth 99-07 (%)	Total Growth index	average annual growth rate 1999-07 (%)	geographical feature			Objective (2007-13)	Region relative growth trend
AT22	*Steiermark*	AT	28100	113	43%	143	4,6	**m**			RCE	
DE21	*Oberbayern*	DE	42000	169	32%	132	3,5	**m**			RCE	
ES42	*Castilla la Mancha*	ES	18200	73	78%	178	7,5	m		**s**	CONV	
ES53	*Balearic Islands*	ES	25400	102	69%	169	6,8		**i**		RCE	
FI13	*Itä-Suomi*	FI	25600	103	71%	171	6,9	**m**		**s**	phasing in	
FR83	*Corse*	FR	23200	93	56%	156	5,7	**m**	**i**		RCE	
GR22	*Ionia Nisia*	GR	16100	65	85%	185	8,0	**m**	**i**		CONV	
GR24	*Sterea Ellada*	GR	18300	73	16%	116	1,9	m	i	**s**	phasing in	
ITG2	*Sardegna*	IT	19700	79	55%	155	5,6	**m**	**i**		phasing in	
PL22	*Śląskie*	PL	8700	35	98%	198	8,9	**m**			CONV	
PT16	*Centro (P)*	PT	13100	53	66%	166	6,5	**m**			CONV	
SE21	*Småland med öarna*	SE	32400	130	41%	141	4,4		**i**		RCE	
SE33	*Övre Norrland*	SE	33900	136	49%	149	5,1	m		**s**	RCE	
SI01	*Vzhodna Slovenija*	SI	14100	57	101%	201	9,1	**m**			CONV	
UKM6	Highlands and Islands	UK	25000	100	49%	149,34	5,1		i	**s**	phasing out	

Source: Eurostat

NB: Colours are blue, red, green and grey for respectively dispersed, lower, better and similar relative growth performances of regions at NUTS3 level (as compared to their respective NUTS2)

25 Meaning: NUTS2 regions having mainly extremely good relative performers at NUTS3 level.
26 Meaning: NUTS2 regions having mainly least well relative performers at NUTS3 level.
27 Meaning: NUTS2 regions having mainly non extreme cases, i.e.NUTS3 regions showing a growth trend close to their NUTS2 region one.
28 Meaning: NUTS2 regions having a relatively balanced number of both extremely good AND least well relative performers.

7.2 Further methodological steps towards the final proposal of 15 regions

In parallel to the Literature Review, we revisited the above mentioned preselecting 15 regions with a view to double checking if this list was the most relevant one, (i) given the Study objective and needs and (ii) comparing the respective merits of the 15 regions already in the pre-selection vis-a-vis a few other candidates, without endangering the overall balance achieved in the first proposal (in terms of criteria fulfillment).

This exercise was carried out building on several elements; some well informed advice from the Steering Group (see below); input from the team of national experts and some additional analysis of individual regions.

Nine additional regions were thus considered: PL51 Dolnośląskie, GR 41 Voreio Aigaio, GR42 Notio Aigaio, FR72 Auvergne, FR71 Rhône-Alpes, FR62 Midi-Pyrénées, DK01 Hovedstaden, SK03 Stredné Slovensko, ITG1 Sicilia. These additional candidates were chosen either from the advice from the Steering Group advice or from our initial work on the preselection.

Several elements were considered:

- the relative availability and reliability of data, with more scrutiny as initially done in the previous stages - additional socio-economic data (mainly from Eurostat) was looked at and collected (employment rate, population, etc.);
- an analysis of the Community measures implemented through ERDF/Cohesion Fund in each region or in a group of regions;

The Steering Group also asked the Study Team to consider the fact that the proposed regions AT Steiermark and SI Vzhodna Slovenija were two neighbouring regions with very similar characteristics. After giving due consideration and thought to this, the Team was of the belief that this should not be seen as a problem, since these two neighbouring regions differ in their other characteristics: as respectively for income level and Community objective, Steiermark is 28.000 Euros per capita in 2007 (113 per cent of the EU average) and thus a Regional Competitiveness and Employment region region, whereas Vzhodna Slovenija's income was only 14.100 Euros (57 per cent of the EU average) and thus a Convergence region. Then, whereas in Steiermark was classified (see above) as a 'blue' region meaning that economic performance observable at the level of its NUTS3 regions (with specific geographical features) is rather dispersed, the Vzhodna Slovenija's case is red i.e. the NUTS3 level performs less well compared to the NUTS2. Actually, the fact that these two regions are neighbouring (and thus probably sharing similar geographical characteristics) might certainly prove interesting and helpful for the Study, raising some interesting comparative about the role of ERDF and the CF.

The two neighbouring French mountainous regions (FR72 Auvergne, FR71 Rhône-Alpes) each provide interesting, as well as contrasting cases, for further analysis. Both were eligible for Objective 2 in the previous programme and are currently eligible for support under the

Regional Competitiveness and Employment Objective. However, there are interesting differences between them as well. On the one hand, Auvergne performs relatively less well in terms of GDP compared with the EU average (a figure of 92 compared to 100) whilst Rhône-Alpes performs much better (with a figure of 120). Interestingly, however, the latter has relatively more internal varianace in terms of economic performance between the four respective NUTS3 areas that are classified as mountainous regions for the purposes of this Study. For example, Ardèche's GDP per capita in 2007 was just over 20,000 whilst Savoie's was over 32,000. Conversely, Auvergne has three NUTS3 areas classified as mountainous within the context of the Study and there is actually much less variation between them and also their economic performance is broadly in line with that of the region at NUTS2 level. The contrast in socio-economic performance in Rhône-Alpes is therefore interesting in the context of this Study in order to try to analyse the reasons for such internal differences; exploring the ways in which ERDF is used differently (or not) within and between the region as well as other differences such as governance and policy strategies at the local level. For this reason, Rhône-Alpes was selected instead of Auvergne in the final list of 15; the next section provides more details on this selection for Task 2.

7.3 Final proposal of selected 15 regions

Four modifications were proposed in the choice of 15 regions, these are listed below:

- The Greek island region of Ionia Nisia (GR22) is replaced by the other Greek island region Voreio Aigaio (GR41);
- The high income mountainous Oberbayern region (DE21) is replaced by the French Rhône-Alpes region (FR71);
- The Italian island Sardegna (ITG2) having been considered too similar to Corse is replaced by the Italian island region Sicilia (ITG1);
- The Nordic island region Smaland med öarma (SE21) is replaced by another Nordic island region, Hovestaden (DK01), comprising of Bornholm.

Table 10 below outlines the Team's final proposal for the selection of 15 regions to be submitted to the Steering Group for their final inclusion under Task 2. Then, Map 2 locates the different regions across the EU.

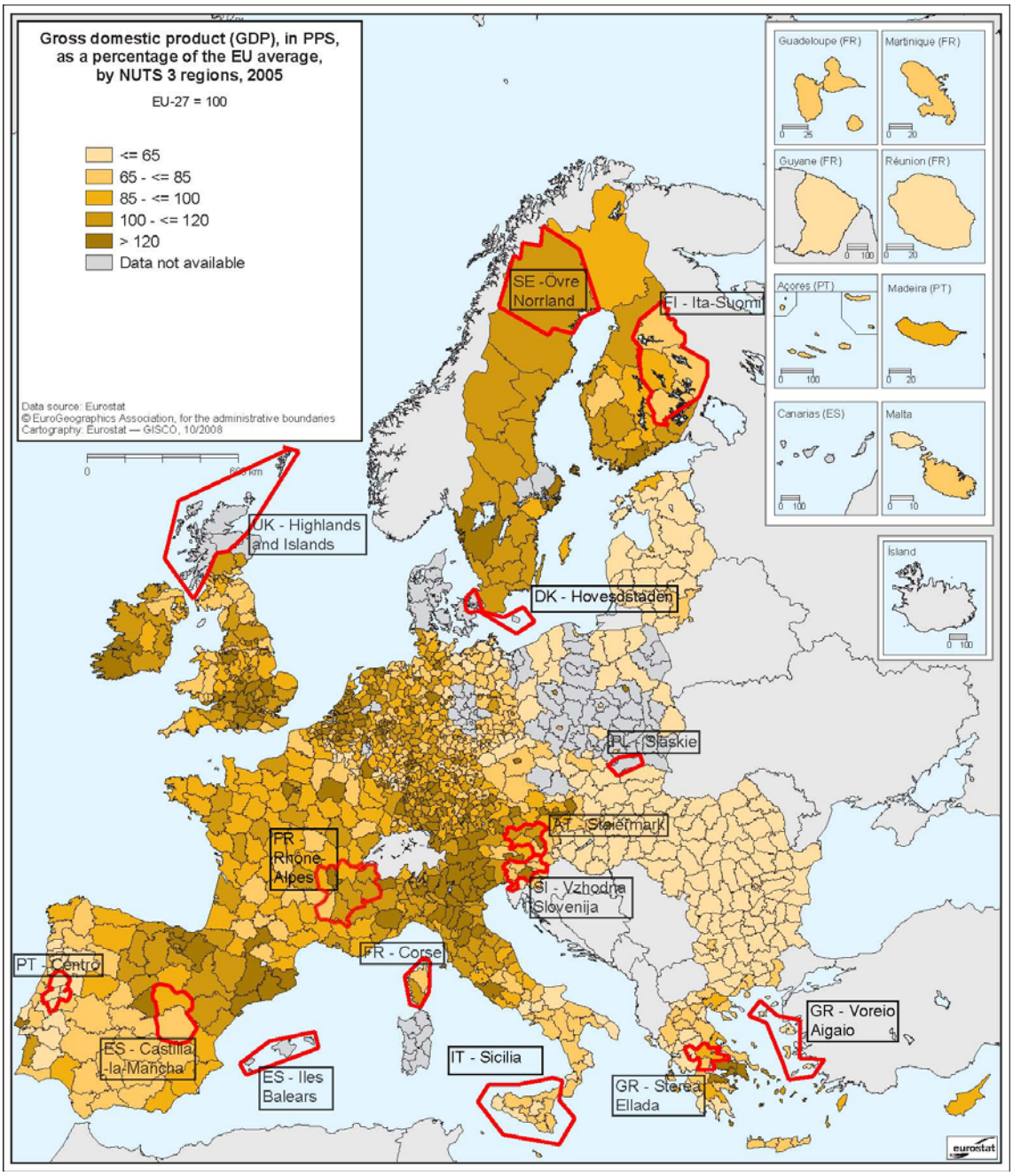
Table 11: Overview of the 15 selected regions

REGION CODE	REGION (NUTS2) NAME	MS	GDP per capita PPS 2007 (€)	GDP per capita PPS index EU (2007)	Total Growth 99-07 (%)	Total Population (Mil.)	Employment rate % (15-64 years)	Nbre of NUTS3 specific geo. Features	geographical feature			Region relative growth trend
AT22	*Steiermark*	AT	26400	106.1	34%	1.2	70.9	5	**m**			
FR71	*Rhône-Alpes*	FR	30000	120	30%	6.1	64.8	4	**m**			
ES42	*Castilla-la Mancha*	ES	20800	81.5	58%	2.0	57.8	2	m		**s**	
ES53	*Balearic Islands*	ES	28400	113.8	41%	1.0	63.0	3		**i**		
FI13	*Itä-Suomi*	FI	22100	88.8	49%	0.7	61.8	3	**m**		**s**	
FR83	*Corse*	FR	21100	84.6	34%	0.3	56.9	2	**m**	**i**		
ITG1	*Sicilia*	IT	16400	66	34%	5.0	43.5	9	**m**	**i**		
GR24	*Sterea Ellada*	GR	20900	83.9	9%	0.6	58.8	3	m		**s**	
GR41	*Voreio Aigaio*	GR	16600	66.6	30%	0.2	58.6	3		**i**		
PL22	*Śląskie*	PL	14400	57.8	98%	4.7	57.5	1	**m**			
PT16	*Centro (P)*	PT	16100	64.4	38%	2.4	69.9	6	**m**			
DK01	*Hovedstaden*	DK	37400	150.3	27%	1.6	77.4	1		**i**		
SE33	*Övre Norrland*	SE	28700	115.1	44%	0.5	70.1	1	m		**s**	
SI01	*Vzhodna Slovenija*	SI	18200	73.1	60%	1.1	66.4	4	**m**			
UKM6	Highlands and Islands	UK	21700	87.2	42%	0.4	73.7	5	m	i	**s**	

Source: Eurostat

NB: Colours are blue, red, green and grey for respectively dispersed, lower, better and similar relative growth performances of regions at NUTS3 level (as compared to their respective NUTS2)

Map 2: Map to show the location of the 15 selected regions



This selection includes:

- 5 island, 5 mountainous and 5 sparsely populated regions;
- 6 convergence, 6 regional competitiveness and employment, 1 phasing out and 2 phasing in regions;
- a relatively balanced sample with regard to NUTS3 regions growth performance (in relation to their respective NUTS2 region).

Regions from twelve Member States are represented, as was already the case in the initial pre-selection, with one slight difference: the Bulgarian, Czech, Romanian and Slovakian regions are still out for the same reasons; Germany is now also not part of the sample.

Some interesting facts regarding this final selection are:

- selected mountainous regions can be found in all sub-regions of Europe (East, North, South, Western European); selected island regions belong to mainly south Europe (Balearic Islands, Corse, Vorei Aigaio, Sicilia) but include also a Nordic one (Hovedstaden comprising of Bornholm), and a Western European one (Highlands and Islands in UK), although the latter was counted as a sparsely populated one in the sample. Selected sparsely populated regions belong to Nordic Countries (Finland, Sweden), two South European ones (Spain and Greece) and a Western Europe one (UK). Hence, the sample is also fairly balanced in terms of subregional coverage of each geographical category;
- Some NUTS2 regions are comprised of NUTS3 region that are all having specific geographical features (e.g. Balearic Island) while other NUTS2 regions have a limited part of their space under the category of areas with specific geographical features (e.g. Slaskie, Poland);
- A wide range of performance and characteristics is observed at the overall NUTS2 level in terms of GDP per capita, growth rate, employment rate and size of population;
- Some NUTS2 regions present strong within group income differences at NUTS3 level (e.g. Rhône-Alpes in France and Steiermark in Austria),
- Some NUTS2 regions are located in central parts of their Member State territory (e.g. Castilla La Mancha in Spain), while other ones are located on its periphery (e.g. Ovre Norrland in Sweden).

Having made the selection based on the described methodology, the next step was to combine it with an analysis of the respective ERDF and CF programmes in order to provide a more comprehensive picture of the range of issues to explore, as discussed in the next section.

7.4 The role of ERDF and CF in the 15 selected regions

It is important to analyse the role of ERDF and the CF in the 15 regions in order to explore the extent to ERDF interventions were or could be relevant in turning specific geographical handicaps into development assets. This work builds on the analysis of the SWECO database for the 2000-06 programming period, as discussed in Section 6. Again, it is important to point out that there the role of ERDF and the CF in the three territories really does vary both within and between the three territories so it is not possible to choose a 'typical' set. However, as this section shows, the 15 regions selected represent a range of interesting examples of the ways in which ERDF has been used, in regard to different intervention areas.

Prior to the analysis of the 15 regions individually, the Table 11 below provides a summary of the ERDF and CF profile of the whole group for the previous and current programming period.

Table 12: ERDF and CF profile at a glance of the 15 selected regions

REGION CODE	REGION (NUTS2) NAME	MS	Operational Programme at NUTS 2 level	ERDF and CF expenditures (2000-2006)	Objective 2007-2013
AT22	*Steiermark*	AT	Yes	Objective 2 (except in AT221 Graz : no fund)	RCE
FR71	*Rhône-Alpes*	FR	Yes	Objective 2	RCE
ES42	*Castilla la Mancha*	ES	Yes	Objective 1 - Cohesion funds	CONV
ES53	*Balearic Islands*	ES	Yes	Objective 1 - Cohesion funds	RCE
FI13	*Itä-Suomi*	FI	Yes	Objective 1	Phasing in
FR83	*Corse*	FR	Yes	Objective 1	RCE
ITG1	*Sicilia*	IT	Yes	Objective 1	CONV
GR24	*Sterea Ellada*	GR	OP 2007-2013 covers sevreal NUTS2 level regions	Objective 1 - Cohesion funds	Phasing in
GR41	*Voreio Aigaio*	GR	No: OP 2007-2013 covers sevreal NUTS2 level regions	Objective 1 - Cohesion funds	CONV
PL22	*Śląskie*	PL	Sectoral programmes	Objective 1 - Cohesion funds	CONV
PT16	*Centro (P)*	PT	Yes	Objective 1 - Cohesion funds	CONV
DK01	*Hovesdstaden*	DK	Only 1 national programme	Objective 2	RCE
SE33	*Övre Norrland*	SE	Yes	Objective 2	RCE
SI01	*Vzhodna Slovenija*	SI	Yes	Objective 1 - Cohesion funds	CONV
UKM6	Highlands and Islands	UK	Yes	Objective 1	Phasing out

Overall, as you can see, there are a range of interesting points of comparison that emerge, including. For example:

- Seven regions benefitted from the Cohesion Fund during the 2000-2006 programming period;
- There is a mix of regions implementing their Operational Programme at NUTS2 level (e.g. Steiermark), at higher level (e.g. Voreio Aigaio), through sectoral programmes (e.g. Slaskie) or through one national programme (e.g. Hovesdtaden in Denmark).
- The selection includes some regions which benefit from ERDF additional support as outlined in the ERDF Regulation (as discussed see Section 6) e.g. Corse (Disposition n°29), Ita-Suomi in Finland and Övre Norrland in Sweden (for parts of some of their NUTS3 regions, i.e. respectively Kainuu, Pohjois-Karjala, Etelä-Savo and Norbotten, alongside outermost regions, Disposition n°20).

Turning to the SWECO analysis of the 2000-06 period, the following Tables provide detailed information about the overall commitments for ERDF and CF for the 15 selected regions, at both NUTS2 and 3 level. The first one (Table 12) provides commitment figures in Euros and the second one (Table 13) provides percentage figures for the same information. Clearly, there are a range of programme sizes ranging from over 4 billion Euros in the Centro region of Portugal to 126 million Euros in Denmark, including 6 million Euros for the NUTS3 region of Bornholm.

Table 13: ERDF and CF 2000-2006 commitments of 15 selected regions (in €)

Nuts code	Region name	Objective	Types	Cohesion funds	Objective 1	Objective 2	Grand Total
AT22	**Steiermark**	**Obj. 2**		**-**	**-**	**196.260.033**	**196.260.033**
AT222	Liezen	Obj. 2	M-	-	-	26.456.700	26.456.700
AT223	Östliche Obersteierm	Obj. 2	M-	-	-	44.016.383	44.016.383
AT225	West- und Südsteierm	Obj. 2	M-	-	-	49.740.986	49.740.986
AT226	Westliche Obersteierı	Obj. 2	M-	-	-	15.986.532	15.986.532
DK00	**Danmark**	**Obj. 2**		**-**	**-**	**126.545.465**	**126.545.465**
DK007	Bornholm	Obj. 2	I	-	-	6.896.657	6.896.657
ES42	**Castilla-La Mancha**	**Obj. 1**		**708.417.844**	**1.884.459.785**	**-**	**2.592.877.629**
ES423	Cuenca	Obj. 1	SP	162.953.774	275.100.952	-	438.054.726
ES424	Guadalajara	Obj. 1	M-	76.825.659	167.208.354	-	244.034.013
ES53	**Illes Balears**	**Obj. 2**		**190.206.414**	**-**	**93.475.442**	**283.681.856**
ES530	Illes Balears	Obj. 2	I	190.206.414	-	93.475.442	283.681.856
FI13	**Itä-Suomi**	**Obj. 1**		**-**	**332.418.249**	**-**	**332.418.249**
FI131	Etelä-Savo	Obj. 1	SP	-	85.251.125	-	85.251.125
FI133	Pohjois-Karjala	Obj. 1	SP	-	81.748.283	-	81.748.283
FI134	Kainuu	Obj. 1	M-SP	-	42.948.989	-	42.948.989
FR71	**Rhône-Alpes**	**Obj. 2**		**-**	**-**	**343.037.386**	**343.037.386**
FR712	Ardèche	Obj. 2	M-	-	-	50.168.816	50.168.816
FR715	Loire	Obj. 2	M-	-	-	160.660.065	160.660.065
FR717	Savoie	Obj. 2	M-	-	-	31.131.031	31.131.031
FR718	Haute-Savoie	Obj. 2	M-	-	-	2.657.239	2.657.239
FR83	**Corse**	**Obj. 1**		**-**	**128.037.121**	**-**	**128.037.121**
FR831	Corse-du-Sud	Obj. 1	M-I	-	65.554.293	-	65.554.293
FR832	Haute-Corse	Obj. 1	M-I	-	62.482.828	-	62.482.828
GR24	**Στερεά Ελλάδα**	**Obj. 1**		**242.159.420**	**1.227.544.906**	**-**	**1.469.704.326**
GR243	Ευρυτανία	Obj. 1	M-SP	-	46.939.662	-	46.939.662
GR244	Φθιώτιδα	Obj. 1	M-	203.977.758	608.332.959	-	812.310.717
GR245	Φωκίδα	Obj. 1	M-	-	77.599.684	-	77.599.684
GR41	**Βόρειο Αιγαίο**	**Obj. 1**		**80.134.449**	**457.013.463**	**-**	**537.147.912**
GR411	Λέσβος	Obj. 1	I	64.713.249	237.949.591	-	302.662.840
GR412	Σάμος	Obj. 1	M-I	15.421.200	105.196.284	-	120.617.484
GR413	Χίος	Obj. 1	I	-	113.867.588	-	113.867.588
ITG1	**Sicilia**	**Obj. 1**		**-**	**3.483.358.276**	**-**	**3.483.358.276**
ITG12	Palermo	Obj. 1	I	-	878.206.100	-	878.206.100
ITG13	Messina	Obj. 1	M-I	-	751.400.059	-	751.400.059
ITG14	Agrigento	Obj. 1	M-I	-	312.023.316	-	312.023.316
ITG15	Caltanissetta	Obj. 1	M-I	-	163.716.586	-	163.716.586
ITG16	Enna	Obj. 1	M-I	-	133.257.109	-	133.257.109
ITG17	Catania	Obj. 1	I	-	710.274.164	-	710.274.164
ITG18	Ragusa	Obj. 1	I	-	177.945.358	-	177.945.358
ITG19	Siracusa	Obj. 1	I	-	356.535.584	-	356.535.584
PL22	**Śląskie**	**Obj. 1**		**1.114.357.997**	**437.406.224**	**-**	**1.551.764.221**
PL225	Bielski	Obj. 1	M-	85.027.216	62.730.233	-	147.757.449
PT16	**Centro (P)**	**Obj. 1**		**875.809.176**	**3.342.262.785**	**-**	**4.218.071.961**
PT164	Pinhal Interior Norte	Obj. 1	M-	75.310.934	200.582.950	-	275.893.884
PT165	Dâo-Lafões	Obj. 1	M-	113.604.760	361.278.679	-	474.883.439
PT166	Pinhal Interior Sul	Obj. 1	M-	39.431.424	96.147.703	-	135.579.127
PT167	Serra da Estrela	Obj. 1	M-	12.274.334	74.490.693	-	86.765.027
PT168	Beira Interior Norte	Obj. 1	M-	38.414.268	183.453.905	-	221.868.173
PT16A	Cova da Beira	Obj. 1	M-	13.020.194	133.491.992	-	146.512.186
SE33	**Övre Norrland**	**Obj. 1**		**-**	**257.128.377**	**-**	**257.128.377**
SE332	Norrbottens län	Obj. 1	SP	-	123.011.377	-	123.011.377
SI01	**Vzhodna Slovenija**	**Obj. 1**		**190.023.534**	**83.398.497**	**-**	**273.422.031**
SI013	Koroška	Obj. 1	M-	7.010.551	4.258.011	-	11.268.562
SI014	Savinjska	Obj. 1	M-	53.814.522	16.122.114	-	69.936.636
SI015	Zasavska	Obj. 1	M-	9.549.520	3.556.902	-	13.106.422
SI018	Notranjsko-kraška	Obj. 1	M-	2.022.721	5.320.705	-	7.343.426
UKM6	**Highlands and Islan**	**Obj. 1**		**-**	**190.101.341**	**-**	**190.101.341**
UKM61	Caithness & Sutherla	Obj. 1	SP	-	40.639.763	-	40.639.763
UKM63	Lochaber, Skye & Lo	Obj. 1	SP	-	52.562.159	-	52.562.159
UKM64	Eilean Siar (Western	Obj. 1	ISP	-	12.721.032	-	12.721.032
UKM65	Orkney Islands	Obj. 1	I	-	10.515.187	-	10.515.187
UKM66	Shetland Islands	Obj. 1	I	-	12.299.578	-	12.299.578
Grand Total				**1.163.578.498**	**6.846.721.851**	**481.189.851**	**8.491.490.200**

Source : SWECO database, 2000-06 period

Table 14: ERDF and CF 2000-2006 commitments of 15 selected regions (in % of total commitments, NUTS2 level)

Row Labels	Region name	Objective	Types	Cohesion fu	Objective 1	Objective 2	Grand Total
AT22	**Steiermark**	**Obj. 2**		**-**	**-**	**100%**	**100%**
AT222	Liezen	Obj. 2	M-	-	-	13%	13%
AT223	Östliche Obersteiermark	Obj. 2	M-	-	-	22%	22%
AT225	West- und Südsteiermark	Obj. 2	M-	-	-	25%	25%
AT226	Westliche Obersteiermark	Obj. 2	M-	-	-	8%	8%
DK00	**Danmark**	**Obj. 2**		**-**	**-**	**100%**	**100%**
DK007	Bornholm	Obj. 2	I	-	-	5%	5%
ES42	**Castilla-La Mancha**	**Obj. 1**		**27%**	**73%**	**-**	**100%**
ES423	Cuenca	Obj. 1	SP	6%	11%	-	17%
ES424	Guadalajara	Obj. 1	M-	3%	6%	-	9%
ES53	**Illes Balears**	**Obj. 2**		**67%**	**-**	**33%**	**100%**
ES530	Illes Balears	Obj. 2	I	67%	-	33%	100%
FI13	**Itä-Suomi**	**Obj. 1**		**-**	**100%**	**-**	**100%**
FI131	Etelä-Savo	Obj. 1	SP	-	26%	-	26%
FI133	Pohjois-Karjala	Obj. 1	SP	-	25%	-	25%
FI134	Kainuu	Obj. 1	M-SP	-	13%	-	13%
FR71	**Rhône-Alpes**	**Obj. 2**		**-**	**-**	**100%**	**100%**
FR712	Ardèche	Obj. 2	M-	-	-	15%	15%
FR715	Loire	Obj. 2	M-	-	-	47%	47%
FR717	Savoie	Obj. 2	M-	-	-	9%	9%
FR718	Haute-Savoie	Obj. 2	M-	-	-	1%	1%
FR83	**Corse**	**Obj. 1**		**-**	**100%**	**-**	**100%**
FR831	Corse-du-Sud	Obj. 1	M-I	-	51%	-	51%
FR832	Haute-Corse	Obj. 1	M-I	-	49%	-	49%
GR24	**Στερεά Ελλάδα**	**Obj. 1**		**16%**	**84%**	**-**	**100%**
GR243	Ευρυτανία	Obj. 1	M-SP	-	3%	-	3%
GR244	Φθιώτιδα	Obj. 1	M-	14%	41%	-	55%
GR245	Φωκίδα	Obj. 1	M-	-	5%	-	5%
GR41	**Βόρειο Αιγαίο**	**Obj. 1**		**15%**	**85%**	**-**	**100%**
GR411	Λέσβος	Obj. 1	I	12%	44%	-	56%
GR412	Σάμος	Obj. 1	M-I	3%	20%	-	22%
GR413	Χίος	Obj. 1	I	-	21%	-	21%
ITG1	**Sicilia**	**Obj. 1**		**-**	**100%**	**-**	**100%**
ITG12	Palermo	Obj. 1	I	-	25%	-	25%
ITG13	Messina	Obj. 1	M-I	-	22%	-	22%
ITG14	Agrigento	Obj. 1	M-I	-	9%	-	9%
ITG15	Caltanissetta	Obj. 1	M-I	-	5%	-	5%
ITG16	Enna	Obj. 1	M-I	-	4%	-	4%
ITG17	Catania	Obj. 1	I	-	20%	-	20%
ITG18	Ragusa	Obj. 1	I	-	5%	-	5%
ITG19	Siracusa	Obj. 1	I	-	10%	-	10%
PL22	**Śląskie**	**Obj. 1**		**72%**	**28%**	**-**	**100%**
PL225	Bielski	Obj. 1	M-	5%	4%	-	10%
PT16	**Centro (P)**	**Obj. 1**		**21%**	**79%**	**-**	**100%**
PT164	Pinhal Interior Norte	Obj. 1	M-	2%	5%	-	7%
PT165	Dâo-Lafões	Obj. 1	M-	3%	9%	-	11%
PT166	Pinhal Interior Sul	Obj. 1	M-	1%	2%	-	3%
PT167	Serra da Estrela	Obj. 1	M-	0%	2%	-	2%
PT168	Beira Interior Norte	Obj. 1	M-	1%	4%	-	5%
PT16A	Cova da Beira	Obj. 1	M-	0%	3%	-	3%
SE33	**Övre Norrland**	**Obj. 1**		**-**	**100%**	**-**	**100%**
SE332	Norrbottens län	Obj. 1	SP	-	48%	-	48%
SI01	**Vzhodna Slovenija**	**Obj. 1**		**69%**	**31%**	**-**	**100%**
SI013	Koroška	Obj. 1	M-	3%	2%	-	4%
SI014	Savinjska	Obj. 1	M-	20%	6%	-	26%
SI015	Zasavska	Obj. 1	M-	3%	1%	-	5%
SI018	Notranjsko-kraška	Obj. 1	M-	1%	2%	-	3%
UKM6	**Highlands and Islands**	**Obj. 1**		**-**	**100%**	**-**	**100%**
UKM61	Caithness & Sutherland a	Obj. 1	SP	-	21%	-	21%
UKM63	Lochaber, Skye & Lochals	Obj. 1	SP	-	28%	-	28%
UKM64	Eilean Siar (Western Isles	Obj. 1	ISP	-	7%	-	7%
UKM65	Orkney Islands	Obj. 1	I	-	6%	-	6%
UKM66	Shetland Islands	Obj. 1	I	-	6%	-	6%
Grand Total				**14%**	**81%**	**6%**	**100%**

Source : SWECO database, 2000-06 period

The following Tables provide an analysis of ERDF and CF commitments, 2000-06, by field of intervention, for each of the 15 selected regions (NUTS2 and 3), compared to the overall commitment at EU level and for type of territory. A summary of some of the key points of interest are highlighted as well. This analysis confirms the fact that the selection of the 15 regions for Task 2 incoporates some interesting points for comparison in terms of how the funds were committed in the previous period.

AT22 Steiermark (Austria)

- A mountainous region in EU15, Objective 2 region;
- Particularly significant investment in productive environment, similar to the Austrian average, which is much higher than the average for Objective 2 and Mountainous regions overall;
- Relatively larger investment in RTDI in the NUTS3 regions of AT223 and AT225; this is significantly higher than Austrian or EU average.

Territorial level (Nuts)	EU	EU	AT	AT22	AT222	AT223	AT225	AT226
Name		Mountains	Austria	Steiermark	Liezen	Östliche Obersteiermark	West- und Südsteiermark	Westliche Obersteiermark
Region eligibility	Obj. 2	Obj. 2		Obj. 2	Obj. 2	Obj. 2	Obj. 2	Obj. 2
Fields of intervention SGF		M			M-	M-	M-	M-
11 Agriculture	0,2%	0,0%		0,0%				
12 Forestry	0,1%	0,0%		0,0%				
13 Promoting the adaptation and the development of rural areas	2,5%	2,1%		0,0%				
14 Fisheries	0,0%	0,0%		0,0%				
15 Assisting large business organisations	5,1%	12,9%	18,8%	22,0%	37,2%	18,2%	16,4%	20,0%
16 Assisting SMEs and the craft sector	31,2%	18,2%	30,2%	27,2%	22,0%	23,7%	31,1%	41,0%
17 Tourism	10,2%	15,9%	24,0%	7,1%	14,5%	0,2%	7,9%	15,8%
18 Research, technological development and innovation (RTDI)	10,1%	10,0%	13,8%	27,0%	5,6%	48,6%	34,9%	13,8%
21 Labour market policy	0,1%			0,0%				
22 Social inclusion	0,7%	0,1%		0,0%				
23 Developing education and vocational training	1,4%	0,6%		0,0%				
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,4%	0,6%		0,0%				
25 Positive labour market actions for women	0,1%			0,0%				
31 Transport infrastructure	7,7%	6,0%	0,3%	0,0%				
32 Telecommunication infrastructure and information society	2,9%	3,0%	1,7%	1,3%	1,4%	0,7%	1,7%	2,2%
33 Energy infrastructure	0,8%	1,9%	3,1%	2,1%	0,5%	6,4%	0,6%	3,2%
34 Environmental infrastructure	5,2%	10,6%	4,5%	12,5%	13,4%	2,2%	7,4%	4,1%
35 Planning and rehabilitation	17,0%	14,6%	2,5%	0,0%				
36 Social and public health infrastructure	1,9%	1,1%	0,1%	0,0%				
41 Technical Assistance and innovative actions	2,3%	2,2%	1,0%	0,7%	5,4%			
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*59,5%*	*59,1%*	*86,8%*	*83,3%*	*79,4%*	*90,7%*	*90,3%*	*90,5%*
Total 2 Human ressources	*2,7%*	*1,3%*		*0,0%*				
Total 3 Basic infrastucture	*35,6%*	*37,4%*	*12,2%*	*16,0%*	*15,2%*	*9,3%*	*9,7%*	*9,5%*
Total 4 Technical Assistance	*2,3%*	*2,2%*	*1,0%*	*0,7%*	*5,4%*			

DK 014 Bornholm (Denmark)

- A small island in the north of Europe. Objective 2 region in EU 15
- Higher investment in basic infrastructure;
- Particularly significant investment in ICT;
- Higher commitments compared to average for islands in Assisting SMEs and craft sector and in transport.

Territorial level (Nuts)	EU	EU	DK	DK014
Name		Islands	Danmark	Bornholm
Region eligibility	Objective 2	Objective 2	Obj. 2	Obj. 2
Fields of intervention SGF		I		I
11 Agriculture	0,2%		0,0%	
12 Forestry	0,1%		0,0%	
13 Promoting the adaptation and the development of rural areas	2,5%	5,5%	4,1%	0,3%
14 Fisheries	0,0%		0,0%	
15 Assisting large business organisations	5,1%	16,4%	2,3%	1,6%
16 Assisting SMEs and the craft sector	31,2%	12,7%	28,6%	33,8%
17 Tourism	10,2%	5,0%	30,4%	1,6%
18 Research, technological development and innovation (RTDI)	10,1%	11,5%	14,6%	6,9%
21 Labour market policy	0,1%		0,0%	
22 Social inclusion	0,7%		0,0%	
23 Developing education and vocational training	1,4%	2,0%	0,0%	
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,4%		0,0%	
25 Positive labour market actions for women	0,1%		0,0%	
31 Transport infrastructure	7,7%	4,6%	7,4%	14,2%
32 Telecommunication infrastructure and information society	2,9%	6,0%	5,2%	33,3%
33 Energy infrastructure	0,8%	0,5%	0,2%	0,5%
34 Environmental infrastructure	5,2%	22,6%	0,0%	
35 Planning and rehabilitation	17,0%	8,7%	5,0%	4,2%
36 Social and public health infrastructure	1,9%	2,9%	0,0%	
41 Technical Assistance and innovative actions	2,3%	1,7%	2,0%	3,5%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*59,5%*	*51,0%*	*80,0%*	*44,3%*
Total 2 Human ressources	*2,7%*	*2,0%*	*0,0%*	
Total 3 Basic infrastucture	*35,6%*	*45,3%*	*17,9%*	*52,2%*
Total 4 Technical Assistance	*2,3%*	*1,7%*	*2,0%*	*3,5%*

ES 42 Castilla -la-Mancha (Spain)

- Two types of NUTS3 regions in Objective 1 region : 1 Sparsely populated (SP) and another Mountainous (M)
- High level of investment in basic infrastructure; similar to the Spainish and Objective 1 average, but with apparently 2 different strategies in the same region:
  - In SP, relatively more investment in transport infrastructure;
  - In M, High investment i n Environmental infrastructure;
- Very little spending on Tourism and Assisting SME and the craft sector.

Territorial level (Nuts)	EU	EU	EU	ES	ES42	ES423	ES424
Name		Mountains	Sparsely populated	Spain	Castilla-La Mancha	Cuenca	Guadalajara
Region eligibility	Obj. 1	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M	S			SP	M-
11 Agriculture	0,1%	0,1%	0,9%		0,0%		
12 Forestry	0,0%				0,0%		
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,7%	0,1%	0,4%	0,6%	0,7%
14 Fisheries	0,1%	0,2%			0,0%		
15 Assisting large business organisations	5,8%	4,8%	3,4%	10,2%	12,4%	7,1%	10,7%
16 Assisting SMEs and the craft sector	9,6%	12,6%	19,2%	0,1%	0,1%	0,0%	0,1%
17 Tourism	2,9%	4,5%	3,7%	0,2%	0,2%	0,1%	0,2%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	9,3%	7,9%	5,7%	2,6%	6,3%
21 Labour market policy	0,1%	0,0%			0,0%		
22 Social inclusion	0,1%	0,0%	0,0%		0,0%		
23 Developing education and vocational training	1,5%	0,8%	1,6%	2,3%	3,7%	3,0%	8,4%
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%			0,0%		
25 Positive labour market actions for women					0,0%		
31 Transport infrastructure	34,0%	33,6%	39,1%	33,5%	37,8%	66,0%	17,0%
32 Telecommunication infrastructure and information society	3,2%	3,9%	4,9%	0,7%	0,2%	0,3%	0,3%
33 Energy infrastructure	1,0%	1,0%	0,3%	0,2%	0,1%	0,0%	0,0%
34 Environmental infrastructure	19,3%	17,3%	8,2%	26,6%	27,7%	9,9%	42,2%
35 Planning and rehabilitation	10,1%	10,7%	5,8%	14,9%	9,1%	8,7%	12,4%
36 Social and public health infrastructure	4,2%	4,6%	1,7%	3,2%	2,5%	1,5%	1,1%
41 Technical Assistance and innovative actions	1,4%	1,5%	1,2%	0,2%	0,2%	0,2%	0,5%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*37,2%*	*18,5%*	*18,7%*	*10,4%*	*18,1%*
Total 2 Human ressources	*1,8%*	*0,9%*	*1,6%*	*2,3%*	*3,7%*	*3,0%*	*8,4%*
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*60,0%*	*79,0%*	*77,4%*	*86,4%*	*73,1%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*1,2%*	*0,2%*	*0,2%*	*0,2%*	*0,5%*

ES 53 : Iles Balears (Spain)

- Touristic Island in southern Europe. Objective 2 regions in EU 15.
- Relatively larger investment in basic infrastructures than all other reference territories (national, Objective 2 or EU Islands regions);
- Particularly significant investment (almost than 70 per cent) in environmental infrastructures.

Territorial level (Nuts)	EU	EU	ES	ES53	ES530
Name		Islands	Spain	Illes Balears	Illes Balears
Region eligibility	Objective 2	Objective 2		Obj. 2	Obj. 2
Fields of intervention SGF		I		I	I
11 Agriculture	0,2%			0,0%	
12 Forestry	0,1%			0,0%	
13 Promoting the adaptation and the development of rural areas	2,5%	5,5%	0,1%	0,0%	
14 Fisheries	0,0%			0,0%	
15 Assisting large business organisations	5,1%	16,4%	10,2%	8,6%	8,6%
16 Assisting SMEs and the craft sector	31,2%	12,7%	0,1%	0,0%	
17 Tourism	10,2%	5,0%	0,2%	0,0%	
18 Research, technological development and innovation (RTDI)	10,1%	11,5%	7,9%	5,1%	5,1%
21 Labour market policy	0,1%			0,0%	
22 Social inclusion	0,7%			0,0%	
23 Developing education and vocational training	1,4%	2,0%	2,3%	1,0%	1,0%
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,4%			0,0%	
25 Positive labour market actions for women	0,1%			0,0%	
31 Transport infrastructure	7,7%	4,6%	33,5%	10,9%	10,9%
32 Telecommunication infrastructure and information society	2,9%	6,0%	0,7%	0,5%	0,5%
33 Energy infrastructure	0,8%	0,5%	0,2%	0,2%	0,2%
34 Environmental infrastructure	5,2%	22,6%	26,6%	69,6%	69,6%
35 Planning and rehabilitation	17,0%	8,7%	14,9%	3,7%	3,7%
36 Social and public health infrastructure	1,9%	2,9%	3,2%	0,0%	
41 Technical Assistance and innovative actions	2,3%	1,7%	0,2%	0,3%	0,3%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*59,5%*	*51,0%*	*18,5%*	*13,6%*	*13,6%*
Total 2 Human ressources	*2,7%*	*2,0%*	*2,3%*	*1,0%*	*1,0%*
Total 3 Basic infrastucture	*35,6%*	*45,3%*	*79,0%*	*85,0%*	*85,0%*
Total 4 Technical Assistance	*2,3%*	*1,7%*	*0,2%*	*0,3%*	*0,3%*

FI13 : Itä-Suomi (Finland)

- Nordic sparsely populated (and mountainous) Objective 1 region;
- Particularly significant investment in productive environment, slightly above the Finnish average as well as higher than average of Objective 1, mountainous or other sparsely populated regions;
- Distinctive points:
    - Relatively larger investment in RTDI (25 per cent of total), significantly higher than all other reference territories;
    - Relatively larger investment in SMEs and craft sector (45 per cent of total)
    - Relatively larger investment in Telecommunication infrastructure and Information society (6.6 per cent of total).

Territorial level (Nuts)	EU	EU	EU	FI	FI13	FI131	FI133	FI134
Name		Mountains	Sparsely populated	Suomi	Itä-Suomi	Etelä-Savo	Pohjois-Karjala	Kainuu
Region eligibility	Obj. 1	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M	S			SP	SP	M-SP
11 Agriculture	0,1%	0,1%	0,9%	2,3%	0,0%			
12 Forestry	0,0%				0,0%			
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,7%		0,0%			
14 Fisheries	0,1%	0,2%			0,0%			
15 Assisting large business organisations	5,8%	4,8%	3,4%		0,0%			
16 Assisting SMEs and the craft sector	9,6%	12,6%	19,2%	44,5%	45,8%	40,6%	47,0%	46,4%
17 Tourism	2,9%	4,5%	3,7%	0,1%	0,0%			
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	9,3%	14,5%	24,8%	21,2%	26,4%	23,1%
21 Labour market policy	0,1%	0,0%			0,0%			
22 Social inclusion	0,1%	0,0%	0,0%		0,0%			
23 Developing education and vocational training	1,5%	0,8%	1,6%	8,7%	0,0%			
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%			0,0%			
25 Positive labour market actions for women					0,0%			
31 Transport infrastructure	34,0%	33,6%	39,1%	9,8%	14,1%	22,7%	8,4%	17,4%
32 Telecommunication infrastructure and information society	3,2%	3,9%	4,9%	5,5%	6,6%	9,9%	6,9%	0,4%
33 Energy infrastructure	1,0%	1,0%	0,3%		0,0%			
34 Environmental infrastructure	19,3%	17,3%	8,2%	6,7%	5,1%	3,0%	5,7%	6,9%
35 Planning and rehabilitation	10,1%	10,7%	5,8%	5,9%	1,7%	0,5%	3,9%	3,4%
36 Social and public health infrastructure	4,2%	4,6%	1,7%		0,0%			
41 Technical Assistance and innovative actions	1,4%	1,5%	1,2%	2,0%	1,9%	2,1%	1,8%	2,4%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*37,2%*	*61,3%*	*70,6%*	*61,8%*	*73,4%*	*69,5%*
Total 2 Human ressources	*1,8%*	*0,9%*	*1,6%*	*8,7%*	*0,0%*			
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*60,0%*	*27,9%*	*27,5%*	*36,1%*	*24,9%*	*28,1%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*1,2%*	*2,0%*	*1,9%*	*2,1%*	*1,8%*	*2,4%*

FR 71 : Rhône-Alpes (France)

- Alpine, Objective 2 Mountainous region with large contrasts between, on the one hand, very attractive regions in the Alps (i.e Savoie) and on the other hand, less favoured Massif central territories (i.e Ardèche, Loire);
- Contrasting strategies between:
    - Relatively larger investment in tourism, mainly in the Alps regions and the Ardèche;
    - Relatively high investment in planning and rehabilitation in the Ardèche and the Loire;
    - Relatively higher investment in Environmental infrastructures in the Alps regions and the Loire.

Territorial level (Nuts)	EU	EU	FR	FR71	FR712	FR715	FR717	FR718
Name		Mountains	France	Rhône-Alpes	Ardèche	Loire	Savoie	Haute-Savoie
Region eligibility	Objective 2	Objective 2		Obj. 2	Obj. 2	Obj. 2	Obj. 2	Obj. 2
Fields of intervention SGF		M			M-	M-	M-	M-
11 Agriculture	0,2%	0,0%	0,0%	0,0%				
12 Forestry	0,1%	0,0%	0,0%	0,0%				
13 Promoting the adaptation and the development of rural areas	2,5%	2,1%	3,4%	2,7%	0,7%	2,8%	9,8%	
14 Fisheries	0,0%	0,0%	0,1%	0,0%				
15 Assisting large business organisations	5,1%	12,9%	2,5%	0,5%			0,1%	
16 Assisting SMEs and the craft sector	31,2%	18,2%	14,5%	13,2%	12,7%	13,7%	11,6%	10,3%
17 Tourism	10,2%	15,9%	14,0%	25,1%	38,4%	18,9%	31,7%	53,2%
18 Research, technological development and innovation (RTDI)	10,1%	10,0%	7,0%	3,2%	1,4%	4,9%	2,2%	0,8%
21 Labour market policy	0,1%		0,0%	0,0%				
22 Social inclusion	0,7%	0,1%	0,5%	0,2%		0,0%	0,9%	
23 Developing education and vocational training	1,4%	0,6%	5,4%	1,1%	0,5%	1,9%	0,0%	0,0%
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,4%	0,6%	0,4%	0,0%	0,1%			
25 Positive labour market actions for women	0,1%		0,0%	0,0%				
31 Transport infrastructure	7,7%	6,0%	14,9%	0,0%				
32 Telecommunication infrastructure and information society	2,9%	3,0%	3,0%	2,5%	4,1%	1,8%	1,6%	0,1%
33 Energy infrastructure	0,8%	1,9%	1,4%	2,2%	1,6%	1,1%	3,2%	1,0%
34 Environmental infrastructure	5,2%	10,6%	7,8%	9,9%	3,4%	15,0%	16,6%	14,1%
35 Planning and rehabilitation	17,0%	14,6%	19,8%	35,6%	32,7%	38,1%	18,2%	18,6%
36 Social and public health infrastructure	1,9%	1,1%	2,9%	0,8%	0,3%		2,5%	
41 Technical Assistance and innovative actions	2,3%	2,2%	2,4%	2,9%	4,3%	1,8%	1,6%	1,9%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*59,5%*	*59,1%*	*41,5%*	*44,7%*	*53,2%*	*40,3%*	*55,5%*	*64,3%*
Total 2 Human ressources	*2,7%*	*1,3%*	*6,3%*	*1,3%*	*0,5%*	*2,0%*	*0,9%*	*0,0%*
Total 3 Basic infrastucture	*35,6%*	*37,4%*	*49,8%*	*51,1%*	*42,0%*	*56,0%*	*42,0%*	*33,8%*
Total 4 Technical Assistance	*2,3%*	*2,2%*	*2,4%*	*2,9%*	*4,3%*	*1,8%*	*1,6%*	*1,9%*

FR 83 : Corse (France)

- Mediterranean Objective 1 Island with Mountains;
- Relatively higher investment in Environmental infrastructures compared to all reference territories;
- Relatively higher investment in transport infrastructures in Corse du Sud compared to all reference territories.

Territorial level (Nuts)	EU	EU	EU	FR	FR83	FR831	FR832
Name		Mountains	Islands	France	Corse	Corse-du-Sud	Haute-Corse
Region eligibility	Obj. 1	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M	I			M-I	M-I
11 Agriculture	0,1%	0,1%		0,0%	0,0%		
12 Forestry	0,0%			0,0%	0,0%		
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,0%	3,4%	2,3%	1,4%	3,3%
14 Fisheries	0,1%	0,2%	0,4%	0,1%	0,0%		
15 Assisting large business organisations	5,8%	4,8%	3,5%	2,5%	0,0%		
16 Assisting SMEs and the craft sector	9,6%	12,6%	16,1%	14,5%	6,3%	4,7%	7,9%
17 Tourism	2,9%	4,5%	7,7%	14,0%	9,6%	11,2%	7,9%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	3,7%	7,0%	1,3%		2,7%
21 Labour market policy	0,1%	0,0%	0,0%	0,0%	0,0%		
22 Social inclusion	0,1%	0,0%	0,0%	0,5%	0,0%		
23 Developing education and vocational training	1,5%	0,8%	0,3%	5,4%	0,0%		
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%		0,4%	0,0%		
25 Positive labour market actions for women				0,0%	0,0%		
31 Transport infrastructure	34,0%	33,6%	22,9%	14,9%	31,9%	43,1%	20,2%
32 Telecommunication infrastructure and information society	3,2%	3,9%	5,0%	3,0%	5,2%	4,7%	5,7%
33 Energy infrastructure	1,0%	1,0%	1,7%	1,4%	1,2%	1,2%	1,3%
34 Environmental infrastructure	19,3%	17,3%	17,0%	7,8%	29,7%	23,0%	36,8%
35 Planning and rehabilitation	10,1%	10,7%	15,1%	19,8%	2,4%	4,0%	0,7%
36 Social and public health infrastructure	4,2%	4,6%	4,2%	2,9%	7,7%	2,1%	13,6%
41 Technical Assistance and innovative actions	1,4%	1,5%	2,2%	2,4%	2,4%	4,8%	
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*31,5%*	*41,5%*	*19,5%*	*17,3%*	*21,8%*
Total 2 Human ressources	*1,8%*	*0,9%*	*0,3%*	*6,3%*	*0,0%*		
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*65,9%*	*49,8%*	*78,1%*	*77,9%*	*78,2%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*2,2%*	*2,4%*	*2,4%*	*4,8%*	

GR 24 : Sterea Ellada (Στερεά Ελλάδα - Greece)

- Mountainous and sparsely populated Objective 1 region in southern Europe;
- Relatively larger investment in basic infrastructure compared to all other reference territories with some differences between different NUTS3 regions;
- Particularly significant investment (almost 70 per cent) in transport infrastructure in two NUTS3 regions (GR 244 and GR 243);
- Relatively higher investment in tourism (GR243 and GR245) and in Social and Public Health (GR 243).

Territorial level (Nuts)	EU	EU	EU	GR	GR24	GR243	GR244	GR245
Name		Mountains	Sparsely populated	Greece	Στερεά Ελλάδα	Ευρυτανία	Φθιώτιδα	Φωκίδα
Region eligibility	Obj. 1	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M	S			M-SP	M-	M-
11 Agriculture	0,1%	0,1%	0,9%		0,0%			
12 Forestry	0,0%				0,0%			
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,7%	0,0%	0,0%			
14 Fisheries	0,1%	0,2%		0,6%	1,2%		0,5%	0,6%
15 Assisting large business organisations	5,8%	4,8%	3,4%	1,2%	2,7%	1,1%	1,2%	0,5%
16 Assisting SMEs and the craft sector	9,6%	12,6%	19,2%	7,4%	8,7%	2,1%	2,3%	1,9%
17 Tourism	2,9%	4,5%	3,7%	2,8%	2,7%	5,6%	1,0%	10,0%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	9,3%	1,3%	0,2%		0,0%	0,1%
21 Labour market policy	0,1%	0,0%		0,1%	0,0%			0,1%
22 Social inclusion	0,1%	0,0%	0,0%	0,0%	0,0%	0,1%	0,0%	0,1%
23 Developing education and vocational training	1,5%	0,8%	1,6%	1,0%	0,5%	0,8%	0,3%	0,6%
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%		0,0%	0,0%			
25 Positive labour market actions for women					0,0%			
31 Transport infrastructure	34,0%	33,6%	39,1%	45,4%	61,5%	51,7%	81,2%	35,4%
32 Telecommunication infrastructure and information society	3,2%	3,9%	4,9%	8,2%	4,8%	11,6%	2,4%	12,5%
33 Energy infrastructure	1,0%	1,0%	0,3%	0,9%	0,7%		0,1%	0,7%
34 Environmental infrastructure	19,3%	17,3%	8,2%	13,5%	6,4%	6,0%	3,8%	10,7%
35 Planning and rehabilitation	10,1%	10,7%	5,8%	7,8%	3,3%	6,2%	1,3%	12,1%
36 Social and public health infrastructure	4,2%	4,6%	1,7%	7,2%	5,5%	12,0%	5,5%	7,8%
41 Technical Assistance and innovative actions	1,4%	1,5%	1,2%	2,5%	1,8%	2,9%	0,4%	7,0%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*37,2%*	*13,4%*	*15,5%*	*8,8%*	*5,0%*	*13,1%*
Total 2 Human ressources	*1,8%*	*0,9%*	*1,6%*	*1,1%*	*0,5%*	*0,8%*	*0,3%*	*0,7%*
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*60,0%*	*83,1%*	*82,2%*	*87,5%*	*94,2%*	*79,2%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*1,2%*	*2,5%*	*1,8%*	*2,9%*	*0,4%*	*7,0%*

GR41 : Voreio Aigiao (Βόρειο Αιγαίο – Greece)

- Mountainous and island Objective 1 region in southeastern periphery of Europe;
- Relatively larger investment in basic infrastructure compared to all other reference territories;
- Particularly significant investment (16 per cent) in telecommunication infrastructures and information society in all NUTS3 regions compared to other reference territories;
- Relatively larger investment in environmental infrastructures (GR411) or in social and health infrastructures (GR413).

Territorial level (Nuts)	EU	EU	EU	GR	GR41	GR411	GR412	GR413
Name		Mountains	Islands	Greece	Βόρειο Αιγαίο	Λέσβος	Σάμος	Χίος
Region eligibility	Obj. 1	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M	I			I	M-I	I
11 Agriculture	0,1%	0,1%			0,0%			
12 Forestry	0,0%				0,0%			
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,0%	0,0%	0,0%			
14 Fisheries	0,1%	0,2%	0,4%	0,6%	1,6%	0,3%	4,1%	2,3%
15 Assisting large business organisations	5,8%	4,8%	3,5%	1,2%	0,7%	0,6%	1,6%	0,0%
16 Assisting SMEs and the craft sector	9,6%	12,6%	16,1%	7,4%	5,1%	5,2%	2,9%	7,0%
17 Tourism	2,9%	4,5%	7,7%	2,8%	5,4%	4,0%	5,3%	9,0%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	3,7%	1,3%	2,0%	1,9%	3,8%	0,4%
21 Labour market policy	0,1%	0,0%	0,0%	0,1%	0,0%		0,1%	0,1%
22 Social inclusion	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
23 Developing education and vocational training	1,5%	0,8%	0,3%	1,0%	0,7%	0,7%	0,7%	0,7%
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%		0,0%	0,0%			
25 Positive labour market actions for women					0,0%			
31 Transport infrastructure	34,0%	33,6%	22,9%	45,4%	26,8%	24,1%	36,6%	23,7%
32 Telecommunication infrastructure and information society	3,2%	3,9%	5,0%	8,2%	16,2%	14,8%	18,8%	17,3%
33 Energy infrastructure	1,0%	1,0%	1,7%	0,9%	0,0%			
34 Environmental infrastructure	19,3%	17,3%	17,0%	13,5%	27,1%	38,8%	14,1%	9,7%
35 Planning and rehabilitation	10,1%	10,7%	15,1%	7,8%	8,6%	6,2%	11,1%	12,5%
36 Social and public health infrastructure	4,2%	4,6%	4,2%	7,2%	4,9%	3,0%	0,8%	13,9%
41 Technical Assistance and innovative actions	1,4%	1,5%	2,2%	2,5%	0,9%	0,4%		3,5%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*31,5%*	*13,4%*	*14,7%*	*12,0%*	*17,7%*	*18,7%*
Total 2 Human ressources	*1,8%*	*0,9%*	*0,3%*	*1,1%*	*0,7%*	*0,7%*	*0,8%*	*0,8%*
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*65,9%*	*83,1%*	*83,6%*	*86,9%*	*81,5%*	*77,0%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*2,2%*	*2,5%*	*0,9%*	*0,4%*		*3,5%*

ITG1 : Sicilia (Italy)

- Large Mediterranean Objective 1 island with mountains;
- Particularly significant investment (43 per cent) in productive environment compared to other Objective 1 reference territories, and in particular in Assisting SMEs, Tourism and RTDI;
- Relatively higher investment in Planning and rehabilitation in some NUTS3 regions.

Territorial level (Nuts)	EU	EU	EU	IT	ITG1	ITG12	ITG13	ITG14	ITG15	ITG16	ITG17	ITG18	ITG19
Name		Mountains	Islands	Italy	Sicilia	Palermo	Messina	Agrigento	Caltanissetta	Enna	Catania	Ragusa	Siracusa
Region eligibility	Obj. 1	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M	I		I	I	M-I	M-I	M-I	M-I	I	I	I
11 Agriculture	0,1%	0,1%			0,0%								
12 Forestry	0,0%				0,0%								
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,0%		0,0%								
14 Fisheries	0,1%	0,2%	0,4%		0,0%								
15 Assisting large business organisations	5,8%	4,8%	3,5%	5,3%	5,9%	5,8%	3,9%	2,3%	8,7%	18,3%	5,5%	12,7%	6,5%
16 Assisting SMEs and the craft sector	9,6%	12,6%	16,1%	25,3%	21,7%	13,0%	16,6%	29,7%	40,6%	24,5%	20,7%	29,7%	16,4%
17 Tourism	2,9%	4,5%	7,7%	6,9%	9,3%	8,6%	8,7%	10,0%	0,9%	4,0%	8,3%	20,1%	12,8%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	3,7%	6,4%	6,5%	8,6%	9,5%	0,4%	1,3%	0,2%	10,8%	3,1%	0,9%
21 Labour market policy	0,1%	0,0%	0,0%		0,0%								
22 Social inclusion	0,1%	0,0%	0,0%		0,0%								
23 Developing education and vocational training	1,5%	0,8%	0,3%		0,0%								
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%			0,0%								
25 Positive labour market actions for women					0,0%								
31 Transport infrastructure	34,0%	33,6%	22,9%	22,2%	21,3%	15,4%	33,9%	13,8%	16,0%	19,4%	27,0%	1,4%	31,9%
32 Telecommunication infrastructure and information society	3,2%	3,9%	5,0%	4,0%	3,7%	9,3%	1,6%	1,9%	2,5%	3,9%	2,5%	2,7%	1,1%
33 Energy infrastructure	1,0%	1,0%	1,7%	1,5%	3,3%	4,2%	2,6%	4,8%	1,3%	0,5%	2,8%	7,3%	3,4%
34 Environmental infrastructure	19,3%	17,3%	17,0%	9,3%	6,1%	7,9%	4,3%	14,3%	2,5%	7,0%	3,6%	8,5%	2,1%
35 Planning and rehabilitation	10,1%	10,7%	15,1%	14,6%	17,0%	18,2%	16,1%	20,7%	20,8%	18,9%	12,5%	11,8%	23,6%
36 Social and public health infrastructure	4,2%	4,6%	4,2%	2,0%	1,6%	1,9%	0,7%	1,3%	1,7%	2,0%	2,9%	1,0%	0,7%
41 Technical Assistance and innovative actions	1,4%	1,5%	2,2%	2,4%	3,4%	7,1%	2,2%	0,8%	3,8%	1,3%	3,5%	1,8%	0,6%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*31,5%*	*43,9%*	*43,4%*	*36,0%*	*38,6%*	*42,4%*	*51,5%*	*47,0%*	*45,3%*	*65,5%*	*36,7%*
Total 2 Human ressources	*1,8%*	*0,9%*	*0,3%*		*0,0%*								
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*65,9%*	*53,7%*	*53,2%*	*56,8%*	*59,2%*	*56,8%*	*44,8%*	*51,7%*	*51,3%*	*32,7%*	*62,7%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*2,2%*	*2,4%*	*3,4%*	*7,1%*	*2,2%*	*0,8%*	*3,8%*	*1,3%*	*3,5%*	*1,8%*	*0,6%*

PL22: Śląskie (Poland)

- Mountains area in new Member Sate, Objective 1 region;
- Particularly significant investment (43 per cent) in basic infrastructure compared to other Objective 1 reference territories, and in particular in transport.

Territorial level (Nuts)	EU	EU	PL	PL22	PL225
Name		Mountains	Poland	Śląskie	Bielski
Region eligibility	Obj. 1	Obj. 1		Obj. 1	Obj. 1
Fields of intervention SGF		M			M-
11 Agriculture	0,1%	0,1%		0,0%	
12 Forestry	0,0%			0,0%	
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%		0,0%	
14 Fisheries	0,1%	0,2%		0,0%	
15 Assisting large business organisations	5,8%	4,8%	1,5%	1,6%	3,0%
16 Assisting SMEs and the craft sector	9,6%	12,6%	8,2%	7,1%	12,0%
17 Tourism	2,9%	4,5%	2,0%	0,4%	1,1%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	1,3%	0,9%	1,3%
21 Labour market policy	0,1%	0,0%		0,0%	
22 Social inclusion	0,1%	0,0%		0,0%	
23 Developing education and vocational training	1,5%	0,8%		0,0%	
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%		0,0%	
25 Positive labour market actions for women				0,0%	
31 Transport infrastructure	34,0%	33,6%	47,3%	45,7%	56,9%
32 Telecommunication infrastructure and information society	3,2%	3,9%	2,6%	0,9%	0,2%
33 Energy infrastructure	1,0%	1,0%	0,0%	0,0%	0,0%
34 Environmental infrastructure	19,3%	17,3%	30,3%	38,8%	19,0%
35 Planning and rehabilitation	10,1%	10,7%	2,2%	1,5%	3,0%
36 Social and public health infrastructure	4,2%	4,6%	2,7%	2,1%	2,5%
41 Technical Assistance and innovative actions	1,4%	1,5%	1,9%	0,9%	1,1%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*13,0%*	*10,1%*	*17,3%*
Total 2 Human ressources	*1,8%*	*0,9%*		*0,0%*	
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*85,1%*	*89,0%*	*81,6%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*1,9%*	*0,9%*	*1,1%*

PT16 : Centro (Portugal)

- Mountainous Objective 1 region;
- Relatively larger investment in environmental infrastructures (PT164, PT 165, PT166);
- Relatively larger investment in social and health infrastructures.

Territorial level (Nuts)	EU	EU	PT	PT16	PT164	PT165	PT166	PT167	PT168	PT16A
Name		Mountains	Portugal	Centro (P)	Pinhal Interior Norte	Dão-Lafões	Pinhal Interior Sul	Serra da Estrela	Beira Interior Norte	Cova da Beira
Region eligibility	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M			M-	M-	M-	M-	M-	M-
11 Agriculture	0,1%	0,1%	0,0%	0,0%						
12 Forestry	0,0%		0,0%	0,0%						
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	1,5%	0,7%	2,1%	0,5%	1,0%	0,6%	4,7%	3,1%
14 Fisheries	0,1%	0,2%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
15 Assisting large business organisations	5,8%	4,8%	7,2%	9,1%	2,6%	9,9%	0,5%	0,9%	2,9%	0,6%
16 Assisting SMEs and the craft sector	9,6%	12,6%	12,4%	13,4%	15,0%	14,7%	30,5%	10,3%	17,0%	14,1%
17 Tourism	2,9%	4,5%	2,4%	1,5%	1,9%	0,4%	0,7%	8,9%	6,6%	8,7%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	4,7%	4,8%	2,5%	3,2%	1,8%	3,1%	4,7%	5,6%
21 Labour market policy	0,1%	0,0%	0,1%	0,0%						
22 Social inclusion	0,1%	0,0%	0,3%	0,0%						
23 Developing education and vocational training	1,5%	0,8%	0,3%	0,0%						
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%		0,0%						
25 Positive labour market actions for women				0,0%						
31 Transport infrastructure	34,0%	33,6%	29,1%	24,5%	18,6%	19,9%	17,1%	25,8%	18,0%	24,3%
32 Telecommunication infrastructure and information society	3,2%	3,9%	3,7%	2,9%	2,3%	2,6%	1,3%	2,2%	2,7%	3,7%
33 Energy infrastructure	1,0%	1,0%	3,1%	3,1%	2,6%	2,7%	0,5%	1,7%	0,9%	1,1%
34 Environmental infrastructure	19,3%	17,3%	14,4%	17,4%	30,7%	23,5%	30,4%	19,9%	20,3%	11,1%
35 Planning and rehabilitation	10,1%	10,7%	8,9%	11,0%	9,6%	12,6%	5,0%	8,1%	12,9%	14,5%
36 Social and public health infrastructure	4,2%	4,6%	10,8%	11,1%	12,0%	9,8%	10,9%	18,2%	9,1%	12,8%
41 Technical Assistance and innovative actions	1,4%	1,5%	1,0%	0,4%	0,2%	0,2%	0,2%	0,3%	0,2%	0,2%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*28,4%*	*29,5%*	*24,1%*	*28,8%*	*34,5%*	*23,9%*	*35,9%*	*32,3%*
Total 2 Human ressources	*1,8%*	*0,9%*	*0,6%*	*0,0%*						
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*70,0%*	*70,1%*	*75,7%*	*71,0%*	*65,3%*	*75,9%*	*63,9%*	*67,5%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*1,0%*	*0,4%*	*0,2%*	*0,2%*	*0,2%*	*0,3%*	*0,2%*	*0,2%*

SE33 : Övre Norrland (Sweden)

- Nordic sparsely populated Objective 1 region;
- Particularly significant investment in productive environment comparable with the Swedish average, and higher than Objective 1 or other sparsely populated regions;
- Relatively larger investment in:
    - SMEs and craft sector (47 per cent of total) and in RTDI (15 per cent of total);
    - in tourism (12 per cent of total);
    - in Telecommunication infrastructure and Information society (6.6 per cent of total).

Territorial level (Nuts)	EU	EU	SE	SE33	SE332
Name		Sparsely populated	Sweden	Övre Norrland	Norrbottens län
Region eligibility	Obj. 1	Obj. 1		Obj. 1	Obj. 1
Fields of intervention SGF		S			SP
11 Agriculture	0,1%	0,9%		0,0%	
12 Forestry	0,0%		0,0%	0,0%	
13 Promoting the adaptation and the development of rural areas	0,4%	0,7%	2,5%	4,7%	4,2%
14 Fisheries	0,1%		0,0%	0,1%	
15 Assisting large business organisations	5,8%	3,4%	0,1%	0,0%	
16 Assisting SMEs and the craft sector	9,6%	19,2%	41,1%	44,6%	47,3%
17 Tourism	2,9%	3,7%	17,6%	9,5%	11,7%
18 Research, technological development and innovation (RTDI)	6,2%	9,3%	15,2%	19,1%	14,8%
21 Labour market policy	0,1%			0,0%	
22 Social inclusion	0,1%	0,0%		0,0%	
23 Developing education and vocational training	1,5%	1,6%		0,0%	
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%			0,0%	
25 Positive labour market actions for women				0,0%	
31 Transport infrastructure	34,0%	39,1%	6,5%	9,9%	9,8%
32 Telecommunication infrastructure and information society	3,2%	4,9%	12,5%	9,6%	9,7%
33 Energy infrastructure	1,0%	0,3%	0,1%	0,0%	
34 Environmental infrastructure	19,3%	8,2%	0,2%	0,0%	
35 Planning and rehabilitation	10,1%	5,8%	1,3%	0,0%	
36 Social and public health infrastructure	4,2%	1,7%	0,4%	0,0%	
41 Technical Assistance and innovative actions	1,4%	1,2%	2,6%	2,3%	2,6%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*37,2%*	*76,5%*	*78,1%*	*77,9%*
Total 2 Human ressources	*1,8%*	*1,6%*		*0,0%*	
Total 3 Basic infrastucture	*71,7%*	*60,0%*	*21,0%*	*19,6%*	*19,5%*
Total 4 Technical Assistance	*1,4%*	*1,2%*	*2,6%*	*2,3%*	*2,6%*

SI01 : Vzhodna Slovenija (Slovenija)

- Mountains area in new Member State, Objective 1 region;
- Diversity of strategies between NUTS2 and NUTS3 regions and amongst NUTS3 regions:
    - Particularly significant investment (46-61 per cent in SI013, 014, 015) in environmental infrastructure;
    - Relatively larger investment in telecommunication infrastructures (SI018, 015, 013);
      Particularly significant investment in tourism (28 per cent in SI018).

Territorial level (Nuts)	EU	EU	SI	SI01	SI013	SI014	SI015	SI018
Name		Mountains	Slovenija	Vzhodna Slovenija	Koroška	Savinjska	Zasavska	Notranjsko-kraška
Region eligibility	Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M			M-	M-	M-	M-
11 Agriculture	0,1%	0,1%		0,0%				
12 Forestry	0,0%			0,0%				
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%		0,0%				
14 Fisheries	0,1%	0,2%		0,0%				
15 Assisting large business organisations	5,8%	4,8%		0,0%				
16 Assisting SMEs and the craft sector	9,6%	12,6%	6,5%	8,2%	13,2%	8,0%	5,8%	15,6%
17 Tourism	2,9%	4,5%	11,7%	11,7%	2,8%	7,9%		28,0%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	7,0%	1,3%	0,2%	2,0%	0,1%	0,2%
21 Labour market policy	0,1%	0,0%		0,0%				
22 Social inclusion	0,1%	0,0%		0,0%				
23 Developing education and vocational training	1,5%	0,8%		0,0%				
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%		0,0%				
25 Positive labour market actions for women				0,0%				
31 Transport infrastructure	34,0%	33,6%	32,6%	35,9%	20,1%	16,6%	17,9%	30,4%
32 Telecommunication infrastructure and information society	3,2%	3,9%	2,0%	2,2%	6,4%	0,9%	7,0%	9,1%
33 Energy infrastructure	1,0%	1,0%	0,8%	0,9%	2,7%	0,4%	2,9%	3,7%
34 Environmental infrastructure	19,3%	17,3%	33,9%	35,6%	46,6%	60,6%	60,4%	3,7%
35 Planning and rehabilitation	10,1%	10,7%	0,8%	0,9%	2,7%	0,4%	2,9%	3,7%
36 Social and public health infrastructure	4,2%	4,6%		0,0%				
41 Technical Assistance and innovative actions	1,4%	1,5%	4,8%	3,3%	5,4%	3,2%	2,9%	5,6%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	*25,1%*	*26,7%*	*25,2%*	*21,2%*	*16,2%*	*17,9%*	*5,9%*	*43,8%*
Total 2 Human ressources	*1,8%*	*0,9%*		*0,0%*				
Total 3 Basic infrastucture	*71,7%*	*71,0%*	*70,1%*	*75,5%*	*78,4%*	*78,9%*	*91,2%*	*50,6%*
Total 4 Technical Assistance	*1,4%*	*1,5%*	*4,8%*	*3,3%*	*5,4%*	*3,2%*	*2,9%*	*5,6%*

UKM6 : Highlands and Islands(UK)

- Contains sparsely populated, islands and mountainous, Objective 1 region;
- Particularly significant investment in productive environment lower than UK average, but higher than all other Objective 1 regions;
- Relatively larger investment in SMEs and craft sector (36 per cent of total);
- Relatively higher investment in telecommunication infrastructures (36 per cent of total).

Territorial level (Nuts)	EU	EU	EU	EU	UK	UKM6	UKM61	UKM63	UKM64	UKM65	UKM66
Name		Mountains	Islands	Sparsely populated		Highlands and Islands	Caithness & Sutherland ...	Lochaber, Skye & Lochalsh ...	Eilean Siar	Orkney Islands	Shetland Islands
Region eligibility	Obj. 1	Obj. 1	Obj. 1	Obj. 1		Obj. 1	Obj. 1		Obj. 1	Obj. 1	Obj. 1
Fields of intervention SGF		M	I	S			SP	SP	ISP	I	I
11 Agriculture	0,1%	0,1%		0,9%		0,0%					
12 Forestry	0,0%					0,0%					
13 Promoting the adaptation and the development of rural areas	0,4%	0,3%	0,0%	0,7%	1,6%	0,0%					
14 Fisheries	0,1%	0,2%	0,4%		0,0%	0,0%					
15 Assisting large business organisations	5,8%	4,8%	3,5%	3,4%	2,3%	0,0%					
16 Assisting SMEs and the craft sector	9,6%	12,6%	16,1%	19,2%	45,9%	35,6%	35,6%	35,6%	35,6%	35,6%	35,6%
17 Tourism	2,9%	4,5%	7,7%	3,7%	6,1%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%
18 Research, technological development and innovation (RTDI)	6,2%	4,1%	3,7%	9,3%	7,9%	3,6%	3,6%	3,6%	3,6%	3,6%	3,6%
21 Labour market policy	0,1%	0,0%	0,0%		0,2%	0,0%					
22 Social inclusion	0,1%	0,0%	0,0%	0,0%	2,4%	0,0%					
23 Developing education and vocational training	1,5%	0,8%	0,3%	1,6%	2,3%	0,0%					
24 Workforce flexibility, entrepreneurial activity, innovation, ICT	0,0%	0,0%			0,3%	0,0%					
25 Positive labour market actions for women					0,2%	0,0%					
31 Transport infrastructure	34,0%	33,6%	22,9%	39,1%	5,7%	31,9%	31,9%	31,9%	31,9%	31,9%	31,9%
32 Telecommunication infrastructure and information society	3,2%	3,9%	5,0%	4,9%	4,2%	6,7%	6,7%	6,7%	6,7%	6,7%	6,7%
33 Energy infrastructure	1,0%	1,0%	1,7%	0,3%	0,4%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%
34 Environmental infrastructure	19,3%	17,3%	17,0%	8,2%	0,9%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%
35 Planning and rehabilitation	10,1%	10,7%	15,1%	5,8%	15,7%	0,0%					
36 Social and public health infrastructure	4,2%	4,6%	4,2%	1,7%	1,8%	7,6%	7,6%	7,6%	7,6%	7,6%	7,6%
41 Technical Assistance and innovative actions	1,4%	1,5%	2,2%	1,2%	2,1%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Total 1 Productive environment	25,1%	26,7%	31,5%	37,2%	63,9%	44,1%	44,1%	44,1%	44,1%	44,1%	44,1%
Total 2 Human ressources	1,8%	0,9%	0,3%	1,6%	5,4%	0,0%					
Total 3 Basic infrastucture	71,7%	71,0%	65,9%	60,0%	28,7%	53,4%	53,4%	53,4%	53,4%	53,4%	53,4%
Total 4 Technical Assistance	1,4%	1,5%	2,2%	1,2%	2,1%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%

Annexes

Annex 1a: SWOT analysis for island regions

Context:

- Three different geographical areas containing islands - Mediterranean, Atlantic and the North; and each performs quite differently;
- General performance is relatively diverse, especially between the islands of the north and south
- Tend to find two demographic 'extremes', either overpopulated or declining population mainly leaving an elderly population behind.

Strengths

- Strong set of **'natural' assets** (e.g. fishery resources, fossil fuels, renewable energy, coastline and beaches), cultural and built environment
- **Export niches,** especially in services (notably tourism), and some craft, manufacturing and agricultural niches
- Relatively stronger **social ties** and **community cohesion**
- Quality and 'pace' life often attractive to **migrants**

Weaknesses

- High multidimensional **cost of transport**
- Small markets and small labour pool; **diseconomies** of scale and of scope
- **Weak competitive** environment
- **Weak local demand:** generally lower GDP per head than on the 'mainland' and greater unemployment rate than on the 'mainland'
- Generally **goods more expensive** than on the 'mainland' due to transport costs utilities costs and monopoly/oligopoly situations
- Relatively lower levels of provision and access to **public services** (education, health, etc.) as well as infrastructure (e.g. fast broadband)
- High economic **vulnerability**
- Possible clientelism and collusion

Opportunities

- Greater **biodiversity**, with many islands possessing high quality flora and fauna which can increase opportunities for tourism as well as research (e.g. bioscience opportunities)
- Exploitation of **natural resources** e.g. oil and gas as well as renewable energy, e.g. wind farms, off-shore carbon capture;
- **Cultural attractiveness** can lead to higher amounts of tourism, and opportunities to develop new tourism niche types
- Can have the advantage being **tax-free regions** or somewhat different legal status (e.g. banking, online gambling etc.)
- New **sectors for investment** opportunities, especially in light of broadband and ICT developments
- Attraction of **high income**, economically active life-style in-migrants

Threats

- Unsure how **climate changes** will affect the island regions although many can expect loss of land due to sea level rise
- Bad weather associated with coastal areas can lead to higher insurance **costs**, flood prevention etc.
- Environmental degradation due to **overpopulation** of certain islands and excessive use of scarce or natural resources (e.g. fish stocks, groundwater supplies, etc.)
- Environmental degradation due to **mass tourism**
- External economic **shocks** (e.g. on international tourism demand)
- Decrease in cultural distinctiveness due to tourism and second home ownership diluting culture
- Low access to higher education; low R&D investment and negative impact on businesses. It can also cause **out-migration** of the younger population leading to an **aging population**
- Globalization/growing competition for products and services incorporating **low added value** (low skilled labour)

Annex 1b:Small vs Big island SWOT comparison

This SWOT analysis for island regions is a 'generic' one in the sense that it tries to generalize some common *strengths*, *weaknesses*, *opportunities* and *threats* observed in any single insular area. In addition, the SWOT below highlights the differences for large islands compared to the one above.

Strengths	Very large island counterpart
Strong set of 'natural' assets (e.g. fisheries resources, fossil fuels, renewable energy, coastline and beaches, cultural and built environment	Present
Export niches, especially in services (notably tourism), some agricultural, craft and manufacturing	Present, but possibility of more indigenous development strategies (either supply-side such as neoclassical growth or demand-side based on within-region demand). In particular greater size opens up possibilities for: (a) *industrial clusters* based on pre-existing sectors or newer technologically-based clusters, and (b) *diversification as* a possible strategy
Relatively stronger social ties and community cohesion	Present, but less strong (internal fragmentation)
Quality and 'pace of life' often attractive to migrants	Present, but less strong
Importance of being unimportant	Most unlikely, except for transport subsidies
Creative political economy	Present, but less likely
	Other possible strengths: - Within-island sourcing of inputs - Economies of scale in utilities and other services (including transport) reducing business costs - Ability to attract some sectors with scale economies (e.g. cruise tourism)
Weaknesses	
High multidimensional cost of transport	Present, but a5 (lack of vehicle and port economies of scale), a6 (restricted origin and destination choices) and a7 (local transport monopolies) less likely
Small markets and small labour pool; diseconomies of scale and scope	Present, but less restrictive
Weak competitive environment	Present (especially if internal fragmentation), but less restrictive
Weak local demand: generally lower GDP per	Present (especially if internal fragmentation) but less

head than on the 'mainland' and greater unemployment rate than on the 'mainland'	restrictive
Generally more expensive than on the 'mainland' due to transport costs, higher utility costs and monopoly/oligopoly situations	Present (especially if internal fragmentation) but less prevalent
Relatively lower levels of provision and access to public services (education, health, etc) as well as infrastructure (e.g. fast broadband)	Present (especially if internal fragmentation) but less restrictive
High economic vulnerability	Present, but greater diversification will reduce severity
Possible clientalism and collusion	Present
Opportunities	
Greater biodiversity, with many islands possessing high quality flora and fauna which can increase the opportunities for tourism as well as research (e.g. bioscience opportunities)	Generally greater, but less potential for use as 'island laboratory' (e.g. wholly carbon-free)
Exploitation of natural resources (e.g. oil and gas) as well as renewable energy (e.g. wind farms, offshore carbon capture)	Present
Cultural attractiveness can lead to higher amounts of tourism and exploitation of newer niche types	Present
Can have the advantage of being tax-free regions or somewhat different legal status (e.g. banking, online gambling etc)	Present
New sectors for investment opportunities, especially in light of broadband and ICT developments	Present
Attraction of high income, economically active 'lifestyle' migrants	Present
Threats	
Unsure how climate changes will affect the island regions although many can expect loss of land due to sea level rise	Present, but will be somewhat less vulnerable
Bad weather associated with coastal areas can lead to higher insurance costs, flood prevention etc	Present
Environmental degradation due to overpopulation of certain islands and excessive use of scarce natural resources (e.g. fish stocks, groundwater supplies etc)	Present, but less severe if large geographical as well as population size
Environmental degradation due to mass tourism	Present, but less severe if large geographical as well as population size
External economic shocks (e.g. on international tourist, demand)	Present, but less vulnerable (more diversified)
Decrease in cultural distinctiveness due to	Present, but less severe

tourism and second-home ownership diluting culture	
Low access to higher education; low R&D investment and negative impact on businesses. It can also cause out-migration of the younger population leading to an ageing population	Present, but likely to be less severe (e.g. may have own HEI)
Globalization/growing competition for products and services incorporating low value added (low skilled labour)	Present

Annex 2: SWOT analysis for mountainous regions

Context:

- Relatively higher differences in economic performance between Member States, possibly due to the government level of investment in basic services and infrastructure;
- Dominant role played by small scale agriculture in terms of employment and economic activity

Strengths

- Availability of **natural resources** such as timber, ores, water…) and energy (hydroelectricity, solar energy)
- Strong **traditional economic activities** (forestry, mining and energy) are the engines of regional development
- Centres of **biological and cultural diversity**, therefore leading to opportunities in recreation and tourism
- For some areas, **good transport links** because of tourism – although at a greater cost
- **Tourism** is well-developed in certain areas, e.g. winter sports in the Alps

Weaknesses

- **Topography** leads to reduced accessibility and higher costs in providing it (e.g. key public services access), high infrastructure costs, challenges for modern agricultural and industrial production
- Higher costs to provide public services; lower access to broadband
- Relatively **lower R&D** investment and larger distances to regional **universities**, which does not promote learning and entrepreneurship in the local areas as well spin-offs
- Often coincide with being on borders which means being **on the margins of national economic and political systems**
- Fragile and highly sensitive **ecosystems**. Altitude/climate leads to short growing season
- Main resource (**nature**) is sensitive and constantly endangered by other growth sources such as tourism

Opportunities

- Large variation in **land uses** (hill sheep farming, hydroelectric power, etc.)
- **Tourism**: remoteness of the area and sporting activities both in summer and winter can act as a tourist attraction
- innovative **University** with good reputation could attract young students (eg: case of Graz in Steiermark) and create innovation and knowledge-spill overs
- financing of R&D, academic research centres, faculty departments on ecological subjects
- investment in **innovation** to increase intra-regional competitiveness
- focus on **ecological farming and natural energy sources**
- increase investments **in cultural activities** in order to attract short-run visitors (e.g. weekend breaks etc.) from the cities
- **ICT:** decreases the geographic 'distance' between places that can open up business opportunities, e.g. e-commerce, SMEs etc.

Threats

- **Tourism** is often an unreliable source of income: follows fashion (cycles of rise and fall). Additionally, it can also cause environmental degradation
- The **degradation** of nature would lead in the long run to the loss of its main asset
- **Migration:** outwardly of the young looking for jobs and inwardly of the retired. This leads to an increase in ageing population
- **Uncertainty** due to climate change, which will particularly affect mountain regions due to their sensitive ecosystems and varying gradients, can lead to an increase in landslides, floods and avalanches
- **Natural risks** in mountains areas intensified by human intervention in three main ways: changes in landscape due to abandonment of traditional activities; pressure related to uncontrolled construction and tourism and sensitivity to climate changes
- Bad weather associated with a mountain climate, snow storms etc. can lead to **higher cost** of insurance and potential reduction in tourism

Annex 3: SWOT analysis for sparsely populated regions

Context

- Different to mountainous or island regions as sparsity is not a natural phenomenon ie it can easily change over time with fluctuations in population movements; However, the settlement structure (i.e. the location of villages, towns and cities) is long-standing;
- GDP remains close to EU average;
- Performance in terms of economic output and employment does vary from region to region, depending on the country, although there is less variation than the other two types of territory;
- Often peripheral or border regions combined with sparsity.

Strengths

- Availability of **natural resources** (timber, ores…) and energy (hydroelectricity);
- Strong **traditional economic activities** (forestry, mining and energy) are the engines of regional development;
- Cohesive local **communities;**
- Strong **commitment** of local and regional stakeholders (e.g. Northern Sparsely Populated Area Network);
- Tradition of **flexibility and adaptation** to wider context (=entrepreneurship capital);
- Good access to **broadband** in the Nordic countries;
- Access to **air transport** is good in the Nordic countries
- Availability of **land** is attractive to land-demanding economic activities
- Do not endure the diseconomies of agglomeration: **better quality of life**

Weaknesses

- Higher **costs** to provide public services; less access to basic services and lower demand for them compared to other areas
- Small **labour markets** lead to less diversified local economies
- Large distances to European markets, meaning higher transport **costs** for individuals and industries
- High degree of **exposure** to fluctuations in traditional economic activities
- Scarce transport **infrastructure**, more adapted to the needs of heavy industries (e.g. mining) than to the ones of increased labour-market mobility
- Steady **out-migration** of young educated women jeopardizes the stability of local community. Transport links often saturated
- Large **distances** to regional universities, which does not promote learning and entrepreneurship in the local areas
- Relatively lower access to **broadband** compared to urban areas
- Poor access to modern **logistics** systems

Opportunities

- **ICT** decrease the 'distance' between places that can open up business opportunities, e.g. e-commerce
- Open **attitude** of sparsely populated communities is an asset in an era of globalization, enabling them to take advantage of business opportunities outside the region
- In terms of businesses, transport costs are a minor proportion of **production costs**
- **Interface territories** between EU and Neighbouring countries
- Europe's last wilderness area can trigger **eco-tourism trend**
- Development of niche **R&D** activities for which the specific environment of sparsely populated areas is an asset (e.g. cold climate research or Space research)
- Turning the historical industrial legacy into an asset for **tourist**
- Low level of development of basic services so there are **investment opportunities**
- **Peripheral position** can be efficiently overcome by active regional policies for the development of local airport traffic
- The **environment** is attractive to footloose, often high quality businesses and personnel

Threats

- **Migration:** outwardly of the young looking for jobs and exciting lifestyles and inwardly of the retired looking for peace and quiet. This results in an ageing population
- Age and gender **imbalances** lead to less dynamic and attractive local labour-markets
- Reduction of **long-term investments**, especially regarding accessibility and mobility, may threaten the possibility for development in the long run
- **Ageing population** also because little job opportunities for young as often too far to commute
- Globalization and climate change accentuates the SPA **weaknesses**: infertile land or rough terrain, climate, high risk of a natural disaster, large distance to a large city and bad transport links
- Increased **polarization** within the region
- Small domestic markets imply a need for open attitude towards economic development leading to enhanced **competition** from external actors
- **Climate change** may impact the stability ecosystem of Europe's last wilderness areas
- Long term **demographic** thinning out of the most sparsely populated parts makes the sustainable development of small communities uncertain

Annex 4: List of references

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