ESPON

European Perspective on Specific Types of Territories

Applied Research 2013/1/12

Draft Final Report | Version 23/03/2012

EUROPEAN UNION
Part-financed by the European Regional Development Fund
INVESTING IN YOUR FUTURE

This report presents the draft final results of an Applied Research Project conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU27, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

Information on the ESPON Programme and projects can be found on www.espon.eu

The web site provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

This basic report exists only in an electronic version.

List of authors

Erik Gløersen, Jacques Michelet and Frédéric Giraut (Department of Geography, University of Geneva, Switzerland)

Diana Borowski and Martin Price (Centre for Mountain Studies, Perth College, University of the Highland and Islands, United Kingdom)

Marta Pérez Soba, Michiel van Eupen, Laure Roupioz and Rini Schuiling (Alterra, Wageningen UR (University & Research Centre), the Netherlands)

Gordon Cordina, Jana Farrugia, Stephanie Vella and Alexia Zammit (E-Cubed Consultants, Malta)

Ioannis Spilanis and Thanassis Kizos (University of the Aegean, Greece)

Alexandre Dubois and Johanna Roto (Nordregio, Sweden)

Hugo Thenint (Louis Lengrand et associés, France)

Christophe Sohn, Olivier Walther and Nora Stambolic (CEPS/INSTEAD)

Monika Meyer and Jan Roters (Leibniz Institute of Ecological and Regional Development – IÖR, Germany)

Kathrin Kopke and Aidan O'Donoghue (Coastal & Marine Resources Centre, Environmental Research Institute, University College Cork, Ireland)

Wolfgang Lexer and Gebhard Banko (Federal Environment Agency, Austria)

Thomas Stumm (Eureconsult, Luxembourg)

Table of contents

Figures

Maps

Tables

Annexes to the draft final report

Annexes to the Scientific report

List of abbreviations

CBMR	Cross-Border Metropolitan Region
CSF	Common Strategic Framework
EAFRD	European Agricultural Fund for Rural Development
EEA	European Environment Agency
EFF	European maritime and Fisheries Fund
ERDF	European Regional Development Fund
ESF	European Social Fund
FUA	Functional Urban Area
GDP	Gross Domestic Product
GRP	Gross Regional Product
ICT	Information and Communication Technologie
IP	Inner peripheries
LAU	Local Area Unit
MUA	Morphological Urban Area
NUTS	Nomenclature Unifiée des Territoires Statistiques
OR/OMR	Outermost Regions
PCA	Poorly Connected Areas
PUSH	Potential Urban Strategic Horizon
SGI	Services of General Interest
SPA	Sparsely populated areas
TFEU	Treaty on the Functioning of the European Union
TPG	Transnational Project Group

A Executive summary

Regions with specific territorial features have received increasing attention in recent years, most notably in article 174 of the Treaty on the Functioning of the European Union (TFEU) and the Green Paper on Territorial Cohesion. These key policy documents have identified certain territories – cross-border, island, mountain, Outermost and sparsely populated regions – in two ways: as having particular challenges, and as having particular assets, many of benefit to Europe as a whole. Two other types of such 'geographic specificities' have also been recognised: coastal areas and inner peripheries. While there have been a number of studies of groups of these areas, or individual types of territories (e.g., coasts, mountains) at the European scale, to date, there has been no comprehensive study of all of these seven particular types of territories. A further challenge identified in many past studies, as well as by diverse stakeholder organisations concerned with such regions, has been that descriptive statistics and maps at the NUTS 3 (or 2) level are inadequate or even misleading for understanding the states and trends of these territories, an essential prerequisite for effective policy development and implementation to contribute to the 'Europe 2020' strategy for smart, sustainable and inclusive growth.

With this background, the ESPON GEOSPECS project has the following objectives, with regard to the seven 'geographic specificities' mentioned above (referred to below as "GEOSPECS areas"):

- to develop a coherent perspective on territories with geographic specificities;
- to identify development opportunities in these parts of Europe;
- to assess the extent of socio-economic diversity within each category;
- to explore how one could facilitate the achievement of strategic targets of the European Union and of European countries by taking better account the diversity of development preconditions linked to geographic specificities;
- to identify the potential role of territorial cooperation and partnership and assess the need for targeted policies for GEOSPECS areas, focusing on the identification of the appropriate administrative level.

This study has broken new ground in a number of ways. First, given that the 'Europe 2020' targets are 'spatially blind' and that achieving them will require efforts at regional and local levels, the TPG recognised a need to approach GEOSPECS areas from the viewpoint of local and regional communities and their preconditions for growth and balanced development. Thus, GEOSPECS is the first ESPON project to base all its analyses on data and delineations at the LAU2 level, considering specific characteristics of 125,049 administrative units across

the ESPON space (apart from Bosnia and Herzegovina and the Former Yugoslav Republic of Macedonia, for which such data were not available). Second, many of these analyses are based on the concept of potentials of population and travel time, recognising that individual municipalities[1] should not be analysed in isolation from each other when considering development opportunities and challenges; it is more relevant to focus on areas of interaction around each point. Third, GEOSPECS questions the value of benchmarking, arguing that it is more appropriate to consider a specific territory's development potentials, opportunities and challenges according to relevant data, defined by the identification of the territory's inherent and inherited characteristics and key challenges and opportunities, presented in 'nexus diagrams'. Fourth, these diagrams and the common data sets provide a common framework for presenting and comparing the development processes of territories and their links with geographic specificities across Europe; thus, they may also be regarded as the beginning of a process to deepen and strengthen the evidence base required for the development of policies across the diversity of European situations.

This analysis has faced multiple challenges:

- First, all territorial development issues and processes are potentially relevant, insofar as they *may* be influenced by geographic specificity. The scope of enquiry was therefore *a priori* unlimited. However, in reality, analyses at the European scale were limited by the availability of consistent data sets. To address this to some extent, 20 case studies were undertaken. In addition, stakeholder consultations provided valuable inputs on which topics were of key importance.

- Second, the identification of the "GEOSPECS areas" required a conceptualisation of each category of geographic specificity, considering that each has been constructed in order to organise the perception of territories and facilitate communication.

- Third, there are extensive overlaps between the various types of geographic specificities, and they can be found in European regions with contrasted development levels; this is a particular reason why the benchmarking of GEOSPECS areas against European target values and/or average performances is not meaningful.

- Fourth, the focus on development opportunities has led to complex questions on why these have not already been realised. In other words, an "opportunity" is a situation where a critical factor prevents local and regional stakeholders from taking advantage of an identified resource or asset. Drawing

[1] For ease of reading, the terms «municipality» and "locality" are used as a synonyms of LAU2 at the European level. In some ESPON countries, the term "municipality" refers to administrative units that do not correspond to the LAU2 level.

on the ESPON TeDi project, GEOSPECS has sought to systematise the analysis of these situations by considering that unexploited opportunities result from a lack of local of coherence between natural resources, human capital and the institutional context. Again, this was explored particularly through the case studies.

The project involved a number of complementary activities:

- delineation of geographic specificities and analyses both for each specificity and for overlaps between them;
- preparation of guidance notes and analyses for economic, social and environmental transversal themes;
- stakeholder consultations, both for each GEOSPECS area and jointly;
- syntheses of analyses, and development of options for policy development.

Delineations

Given the objectives of GEOSPECS, delineations that, for example, neither distinguish highland areas from their respective piedmont, nor make it possible to consider phenomena such as double insularity, are not operational. Furthermore, delineations that deviate substantially from local and regional understandings of the different GEOSPECS areas may not function in a project that investigates how identities and geographic specificities interact. Thus, the TPG did not consider it possible to use NUTS3-based definitions of some GEOSPECS areas used in previous studies. All delineations are based on LAU2 units, as the TPG considers this scale as appropriate to meet the criteria described above.

Mountains: The delineation builds on previous studies (Nordregio, 2004 and EEA, 2010). It is based on the GTOPO30 Digital Elevation Model, which records average elevation of the Earth's land surface in a 1km^2 grid. To define mountainousness, different thresholds of terrain roughness and slope were applied at different levels of altitude, up to 2500m, above which all areas are considered as mountains. This set of grid cells with mountainous topography was approximated to municipal boundaries by considering that LAU2 units with more than 50% mountainous terrain should be considered mountainous. Mountain exclaves of <100km^2 are excluded from the delineation; non-mountainous enclaves of <200km^2 surrounded by mountains are included. Mountain massifs were defined for analytical purposes. Mountains cover 28.7% of the EU27 and are home to 16.9% of its population. For the ESPON space, the proportions are 41.3% and 25.4%.

Islands: All territories that are physically disjoint from the European mainland and, because of their large population, disjoint from the main islands of the British Isles (UK and Ireland) are considered as insular, including parts of

municipalities, but excluding inland islands. On this basis, a typology of islands was established. Firstly, islands with a fixed connection to the mainland are considered as a separate category. Secondly, a multi-level approach is used (NUTS 1 to LAU2), as the socio-economic impact and political significance of insularity is considered to differ, depending on whether it occurs at the national, regional or local scale. Islands cover 3.5% of the EU27 and are home to 4% of its population. For the ESPON space, the proportions are 4.7 % and 3.4%.

Sparsely Populated Areas (SPAs): The delineation of SPAs is based on population potential. First, SPAs are defined as areas with a population potential below 100,000 persons within 50km, and Poorly Connected Areas (PCAs) have a population potential below 100,000 persons within 45 minutes travel time. Second, localities (LAU2 level) are defined as sparsely populated or poorly connected if at least 90% of their area is covered by SPAs or PCAs. Third, 'regions faced with demographic sparsity' are NUTS 3 regions that contain at least one sparsely populated locality. Finally, Sparse Territories (ST) are territorial 'clusters' of SPAs that form relevant geographical units for developing a spatial analysis of SPAs. SPAs cover 16.7% of the EU27 and are home to 0.8% of its population. For the ESPON space, the proportions are 24.2% and 3.7%.

Border areas: GEOSPECS identifies different types of *border effects*. Because the ranges of mobility and interaction associated to these different types vary, it is not meaningful to produce a general delineation of border areas. Instead, the delineation is based on a 45-minute travel distance to a border. Some border areas are Cross-Border Metropolitan Regions (CBMR): regions that are "metropolitan" and have a significant cross-border dimension (i.e. each "side" of the border contains no less than 10% of the population of the CBMR). LAU2 areas within 90 minutes of a borderline cover 39.4% of the EU27 and are home to 40.7% of its population. For the ESPON space, the proportions are 32.9 % and 35.9%.

Coasts: The TPG does not consider it meaningful to produce a general delineation of coastal zones, as the ranges of mobility and interaction associated with the different types of coastal effects are different. To identify these various ranges, two hypotheses are tested: whether areas within commuting distance to the sea (45 minutes by the road) and contiguous to the sea exhibit specific socio-economic patterns. LAU2 areas within 90 minutes of a coastline cover 37.3% of the EU27 and are home to 47.9% of its population. For the ESPON space, the proportions are 37% and 46%.

Outermost Regions (ORs): As ORs are legally defined, their delineation is given. Nevertheless, GEOSPECS has made two advances for their understanding: first, by analysing them in their geographic context; second, by the use of LAU2 data to analyse their internal territorial structures. ORs cover 2.3% of the EU27 and are home to 0.8% of its population. For the ESPON space, the proportions are 1.7% and 0.7%.

Inner Peripheries (IP): The concept of Inner Peripheries (IP) is new in the European policy arena. The following elements appear overall as key when understanding IP: 1) they can be described by several socio-economic, political and geophysical characteristicsy; 2) they are identified with a development concept that is not a question of urban or rural but of being a centre or a periphery; 3) they are permanent in neither time nor place; 4) they are initially recognisable by population loss initiated by the disappearance of the main economic activity. They should therefore not be considered as a category of geographic specificity.

These GEOSPECS areas may be separated into two groups:

- Mountain areas, islands, sparsely populated areas, Outermost Regions and inner peripheries are "areal notions", defined on the basis of the properties of parts of the European territory;
- Borders and coasts are linear notions. Associating areas to these "lines" requires hypotheses on the types of proximity that can be relevant from the point of view of socio-economic development.

In addition to delineating GEOSPECS areas, the TPG delineated urban areas (both >100,000 and >750,000 inhabitants).

There are many overlaps between different GEOSPECS areas. Inevitably, the majority of the area and population of islands is also coastal. For mountain areas, about one third of their area and population is coastal, a quarter of their area and population are within 90 minutes of a border, and a third of their area is sparsely populated. In addition almost half of their population is in urban areas with a population >100,000. At least a third of the area of islands is sparsely populated, and well over half of their population live in urban areas with a population >100,000. Half the area, and three-quarters of the population, of SPAs/PCAs is mountainous, and a third of their area is within 90 minutes of a border and/or a coastal area; a fifth of their population live within the latter. It is also worth noting that about half the population living within 45 or 90 minutes of both border and coastal areas lives in urban areas with a population >750,000.

Key findings

Given the wide range of geographic specificities covered by GEOSPECS, the preparation of quantitative analyses and maps was limited to key aspects for each. Data availability largely influenced the analyses. Given the novel character of the data and the indicators that have been constructed, the TPG has only explored a small proportion of the potential innovative quantitative analyses that could be envisaged. Data at the level of the 125,049 LAU2 units in the ESPON space open new perspectives for multi-scalar analysis.

In order to undertake Europe-wide analyses for GEOSPECS areas, subdivisions into units of analysis were needed, as follows:

- Mountain areas: 16 massifs, adapted from previous work by the EEA;
- Islands: 319 islands and island municipalities;
- SPAs: clustered into 39 'Sparse territories';
- Coastal areas: areas within 45 and 90 minutes from 70 portions of the ESPON space coastlines, divided by bordering sea and by country
- Border areas: areas within 45 and 90 minutes of the 72 terrestrial borderlines of ESPON space, divided by country, in total 117 national border areas[2];
- Outermost Regions: each region was considered as a unit of analysis.

A range of issues and themes was explored, including age structures and demographic trends; patterns of employment; tourism; and accessibility. There were important variations with regard to the scales of analysis considered relevant, the ways in which different levels of analysis are related to each other, and the territorial contexts used to produce comparisons. This demonstrates that GEOSPECS areas cannot be analysed as one group, as well as the diversity within each GEOSPECS area with regard to many variables and, hence, that quantitative analyses of each geographic specificity should be carried out as separate projects, based on compilations of LAU2 data and data processing at the level of the ESPON programme as a whole.

The nexus diagrams not only help to distinguish territorial development policy issues relate to each GEOSPECS area or case study, but can function as tools to identify possible fields of action and construct a shared understanding of the most relevant socio-economic processes for the development of a locality or region, and the corresponding challenges and opportunities. The combination of development opportunities and challenges in one model helps to clarify not only the obstacles that need to be overcome, but also the resulting added value that should be expected, whether in economic terms or in terms of positive externalities. The diagrams allow the identification of two types of public interventions: permanent compensatory measures to address structural or permanent imbalances; and targeted interventions to address specific situations, such as the lack of infrastructure or to begin a process.

A range of transversal themes was investigated through literature review and the case studies.

[2] Because of the limited quality of available road network model, areas within 45 and 90 minutes of borders could not be delineated in Albania, Montenegro, Serbia, Turkey, Kosovo, Macedonia (FYROM) and Bosnia and Herzegovina. The TPG considered that Sweden and Denmark share a terrestrial border at the level of the Øresund bridge, as this fixed link has generated significant daily cross-border commuting and allows the catchment area of Copenhagen airport to include parts of southern Sweden.

Economic themes: No 'typical economic structure' of any type of GEOSPECS area could be identified. However, many of the case study areas – especially mountain, island, ORs, and SPAs – featured above-average public sector employment. Many of the specialisations of GEOSPECS areas are directly or indirectly linked to their specificity, but this is not necessarily an advantage, given trends towards rationalisation and mechanisation and hence the need for smaller labour forces. Given the seasonality of tourism, which is a widespread source of income in GEOSPECS areas, year-round employment is often a key issue for maintaining populations and economies. Here, high-quality niche products can offer new opportunities. Accessibility to means of transport and services of general interest (SGI) is a key need for economic development; their lack is a widespread challenge for many GEOSPECS areas, but less for coastal and border areas. ICT can also offer great potential for mitigating remoteness and lack of SGI. However, while there are some good examples, usually deriving from public investment, there are many regions which are far behind.

Social themes: Significant proportions of most GEOSPECS areas have high residential attractiveness, due particularly to their environmental assets, but often also to their social and cultural capital, including both history and the 'closely-knit' communities found in small communities, for example in mountains, islands, SPAs and ORs. A resulting challenge is often that older people wish to migrate to these areas, thus increasing house prices, with the result that younger people can no longer afford to live there and therefore leave. A further factor in this is often a lack of educational opportunities.

Environmental themes: Some GEOSPECS areas have abundant natural resources, and their economies depend on their exploitation: examples include marine aggregates and fishing in coastal and island areas, and mining in SPAs and mountains. Apart from borders, all GEOSPECS areas have renewable energy resources with great potential, though their development may face particular challenges when distances to markets are large. Many GEOSPECS areas (especially ORs, mountains, islands, and coats) are also characterised by relatively high levels of biodiversity; and the coverage of protected areas is, on average, higher in all types of GEOSPECS areas (except borders) than the European average. Increasingly, connections are being made between biodiversity and the provision of other ecosystems services; here again, some GEOSPECS areas are vital in the European context. For instance, mountains are the 'water towers' of Europe; coastal ecosystems provide not only food but habitats for diverse economically-valuable and other species; and the forests of mountains and SPAs – and French Guiana, an OR – are important for carbon sequestration. Nevertheless, the characteristics of many GEOSPECS areas make them particularly vulnerable to climate change: especially coasts, islands, and ORs, threatened by sea level rise and increased frequencies of extreme events; mountain areas whose economies depend on snow for skiing; and ORs and islands where availability of freshwater may become an increasing challenge.

Even though border areas may not face specific impacts from climate change, adaptive capacity may be low where cross-border cooperation is weak.

Options for policy development

In policy terms, the work of the TPG has been undertaken within two particular contexts: 'Europe 2020', and the existing and planned consideration of GEOSPECS areas, both jointly and separately, in European (as well as some national) policies. GEOSPECS included two stakeholder consultations to explore both the effectiveness of implementation of existing policies and their potential development. The first involved stakeholders concerned with individual specificities, who responded to a questionnaire. The second was a stakeholder conference in December 2011 which brought together about 30 representatives of geographic specificities. Both processes enquired into the stakeholders' views on policy needs for "their" areas.

Diversity

Before proceeding to the presentation and discussion of policy options, it is necessary to review the diversity of both preconditions and objectives for GEOSPECS areas. First, there is considerable diversity between GEOSPECS areas. As noted above, they may be separated into two groups. Within these groups, some are more similar in terms of their constraints: particularly islands, mountains, and SPAs, typically characterised by remoteness, limited population, physical and climatic conditions, and important natural and often cultural heritage – and the focus of an Intergroup in the European Parliament. These areas also share challenges, particularly related to demography and the provision of services of general interest. ORs also share such constraints and challenges. Their recognition has led to compensatory policy instruments such as the Less Favoured Areas (LFA) scheme and specific funding packages for SPAs and ORs. In contrast, border areas and coasts, in general, do not share these constraints and challenges; though specific policy measures have been implemented to address those that they do face, e.g., Interreg (cross-border cooperation) and the Recommendation on Integrated Coastal Zone Management. During the GEOSPECS consultations, only stakeholders from coasts did not generally state that an integrated European policy towards their specificity was desirable.

Second, there is great diversity within each of the GEOSPECS areas, as illustrated by the following examples. The total populations of islands vary hugely, and there are major variations in population density: high in southern Europe and low in northern Europe. The employment structure in mountain massifs varies greatly at every spatial scale. While most parts of SPAs in Spain are within two hours of a large urban centre, people living in SPAs in northern Europe have to travel long distances to urban centres. Border areas include both

remote mountains and major metropolitan centres. Third, as noted above, GEOSPECS areas overlap, so that all or part of a particular region can be characterised as belonging to multiple such categories. However, regional or local stakeholders often characterise themselves as 'belonging' to a particular specificity. Finally, the regions of Europe as a whole are very diverse.

The nexus models developed during GEOSPECS, both for the case study regions and for each GEOSPECS area overall, have proved a very valuable means of assessing the key challenges, opportunities and, particularly importantly, the processes that link them. At the same time, this process underlined the fact that policies to foster both cohesion and competitiveness need to be targeted at the regional scale; generic policies per GEOSPECS area are unlikely to achieve the aims of either Cohesion or Competition policy. A particular finding was also that many GEOSPECS areas provide a wide range of positive externalities to Europe as a whole. As market values are not assigned to these, the vital contributions of GEOSPECS areas to Europe are rarely internalised in accounts of any type; this implies a need to reflect more strategically on how the long-term provision of these services and how the population of GEOSPECS areas could be supported to ensure this – rather than being 'compensated' for 'handicaps'.

Multi-level governance

Territorial cohesion is about ensuring a balanced spatial distribution of activities and people: this requires coherence among policies for different sectors and levels. One challenge is vertical coordination: to balance 'top-down' and 'bottom-up' approaches. In this context, stakeholders stressed the importance of coordination between levels in future Cohesion Policy, and particularly the need for regional and local authorities to be involved in the process of defining and implementing 'partnership contracts'. This implies their involvement with both national and EU institutions and, with regard to GEOSPECS areas, the need to move beyond both a hierarchical understanding of multi-level governance and a strict focus on administrative units, recognising the opportunities and challenges shared within territorial ensembles, e.g. a mountain massif, an archipelago, or a cluster of SPAs. A second challenge is horizontal coordination. While the need for this is certainly not exclusive to GEOSPECS, it may be that it is in such areas that sectoral policies interact most dramatically. This challenge is being addressed in the European Commission's current proposal for a 'Common Strategic Framework' that would apply to a range of funding instruments. Third, territorial cooperation is relevant for GEOSPECS areas because they do not stop at politically-defined borders. The existing and emerging macro-regional strategies, for both coastal and mountain areas, may be regarded as relevant in this context. Equally, border areas are a type of GEOSPECS area; and cross-border cooperation can be a key factor in ensuring smart, sustainable and inclusive growth.

The potential use of GEOSPECS areas for policy making

The GEOSPECS areas are as diverse as Europe as a whole, in every respect. Given the diversity of situations within each specificity, a "policy per geographic specificity" is not the best way forward. In addition to the great diversity within categories, the great potential for overlaps would make such an approach difficult to implement at local or regional level. In economic terms, each type of GEOSPECS area includes both highly successful and lagging regions –characteristics that derive from the interaction of many factors that may be further enhanced or mitigated by overlaps as well as other independent factors. Thus, a development strategy has to be based in the specific context of the area for which it is created. These conclusions suggest that the key challenge is to propose an improved framework for dialogue between the European, national, regional and local levels, making it possible to reflect unique patterns of opportunity and challenges in each territory. This would include:

- A general method to assess local situations, focussing on potentials and challenges, rather than comparisons of performance. Nexus models could be part of such a general method, complementing foresight workshops, visioning exercises, etc.
- Support to the formulation of development models adapted to local/regional conditions. In this regard, it is necessary to consider regions not only individually, but in relation to their adjacent regions. Neighbouring regions within the same territorial ensemble will face similar situations, and cooperation between them can unleash synergies (this includes interactions across administrative boundaries). This should be complemented by improved horizontal coordination of policies. It also implies challenging the "monolithic" character of the EU2020 strategy, incorporating the different types of ambitions and strategies across Europe.
- Better access to data and improved quantitative analyses of local situations, e.g., through a European observatory of local development conditions. GEOSPECS has shown, first, that local data of sufficient quality to assess local situations can be compiled, but that this requires an appropriate framework and substantial effort and, second, that it is possible to construct datasets that focus on each local area's context for social and economic development, rather than considering individual LAU2 areas as "isolated islands". Potentials could be calculated for a wide range of indicators and be made available for local and regional actors or feed into targeted analyses.

During GEOSPECS, stakeholders proposed that a catalogue of indicators (including geographic specificities and their effects) could be applied across

Europe so that the potentials and needs of each territory could be studied and taken into consideration adequately in order to indicate in which sector(s) intervention is necessary. Such an approach would be most applicable to Cohesion Policy and would require the definition of "smarter" indicators that go beyond the current focus on GDP. More generally, current EU policies (particularly Cohesion Policy) focus strongly using benchmarking to deduce the need for intervention (or not). This neither recognises the specific potentials of, and underlying processes within, regions nor reflects the important positive externalities that these regions may be able to offer to Europe as a whole.

Further initial conclusions are therefore that:

- Further progress should be made in moving away from viewing geographic specificities as "handicaps" and towards recognizing their assets. Regions with these specificities do face challenges, but there is a need to balance "compensation" and "promotion" efforts. In the long run, it would be necessary to value "non-market values" or positive externalities adequately.
- Better account should be taken of specific forms of ecological vulnerability associated with some GEOSPECS categories when formulating development objectives.
- Challenges and opportunities should be addressed jointly, e.g. by identifying the resources and possibilities that could be exploited if some key social obstacles were overcome. Stakeholders of GEOSPECS areas generally emphasize that public policies in favour of geographically specific areas should endeavour to generate a net gain for Europe and for its national components. However, the identification of this net gain often presupposes that the positive externalities of these areas are better acknowledged and taken into account, e.g. by identifying the external inputs on which Europe's metropolitan growth motors rely.

B Report

1. Main results, trends, impacts

1.1 Introduction

Regions with specific territorial features have received increasing attention in recent years. Most significantly, article 174 of the Treaty on European Union (TFEU) reads as follows:

> "*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."*

Additionally, Article 349 of the TFEU states that specific measures shall be adopted to take account of the structural social and economic situation of the Outermost Regions, which is compounded by "remoteness, insularity, small size, difficult topography, climate and economic dependence on a few products". Consequently, the Council shall adopt specific measures for these regions.

Thus, in policy terms, regions with territorial specificities are currently approached as a subset of disadvantaged and least favoured regions, and thus their specificities are described as "handicaps". They are primarily identified as part of efforts to reduce disparities between European regions. The significant number of sparsely populated, insular, border and mountainous regions whose economic and social performance levels are around or above European average values are therefore not targeted by this provision.

The Territorial Agenda adopts a similar approach, as it only deals with specific types of territories by referring to "areas with specific geographic challenges and needs (e.g. structurally weak parts of islands, coastal zones and mountainous areas)" and otherwise considers coastal zones and mountainous areas from a natural risk management perspective.

The Green Paper on Territorial Cohesion, published by the European Commission in 2008, takes a different angle. The subtitle of the document, "Turning territorial diversity into strength", suggests that geographic specificities could also represent a chance for the concerned regions and for Europe. The first examples of this diversity – "the frozen tundra in the Arctic Circle", "the tropical rainforests of Guyane", "the Alps" and "the Greek islands" – are sparsely populated, outermost, mountainous and insular areas, respectively. The Green Paper furthermore defines territorial cohesion as "a means of transforming diversity into an asset that contributes to sustainable development of the entire EU". However, the section entitled "regions with specific geographical features" introduces mountainous, insular, sparsely populated, coastal and outermost regions as areas that "face particular development challenges", even if their subsequent description emphasises their combined assets and handicaps and the coexistence of positive and negative development trends. The ambivalent understanding of Europe's extensive and diverse geographic specificities, as an asset (trends and current situation) as well as a source of territorial development challenges, shapes the political context for the present study.

In the working paper "Territories with specific geographical features" published by DG REGIO in 2009, Philippe Monfort calculated performance indicators for mountain, island, sparsely populated, border and outermost regions. He concluded that while these regions are "by nature, […] less accessible and on average services are more distant from their population", "each category includes a wide variety of situations". Therefore, "specific regional development programmes" for these categories of regions are likely to be "ineffective" (Monfort, 2009).

The European Commission's legislative proposals for the EU Cohesion Policy 2014-2020 include an additional allocation for outermost and sparsely populated regions of 926 million Euros and the possibility of modulating co-financing rates from the Funds to a priority axis to take account of "areas with severe and permanent natural or demographic handicaps" defined as "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", "mountainous areas as defined by the national legislation of the Member State" and "sparsely (less than 50 inhabitants per square kilometre) and very sparsely (less than 8 inhabitants per square kilometre) populated areas" (European Commission, 2012)[3]. These provisions were identical for the 2007-2013 Structural Funds programming period.

Among the innovative measures for the 2014-2020 period, the renewed focus on Community-led Local Development is particularly relevant for GEOSPECS areas.

[3] http://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/pdf/2014/proposals/regulation/general/general_proposal_en.pdf

Building on, for example, existing LEADER action groups and the URBAN pilot project, the Commission wishes to fund programmes for capacity building, local public private partnerships, networking and exchange of experience. The focus is on specific sub-regional territories that can be urban, rural, coastal, cross-border, mountainous but that must be implemented by the local community. Considering that geographic specificities are factors of territorial identity around which local and regional actors coalesce, they may play an important role in the further bottom-up process leading to the definition of Community-led Local Development projects.

The GEOSPECS approach of geographic specificities can feed into these types of discussions, as it focuses on identifying possible effects of geographic specificity on regional and local development processes.

Its objectives are:

- to develop a coherent perspective on territories with geographic specificities;
- to identify development opportunities in these parts of Europe;
- to assess the extent of socio-economic diversity within each category;
- to explore how one could facilitate the achievement of strategic targets of the European Union and of European countries by taking better account the diversity of development preconditions linked to geographic specificities;
- to identify the potential role of territorial cooperation and partnership and assess the need for targeted policies for GEOSPECS areas, focusing on the identification of the appropriate administrative level.

This analysis faces multiple challenges:

- First, all territorial development issues and processes are potentially relevant, insofar as they *may* be influenced by geographic specificity. The scope of enquiry is therefore *a priori* unlimited.

- Second, the identification of the "GEOSPECS areas" requires a conceptualisation of each category of geographic specificity. This conceptualisation needs to consider that each category has been constructed in order to organise the perception of territories and facilitate communication. None of the GEOSPECS categories are in other words "given"[4].

- Third, the extensive overlaps between the various types of geographic specificities and the fact that they can be found in European regions with

[4] While the delineation of Outermost Region can be characterised as "given", this GEOSPECS category is, as described in section 3.2.7, a policy construct.

contrasted development levels imply that a benchmarking of GEOSPECS areas against European target values and/or average performances is not meaningful.

- Fourth, the focus on development opportunities leads to complex questions on why these have not already been realised. In other words, an "opportunity" is a situation where a critical factor prevents local and regional stakeholders from taking advantage of an identified resource or asset. Drawing on ESPON TeDi, GEOSPECS has sought to systematise the analysis of these situations by considering that unexploited opportunities result from a lack of local of coherence between natural resources, human capital and the institutional context (see Figure 1).

Figure 1 The three dimensions to be put into coherence for the exploitation of territorial development opportunities

To overcome these challenges, the TPG has specified principles and characteristics for defining each category in order to identify delineation principles, as specified in Table 1 and 0. On the basis of the conceptualisation of each category, it is then possible to formulate hypotheses on their possible socio-economic effects so as to circumscribe the scope of enquiry. In other words, the enquiry focuses on identifying hypothetical causal connections between the different concepts of geographic specificity and socio-economic performance. Quantitative analyses guide this reflection, as they help to identify socio-economic patterns and trends that may constitute a challenge or, in contrast, a potential lever of growth and development. However, quantitative evidence can neither confirm nor invalidate the existence of a "disadvantage" or "advantage" in GEOSPECS areas, considered the high probability of spurious correlations when comparing geographically specific areas to the rest of Europe.

Table 1 Principles used to delimit GEOSPECS areas

Nature of extension for GEOSPECS areas	**Outermost** ◇	**Islands** ○	**Mountains** ➔➔	**Sparsely populated** ➔➔	**Border areas** ◇ ➔ I ➔	**Coastal zones** (◇) ➔ I ➔	**Inner peripheries** Not a geographic specificity.
	Designated politically as a part of Europe situated in a non-European geographic context	**Defined as territories surrounded by bodies of water, irrespective of context**	**Defined on the basis of topographic contrasts with immediate neighbourhood**	**Defined on the basis of local population potentials, irrespective of wider geographic context**	**Defined on the basis of distance to a politically defined borderline**	**Defined on the basis of proximity to a maritime space, which in some respects is politically delimited**	**Defined on the basis of a diversity of historical processes, leading a centrally located territory to be disconnected from physical, social and economic networks and experience relative or absolute decline.**

Legend for symbols:		
◇ = Politically designated	**I** = Line	➔ = Delimitation of GEOSPECS areas
○ = Unequivocally delineated		➔ / ➔ = Contextual parameters used for the delineation at local scale (LAU2 or daily mobility area) scale or considering a wider regional context

Table 2 Conceptual & methodological interpretation of GEOSPECS areas

Category of GEOSPECS area	**Outermost**	**Islands**	**Mountains**	**Sparsely populated**	**Border areas**	**Coastal zones**	**Inner peripheries**
Delineation principle	Given		Based on threshold values		Based on distances to a line		Perception by local, regional and national actors
Nature of specificity	Defined politically, as a response to an inherited situation	Categories designated on the basis of specific physical characteristics		Categories designated on the basis of specific settlement patterns	Categories designated because they act as an interface and/or are situated on the rim of Member States		Defined on the basis of a perception of being "out of the loop" in spite of a central location
Data used for delineation	Not applicable		Topography	Population potential	Time-distance, Euclidian distance, topological distance (e.g. contiguity)…		N/A
Most relevant territorial context	Macro-regional context		Buffer zone with mutual influence	Macro-regional context	Buffer zone with mutual influence		Wider territorial context

1.2 Overview of delineations

These considerations imply that it is not possible to use the NUTS3-based definitions of some GEOSPECS categories, as provided in the Fifth Cohesion Report and in the ESPON typology, for the present project. Also GEOSPECS does not aim to benchmark GEOSPECS areas against European average values. Rather, the project seeks to understand how each type of specificity may influence socio-economic development processes, and potentially lead local and regional stakeholders to formulate development objectives that are different from those prevailing at the European and national levels. For these purposes, delineations that, for example, neither distinguish highland areas from their respective piedmont, nor make it possible to consider phenomena such as double insularity, are not operational. Furthermore, delineations that deviate substantially from local and regional understandings of the different GEOSPECS categories may not function in a project that investigates how identities and geographic specificities interact. All delineations are therefore based on LAU2 units, as this is considered to be the scale at which delineations meeting the criteria described above may be met.

The TPG has nonetheless sought to maintain the greatest possible congruence between the LAU2 delineations and the ESPON typology. However, the focus on conditions for economic and social development has induced some significant differences in the approach.

First, GEOSPECS categories need to be separated in two groups:

- Mountain areas, islands, sparsely populated areas, Outermost Regions and inner peripheries are “areal notions”, defined on the basis of the properties of parts of the European territory;
- Borders and coasts are linear notions. Associating areas to these “lines” requires hypotheses on the types of proximity that can be relevant from the point of view of socio-economic development.

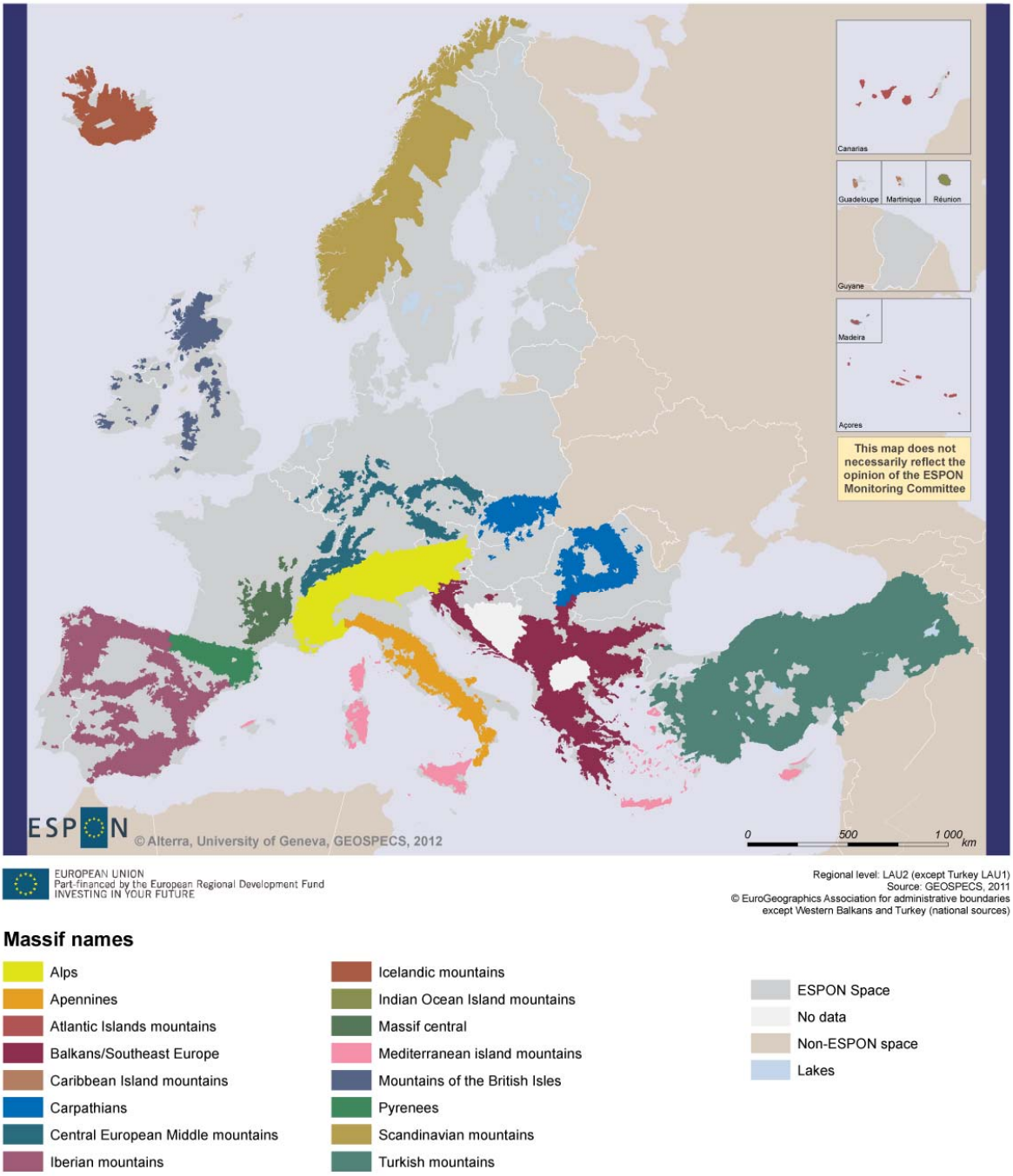
These types of questions are not addressed in the ESPON typology, in which participation in cross-border cooperation programmes in the 2007-2013 programming period is the defining feature for border regions. Coastal regions are defined on the basis of the proportion of the NUTS 3 population living in municipalities within 10 km from the coast; a justification of this distance threshold has not been provided.

1.2.1 Mountains: Conceptual understanding and delineation

In pre-modern times, a mountain was defined in relation to the observation site, usually located below. From the 18th century, mountains became increasingly defined according to objective criteria, particularly altitude and slope. Once mountains had been accordingly defined, further concepts emerged, such as mountain people, mountain agriculture, and mountain tourism. At the national level, individual countries established policies for mountain forests from the mid-19th century, and mountain agriculture from the 1930s, the latter recognising the particular challenges of production in these difficult environments. In 1975, the EU recognised such challenges through the Directive on 'mountain and hill farming and farming in less favoured areas' which has been modified several times. Member States define the area to which this applies within their national territories, using criteria of altitude and slope. Similar criteria have also been used by certain countries to define mountain areas for tourism or regional policy and, in two parts of Europe – the Alps and the Carpathians – to define the area to which international conventions apply.

The delineation of mountains used for GEOSPECS builds on previous work for the European Commission (Nordregio et al., 2004) and the European Environment Agency (EEA, 2010) using the criteria of altitude, slope, and terrain roughness, derived from a digital elevation model (DEM). This approach recognises the need for more stringent criteria at lower altitudes. These criteria were applied for each kilometre square (grid cell) of the ESPON space to delineate it as mountainous or non-mountainous. It should be noted that the Fifth Cohesion Report started from similar principles, as it defined NUTS 3 mountain regions as those where at least 50% of the population lives in a mountainous area or at least 50% of the land area is mountainous, in both cases using the same topographic criteria. However, such an approximation at the level of NUTS 3 regions loses the mountain perspective: groups of grid cells with rough topography are combined with others that are not mountainous. This also makes it difficult to analyse mountain-piedmont relationships, as these two types of areas are usually included in the same regions.

The delineation in GEOSPECS is slightly modified from that used by the EEA. The set of grid cells with mountainous topography was approximated to municipal boundaries by considering that LAU2 units with more than 50% mountainous terrain should be considered to be mountainous. Isolated mountainous areas of less than 10 km^2 were not considered, and non-mountainous areas of less than 10 km^2 within mountain massifs were



Map 1 Massif areas in the ESPON space

The notion of massif is inspired by French policies for mountain areas and is used to designate mountainous territorial units. It was applied at the European level in 2004 (Nordregio et al., 2004). In this study, massifs were identified on the basis of national perceptions. Thus, their definition and naming are based not only on geophysical parameters, but also on socio-cultural ones. For the present study, larger European massifs have been defined, starting from those defined by the EEA (2010).

included. Continuous mountain areas of less than 100 km^2 were then identified, and designated as exclaves which were excluded from the mountain delineation except on islands of less than 1000 km^2. Non-mountainous groups of LAU2 units of less than 200 km^2 surrounded by mountain areas were identified as enclaves and included in the delineation. The mountain areas were grouped into 15 massifs, defined on the basis of the delineations of the EEA (2010), with some modifications.

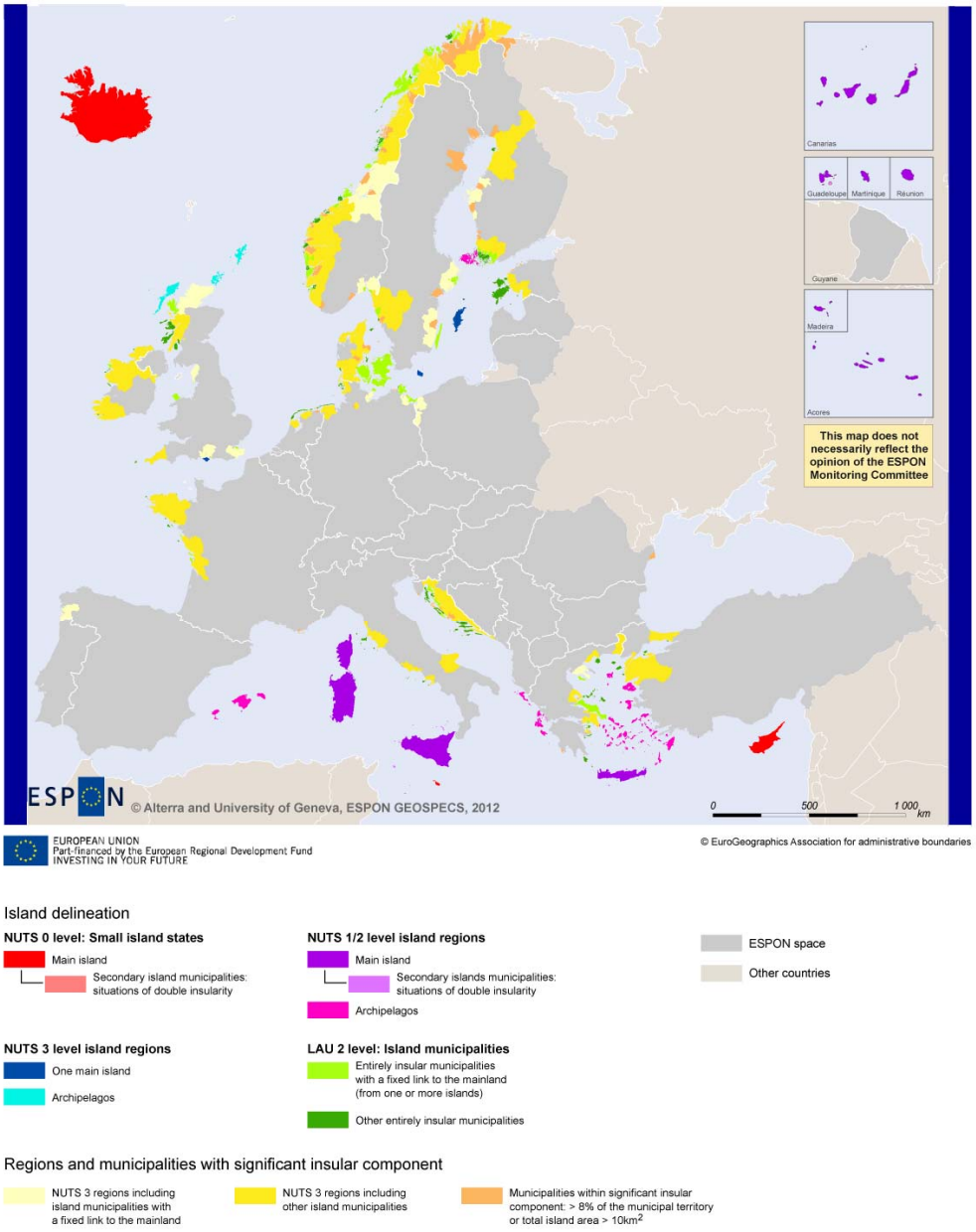
1.2.2. Islands: conceptual understanding and delineation

The concept of island is closely linked to that of insularity: the situation of isolation and inaccessibility of a place surrounded by sea. This situation can be further compounded by increasing isolation from other islands and the respective continent: an isolation that is typically not only physical. Many islands are both peripheral to, and dependent on, main centres of political, social and economic activity. While they may have some level of self-administration, they tend to have little political power at higher levels. However, in this respect, situations are very diverse. It is of key importance to distinguish the degrees of autonomy of island states, island regions and other islands and the different notions of "mainland" that prevail in each case. The situations of "double insularity" (islands outside the coast of another, larger island) and of archipelagos also need to be dealt with separately.

While island societies tend to exhibit homogeneity and social cohesion, they are particularly vulnerable to external influences, particularly when they become dependent on a seasonal tourism industry. The environment and unusual species of islands are often elements that attract tourists; yet these are often particularly fragile.

The delineation of islands started by identifying all territories that are physically disjoint from the European mainland. Given the focus of the study on the social and economic relevance of insularity, the 601 islands connected to the mainland by a fixed road link – most in the Nordic countries – were then excluded. It is recognized that such links do not negate insularity and may be comparable to regular ferry services.

A total 319 "island territories", defined as an individual municipality comprising multiple islands, or a single island with one or more municipalities, can be identified in the extended ESPON space. Of these, 75 have a fixed link to the continent. They have a total population of 4.6 million inhabitants of whom 2.5 million live on the



Map 2 Delineation and typology of islands

A multilevel approach has been used, as the socio-economic impact and political significance of insularity is considered to be different depending on whether it occurs at the national, regional or local scale(s).

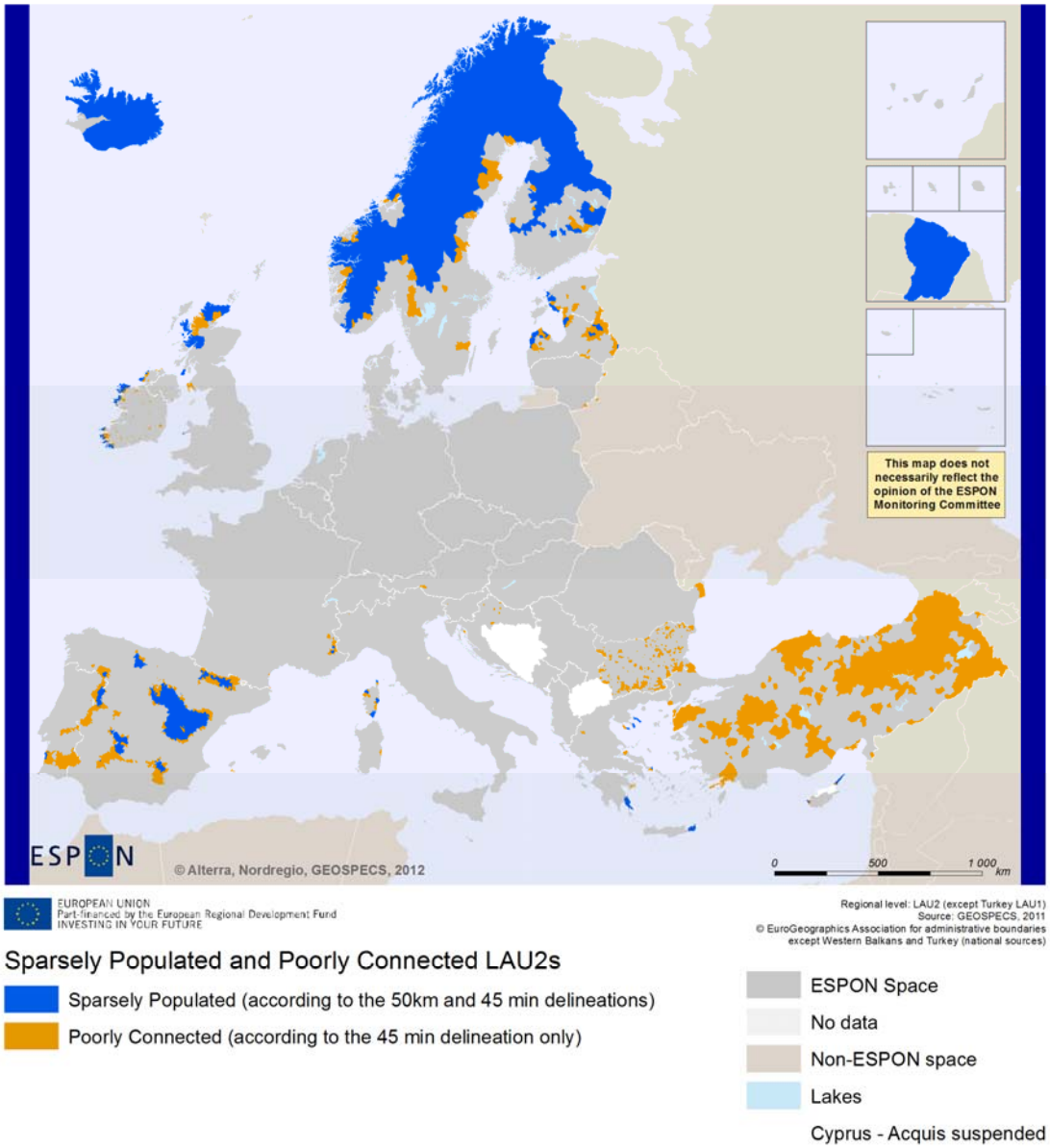
island of Sjælland (Copenhagen). The 244 remaining islands have a total population of 15.6 million.

In addition, many islands are part of a municipality that is not entirely composed of one or more islands. Municipalities with a significant insular component were defined as those including islands with a total area of at least 10 km² or where the insular area comprises at least 8% of the municipal area. 67 such LAU2 areas were identified in the ESPON space, with a total population of around 1.4 million inhabitants, of which 500,000 for the city of Göteborg in Sweden. Insularity is relevant spatial planning and regional development issue for NUTS3 regions comprising insular LAU2 units. 51 mainland NUTS3 regions in the ESPON space comprise insular LAU2 units without fixed links, and 24 with fixed links. The corresponding figures within the European Union are respectively 36 and 24 mainland NUTS3 regions.

1.2.2 Sparsely populated areas: Conceptual understanding and delineation

The concept of Sparsely Populated Areas (SPAs) originated in the Nordic countries; such areas were typically characterized by land that was not suitable for agriculture but, from the Industrial Revolution, gained value because of their large-scale natural resources (wood, coal, metal ores). The exploitation of these resources was enabled by the establishment of towns and, often, the development of hydroelectricity; however, population densities across most of these regions remained low. Following the accession of Finland and Sweden to the EU in 1995, sparsity gained European recognition as a unique characteristic of these countries' northernmost regions. More recently, sparsity has also been recognised in other parts of the EU, albeit to a lesser extent, notably in northern Scotland and central Spain. However, it should be stressed that, unlike other geographic specificities apart from inner peripheries, the concept of SPA is dynamic, as population densities change over time.

Traditionally, SPAs are identified on the basis of population densities, with threshold levels of 8 persons/km^2 for regional policy and of 12.5 persons/km^2 for Competition Policy. However, the resulting delineation is largely determined by administrative boundaries. GEOSPECS has therefore chosen to delineate SPAs on the basis of population potentials, i.e. the number of persons that can be reached within a maximum generally accepted daily commuting or mobility area from each point in space. Two



Map 3 LAU2s with more than 90% of the total area covered by SP Areas.

The map distinguished between Sparsely Populated Localities and Poorly Connected Localities, i.e. areas from which one cannot reach 100,000 inhabitants within 45 minutes and 50 km, respectively. Many localities in Europe contain at least some areas with a low potential population potential. However, in GEOSPECS, in GEOSPECS, the focus has been on LAU2 units where this is a predominant a feature. Only localities with over 90% sparsely populated areas have therefore been selected.

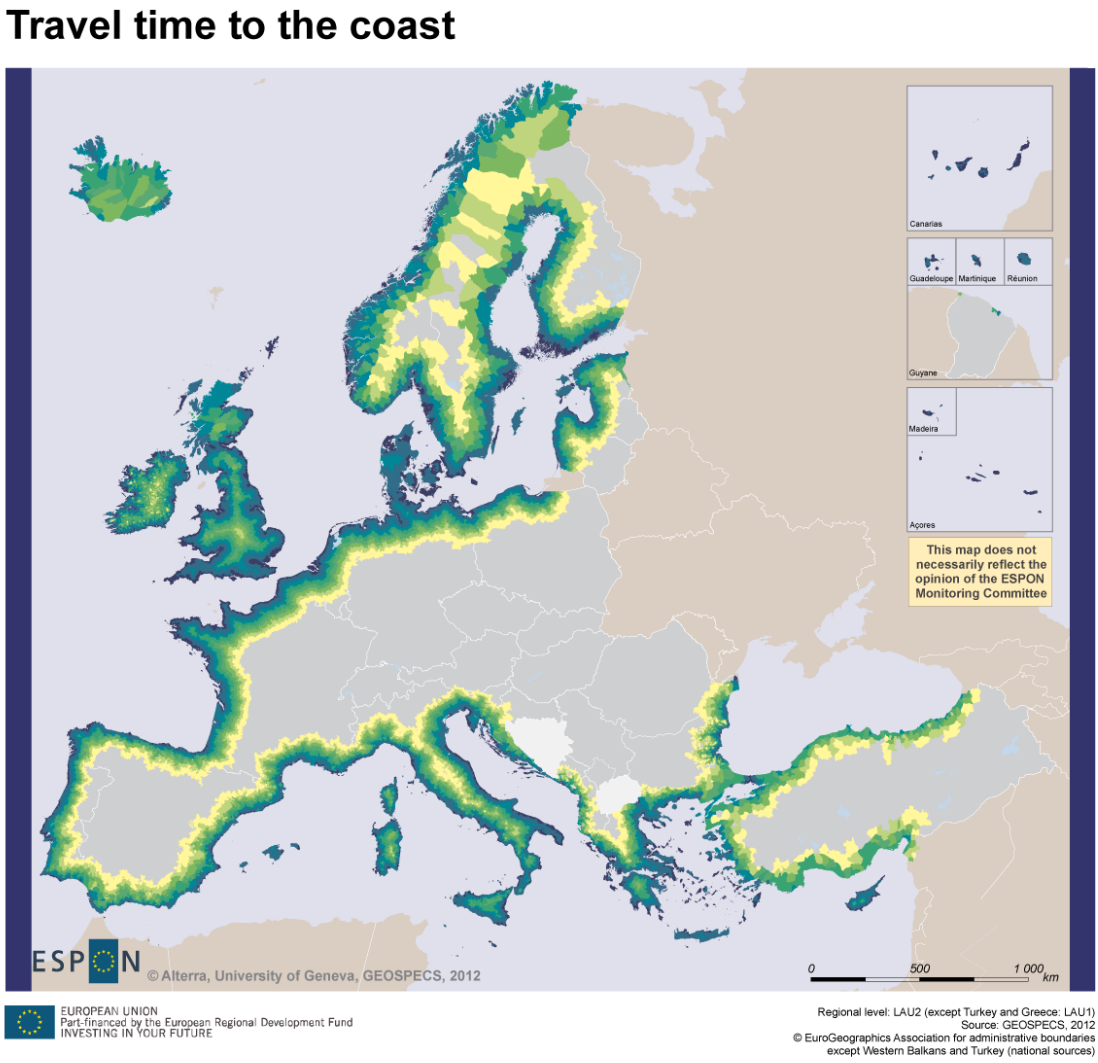
Population densities have not been used because they fail to take into account the geographic context of each LAU2 unit. Furthermore, they are largely determined by the way in which administrative boundaries are drawn.

approaches were used. The first evaluated the isotropic distance, i.e., the possibility to commute 50 km from a point in all directions equally. The second evaluated the population potential using 45-minute isochrones along road networks. The application of a common threshold of 100,000 persons (i.e., 12.7 persons/km²) allowed the identification of SPAs and Poorly Connected Areas (PCAs) (covering respectively 17.2% and 34.6% of the expanded ESPON space). A number of small islands were excluded from this delineation, even if they technically meet the criterion of low population potential, as their situation is more adequately analysed under the heading 'insularity'.

The extent of economic and social development challenges linked to sparsity does not depend on the proportion of "sparse" or "poorly connected" areas at the regional or national level. The focus is not on uninhabited areas, but on local communities that are economically vulnerable because of the small size of the labour market and where the limited "reachable population" makes it difficult to deliver private and public services cost-efficiently. Thus, Sparsely Populated Localities and Poorly Connected Localities were identified as LAU2 units with at least 90% of their area defined as SPA or PCA (Map 3). Finally, given that EU territorial policies and instruments are mainly applied at the NUTS3 level, regions with low population potential, i.e., including at least one of the localities just mentioned, were identified. Such regions cover most of the Nordic and Baltic states, Turkey, Ireland, and Spain.

1.2.4. Coastal areas: Conceptual understanding and delineation

Coastal areas function as interfaces between terrestrial and marine systems. The coast*line* is the physical environment where marine and terrestrial systems meet, geomorphologically varying from major indentations to long stretches of sandy beach. From a functional socio-economic perspective, the coastal *zone* is an area where the proximity to the coastline has a direct effect on socio-economic structures, trends and development perspectives, e.g. in terms of employment opportunities and residential attractiveness.



Map 4 Average travel times to the coastline from LAU2 units

The TPG does not consider it meaningful to produce a fixed delineation of coastal zones. The objective is, on the contrary, to identify the various ranges of mobility and interaction associated with the different types of coastal effects.

A vast array of actors have interests in coastal zones, as they serve as fishing grounds (i.e. sources of food), focal points for trade and transport, as recreational spaces, but are also the habitats of a number of ecologically important species. Ports in their function as gateways have historically attracted industry and population, a reason why some coasts are densely populated.

The conflicts of interest that result from the high number of activities in coastal zones is reflected in policy documents. In general, coastal and marine policy in Europe is driven by the negative impacts from human activities on natural coastal and marine resources, resulting in a host of policies that concern, for example, water management, pollution, bathing water, nitrates, shellfish, conservation, renewable energy, climate adaptation, floods and erosion.

Eurostat (2010) defines EU coastal regions as "regions with a sea border, regions with more than half of its population within 50 km of the sea and Hamburg". Such an approach may be relevant from a governance perspective, as proximity and contiguity makes the coastal dimension relevant issue for territorial policy making. However, when seeking to understand how proximity to the coast influences socio-economic structures, trends and development perspectives, it seems more relevant to consider the distance of individual communities (i.e. LAU2 units) to the coast. One can also consider the specific effects of contiguity and of proximity to so-called "landing points" where resources from the sea or transiting across the sea arrive.

Therefore, GEOSPECS does not consider it meaningful to produce a fixed delineation of coastal zones. The objective is, on the contrary, to identify the various ranges of mobility and interaction associated with the different types of coastal effects. Two of the hypotheses to be tested are whether areas within commuting distance to the sea (45 minutes by the road) and contiguous to the sea exhibit specific socio-economic patterns.

1.2.5. Border areas: Conceptual understanding and delineation

Border areas differ from other GEOSPECS categories in that they primarily refer to a human construct: a politically-defined border which is designed to organise the sovereignty of modern states. However, the reality of these borders is multidimensional because it also involves – at the same time – other important features (i.e. natural obstacles; economic discontinuities; socio-cultural dividing lines) which generally affect the socio-economic dynamics in border areas.

This multidimensional reality of European borders generates a variety of positive or negative consequences in the concerned border areas (i.e. "border effects") which, in practice, are also interlinked by complex cross-

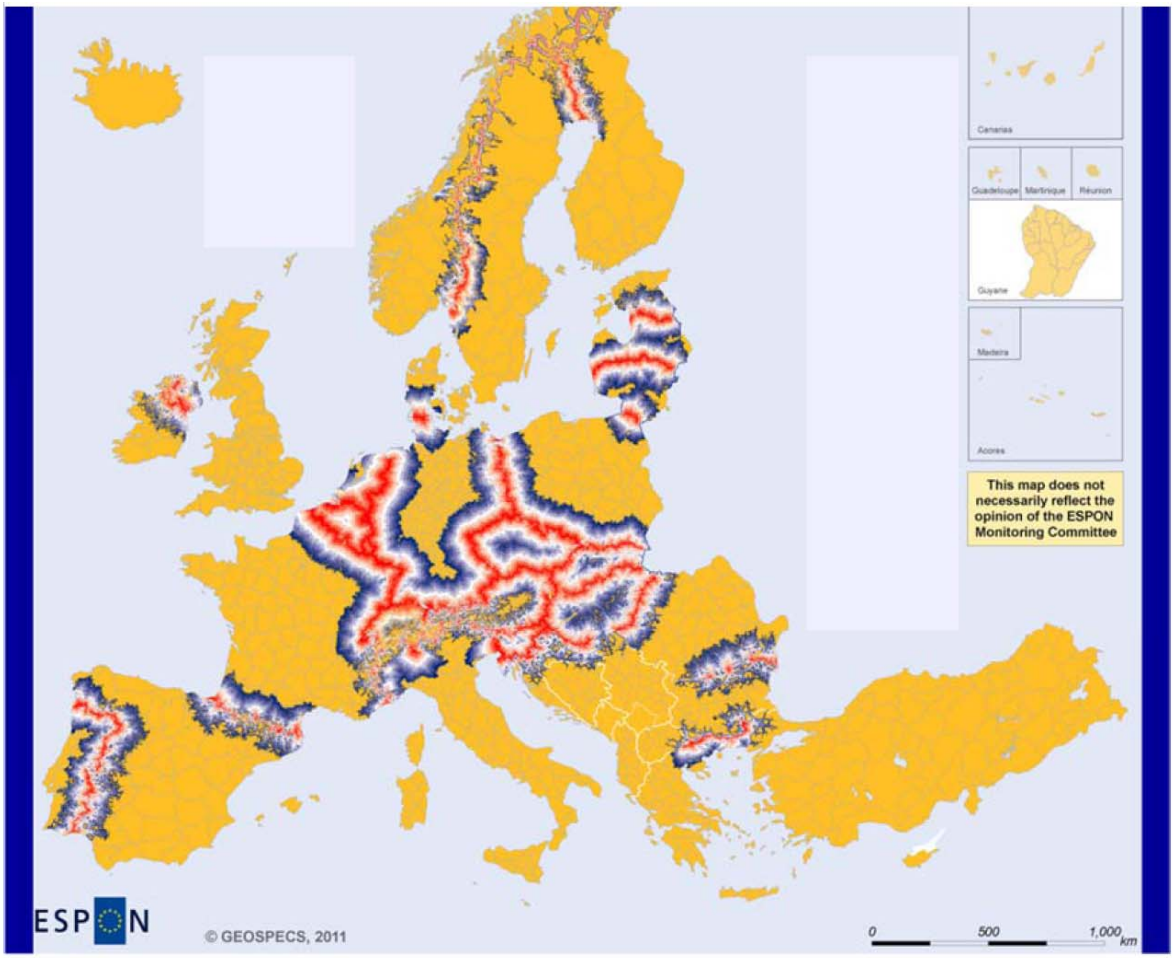
relations and cross-impacts or feedback loops. These effects influence the socio-economic development of an area that may be more or less distant from a political border (i.e. not only immediately at the border line), depending on the theme or the specific issue at stake.

Type of border effect	General reasons explaining the associated border effects
Effects associated with political borders	Different status of the political border & different degrees of "openness" for economic exchanges & inter-personal relationships. Different legal systems, governance structures (administrative units & powers) or policies meeting at a border.
Effects associated with natural obstacles	Existence or non-existence of a natural obstacle (e.g. high mountain, large river & lake, sea or large maritime separation) & varying significance of the "barrier effect" represented by the obstacle.
Effects associated with economic discontinuities	Significantly different levels of economic performance (i.e. observed with respect to the overall situation or a specific issue) between border areas, acting at the same time as potential "push factors" and "pull factors".
Effects associated with socio-cultural dividing lines	Variations with respect to the general cultural & linguistic settings on either side of a border. Different interpretation of the common historical legacy, different levels of inter-personal relationships existing between both sides of a border.

The dynamic EU integration process created internally an array of new opportunities for flows and exchanges by successively dismantling many obstacles which previously resulted from the more rigid function of the classical nation-state borders. However, barriers and obstacles continue to exist at the *internal* EU/EEA-borders and, especially along the *external* EU/EEA borders, they have in some respects been further strengthened.

This creates in all border areas, whether located along the *internal* or *external* EU-borders, a pattern of "half-circle social and economic relations": socio-economic exchange relations and other interactions with the domestic hinterland are generally more intense than across the border, because the latter do not yet function in a way that comes close to what is normally experienced in the domestic context. This also leads, to varying extents, to a degree of "territorial non-integration" between areas immediately adjacent to a common border.

Consequently, GEOSPECS did not deem it meaningful to produce a general delineation of border areas which follows administrative boundaries (i.e. the NUTS 3 regions determining the eligibility of ERDF-supported cross-border co-operation programmes). Instead, they were delineated on the basis of a 45-minute travel distance to a politically-defined borderline which corresponds to a reasonable proxy for the maximum generally accepted commuting and daily mobility distance. A mapping of variants of this time-distance parameter (< 45 min. or > 45 min.) shows that the extent of border areas in the EU can change considerably (see Map 4).



Map 4 Travel time to internal EU borders

1.2.3 Inner peripheries

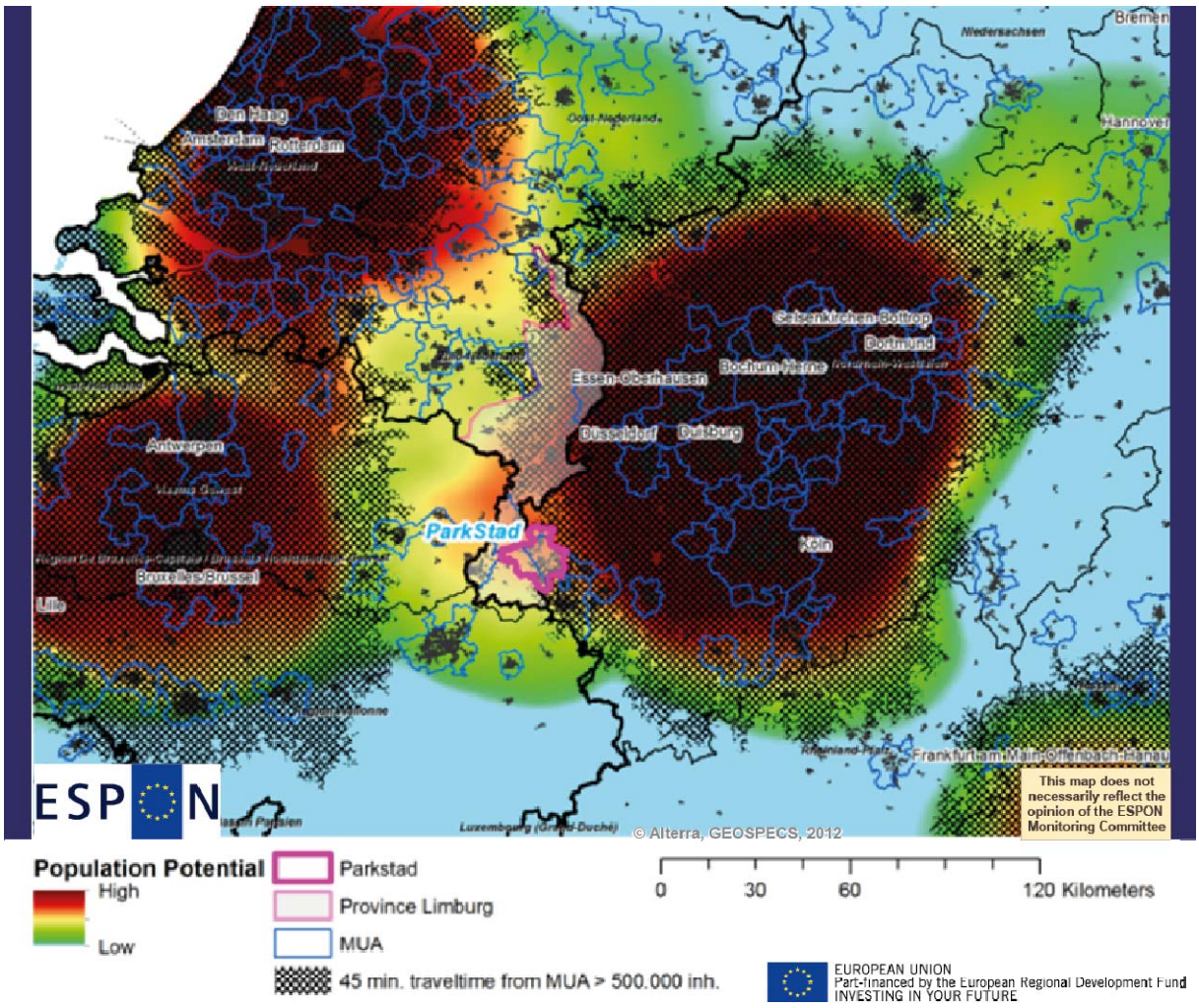
The concept of Inner Peripheries (IP) as such is new in the European policy arena, as illustrated by the fact no policy documents dealing explicitly with it. However, there are different policy and scientific documents on spatial planning and regional development at national level that specifically approach those 'places' that suffer from socio-economic decline or stagnation. The reasons for the socio-economic 'peripherality' in these regions are various. They mainly depend on the settlement structure of the region/country (centralised or polycentric), as well as on the specific bio-physical characteristics and socio-economic trends (e.g. land cover and linked use dynamics and functionalities, population density, accessibility, etc.). This is why the concept of IP is wide-ranging and impossible to delineate for the whole ESPON area and should not be considered as a geographic specificity category.

After reviewing the different concepts gathered during the face-to-face interviews, and those found in grey literature, the following elements appear overall as key when understanding IP:

- Inner Peripheries can be described by several socio-economic, political and geophysical characteristics, and therefore **cannot be fully considered as geographical specificities**. The peripherality is not limited to the outer margins of any given territory. The distances that contribute to determine the conditions for economic and social development are not the Euclidian ones to a hypothetical "centre", but linked to the configuration of physical, social, economic, institutional and cultural networks. "Peripheries" may therefore be situated in areas that what would geometrically be characterised as the centre of a given territory;
- IP are identified with a **development concept** that is not a question of urban or rural but of being a centre or a periphery, which implies that IP are found both in urban as in rural environments;
- IP are **neither permanent in time nor in place**, but appear and disappear in the course of the history of a region, differing in this aspect from the other GEOSPECS specificities;
- IP are initially recognisable by a **population shrink** initiated by the disappearance of the main economic activity;
- In general, IP are located close to strong development centres associated with provision of Services of General Interest (SGI), defined by population, jobs, universities, hospitals, administrative centres, etc.

The following indicators appear therefore as relevant to identify IP: demographic trends (total population by age segments and out- and in-migration), commuting patterns (based on the working and living locations), size of labour market and access to Service. What remains challenging is the identification of critical thresholds for these indicators at pan European level.

Although the delineation of IPs at the European scale is difficult due to the lack of harmonised datasets on socio-economic indicators at relevant spatial and time scales, some indicators are particularly useful to describe their specific situation, e.g. accessibility to the metropolitan cores in terms of travel time, population potentials (see Map 5), data on employment per economic branch and on the number of gainfully employed persons.



Map 5 Population potentials mapped at supra-regional level around Parkstad

The map shows the location of a Dutch IP (Parkstad) just outside the reach of core development centres with large populations.

1.2.4 Outermost regions: Conceptual understanding and delineation

Article 349 of the TFEU lists nine Outermost Regions (OR) and presents the main determinants of this specific EU status. As a political category, accessing the status of OR (or abandoning it) requires validation at the EU level. Following recent decisions, there are now only eight OR:

- 4 French Départements – Martinique, Guadeloupe, French Guiana (Guyane) and La Réunion
- 1 French "Collectivité" – Saint Martin
- 2 Portuguese Autonomous Regions – Madeira and the Azores (Açores)
- 1 Spanish Autonomous Community – the Canary Islands (Islas Canarias)

The Treaties establish a clear-cut difference between ORs and Overseas Countries and Territories (OCTs). While OCTs are part of their mainland but not of the EU (and EU law consequently does not apply there), the OR are an integral part of the European Union, although isolated in the Atlantic Ocean, the Caribbean Sea and the Indian Ocean as well as on the South American continent. Given their situations, it is officially acknowledged that these regions have to cope with specific constraints – remoteness, insularity, small (usable) area, difficult topography and climate, economic dependence on a few products – the permanence and combination of which severely restrain development capacities. The OR therefore profit from derogations under some EU policies, and from particular compensation programmes under others.

These French, Spanish and Portuguese territories were colonised mostly during the 16th century. The new settlers imposed a specific economic model, based on the cultivation of one or a very limited number of crops (cane sugar, coffee, spices, some fruit). In all territories, slaves were imported to sustain the developing economies. The 19th century marked a turning point: competition from other colonies became important (as did beet sugar from Europe), slavery was successively abolished, wars and the aftermath of the French Revolution shook the economies.

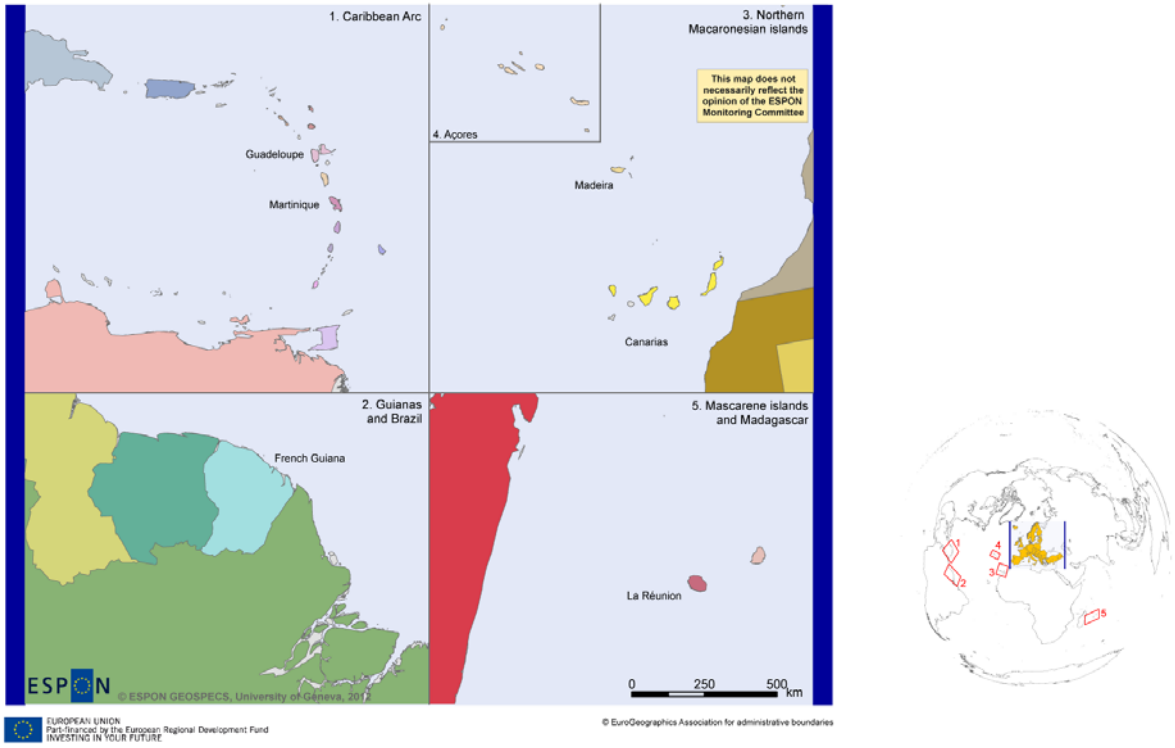
The French ORs became 'départements' in 1946, Madeira and the Azores were granted their autonomy in 1976, and the Canary Islands gained their current status of Autonomous Community in 1982. In all ORs, the economic structure has followed comparable major trends: downturn of agricultural activities in terms of their contribution to GDP; increasing importance of services, especially tourism; and strong influence of the public sector, which became the major employer. However, there are

some disparities, and it appears that, while ORs follow a trajectory that is influenced by their status of overseas territories, this common status is less strong than their economic ties with France, Spain or Portugal.

Although being in the first instance a politically constructed category, the Outermost regions share a number of geographic characteristics, which set them apart from continental EU territories, as shown in Table 3.

Table 3 Geographical constraints of Outermost Regions

Regions	Remote-ness	Insularity	Double insularity	Small territory	Complex territorial morphology	Specific climatic conditions	Natural risk
Azores	X	X	X	X	X	X	X
Canary Islands	X	X	X	X	X	X	X
Guadeloupe	X	X	X	X	X	X	X
French Guyana	X			X	X	X	
Madeira	X	X	X	X	X	X	X
Martinique	X	X		X	X	X	X
La Réunion	X	X		X	X	X	X



Map 6 Outermost Regions and their respective geographic context

1.3 Cross-analysis of delineations

The delineation of geographically specificities has been an extensive and crucial step for the TPG to consider the demographic, economic and environmental characterisation of these territorial specificities. This chapter has two objectives: to briefly summarise basic information on area and population resulting from the respective delineations; and to analyse how GEOSPECS areas overlap in ESPON space and in the EU.

Synthesis of delineations at EU27 and ESPON space levels

As indicated in section 1.1, the delineation of various geographic specificities is based three types of definition principles:

- "Given" either geographically or politically: Outermost Regions and islands;
- "Based on threshold" values: mountain (morphological) and sparsely populated (demographical) regions;
- "Based on driving time-distances" to a line: coastal and border regions.

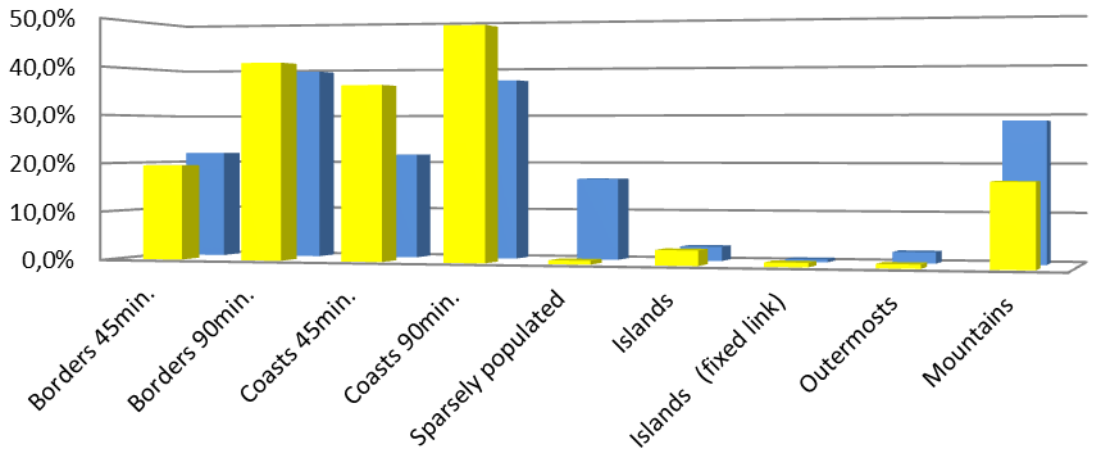
The TPG has chosen not to make a general delineation of border areas and coastal zones, considering that these are defined on the basis of different types of proximity (socio-economic, environmental etc.) to a borderline or a coastline. Admittedly, in its analyses, the TPG has mainly considered areas within 45 and 90 minutes travel time from to a borderline or a coastline. However, these thresholds do not cover all types of border and coast effects; differences in wealth and legislation between neighbouring countries can, for example, have an effect on national economies as a whole. 'Border area' is therefore a complex notion, analysed in detail in section 3.2.5.

As shown in Figure 2 (EU27) and Figure 3 (ESPON space[5]), the relative importance of GEOSPECS specificities varies depending on whether the one considers their spatial extent or their population.

Considering their spatial extent, mountain areas occupy the largest share of EU27 territory (see Figure 2) with 28.7% of the area. Next come areas within 45 minutes from borders and coasts, with about 22% of the EU 27 territory, while sparsely populated areas total 16.7%. There is a major

[5] Excepting "the Former Yugoslav Republic of Macedonia" and "Bosnia and Herzegovina" where no LAU1 or LAU2 digital maps were available, making delineation process impossible.

difference between these four largest categories, and the three other ones. Islands without a fixed link total only 2.9% of the EU27 area, Outermost Regions 2.3%, and islands with a fixed link 0.6%.



The sum of percentages may exceed 100% due to the fact that many specificities overlap (see section on cross-delineations)

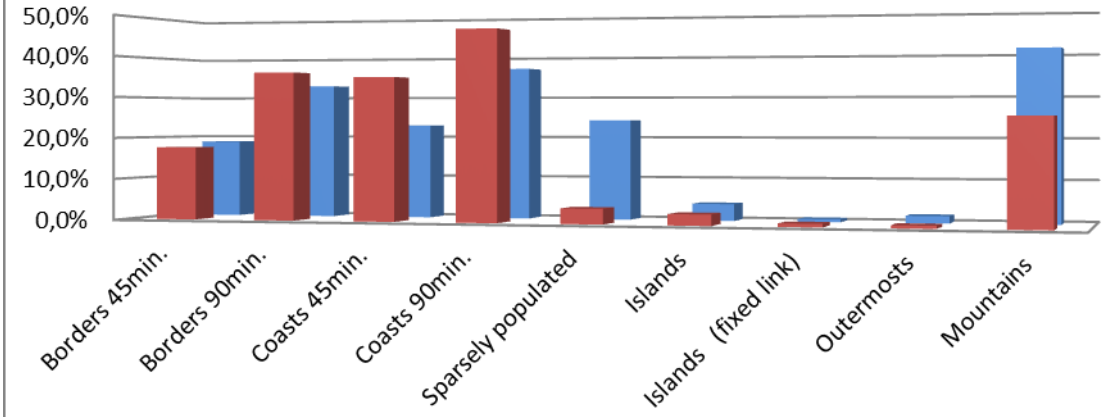
	Borders 45min.	Borders 90min.	Coasts 45min.	Coasts 90min.	Sparsely populated	Islands	Islands (fixed link)	Outermosts	Mountains
UE27 (Pop)	19,5%	40,7%	36,0%	47,9%	0,8%	3,1%	0,9%	0,8%	16,9%
UE27 (Area)	22,0%	39,4%	21,6%	37,3%	16,7%	2,9%	0,6%	2,3%	28,7%

Figure 2 Proportion of population and area covered by various types of geographic specificities (EU27)

Another way to interpret the relative importance of various specificities consists of taking account of the proportion of the EU27 population that lives within each GEOSPECS category. From this perspective, areas with 45 minutes from the coastline host the largest share of the EU27 population (36%), followed by areas within the same distance from borders (19.5%) and mountain areas (16.9%).

An alternative classification of GEOSPECS categories can be made on the basis of the ratio between the proportions of area and population. On one hand, there are geographic specificities where the population tends to "concentrate" (coasts, borders and islands) and, on the other, geographic specificities that tend to be more thinly populated than the European average (SPAs and, to a lesser extent, mountains). Outermost Regions are in a contrasting position, as they include both relatively densely populated islands and the sparsely populated rainforest of French Guiana.

The overall patterns are similar when one considers the ESPON space as a whole (see Figure 3). Nonetheless, some significant changes can be observed in the relative importance of the mountain, sparsely populated and island categories, reflecting patterns of geographic specificity in ESPON countries not belonging to the European Union.



Sum of percentages may exceed 100% due to the fact that many specificities overlap (cf. chapter on cross-delineations)

	Borders 45min.	Borders 90min.	Coasts 45min.	Coasts 90min.	Sparsely populated	Islands	Islands (fixed link)	Outermosts	Mountains
ESPON (Pop)	17,6%	35,9%	34,7%	46,0%	3,7%	2,6%	0,8%	0,7%	25,4%
ESPON (Area)	18,8%	32,9%	22,9%	37,0%	24,2%	4,0%	0,7%	1,7%	41,3%

Figure 3 Population and area within various types of geographic specificities (ESPON space)

As shown in section 3.2.3, major parts of Iceland, Norway and Turkey comprise sparsely populated or poorly connected municipalities[6]. Similarly, for mountains, (see section 3.2.1) Switzerland, Liechtenstein, Iceland, Norway, Western Balkans and Turkey all have a particularly high proportion of mountain areas[7]. The proportion of mountainous areas therefore rises from 28% in the EU27 to 41% when considering the entire ESPON area.

Regarding islands in general, the fact that the share of area is more than one-third higher in the ESPON space than in the EU, while the share of

[6] IS : 72'814 habitants & 94'715 km^2; NO : 1'050784 habitants & 256'014 km^2; TR : 16'709'234 habitants & 326'202km^2

[7] AL: 23'291 KM^2 & 2'050'514 habitants; CH: 38'234 km^2 & 6'501'651 habitants; IS: 86'810 km^2 & 68'384 habitants; LI: 160 km^2 & 35'168 habitants; ME: 13'089 km^2 & 670'734 habitants; NO: 267'466 km^2 & 2'655'169 habitants, RS: 38'462 km^2 & 3'986'789 habitants; TR: 643'988 km^2 & 48'308'333 habitants; XK: 10'903 km^2 & 2'337'024 habitants.

population is 15% lower is mainly due to the inclusion of Iceland and, to a lesser extent, of the relatively sparsely populated islands of Norway. In parallel, the relative weight of the Turkish population in the ESPON space and the limited population of Turkish islands contribute to reduce the relative share of island population.

Comparison of GEOSPECS delimitation with ESPON typologies

As mentioned in section 1.2, the TPG has sought to maximise congruence with ESPON typologies, but it has nonetheless been necessary to adopt significantly different methods to create meaningful delineations for the analysis of development opportunities and challenges. The comparison of the delineations of GEOSPECS categories at the LAU2 level in GEOSPECS with the NUTS 3 typologies of ESPON provides information on the impact of these methodological differences on the number of persons and areas identified as geographically specific. It should also be noted that the GEOSPECS project's delineations include Turkey as well as most of the Western Balkans[8], which the ESPON typologies only covered these for border areas and SPAs.

In the case of border regions, the maps 1, 2, 7 and 8 of Annex 56 show the differences between a political/administrative and a geographical approach to the same specificity. The ESPON typology, for example, identified coastal NUTS3 regions participating in cross-border cooperation programs around the Baltic Sea, the English Channel, and the Mediterranean Sea as border regions. The extent to which the socio-economic dynamics in these maritime border areas can be compared to those observed along terrestrial borders can be questioned. Considering terrestrial border areas, the areas within 90 minutes of the border lines (Annex 56, Map 2) fit more closely the border cooperation areas identified by the ESPON typology than the areas within 45 minutes (Annex 56, Map 1), illustrating that border cooperation extends beyond areas of daily mobility to a border. However, maps representing the proportion of population that lives within 45 minutes of the border (Annex 56, Map 7) are more informative when it comes to identifying areas where being close to a border is a major component of regional life and identity. This mainly concerns border areas in a central part of Europe, stretching from the Benelux countries to Romania, as well as Northern Ireland.

Coastal regions have been delineated on the basis of the proportion of population within 10 km from the coast in the ESPON typology, while GEOSPECS has considered different time-distances to the coast. The

[8] Excepting "the Former Yugoslav Republic of Macedonia" and "Bosnia and Herzegovina" where no Lau1 or Lau2 digital maps were available, making delineation process impossible

ESPON typology was subdivided in four classes (low, medium, high and very high share of coastal population). With regard to the daily mobility maximum travel time of 45 minutes, there are major variations within the classes with "low" and "medium" shares of coastal populations, as the proportions of population living in LAU2 within 45 minutes from the coast range from respectively 0.4% and 20.4% to 100% (Figure 4). This is an effect of the variable quality of transportation networks connecting the coast and the inland. Interestingly, the non-coastal regions identified in the ESPON typology also contains 35 NUTS 3 regions where more than 80% of the population is within commuting distance of the coast. These regions are all in the United Kingdom, the Netherlands, Belgium and Germany.

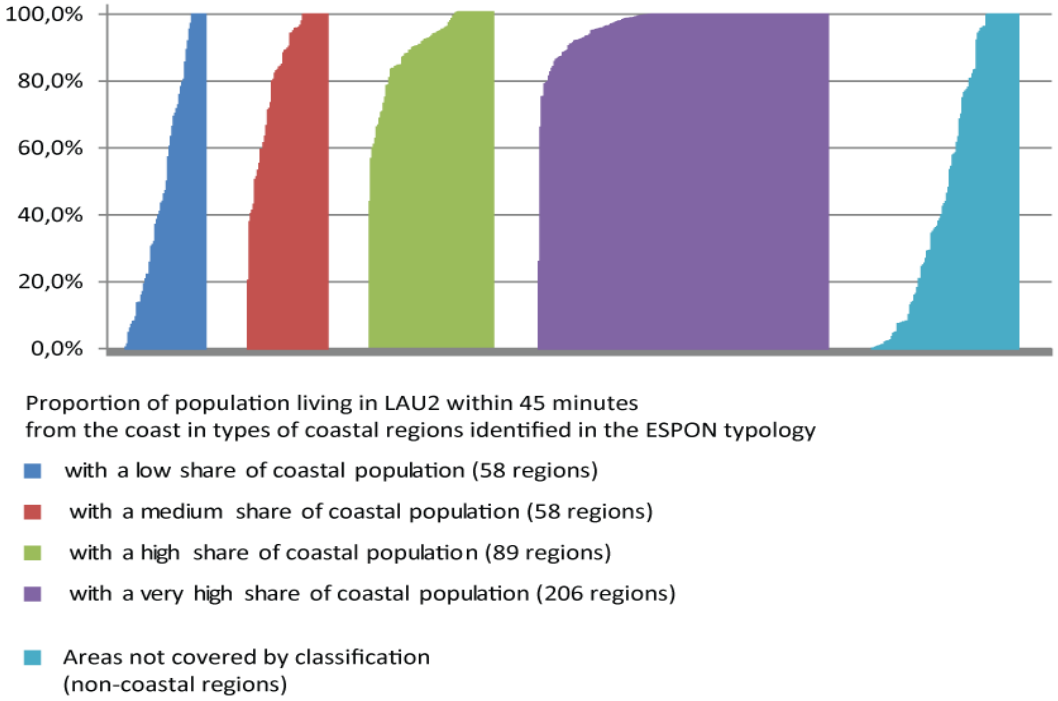


Figure 4 Proportions of population living in LAU2 within 45 minutes from the coast in the four classes of coastal regions of the ESPON typology

The mountain delineation of GEOSPECS includes Turkey, the Western Balkans, Reunion and Iceland, which are missing in the ESPON typology (Annex 56, Map 5; Annex 56, Map 12). The two delineations are methodologically similar, as they are based on very similar grids of mountain areas. However, these are applied at different levels (LAU2 and NUTS3, respectively). This explains why the patterns are relatively similar when considering the proportions of mountainous area and population at NUTS3 level (Annex 56, Map 5; Annex 56, Map 12). The comparison

between these maps of proportions of mountain population and area makes the distinction between regions with populated mountains (e.g. Alps, Apennines, Massif Central) and with populated piedmonts (e.g. Pyrenees). It appears important to maintain this distinction in the analyses, as the social and economic realities of regional "mountainousness" will be significantly different in each group of regions.

Attempts to map SPAs at the NUTS3 level makes the limitations of this scale of analysis obvious. Most "archipelagos of sparsity" (see section3.2.3) disappear, e.g. along the Irish coast and the Portuguese-Spanish border, as well as in the Pyrenees, the Alps, Bulgaria, and the Baltic countries. In the Nordic countries, comparing the share of population (Annex 56, Map 11) and area (Annex 56, Map 6) in SPAs at the NUTS 3 level shows the different degrees of intra-regional disparity. While most of the territory of Norrbotten and Västerbotten in Northernmost Sweden has been defined as SPA in GEOSPECS, the proportion of the population living in these LAU2 units is very low.

Overall, these comparisons demonstrate the need for multi-scalar analyses to understand patterns of geographic specificity.

Cross-analysis of delineations

A major difficulty that arises when trying to assess whether a geographical specificity is associated with particular sets of development potentials or limitations is that several specificities often overlap over the same region.

Due to the large number of potential overlaps - 49 if one includes areas within commuting distance of urban areas – the TPG has mainly focused on overlaps that are most likely to reinforce or reduce development constraints in GEOSPECS areas (see Figure 5).

Mountains have been considered by the TPG as one of the most relevant categories for cross-delineations. Indeed, mountain massifs act as barriers that have often influenced the geographic context for social and economic development in all other categories, e.g. through additional infrastructure costs. The rough terrain of mountainous coasts, for instance, generally makes them less suitable for human settlement and use. Similar effects can be observed on islands, Outermost Regions and in sparsely populated areas. Mountains also reinforce border effects by adding topographic barriers to administrative ones. Finally, rough terrain limits the range of potential daily commuting distances to urban areas.

In contrast, accessibility to urban areas favours development potentials within all kind of territories. It is of particular relevance in geographic specificities where settlement patterns tend to be sparse, such as

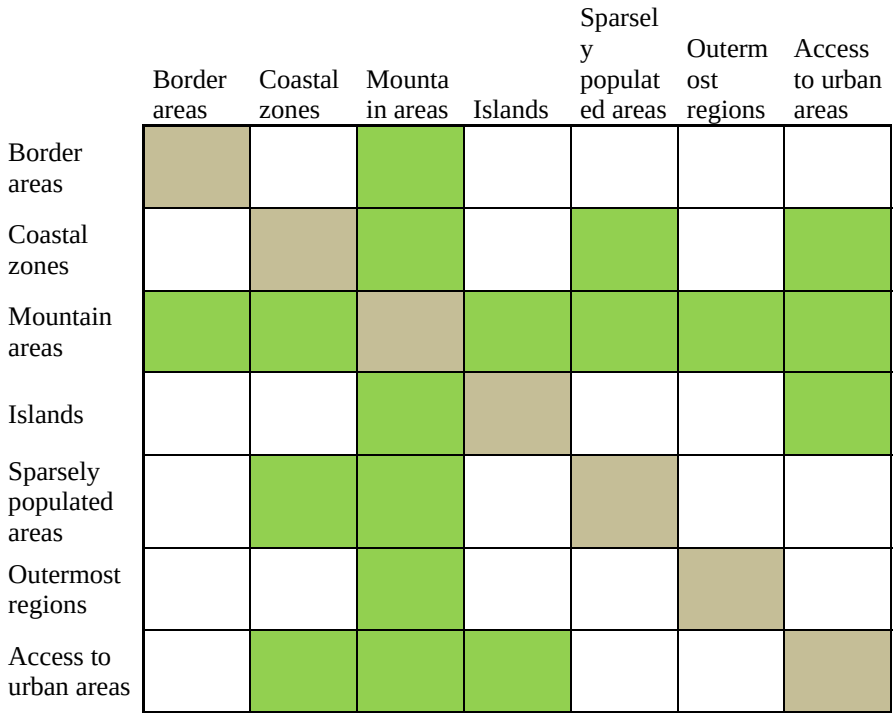


Figure 5 Identification of most relevant overlapping categories

mountain areas and islands (see Figure 3). Indeed, urban areas act to concentrate demographic and economic activities upon which regional development strategies can build. Based on this rationale, one could think of the importance of PUSH for SPAs. This cross-delineation is, however, of no relevance because, using a threshold of FUA over 100,000, no such PUSH can be found in SPA. In the case of coastal zones, this tends to concentrate a large proportion of the population on small areas: PUSH (especially those over 750,000) represents precisely the backbone of this concentration process. In most cases, they do not only imply concentrations of people, goods and economic activities, but also act as interfaces with the global economy, hosting major harbours. Their role is therefore of particular relevance not only for the coastal zone itself, but for entire national economies.

Finally, crossing coastal zones with SPAs provides an interesting and complementary perspective on coasts. Indeed, this geographic specificity is, overall, characterised by the highest ratio of population to area (see Figure 3) among GEOSPECS categories. In that sense, looking at the less populated parts of coastal zones provides the TPG with useful elements on factors of attractiveness for the category.

Table 4 Overlaps between GEOSPECS categories (areas)

ESPON_Area	Border area (within 45 minutes)	Border area (within 90 minutes)	Coastal area (within 45 minutes)	Coastal area (within 90 minutes)	Sparsely populated and PC areas	Island without fixed link	Island with fixed link	Outermost region	Mountain area	Urban area > 100 000 inh.	Urban area > 750 000 inh.
Border area (within 45 minutes)		100.0%	10.9%	20.5%	38.6%		0.1%	4.7%	31.6%	34.2%	11.5%
Border area (within 90 minutes)	57.1%		13.0%	23.5%	25.5%		0.4%	3.3%	29.9%	40.4%	13.9%
Coastal area (within 45 minutes)	8.9%	18.6%		100.0%	26.8%	14.6%	2.9%	3.6%	38.3%	40.8%	13.2%
Coastal area (within 90 minutes)	10.4%	20.8%	61.9%		21.5%	10.8%	1.8%	2.3%	38.6%	39.5%	12.7%
Sparsely populated and PC areas	29.9%	34.6%	25.4%	32.9%		7.0%	1.0%	5.9%	55.9%	0.2%	0.0%
Island without fixed link			82.7%	99.0%	42.3%			6.7%	71.9%	16.7%	3.0%
Island with fixed link	3.8%	17.5%	100.0%	100.0%	34.6%				39.9%	23.3%	15.0%
Outermost region	51.2%	62.8%	48.8%	48.8%	83.8%	15.9%			12.2%	0.6%	
Mountain area	14.4%	23.8%	21.3%	34.6%	32.9%	7.0%	0.6%	0.5%		17.6%	3.7%
Urban area > 100 000 habitants	18.3%	37.9%	26.7%	41.7%		1.9%	0.4%	0.0%	20.8%		30.4%
Urban area > 750 000 habitants	20.3%	42.9%	28.4%	44.0%		1.1%	0.9%	14.1%	14.1%	100.0%	

The table reads as follows (using the figures in red font colour as examples):

- *Within border areas (1st row), 10,9% of the area is also a coastal area (3rd column)*
- *Within coastal areas (3rd line), 8,9% of the area is also a border area (1st row)*

Table 5 Overlaps between GEOSPECS categories (population)

ESPON_Population	Border area (within 45 minutes)	Border area (within 90 minutes)	Coastal area (within 45 minutes)	Coastal area (within 90 minutes)	Sparsely populated and PC areas	Island without fixed link	Island with fixed link	Outermost region	Mountain area	Urban area > 100 000 inh.	Urban area > 750 000 inh.
Border area (within 45 minutes)		100.0%	14.8%	25.6%	0.9%		1.4%	0.1%	22.1%	84.7%	48.1%
Border area (within 90 minutes)	49.1%		17.7%	26.9%	0.7%		1.2%	0.0%	19.3%	84.8%	51.9%
Coastal area (within 45 minutes)	7.5%	18.3%		100.0%	1.9%	7.1%	2.3%	1.9%	17.5%	77.5%	46.5%
Coastal area (within 90 minutes)	9.8%	21.0%	75.3%		1.6%	5.7%	1.7%	1.5%	19.9%	76.7%	45.6%
Sparsely populated and PC areas	4.4%	6.9%	18.0%	20.5%		0.9%	0.9%	0.9%	77.0%	0.3%	0.0%
Island without fixed link			94.2%	99.3%	1.2%			25.3%	54.5%	56.7%	16.7%
Island with fixed link	31.2%	53.2%	100.0%	100.0%	4.1%				6.2%	73.1%	53.6%
Outermost region	1.5%	1.5%	96.5%	96.5%	4.8%	95.1%			75.2%	23.3%	
Mountain area	15.4%	27.2%	23.8%	36.1%	11.1%	5.6%	0.2%	2.1%		42.7%	17.0%
Urban area > 100 000 habitants	20.6%	41.9%	37.0%	48.6%		2.1%	0.8%	0.2%	14.9%		58.4%
Urban area > 750 000 habitants	20.0%	44.0%	38.0%	49.5%		1.0%	1.0%	10.2%	10.2%	100.0%	

The table reads as follows (using the figures in red font colour as examples):

- *Within border areas (1st line), 14,8% of the population lives in a coastal area (3rd column)*
- *Within coastal areas (3rd line), 7,5% of the population lives in a border area (1st column)*

2. Options for policy development

2.1 Introduction

The delineation of GEOSPECS areas at the European level has shown that GEOSPECS categories are not simply defined by physical features that can be circumscribed on the basis of quantitative criteria. On one hand, the geographic categories "island", "mountains", "coast, "sparse" and "border" area are embedded in the national territorial policy discourses of the concerned countries. Most of them have more or less long-standing traditions of addressing the specific challenges and opportunities of these areas through dedicated measures, or have had debates on the need for such measures.

On the other hand, the understanding of each European citizen regarding these notions contributes to shaping the ways in which he or she perceives European territories and their interactions. These "general understandings" of GEOSPECS categories are important factors of development, not least when trying to understand how local growth coalitions are formed and how internal and external territorial branding processes may contribute to improving economic and social performance. To facilitate dialogue between the European, regional and local levels, quantitative analyses and discussions of GEOSPECS categories need to be based these "general understandings" of the different GEOSPECS categories.

However, these "general understandings" may vary across Europe. A simple compilation of national delineation criteria would therefore not create a coherent European basis for the understanding of Territorial diversity. It is necessary to (re-)construct GEOSPECS categories from a European perspective. This has been attempted in the Fifth Cohesion Report, in the Green Paper on Territorial Cohesion and in subsequent working papers of the European Commission (Monfort, 2009, Dijkstra and Poelman, 2011). The GEOSPECS project is an additional input to the construction of European categories of territorial diversity.

Whether geographically specific areas perform differently from an economic or social point of compared to other territories is therefore of secondary importance. The main issue is whether GEOSPECS categories could help in designing policies that would be more efficient and better suited to meet the key objectives of the European Union and of the Member States.

In order to take due consideration of stakeholders' opinions and their policy demands, the GEOSPECS project included two stakeholder consultations. The first took the form of a written questionnaire which was sent out to, and answered by, stakeholders specifically concerned with the different geographic specificities. The second consultation was a stakeholder conference, which took place in Brussels on 8 December 2011, bringing together about 30 representatives of geographic specificities. Both processes enquired into the stakeholders' views on policy needs for "their" areas. The stakeholder conference focused particularly on the Commission's proposal for a future (2014-2020) Cohesion Policy. Aspects of current policies (from EU to regional level) were also taken into account in the case studies.

The starting point of the TPG's work has been the "Europe 2020" strategy for smart, sustainable and inclusive growth. In a discussion that mostly refers to the regional and local level, it is important to keep in mind that the five headline targets[9] pertain to the EU *overall*, and are not to be achieved by *each* region individually. Instead, the headline indicators are translated into national targets[10], adapted to the preconditions and requirements of each Member State. The targets themselves are "spatially blind", but presuppose the implementation of measures that are adapted to each territorial context. Normative European positions on how this should be done, e.g. in GEOSPECS areas, would probably not be appropriate, considering the diversity of local and regional situations. Hence, it is necessary to formulate general principles on the diversity of regional and local contributions to overall economic and social performance and sustainable development: as the ESPON TeDi ("Territorial diversity in Europe") project observed, "high European performance in terms of economic and social development is not simply the sum of high local and regional performances" (Nordregio et al, 2010, p. 58)[11].

[9] The five headline indicators are:
- Employment: 75% of the 20-64 year-olds to be employed
- R&D / innovation: 3% of the EU's GDP (public and private combined) to be invested in R&D/innovation
- Climate change / energy: greenhouse gas emissions 20% lower than 1990; 20% of energy from renewable; 20% increase in energy efficiency
- Education: Reducing school drop-out rates below 10%; at least 40% of 30-34–year-olds completing third level education
- Poverty / social exclusion: at least 20 million fewer people in or at risk of poverty and social exclusion

[10] See: http://ec.europa.eu/europe2020/pdf/targets_en.pdf

[11] See http://www.espon.eu/export/sites/default/Documents/Projects/TargetedAnalyses/ESPONTEDI/TeDi_Final_Report-14-05-2010.pdf

Any discussion on policy development must recognise that, while each region in Europe should make best use of its assets to contribute to the achievement of the Europe 2020 targets, and the success of Europe 2020 will depend on the efforts made at the regional and local levels (Böhme et al., 2011), this does not imply that all regions should be compared against the same benchmarks. Instead, a more functional approach is needed, acknowledging that the high performances of some areas, e.g. metropolitan areas, is possible because other areas provide strategically important inputs such as water, energy, food, and opportunities for leisure and recreation. The "territorialisation" of general targets, such as those of Europe 2020, needs to take into account the reality that different types of regional specialisation create different levels of economic return. Furthermore, economies of scale and agglomeration, combined with a higher degree of circularity in exchange patterns, allow regions with large and diversified economies to benefit more from their productive activities than small and specialised ones. The question is whether one should conclude from this that all regions should focus on economic sectors with the highest economic returns, or that Europe's population should concentrate in a few metropolitan areas. Such an uncritical application of economic theories, e.g. developed as part of New Economic Geography (Krugman, 1995)[12], does not take into account the diversity of regional contributions to balanced long-term economic and social development: or, as Böhme et al. (2011) put it, "the EU 2020 priorities should be spelled out for different territories in line with their potentials and specificities."

From the perspective of GEOSPECS categories, this raises two types of questions:

(1) To what extent can GEOSPECS categories inform political debates on how overall European targets, such as those formulated by Europe 2020, should be "territorialised"? Could policies help to ensure that the specific contributions of GEOSPECS areas become more efficient or sustainable?

(2) Do GEOSPECS areas face specific challenges in the endeavour of contributing to the achievement of Europe 2020 objectives? Could targeted measures help them overcome some key obstacles and improve their overall contribution to European "smart, sustainable and inclusive growth"?

While Europe 2020 defines the overall direction of the EU in the coming years, it is evident that the discussion on geographic specificities takes place against the backdrop of – first and foremost – a long-standing

[12] Krugman, Paul, (1995) *Development , Geography and Economic Theory*, Cambridge, Massachusetts: MIT Press.

discussion on territorial cohesion, as well as the existing policies at EU level (mainly Cohesion policy and Agricultural policy) and at national and regional levels.

As GEOSPECS is, in many ways, the logical continuation of the ESPON TeDi project, it is necessary to briefly summarize some of the main conclusions from this project as the foundation for any further discussions. TeDi considered *mountainous*, *insular* and *sparsely populated* areas in Europe, and concluded that:

- It is necessary to encourage the formulation and implementation of *locally designed* development strategies. Europe is diverse, and no model can be applied across all of Europe.
- Even when designing development strategies at the local level, we must not consider regions in isolation. Each region (or locality) interacts with its neighbouring territories, and often functional integration is needed.
- Policymakers should focus on development *opportunities* – rather than *limitations* – and thereby identify endogenous growth potentials of areas.
- The Europe 2020 strategy should be tailored to territorial specificities by adapting objectives and strategies at the regional and sub-regional scale.

Furthermore, TeDi pointed to the necessity of compiling *sub*-regional data, at the level of commuting areas, as a prerequisite for formulating policies to address the demographic and social balanced development of communities. Since GEOSPECS works at the level of municipalities (LAU 2), and specifically considers commuting areas (in the form of PUSH), it is a first step in addressing this data need.

2.2 Diversity of preconditions and diversity of objectives

Diversity *between* GEOSPECS categories

A fundamental challenge when dealing with GEOSPECS areas is that it is impossible to make a general, generalizing, or generalizable statement that applies to all of them. Mountains, islands and sparsely populated areas (SPAs) appear to have a (limited) number of common features, and have been collectively addressed in different studies (the ESPON TeDi project; Monfort, 2009; ADE, 2012). In addition, these three types of territories are addressed collectively at a political level, as they form the focus of the European Parliament's Intergroup 174, which refers to the respective article in the consolidated version of the Treaty on the Functioning of the European Union (which also refers to cross-border regions). The feeling that mountains, islands and SPAs have the highest number of common characteristics was also voiced at the GEOSPECS stakeholder conference in December 2011. While there are arguably parallels to Outermost Regions, it is not possible to integrate borders, coasts and inner peripheries into this same framework.

A study by ADE (2012) investigated the effectiveness of ERDF and Cohesion Fund support in islands, mountains and SPAs. Focussing on six case studies, it came to the conclusion that there are common types of territorial feature that are apparent in the respective regions:

- Remoteness: from major markets, services or industrial 'poles' or clusters;
- Territorial (small) size: in terms of population, density and/or GDP
- Low density: in terms of population per square kilometre;
- Physical constraints: in terms of insularity, slopes, boundaries, poor quality of soils etc;
- Extreme climate conditions: e.g. hot/cold, dry/wet, windy;
- Outstanding and/or preserved environment and habitats: in terms of the biodiversity of flora and fauna;
- Outstanding and/or preserved cultural heritage: historical traditions linked to the landscape, specific cultural identities

The first five items on this list are described as "natural constraints" (i.e. non-changeable, such as the geographical remoteness of an island), or "structural constraints" (which could theoretically be changed, but only in the long run). Indeed, the idea of structural constraints was echoed in the

GEOSPECS stakeholder conference in the form of "severe structural handicaps" – this point being most frequently brought up by stakeholders from islands. However, it is hard to argue that either a coastal region or a border region would face certain structural handicaps simply *because* it is a coast or a border.

In a next step, ADE (2012) summarized the challenges deriving *from* (the combination of) these characteristics: "the demographic challenges are common to all of the studied regions, which are negative natural growth rates, out-migration of young people (often women) and an ageing population." This resounds with the findings of the ESPON TeDi project, which also concluded that some issues related to demography are common to the same three types of territories: "it appears that the main quality of life issues are related to small and isolated settlements. Recurring issues such as the difficulty of maintaining access to services of general interest, to generate balanced and robust labour markets or to improve the quality of the infrastructure are indeed all linked to insufficient population numbers. Independently of whether one considers mountains, islands or sparsely populated areas, settlement patterns and obstacles to mobility are shared concerns leading to similar effects". This then led to the conclusion that "a European policy explicitly addressing settlement pattern related issues and formulating objectives for how the population should be organised across the European territory would be particularly relevant for TeDi areas".

Again, these findings cannot be extended to coastal or border areas in general. One key reason is that some of the most densely populated areas of Europe are cross-border areas (e.g. Luxembourg and Geneva), or coasts (e.g. the Belgian coast). These are hubs of settlement and economic activities, certainly not suffering from a lack of access to services. While neither coastal areas nor border regions can be assimilated to the "classical" categories of geographic specificity, they appear to have common features, both referring to a line which first and foremost acts as a barrier. The coastline separates the land from the sea, whereas the border line separates administrative units, political systems, economic spheres, languages, cultures, etc. However, both also act as interfaces for exchange (see a more detailed elaboration in the chapter on case studies).

On the other hand, it *is* possible to assimilate Outermost Regions (ORs) to this framework. All of the features mentioned above (particularly remoteness, small size, extreme climate conditions) also apply to ORs. The associated challenges often appear stronger for these regions; this is partly for historical reasons. The term "remoteness" gains a different dimension when speaking, for instance, about French Guyana, situated on

a different continent. The analytical focus therefore rather needs to be on the integration of these territories in their respective continental context, and the specific challenges a European regulatory and institutional framework may pose in this respect. In the two GEOSPECS stakeholder consultations, representatives from ORs recurrently made the point that they consider these areas as "particular" and not comparable with the other GEOSPECS categories, as the issues they face are so much more severe than for any region within mainland Europe. While this is a valid point, the GEOSPECS TPG considers that – even though the *intensity* of challenges is stronger – the challenges of ORs can be traced back to the same characteristics as mentioned above for islands, mountains and SPA.

According to these different preconditions, stakeholders voice different demands for the different GEOSPECS categories. As none of these are made "into the blue", but rather within an existing context, it is necessary to very briefly summarize the most important existing EU policy provisions for geographically specific areas.

- Mountains: Mountain agriculture is a well-established topic of European policy-making. The aid scheme to farmers in Less Favoured Areas (LFA) has included special provisions for mountain areas since 1975, since these regions are subject to handicaps due to altitude (climate) and topography.
- Islands: Many islands are classified as LFAs (under the "specific handicaps" clause of the scheme) within the framework of the Common Agricultural Policy. When it comes to competition rules, different thresholds apply for the allocation of state aid. In the scope of EU environmental legislation, special rules for the treatment of waste apply to small islands.
- SPAs: The need for a particular status and development actions in the *Northern* sparsely populated areas has a legal basis in Protocol 6 of the Accession Treaty for Sweden, Finland and Austria, and was further recognised in the extension of the 'mountain' category of LFAs to areas north of 62^0N after the accession of Sweden and Finland. In the proposed legislative package of EU regional, employment and social policy for 2014-2020, SPAs are foreseen to receive a specific additional allocation (along with ORs).
- Coasts: In 2002, the European Parliament and the Council adopted a Recommendation on *Integrated Coastal Zone Management,* followed by a review and a consultation. While most coastal Member States have adopted management strategies for their coastal zones, this is not (yet) a binding EU policy. Other policies affecting the coastal zone are issue-oriented, concerning, for

example, water management, pollution, bathing water, nitrates, shellfish, conservation, renewable energy, climate adaptation, floods and erosion.

- Border areas: INTERREG was launched in 1989. Financed by the ERDF, it stimulates cooperation between regions, among which cross-border cooperation programmes are the most important. In the current financial period, it forms objective 3 "Territorial Co-operation" of Cohesion Policy.
- Outermost Regions: ORs benefit from special treatments through targeted additional funds and instruments, in both Agricultural Policy (under the *Programme of Options Specifically Relating to Remoteness and Insularity* POSEI) and Cohesion Policy (in which they receive an additional allocation to compensate for the handicaps which cause additional production costs). In the proposed legislative package of EU regional, employment and social policy for 2014-2020, ORs are foreseen to receive a specific additional allocation (along with SPAs).

This partly confirms what has already been mentioned above: mountains, islands, SPAs and ORs have something in common. All of these regions have (via stakeholders and lobby groups) repeatedly made the point that they deserve compensation for a certain handicap – be it remoteness and distance to markets (ORs, SPAs, islands), low population densities (SPAs), particular geophysical conditions (mountains, islands, ORs), particular climatic conditions (mountains, ORs), and the associated problems, such as high transportation costs (islands, ORs), lack of access to services (SPAs, islands, ORs, mountains), higher production costs for agriculture (mountains), dependence on imports (islands, ORs), etc. The mentioned policy approaches at EU level are all in this logic of compensation. For the ERDF in particular, the point has been made that it "views geographic specificity as an obstacle to be overcome, rather than an opportunity to be harnessed" (ADE, 2012). Servillo (2010) calls the "topological conditions" the "second dimension of territorial cohesion", with the main policy measures being compensatory, "meant to reduce or eliminate disadvantages, mainly in relation to accessibility to services of general interest".

The picture for coasts and borders is different. Here, compensation is less of a focus (although this logic is not unheard of, for instance the claim that border areas – by definition peripheral – suffer from underdeveloped transport infrastructure). By contrast, in coastal zones the most pressing issue appears to be the management of the manifold demands placed on

the (narrow) coastal space by many different actors. The conflicts of interest that result from the high number of activities in coastal zones are reflected in policy documents. In general, coastal and marine policy in Europe is driven by the negative impacts from human activities on natural coastal and marine resources. However, coastal zones are not *by nature* disadvantaged (and would thus require compensatory measures); rather, the challenges that coasts face derive from varied human activities, which in turn result from the inherent attractiveness of coasts (as a "beautiful" living and recreational space, as a logistics hub, as a starting point for transport, for fisheries, for the exploitation of natural resources, etc.).

Border areas, for their part, require policies that are designed to overcome discontinuities, or (phrased more positively) to encourage cross-border cooperation. This is the goal and focus of the previous INTERREG programmes, now renamed European territorial cooperation. The overall aim is to diminish the impact of national borders in favour of the equal economic, social and cultural development of the whole territory of the EU.

This picture is further substantiated by demands made by stakeholders with regard to the future development of EU policies. For instance, in the first GEOSPECS stakeholder consultation, representatives from coastal areas (as opposed to those from other GEOSPECS categories) were the only ones who were explicitly *not convinced* that an integrated European policy towards their specificity would be necessary. While some found that coasts are too diverse for this kind of approach, others pointed out that the existing policies (ICZM, as well as others, such as the Marine Strategy Framework Directive) are good instruments that just need to be adequately implemented and financed. For coastal areas, it was more the insufficient coordination between different existing measures that caused concern (instead of a possible compensation of perceived handicaps). Another characteristic that makes coastal areas stand out is their direct and inevitable vulnerability to the impacts of climate change, namely sea level rise – also reiterated by the TSP 2020: "the aggregated estimates of climate change impacts masks large sectoral and regional variability; however, coastal systems are affected everywhere".

In the GEOSPECS stakeholder conference, participants were asked to name some policy requirements for "their" areas. The discussion soon centred on Cohesion Policy in the upcoming (2014-2020) programming period. One stakeholder claimed that the "unifying challenge" is to retain a "critical mass of population" in the areas, as some areas would simply "die out" without financial support from the EU or other public bodies. For this reason, it was claimed to be necessary to support the provision of sufficient services of general interest. This is strongly linked to the general

"viability" debate (do people in sparsely populated or remote areas "deserve" to have access to the same level of services as everyone else, even if this is economically unprofitable, or should they accept the disadvantages of the areas that they chose to live in?). This is a highly moral question, to which different countries give different answers, and the GEOSPECS TPG is certainly not in a position to take sides in this matter. On the other hand, it is important to point out, in this context, that the provision of sufficient services is, again, an issue mainly in SPAs, islands, mountains and arguably ORs, but not *per se* in coastal or border areas – and can as such not be deemed a "unifying challenge" for all GEOSEPCS areas.

Finally, a long discussion on commonalities and specificities, opportunities and challenges does not prevent competition between GEOSPECS categories with regard to financial allocations. In the discussion on the future of EU Cohesion Policy, some stakeholders were adamant to point out that only SPAs and ORs will profit from a specific earmarked allocation, which raised the question why other geographically specific areas should not deserve the same. Some stakeholders also questioned why urban areas have been allocated a certain share of the Cohesion Policy package, even though there is no legal basis for this in the treaties, yet a number of geographic specificities are specifically mentioned in the consolidated version of the Treaty on the Functioning of the European Union, but do not receive an earmarked allocation.

Diversity *within* GEOSPECS categories

In addition to this observed diversity between different GEOSPECS categories, there is an equally strong diversity *within* GEOSPECS categories. While it is intuitively obvious that a Mediterranean island and a Scandinavian island, for example, will face different challenges, the GEOSPECS project confirms this diversity with both quantitative evidence and case studies.

For instance, quantitative analysis shows that:

- Population density varies strongly between different islands (somewhat qualifying the claim made above that "all" islands have low population densities). While the average density is 106 persons/km^2 on Mediterranean islands, it is 16 persons/km^2 on Norwegian islands and those in the Barents Sea. The total population on islands is also very variable, from Sicily and Sardinia with more than 1 million inhabitants, down to 123 identified islands and island municipalities with less than 2,000 inhabitants.

- Employment structure in mountain massifs varies. While about 9% of people are employed in the primary sector in the Carpathians and the Iberian mountains, only 3% of people work in agriculture in the Pyrenees and the British mountains.
- While long distances to the nearest urban agglomeration are a key challenge of Northern SPAs , the SPAs of central Spain are located between a number of agglomerations, with only very few places more than 2 hours away from an urban core.
- Average income levels are approximately three times higher in the main urban centres of French ORs than in the most remote rural areas.
- Border areas include both cross-border metropolitan regions with major, daily commuting flows and mountain ranges with only a few passes, some of which will be accessible for only part of the year. Crossing the border line can be difficult or trivial.

To cite only a few examples from the case studies:

- Mountains: while the tourism sector accounts for a significant share of employment in the Scottish Highlands, people in the Jura massif hardly rely on tourism for employment, as industry has historically been very strong.
- Islands: while the Outer Hebrides have extremely low population densities, Sicily is confronted with an overcrowded coast, and all the environmental and social pressures deriving from such high density.
- Borders: while the Luxembourg cross-border metropolitan area displays the highest GDP per-capita levels of the entire EU, along with a multi-lingual population, the border triangle between Germany, Poland and the Czech Republic is still challenged by the consequences of economic transition, and language barriers remain strong.

This diversity is an indication that it would not be meaningful to look for general, statistically significant differences between economic and social performances of GEOSPECS categories as a group and the rest of Europe. Any such differences can generally be considered as "spurious correlations", linked to the over- or under-representations of more or less wealthy and advanced regions within each GEOSPECS category. In general, an exercise of benchmarking the performance of GEOSPECS areas against a European average does not advance the discussion in the right direction. Instead, the endogenous opportunities and challenges of each area should be taken into account (see below).

Diversity of regions

While the diversity between and within GEOSPECS categories has been noted above from a European perspective, a view from the regional perspective reveals even more diverse situations. Geographic specificities can clearly overlap in a particular region (see the chapter on quantitative analysis for an overview of statistical overlaps across Europe). Thus, a particular region can be faced with a combination of geographic specificities, which can reinforce both challenges and opportunities. Among the GEOSPECS case studies, the Highlands of Scotland are a particularly good example, as they include mountainous areas, SPAs, long stretches of coast, and islands. The Canary islands are not only an Outermost region, but also mountainous islands; the border triangle between Germany, Poland and the Czech Republic is mountainous as well; the sparsely populated Torne valley is also a cross-border region, as is the Jura massif; and so on.

It is important to note that the geographic specificity highlighted by regional and local stakeholders in these areas is generally determined by cultural, and in some cases also political factors, rather than by the relative importance or presumed socio-economic impact of the chosen specificity.

The same point was made in the stakeholder consultation. One participant pointed out that she represents a region that is mountainous, coastal and sparsely populated, and went on to say that this kind of overlap creates challenges when implementing policies in practice. Others added that this is an argument against developing any "policy per geographic specificity" at European level (e.g. a "mountains policy", an "islands policy", "SPA policy"), as this kind of approach would create a very complex, potentially confusing situation for local authorities who implement measures on the ground.

Diversity of Europe

It goes without saying that the described diversity of European regions is not exclusively attributable to geographic specificities, as a multitude of very different factors come into play. The most far-reaching of these may well be the climatic conditions, which create both North-South and West-East gradients; the mixed European history, which makes for a West-East gradient, in particular; and the strong core-periphery orientation which characterises the European territory in economic terms.

All factors taken together also determine how an individual region can and does deal with the impact of global challenges. "Regions 2020" (European Commission, 2008), for instance, tried to analyse the combined impact of

globalization, demographic change, climate change and energy challenges (at NUTS2 level). The resulting map "Intensity of multiple risks for European Regions" more strongly reflected a North-South gradient than any typology of geographic specificities – but the final paper also took care to note that "the outermost regions will be in the front line for many of these challenges".

2.3 Nexus models as instruments for policy design

The ongoing processes in each case study area have been visualized by a model showing the nexus of development factors – "nexus models" in short. These show, first, the effects directly or indirectly *deriving from the geographic specificity* (also dubbed "legacy") and, second, the *challenges and opportunities* that derive from this legacy. This model intends to illustrate where policymakers could "apply the lever" in order to either *overcome challenges* or *make use of opportunities* in a path to the development of the particular area.

This approach has several advantages:

- It demonstrates that geographic specificities prompt both challenges *and* opportunities – in order to achieve balanced development, it will be necessary to give due consideration to both, instead of focussing exclusively on one set or the other.
- It demonstrates that geographic specificities entail a number of effects that, in turn, *influence each other* – a geographic specificity does not have simple linear effects; rather, a complex net of processes plays a role in each area. Recognition of such a net of processes implies that any policy measure can have effects on several characteristics of the area (or, conversely, that several measures may be necessary to influence one particular aspect of the area).
- Not only do the *effects* of geographic specificities influence each other but, in many areas, the geographic specificities themselves overlap. Such overlaps frequently serve to reinforce a (positive or negative) effect of geographic specificities. For instance, in the Scottish Highlands, the mountainous and coastal and sparsely populated character of the area work together to form a landscape that attracts tourists and creates potentials for renewable energies ("opportunities"), but at the same time entails challenges, as the combination of these specificities makes the area particularly

inaccessible (making transport more expensive) and limits the number of enterprises (which in turn favours an over-reliance on public sector employment). This proves that policies need to be adapted to a specific situation; it is not enough to focus separately on the "mountain aspect" or "island aspect" (etc) of a region.

Coming back to previous analyses of territorial development in Europe, ADE (2012) has pointed out that – in terms of ERDF intervention in geographically specific areas – "there is definitely a strong focus on 'hard' infrastructure". Copus & Hörnström (2011) take the same line when claiming that there is a "need to measure intangible assets better". Here, the "nexus of development factors" model again shows its strength, as it makes apparent the lever not only for "hard" infrastructure (such as roads and internet connections), but also for "softer" measures (relating to intangible assets such as human and social capital).

A nexus model was also prepared for each GEOSPECS category overall. In this case, the model does not try to give an overview of inter-related processes within one particular area (and thus evidently does not consider overlaps), but attempts to summarize the set of processes that can be said to take place in *all* areas of this GEOSPECS category. While this exercise runs the risk of generalization, the TPG finds it useful to give a first coarse impression of the processes that are important for the GEOSPECS category. Again, the division into challenges and opportunities illustrates that no geographic specificity is exclusively "disadvantaged" or "handicapped".

It may be constructive to reiterate that the notions of challenges and opportunities were rather controversial in the GEOSPECS stakeholder consultations, and became a topic of strong debate in the stakeholder conference. Some participants made the point that, as some handicaps will *always* be challenges (such as the remoteness of an island from the mainland), some territories may find it more onerous to achieve the same (EU) goal than others, so that funding allocations should reflect this (following a logic of compensation). Other stakeholders disagreed, stating that it makes more sense to fund opportunities - rather than problems - when trying to set a territory on a positive development path. One made the point that a strategy that focuses on *existing* assets runs the risk of "killing in the egg" entrepreneurial activities that are not in line with existing assets, and could therefore hamper diversification of the economy.

In general, this discussion positions itself in the debate on "cohesion versus competitiveness". On the one hand, the compensation of

geographical handicaps could create "a level playing field" and thus lead to cohesion or spatial justice. On the other hand, the promotion of assets ("territorial capital") would be more in the logic of underpinning competitiveness. However, one may also argue that measures to "level the playing field" are part of a general line of argument focusing on the idea that increased competitiveness would be a key objective of the regions; the decline of regions that do not manage to generate competitive activities, in spite of measures that are deemed to have "levelled the playing field", would be considered economically unviable. Inversely, a promotion of assets ("territorial capital") can be presumed without focusing on external trade. One can, instead, seek to identify how regional resources can help to generate a more robust internal economy, and on this basis increase the sustainability of local communities. Because GEOSPECS areas include some of Europe's most atypical territories, they illustrate the fact that some regions need entirely different sets of economic rules to function in a sustainable way; it is a political decision whether their current decline is a necessary adaptation to changing framework conditions, or whether public efforts to maintain settlement patterns are justified on the basis of the positive externalities they generate.

Discussions over the preservation of such externalities are confronted by economic realities. However, a functional approach on the diverse contributions of regions to overall performance may make it possible to go beyond dualistic debates which ask the question of how many resources one should respectively devote to cohesion (equity) and competitiveness (economic growth). The *Scenarios on the territorial future of Europe* of ESPON Project 3.2 presumed that differences between cohesion and competitiveness would be increased by the concentration of activities in metropolitan areas and a more or less extensive "area of concentration of growth and activities" extending from the European core area or "Pentagon". Our analyses demonstrate that the scales at which these processes of concentration or diffusion occur in GEOSPECS areas are more complex, and that the intra-regional scale needs to be taken into account. European debates on cohesion and competitiveness therefore need to focus on models of growth and development within regions, rather than on the convergence or divergence of regional levels of performance. Stakeholder dialogues have, furthermore, shown that the main concern is not to obtain subsidies but to be given the opportunity, through adapted regulatory frameworks, to preserve local communities in areas where there is an economic potential.

Finally, it is noteworthy that the perspectives on challenges and opportunities, although very relevant, focus on the short to medium term:

more precisely, on how to generate economic growth (and thereby improve the living situation of the people) in the short to medium term. Potential exists to broaden the debate on policy interventions to a more long-term perspective with a focus on ”non-commodified” values or “positive externalities”. This aspect will be refined further for the Final Report of GEOSPECS. A more detailed elaboration can be found in the chapter on case studies. Suffice it to say at this point that, at times, stakeholders will argue that “positive externalities” or “irreplaceable resources” are generated or maintained by regions with geographic specificities. These positive externalities benefit the entire European territory by increasing overall well-being. This refers, in the first instance, to natural capital, with the ensuing provision of vital ecosystem services as well as natural resources, but also to social capital (contributing to Europe’s diversity and attractiveness)[13]. Whether or not these externalities should be economically “internalised” by assigning market values to them, it will be necessary to reflect more strategically on what these services mean to the European continent, and how they can be adequately valued. This is part of a broad and long-standing debate[14] on the internalisation of externalities (both positive and negative). Within this, the “pricing of ecosystem services”[15] has received attention in recent years.

[13] To give an example of what this could include: The Highlands and Islands European Partnership in their reaction to the Green Paper on Territorial Cohesion claimed: “Peripheral and rural areas like ours often propose a good environment in which young families can bring up children with open space, limited crime, and social networking. Creating sustainable jobs in such areas could help solve problems of urban overpopulation, social unrest, and pollution. They have a range of natural resources to offer, such as our marine produce and bio diversity, that could help foster Europe’s competitiveness if exploited to their best use. The potential for renewable energy production, for example, if it were developed could help limit Europe’s dependency on external providers and help tackle the challenge of climate change. The languages and cultures of the people is a definite asset that is part of Europe’s unique diversity and attractiveness, which could also be a source of economic development for the benefit and pleasure of all.”

[14] Externalities are a production of goods or services that does not take into account the full cost or benefit of production, as a cost or benefit is not transmitted through prices. Measures discussed to internalize externalities are corrective taxes and corrective subsidies, but also negotiations. Ronald Coase already reflected on externalities in 1960, later earning the Nobel Prize for his so-called “Coase Theorem” (Coase, 1960) stating that if trade in an externality is possible and there are no transaction costs, bargaining will lead to an efficient outcome regardless of the initial allocation of property rights.

[15] The adequate valuation of ecosystem services has surfaced in public debate in the past two decades and so far culminated in the Economics of Ecosystems and Biodiversity (TEEB). The TEEB study is an international initiative “to draw attention to the global economic benefits of biodiversity, to highlight the growing costs of biodiversity loss and ecosystem degradation”. For further consideration of ecosystem services and their values, see the chapter on Transversal Themes, particularly “biodiversity and protected areas as factor for development”.

Multilevel governance of geographic specificity: institutional and governance implications

Territorial cohesion is about ensuring a balanced spatial distribution of activities and people. This requires coherence: ensuring that relevant policies from various sectors and levels form a coherent whole. This was also reiterated many times during the consultation on the Green Paper on Territorial Cohesion. Coherent territorial governance requires vertical coordination, horizontal coordination, and territorial cooperation (cooperation between different territorial entities with the aim of identifying synergies resulting from interdependency) (Faludi & Peyrony, 2011). Why these three elements are particularly relevant when dealing with geographic specificities is set out below.

Vertical coordination

The question *at which level* of policymaking to take geographic specificities into account is not trivial. During the stakeholder consultations (and also more widely in other policy documents), claims abounded that "top down" and "bottom up" approaches need to be balanced, since neither can achieve satisfying results *on its own*. As always, there is a long way from this general assertion to its practical implementation.

The term "multilevel governance" can look back on a mixed history (see Faludi, 2011). While, from a scientific point of view, it is a complex concept (including public and private actors), in political rhetoric it is often used synonymously with coordination between tiers of govern*ment*, i.e. spatially bounded public authorities (e.g., in the Committee of the Regions' White Paper on Multilevel Governance). Close to the concept of subsidiarity, it is then meant to give each level of govern*ment* its proper place in a hierarchical constitutional order (Faludi, 2011).

It is probably this latter sense that stakeholders had in mind when they insisted on the importance of vertical coordination during the stakeholder conference. The discussion centred on the setup of Cohesion Policy in the upcoming programming period (2014-2020). Many stakeholders commented on coordination issues, pointing to missing links between the different levels. For instance, the "partnership contract" approach suggested by the Commission was criticized for only linking the European to the national level, while leaving aside the interests of the regional level. For some Member States, stakeholders regarded the national level as "not ready" or "unclear" about territorial diversity. Instead, they demanded a say for the regional and local authorities in the process. The national level should be committed to coordinate with (or "listen to") the regional authorities, and it should be ensured that funds intended for the regions

are not diverted to national problems and/or national priorities by way of the partnership contracts. Consequently, an early identification of problems/potentials by the regional authorities was deemed necessary, so that enough time remains to communicate the requirements to the national level. The "particular attention" to be paid to GEOSPECS areas according to the words of the Treaty would not be the sole responsibility of the European level, as regional and national actors would be actively involved.

It thus becomes clear that, for the regional stakeholders, the main issue is to "make their voice heard" at EU level. This is an issue of immense importance, not only for the adequate consideration of geographic specificities, but beyond that. For example, one commentator has stated that "Only thus will we avoid the failure of the EU 2020 strategy, as was the case with its predecessor, the Lisbon strategy which did not adequately engage local and regional authorities" (Banks, 2011).

However, with particular consideration for geographic specificities, it may be helpful to move beyond this hierarchical understanding of multilevel governance and beyond a strict focus on administrative units. Economic spaces are usually not delineated by administrative divisions, but rather by common challenges and development opportunities experienced by a collection of local communities. In this way, **local economies belong to certain territorial ensembles** ("massifs" of mountain areas, islands or archipelagos for insular territories, "clusters" of SPAs). These economic spaces often overlap: an individual local economy can be embedded into, or integrated in, a number of these territorial ensembles. For local economies, an integrated development strategy thus needs to take into account this multiple territorial anchoring. Similar observations can be made for spaces of cultural identification and habitats/ecosystems, which are typically not congruent to administrative boundaries.

This comes close to what Hooghe and Marks refer to as "type II multilevel governance"[16] ("type II of multilevel governance conceives of specialized jurisdictions that, for example, provide a local service, solve a common pool resource problem, monitor water quality in a particular river [...]. The scales at which jurisdictions operate vary finely, and there is no great fixity in their existence") (Faludi, 2011). However, it can also be described by the better known "place-based policy" of Barca: a "place" is "endogenous to the policy process"; it is a "contiguous area within whose boundaries a set of conditions conducive to development apply more than they do across boundaries" (Barca, 2009). "Places", in this terminology,

[16] In contrast, "type I multilevel governance conceives of dispersion of authority to jurisdictions at a limited number of levels [...]. The membership boundaries do not intersect [...]. In this form of governance, every citizen is located in a Russian Doll set of nested jurisdictions." (Faludi, 2011).

are thus not pre-given as physical objects. Instead they are formed and framed through specific practices and are, in a way, social constructs. For GEOSPECS areas, this logic appears particularly relevant. Taking again the accessibility of islands as an example, it becomes clear that a targeted transport measure will be more relevant for the island as a whole (being removed from the mainland and thus reliant on sea or air connections) than for an area comprising both insular and mainland parts – thus defining the "place" for this particular measure. When nature conservation measures are defined, it will make more sense to consider coastal habitats (with all their particularities) than to consider a pre-defined region that may comprise coastal and inland habitats. A set of sparsely populated municipalities will face similar obstacles when trying to supply services to their citizens. And so on. Even though Barca also refers to "places" as "functional areas", this does not coincide with the understanding of GEOSPECS, where a functional area is deemed to mean an area organized around a node or focal point, with the surroundings linked to the node by, for example, transportation and communication systems, commuter flows, and economic linkages.

In addition, this type of approach allows the consideration of overlaps – not only between geographic specificities but also of "jurisdictions" for a particular topic, each with a different boundary. This kind of "fluid" understanding of place does not make policy implementation easier, but reflects more adequately the situation in GEOSPECS areas. This is not, in any case, a call for the establishment of new layers of government or new formal institutions, but rather for more effective forms of communication and cooperation (not limited to formal public authorities).

Horizontal coordination

Many authors have criticized the excessive fragmentation of European policies, dispersed between many Directorates-General, offices, initiatives, programmes, and national traditions (Vanolo, 2010). The idea of the need for better coordination between sectoral policies has been fully developed in the Green Paper on Territorial Cohesion, and the responses to the Green Paper in the consultation were almost unanimous in demanding stronger coordination of European policies with territorial dimensions and impacts (European Commission, 2009). The need for coherence between rural and regional policies is mentioned particularly often (Copus & Hörnström, 2011; TSP2020; European Commission, 2009). The goal of territorial cohesion is to reduce regional disparities by making sectoral policies which have spatial impacts, and regional policy, more coherent (Copus & Hörnström, 2011).

This demand is certainly not exclusive to regions with geographic specificities. However, some stakeholders find that it is particularly important for these. Along with general considerations (such as the more effective delivery of coordinated policies), it is mentioned that it is often in these economically, socially and environmentally fragile areas that sectoral policies interact most dramatically and rapidly17 (Euromontana, 2009; AEM, 2009; CPMR Islands Commission, 2009).

This concern is being addressed in the current Commission proposal for the next programming period, by proposing a "Common Strategic Framework" (CSF) which would apply to the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund, and also the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EFF). In this way, the most important funding lines are given a common orientation: to focus on the implementation on Europe2020. This proposal was warmly greeted by stakeholders during the GEOSPECS stakeholder conference.

Territorial cooperation

Territorial cooperation is relevant for GEOSPECS areas for several reasons. First, geographic specificities do not stop at borders; though it should be recognised that many borders have been drawn at a topographic barrier, such as a river or along the summits of a mountain range, and that coasts are a natural border. When considering the functional integration of these territories (see above), it is necessary to take into account cross-border (but also transnational) interactions and interdependencies. The TeDi project noted that "the European level has an obvious role to play in promoting such territorial cooperation beyond national borders. Using the established instruments for territorial cooperation and adapting them to the specific conditions of TeDi areas is therefore a promising option"[18]. Recognising that border areas in mountain massifs, or border areas at coasts, share similar issues, the outcomes of GEOSPECS can help to design better territorial cooperation. The importance of GEOSPECS categories in current adopted or emerging

[17] As an example, it is mentioned that, in mountain areas, agricultural activity structures both the landscape and the economy, so that the integration of agricultural policies to transversal dynamics (regarding tourism, and culture, for instance) is more apt to achieve results for all parts of society (see reaction to Green Paper from the Comité de Massif des Pyrénées)

[18] Both "TeDi area" and "GEOSPECS area" refers to an area *with geographic specificity*. The difference is that TeDi referred to mountains, islands and sparsely populated areas, whereas GEOSPECS addresses mountains, islands, sparsely populated areas, border areas, coastal zones, Outermost Regions, and Inner Peripheries.

macroregional strategies is obvious, as the Alpine and Carpathian initiatives are built around mountain massifs, while the Baltic, Adriatic-Ionian and Atlantic initiatives focus on coastal zones.

Border regions are – secondly – in themselves a type of specificity considered by the GEOSPECS project. Territorial cooperation brings benefits such as the creation of a critical mass for development, approaches to decrease or limit the fragmentation of ecosystems, and the building of mutual trust and social capital (TSP2020). Therefore, cooperation across administrative borders is a factor for enhancing smart, sustainable and inclusive growth; and the dismantling of barriers along borders is at the heart of European integration. This is common knowledge, and the Interreg programme has been stimulating cooperation since 1989. However, the logic of Interreg programmes has been criticized for often still failing to address the actual cross-border aspects; the SWOT analysis of many Interreg programmes resembles the logic of the Convergence programmes, in that they analyse facts such as GDP/head and population size, instead of focussing on cross-border issues such as transport *flows*, workforce *mobility*, population *migration* (Böhme et al, 2011). This is an illustration of a point made above: the issue for GEOSPECS areas is NOT to be benchmarked against the performance of other areas, but rather to take advantage of their specific attributes (in the case of border areas, positive changes resulting from cross-border cooperation).

Synthesis on the potential usefulness of GEOSPECS categories for policy making

As mentioned above, the variety within and between GEOSPECS categories makes it impossible to make any claims that hold true for all GEOSPECS categories. The GEOSPECS areas are as diverse as Europe as a whole, in that they include highly successful regions (in economic terms) and lagging regions. Other analyses have come to the same conclusion (Monfort, 2009; TSP2020). In addition, the categories included in the project are diverse, ranging from truly "geographic" specificities (mountains, islands, coasts, ORs) to other that are more "demographic" (SPAs, IPs) and "political" (borders, IPs). Arguably, other areas could claim "specificity" in a similar manner (regions in economic transition, peripheral areas, deprived districts of large cities, arctic zones, etc).

The final report of the TeDi project noted that "observing the recurring features in this respect, such as access to services of general interest, modern logistics and communication centres, vicious demographic circles leading to continued demographic decline and depopulation, one can hypothesise that the most efficient way of addressing the development of

TeDi areas may not be a 'mountain', 'island', or 'sparsely populated areas' policy, but coordinated strategies addressing these key themes in a balanced territorial development perspective". For GEOSPECS, such "recurring features" could not be identified if all categories are taken into consideration simultaneously. However, it holds true that a "policy per geographic specificity" is not the best way forward, given the diversity of situations within each specificity. On top of the strong diversity within categories, it is mainly the infinite potential for overlaps (i.e. the plethora of local situations created by the overlapping of different geographic specificities and other characteristics) that would make such an approach difficult to implement at local or regional level.

The reasons for a region being "lagging" derive from the interplay of several factors, and it should be recognised that, first, the presence of more than one geographic specificity in one region can reinforce a challenge and, second, that other – historical, economic, social, etc. – factors also play a role independent of geographic specificity. A development strategy thus has to take the specific context of the area into account. In other words, a *case-by-case approach* is more valid than attaching particular funding lines to geographic conditions.

This implies that the key challenge is to propose an improved framework for dialogue between the European, national, regional and local levels, making it possible to reflect unique patterns of opportunity and challenges in each territory. This improved framework would include:

- A general method for the assessment of local situations, in which the focus is on potentials and challenges, rather than on comparisons of performance. Nexus models could be part of such a general method. European initiatives to promote a more systematic recourse to stakeholder involvement through foresight workshops and visioning exercises would make it possible to further enhance the focus on possibilities in each area, and to pinpoint key obstacles to local development with greater precision.
- Support to the formulation of development models that are adapted to local conditions. The case studies have shown that, while local actors are well aware of challenges and opportunities, they do not necessarily have the resources and capacity to produce a development model that would draw all the consequences from their specific development conditions. Instead, there is a tendency to import external models that are not necessarily fully adapted.
- Better access to data. GEOSPECS has shown that local data of sufficient quality to assess local situations can be compiled, but that this requires an appropriate framework and substantial efforts. A

European observatory of local development conditions would be needed to maintain and update such a database and produce targeted analyses, e.g. supporting community-led local development initiatives.

- Improved quantitative analyses of local situations. GEOSPECS has demonstrated that it is possible to construct datasets that focus on each local area's context for social and economic development, rather than considering individual LAU2 areas as "isolated islands". The calculation of "45 minute potentials" has been applied to population in GEOSPECS, but could be used for a wide range of indicators, e.g. unemployment, dependency ratios, and income levels. These calculations are technically complex and require significant computing power. However, once produced, they can easily be made available for local and regional actors or feed into targeted analyses of individual local areas. It would be necessary to create a structure to produce and disseminate such data, which are a real alternative to the NUTS 3 level when assessing the contexts for local development.
- Alternative methods for analyses at the NUTS 2 and 3 levels. Analyses at the level of NUTS regions will remain a major basis for the design and implementation of European policies. However, local data such as those collected by GEOSPECS, and data based on "45 minute potentials", can be used to produce alternative indicators that do express not an average regional profile, but the proportion of inhabitants or employees experiencing patterns or trends that call for public interventions (e.g. number of persons living in a functional context with declining population, high unemployment or high age dependency rates). This type of approach would be particularly useful in GEOSPECS areas, which are often characterised by strong intra-regional contrasts.

In the stakeholder conference, this point arose in the form of a "matrix approach", meaning that a catalogue of indicators could be applied across all of Europe (in which geographic specificities and their effects would be indicators alongside others). In this way, the potentials and needs of each territory could be studied and taken into consideration adequately. The combination of characteristics would indicate which sector requires intervention. Without being explicitly framed in this way during the conference, it seems likely that this type of approach would be most applicable to Cohesion Policy. In any case, this would require the definition of "smarter" indicators that go beyond the current focus on GDP.

Indicators are also a more general matter. Current EU policies (particularly Cohesion Policy) focus strongly on benchmarking, i.e. comparing a region to the "European average" and, on this basis, deducing the need for intervention (or not). On one hand, this attempt to level out differences between regions without due consideration for their specific potentials (and underlying processes) is not apt to lead to the right answer. Even more importantly, however, it does not reflect the important "positive externalities" that these regions may be able to offer to Europe as a whole. As noted above, many of these regions provide goods and services that do not receive market pricing (and are thus not reflected in figures of GDP etc.), ranging from strategic reserves of natural resources to services such as carbon sequestration, air purification, hazard prevention, and recreational values for visitors. The need to define new indicators has been recognized, at not only European but also national level, where a number of political initiatives have formed to debate benchmarks for development, but also "limits for growth" in more general terms.

Other issues raised in the case studies concern the limited local and regional economic returns of economic activities, creating socially and economically unsustainable situations.

Hence:

- It is not necessary to install a policy or funding line "per geographic specificity". Rather, it makes more sense to establish development strategies that take into account the particular situation of each region, i.e. applying a case-by-case evaluation (since a number of factors – whether deriving from different geographic specificities or other origins – interweave in each area to create the particular situation). In this regard, it is necessary to consider the regions not only individually, but in relation to their adjacent regions. Neighbouring regions within the same territorial ensemble will face similar situations, and cooperation between them can unleash synergies (this includes interactions across administrative boundaries).
- This should go hand in hand with further horizontal coordination of policies.
- Further progress should be made in moving away from viewing geographic specificities as "handicaps" and towards recognizing their assets. This means that while it should not be denied that regions with these specificities face challenges, but that there is a need to balance "compensation" and "promotion" efforts. In the long run, it would be necessary to reflect on how "non-market

values" or positive externalities can be valued adequately – instead of focusing purely on growth in GDP. This would be complemented by a reconsideration of the current benchmarking/indicator system.

- Challenges and opportunities should be addressed jointly, e.g. by identifying the resources and possibilities that could be exploited if some key social obstacles were overcome.
- Better account should be taken of specific forms of ecological vulnerability associated with some GEOSPECS categories when formulating development objectives
- The "monolithical" character of the EU2020 strategy needs to be challenged, incorporating the different types of ambitions and strategies across Europe, and actively supporting local communities in the formulation of development models that are adapted to their specific conditions.
- There is a need to focus on the improvement of frameworks for dialogue between the European, national and regional level, with less focus on benchmarks and a more robust method for assessing potentials, discussing on-going potentials and identifying the key processes to be targeted by policy measures.

3. Key analysis, diagnosis, findings and the most relevant indicators and maps

3.1 Synthesis of quantitative findings

Given the wide range of geographic specificities covered by GEOSPECS, quantitative analyses are necessarily limited to the most important aspect for each of them. Considering the diversity of GEOSPECS areas, in terms of development issues and relevant scales of analysis, heterogeneous sets of maps and analyses are presented for each geographic specificity. The TPG does not consider it meaningful to compare territorial patterns and trends observed within different geographic specificities. The objective of the present section is to describe how the different geographic specificities can be approached quantitatively, based on their respective characteristics.

Data availability has largely influenced the analyses carried out within GEOSPECS. However, given the novel character of the data that have been compiled and the indicators that have been constructed, the TPG has only explored a small proportion of the potential innovative quantitative analyses that could be envisaged. Data at the level of the ESPON space's 125,049 LAU2 units[19] open new perspectives for multi-scalar analysis.

Units of analysis

In order to undertake Europe-wide analyses for GEOSPECS areas, subdivisions in units of analysis were needed:

- Mountain areas were subdivided in 16 massifs (see section 1.2.1), adapted from the subdivision used in the European Environment Agency's report on Europe's mountains (EEA, 2010). These massifs are more extensive than those used in the 2004 DG REGIO Mountain Study (Nordregio, 2004), which focuses on identifying mountain units recognised by national stakeholders. However, the smaller number of massifs makes European comparisons easier.
- For islands, the TPG has identified 319 islands and island municipalities. Multiple islands belonging to one municipality have been considered as one unit, substantially decreasing the

[19] Excluding the Former Yugoslav Republic of Macedoniaand Bosnia and Herzegovina, for which LAU2 delineations have not been compiled.

number of island units identified in the data set. This rationalisation applies to Greek islands which form part of the same municipality, as well as to a number of islands in Norway, Finland and Sweden. Multiple municipalities which form part of one island have been grouped together. Where part of an island is covered by one or more insular municipalities, while another part is covered by a municipality which is partly on the mainland, the municipalities that are entirely insular are the only ones considered.

- Sparsely populated areas (SPAs) have been subdivided into 39 "Sparse territories", defined as "clusters" of SPAs that form relevant geographical units for developing a spatial analysis of SPA and coherent territories for developing integrated 'regional' economic spaces (see section 3.2.3 of the scientific report).
- For coastal areas, the TPG has identified areas within 45 minutes and within 90 minutes of individual coastlines. These areas overlap, as a single municipality can be within these travel times from multiple coastlines (e.g. in Denmark, a number of LAU2 are within 45 minutes of both the Baltic Sea and the North Sea). The coastal areas have also been subdivided by country.
- Similarly, the TPG has identified areas within 45 minutes and within 90 minutes of each border between two countries. These areas overlap, as a single municipality can be within these travel times from multiple borders (e.g. Basel is within the border areas between Switzerland and Germany and between Switzerland and France). Border areas have been subdivided by country.
- Each Outermost Region has been considered as one unit of analysis.

The units of analysis have been analysed as both geographical units for which overall indicators can be calculated, and territorial contexts for the assessment of internal disparities.

Issues and themes

This section identifies how TPG members have applied different methods to analyse similar themes and issues in different GEOSPECS categories.

Age structures and demographic trends

For a number of geographic specificities, comparisons between age structures in GEOSPECS areas and national average values show contrasting patterns. In mountain areas, some massifs have significantly lower proportions of children (e.g. Pyrenees and Massif Central in France, Polish Middle mountains), while others have high proportions of children (e.g. Polish Carpathians). Similarly, areas within 45 minutes of a coastline may have higher proportions of elderly people than the national average (e.g. in Greece and along the North Sea in the UK), or lower proportions (e.g. in Bulgaria and Latvia). In the Outermost Regions, French Guyana stands out due to exceptionally high birth rates (27.7 ‰, compared to 12.9 ‰ on average in France), as well as children, 35 to 49% in most LAU2. At the other end of the scale, the Canary Islands have relatively high proportions of elderly people, especially in rural and isolated areas.

Demographic trends have particularly been analysed in SPAs, as population decline is a particularly important issue in areas that run the risk of falling below critical population thresholds for maintaining service provision levels and a sustainable labour market. Unfortunately it has only been possible for the TPG to compile LAU2 data on total population for the years 2001 and 2006. Current initiatives to compile harmonised LAU2 population figures for previous decades would, if successful, make it possible to carry out a wide range of statistical analyses in GEOSPECS areas.

Patterns of employment

Multi-scalar analyses of patterns of employment have been produced for a number of GEOSPECS categories. In ORs, factorial analyses of employment patterns shows that the French, Spanish and Portuguese ORs have distinct profiles, respectively characterised by an over-representation of public services (France), hotels, restaurants and construction related activities (Spain) and agriculture and fisheries (Portugal). To identify internal structures of employment within ORs, it is thus more meaningful to produce ascendant classifications of LAU2 employment profiles with these national groups, than across all ORs.

Similarly, in mountain areas, a first map compared the relative weights of the primary, secondary and tertiary sectors of activities in Europe's 16 massifs subdivided into their national parts and showed, for example, the relative over-representation of agriculture in the Romanian Carpathians. An ascendant classification of LAU2 employment structures in the Carpathians confirmed this contrast between its Slovak and Romanian

parts, but also makes it possible to identify the more local contrasts and similarities across national boundaries.

In SPAs, the focus on local contrasts seemed less relevant, as the main urban areas are per definition excluded from this GEOSPECS category. The combination of a comparison of the relative weights of the primary, secondary and tertiary sectors and a factorial analysis of employment structures by branch shows that employment profiles are relatively similar within large trans-national areas such as the Nordic countries, the Iberian peninsula, and south-eastern Europe. This suggests that, from the point of view of employment structures, sparsity could more meaningfully be approached within these trans-national areas.

For coastal areas, there is no general "employment profile" from either a European or a national perspective. Some coastal areas have a strong overrepresentation of the fisheries sector compared to national average values (e.g. Gulf of Cádiz in Spain, Iceland). Only the Danish and French coastal areas along the North Sea have a significant over-representation of the manufacturing sector, while transport and storage activities are most over-represented along the coastlines of Slovenia, Cyprus and Belgium. Considering this diversity of situations, a general factoral analysis is less meaningful; it mainly reflects differences in national employment structures.

Tourism

Tourism is evoked as an important sector of activity and/or potential development opportunity for most GEOSPECS areas. In the quantitative analyses, the proportion of employment in hotels and restaurants (NACE branch H) is often used as a proxy for the relative importance of tourism. The example of the Alps, where this indicator could be crossed with the number of beds per LAU2 (see section 4.2.1), shows the added value and limitations of each of these proxies. Close to major cities, one finds many municipalities with significant proportion of employment in "branch H", but no accommodation. Conversely, in many intermediate areas between the outer borders of the Alps and the attractive high-altitude skiing resorts, many LAU2 have proportions of employment that are relatively lower than one might expect, considering the number of beds. This gives some indication of the differentiated effect of a number of tourists (estimated on the basis of the commercial offer for overnight accommodation) and employment. It also illustrates that the leisure economy also includes services for neighbouring urban areas, for owners of second gomes, and for the local permanent population in GEOSPECS areas.

The trans-national comparison of employment in tourism in ORs makes it possible to highlight the relative weakness of the tourism sector in the French ORs, which contradicts the general perception of these regions in France.

The analysis of tourism for islands has identified different patterns according to groups of islands, distinguishing not only between the more tourism-intensive Mediterranean islands and the rest, but also showing that medium-sized islands with a population of 100,000 to 1 million inhabitants have the largest proportions of employment in tourism.

In coastal areas, the focus is on the concentration of tourism activities in a limited number of LAU2 contiguous to the coast. Employment rates in hotels and restaurants are almost systematically higher along the coastline than within the area within commuting distance from the coast. The extent of these differences gives an indication of the extent to which tourism is concentrated on the coast. However, differences between portions of the coastline also play a role, calling for detailed analyses of individual coastal areas to identify those with the highest degree of concentration of tourism in a limited number of locations.

Accessibility

Access to urban areas and to key infrastructure such as airports is of key importance, and can generally be considered as having a greater direct influence on socio-economic patterns and trends than geographic specificities. Different analyses have therefore subdivided GEOSPECS areas on the basis of their access to urban areas. In the analysis of Northern SPAs, Sparse Territories with a relatively better access to urban centres have been analysed separately. The analysis for islands separates them according to their total population. Mountain massifs have been characterised on the basis of the proportion of area and population living within commuting distance of cities of different sizes, showing major differences between, for example, the Carpathians where only 23% of the mountain population is within commuting distance of an urban area, and Central European middle mountains which are almost entirely within commuting distance of such centres. Cross Border Metropolitan Regions have been analysed separately from other border areas and a separate typology of these areas has been produced.

Comparisons of access to airport between mountain areas and national average values show that the proportion of people living within 45 minutes of an airport is almost systematically lower in mountain areas than for each country taken as a whole. However, the extent of this difference varies considerably. For islands, the distinction between islands

with and without an airport is such that these have been analysed in separate groups, as illustrated by the nexus models (see section 3.2).

Conclusions

The different ways in which the same indicators have been processed and interpreted illustrate the various types of concerns in different GEOSPECS categories. Furthermore, there have been important variations with regard to the scales of analysis considered relevant, the ways in which different levels of analysis are related to each other, and the territorial contexts used to produce comparisons. This demonstrates that GEOSPECS areas cannot be analysed as one group, as well as the diversity within each GEOSPECS area with regard to many variables.

The GEOSPECS project therefore demonstrates that quantitative analyses of each geographic specificity should be carried out as a separate project. At the same time, these analyses require compilations of LAU2 data and data processing which are most efficiently carried out at the level of the ESPON programme as a whole. This calls for an alternative organisation of data collection and quantitative analysis.

3.2 Synthesis of social and economic structures and trends based on "nexus diagrams"

One challenge in the analysis of the socio-economic effects of geographic specificity is that GEOSPECS areas are influenced by wide range of factors, some of which stem from geographic specificity, while others are related to inherited features, macro-economic contexts, and institutional structures. In view of narrowing down the potentially infinite set of relations and highlighting the most relevant ones from the perspective of the geographic specificities, a graphic modelling approach was developed and applied to all case study areas.

This "nexus of development factors" or "nexus" approach[20] is inspired by the notion of 'syndromes of disadvantage', which was introduced in environmental analysis in the 1990s. It is inspired by medical science and is initially a way of approaching 'typical combinations of pertinent

[20] In earlier reports, the term "syndrome" approach was used. However, ESPON programme stakeholders criticised the term "syndrome" for its negative connotations. ¨The terms "nexus of development factors" and "nexus approach" were therefore introduced as alternatives.

cofactors' when confronted with complex situations of unsustainable development with numerous parallel dimensions. As in a medical syndrome, the situation of territories with geographic specificities is characterized by a number of associated symptoms of disadvantage which, although they mutually reinforce the overall disadvantage experienced by these regions, are not necessarily connected in a causal sense.

The term is used to avoid the pitfalls of reductionism, whereby these complex situations could be reduced to a series of measurements focusing on specific problems, and of analogous modelling, whereby the production of a virtual reality through mathematical simulations reproducing observed quantitative structures is presumed to offer the understanding needed for policy interventions. In the former case, one loses sight of the totality, and the importance of interactions between various types of processes is ignored. In the latter case, models reproducing observed trends are so complex that they are of little help when trying to communicate politically about the relevant processes (Schellnhuber et al., 1997).

Within GEOSPECS, the nexus diagrams are used to approach one of the three "analytical dimensions" (see section 1.3 of scientific report), focusing on opportunities and obstacles/challenges. The objectives areas follows:

- To synthesise results from case studies in a compact way;
- To provide a common framework for the presentation of development processes, and their link with geographic specificity, in the very different contexts of mountainousness, insularity, sparsity, inner peripherality, proximity to a border or coast or status of Outermost Region, in order to identify parallels and differences between specificities;
- To turn the focus away from benchmarking of areas, and towards the identification of development potentials and opportunities, on one hand, and key challenges that could be addressed by targeted policy measures, on the other. As such, the nexus model reflects a shift in the strategic focus of regional policy from convergence to the realisation of growth potentials and promotion of sustainable development;
- To better identify "softer processes" in geographically specific areas. While the geographic specificity as such may not be mutable, policy measures may target the intermediary processes through which they have an economic and social impact.

- To propose a tool to communicate and disseminate results that would be clear and concise, while at the same time reflecting the complexity and uniqueness of each regional situation.

Additionally, the TPG has the ambition to develop synthetic "nexus models" that would synthesise findings for each geographic specificity. Ideally, it should be able to propose a general nexus model synthesising socio-economic processes that are typical for each GEOSPECS category, or for sub-categories of GEOSPECS areas[21].

The point of departure has been the corresponding models developed as part of the ESPON TeDi project. However, as part of the process of producing the GEOSPECS nexus models, alternative approaches were introduced. As illustrated by Figure 6, the initial model (a) focused on how a combination of processes that can be related to geographic specificities creates a territorial situation, characterised by the co-existence of constraints and opportunities, assets and "handicaps". In this approach, when geographic specificities and inherited features generate both limitations and opportunities, they may appear on both the right and left sides of the model. This is a way of underlining the multiple and contradictory effects of geographic specificities, and how their positive and negative socio-economic effects can be interwoven. However, the repetition of elements also creates some confusion, and may make the model unnecessarily complicated. An alternative model (b) was therefore constructed, in which challenges and opportunities deriving from geographic specificities are described separately, on the left and right sides of the model, while geographic specificities are listed in the middle. Such a model demonstrates the duality of effects of geographic specificity, but may, to a lesser extent, show how processes that create constraints and opportunities may be interwoven.

[21] Such synthetic models could not be produced for the Draft Final Report. However, the TPG will seek to propose them in the Final Report.

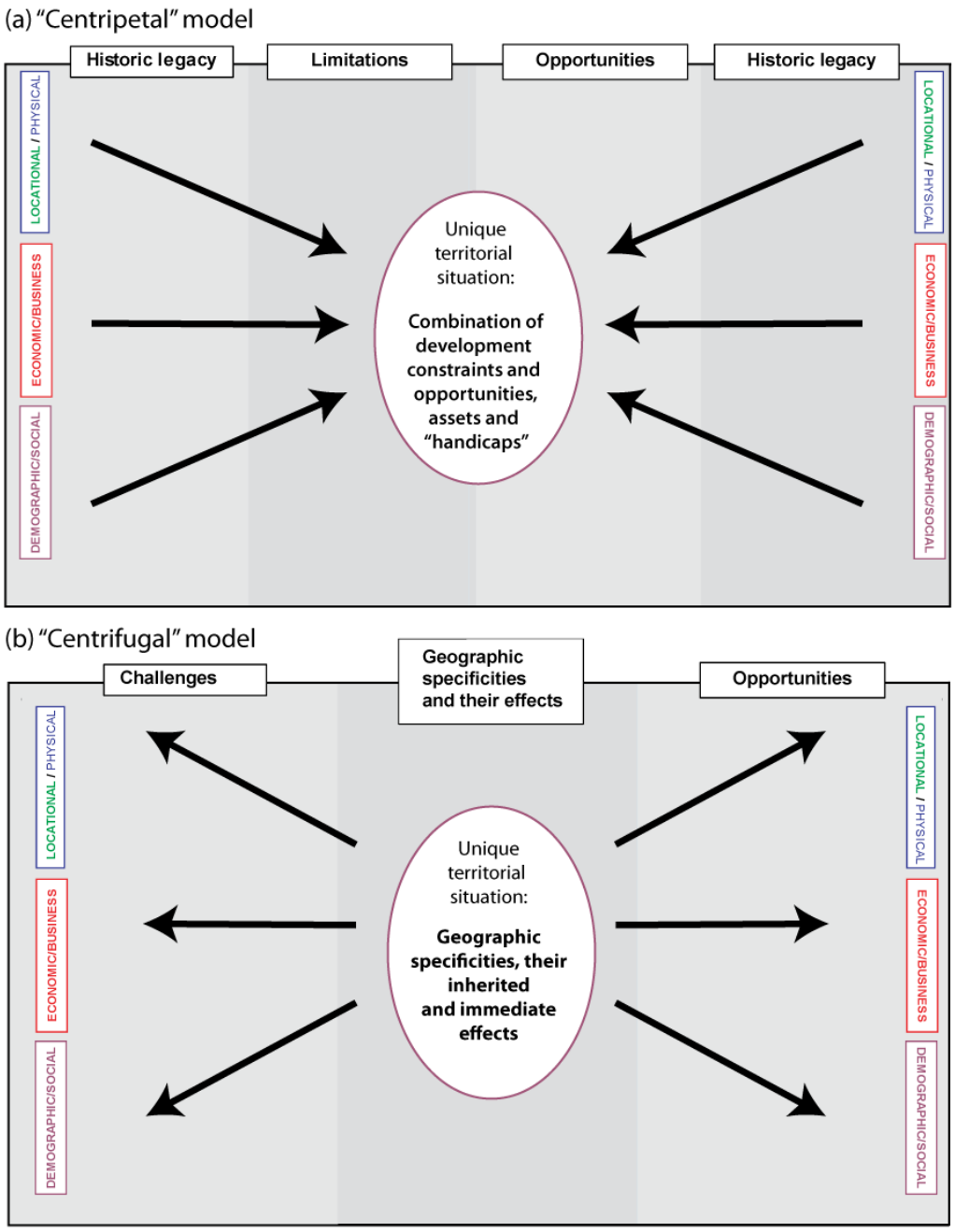


Figure 6 Alternative models for the construction of "nexus models"

Such discussions on the graphical models reflect more fundamental issues on the understanding of the uniqueness of territories:

- in the centrifugal model, the combination of geographic specificities defines the unique profile of each region, while their socio-economic effects are decomposed as individual "results". However, these "results" may be interlinked.
- in the centripetal model, uniqueness is a resultant of socio-economic processes, while geographic specificities are

decomposed in individual "determinants" influencing them in different ways. However, these "determinants" may be interlinked.

The models therefore express the relationships between geographic specificity and performance in different ways, and provide policy-makers and stakeholders with a different perspective on each regional situation. It can be argued that the centripetal model more effectively incorporates the ways in which social and economic actors interact with and transform geographic specificity, creating a situation to which policy makers can then relate to identify challenges, opportunities and measures. However, the centrifugal model provides a clearer, albeit possibly more simplistic, representation of the effect of geographic specificity.

In both models, the starting point of the causal processes is often not geographic specificity as such, but inherited features caused by the geographic specificity. The historical perspective and way in which the time dimension is dealt with is important, as it may be difficult to differentiate the geographic specificity from the effects it has produced. For example, Europe's most sparsely populated areas are generally characterised by climatic constraints, and thus extensive modes of production prevail in agriculture and forestry. This limited potential for the production of foodstuff is historically the main explanatory for sparse settlement patterns. It can therefore be considered intrinsically linked to sparsity. There are however many situations where it may be more difficult to distinguish "geographic specificity, their inherited and immediate effects" on the one hand, and the processes leading to challenges and opportunities on the other. In both models, there is therefore often a smooth transition rather than a distinct limit between the geographic specificities and their "historic legacy" on one hand, and the opportunities and challenges on the other.

The nexus models illustrate multiple similarities between mountain regions, islands and sparsely populated areas. The closely knit local communities, strong ties between local actors and particularly developed sense of local identity are primarily interpreted as an asset for local development. The specific roles of landscapes and unspoilt nature as a basis for tourism and as factors contributing to residential attractiveness and quality of life is also mentioned repeatedly for these categories, as well as for coastal areas. The specific development conditions for coastal areas are otherwise mainly linked to competition for space, the exploitation of marine resources and the effects of coastal climatic conditions.

For border regions, the TPG found that it was not meaningful to construct a synthetic nexus model, considering the diversity of situations. The comparison of the nexus models for the Polish-Ukrainian region and Luxembourg Cross-Border Metropolitan Region nexus models illustrates this.

In the case of islands, it was felt that the general nexus model (see Figure 9) did not reflect the diversity of island situations. Therefore, specific nexus models are proposed for islands with poor connections, islands with fixed links and islands with air links.

From nexus models to strategies

Nexus models should not only help to identify territorial development policy issues related to each GEOSPECS category or case study area. They can also function as tools to identify possible fields of action, and be an instrument in a process of constructing a shared understanding of the most relevant socio-economic processes for the development of a locality or region, and the corresponding challenges and opportunities.

The combination of development opportunities and challenges in one model helps to identify not only the obstacles that need to be overcome, but also the economic added value that should be expected from these measures. In GEOSPECS areas where public interventions are deemed necessary, the underlying idea is, in other words, to demonstrate that European, national or regional efforts are justified. Inversely, nexus models could also become an instrument to identify situations where the appropriate strategy would be controlled depopulation, because the level of public intervention needed to overcome identified challenges is out of proportion with the expected returns. The range of "returns" to be taken into account is to be defined politically: it may include not only economic returns, but a wide range of positive externalities including ecosystem services and the preservation of traditional ways of life.

Two groups of public interventions may be identified on the basis of nexus diagrams:

- structural and permanent imbalances may require permanent compensatory measures. For example, in the context of a knowledge society where higher education is encouraged, there will tend to be a net out-migration of young people from areas with no higher education opportunities. Without compensatory measures, this leads to ageing and population decline.
- Other situations require specific, focused public interventions. For example, public-private partnerships or subsidies may

compensate for the lack of ICT infrastructure in small and isolated communities. In other cases, public authorities may need to get a process started (so-called "pump priming"). In both cases, strategies for handling the end of the public intervention need to be clearly formulated.

The stakeholder consultations have shown that GEOSPECS stakeholders are generally keen to demonstrate that geographically specific areas should not be given political attention on principle or for reasons of "spatial justice", but because they are convinced that these areas have more to offer for Europe as a whole. Nexus diagrams can be one instrument to demonstrate how this can be achieved.

Figure 7 Nexus model for sparsely populated areas

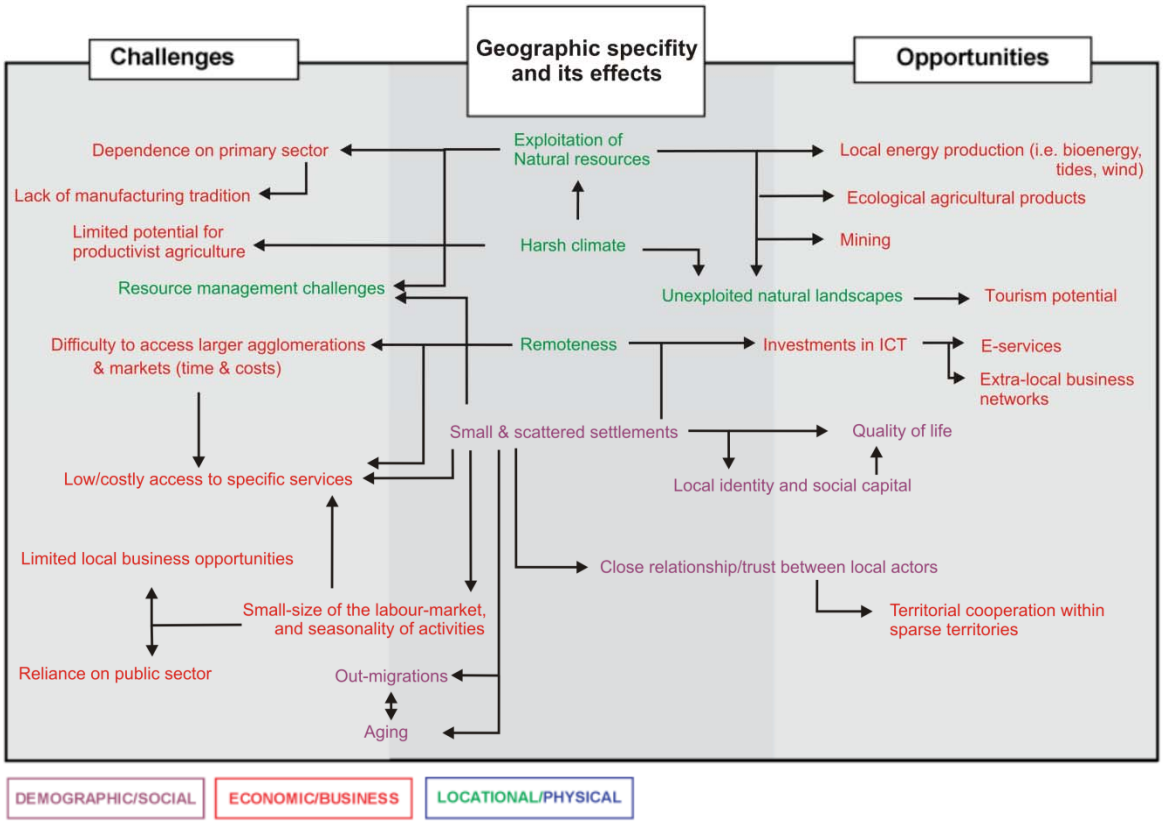


Figure 8 Synthetic Nexus model for mountain areas

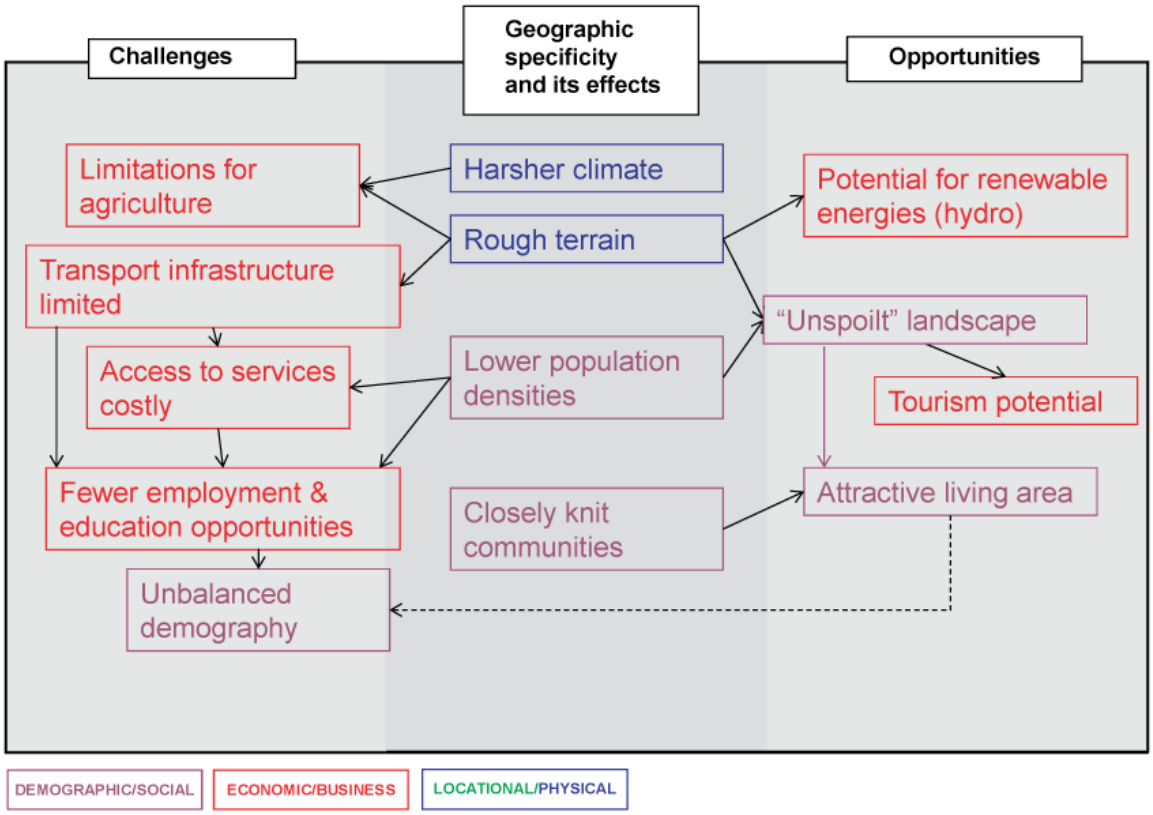
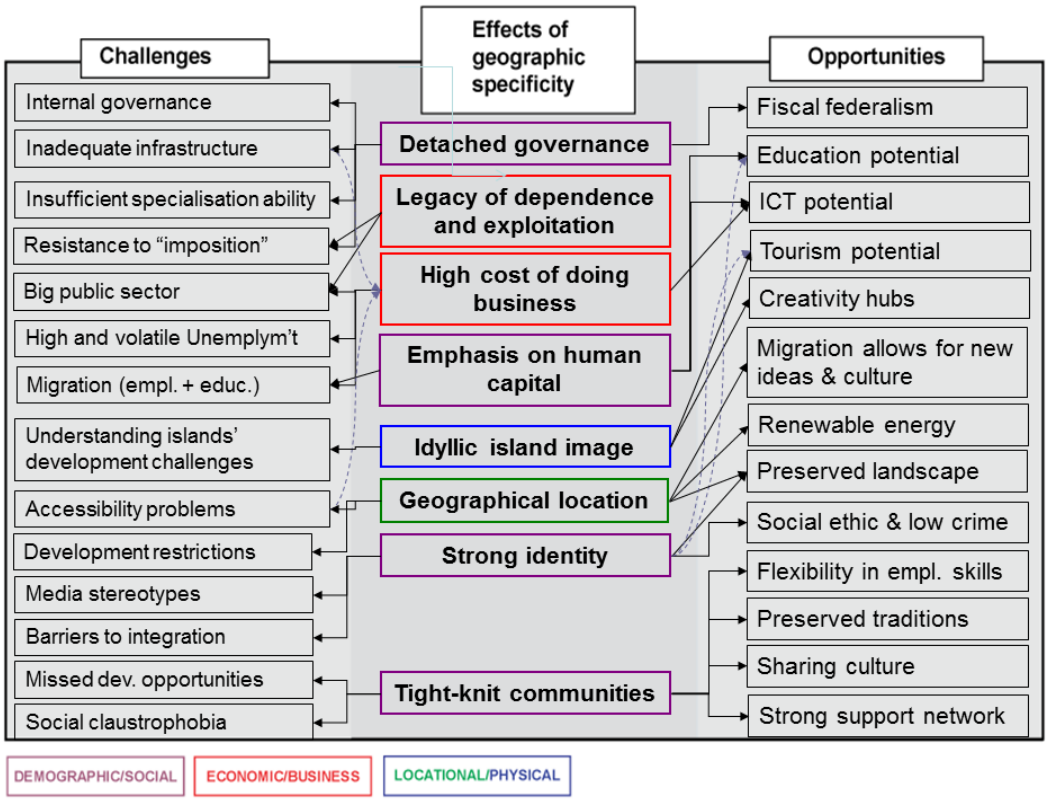


Figure 9 Synthetic Nexus model for islands



3.3 Synthesis of findings from transversal themes

The analysis of transversal themes confirmed many of the hypotheses that were presented in the Interim Report. Based on case studies and quantitative analysis, the main findings are the following:

Accessibility and Services of General Interest: As remoteness is the main characteristic of Outermost Regions (ORs), these areas face the most challenges deriving from limited accessibility. When the European mainland is considered, it appears that islands, sparsely populated areas (SPAs) and mountain areas are most limited in terms of accessibility. Coastal areas and border areas fare much better in comparison, whereas Inner Peripheries are a specific case.

If access to an airport is taken as an indicator for general accessibility of an area, this confirms the picture: on the European average, 52% of population lives in a LAU2 area in which more than 50% of territory has access to an airport of over 150,000 passengers per year within 45 minutes travel time. This figure is strikingly higher in coastal areas (63%), similar in border areas (53%), but significantly lower for islands (37%) and mountain areas (31%), and negligible in SPAs (2%) and OR (almost 0%).

If the presence of urban agglomerations is taken as an indicator for access to many different services, a similar picture emerges: on the European average, 83% of people live in or around urban areas of over 100,000 inhabitants[22]. In coastal and border areas, this number is even higher (87% for both), but lower for mountains (64%) and islands (57%), and significantly lower in ORs (23%), and (unsurprisingly) negligible for SPAs (1%).

The case studies confirm that low accessibility is a major concern for many GEOSPECS areas. Stakeholders have noted the remote location and resulting high transport costs in several case studies: first and foremost, both OR case studies (French Guyana and the Canary islands), but also in the Outer Hebrides, the Scottish Highlands, Torne valley, the Spanish SPAs, and Sicily.

Inner Peripheries, represented by the two case studies of Parkstad (NL) and Werra-Meissner-Kreis (DE), have high accessibility by road to cities. The chapter on IP confirms this finding, as IP do not principally result from inaccessibility but from lack of employment and demographic decline. In

[22] More specifically, in a PUSH around a MUA of which FUA > 100.000

fact, high accessibility to nearby urban centres causes the demographic decline in many cases.

The age structure of the population is also relevant in this regard, as a society with a high proportion of elderly requires more services in the health sector (care homes, hospitals, etc.), whereas a society with a high proportion of children requires more education services. While coastal and border areas, and even islands and mountains, overall do not differ significantly from the European average, the proportion of elderly (above 60) is higher in SPAs (24%) than on the European average (21%). Most significantly, it is the OR that differ, with 15% of elderly (compared to 21%) but 21% of children (under 15), compared to 17% on the European average[23]. Nevertheless, individual mountainous or insular regions can feature a strong over-representation of older population segments, as confirmed by the case studies.

In terms of economic vulnerability and resilience, it is impossible to identify one "typical" economic structure or typical labour market profile that could be dubbed "the mountain economy" or "the island economy" etc. The categories of geographic specificity are much too diverse for that. One similarity of the case study areas is that many (not all) feature an above-average share of employment in the public sector – often due to a generally low diversification of economic activity. This is, however, much more true for mountainous, insular, sparsely populated and outermost areas, and only rarely for coastal and border areas. Often, these areas of "classical" geographic specificity (mountains, islands, SPA, OR) are characterized as being "small economies" (i.e. with a small market and only limited availability of workforce) – and are also often removed from agglomerations – where investment (from outside) is consequently less attractive.

Many of the "specialisations" of GEOSPECS areas are directly or indirectly linked to their geographic specificity as, for instance, the heavy focus on tourism found in many of these areas (as a mountainous or coastal landscape is largely perceived as "beautiful" by visitors and offers opportunities for outdoor recreational activities). Some "specialisations" rely on natural resources that only occur in particular (geographically specific) areas, such as fishing around coastal areas and islands, mining and forestry in sparsely populated areas. A focus on renewable energies is an opportunity in almost all geographically specific areas, since many renewable energy resources are linked to geographic specificities (see more below). A concentration on this type of "typical" activity is not

[23] These numbers consistently exclude Turkey, as the data on age structure for Turkey was not comparable with the other European countries.

necessarily an advantage, as many of these activities – such as fishing, mining, agriculture, or forestry – require decreasing labour forces due to rationalisation, mechanisation, etc.; and primary products of low added value do not generate high income for these areas. In addition, both agriculture and tourism tend to be marked by seasonality of employment. Many of the examples of particularly successful specialisations in case study areas are those which focus on niche products of high quality: watchmaking in the Jura massif, whisky production in the Scottish Highlands, organic farming in Sicily and Central Spain, aquaculture specialised in seed mussels along the Irish Sea coast, aquaculture and the extraction of marine aggregates on the Belgian coat, even financial services in Luxembourg and Geneva.

In terms of intangible assets / social capital, it has often been stated that rural areas and small towns feature particularly tight interpersonal relations (Ward and Hite, 1998). This was also confirmed by the transversal theme on residential attractiveness, where "closely-knit" communities were found to characterise many GEOSPECS case study areas. Again, this is only true for those areas that were characterized as "small economies" (SPAs, OR, some islands, some mountain areas), but not for any of the coastal or border case studies. Although these high levels of 'bonding' social capital are also an asset in economic terms, it is important to point out that this should be complemented by openness towards extra-local actors, as local communities will not be able to generate development purely from within. This ties in with the topic of residential attractiveness, since an area that is not attractive for residents will inevitably lose population, and thereby the basis for sustainable local development.

Excluding border areas, the most prominent heritage of many types of GEOSPECS areas is their environmental capital: the beauty of the landscape (and sometimes unique wildlife) is a source of pride and is considered to be one of the main advantages of living in these areas. Environmental capital is even greater for those regions that can boast more than one type of landscape (such as the Highlands and Sicily). This not only attracts residents, but also tourists, and thus contributes to employment opportunities.

In many cases, a rich history and culture can be added to the environmental assets, and this may be linked to the geographic specificity, particularly for coasts, where the historic importance of ports is an element of cultural heritage, and island and mountain areas and ORs, where the isolation adds to the preservation of traditions. As mentioned, social capital is strong in the form of preserved traditions, tightly-knit communities and even values such as courteousness – but more so in the

more isolated areas, i.e. islands, sparsely populated areas and many mountain areas. This is valued highly by many residents, but can also be perceived as "suffocating". Border areas, for their part, can have particular social capital in that they are places where different cultures meet and are thus exposed to different influences: multicultural, "open" societies can therefore emerge in these areas – but this is not necessarily the case, as identity-based, exclusionary behaviour can also develop in border areas.

The combination of these elements makes these areas attractive living spaces. However, this can in turn cause conflicts, as a significant inflow of pensioners and second-home-owners drives up house prices, which can exclude younger population segments who cannot afford housing anymore. Evidence of this was found in the Highlands and the Outer Hebrides case studies, in both coastal case studies and, to some extent, in the SPAs of Spain and Tornedalen. In combination with outmigration of younger people (due to a lack of employment opportunities and/or a lack of education institutions), this means that these areas face a strongly ageing population, which in turn puts pressure on welfare systems in these areas. Evidently, even though natural capital and social capital are an important factor in choices of residence, they cannot compensate a lack of job opportunities and lack of access to services.

Information and communication technologies (ICT) are often said to overcome the main disadvantage of some GEOSPECS areas, namely remoteness – in terms of distance from markets and economic activities as well as centres of service provision. Some case studies show examples of the application of these technologies (e.g., telemedicine projects in Finland and French Guyana, homeworking in the Scottish Highlands, "e-democracy" approaches in Finland). However, most of these projects have been pilot initiatives subsidized by national or European public funds. Another example is the University of the Highlands and Islands in Scotland (an institution with 13 campuses across this sparsely populated and extensive area), which has particularly embraced the advantages of virtual interaction: "the UHI do as much videoconferencing as all the rest of the universities in the UK put together" (Rennie & Mason, 2005).

On the supply side, geographic specificities pose challenges. As many GEOSPECS areas are sparsely populated or remote or both (again, this is mainly true for OR, islands, SPA and mountains), private investors have few incentives to supply these areas with broadband or mobile phone connections. Telecoms connectivity is inherently more commercially attractive in urban areas due to lower deployment costs per user. Broadband coverage in sparsely populated areas generally lags behind that of densely populated ones. In the Highlands and Islands of Scotland,

a major effort of public investment in ICT (in the past two decades) has propelled the area into the same league as the national average in terms of internet and mobile phone coverage. Similar public efforts have been undertaken in Scandinavian countries. These successful examples show that public intervention is necessary, or at least useful, in areas where the market does not supply the infrastructure. Nevertheless, it should be noted that, even though the variation between GEOSPECS areas and other areas can be large, variations between countries are even larger. For example, while in Sweden or the Netherlands, 77 - 79% of households have broadband coverage, in Greece this figure is only 34% and, in Romania and Bulgaria, less than 25%.

As noted above, some GEOSPECS areas offer an abundance of natural resources, and therefore specialize in their exploitation. For example, one particularity of coastal areas is the possibility to extract marine aggregates. This type of resource exploitation is growing in the waters off the Belgium coast, where the aggregates are utilised in the construction industry and as materials for land reclamation and the re-nourishment of eroding beaches. In both coastal case study areas and the islands of the Outer Hebrides, fish are cited as important natural resources, though overfishing is a problem. In the coastal case study areas, expansion of the aquaculture sector is noted as an opportunity to partly compensate for the declining fishing industry.

SPAs are often associated with resource exploitation – this is not only because resources occur there (which is more of a coincidence), but also because their exploitation does not conflict with human settlements or, in many cases the need to preserve areas of high Biodiversity, and is therefore easier. In Teruel and Soria, SPAs in Central Spain, the extraction of ornamental rocks (e.g., alabaster) and construction materials (e.g., clay) plays a role, but it is the exploitation of coal that has had the largest economic and physical effect on the region. Around 65% of Spain's coal production originates in Teruel, and its exploitation is integral to the national energy supply. In the Torne valley (on the border between Finland and Sweden), mining is also important as well, as is forestry, as the region contains some of Europe's most extensive forests.

However, what all GEOSPECS areas (apart from borders) have in common is that they are associated with high levels of renewable energy resources. Hydropower is an important opportunity in mountain areas; offshore wind, wave and tidal energies can be exploited from coasts and islands; SPAs often offer resources for biomass energy generation (and enough space for large-scale wind power installations); solar energy can be exploited in ORs due to their proximity to the equator (but seeing that most of them are islands, marine energies are an opportunity there as well).

Nevertheless, while the development of these various types of resources can be beneficial for the development of local/regional economies, their distance to major areas of demand and underdeveloped grid capacity are often key constraints to their development.

Given that the natural capital of GEOSPECS areas (generally excluding border areas) is one of their main assets, this can be an opportunity in economic terms, as it either attracts residents (and visitors), or provides opportunities for the exploitation of resources, thus contributing to generating income for the area. However, the natural capital of these areas is also a value *per se*. These areas provide vital ecosystem services to the European continent. Some are generic to any ecosystem (photosynthesis, soil stabilisation, nutrient cycling, etc), but others are particular to GEOSPECS areas. Mountain ecosystems play a key role in the water cycle for Europe as a whole. They influence temperature and precipitation patterns, and modulate the runoff regime. Water from both rain and snow is stored on and in mountain vegetation and soils and gradually released. It transports sediments downstream, providing nutrients for lowland areas, replacing fluvial and coastal sediments, and contributes to groundwater recharge in lowland areas (EEA, 2010b). Coastal ecosystems have always played important roles in providing food, not only by directly generating a variety of seafood products like fish, mussels and crustaceans, but also by providing nursery habitats for many commercially important marine species. Other services include shoreline stabilization, bioremediation of waste and pollutants, and a variety of aesthetic and cultural values (European Commission, 2011). SPAs (but also some ORs, especially French Guyana) have extensive forests which are not only a resource, but important in terms of carbon sequestration.

Although an academic debate is underway as to how these services can be adequately valued, they do not currently receive any market pricing – a reason why they are also referred to as "positive externalities". If the true value of the natural capital of GEOSPECS areas were taken into account, it would become apparent that these areas are immensely valuable for Europe as a whole, even if they often do not generate as much value in terms of GDP.

GEOSPECS confirms that the coverage with protected areas is higher in all categories of geographic specificity (except for SPAs) than on European average. Although this is no proof, it is certainly an indication of the high value of their natural capital.

Climate change: The climate change vulnerability of a particular region depends on the interaction of a very wide range of factors. Geographic specificity can influence some of those factors, and the GEOSPECS case studies show that geographic specificity makes many areas more

vulnerable to climate change impacts overall. This has been confirmed by research, much of which was recently compiled in the ESPON CLIMATE project (ESPON & IRPUD, 2011). This concluded that the overall hotspots of *physical impacts* are almost all located on or close to coasts, especially at river mouths. The assessment of the combined *economic impacts* of climate change shows that the south is more vulnerable, since large parts of Southern Europe are dependent on (summer) tourism, but also agriculture, which are projected to be negatively impacted due to temperature increase and precipitation decrease. Given that tourism plays a particular role in many island and coastal territories in Southern Europe (as also confirmed by the GEOSPECS case studies), they will be particularly hard hit. The Alps as a premier tourism region are also identified as a hotspot, which mainly due to projected decreases in snow cover. Regarding the *aggregated potential impacts* of climate change, the following regions emerge as hotspots: the South of Europe, i.e. the large agglomerations and summer tourist resorts along the coast; mountains; but also the densely populated Dutch/Belgian coastline.

The concentration of physical structures and economic activities along parts of the European coastline accounts for a high damage potential, as the coasts face risks from sea level rise, storms, erosion and inundations. The intensely urbanised Belgian coast is a prime example of a region at risk.

For the ORs, the main impacts are heat-related - decreasing water availability and increasing water stress - as well as increasing hazard potentials related to extreme climate events (tropical cyclones, inundation, heavy rainfalls, floods, etc). The Canaries are an example of a region that already faces difficulties in accessing sufficient freshwater supplies. In addition, much of the settlement and economic activity is concentrated in the coastal zones. As the ORs are generally less developed than mainland Europe, their adaptive capacity is accordingly lower.

For mountain areas, climate change will impact on the annual days of snow cover – for all of the GEOSPECS case studies of mountain areas, a decrease of up to 30 days and more is predicted. This, in combination with increased rainfall and more extreme weather events (and glacier ablation in higher areas), will increase risks from natural hazards, and also affect water supply downstream. Mountain areas relying on winter tourism will be negatively affected in economic terms. For every ºC increase in temperature, the snow line will, on average, rise by about 150 m in elevation. In the Tatra and West Stara Planina case studies, for instance, major investments in ski infrastructures are planned, something that does not appear sustainable in the face of climate change.

A traditionally strong role of natural resources and the primary sector in regional economies is a common characteristic of many SPAs. Since agriculture and forestry are in general very climate-dependent sectors, this makes such territories, in principle, more climate-sensitive than regions with a more diversified economic structure.

Islands will be mainly affected by sea level rise, storms and inundations. In the case of southern islands (for instance Sicily), global warming may negatively impact the economically important tourism sector, when temperatures become uncomfortable in the peak summer months. In addition, Sicily already faces difficulty in accessing sufficient freshwater, a challenge that will increase with climate change.

Border areas do not in general face specific climate change impacts, but their adaptive capacity may be reduced in cases where cross-border cooperation is still weak.

As many GEOSPECS categories are associated with high levels of biodiversity (particularly ORs, mountains, islands and coasts), these – often unique – ecosystems are at particular risk of being lost altogether, as species cannot adapt to climate change fast enough.

3.4 Synthesis of findings from case studies

When characterizing the case study areas, it becomes obvious that all are searching for the right path to development – and this almost exclusively refers to economic development, i.e. the generation of (economic) value. However, the discourse varies. For many areas, discussions centre strongly on the area's handicaps or challenges, which should be *compensated fo*r by policies, in order for the area to be able to exploit its full potential. In other areas, the focus is more on assets or opportunities, which should be *promoted*. A third perspective – although less frequently voiced in ongoing discussions about Structural Funds, regional competitiveness and "headline goals" – is that of overarching values which are less easily quantifiable.

The common question is of course: What can policy do - which levers can be applied – to aid these areas in their path towards development?

The tables in the Annex attempt to give an overview of these elements for each case study area. The case studies were prepared to evaluate how geographic specificities influence development paths. The table should be read with this in mind: it focuses on development challenges and

opportunities *deriving from geographic specificity* and is thus not a complete SWOT analysis. In addition, as the case studies focussed on a limited number of transversal themes, not every possible issue is included.

The first two columns present elements of the case study areas where a lever could be applied to *compensate for* challenges or to *promote* assets. As argued in the chapter on policy options, much of the debate so far has concentrated on how GEOSPECS areas can be compensated for their "structural handicaps", with a view to "levelling the playing field" for these areas. However, when arguing for a level playing field, the underlying assumption is that all regions in Europe should be moving towards the same objective, namely *competitiveness* (in any way, shape or form). On the one hand, this raises the question whether the concept of competiveness can be applied to regions *at all*,[24] and on the other hand if it is a useful approach. GEOSPECS argues that this is the wrong approach. Policy-makers should be reluctant to imitate a successful model that has its origin in a different environment without accounting for region-specific contexts. A successful model relies on a number of interdependencies between different factors. Instead of proclaiming common objectives for every region (and accordingly benchmark everyone against the common average), it would be necessary to seek to identify how regional resources can help generate a more robust internal economy, and on this basis increase the sustainability of local communities. Instead of generally compensating for any perceived disadvantage, it would then be necessary to counteract only those disadvantages that prevent the region from exploiting its full potential.

The third column is here entitled "non-commodified values". The phrasing stems from an attempt to expand the concept of "ecosystem services". Ecosystem services are the benefits people obtain from ecosystems, which are quite frequently not quantified in economic terms, as very few are traded on the market. In this context, the concept shall refer to something broader than only services from ecosystems, as ecosystems are usually associated with ecology or the *natural* environment (although this is not strictly speaking true[25]). Here, "non-commodified values" is deemed to

[24] see, for instance: Boschma, R. A. (2004). Competitiveness of Regions from an Evolutionary Perspective. *Regional Studies*, *38*(9), pp. 1001-1014.

[25] The Oxford Dictionary defines "ecosystem" as "a biological community of interacting organisms and their physical environment" – it can thus easily include humans, man-made structures, cultural interactions, etc

mean *any value that does not normally receive market-pricing*. The column could equally have been termed "positive externalities", "public goods" or even "global commons".

Nevertheless, attempts have been made to quantify such non-market values in economic terms, and there is a growing literature concerned with the pricing of ecosystem services. This exercise inevitably runs into moral snares, since the sum of value of all ecosystem services of the planet is necessarily infinite (as all humans are part of ecosystems, we would not exist without them).

This column intends to broaden the debate, with view to a more long-term perspective. While ongoing political discussions are typically reduced to the immediate generation of monetary value (growth), many elements (assets) of an area have an intrinsic value, which deserves to be maintained for future generations, even if it does not generate immediate added value. These resources (in the widest sense of the word) will be the basis for life for future generations, but also enrich people's lives today (by creating culture, recreation, health and other values). A region with a comparatively low GDP can thus create a wide range of other values. If the true value of natural capital were taken into account (an approach that is referred to as "ecological economics"), many GEOSPECS areas might be able to offer much more than agglomerations, which are the classical nodes of competitiveness. In an ever more densely populated world, putting ever more pressure on the natural environment, these aspects deserve consideration, and are being gradually factored into political debates.

It should be noted that the column deliberately leaves out (ecosystem) services that would be common to *all* of these areas. For instance, photosynthesis, air purification, carbon sequestration, soil stabilization, nutrient cycling and pollination can be expected of *any* terrestrial ecosystem, hence a listing for each case study area would be redundant. A ranking of the *extent* to which each case study area provides these services could be created; however, this exercise would require a quantification and go far beyond the scope of this project. Hence the focus is on values/services that are specific to that case study area. More generally, there are some ecosystem services that are exclusive to geographically specific areas. Examples are mountains which play a key role in the water cycle for Europe as a whole, or coasts which provide particular food resources like fish. A more detailed analysis of these specific services can be found in the chapter on transversal themes, more specifically "Biodiversity and protected areas as factors of development".

The Annex contains a summary of all case studies according to this model. For reasons of space, only one example (of the Highland Council area) is reproduced here. Typically, the model would contain elements such as:

Compensation of constraints:

- Low diversification of economy / dependence on public sector (Outer Hebrides)
- Access to island time-consuming & costly (Sicily)
- Services of general interest are provided at lower levels (higher costs per head due to low population densities and long distances) (Tornedalen)
- Small size does not attract investment (sparsely populated areas in Spain)
- Environmental degradation due to overdevelopment of the coast by tourist structures (Belgian coast)
- Ageing society / high share of elderly (Irish Sea)
- Dependency on imported products / higher costs (Canary Islands)

Promotion of assets:

- High living quality (natural capital, strong sense of identity, close-knit communities, particular traditions) (Outer Hebrides)
- Attractive area for tourists, brand as "sea and sun" destination (Sicily)
- Availability of natural resources (Tornedalen)
- Potential for renewable energy exploitation (Belgian coast)
- Multicultural society (Geneva CBMR)
- Building relations with African neighbours: trade increasing (Canary Islands)
- Permeable border makes daily commuting easy (Jura massif)

Non-commodified values:

- Ecological richness (French Guyana)
- Potential for exploiting renewable energy sources: direct use value + option value (Outer Hebrides)
- Recreation value hinging on activities particular to coasts (swimming, boating...) and unique landscape (Irish Sea)
- Interface (melting pot) for many cultures (Sicily)
- Living area of the only indigenous people of the EU (Tornedalen)
- Resources of worldwide importance (forests, iron, construction materials) (sparsely populated areas of Spain)
- Regeneration of a resource: Belgian North Sea as an important spawning and nursery ground for some commercial fish species (Belgian coast)
- Gateway between EU and non-EU countries (Polish-Ukrainian border)

Table 6 Example: Highland Council area

	Levelling the playing field (Compensation of constraints)	Enhancing endogenous development (Promotion of assets)	Non-commodified values
Economic structure	Low diversification of economy / dependence on tourism & public sector	Attractive area for tourists (unique landscapes + outdoor activity opportunities + Highland image)	Recreation value hinging on - unique landscape + outdoor activities - cultural elements
	Long travel times (due to dispersed settlements and terrain) - deters new enterprises makes some goods more expensive		
	Services of general interest are provided at lower levels (higher costs per head due to low population densities and long distances)		
Society	Ageing society (due to inmigration of old & outmigration of young)		
	High house prices (due to influx of older people) are sometimes unaffordable for younger	Attractive area for residents (living quality due to quality of environment and close-knit communities)	
			Unique cultural heritage including specific products (e.g. whisky), garments (e.g. kilts), traditions (e.g. Highland dances), Gaelic language + strong sense of identity: *cultural value + heritage value*
Environment			High levels of biodiversity supported by Highland landscape: *preservation value / intrinsic value*
	Lack of grid capacity may hinder efficient exploitation of renewable energies	Potential for renewable energy: wave & tidal, wind (offshore & onshore), hydro	Potential for exploiting renewable energy sources: *direct use value + option value*

When looking at the tables, it becomes obvious that this approach works better for some geographic specificities than for others. When discussing the compensation of natural handicaps (or constraints), the promotion of assets and non-commodified values makes sense particularly for islands, in mountains, sparsely populated areas and Outermost Regions. A discourse of compensation has for a long time surrounded these areas, and elements of this discourse have been evoked throughout this report. Particularly typical examples are difficulties of access, low levels of public services in sparsely populated areas, the dependence of Outermost Regions on imports due to their remoteness and small market size, or the difficulties that mountain farmers face as compared to lowland farmers. In order to achieve territorial justice, many have claimed that these areas should receive compensation of some form (monetary or exemption from particular regulations). To counterbalance this "negative" discourse, the assets of these areas are then sometimes evoked (as an opportunity for development and GDP growth), or, perhaps more abstractly, the vital contributions that these areas make to the general well-being of humanity as a whole (the non-market values that are often related to the preservation of natural capital).

However, this type of discourse is less pertinent for other GEOSPECS categories, namely border areas and coasts. The underlying assumption of the logic of "compensation" is that all – or at least most – of the respective areas face the same challenges, because the challenges are *structural*: in the case of islands, mountains and Outermost Regions they derive from geographic preconditions, whereas in the case of sparsely populated areas the challenges are inherent in the definition of "sparsely populated", as the logic of a market economy makes it inevitable that levels of service provision will be lower.

This is not true for borders or coasts. As the case studies prove, both of these GEOSPECS categories are very diverse, and some of the richest and most attractive areas of Europe are borders or coasts. The Luxembourg cross-border metropolitan region features the highest GDP per capita levels of the entire EU, and the Belgian coast is a successful node for transport and logistics, as well as an attractive and thus densely populated living space.

Even though these areas certainly face *challenges*, which policymakers need to address, these challenges do not follow the logic of *compensation for a structural handicap*. For instance, the Belgian coast faces severe environmental degradation due to the impacts of intense anthropogenic activity. Fish stocks in the Irish Sea are depleting. Soaring house prices in Luxembourg and Geneva lead to exclusion of those unable to afford them. The challenges of the border area between Germany, Poland and the

Czech Republic are those of an economy in transition. While all of these issues call for political solutions, they are only indirectly linked to the respective area's position at a border or at a coast, and thus the logic of compensation is hard to apply.

Table 7 Example: Geneva CBMR

	Levelling the playing field (Compensation of constraints)	Enhancing endogenous development (Promotion of assets)	Non-commodified values
Economic structure		International finance centre Concentration of international organizations Research cluster	
	Competition for space leads to high land/real estate prices	Many opportunities for (well-paid) employment in the canton Geneva (also for residents of surrounding areas)	
		Image of natural charms in combination with historic & architectucal assets	Recreation value hinging on: - landscape - cultural elements
	Public transport network across border insufficient	Projects to improve public transport network	
Society	Border as a limit for spatial planning: in Geneva city development of housing does not keep up with rapidly increasing population	Strong links between both sides of border via commuters: French areas function as "suburbs" for Geneva city without border being an obstacle	
	High number of internationals / commuters creates slight exclusionary sentiments among some parts of Genevan population	International & multilingual environment: creativity	Multicultural society: learning process: *cultural value*
Environment	Urban sprawl (consumption of natural areas) + high resource use and waste production		

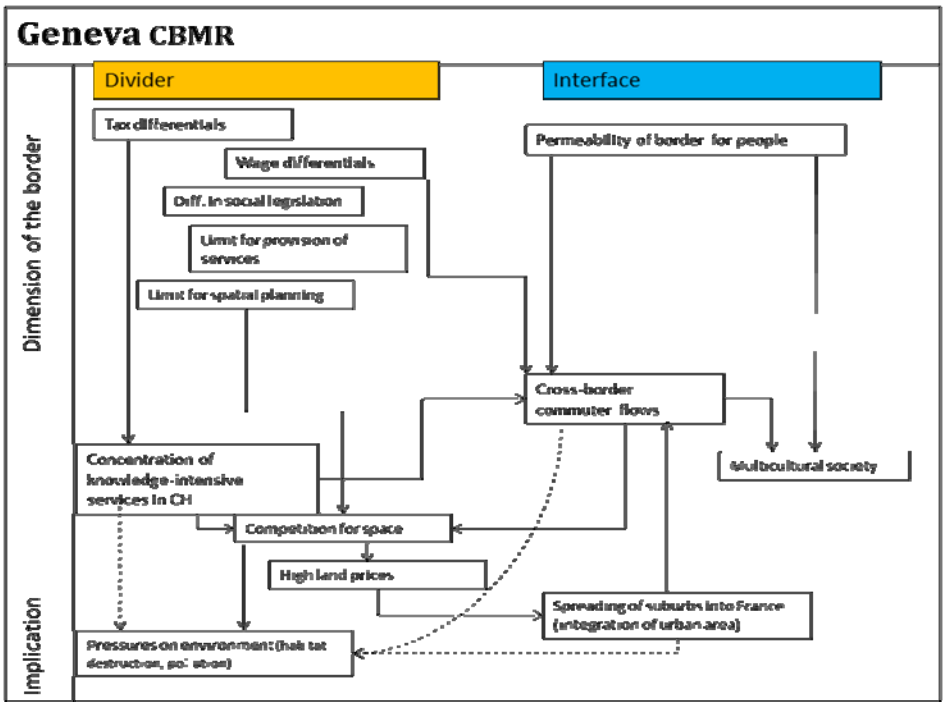


Figure 10 Model of socio-economic processes in areas with a 'linear' geographic specificity: example of the Geneva CBMR

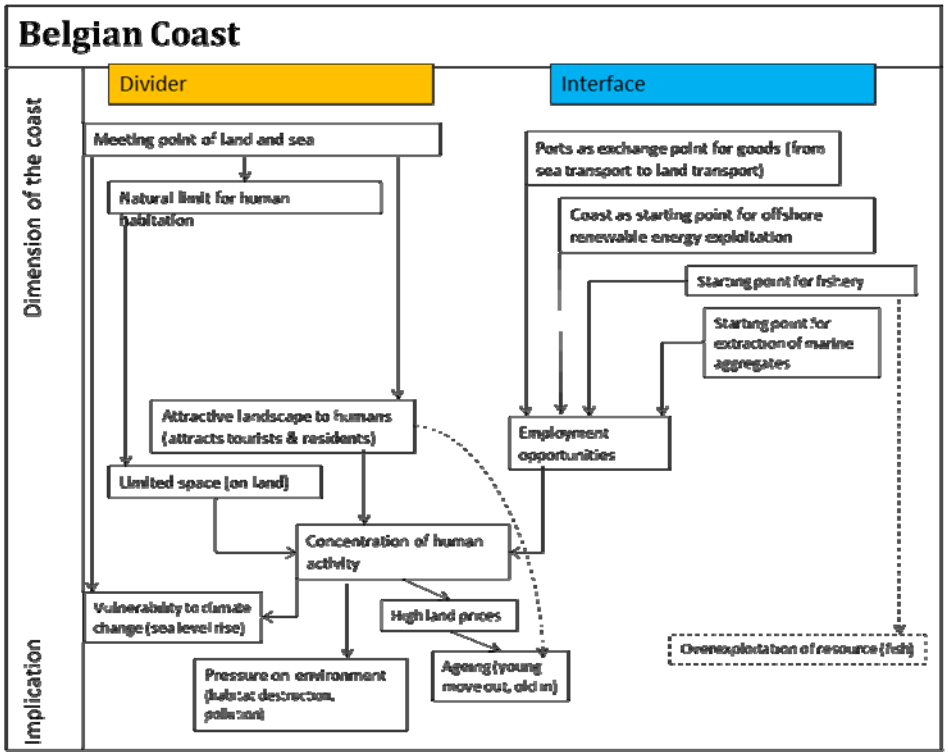


Figure 11 Model of socio-economic processes in areas with a 'linear' geographic specificity: example of the Belgian coast

Instead, a different characteristic appears to unite borders and coasts: conceptually, both can be regarded as *lines* that function as *separators*. The coast obviously separates land from the sea. Borders separate different political administrations with respective rules, different economic spheres with different levels of development, different cultures with different languages, etc. At the same time, these lines have an important role as *interfaces*: economic and cultural exchange takes place across borders; ports on coasts are a focal point for transport, the exchange of goods, and logistics.

GEOSPECS does not regard borders or coasts exclusively as lines, as indicated in the chapter on conceptual understandings and delineations. A coastal *zone* is a strip of variable width measured from the coastline (depending on the type of use for which it is being defined), whereas a border *area* is often characterized as a "buffer zone" where different cultures meet (seeing that lines between different cultures can very rarely be traced sharply). However, both coastal zones and border areas *refer to* a conceptual line.

Overall, it may be more logical to look at borders and coasts in terms of being separators and interfaces. The following are examples for a border region and a coastal region.

4. Issues for further analytical work and research, data gaps to overcome

Identified data gaps and methodological shortcomings

The TPG has been confronted to the lack of tools for the analysis and mapping of LAU2 data within the ESPON programme. For example the TPG constructed a new mapping template and compiled new administrative boundary maps. The TPG relied on the networks of partner organisations for the compilation of boundary maps in the Western Balkans and in Turkey. The TPG has therefore overcome the most important initial data gaps. However, the resources that had to be allocated to these preparatory tasks exceeded the budget forecasts.

Furthermore the capacity of individual ESPON projects to compile new LAU2 data for the ESPON space from national sources is necessarily limited. The TPG compiled data on employment per NACE categories for 32 ESPON countries, opening new perspectives of research on territorial structures. A wider collection of LAU2 data is possible, but this would require that additional resources are allocated to this. Compiling and processing historical LAU2 data is particularly challenging, e.g. because of changes in boundaries. The construction of a framework for the integrated analysis of LAU2 data for different years, e.g. making it possible to estimate data for one set of LAU2 boundaries on the basis of data corresponding to a variety of boundaries, would greatly facilitate this type of endeavour.

Further analytical work

The ESPON GEOSPECS projects was asked to cover a wide variety of geographic specificities, each of which require specific sets of quantitative and qualitative methods to produce analysis that fully reflect the types of opportunities and challenges they face.

The TPG has therefore chosen to focus on the production of frameworks for analysis: detailed conceptualisations and carefully designed delineations of each GEOSPECS category, analyses based on innovative methods and new datasets illustrating how they can be described quantitatively, transversal themes providing examples of cross-cutting themes of particular importance for geographically specific areas, but raising different types of issues. The ESPON GEOSPECS project therefore offers a methodological framework and a database that can be further exploited in targeted analyses focusing on specific portions of the European territory as well as in studies of individual geographic specificities.

References

ABEGG, B. (2006). *Climate Change and Winter Tourism. OECD Report on Adaptation.* Presentation at the OECD Wengen 2006 Workshop 'Adaptation to the Impacts of Climate Change in the European Alps', 4th-6th October 2006, Wengen.

ABS (2011). *Todos los mineros de Castilla y León están parados tras el ultimo ERE*. URL : http://www.abc.es/20110120/local-castilla-leon/abci-mineros-201101200946.html

ADE (2011). *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. Second Intermediate Report*. Study coordinated by ADE. URL: http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/eval2007/geographical_2nd_int_rep_castilla_la_mancha.pdf

ADE (2012). *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*. Final Report: Volume 1. Report prepared by ADE at the request of the European Commission. URL: http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/eval2007/geographical_final1.pdf

ADGER, W.N., AGRAWALA, S., MIRZA, M.M.Q., CONDE, C., O'BRIEN, K., PULHIN, J., PULWARTY, R., SMIT, B. & TAKAHASHI, K. (2007). *Assessment of adaptation practices, options, constraints and capacity*. *Climate Change 2007: Impacts, Adaptation and Vulnerability.* Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, pp. 717-743.

ADGER, W.N., ARNELL, N.W., TOMPKINS, E.L. (2005). *Successful adaptation to climate change across scales.* In: Global Environmental Change Part A, vol. 15, no. 2, pp. 77-86.

ADGER, W.N., KELLY, P.M. & NINH, N.H. (eds.) (2001). *Living with Environmental Change: Social Resilience. Adaptation and Vulnerability in Vietnam.* London, Routeledge.

AEM - EUROPEAN ASSOCIATION OF ELECTED REPRESENTATIVES FROM MOUNTAIN REGIONS (2009). *Position of the Executive Board on the Green Paper on Territorial Cohesion.* URL: http://ec.europa.eu/regional_policy/archive/consultation/terco/pdf/4_organisation/86_aem_en.pdf

AEMA - AGRUPACIÓN DE EMPRESAS MINERAS DE ARAGÓN - (2011). *Minería en Aragón*. URL: http://www.aema-aragon.com/mineria.asp

ÅF-INFRASTRUCTURE AB (2010). *Supply of Raw Materials, Transport Needs and Economic Potential in Northern Europe*. Final Report. ÅF-Infrastructure AB/Infraplan. Report produced for the Swedish Ministry of Enterprise, Energy and Communictaions. URL: http://89.233.236.127/Barents/BARENTS100526.pdf

AGECAM - AGENCIA DE LA ENERGIA DE CASTILLA-LA MANCHA (2011). *Anuario Estadístico de Espana 2010*. Capítulo 3. Educación. INE. URL : http://www.agecam.es/

AGECAM - AGENCIA DE GESTION DE LA ENERGIA DE CASTILLA-LA MANCHA (2002). *La biomasa en Castilla-La Mancha*. Junta de Comunidades de Castilla-La Mancha.

AGHION, P. & HOWITT, P. (1998). *Endogenous Growth Theory*. MIT Press, Cambridge.

AGRAWALA, S. & FANKHAUSER, S. (eds.) (2008). *Economic Aspects of Adaptation to Climate Change Costs, benefits and policy instruments*. OECD - Organisation for Economic Co-Operation and Development.

AIROLDI, L. & BECK, M.W. (2007). *Loss, Status and Trends for Coastal Marine Habitats of Europe.* In: Oceanography and Marine Biology: An Annual Review, 45, pp. 345-405.

AKADEMIE FÜR RAUMFORSCHUNG UND LANDESPLANUNG - ARL (1996). *Planerische Zusammenarbeit und Raumentwicklung in tschechischen, slowakischen und deutschen Grenzregionen* (Planning cooperation and spatial development in Czech, Slovak and German border regions). ARL, Hannover.

ALBERTO MORALEJO, S. & ROYO LASARTE, J. (coord.) (2007). *Comarca de las Cuencas mineras.* Colección Territorio 24. Comarcalización de Aragon Gobierno de Aragon.

ALBRECHT, C. (2008). *Umweltindikatoren und Umweltqualitätsziele in Sachsen*. Vortrag auf der Projektwerkstatt „Umwelt- und Lebensqualitäten im Dreiländereck", al. Lecture. Nov. 6, 2008 in IOER, Dresden.

ALCAMO, J., MORENO, J.M., NOVÁKY, B., BINDI, M., COROBOV, R., DEVOY, R.J.N., GIANNAKOPOULOS, C., MARTIN, E., OLESEN, J.E., & SHVIDENKO, A. (2007). *Europe. Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, pp. 541-580.

ALLISON, I., BINDOFF, N.L., BINDSCHADLER, R.A., COX, P.M., de NOBLET, N., ENGLAND, M.H., FRANCIS, J.E., GRUBER, N., HAYWOOD, A.M., KAROLY, D.J., KASER, G., Le QUERE, C., LENTON, T.M., MANN, M.E., MCNEIL, B.I., PITMAN, A.J., RAHMSTORF, S., RIGNOT, E., SCHELLNHUBER, A.J., SCHNEIDER, S.H., SHERWOOD, S.C., SOMERVILLE, R.C.J., STEFFEN, K., STEIG, E.J., VISBECK, M., WEAVER, A.J. (2009). *The Copenhagen Diagnosis, 2009: Updating the World on the Latest Climate Science.* Sydney, The University of New South Wales Climate Change Research Centre (CCRC), pp. 60.

ALMEIDA, A. (2008). *ICT and sustainable development in an outermost region*. Thesis, Newcastle University.

ALSTON, M. (2000). *Rural Policy in Australia- Time for a Rethink*. Presented at 'European Rural Policy at the Crossroads', 3 -7 July 2000, University of Aberdeen, Aberdeen.

AMELUNG, B. & MORENO, A. (2009). *Impacts of climate change in tourism in Europe. PESETA-Tourism study JRC,* Scientific and Technical Reports. European Commission – Joint Research Centre Institute for Prospective Technological Studies.

AMOS, W. & MANICA, A. (2006). *Global genetic positioning: evidence for early human population centers in coastal habitats*. In: PNAS, **103,** 3, pp. 820–824.

ANELLO, L. (2010). *Sicily, gobbler of EU funds*. Article on presseurop of 8 October 2010. URL: http://www.presseurop.eu/en/content/article/356171-sicily-gobbler-eu-funds

ANGUS, S., HANSOM, J. & RENNIE, A. (2011). *Habitat change on Scotland's coasts.* In: Marrs, S.J., Foster, S., Hendrie, C., Mackey, E.C., & Thompson, D.B.A. (eds.) The Changing Nature of Scotland. TSO Scotland, Edinburgh, pp. 183-198.

ANNETT, J.A., MACNULTY, D. & O'DRISCOLL, E. (2007). *The potential for growing marine leisure: A study establishing the scope & opportunities for expansion on the east coast of Ireland*. Irish Sea Marine Sector Marketing & Business Development Programme.

ARBIA, G., BATTISTI, M. & DI VAIO, G. (2007). *Do Institutions Matter More Than Geography? Empirical Test of Spatial Growth Regressions for the Regions of Europe.* LLEE Working Document No. 57. URL: http://ricerca.economiaefinanza.luiss.it/dptea/files/llwp57.pdf

ARMAROLI, N. & BALZANI, V. (2007). *The future of energy supply: challenges and opportunities.* In: Angewandte Chemie International, 46, pp. 52-56.

ASENSIO, S. (2008). *La energía en la Comunidad Autónoma de Aragón:el Plan Energético 2005-2012*. URL : http://www.camarazaragoza.com/medioambiente/docs/bibliocamara/documentobibliocamara276.pdf

ATTERTON, J. (2007). *The 'Strength of Weak Ties': Social Networking by Business Owners in the Highlands and Islands of Scotland*. Sociologia Ruralis 47, pp. 228-245.

AUDRETSCH, D.B & KEILBACH, M. (2004). *Entrepreneurship and regional growth: an evolutionary interpretation*. In: Journal of Evolutionary Economics, 14 (5), pp. 605-616.

AURROCOECHEA, I. & PETHICK, J.S. (1986). *The Coastline - Its Physical and Legal Definition*. In: International Journal of Estuarine and Coastal Law, 1(1), pp. 29-42.

AZZOPARDI, R.M. (2011). *Lipari and the Impact of the European Social Fund*. Regional Studies Association Conference. URL: http://www.regional-studies-assoc.ac.uk/events/2011/mar-slovenia/papers/Azzopardi.pdf

BACHEV, H. (2010). *State and Efficiency of Management of Agroecosystem Services - The Case of Bulgaria*. In: Annals of the University of Petroşani, Economics, 10(1) , pp. 5-28.

BAILLY, A. (2000). *Geneva: Does Wealth Ensure Social Sustainability*? In: Polèse M., Stren R. (ed) The social sustainabilty of cities: Diversity and the Management of Change. University of Toronto Press, Scholarly Publishing Division, pp. 157-172.

BALMASEDA, M., CADENAS, G., CUBERO, J., NIETO, E., PEREIRA, E. (2005). Situacion Canarias. BBVA, Service for Economic Studies. Bilbao, Spain.

BALTZER, M., STROBEL, D. & VANCURA, V. (2009). *The Carpathian Mountains - The Wild Heart of Europe*. In: International Journal of Wilderness, Volume 15 number 1. URL: http://ijw.org/wp-content/uploads/2009/12/Apr09-IJW-vol-15-no-1small.pdf#page=38

BANCA D'ITALIA (2010). *Economic Development in the Italian Regions*. Rome. URL: http://www.bancaditalia.it/pubblicazioni/econo/ecore/2010/analisi_m/1085_economieregionali_2010/Economic-development-italian-regions-2009.pdf

BANKS, M. (2011). *Regions 'crucial' to success of EU 2020 strategy*. Online article of 13 December 2011 on TheParliament.com. URL: http://www.theparliament.com/latest-news/article/newsarticle/regions-crucial-to-success-of-eu-2020-strategy/

BANSE, J. & BIELAWSKA-ROEPKE, P. (2010). *Rozwój demograficzny i struktura gospodarcza w saksonsko-polskiej czesci "Zielonego Trójkata Przygranicznego*. (Population development and economic structure in the Saxon Polish part of the Green triangle). In: ROCH, I. & KOBIELSKA, K. (eds.) Trójkat pogranicza niemiecko-polsko-czeskiego. Aspekty demograficzne, srodowiskowe i przestrzenne. Wroclaw: Dolnoslaskie Centrum Rozwoju Lokalnego (DCRL), pp. 22-37.

BANSE, J. & JERÁBEK, M. (2009). *Sozioökonomische Entwicklungsverläufe unter Berücksichtigung der Bevölkerungsentwicklung und des Arbeitsmarktes im sächsisch-böhmischen Teil des Grünen Dreiländerecks und der Euroregion Elbe-Labe* (Socio-economic development progress, taking into account population development and the labour market in the Saxon-Bohemian part of the Green Triangle and the Elbe Euroregion). In: GEOSCAPE vol. 4, Suppl., pp. 37-51.

BANSE, J. & ROCH, I. (2010). *Sanierung und Entwicklung im deutsch-polnisch-tschechischen Dreiländereck - ein grenzübergreifendes Projekt* (Rehabilitation and development in the German-Polish-Czech Three Corners Area – A cross-border project). In: GEOSCAPE vol. 5, Suppl., pp. 67-76.

BANSE, J. (2012a). *Wirtschaft im Dreiländereck*. In: LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT (IOER) Project 'Begrüntes Dreiländereck – Evaluation umweltschonender Sanierungs- und Entwicklungsprozesse im deutsch-polnisch-tschechischen Dreiländereck' (english title: Green Border Triangle – An Evaluation of Environmentally Benign Rehabilitation and Development Processes in the German-Polish-Czech Border Triangle), unpublished manuscript.

BANSE, J. (2012b). *Bevölkerung und Wohnen*. In: LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT (IOER) Project 'Begrüntes Dreiländereck – Evaluation umweltschonender Sanierungs- und Entwicklungsprozesse im deutsch-polnisch-tschechischen Dreiländereck' (english title: Green Border Triangle – An Evaluation of Environmentally Benign Rehabilitation and Development Processes in the German-Polish-Czech Border Triangle), unpublished manuscript.

BARBIER, E.B., HACKER, S.D., KENNEDY, C., KOCH, E.W., STIER, A.C. & SILLIMAN, B.R. (2011). *The value of estuarine and coastal ecosystem services*. In: Ecological Monographs 81, pp. 169–193.

BARCA, F. (2009). *An Agenda for a Reformed Cohesion Policy. A place-based approach to meeting European Union challenges and expectations*. Independent Report prepared at the request of Danuta Hübner, Commissioner for Regional Policy. URL: http://www.eurada.org/site/files/Regional%20development/Barca_report.pdf

BARILARO, C. (1992). *Problemi ambientali e sviluppo nell'area costiera megarese*. In: Atti del XXVI Congresso Geografico Italiano, Genoa.

BARREDO, J.I. (2009). *Normalised flood losses in Europe: 1970–2006*. In: Natural Hazards and Earth System Sciences 9, pp. 97–104. European Commission — Joint Research Centre, Institute for Environment and Sustainability.

BARRIOS et al. (2007). *Mapping the ICT in EU Regions*. IPTS, JRC scientific and technical reports.

BASSO, C. & MATERA, F.V. *Development of Renewable Energy in Sicily*. Regione Sicilia. URL: http://www.regione.sicilia.it/industria/use/Documenti%20ufficiali%20energia/Internazionali/Developement_renewable_energy_Sicily.pdf

BAULUZ LAZARO, B. & SUBIAS PEREZ, I. (2007). *Los recursos minerales y energéticos*.

BAULUZ, L.B. & SUBIAS PEREZ, I. (2007). *Los recursos minerales y energéticos*.

BAUMOL, W.J. (2002). *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism.* Princeton UP, Princeton NJ.

BBC NEWS (2009). *Italy revives Sicily bridge plan.* Article on BBC online of 6 March 2009. URL: http://news.bbc.co.uk/1/hi/7928949.stm

BBC NEWS (2009b). *MP's anger over Inverness's 'slowest' broadband*. BBC website on 25 November 2009. URL: http://news.bbc.co.uk/1/hi/scotland/highlands_and_islands/8378119.stm

BCGE (2007). *Différences entre places financiers genevoise et luxembourgeoise*. In: Les previsions conjoncturelles 2008 de la BCGE. Geneva, BCGE.

BEATTY, C., FOTHERGILL, S. & WILSON, I. (2008). *England's Seaside Towns: A 'Benchmarking' Study*. Centre for Regional Economic and Social Research, Sheffield Hallam University.

BEČVÁR, J. (2008). *Darstellung des Verständnisses von Umweltqualität und relevanter Entwicklungsziele in Tschechien* (Presentation of an understanding of environment quality and relevant development goals in the Czech Republic), al. Lecture. Nov. 6, 2008 in IOER, Dresden.

BEHRENS, K., GAIGNE, C., OTTAVIANO, G.I.P. & THISSE, J.F. (2006). *Is remoteness a locational disadvantage?* In: Journal of Economic Geography 6, pp. 347–368.

BELFAST HARBOUR (2009). *Belfast harbour Annual Report and Accounts 2009*. Belfast Harbour.

BELPAEME, K., KONINGS, P. & VANHOOREN, S. (2011). *The Coastal Atlas Flanders-Belgium*. The Coordination Centre for Integrated Coastal Zone Management, Oostende.

BENISTON, M., KELLER, F. & GOYETTE, S. (2003). *Snow pack in the Swiss Alps under changing climatic conditions: an empirical approach for climate impact studies.* In: Theor. Appl. Climatol., 74, pp. 19-31.

BERNARDI, G., BUNEMAN, P., & MARINA, M. (2009). *Broadband for Rural Scotland: a white paper.* Edinburgh, Outcomes of the Tegola project.

BERNDT, E.R. & MORRISON, C.J. (1995). *High-Tech Capital Formation and Economic Performance in U.S. Manufacturing Industries: An Exploratory Analysis.* In: Journal of Econometrics 65, pp. 9-53.

BEVAN, M. & RHODES, D. (2005). *The Impact of Second and Holiday Homes on Rural Communities in Scotland*. Communities Scotland, Edinburgh.

BEYER, E. (2005). *Chronology*. In: P. Oswalt (ed.), Shrinking cities; volume 1: international research. Ostfildern, Hatje Cantz Verlag, pp. 404 – 406.

BIEL IBAÑEZ, P. (2009). *El paisaje minero en España como elemento de Desarrollo territorial*. In : APUNTES, vol 22 num1. 6-19.Enero-Junio. Bogotá, Colombia.

BIELAWSKA-ROEPKE, P. (2007). *Informationen zur Umweltsituation in Polen*. Internal materials for the LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT (IOER) project 'Begrüntes Dreiländereck' (english title: Green Border Triangle), unpublished manuscript.

BILGILI, M., YASAR, A. & SIMSEK, E. (2011). *Offshore wind power development in Europe and its comparison with onshore counterpart*. In: Renewable and Sustainable Energy Reviews, Vol. 15, Issue 2, pp. 905-915.

BLACKPOOL COUNCIL (2006). *A Strategy for Blackpool's Visitor Economy*.

BŁASZKÓW, P. (2008). *Darstellung des Verständnisses von Umweltqualität und relevanter Entwicklungsziele in Polen* (Presentation of an understanding of environment quality and relevant development goals in Poland), al. Lecture. Nov. 6, 2008 in IOER, Dresden.

BNA (2008). *Verslag slotbijeenkomst Ontwerplab Krimp Parkstad Limburg*. KEI V-reeks, V48. Rotterdam / Amsterdam, KEI / BNA.

BOGAERT, D., CLIQUET, A. & MAES, F. (2009). *Designation of marine protected areas in Belgium: A legal and ecological success*? In: Marine Policy, vol. 33, pp. 878-886.

BÖHME, K., DOUCET, P., KOMORNICKI, T., ZAUCHA, J. & ŚWIĄTEK, D. (2011). *How to strengthen the territorial dimension of 'Europe 2020' and the EU Cohesion Policy*. Report based on the Territorial Agenda 2020, prepared at the request of the Polish Presidency of the Council of the European Union. Warsaw. URL: http://www.mrr.gov.pl/rozwoj_regionalny/Prezydencja/Documents/Background_report_territorial_dimension_of_EU2020_CP.pdf

BÖHME, K., HANELL, T., PFLANZ, K., ZILLMER, S. & NIEMI, P. (2009). *ESPON Typology Compilation. Scientific Platform and Tools 2013/3/022.* ESPON Interim Report. European Union Publications, Brussels.

BOKO, M., I. NIANG, A. NYONG, C. VOGEL, A. GITHEKO, M. MEDANY, B. OSMAN-ELASHA, R. TABO & P. YANDA (2007). *Africa. Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, pp. 433-467.

BORDER MONITORING PROJECT UKRAINE (2010). *Access to Protection Denied: Refoulement of Refugees and Minors on the Eastern Borders of the EU – the case of Hungary, Slovakia and Ukraine.* Munich, BMPU.

BORDERMONITORING UKRAINE (2009). *Go East! "European Neighbourhood Policy" and Frontex in Ukraine*. URL: http://bordermonitoring-ukraine.eu/2009/12/12/go-east-european-neighbourhood-policy-and-frontex-in-the-ukraine/#more-22

BORJA, A. (2005). *The European water framework directive: A challenge for nearshore, coastal and continental shelf research.* In: Continental Shelf Research, **25** (14), pp. 1919–1923.

BOSWORTH, B. & TRIPLETT, J. (2000). *What's New About the New Economy? IT, Economic Growth and Productivity*. Brookings Institution.

BOTTIN, M. (1996). *La frontière de l'Etat. Approche historique et juridique.* In: Sciences de la Société, no. 37.

BOUDOUX D'HAUTEFEUILLE, M. (2010). *La frontière et ses échelles : les enjeux d'un pont transfrontalier entre la Guyane française et le Brésil*. In : Cybergeo : revue européenne de géographie. URL : http://cybergeo.revues.org/23405

BRABANT, R., DEGRAER, S. & RUMES, B. (2011). *Offshore wind energy development in the Belgian part of the North Sea & anticipated impacts: an update.* In: BRABANT, R., DEGRAER, S. & RUMES, B. (Eds.) Offshore wind farms in the Belgian part of the North Sea: Selected findings from the baseline and targeted monitoring. Royal

Belgian Institute of Natural Sciences, Management Unit of the North Sea Mathematical Models. Marine ecosystem management unit. pp. 9-16.

BRASEY-DUTHE, K. (2011). Interview with Karine Brasey-Duthé, Déléguée aux affaires extérieures, Service de l'économie, Neuchâtel, on 17 October 2011.

BRATANOVA, S., & STOYANOV, N. (2009). *Republic of Bulgaria*. In: I. Willoughby, P. Balandier, N. S. Bentsen, N. McCarthy, & J. Claridge, Forest vegetation management in Europe: current practice and future requirements. Brussels, COST Office.

BRECKMANN, O. (2007). *Hope in the North Atlantic - How the Faeroe Islands could inspire economic and cultural renewal in the Highlands and Islands.* Policy Institute Series: Rural No 3.

BREITENMOSER, U., BREITENMOSER-WÜRSTEN, C., CAPT, S., MOLINARI-JOBIN, A., MOLINARI, P. & ZIMMERMANN, F. (2007). *Conservation of the lynx Lynx lynx in the Swiss Jura Mountains*. In: Wildlife Biology 13:4. URL: http://www.wildlifebiology.com/Downloads/Article/680/En/breitenmoser%20et%20al.pdf

BRIDGE, G. (2009). *Natural Resources*. Elsevier Ltd.

BRIDGEPROS (n.d.). *Strait of Messina Bridge Project*. Article on website Bridgepros.com. URL: http://bridgepros.com/projects/Strait_of_Messina_Bridge/

BRIGHT, J.A., LANGSTON, R.H.W., PEARCE-HIGGINS, J.W., BULLMAN, R., EVANS, R. & GARDNER, S. (2008). *Spatial overlap of wind farms on peatland with sensitive areas for birds*. In: Mires and Peat, Volume 4, Article 07.

BRIGUGLIO, L., CORDINA, G., FARRUGIA, N. & VELLA, S. (2008). *Economic Vulnerability and Resilience – Concepts and Measurements*. UNU-WIDER Research Paper No. 2008/55.

BRIGUGLIO, L., CORDINA, G., FARRUGIA, N.& VELLA, S. (2009). *Economic Vulnerability and Resilience Concepts and Measurements*. Oxford Development Studies vol. 37 issue 3, pp. 229-249. URL: http://www.tandfonline.com/doi/abs/10.1080/13600810903089893

BROGGIO, C. (1992). *Les enjeux d'une politique montagne pour l'Europe*. In : Revue de Géographie Alpine, 80, 4, pp. 26-39.

BROGGIO, C. (2002). *La politique de la montagne en France*. In: *Hérodote,* 107, pp. 147-158.

BROOKS, N. (2003). *Vulnerability, risk and adaptation: A conceptual framework*. Tyndall Centre Working Paper, no. 38.

BROOKS, N., ADGER, W.N. & KELLY, M.P. (2005). *The determinants of vulnerability and adaptive capacity at the national level and the implications for adaptation.* Global Environmental Change Part A, vol. 15, no. 2, pp. 151-163.

BROWN, P. (2011). Interview with Peter Brown, Outer Hebrides Tourism Industry Association.

BRYDEN, D., WESTBROOK, S., BURNS, B., TAYLOR, W., & ANDERSON, S. (2010). *Assessing the economic impacts of nature based tourism in Scotland.* Scottish Natural Heritage Commissioned Report No. 398.

BRYDEN, J. (2000). *Decline? What decline? A demographic revival is being observed in a number of rural areas*. LEADER Magazine nr.22. European Union Publications, Brussels.

BUCCA, M. (2011). Interview with Marcella Bucca, Assistente dell'On.le Giovanni LA VIA; Deputato al Parlamento Europeo.

BUEKER.NET (2011). *Railways through Europe. Map of Polish network*. Website maintained by Thorsten Büker. URL: http://www.bueker.net/trainspotting/maps_poland.php

BURNETT, K. A., & DANSON, M. (2004). *Adding or subtracting value? Constructions of rurality and Scottish quality food promotion*. In: International Journal of Entrepreneurial Behaviour & Research 10, pp. 384-403.

BUSSADORI, V. (2005). *Territorial Cohesion and Spatial Planning.* AESOP, Vienna. URL: http://aesop2005.scix.net/data/papers/att/291.fullTextPrint.pdf

BYROM, J., MEDWAY, D. & WARNABY, G. (2001). *Strategic Alternatives for Small Retail Businesses in Rural Areas: Evidence from the Southern Western Isles of Scotland*. Manchester Metropolitan University Business School Working Paper Series. URL: http://www.ribm.mmu.ac.uk/wps/papers/01-05.pdf

C.P.M.R ISLANDS COMMISSION (2009). *Green Paper on Territorial Cohesion Submission*. URL: http://ec.europa.eu/regional_policy/archive/consultation/terco/pdf/4_organisation/94_cpmr_islands_en.pdf

CAIRNGORMS NATIONAL PARK AUTHORITY (2010). *The Economic and Social Health of the Cairngorms National Park 2010.* Grantown-on-Spey, Cairngorms National Park Authority.

CAIRNGORMS NATIONAL PARK AUTHORITY (2010a). *Cairngorms National Park Visitor Survey 2009/2010 – Summary*. Grantown-on-Spey, Cairngorms National Park Authority.

CAIRNGORMS NATIONAL PARK AUTHORITY (2011). *Draft Cairngorms National Park Plan 2012-2017 - Strategic Environmental Assessment - Environmental Report*. Grantown-on-Spey, Cairngorms National Park Authority.

CAIRNGORMS NATIONAL PARK AUTHORITY (2011a). *A Strategy and Action Plan for Sustainable Tourism 2011-2016.* Grantown-on-Spey, Cairngorms National Park Authority.

CALLACI, G. (2007). *Sicily's rich heritage*. URL: http://www.interreligiousinsight.org/April2007/April07Callaci.pdf

CAMARERO, L. & SAMPEDRO, R. (2008). *Porqué se van las mujeres? El continuum de movilidad como hipótesis explicativa de la masculinización rural*. In : Revista Española de Investigaciones Sociológicas. nº124, 2008. pp. 73-105.

CAMARERO, L., et al. (2009). *The rural population in Spain. From desequilibrium to social sustainability*. Social Studies Collection.Vol27. Fundació La Caixa. Barcelona, Spain.

CAMILLONI, S. (2006). *Viminale: il 60% dei clandestini resta con il visto scaduto*. Article on Stranieri in Italia of 14 August 2006. URL:http://www.stranieriinitalia.it/news/viminale14ago2006.htm

CAMPBELL, N. (2011). Interview with Neil Campbell, Outer Hebrides Councillor.

CAÑIZARES RUIZ, M.C. (2004). *Algunas iniciativas de turismo minero en Castila-La Mancha.* In: Cuadernos Geográficos, 34 (2004-1), pp. 129-143.

CARLISLE, M.A., GREEN, D.R. & RITCHIE, W. (Eds.) (2008). *Corepoint Expert Couplets & case studies: Descriptions of physical, ecological and socio-economic context and of area-specific Corepoint activities*. University of Aberdeen & COREPOINT.

CARPENTIER, S. & GERBER, P. (2009). *Les déplacements domicile-travail: en voiture, en train ou à pied?* Luxembourg, CEPS/INSTEAD Vivre au Luxembourg 53.

CARPENTIER, S. & LICHERON, J. (2010). *Des actifs résidents devenus frontaliers. Analyse d'un phénomène émergent*. Luxembourg, La note de l'Observatoire de l'Habitat 14.

CARPENTIER, S. (ed). (2010). *La mobilité résidentielle transfrontalière entre le Luxembourg et ses régions voisines*. Luxembourg, Saint-Paul.

CARTENSEN, J., HENRIKSEN, O.D. & TEILMANN, J. (2007). *Impacts on harbour porpoises from offshore wind farm construction: acoustic monitoring of echolocation activity using porpoise detectors (T-PODs)*. In: Marine Ecology Progress Series 321, pp. 295–308.

CARVER, S., EVANS, A. & FRITZ, S. (2002). *Wilderness attribute mapping in the United Kingdom.* In: International Journal of Wilderness 8, pp. 24–29.

CASALEGNO, S., AMATULLI, G., BASTRUP-BIRK, A. & DURRANT, T. (2007). *Modelling current and future distribution of European forest categories.* Proceedings of the 6th European Conference on Ecological Modelling: Challenges for ecological modeling in a changing world – global changes, sustainability and ecosystem based management. European Environment Agency.

CASTELEIN, A., DINH, T.T.V., MEKOUAR, M.A. AND VILLENEUVE, A., (2006). *Mountains and the law: Emerging trends.* Legislative study 75, Revision 1. FAO, Rome.

CASTELLS, M. (2002). *The Rise of the Network Society*. Blackwell, Oxford.

CASTELLS, M. (2006). *Globalisation and Identity: A Comparative Perspective*. Barcelona. URL: http://www.llull.cat/rec_transfer/webt1/transfer01_foc01.pdf

CATANI, F. & KUKAVICIC, M. (2009). *Remote Sensing Analysis of Desertification trend in Eastern Sicily.*

CATOVSKY, S., BELLAMY, O., BEYNON, E., DUNKLEY, M., KENNEDY, D., MCNAUGHT, L., THOMPSON, D., TOWERS, E. & WILSON, J. (2011b). *How well is Scotland preparing for Climate Change*? Prepared by the Adaptation Sub-Committee for the Scottish Government.

CATOVSKY, S., BEYNON, E., DAVIES, S., LIPSON, M., PINDER, C., SURA, K., THOMPSON, D., & WARD, A. (2011a). *Adapting to climate change in the UK: Measuring progress*. United Kingdom, Adaptation Sub-Committee.

CBD (2009). *Island Biodiversity – What's the problem?* Text on the website of the Convention on Biological Diversity. URL: http://www.cbd.int/island/problem/

CBS STATLINE (2010). *Regionale kerncijfers Nederland.* Heerlen / The Hague: CBS. URL: http://statline.cbs.nl/StatWeb/publication

CEBRIAN, F. & CEBRIAN, A. (2000). *Los desequilbibrios en la estructura urbana de Castilla-La Mancha*. In : Papeles de Geografía, 32. 2000. pp. 45-59.

CENIA - CZECH ENVIRONMENTAL INFORMATION AGENCY (2007). *Report on the Environment in the Czech Republic*. CENIA, Prague. URL: http://www.cenia.cz/web/www/web-pub-en.nsf/$pid/MZPMSFSP1PHE/$FILE/zprava_o_zp_cr_2007_souhrn_eng.pdf

CENTRAL STATISTICAL OFFICE (POLAND) (2010). *Monitoring of socio-economic phenomena in border areas. The European Union's external border in Poland.* URL: www.stat.gov.pl/cps/rde/xbcr/rzesz/ASSETS_informator_ANG.pdf

CENTRAL STATISTICAL OFFICE (POLAND) (2011). *Border traffic and movement of goods and services at the external border of the European Union in Poland in 2010.* URL: www.stat.gov.pl/cps/rde/xbcr/gus/PUBL_pts_border_traffic_at_the_external_border_EU_2010.pdf

CENTRO DE ESTUDIOS ECONOMICOS – FOUNDATION TOMILLO (2002). *Los costes de ultraperiferia de la economia canaria*. URL : http://www.gobcan.es/haciendacanaria/downloads/Revista2/RevistaHC_2_6_ULTRAPERIFERIA.pdf?q=jqmodal&go=&form=QBLH&width=100%&height=90%

CHARLIER, R.H. (2011). *The Zwin: From Golden Inlet to Nature Reserve*. In: Journal of Coastal Research, vol. 27, Issue 4, pp. 746-756.

CHARNEY, J. I. & ALEXANDER, L.M. (eds.) (1996). *International Maritime Boundaries.* Dordrecht.

CHÉTELAT, J. & LEY, E. (2002). *Intégration des représentations sociales dans la gestion du paysage jurassien.* In: Cybergeo : European Journal of Geography, Environnement, Nature, Paysage, article 228. URL : http://cybergeo.revues.org/2048. Consulté le 29 août 2011

CHETLEY, A. (Ed.) (2006). *Improving health, Connecting People: The Role of ICTs in the Health Sector of Developing Countries 2006*. infoDev program Grant no. 1254. URL: http://www.asksource.info/pdf/framework2.pdf

CHIFFELLE, F. (2000). *L'arc jurassien romand à la frontière des langues : faut-il craindre la germanisation?* Lausanne, Payot.

ČHMÚ (Český hydrometeorologický ústav), WIOŚ (Wojewódzki Inspektorat Ochrony Środowiska), LfUG (Sächsisches Landesamt für Umwelt und Geologie) & UBA (Umweltbundesamt) (2003). ***Joint report on air quality in the Tri-border region of the Czech Republic, Poland and Germany in 2002 (former Black Triangle region).***

CHRISTENSEN, O.B. & CHRISTENSEN, J.H. (2003). *Severe summertime flooding in Europe*. In: Nature, 421, pp. 805-806.

CIPOLLA, G. (Ed.). *Arba Sicula: Journal of Sicilian Folklore and Literature*. URL: http://www.arbasicula.org/pdf/arba_sicula/30.pdf

CIRELLI, C., MERCANTANTI, L. & PORTO, C.M. (2003). *Sustainable Development of Sicily East Coast Area*. 43rd Congress of the European Regional Science Association Jyväskylä (Finland). URL: http://www.jyu.fi/ersa2003/cdrom/papers/346.pdf

CISCAR, J.C. (ed.) (2009). *Climate change impacts in Europe. Final report of the PESETA research project.* JRC Scientific and Technical Reports. European Commission – Joint Research Centre Institute for Prospective Technological Studies, Institute for Environment and Sustainability. URL: http://ftp.jrc.es/EURdoc/JRC55391.pdf

CITY OF LONDON (2010). *The Global Financial Centres Index 7*. London, City of London.

CLAEYS, P. & MANCA, F. (2009). *A Missing Spatial Link in Institutional Quality*. Working Papers 2009/11, Research Institute of Applied Economics. URL: http://www.ub.edu/irea/working_papers/2009/200911.pdf

CLIQUET, A., KERVAREC, F., BOGAERT, D., MAES, F., QUEFFELEC, B. (2010). *Legitimacy issues in public participation in coastal decision making processes: Case studies from Belgium and France*. In: Ocean & Coastal Management, vol. 53, pp. 760-768.

CLISP & EURAC (2011a). *Vulnerability Assessment*. WP4 Synthesis Report of the ETC Alpine Space project CLISP- Climate Change Adaptation by Spatial Planning in the Alpine Space.

CLISP & EURAC (2011b). *Climate change scenarios for the Alps*. Annex D.3 of the WP4 Synthesis Report of the ETC Alpine Space project CLISP- Climate Change Adaptation by Spatial Planning in the Alpine Space.

CLISP & EURAC (2011c). *Model Region Report South Tyrol*. European Acadamy of Bolzano, ETC Alpine Space project CLISP- Climate Change Adaptation by Spatial Planning in the Alpine Space.

CLISP (2011a). *Final Results Print Publication of the ETC Alpine Space project CLISP – Climate Change Adaptation by Spatial Planning in the Alpine Space*. The CLISP Partnership. URL: www.clisp.eu

CLISP (2011b). *Transnational Strategy for Climate Proof Spatial Planning*. The CLISP Partnership. ETC Alpine Space project CLISP- Climate Change Adaptation by Spatial Planning in the Alpine Space.

COASE, R. (1960). *The Problem of Social Cost*. In: Journal of Law and Economics 3, pp. 1-44.

COLL, J., GIBB, S. W., PRICE, M. F., MCCLATCHEY, J., & HARRISON, J. (2010). *Developing site scale projections of climate change in the Scottish Highlands*. In: Climate Research 45, pp. 71-85.

COLLADO CURIEL, J.C. & MORENO TORRES, B. (2004). *Los costes de la ultraperiferia en Canarias: el coste público* (Costs of ultraperiphery in the Canary Islands : public costs). In: Hacienda Canaria, Nº. 7, Feb. 2004, pp. 5-45. URL: http://www.gobcan.es/haciendacanaria/downloads/Revista7/RevistaHC_7_1_ULTRAPERIFERIA.pdf?q=jqmodal&go=&form=QBLH&width=100%&height=90%

COLLANTES, F., PINILLA, V., SAEZ, LA. & SILVESTRE, J. (2010). *El impacto demográfico de la inmigración en la España rural despoblada*. Documento de Trabajo. Real Instituto Elcano, Madrid.

COLLIER, U., GAULT, A., KHARE-ZODGEKAR, S., MCNAUGHT, L., TOWERS, E. & WILSON, J. (2011). *The appropriateness of a Northern Ireland Climate Change Act*. Report prepared by the Committee on Climate Change.

COMBES, P.P. (2000). *Economic Structure and Local Growth: France 1984 – 1993.* In: Journal of Urban Economics 47, pp. 329-355. URL: http://web.cenet.org.cn/upfile/11531.pdf

COMHAIRLE NAN EILEAN SIAR (2000). *Western Isles Transitional Programme Strategy 2000-2006*. URL: http://www.cne-siar.gov.uk/cxdir/strategiespolicies/witps/index.asp

COMHAIRLE NAN EILEAN SIAR (2010). *Outer Hebrides Fact Card*. URL: http://www.cne-siar.gov.uk/factfile/documents/OHFactCards2010.pdf

COMHAIRLE NAN EILEAN SIAR (2010b). *Outer Hebrides Local Development Plan: Strategic Environmental Assessment, Environmental Report*. URL: http://www.cne-siar.gov.uk/planningservice/documents/SEA-%20Env%20Report%20LDP.pdf

COMITE DE MASSIF DES PYRENEES (2009). *La Contribution De Politique Interrégionale a la Cohésion Territoriale du Massif des Pyrénées. Contribution au Débat sur le Livre Vert sur la Cohésion Territoriale*. URL : http://ec.europa.eu/regional_policy/archive/consultation/terco/pdf/4_organisation/82_massif_pyrenees_fr.pdf

COMITE INTERMINISTERIEL DE CONTROLE DE L'IMMIGRATION (2012). *Les orientations de la politique de l'immigration en outre-mer de 2006 à 2011*. URL : http://www.migrantsoutremer.org/Les-orientations-de-la-politique

COMMISSARIAT A L'AMENAGEMENT DU MASSIF DU JURA (2006). *Schéma interregional d'aménagement et de développement du Massif du Jura.* URL: http://territoires.rhonealpes.fr/IMG/pdf_JURA_20sch_C3_A9ma_20massif.pdf

COMMISSARIO DELEGATO PER L'EMERGENZA BONIFICHE E LA TUTELA DELLE ACQUE IN SICILIA (2006). *Piano di Tutela delle Acque della Sicilia*. URL: http://www.regione.sicilia.it/arra/piano_acque/e/all_eiii.pdf

CONFÉRENCE TRANSJURASSIENNE (2008). *Gestion intégrée des paysages sylvo-pastoraux de l'Arc Jurassien: MANUEL*. Projet cofinancé par Interreg. URL: http://www.arcjurassien.ch/uploads/media/Manuel_de_gestion_integree.pdf

CONFERENCE TRANSJURASSIENNE (2010). *Préparer une démarche de co-développement économique à l'échelle de l'Arc jurassien franco-suisse*. Etude réalisée dans le cadre du programme Interreg IV France-Suisse. URL: http://www.conference-transjurassienne.org/fileadmin/Docs_groupes_de_travail/Developpement_economique/150610_rapportfinal_CTJ_Vfinale.pdf

CONFERENCE TRANSJURASSIENNE (2010a). *Schéma de cohérence des mobilités transfrontalières de l'Arc jurassien - Raport de consultation.* Projet cofinancé par Interreg IV A France-Suisse 2007-2013. URL: http://www.conference-transjurassienne.org/fileadmin/Docs_groupes_de_travail/Transports/Rapport_consulation_schema_mobilite_221110.pdf

CONRADT, S. & KUSS, H. (2000). *Die Luftqualität im Schwarzem Dreieck gemessen an den neuen europäischen Minderungsstrategien* (air quality in the black triangle, measured by the new European reduction strategies). In: OMKAS. Optimierung emissionsmindernder Maßnahmen bei gleichzeitiger Kontrolle der Aziditäts- und Luftschadstoffentwicklung für die Grenzregionen des Freistaates Sachsen (Optimizing emission reducing measures with simultaneous monitoring of acidity and air pollution developments in the border regions of the state of Saxony). Dresden, pp. 23-31.

CONSEIL REGIONAL (2007). *PO FEDER 2007-2013*. URL : http://www.europe-guyane.eu/index.php?option=com_content&task=view&id=14&Itemid=206

CONSEIL REGIONAL DE GUYANE (2000). *Schema Regional Des Transports.* URL*:* www.cr-guyane.fr/ressources/File/region_dyn/Etudes/SRT.pdf

CONSOLI, M.T. (2006). *Migration phenomenon in Sicily*. Department of Sociology University of Catania. URL: http://www.huredepis.eu/assets/mymedia/pdf/Migration_phenomenon.pdf

COOPER, J.A.G. (2009). *Coastal economies and people review*. In: Marine Climate Change Ecosystem Linkages Report Card 2009. Editors Baxter, J.M., Buckley, P.J. & Frost, M.T. Online science reviews.

COPUS, A. & HÖRNSTRÖM, L. (eds.) (2011). *The New Rural Europe: Towards Rural Cohesion Policy*. NORDREGIO Report 2011:1. Nordregio, Stockholm.

CORDINA, G. (2010). *Small Enterprises in Small States: A Case of Double Disadvantage?* Department of Economics, University of Malta. URL: http://www.eesc.europa.eu/resources/docs/cordina-delivering-sme-policies-in-remote-areas-of-the-eu-07-05-2010.pdf

COREPOINT (2007). *EU legislation and policies with implications for coastal management*. Compiled as part of the Corepoint project.

CORTES DE ARAGON (2000). *Plan Integral de Política Demográfica*. Boletín Oficial de las Cortes de Aragón.

COSTA, L., TEKKEN, V. & KROPP, J. (2009). *Threat of Sea Level Rise: Costs and Benefits of Adaptation in European Union Coastal Countries*. In: Journal of Coastal Research, SI 56 (Procceedings of the 10th International Coastal Symposium). Lisbon. pp. 223-227.

COUR DES COMPTES (2011). *Les flux migratoires irréguliers en Guyane, à Mayotte et à Saint-Martin. Rapport*. URL :

http://www.ccomptes.fr/fr/CC/documents/RPA/11_flux_migratoires_irreguliers_guyane_mayotte_saint_martin.pdf

CPCFPU - CENTER FOR PEACE, CONVESION AND FOREIGN POLICY OF UKRAINE (2008). *Expansion and Modernization of the Schengen: Consequences and perspectives for Ukraine.* Kiev.

CRABTREE, B., MACDONALD, D., & HANLEY, N. (2002). *Non-market Benefits Associated with Mountain Regions.* Report for Highlands and Islands Enterprise and Scottish Natural Heritage.

CRAIG, R. H. (2011). *The Value of the Air Bridge to the Islands*. Scottish Geographical Journal 127, pp. 61-78.

CREEL, L. (2003). *Ripple effects: population and coastal regions.* Population Reference Bureau, Washington DC.

CREVOISIER, O., & KEBIR, L. (2007). *Les ressources culturelles entre réseaux internationaux et développement local*. WORKING PAPER 6/2007-F . Groupe de recherche en économie territoriale (GRET). Institut de Sociologie , Université de Neuchâtel. URL : http://www.migration-population.ch/files/content/sites/socio/files/shared/documents/publications/workingpapers/wp_2007_06_f.pdf

CREVOISIER, O., & KEBIR, L. (2008). *Cultural resources and regional development: the case of the cultural legacy of watchmaking*. In: Philip Cooke, Luciana Lazzeretti (eds): Creative Cities, Cultural Clusters and Local Economic Development. Edward Elgar Publishing, Cheltenham.

CRISCIONE, L. (2007). *The Sicilian Language*. URL: http://www.leoluca-criscione.net/HTM-DOCUMENTI/DIALetto-english%20version.htm

CROME, E. & FRANZKE, J. (1997). *Die DDR und Polen. Betrachtungen über das Verhältnis der Ostdeutschen zu den Polen* (the German Democratic Republic and Poland: observations on the relationship between East Germans and poles). In: WeltTrends, vol. 14, Spring 1997.

CROSBIE, J. (2009). *Commission questions Italy's immigration policy*. Article on EuropeanVoice.com of 23.07.2009. URL: http://www.europeanvoice.com/article/imported/commission-questions-italy-s-immigration-policy/65570.aspx

CROSSBORDER TORNEDALEN (2011). Homepage for Eures Crossborder Tornedalen and employment authorities in the North Calotte area. URL: http://www.crossbordertornedalen.net/home

CROSSLAND, C.J., KREMER, H.H., LINDEBOOM, H.J., MARSHALL CROSSLAND, J.I. & LE TISSIER, M.D.A., (Ed.) (2005). *Coastal Fluxes in the Anthropocene*. The Land–Ocean Interactions in the Coastal Zone Project of the International Geosphere–Biosphere Programme, Springer.

CUMMINS, V., O'MAHONY, C. & CONNOLLY, N. (2004). *Review of Integrated Coastal Zone Management & Principals of Best Practice*. Prepared for the Heritage Council.

CURRAN, S. & AGARDY, T. (2004). *Considering migration and its effects on coastal ecosystems*. In: Unruh, J.D., Krol, M.S. and Kliot, N.

Editors , Environmental Change and Its Implications for Population Migration, Kluwer, pp. 201–229.

CZECH STATISTICAL OFFICE (2009). *Population Projection of the CR up to 2065*. URL: www.czso.cz/eng/redakce.nsf/i/czech_demography_2009_vol_3

DAJIĆ-STEVANOVIĆ, Z. (2010). *Biodiversity of Natural Grasslands of Serbia: State and Prospects of Utilization*. In: Biotechnology in Animal Husbandry 26, pp. 235-247.

DAJIĆ-STEVANOVIĆ, Z., LAZAREVIĆ, D., PETROVIĆ, M., AĆIĆ, S., & TOMOVIĆ, G. (2010). *Biodiversity of Natural Grasslands of Serbia: State and Prospects of Utilization.* In: Biotechnology in Animal Husbandry 26 , pp. 235-247.

DALRADIAN RESOURCES INC. (2012). *Dalradian Acquires Additional Concessions Assembling Largest Exploration Holding in Europe*. News release 2012 – no 2. URL: http://www.dalradian.com/Theme/Dalradian/files/doc_news/DNA_NR_2012_No2_FINAL_Jan_25_2012.pdf

DALTON, G.J. & LEWIS, T. (2011*). Metrics for measuring job creation by renewable energy technologies, using Ireland as a case study.* In: Renewable and Sustainable Energy Reviews, Vol.15, Issue 4, pp. 2123-2133.

DAMSGAARD, O., LINDQVIST, M., ROTO, J. & STERLING, J. (2009). *Territorial potentials in the European Union*. Nordregio Working Paper 2009:6.

DAS, M. & DE FEIJTER, H. (2009). *Wie komen en wie gaan*? In: J. Latten & S. Musterd (eds.). De nieuwe groei heet krimp; een perspectief voor Parkstad Limburg. The Hague, Nicis Institute, pp. 57 – 69.

DATZIRA-MASIP, J. & JULIA-EGGERT, M. (2008). *Spain and Croatia: Traditional versus new markets for residential tourism*. In: Keller, P. and Bieger, T. (Editors) Real Estate and Destination Development in Tourism - Successful Strategies and Instruments. International Association of Scientific Experts in Tourism (AIEST). Berlin.

DCENR - DEPARTMENT OF COMMUNICATIONS, ENERGY AND NATURAL RESOURCES (2011a). *Fourth Strategic Environmental Assessment for Oil and Gas Activity in Ireland's Offshore Waters: IOSEA4 Irish and Celtic Seas, Environmental Report*. Report prepared by Xodus Group and Aqua-Fact International Services Ltd.

DCENR - DEPARTMENT OF COMMUNICATIONS, ENERGY AND NATURAL RESOURCES (2011b). *Fourth Strategic Environmental Assessment for Oil and Gas Activity in Ireland's Offshore Waters: IOSEA4 Irish and Celtic Seas, Annex 4*. Report prepared by Xodus Group and Aqua-Fact International Services Ltd.

DCENR - DEPARTMENT OF COMMUNICATIONS, ENERGY AND NATURAL RESOURCES (2011c). *Appropriate Assessment for IOSEA4: Irish and Celtic Seas*. Report prepared by Xodus Group.

DE DECKER, P. (2011). *Not for the homeless? Housing policy in Flanders: between selectivity and legitimacy*. In: European Journal of Homelessness, vol. 5, Issue 2.

DE RIJCK, K., & ERG, B. (2006). *High Nature Value farming in the Western Balkans*. Final report of Workshop on High Nature Value farming in the Western Balkans 2-3 February 2006, Belgrade.

DE RUYCK, A.M.C., AMPE, C. & LANGOHR, R. (2001). *Management of the Belgian Coast: opinions and solutions*. In: Journal of Coastal Conservation, vol. 7, pp. 129-144.

DEBARBIEUX, B. & RUDAZ, G. (2010). *Les faiseurs de montagne*. Paris, CNRS Editions.

DECOVILLE, A., DURAND, F., SOHN, C. & WALTHER, O. (2010). *Spatial integration in European cross-border metropolitan regions: A comparative approach*. Luxembourg, CEPS/INSTEAD Working Papers 40.

DECOVILLE, A., DURAND, F., SOHN, C. & WALTHER, O. (2010). *Spatial integration in European cross-border metropolitan regions: A comparative approach.* Luxembourg, CEPS/INSTEAD Working Papers 40.

DEHLG - DEPARTMENT OF THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT (2007). *Ireland National Climate Change Strategy 2007 – 2012*. PRN: A7/0397.

DELANEY, A., DE SMET, S. & VERHAEGHE, D. (2010). *Assessment of the status, development and diversification of fisheries-dependent communities: Oostende Case Study Report.*

http://richardbrenneman.wordpress.com/2011/01/13/wikicable-sicilians-fight-back-against-the-mafia/DEMOPOLIS (n.d.). *Orgogliosi di essere siciliani ma insoddisfatti dei servizi e della qualità della vita nell'Isola*. Website of Demopolis. URL: http://www.demopolis.it/newsfocussicilia.php?subaction=showfull&id=1257953167&archive=&start_from=&ucat=13,23&template=News&category=23&sortby=5&PHP_SELF=newsfocussicilia.php

DERKS, W., HOVENS, P. & KLINKERS, L.E.M. (2006). *Structurele bevolkingsdaling; een urgente nieuwe invalshoek voor beleidsmakers*. The Hague, Raad voor Verkeer en Waterstaat & VROMRaad.

DEVOS, K. (2008). *Numbers and population trends of waders along the Belgian North Sea coast.* In: BURTON, N.H.K., REHFISCH, M.M., STROUD, A. & SPRAY, C.J. (Eds). The European Non-Estuarine Coastal Waterbird Survey. International Wader Studies 18. International Wader Study Group, Thetford. pp. 5–11.

DEVOY, R.J.N. (2008). *Coastal vulnerability and the implications of sea-level rise for Ireland*. In: Journal of Coastal Research 24(2), pp. 325-341.

DG ENVIRONMNET (2011). *Analysis of Member States progress reports on Integrated Coastal Zone Management (ICZM). Final Report.* European Commission – DG Environment.

DG REGIO (2009). *Regions 2020. The Climate Change Challenge for European Regions. Background Document to Comission Staff Working Document SEC(2008)2868 Final Regions 2020: An Assessment of*

future Challenges for EU Regions. Brussels, Directorate General for Regional Policy.

DI CRISTOFALO, A. & BARBA, L. *Sicilia: Verso una Perenne Siccita?* ITCGS Palermo.

DI GIACINTO, V., NUZZO, G., *The Role of Institutional Factors in Fostering the Development of Industrial Districts in Italy*. Banca D'Italia Research Unit. URL: http://www.bancaditalia.it/studiricerche/convegni/atti/econ_loc/papers/digiacinto-nuzzo.pdf

DIARIO ARAGONES (2011). *Alcaldes de Cuencas Mineras viajan a Bruselas para defender el sector del carbon*. URL : http://www.diarioaragones.com/mediodia/19195-alcaldes-de-cuencas-mineras-viajan-a-bruselas-para-defender-el-sector-del-carbon.html

DICK, J., SMITH, R. & SCOTT, M. (2011). *Ecosystem services and associated concepts*. In: Environmetrics 22, pp. 598-607.

DIJKSTRA, L. & POELMAN, H. (2011). *Regional typologies: a compilation*. Regional Focus no 01/2011, European Commission, DG REGIO, Brussels.

DIOP, L. (2011). *Luxembourg : les marchés fonciers et immobiliers transfrontaliers à l'épreuve de la métropolisation*. CEPS /INSTEAD Working Papers 48.

DIPARTIMENTO TRASPORTI E COMUNICAZIONI NELL'ASSESSORATO DEL TURISMO DELLE COMUNICAZIONI E DEI TRASPORTI (2002). *Piano Regionale dei Trasporti e della Mobilita*. URL: http://www.regione.sicilia.it/turismo/trasporti/arcdocumenti/2002/pdirettore.pdf

DIPUTACION PROVINCIAL DE TERUEL (2007). *Geología y Paleontología*. Teruel, Patronato de Turismo. URL : https://236ws.dpteruel.es/turismo

DOUVERE, F. & EHLER, C. (2008). *New perspectives on sea use management: Initial findings from European experience with marine spatial planning*. In: Journal of Environmental Management 90(1), pp. 77-88.

DOUVERE, F. (2005). *Socio-economic value of the human activities in the marine environment: The Belgian case*. In: MAES, F. Marine resource damage assessment: liability and compensation for environmental damage. Springer.

DOUVERE, F. (2008). *The importance of marine spatial planning in advancing ecosystem-based sea use management*. In: Marine Policy, vol. 32, Issue 5, pp. 762-771.

DOUVERE, F., MAES, F., VANHULLE, A. & SCHRIJVERS, J. (2007). *The role of marine spatial planning in sea use management: The Belgian case.* In: Marine Policy, vol. 31, Issue 2, pp. 182-191.

DRAKE, R. (2010). Review of Lupo, Salvatore, *History of the Mafia*. H-Italy, H-Net Reviews. URL: http://www.h-net.org/reviews/showrev.php?id=29352

DREWITT, A. L. & LANGSTON, R. H. W. (2006). *Assessing the impacts of wind farms on birds*. Ibis, 148, pp. 29–42.

DRUKER , J. (2011). *The Czech Republic's "Roma Problem" Gets Educational*. Editor's blog on "Transitions online" on the EAST OF CENTER website. URL: http://eastofcenter.tol.org/2011/01/the-czech-republics-roma-problem-gets-educational

DSM (2009a). *DSM; meer dan een eeuw evolutie.* Heerlen, DSM. URL: http://www.dsm.com/nl_NL/html/about/dsm_history.htm

DSM (2009b). *Bedrijfsprofiel.* Heerlen, DSM. URL: http://www.dsm.com/nl_NL/html/about/dsm_company_profile.htm

DUBLIN PORT COMPANY (2007). *Response by the Dublin Port Company to the Dublin City Council Dublin Bay Study*. Dublin Port Company.

DUBOIS, A. & HEDSTRÖM, M. (2011). *Striving for Local Development – Brokering firm networks in the North of Europe*. Paper presented at the Regional Studies Association Annual International Conference, 17th – 20th April 2011, Newcastle upon Tyne, UK.

DUDLEY, N. (2011). *A Transboundary Biosphere Reserve in the Carpathians*. Case Study prepared for IUCN. URL: http://www.tbpa.net/page.php?ndx=57

DUDLEY, N. (Ed.) (2008). *Guidelines for Applying Protected Area Management Categories.* Gland, IUCN. URL: http://data.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf

DUMAIN, A. (2003). *Voyage ethnographique sur les Routes du Comté, des acteurs réunis pour la « fabrication » d'un fromage*. In : ethnographiques.org, Numéro 3. URL : http://www.ethnographiques.org/2003/ Dumain

DURA-GUIMERA, A. (2003). *Population deconcentration and social restructuring in Barcelona, a European Mediterranean city*. In: Cities, Vol. 20, No. 6, pp. 387–394.

DUTHIE, D. (2011). Phone Interview with Dave Duthie, HITRANS, on 4 November 2011.

DUTTA, K. (2010). *Marine energy projects approved for Scotland*. The Independent, 17 March 2010, London.

DÜVELL, F. & VOLLMER, B. (2009). *Irregular Migration in and from the Neighbourhood of the EU. A comparison of Morocco, Turkey and Ukraine. CLANDESTINO report*. URL: *http://irregular-migration.net/typo3_upload/groups/31/4.Background_Information/4.6.Link_library_InternalDocuments/Transit_report_COMPAS_Sept09.pdf*

EBRAHIM-ZADEH, C. (2003). *Back to Basics – Dutch Disease: Too much wealth managed unwisely.* Finance and Development, A quarterly magazine of the IMF, Volume 40, Number 1.

ECON PÖYRY (2007). *The Expanding Bio-energy Market in the Nordic Countries – Possibilities and Consequences.* Econ Pöyry-Report no. 2007-091. URL: http://www.bioenergypromotion.net/bsr/publications/the-expanding-bio-energy-market-in-the-nordic-countries-2013-possibilities-and-consequences/at_download/document

ECRE - EUROPEAN COUNCIL ON REFUGEES AND EXILES (2011). *ECRE Recommendations on the Occasion of the Polish Presidency of the EU.* URL: www.ecre.org/component/downloads/downloads/238.html

EEA (2004). *Impacts of Europe's Changing Climate*. EEA Report no 2/2004, European Environment Agency, Copenhagen.

EEA (2006). *The changing faces of Europe's coastal areas*. EEA Report No 6/2006. European Environment Agency, Copenhagen.

EEA (2006b). *Vulnerability and adaptation to climate change*. EEA Technical Report no. 7/2005. European Environment Agency, Copenhagen.

EEA (2007). *Climate Change: the cost of inaction and the cost of adaptation*, EEA Technical Report 13/2007. European Environment Agency, Copenhagen.

EEA (2007b). *Marine and Coastal Environment.* In: Europe's environment – The Fourth Assessment. European Environment Agency, Copenhagen. URL: http://www.eea.europa.eu/publications/state_of_environment_report_2007_1/chapter5.pdf

EEA (2009). *Regional climate change and adaptation — The Alps facing the challenge of changing water resources*. EEA Report No 8/2009. European Environment Agency, Copenhagen.

EEA (2010). *Europe's ecological backbone: recognising the true value of our mountains*. EEA report No 6/2010. European Environment Agency, Copenhagen. URL: http://www.eea.europa.eu/publications/europes-ecological-backbone

EEA (2010a). *10 messages for 2010: Coastal ecosystem*s. European Environment Agency, Copenhagen. URL: http://www.eea.europa.eu/highlights/europe2019s-coasts-reconciling-development-and-conservation

EEA (2010b). *10 messages for 2010: Mountain ecosystem*s. European Environment Agency, Copenhagen. URL: http://www.eea.europa.eu/publications/10-messages-for-2010-mountain-ecosystems

EEA (2010c). *10 messages for 2010: Forest ecosystem*s. European Environment Agency, Copenhagen. URL: http://www.eea.europa.eu/publications/10-messages-for-2010-2014-3

EEA (2010d). *Marine and coastal environment — SOER 2010 thematic assessment*. The European Environment: State and Outlook 2010. European Environment Agency, Copenhagen. URL: http://www.eea.europa.eu/soer/europe/marine-and-coastal-environment

EEA (2010f). *The European Environment. State and outlook 2010: Adapting to climate change*. European Environment Agency, Copenhagen.

EEA (2010g). *The European Environment. State and outlook 2010: Understanding climate change*. Copenhagen, European Environment Agency.

EEA (2010h). *The territorial dimension of environmental sustainability – Potential territorial indicators to support the environmental dimension of territorial cohesion*. Technical report No 9/2010.

EEA (2012). *National Adaptation Strategies*. URL: http://www.eea.europa.eu/themes/climate/national-adaptation-strategies, last accessed on March 19th 2012

EEA, JRC, WHO (2008). *Impacts of Europe`s changing climate – 2008 indicator-based assessment*. EEA Report, 4/2008, JRC Reference Report JRC47756. Joint EEA-JRC-WHO report. Copenhagen, European Environment Agency.

EFNCP, E. F. (2011). *Fading glory of the Western Stara Planina's grasslands*. URL : http://www.efncp.org/hnv-showcases/bulgaria/western-stara-planina/facts-and-figures/

EHLER, C. & DOUVERE, F. (2009). *Marine Spatial Planning: A Step-by-Step Approach Toward Ecosystem-based Management*. Intergovernmental Oceanographic Commission. Manual and Guides No. 53, ICAM Dossier No. 6.

EJEDEMO, T. & SÖDERHOLM, P. (2011). *Mining investment and regional development: A scenario-based assessment for Northern Sweden*. In: Resources Policy, 36 (2011), pp. 14–21.

EL MUNDO (2011). *Encierro en todas las cuencas mineras de Castilla y León por el futuro del sector.* 2011-02-02. URL : http://www.elmundo.es/elmundo/2011/02/02/leon/1296673433.html

EL NORTE DE CASTILLA (2011). *Las mineras de Castilla y León no podrán pagar las nóminas en septiembre ni mantener la producción en 2011 "sin ayudas".* 2010 -07-26. URL : http://www.elnortedecastilla.es/20100726/economia/mineras-castilla-leon-podran-201007262020.html

ELZERMAN, K. (2010). *A future with shrinkage. What is a suitable policy response to shrinkage*? Master Thesis, Faculty of Social and Behavioural Sciences, University of Amsterdam.

ENAUX, C. & GERBER, P. (2008). *Les déterminants de la représentation transnationale du bassin de vie. Une approche fondée sur l'attachement au lieu des frontaliers luxembourgeois*. In: Revue d'Économie Régionale et Urbaine 5, pp. 725-752.

ENERGIAS RENOVABLES EN ARAGON (2008). URL : http://www.crea.es/economia/pdf/Energias%20Renovables%20en%20Aragon.pdf

EREN - ENTE REGIONAL DE LA ENERGIA CASTILLA Y LEON (2011). Portal del EREN. URL : http://www.eren.jcyl.es/

ERNST, D. & FAGERBERG, J. & HILDRUM, J. (2002). *Do Global Production Networks and Digital Information Systems Make Knowledge Spatially Fluid?* Economics Study Area Working Papers 43, East-West Center, Economics Study Area.

ESCALONA-ORCAO, A.I. & DÍEZ-CORNAGO, C., (2007). *Accessibility to basic services in one of the most sparsely populated areas in Europe: the province of Teruel (Spain).* In: Area, (2007) 39.3, pp. 295–309.

ESCHMANN, P. & GIRARDIN, F. (2011). Interview with Patrice Eschmann and Francis Girardin, Domaine Forets, Office de l'environnement, Republique et canton du Jura, on 28 September 2011.

ESPACE CULTUREL GRANDE RÉGION (2011). *Coopération transfrontalière – l'association espace culturel Grande Région*. URL : http://www.espaceculturelgr-kulturraumgr.plurio.net

ESPERE CLIMATE ENCYCLOPEDIA (2003). *Climate in Cities – Areas endangered by air pollution.* URL: http://www.atmosphere.mpg.de/enid/3ou.html

ESPON & IRPUD (2011). *ESPON Climate – Climate Change and Territorial Effects on Regions and Economies*. Applied Research 2013/1/4. Final Report. Scientific Report. TU Dortmund University. URL:http://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/CLIMATE/ESPON_Climate_Final_Report-Part_C-ScientificReport.pdf

ESPON (2006). *ESPON Atlas—Mapping the Structure of the European Territory*. Bundesamt für Bauwesen und Raumordnung, Bonn.

ESPON ATTREG (2010). *The Attractiveness of European Regions and Cities for Residents and Visitors – Interim Report*. ESPON, Luxembourg. URL: http://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/ATTREG/ATTREG_Interim_report_Dec_2010-case_studies.pdf

ESPON CLIMATE (2010). *Climate Change and Territorial Effects on Regions and Local Economies. Revised Interim Report: Annexes*. GREIVING, S. et al. Dortmund, TU Dortmund University.

ESPON METROBORDER (2010). *METROBORDER. Cross-border Polycentric Metropolitan Regions*. *Final Report*. ESPON, Luxembourg.

ESPON PROJECT 1.2.1. (2004). *Transport services and networks: territorial trends and basic supply of infrastructure for territorial cohesion. Final report for ESPON project 1.2.1.* ESPON, Luxembourg.

ESPON PROJECT 1.2.2 (2004). *Telecommunication Services and Networks: Territorial Trends and Basic Supply of Infrastructure for Territorial Cohesion. Final Report.* ESPON, Luxembourg.

ESPON PROJECT 1.2.3 (2007). *Identification of Spatially Relevant Aspects of the Information Society. Final Report*. ESPON, Luxembourg.

ESPON PROJECT 3.2 (2007). *Scenarios on the territorial future of Europe. ESPON Project 3.2*. ESPON, Luxembourg.

ESPON TEDI (2010). *Territorial Diversity (TeDi). Final Report*. ESPON, Luxembourg. URL: http://www.espon.eu/export/sites/default/Documents/Projects/TargetedAnalyses/ESPONTEDI/TeDi_Final_Report-14-05-2010.pdf

ESPON-INTERACT (2007). *Cross-border co-operation – Cross-Thematic Study of INTERREG and ESPON activities.* KTH - Royal Institute of Technology, Stockholm. Esch-sur-Alzette and Viborg: ESPON Coordination Unit and INTERACT Point Qualification & Transfer.

ESRI (2006). ArcGIS 9.2. Environmental Systems research, Redlands.

EUDIMENSIONS (2009). *Polish-Ukranian Case Study.* URL: http://www.eudimensions.eu/

EURAQUA (2008). Euraqua homepage. URL: http://www.euraqua.org/content/whatiseuraqua.4.4a4d22a41128e56161b800012068.html

EURISLES (1996). *Los sistemas de transporte en las islas*. Edition l´Harmattan.

EUROMARC EUROPEAN MOUNTAIN AGROFOOD PRODUCTS, RETAILING AND CONSUMERS (2007). *Report on theoretical and methodological framework of the retailing surveys.*

EUROMARC EUROPEAN MOUNTAIN AGROFOOD PRODUCTS, RETAILING AND CONSUMERS. (2009). *Report on the perception of mountain quality-food products by consumers.*

EUROMONTANA (2009). *The Green Paper on Territorial Cohesion 'Turning territorial diversity into strength' - Response to consultation.* URL: http://ec.europa.eu/regional_policy/archive/consultation/terco/pdf/4_organisation/114_euromontana_en.pdf

EUROPEAN CENTRE FOR INTEGRATION AND SELF-GOVERNMENT CO-OPERATION (2008). *Polish-Ukrainian cross-border co-operation strategy for year 2007-2015.* Lublin.

EUROPEAN COMMISSION (2010). *Investing in Europe's future - Fifth report on economic, social and territorial cohesion*. URL: http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/cohesion5/pdf/5cr_en.pdf

EUROPEAN COMMISSION (1996). *Living and working in the information society: people first, Green Paper.* Luxembourg, Office for Official Publications of the European Communities.

EUROPEAN COMMISSION (1999). *Lessons from the European Commission's Demonstration Programme on Integrated Coastal Zone Management (ICZM).* European Union Publications, Brussels.

EUROPEAN COMMISSION (2000). *Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy*. Brussels, European Commission.

EUROPEAN COMMISSION (2003a). *Analysis of the Island Regions and the Outermost Regions of the E.U. Part II: The Outermost Regions*. Report for the Commission (DG-Regional Policy). Planistat Europe and Bradley Dunbar Associates. Brussels. URL: http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/ilesrup/islands_part2_summary_en.pdf

EUROPEAN COMMISSION (2005a). *i2010 – A European Information Society for Growth and Employment*, COM (2005) 229 final, Brussels.

EUROPEAN COMMISSION (2006). *Regulation (EC) No 1931/2006 of the European Parliament and of the Council of 20 December 2006 laying down rules on local border traffic at the external land borders of the Member States and amending the provisions of the Schengen Convention*.

EUROPEAN COMMISSION (2007). *An Integrated Maritime Policy for the European Union*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions COM(2007)575 final.

EUROPEAN COMMISSION (2007b). *Study on Availability of Access to Computer Networks in Rural Areas.* DG for Agriculture & rural development, Contract No: 30-CE-0099278/00-78, Final Report.

EUROPEAN COMMISSION (2008). *Regions 2020. An Assessment of Future Challenges for EU Regions*. Commission Staff Working Document. URL: http://ec.europa.eu/regional_policy/sources/docoffic/working/regions2020/pdf/regions2020_en.pdf

EUROPEAN COMMISSION (2008b). *Directive 2008/56/EC of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive*).

EUROPEAN COMMISSION (2009). *Territorial Cohesion: unleashing the territorial potential*. Background Document to the Conference on Cohesion Policy and Territorial Development: Make Use of the Territorial Potential on 10-11 December 2009, Kiruna, Sweden. URL: http://ec.europa.eu/regional_policy/archive/consultation/terco/kiruna_20091211.pdf

EUROPEAN COMMISSION (2009a). *WHITE PAPER Adapting to climate change: Towards a European framework for action*. COM (2009) 147 final.

EUROPEAN COMMISSION (2009b). *Climate Change and Water, Coasts and Marine Issues*. Commission Staff working document accompanying the WHITE PAPER Adapting to climate change: Towards a European framework for action. COM(2009) 147 final.

EUROPEAN COMMISSION (2009d). *The economics of climate change adaptation in EU coastal areas: Belgium*. European Commission, Brussels. URL: http://ec.europa.eu/maritimeaffairs/documentation/studies/documents/belgium_climate_change_en.pdf

EUROPEAN COMMISSION (2009g). *Scientific Report on the Mobility of Cross-border Workers within the EU-27/EEA/EFTA Countries.* Final Report, DG Employment and Social Affairs. Munic/Sopron.

EUROPEAN COMMISSION (2010a). *EUROPE 2020: A strategy for smart, sustainable and inclusive growth. Commission Staff Working Document*, COM(2010) 2020. Brussels, European Commission.

EUROPEAN COMMISSION (2010b). *Open call for proposals in the framework of the Preparatory Action 'BEST' (Voluntary scheme for Biodiversity and Ecosystem Services in Territories of the EU Outermost Regions and Overseas Countries and Territories).* URL: http://ec.europa.eu/environment/funding/pdf/best/Call.pdf

EUROPEAN COMMISSION (2010c). *Energy 2020 – A strategy for competitive, sustainable and secure energy.* Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels.

EUROPEAN COMMISSION (2010e). *Europe's Digital Competitiveness Report*, SEC(2010) 627, Brussels.

EUROPEAN COMMISSION (2011). *Guidelines on the Implementation of the Birds and Habitats Directives in Estuaries and Coastal Zones with particular attention to port development and dredging*. URL: http://ec.europa.eu/transport/maritime/doc/guidance_doc.pdf

EUROPEAN COMMISSION (2011a). *Second report on the implementation and functioning of the local border traffic regime set up by Regulation No 1931/2006*, COM(2011) 47 final, Brussels, 9.2.2011.

EUROPEAN COMMISSION (2011b). *Roadmap to a resource-efficient Europe*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels.

EUROPEAN COMMISSION (2011c). *A resource-efficient Europe – Flagship initiative under the Europe 2020 Strategy*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels.

EUROPEAN COMMISSION (2011d). *Implementation of the European Neighbourhood Policy in 2010, Country Report on: Ukraine.* Joint Staff Working Paper. Brussels, 25/05/2011.

EUROPEAN PARLIAMENT (1997). *Les travailleurs frontaliers dans l'Union Européenne.* Série Affaires Sociales W 16 - 5/1997. Luxembourg.

EUROREGION "STARA PLANINA". (2007). *Strategy for Development of Euroregion Stara Planina 2008 – 2013.*

EUROREGION KARPACKI (n.d.). *Tatra National Park*. Website of the Carpathian Euroregion. URL: http://www.karpacki.eu/english_tatry.html

EUROSION (2004). *Living with coastal erosion in Europe: Sediment and Space for Sustainability. PART II – Maps and statistics*. Service contract B4-3301/2001/329175/MAR/B3. "Coastal erosion – Evaluation of the need for action" Directorate General Environment, European Commission.

EUROSION (2004). *Living with coastal erosion in Europe: Sediment and Space for Sustainability. PART II – Maps and statistics*. Service contract B4-3301/2001/329175/MAR/B3. "Coastal erosion – Evaluation of the need for action", Directorate General Environment, European Commission, Brussels.

EUROSTAT (2009). *Nearly half of the population of EU countries with a sea border is located in coastal regions, Statistics in Focus: Agriculture and Fisheries*. 47/2009. European Commission.

EUROSTAT (2010). *Portrait of EU coastal regions, Statistics in Focus: Agriculture and Fisheries.* 38/2010. European Commission.

EUROSTAT (2011). *Trends in densely and thinly populated areas*. Eurostat regional yearbook 2011.

EUROSTAT (2011b). *Euro area unemployment rate at 10.0%*. News release 124/2011. URL: http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-31082011-BP/EN/3-31082011-BP-EN.PDF

EUROSTAT (2012). *Database: National air passenger transport by reporting country*. URL: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=avia_panc&lang=e

EVAN, P.G.H (2007). *Proceedings of the ASCOBANS/ECS Workshop Off shore Windfarms and Marine Mammals: Impacts and Methodologies for Assessing Impacts*. (Editor Evans, P.G.H) ECS Special Publication Series No. 49. Feb 2008.

EXPEDITIONGREENTHORN.COM (2011). *Border crossings.* URL: http://2011.expeditiongreenthorn.com/Border_crossings

FÁILTE IRELAND (2007). *Tourism and the Environment. Fáilte Ireland's Environmental Action Plan 2007-2009.* Fáilte Ireland – National Tourism Development Authority.

FALUDI, A. & PEYRONY, J. (2011). *Cohesion Policy Contributing to Territorial Cohesion – Future Scenarios*. In: European Journal of Spatial Development. Article no. 43.

FALUDI, A. (2009). *Territorial Cohesion under the Looking Glass: Synthesis paper about the history of the concept and policy background to territorial cohesion.* European Commission - Regional Policy – Inforegio. URL: http://ec.europa.eu/regional_policy/consultation/terco/pdf/lookingglass.pdf

FALUDI, A. (2011). *Multi-level (Territorial) Governance: Three Criticisms*. Paper published on the online platform CoesioNet. URL: http://www.sciencespo.fr/coesionet/sites/default/files/Faludi%20-%20Multi-level%20%28Territorial%29%20Governance%20-%20Three%20Criticisms.pdf

FARMER, J. (2007). *Connected care in a fragmented world: lessons from rural health care*. In: British Journal of General Practice 57(536), pp. 225–230.

FARRINGTON, J. & FARRINGTON, C. (2005). *Rural accessiblitiy, social inclusion and social justice. Towards conceptualization*. In: Journal of Transport Geography, 13, pp. 1-12.

FAZIO, A. (2002). *Culture and the Development of Southern Italy*. University of Catania. URL: http://www.bancaditalia.it/interventi/integov/2002/catania/en_fazio_14_12_02.pdf

FEYEN, L. & DANKERS, R. (2009). *The impact of global warming on streamflow drought in Europe. In*: Journal of Geophysical Research 114.

FINDLAY, G. (2011). Interview with Gayle Findlay, Outer Hebrides Community Planning Partnership.

FINNISH COMMUNICATIONS REGULATORY AUTHORITY (2011). *Broadband project ensures fast network connection also to sparsely-populated areas*. Article on the website of the Finnish Communications Regulatory Authority. URL: http://www.viestintavirasto.fi/en/index/internet/laajakaista/laajakaista2015-hanke.html

FISHERIES RESEARCH SERVICES (2003).*The Changing Abundance of Spring Salmon*. FRS Freshwater Laboratory, Faskally. URL: http://www.riverdee.org.uk/FileLibrary/Content/Publications/CS2.pdf

FISHERIES SCIENCE SERVICE (2005). *Biologically Sensitive Area. Assessing, researching and advising on the sustainable exploitation of living marine resources in a healthy ecosystem.* Marine Institute.

FLEMISH GOVERNMENT (2010). *Policy Paper 2009-2014: Tourism*. Flemish Authorities. URL: http://iv.vlaanderen.be/nlapps/data/docattachments/policypaper_tourism_09-14.pdf

FLØYSAND, A. & SJØHOLT, P. (2007). *Rural development and embeddedness: the importance of human relations for industrial restructuring in rural areas*. In: Sociologia Ruralis, Vol. 47:3, pp. 205-227.

FOCUS MIGRATION (2010). *Länderprofil Tschechien*. (Country profile of the Czech Republic). Online information portal "Migration-info.de" maintained by Netzwerk Migration in Europa and Bundeszentrale für Politische Bildung. URL: http://www.migration-info.de/mub_artikel.php?Id=040203

FOCUS MIGRATION (2010a). *Länderprofil Polen*. (Country profile of Poland). Online information portal "Migration-info.de" maintained by Netzwerk Migration in Europa and Bundeszentrale für Politische Bildung. URL: http://www.focus-migration.de/Polen_Update_02_200.2810.0.html

FONTAINE, C.M. & ROUNSEVELL, M.D.A. (2009). *An agent-based approach to model future residential pressure on a regional landscape*. In: Landscape Ecology, 24, pp. 1237-1254.

FORTE, A., ORAM, R.D. & PEDERSEN, F. (2005). *Viking Empires*. Cambridge University Press.

FORUM FOR RENEWABLE ENERGY DEVELOPMENT IN SCOTLAND (2009). *Marine Energy Road Map.*

FRASER OF ALLANDER INSTITUTE, UNIVERSITY OF STRATHCLYDE, THE MACAULAY LAND USE RESEARCH INSTITUTE AND THE ARKLETON CENTRE FOR RURAL DEVELOPMENT RESEARCH, UNIVERSITY OF ABERDEEN (2003). *Economic Impact of the 2001 Foot and Mouth Disease Outbreak in Scotland: Final Report*. **Fraser of Allander Institute, Glasgow.**

FRENCH, P.W. (1997). *Coastal and Estuarine Management*. Routledge, London.

FRIEDEWALD, M. (Ed.) (2004). *Benchmarking national and regional policies in support of the competitiveness of the ICT sector in the EU*. Fraunhofer Institute Systems and Innovation Research, Louis Lengrand & Associés, TNO, Paper prepared for European Commission.

FRIEDMAN, T.L. (2005). *The World is Flat. A Brief History of the Twenty-First Century*. Farrar, Strauss and Giroux, New York.

FRONTEX (2011). *Annual Risk Analysis 2011*. Warsaw. URL: www.frontex.europa.eu/download/Z2Z4L2Zyb250ZXgvZW4vZGVmYXVsdF9ha3R1YWxub3NjaS8xMDYvMjMvMQ/ara_2011_for_public_release.pdf

FUJITA, M., KRUGMAN, P. & VENABLES, A. (1999). *The Spatial Economy. Cities, Regions and International Trade.* MIT Press, Cambridge.

FUNDACIÓN ENCUENTRO (2009). *Indicadores Estadísticos. Evolución del Índice de Dependencia de niños y mayors por provincias.1990-2009.* URL : http://www.fund-encuentro.org/indicadores_php/indicadores.php?t=2&id1=N1-5

FUNDEAR (2007). *Innovaciones en política territorial. Comarcas y otras experiencias internacionales de cooperación intermunicipal*. FUNDEAR (Fundacion Economía Aragonesa). Libros FUNDEAR. Zaragoza.

FÜSSEL, H.M. & KLEIN, R.J.T. (2006). *Climate Change Vulnerability Assessments: An Evolution of Conceptual Thinking*. In: Climatic Change, 75, pp. 301–329.

FÜSSEL, H.M. (2005). *Vulnerability in Climate Change Research: A Comprehensive Conceptual Framework*. University of California International and Area Studies, Paper 6.

FÜSSEL, H.M. (2007). *Vulnerability: A Generally Applicable Conceptual Framework for Climate Change Research*. In: Global Environmental Change, 17, pp. 155–167.

GALLOWAY, L., SANDERS, J. & DEAKINS, D. (2011). *Rural small firms' use of the internet: From global to local*. In: Journal of Rural Studies, 27:3, pp. 254-262.

GAME & WILDLIFE CONSERVATION TRUST SCOTLAND (2010). *An economic study of Scottish grouse moors: An update.* A report by the Fraser of Allander Institute to the Game & Wildlife Conservation Trust Scotland.

GARMENDIA, M., UREÑA, J.M. & CORONADO, J.M. (2011). *Long-distance trips in a sparsely populated region: The impact of high-speed infrastructures*. In: Journal of Transport Geography, Vol 19, pp. 537-551.

GASPAR, J. & GLAESER, E. (1998). *Information Technology and the Future of Cities*. In: Journal of Urban Economics, Elsevier, vol. 43(1), pp. 136-156.

GASPARINI A. (1999). *Borders dividing and borders uniting Europe*. In: Isig magazine, no. 4/99, no. 1/2000.

GAULT, J. & MCSWEENEY, S. (2006). *Review of the coastal protection at Tramore strand. Final report*. Prepared for Waterford County Council.

GENEVE PLACE FINANCIERE (2011a). *Liste des banques à Genève*. URL: http://www.geneve-finance.ch

GENEVE PLACE FINANCIERE (2011b). *La place financière de Genève*. URL: http://www.geneve-finance.ch

GENRE-GRANDPIERRE, C. & MOINE, A. (1999). *L'Arc jurassien franco-suisse, une communauté de destin?* In: Images de Franche-Comté, n°20, pp. 14-17.

GEORGE STREET RESEARCH & JONES ECONOMICS (2004a). *Economic Impact And Development Opportunities For Outdoor And Environment Related Recreation In The Highlands And Islands - Research Report - Walking And Mountaineering 2003/2004.*

GEORGE STREET RESEARCH & JONES ECONOMICS (2004b). *Economic Impact And Development Opportunities For Outdoor And Environment Related Recreation In The Highlands And Islands - Research Report – Snowsports 2003/2004.*

GEORGE STREET RESEARCH LIMITED (2003). *Highlands Visitor Survey - Full-year Report: May 2002 to April 2003.* Report prepared for Highlands and Islands Enterprise; Highland Council; Highlands of Scotland Tourist Board; VisitScotland; Scottish Natural Heritage; Forest Enterprise.

GERBER, P., KLEIN, O. & CARPENTIER, S. (2011). *Local mobility and cross-border peri-urbanisation.* In: Sohn C. (ed.) Luxembourg: an emerging cross-border metropolitan region. Brussels, Peter Lang, pp. 141-159.

GERSHUNY, J.I. & MILES, I.D. (1983). *The New service Economy. The Transformation of Employment in Industrial Societies*. Francis Printer, London.

GERVAIS-AGUER, M.M. (2006). *Cahiers du GRES - Prospective Analysis : Residential choice and territorial attractiveness*. Groupement de Recherches Economiques et Sociales, France.

GETZNER, M (2009). *Economic and cultural values related to Protected Areas - Part A: Valuation of Ecosystem Services in Tatra (PL) and Slovensky Raj (SK) national parks- Final report.* Commissioned by WWF World Wide Funds for Nature - Danube Carpathian Programme (DCP), Vienna.

GETZNER, M. (2010). *Ecosystem services, financing, and the regional economy: A case study from Tatra National Park, Poland.* In: Biodiversity, Vol. 11, Issue 1-2.

GIBSON, J. (2003). *Integrated Coastal Zone Management Law in the European Union.* In: Coastal Management, 31(2), pp. 127-136.

GLOBAL DETENTION PROJECT (2009). *Ukraine Detention Profile.* URL: http://www.globaldetentionproject.org/countries/europe/ukraine/introduction.html

GLÖCKNER, R., SLAVIK, J. & ROCH, I. (2010). *Vývovojé Procesy Změn v Sasko-Česko-Polském Pohraničí* (Development Processes of Change in the the Saxon-Bohemian-Polish Border Region. In: Urbanismus a Územní Rozvoj, vol. XIII, 2/2010. pp. 45-52.

GLØERSEN, E. (2009). *Strong, Specific and Promising: Towards a Vision for the Northern Sparsely Populated Areas in 2020*. Nordregio Working Paper 2009:4.

GLØERSEN, E., DUBOIS, A., ROTO, J., RASMUSSEN, R. & STERLING, J. (2009). *Development perspectives for the NSPA - Opportunities and challenges.* Nordregio Working Paper 2009:5.

GLOERSEN, E., et al. (2005). *Northern peripheral, Sparsely Populated Regions in the European Union and in Norway*. Nordregio Report 2006:2. Nordic Centre for Spatial Development, Stockholm.

GOBIERNO DE ARAGON - DEPARTAMENTO DE EDUCACION Y CIENCIA (2001). *Orden de 18 de abril de 2001. que desarrolla la dispocición*

adicional del RD 1004/1991, de Centros y Escuelas de Educación Infantil de primer ciclo en el àmbito de la Comunidad Autonómica de Aragon.

GOBIERNO DE ARAGON (2010). *Datos Básicos Aragon, 2010*. Instituto Aragonés de Estadística.

GOBIERNO DE ARAGON. LEY 6/2002, de 15 de abril, de *Salud de Aragón*.

GOBIERNO DE CANARIAS (2004). *Plan de salud de Canarias 2004-2008* (Canary Islands Health Plan 2004-2008). Canary Islands.

GOBIERNO DE CANARIAS (2008). *Informe anual del sistema de salud 2008* (annual report on the health care system, 2008). Canary Islands.

GOBIERNO DE ESPAÑA (2005). *Plan de Energías Renovables en España 2005.-2012*. *(PER*). Instituto para la Diversificación y Ahorro de la Energía. Minsterio de Industria, Turismo y Comercio.

GOBIERNO DE ESPAÑA (2005b). *Plan Estratégico de Infrastructuras y Transporte 2005-2020*. Ministerio de Fomento, Madrid. URL: *http://www.fomento.es/MFOM/LANG_CASTELLANO/_ESPECIALES/PEIT/*

GOBIERNO DE ESPAÑA (2006). *Plan Nacional de Reserva Estratégica del Carbón 2006-2012 y Nuevo modelo de desarollo integral y sostenible de las Comarcas Mineras*. Instituto para la Reestructuración de la Minería del Carbón. Ministerio de Industria, Turismo y Comercio.

GOBIERNO DE ESPAÑA. *Ley Orgánica de Educación* 2/2006.

GODENAU, D. (2008). *Immigration in the Canary Islands*. Speech given in Rabat, Morocco, 4th January 2008.

GÓMEZ LOSCOS, A. & HORNA JIMENO, G. (2006). *El sector turístico en las comarcas aragonesas*. Fundación Economía Aragonesa. Documentos de Trabajo 25/2006.

GORDON, R.J. (2000). *Does the 'New Economy' Measure Up to the Great Inventions of the Past?* In: Journal of Economic Perspectives 14, pp. 49-74.

GORZELAK, G. et al. (2011). *EU BORDERREGIONS. Case Studies. Poland-Ukraine.* URL: http://euborderregions.eu/research-content/case-studies/pol-ukr-przemysl-sambor

GRAAF, P. DE (2005). *Met sluiting kolenmijnen knakte Limburgs trots*. De Volkskrant, 19th December 2005.

GRANT, L. (2005). *Liverpool between stations*. In: P. Oswalt (ed.), Shrinking cities; volume 1: international research. Ostfildern, Hatje Cantz Verlag, pp. 421 – 424.

GR-Atlas (2011). University of Luxembourg. URL: http://geo.uni.lu/joomla/

GRENAND, F. (2011). *Un pont entre la France et le Brésil : l'Observatoire Hommes / Milieux sur le fleuve Oyapock*. In : 'Dossier Brésil', Rayonnement du CNRS, 56, pp. 41-47, Paris. URL : http://www.rayonnementducnrs.com/bulletin/b56/grenand.pdf

GRET - GROUPE DE RECHERCHES EN ECONOMIE TERRITORIALE & THEMA - THEORISER ET MODELISER POUR AMENAGER (2006). *Impact de*

l'accord bilatéral relatif à la libre circulation des personnes sur la région transfrontalière du canton de Neuchâtel et du département du Doubs. Etude realisé dans le cadre de Interreg III. URL: http://www.ostaj.org/fileadmin/user_upload/indicateurs/pages_diveres/Canededo_RapportFinalOctobre06.pdf

GRIMES (2005). *How well are Europe's Rural Businesses Connected to the Digital Economy*? In: European Planning Studies Vol. 13, No. 7.

GROGNA, V., MAHY, M., MEURIS, S., TAYMANS, J., VINCKE, J., WEYNS, S., BORN, C.H., MAHY, G., HERMY, M., TYTECA, D., AMELOOT, E., ENDELS, P., NULENS, G. (2009). *How to make natura 2000 work properly? Socio-economic, legal and ecological management - SELNAT. Final Report.* Brussels: Belgian Science Policy 2009 (Research Programme Science for a Sustainable Development).

GUIDE TO ITALY (2009). *Water in Sicily*. Article on traditional-italy.co.uk. URL: http://www.traditional-italy.co.uk/water-in-sicily-2/#axzz1WbDteLjQ

GUTIERREZ PUEBLA, J., (2004). *El tren de alta velocidad y sus efectos espaciales*. Investigaciones Regionales, otoño.num 005. Asociación Española de Ciencia Regional. Alcalá de Henares. Pp. 199-121.

HALCROW GROUP LIMITED (2009). *Economic and Community Benefit*. Study for the Scottish Government. URL: http://www.scotland.gov.uk/Resource/Doc/917/0076743.pdf

HALL AITKEN (2007). *Outer Hebrides migration study*. for Comhairle nan Eilean Siar, Western Isles Enterprise and Communities Scotland. URL: http://www.cne-siar.gov.uk/factfile/population/documents/OHMSStudy.pdf

HALL AITKEN (2008). *Building capacity for a Sustainable Population in the Outer Hebrides*. for the Outer Hebrides Community Planning Partnership. URL: http://www.cne-siar.gov.uk/factfile/population/documents/Building%20Capacity%20Study.pdf

HANSEN, N. (1981). *The Border Economy*. Austin, University of Texas Press.

HANTEL, M., EHRENDORFER, M. & HASLINGER, A. (2000). *Climate sensitivity of snow cover duration in Austria*. In: Int. J. Climatol., 20, pp. 615-640.

HARRIS INTERACTIVE (2008). *The Visitor Experience 2008: Overview Presentation*. A presentation prepared for VisitScotland.

HARRIS TWEED HEBRIDES (2011). *About Harris Tweed*. Website of Harris Tweed Hebrides. URL: http://www.harristweedhebrides.com/about-harris-tweed/

HARVEY, D. (1990). *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Cambridge, Blackwell.

HAY, W. A. (2003). *Geopolitics of Europe*. Orbis, vol. 47, Issue 2, pp. 295-310.

HEBRIDES NEWS TODAY (2011). *Well North Outer Hebrides leads the way in Scotland.* Article of June 30, 2011. URL: http://hebridestoday.com/2011/06/well-north-outer-hebrides-leads-the-way-in-scotland/

HEGEWALD, M. (2008). *Das Verständnis von Lebensqualität in der sächsischen Raumordnung.* Vortrag auf der Projektwerkstatt „Umwelt- und Lebensqualitäten im Dreiländereck", al. Lecture. Nov. 6, 2008 in IOER, Dresden.

HELPMAN, E. (ed.) (1998). *General Purpose Technologies and Economic Growth*. MIT Press, Cambridge MA, pp. 55-83.

HERALD SCOTLAND ONLINE (2009). *Harris votes for national park status to reverse depopulation*. Article of 21 February 2009. URL: http://www.heraldscotland.com/harris-votes-for-national-park-status-to-reverse-depopulation-1.903277

HERNANDEZ, B., JIMÉNEZ, J. & MARTÍN, M.J. (2009). *Key website factors in e-business strategy.* In: International Journal of Information Management, vol. 29, pp. 362-371.

HERRIER, J.L. & LETEN, M. (2010). *Restoration of the tidal lagoon of the Zwin*. Proceedings of the 7th European Conference on Ecological Restoration Avignon, France, 23-27/08/2010.

HERRIER, J.L., MEES, J., SALMAN, A., VAN NIEUWENHUYSE, H. & DOBBELAERE, I. (Eds.) (2005). Proceedings '*Dunes and Estuaries 2005*' – International Conference on Nature Restoration Practices in European Coastal Habitats, Koksijde, Belgium, 19-23 September 2005, VLIZ Special Publication 19.

HI ENERGY (2010). *Hebridean Hydrogen Park*. Website of HI Energy. URL: http://www.hi-energy.org.uk/Research-Development/Hebridean-Hydrogen-Park.htm

HI ENERGY (n.d.). *Biomass Energy*. URL: http://www.hi-energy.org.uk/Renewables/Biomass-Energy.htm

HI ENERGY (n.d.). *Hydro Energy*. URL: http://www.hi-energy.org.uk/Renewables/Hydro-Energy.htm

HI ENERGY (n.d.). *Onshore Wind*. URL: http://www.hi-energy.org.uk/Renewables/Wind-On-Shore.htm

HIDAIR, I. (2008). *L'immigration étrangère en Guyane : entre stigmatisation et stratégie de récupération*. In : REVUE Asylon(s), N°4, mai 2008, Institutionnalisation de la xénophobie en France. URL: http://www.reseau-terra.eu/article742.html

HIEP - HIGHLANDS AND ISLANDS EUROPEAN PARTNERSHIP (2009). *Response to the Green Paper on Territorial Cohesion*. URL: http://ec.europa.eu/regional_policy/archive/consultation/terco/pdf/4_organisation/91_hiep_en.pdf

HIGHLAND AREA TOURISM PARTNERSHIP (2006). *Highland Area Tourism Partnership Plan - The Strategy*.

HIGHLAND COUNCIL (2006). *Highland Renewable Energy Strategy and Planning Guidelines.*

HIGHLAND COUNCIL (2006a). Deprivation and Fragility. URL: http://www.highland.gov.uk/yourcouncil/highlandfactsandfigures/deprivationandfragility/

HIGHLAND COUNCIL (2009). *Local Transport Strategy for the Highlands.*

HIGHLAND COUNCIL (2009a). *Highland Wide Local Development Plan - Main Issues Report.*

HIGHLAND COUNCIL (2010a). *Highland Biodiversity Action Plan 2010-2013*.

HIGHLAND COUNCIL (2010b). *Climate Change Adaptation Strategy: Highland Context.*

HIGHLAND COUNCIL AND ARGYLL AND BUTE COUNCIL (2004). *The Cost of Supersparsity.* Report produced by Paula Gilder Consulting with Ralph Leishman and Nicola Rankin.

HIGHLAND COUNCIL PLANNING ENVIRONMENT AND DEVELOPMENT COMMITTEE (2011). *Update on Fuel Supply Issues in the Highlands. Report by Director of Planning and Development.*

HIGHLAND CYCLE FORUM (2004). *The Value of Cycling in the Highlands and Islands of Scotland.*

HIGHLANDS AND ISLANDS ENTERPRISE (2009). *Telecoms connectivity in the Highlands and Islands - Executive Summary.*

HIGHLANDS AND ISLANDS ENTERPRISE (2009a). *Young people in the Highlands and Islands.* Report developed by Cogent Strategies International on behalf of HIE.

HIGHLANDS AND ISLANDS ENTERPRISE (2011). *Area profile for Highlands and Islands.*

HIGHLANDS AND ISLANDS ENTERPRISE (2011a). *Area profile for Caithness and Sutherland.*

HIGHLANDS AND ISLANDS ENTERPRISE (2011b). *Area profile for Innse Gall*. Website of Highlands and Islands Enterprise. URL: http://www.hie.co.uk/highlands-and-islands/area-information/outer-hebrides/economic-profile.html

HIGHLANDS AND ISLANDS ENTERPRISE (2011b). *Area profile for Lochaber, Skye and Wester Ross.*

HIGHLANDS AND ISLANDS ENTERPRISE (2011c). *Area profile for Inner Moray Firth.*

HIGHLANDS AND ISLANDS ENTERPRISE (2011d). *Next generation broadband for the Highlands and Islands.*

HIGHLANDS AND ISLANDS ENTERPRISE (2011e). *Next generation broadband.* URL: http://www.hie.co.uk/highlands-and-islands/digital/next-generation-broadband.html

HINKEL, J., NICHOLLS, R., VAFEIDIS, A., TOL, R. & AVAGIANOU, T. (2010). *Assessing risk of and adaptation to sea-level rise in the European Union: an application of DIVA*. Mitigation and Adaptation Strategies for Global Change, pp. 1–17.

HINKEL, J., NICHOLLS, R.J., VAFEIDIS, A.T., TOL, R.S.J., EXNER, L. & AVAGIANOU, T. (2009). *The vulnerability of European coastal areas to sea level rise and storm surge*. Contribution to the EEA SOER 2010 report, Potsdam Institute for Climate Impact Research (PIK).

HITRANS THE HIGHLANDS AND ISLANDS TRANSPORT PARTNERSHIP (2007). *Regional Transport Strategy for the Highlands & Islands.*

HN CONSEIL INGENIERIE (2008). *Etat des lieux du tourisme équestre en vue de la mise en place d'une Grande traversée du Jura équestre*. URL: http://across-jura.com/upload/paragraphes/1233671879.pdf

HOLZINGER, K., KNILL, C. & SCHAFER, A. (2006). *Rhetoric or Reality? 'New Governance' in EU Environmental Policy*. In: European Law Journal 12(3), pp. 403–420.

HOWARD, R. (2011). *Grid connection conundrum*. In: Renewable Energy Focus 12 (1), pp. 8-9.

HSIAO, E. (2010). *Peace Parks for Mountain Forests: The Law and Policy of Transforming Conflict to Stewardship*. LL.M. Thesis. URL: http://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1006&context=lawdissertations

HUFFINGTON POST (2009). *Italy Illegal Immigration Crackdown Draws Fire.* Article on Huffingtonpost.com of 08/15/09. URL: http://www.huffingtonpost.com/2009/07/15/italy-illegal-immigration_n_233331.html

HUGGINS, R. & WILLIAMS, N. (2011). *Entrepreneurship and regional competitiveness: the role and progression of policy*. Entrepreneurship & Regional Development, pp. 1-26.

HUISMAN, O. & ICARE-NOUREL, M. (2009). *Rapport de synthèse des Etats Généraux en Guyane*. Secrétariat d'Etat à l'outre-mer. URL : http://www.etatsgenerauxdeloutremer.fr/rapport-de-synthese-des-etats-generaux-en-guyane

HUMAN RIGHTS WATCH (2010). *Buffeted in the Borderland. The Treatment of Asylum Seekers and Migrants in Ukraine*. Washington, HRW. URL: http://www.hrw.org/sites/default/files/reports/ukraine1210WebVersion.pdf

HYNES, S. & FARRELLY, N. (2012). *Defining standard statistical coastal regions for Ireland.* In: Marine Policy, 36(2), pp. 393-404 (in press).

HYNES, S. & FARRELLY, N. (in press). *Defining standard statistical coastal regions for Ireland*. In: Marine Policy, vol. 36, Issue 2, March 2012, pp. 393-404.

IAEST - INSTITUTO ARAGONES DE ESTADISTICA (2008). *Datos Básicos Aragon* 2008. Gobierno de Aragon.

IDATE (2000). *Regulatory, infrastructure and tariff aspects of electronic communications and broadband connectivity in the Outermost Regions (OR) - A comparison of the current situation with that in the rest of the Community and neighbouring countries*. Report for the European Commission

IDEA - INSITUTO PARA EL AHORRO Y LA DIVERSIFICACIÓN ENERGÉTICA. *Wind Atlas of Spain*. URL: http://atlaseolico.idae.es

I-ES - INSTITUTO DE ESTADISTICA DE CASTILLA Y LA MANCHA (2009). *Anuario Estadístico Castilla-La Mancha.* Junta de Castilla-La Mancha.

IGLICKA, K., GMAJ, K. & BORODZICZ-SMOLIŃSKI, W. (2011). *Circular Migration Patterns. Migration between Ukraine and Poland*. URL: http://www.eui.eu/Projects/METOIKOS/Documents/CaseStudies/

ILO (1989). *C169 Indigenous and Tribal Peoples Convention*. URL: http://www.ilo.org/ilolex/cgi-lex/convde.pl?C169

IMAGAWA TAKUO (2002). *Economic analysis of telecommunication, technology and cities in Japan*. Taga Shuppan.

INGLE, R. & DE SUTTER, R. (2009). *Effects of climate change on the Flemish water system*. Presentation at the First IWA BeNeLux Regional Young Water Professionals Conference, Eindhoven, The Netherlands.

INSEE GUYANE (2006). *L'Atlas des populations immigrées en Guyane*. INSEE. URL : http://www.insee.fr/fr/insee_regions/guyane/themes/etudes_detaillees/atlas_immig/atlas_immigres_gy.pdf

INSEE GUYANE (2010). *Tableau Economique Régional Enseignement – Formation.* TER 2008, Direction Antille-Guyane INSEE. URL : http://www.insee.fr/fr/insee_regions/guyane/themes/ter/ter2010/ter2010_gy.pdf

INSEE-OCSTAT (2008). *Synthèse 2008*. Observatoire statistique transfrontalier des accords bilatéraux. Geneva, Lyon: OCSTAT, INSEE.

INSEE-OCTAT (2010). *Synthèse 2010.* Observatoire statistique transfrontalier des accords bilatéraux. Geneva, Lyon: OCSTAT, INSEE.

INSTITUTO NACIONAL DE ESTADÍSICA (2009). *Enquestas de ocupación hotelera.* National Statistic Insitute of Spain. URL: www.ine.es.

INSTITUTO NACIONAL DE ESTADÍSICA (2010). *Indicadores Demográficos Básicos.* National Statistics Institute of Spain. URL: www.ine.es

INSTITUTO NACIONAL DE ESTADÍSICA. Census (1961, 1971, 1981, 1991, 2001). National Statistics Institute of Spain. URL: www.ine.es

INSTITUTO NACIONAL DE ESTADÍSICA. *Estadística de Transporte de Viajeros*. National Statistic Insitute of Spain. URL: www.ine.es.

INSTITUTO NACIONAL DE ESTADÍSICA. *Explotación Estadística del .Padrón municipal 2010.* National Statistic Insitute of Spain. URL: www.ine.es.

INSTITUTO NACIONAL DE ESTADÍSICA. *Municipal Register (1996-2010).* National Statistics Institute of Spain. URL: www.ine.es

INSTITUTO PARA LA DIVERSIFICACION Y AHORRO DE LA ENERGIA (2007). *Energía Solar en España 2007. Estado Actual y Perspectivas.* Minsterio de Industria, Turismo y Comercio.

INTERNATIONAL CENTRE FOR TOURISM AND HOSPITALITY RESEARCH, BOURNEMOUTH UNIVERSITY (2010). *The Economic Impact of Wildlife Tourism in Scotland.* Scottish Government Social Research.

INTERREG IV A NORD (2011). *Gränslös vård II – Tornedalen*. URL: http://www.interregnord.com/fi/hyvaeksytyt-hankkeet/pohjoinen/3-alueellinen-toimivuus-ja-identiteetti/graensloes-vaard-ii-tornedalen.aspx

INVERIE PRIMARY SCHOOL (2010). *Inverie Primary School Handbook 2010-2011*. URL: http://www.highland.gov.uk/NR/rdonlyres/E24C824D-2D6A-40BC-9862-6D184E31A699/0/InveriePrimary2011.pdf

IPCC (International Panel for Climate Change) (2007). *Europe: Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Editors, Cambridge University Press, Cambridge, pp. 541-580.

IPCC (2001). *Impacts, Adaptation and Vulnerability: Contribution of WG II to the 3rd Assessment Report of the Intergovernmental Panel of Climate Change.* Cambridge, Cambridge University Press.

IPCC (2007a). *Climate change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge, Cambridge University Press.

IPCC (2007b). *Climate change 2007: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge, Cambridge University Press.

IPCC (2007c). *Annex I: Glossary*. In: IPCC (ed.) Climate change 2007: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, Cambridge University Press.

IRISH TOURIST INDUSTRY CONDEDERATION (2009*). ITIC News, Year-end Review 2009 & Outlook 2010.* Irish Tourist Industry Confederation.

ISTAT (2010). *Regional Statistical Yearbook, Sicily 2010*. URL: http://pti.regione.sicilia.it/portal/pls/portal/!PORTAL.wwpob_page.show?_docname=9572232.PDFhttp://www.regione.sicilia.it/bilancio/Statistica/annuario2007/english_version/chapter2/02_Population.pdf

ITD (2010). *L'intégration régionale des PME-PMI guyanaises*. AFD. URL : http://www.cnccef.org/TPL_CODE/TPL_PUBLICATIONLISTE_INTERNET/ID_PUBLICATION/222/DL/PUB_FICHIER/46-publications.htm

IVANKOVIĆ, M. (2009). *Raising Awareness in the Stara Planina mountain of Serbia.* In: Europes mountain bonus: how communities and land management provide positive externalities for European society and the related policies and opportunities. Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia.

IVANOV, S. (2008). *Agrobiodiversity in the Stara Planina Mountain Nature Park, Serbia.* In: T. e. Amend, Protected Landscapes and Agrobiodiversity Values. IUCN World Commission on Protected Areas.

JARVIS, T. (2011). Phone Interview with Tony Jarvis, Senior Development Manager, Transport Policy, Highlands and Islands Enterprise, on 4 November 2011.

JCYL - JUNTA DE CASTILLA Y LEON (2010). *Anuario Estadístico de Castila y León*. URL : http://www.jcyl.es/

JEAN, R. (2008). *Guyane : Un développement sous contraintes*. CEROM. URL:

http://www.insee.fr/fr/insee_regions/guyane/themes/etudes_detaillees/cerom/cerom_2008_gy.pdf

JERNSLETTEN, J. & KLOKOV, K. (2002). *Sustainable Reindeer Husbandry*. Centre for Saami Studies, University of Tromsø.

JILKOVÁ, J. (2008). *Das Verständnis von Lebensqualität in Tschechien und diesbezügliche Entwicklungsziele*. Vortrag auf der Projektwerkstatt „Umwelt- und Lebensqualitäten im Dreiländereck", al. Lecture. Nov. 6, 2008 in IOER, Dresden.

JIT - JOINT IMPROVEMENT TEAM (2010). *Summary of Telecare Services in Scotland.*

JIT - JOINT IMPROVEMENT TEAM (2010a). *An Assessment of the Development of Telecare in Scotland 2006-2010.*

JOHANSSON, B., KARLSSON, C. & STOUGH, R.R. (Eds.) (2006). *The Emerging Digital Economy. Entrepreneurship, Clusters and Policy*. Springer, Berlin.

JONES, G. & JAMIESON, L. (1997). *Young People in Rural Scotland: Getting Out and Staying On*. Joseph Rowntree Foundation, York.

JONES, G. (1999). *The Same People in the Same Places? Socio-spatial identities and migration in youth*. In: Sociology, Vol. 33(1), pp. 1-22.

JONES, R.N. (2001). *An environmental risk assessment/management framework for climate change impact assessments.* In: Nat. Hazards, 23, pp. 197-230.

JONG, A. DE & VAN DUIN, C. (2010). *Regionale prognose 2009-2040: vergrijzing en omslag van groei naar krimp.* The Hague, Netherlands Environmental Assessment Agency.

JORDAN, A. (2005). *Environmental policy in the European Union*. Earthscan, London.

JORGENSEN, D.W., HO, M.S. & STIROH, K.J. (2002). *Projecting Productivity Growth: Lesson from the US Growth Resurgence.* Federal Reserve Bank of Atlanta Economic Review, Third Quarter, pp. 1-13.

JUNTA DE CASTILLA Y LEON (2005). *Ley 9/2005, de 17 de Junio, por la que se establece el programa de actuación en las comarcas mineras durante el período 2004-2007*. Boletin Oficial de Castilla y Leon. URL : http://bocyl.jcyl.es

JUNTA DE CASTILLA Y LEON (2010). *Agenda para la Población de Castilla y León 2010-2020*.

JUNTA DE CASTILLA Y LEON (2010). *Plan Regional del Ámbito Sectorial de la Bionenergía de Castilla y León. (PBCyL).* Ente Regional de la Energía (EREN).

JUNTA DE CASTILLA Y LEON (2011). *Anuario Estadístico de Castila y León, 2010*. Dirección General de Estadística.

JUNTA DE COMUNIDADES DE CASTILLA.- LA MANCHA. Ley 7/2010 *Ley de Educacion de Castilla-La Mancha.*

JUNTA DE COMUNIDADES DE CASTILLA-LA MANCHA (2002). *Plan Director de Transportes de Castilla-La Mancha.* URL: http://www.jccm.es/contenidos/portal/ccurl/230/914/PLAN_DIRECTOR.pdf

JUNTA DE COMUNIDADES DE CASTILLA-LA MANCHA (2009). *Anuario Estadístico Castilla-La Mancha 2009.* I-ES (Instituto de Estadística de Castilla y la Mancha).

KAARLELA, M. (2009). *Crossborder Tornionlaakso -työmarkkinat ja työvoiman liikkuvuus 2009.* Crossborder Tornedalen. URL: http://www.crossbordertornedalen.net/images/stories/pdf/TutkimusCrossborder.pdf

KAMPHUIS, O. (2011). *The eastern external border of the EU. A journey through the borderlands of the EU and its neighbours.* Master thesis Human Geography, Nijmegen.

KAPOS, V., RHIND, J., EDWARDS, M., PRICE, M.F. & RAVILIOUS, C. (2000). *Developing a Map of the World's Mountain Forests*. In: M.F. Price and M. Butt (eds.), Forests in Sustainable Mountain Development: A Report for 2000. Wallingford, CAB International, pp. 4-9.

KAWKA, R. (2003). *Regional Development along the Former Inner-German Border after Unification* (Preliminary Version). Institut fur Wirtschaftsforschung, Halle. Paper presented at ERSA 2003, 27th-30th August 2003, Jyva skyla , Finland.

KEAVENEY, K. (2007). *Contested Ruralities: Housing in the Irish Countryside*. Project No: 5164 NUI Maynooth.

KELLENS, W., NEUTENS, T., DECKERS, P., REYNS, J. & DE MAEYER, P. (2011). *Coastal flood risks and seasonal tourism: analysing the effects of tourism dynamics on casualty calculations*. In: Natural Hazards 60 (3), pp. 1211-1229.

KELLY, P.M. & ADGER, W.N. (2000). *Theory and practice in assessing vulnerability to climate change and facilitating adaptation*. In: Climate Change, 47, pp. 325-352.

KIDD S., MCGOWAN, L., SHAW, D., JANßEN, H., SAPOUNTZAKI, K. WASSENHOVEN, L., KOKKOSSIS, H., GILBERT, A., JANSSEN, R., KVINGE, T., LANGELAND, O., BOSTINA, A., STANÇA, C., LITTKOPF, A., ABDUL-MALAK, D., ULIED, A., BIOSCA, O. & FARINOS-DASI, J. (2011). *European Seas and Territorial Development Opportunities and Risks.* ESaTDOR Inception Report 28/02/2011. European Union Publications, Brussels.

KIDD, A. (2005). *The rise and decline of Manchester*. In: P. Oswalt (ed.), Shrinking cities; volume 1: international research. Ostfildern, Hatje Cantz Verlag, pp. 407 – 414.

KIISKINEN, K. (2009). *Borderless form or bounded substance: media images of cultural cooperation in the Polish-Ukrainian borderland.* In: H Hyvönen, T Räsänen & J Tunturi (eds)*, Media, interaction and integration: cross-cultural dialogues in the Baltic sea area.* Publications of The Graduate School on Integration and Interaction in The Baltic Sea Region, no. 10, Working papers /

Population Research Institute. E., no. 36/2009, Graduate school on integration and interaction in the Baltic sea region, Turku, pp. 17-44.

KILKENNY, M. (1998). *Transport costs, the New Economic Geography, and Rural Development*. In: Growth and Change, Vol. 29:3, pp. 259-280.

KNIGHT, F. (2011). *New Build Second Homes Report*. Knight Frank Residential Research, DCLG.

KNIPPSCHILD, R. (2011). *Cross-border Spatial Planning: Understanding, Designing and Managing Cooperation Processes in the German-Polish-Czech Borderland*. In: European Planning Studies vol. 19, no. 4, pp. 629-645.

KNOBBLOCK, E. & PETTERSSON, Ö. (2010). *Restructuring and risk-reduction in mining: employment implications for northern Sweden*. In: Fennia 188: 1, pp. 61–75.

KOCHAN, B. (2012a). *Natur- und Landschaftsschutz*. In: LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT (IOER) Project ‚Begrüntes Dreiländereck – Evaluation umweltschonender Sanierungs- und Entwicklungsprozesse im deutsch-polnisch-tschechischen Dreiländereck' (english title: Green Border Triangle – An Evaluation of Environmentally Benign Rehabilitation and Development Processes in the German-Polish-Czech Border Triangle), unpublished manuscript.

KOCHAN, B. (2012b). *Fazit und neue/weiterführende Aufgaben*. In: LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT (IOER) Project ‚Begrüntes Dreiländereck – Evaluation umweltschonender Sanierungs- und Entwicklungsprozesse im deutsch-polnisch-tschechischen Dreiländereck' (english title: Green Border Triangle – An Evaluation of Environmentally Benign Rehabilitation and Development Processes in the German-Polish-Czech Border Triangle), unpublished manuscript.

KOPECKÁ, M. & NOVÁÈEK, J. (2009). *Forest fragmentation in the Tatra Region in the period 2000–2006.* In: Landform Analysis, Vol. 10. Pp. 58–63. URL: http://geoinfo.amu.edu.pl/sgp/LA/LA10/LA_10_11.pdf

KOPKE, K. & O'MAHONY, C. (2011). *Preparedness of key coastal and marine sectors in Ireland to adapt to climate change*. In: Marine Policy vol. 35, No. 6, pp. 800-809.

KOSTADINOVA, V. (2010). *Ambiguous Borders: the European Commission and the reconstruction of borders.* Ph.D. thesis, University of Birmingham.

KOUTI, R. & RAMIREZ, J. (2009). *Mobility habits of the cross-border commuters in Geneva*. Geneva School of Business Administration, University of Applied Sciences of western Switzerland, No HES-SO/HEG-GE/C--09/8/1—CH, Working Paper Series. URL: http://doc.rero.ch/lm.php?url=1000,44,9,20091126084057-MX/8_09_Kouti_Ramirez.pdf

KOWALCZYK, M. A. (2008). *Mobilisierungspotenziale sozialen Kapitals in der deutsch-polnischen Grenzregion* (Mobilization potentials of social capital in the German-Polish border region). Shaker Verlag, Aachen.

Dissertation submitted to the European Viadrina University, Frankfurt (Oder).

KOWALKE, H. (ed.) (2000). *Sachsen (Saxony) Perthes Länderprofile*. Klett-Perthes, Gotha & Stuttgart.

KRÄMER, R. (1999). *Zwischen Kooperation und Abgrenzung - Die Ostgrenzen der Europäischen Union* (Cooperation and delimitation – The eastern boundary of the European Union). In: WeltTrends vol. 22, pp. 9-26.

KRAUS, M. & SCHWAGER, R. (2003). *EU Enlargement and Immigration*. JCMS 42(2), pp. 165–81.

KROK, K. (2004). *Polish – Ukrainian transboundary co-operation and policy of the European Union (Polsko – Ukraińska współpraca transgraniczna a polityka Unii Europejskiej) paper for International Conference "EU Membership of Poland and Baltic States as a factor of strengthening transborder co-operation in Northern and Eastern Europe"*. Augustow.

KROMP-KOLB, H. & FORMAYR, H. (2005). *Schwarzbuch Klimawandel*. Salzburg, ecowin Verlag der TopAkademie GmbH.

KRUGMAN, P. (1991). *Geography and Trade*. MIT Press, Cambridge.

KRUPPA, S. (2008). *Die Highlands - Unberührter Naturraum und/Oder Touristisches Potential*. Grin.

KUBRIN, C.E. & WEITZER, R. (2003). *New Directions in Social Disorganisation Theory*. In: Journal of Research in Crima and Delinquency, Vol. 40. URL: http://www.gwu.edu/~soc/docs/Kubrin_new_directions.pdf

KULONEN, U., SEURUJÄRVI-KARI, I. & PULKKINEN, R. (ed.) (2005). *The Saami – a cultural encyclopaedia.* SKS, Helsinki.

LACHAT, G. (2011). Interview with Guillaume Lachat, Directeur, Jura Tourisme, on 10 September 2011.

LAGNEAUX, F. (2005). *Economic importance of the Flemish maritime ports: Report 2003.* Working Paper Document Series. Prepared for the National Bank of Belgium.

LÄHTEENMÄKI, M. (2006). *Terra ultima – a short history of Finnish Lapland*. Otava, Keuruu.

LAIRD, J. (2009). *Wider Economic Impacts in Remote Rural Areas of Scotland.* Association for European Transport and contributors.

LAIZ MONSALVE, A. (2010). *Transporte público a la demanda.Castilla y León*. Catàleg de Bones Pràctiques. Xarxa MOBAL. Diputació de Barcelona. URL : http://xarxamobal.diba.cat/XGMSV/documents/practiques/61/61.pdf

LAMMENS, M., DE BRUYN, R. & GO, F. (2008). *A conceptual design of public measures: The case of the Flemish holiday market*. In: KELLER, P. & BIEGER, T. (Eds.) Real estate and destination development in tourism: successful strategies and instruments. Erich Schmidt Verlag GmbH.

LAPIN ALUEHALLINTOVIRASTO (2011). *Peruspalvelut Lapissa 2010*. Lapin aluehallintoviraston julkaisuja 2/2011. URL: http://www.avi.fi/fi/virastot/lapinavi/Ajankohtaista/julkaisut/Documents/Peruspalvelut_Lapissa_2010.pdf

LARSON, J. (2007). *Relevance of geographical indications and designations of origin for the sustainable use of genetic resources*. Study commissioned by the Global Facilitation Unit for Underutilized Species. URL: http://www.underutilized-species.org/Documents/PUBLICATIONS/gi_larson_lr.pdf

LATTEN, J. & MUSTERD, S. (2009). *Parkstad Limburg in een veranderend demografisch tij*. In: J. Latten & S. Musterd (eds.), De nieuwe groei heet krimp; een perspectief voor Parkstad Limburg. The Hague, Nicis Institute, pp. 9 – 15.

LAUDANI, M. *Climate Change Adaptation Action Plan in the Province of Catania and in the Municipality of Biancavilla*. Provincia Regionale di Catania. URL: http://www.grabs-eu.org/downloads/ETNA%20PPT-AAP%20[modalit_%20compatibilit_].pdf

LE HIR, P. (2011). *El Hierro, an island in the wind*. Article in 'The Guardian', Tuesday 19 April 2011.

LE ROY, D., VOLCKAERT, A, VERMOOTE, S., DE WACHTER, B., MAES, F., COENE, J. & CALEWAERT, J.B. (2006). *Risk analysis of marine activities in the Belgian Part of the North Sea (RAMA).* Research in the framework of the BELSPO Global change, ecosystems and biodiversity – SPSDII.

LEBBE, L. & VAN MEIR, N. (2000). *Implications of Accelerated Sea-Level Rise (ASLR) for Belgium.* In: Proceeding of SURVAS Expert Workshop on European Vulnerability and Adaptation to impacts of Accelerated Sea-Level Rise (ASLR), Hamburg, Germany, 19th-21st June 2000.

LEBBE, L., VAN MEIR, N. & VIAENE, P. (2008). *Potential implications of sea-level rise for Belgium*. In: Journal of Coastal Research, vol. 24, Issue 2, pp. 358–366.

LEGGE 15 LUGLIO 2009, N. 94 *'Disposizioni in materia di sicurezza pubblica'*, pubblicata nella *Gazzetta Ufficiale* n. 170 del 24 luglio 2009 - Supplemento ordinario n. 128. URL: http://www.parlamento.it/parlam/leggi/09094l.htm

LEHTOLA, V. (1997). *Saamelaiset – historia, yhteiskunta, taide*. Kutannus-Puntsi, Jyväskylä.

LEICK, B. (2006). *Die Rolle grenzüberschreitender Unternehmenskooperationen im Grenzraum Südwestsachsen-Nordböhmen im Zuge der EU-Osterweiterung* (The role of cross-border business cooperation in the border area between Southwestern Saxony and northern Bohemia in the course of the EU Eastern enlargement). Dissertation submitted to the Department of Economics of the University of Mining, Freiberg.

LEICK, B. (2006a). *Grenzüberschreitende Verflechtungen sächsischer und tschechischer Unternehmen: Ein Beitrag zur Konvergenz der Grenzräume?* (Connections of Saxon and Czech businesses). In: Ifo Dresden Berichtet, Ifo Institut Dresden /2, pp. 20-25.

LEUNG, D.Y.C. & YANG, Y. (2012). *Wind energy development and its environmental impact: A review*. In: Renewable and Sustainable Energy Reviews, vol. 16, Issue 1, pp. 1031-1039.

LEVY, J. & LUSSAULT, M. (2003). *Dictionnaire de la géographie et de l'espace des sociétés*. Paris, Berlin.

LÉVY, B. & MATOS, R. (2002). *Transforming the Tourist Image of Geneva from a Leisure to a Business Destination and its Cultural Implications*. In: Wöber K. (ed) City Tourism. New York, Springer Verlag, pp. 241-250.

LEWS CASTLE COLLEGE (2012). *About Lews Castle College*. Website of the University of the Highlands and Islands. URL: http://www.lews.uhi.ac.uk/about

LEXER, W., FELDERER, A., GROTHMANN, T., HOLSTEN, A., KROPP, J., LEXER, M.J., PLESCHBERGER, W., ROITHMEIER, O., SCHERHAUFER, P., SÜSSENBACHER, E. & WALTER, C. (2010). *Concept and process design for participatory regional vulnerability assessments: lessons learnt from analysing model projects*. International conference 'Global Change and the World's Mountains', Perth, Scotland, 26-30 September 2010. URL: http://mri.scnatweb.ch/webcasts/perth-conference-26-30-september-2010-scotland-parallel-sessions-4

LIGIER, J-M. (1999). *L'arc jurassien, région d'Europe: Présent et avenir d'une identité.* Yens-sur-Morges, Editions Cabédita.

LIMAO, N. & VENABLES, A.J. (2001). *Infrastructure, geographical disadvantage, transport costs, and trade.* The World Bank Economic Review, 15, pp. 451–479.

LINDBLOM, P. & RASMUSSEN, R. (2008). *Bioenergy and Regional Development in the Nordic Countries.* Nordregio Working Paper 2008:5.

LINTZ, G. & SCHMUDE, K. (2005). *Germany: Tackling the East-West Divide*. In: MÜLLER, B., FINKA, M. & LINTZ, G. (eds.) Rise and Decline of Industry in Central and Eastern Europe. A Comparative Study of Cities and Regions in Eleven Countries. Berlin. (Central and Eastern European Development Studies - CEEDES), pp. 81-110.

LL&A, UNIVERSITE LIBRE DE BRUXELLES (DULBEA - Département d'économie appliquée) (2006). *Identification and estimation of the quantifiable effects of special handicaps specific to outermost regions and possible measures to reduce these handicaps*.

LOESENER, P. (2011). Phone Interview with Pierre Loesener, Secrétaire général de la Conférence TransJurassien on 29 September 2011.

LONG, R. (2011) *Legal aspects of ecosystem-based marine management in Europe*. Ocean Yearbook Vol. 26.

LONGINO, C.F. & BRADLEY, D.E. (2003). *A First Look at Retirement Migration Trends in 2000*. In: The Gerontologist, 43(6), pp. 904-907.

LOPEZ JIMENEZ, A. (coord.) (2007). *Comarcas, calidad de vida y vertebración del territorio. Logros y retos del proceso de*

comarcalización. FUNDEAR (Fundacion Economía Aragonesa). Libros FUNDEAR, Zaragoza.

LORENZEN, M. & ANDERSEN, K.V. (2007). *The Geography of the European Creative Class: A Rank-Size Analysis.* DRUID Working Paper No. 07-17. Aalborg & Copenhagen, Danish Research Unit for Industrial Dynamics.

LOTTIERI, C. & STAGNARO, C. (2007). *North and South, the Tragedy of Equalisation in Italy*. Istituto Bruno Leoni Turin. URL: http://www.fcpp.org/images/publications/FB049ItalianEqualizationMarch07draft.pdf

LOUIS LENGRAND & ASSOCIES (2001). *Impact des technologies de l'information et de la communication dans les régions ultrapériphériques de l'Union européenne*. Rapport pour la Commission européenne.

LOWE, P.J., MURDOCK, J. & WARD, N. (1995). *Networks in rural development beyond endogenous and exogenous models*. In: van der Ploeg, J.D. and van Dijk, G., eds. Beyond modernisation: the impact of endogenous development. Assen, Van Gorcum.

LUERS, A. L. (2005). *The surface of vulnerability: An analytical framework for examining environmental change*. In: Global Environmental Change, 15, pp. 214-223.

LUNDVALL B.-Å. & ARCHIBUGI, D. (Eds.) (2001). *The Globalizing Learning Economy.* Oxford University Press, Oxford.

MACLENNAN, J. (2011). Interview with Joyce MacLennan, Head of Financial and Business Services, Highlands and Islands Enterprise, on 16 November 2011.

MADSEN, P.T., WAHLBERG, M., TOUGAARD, J., LUCKE, K. & TYACK, P. (2006) *Wind turbine underwater noise and marine mammals: implications of current knowledge and data needs*. In: Mar Ecol Prog Ser., 309, pp. 279-295.

MAES, F. (2008). *The international legal framework for marine spatial planning*. In: Marine Policy vol. 32, pp. 797– 810.

MAGNOLLAY, J. (2011). *Le pâturage boisé , emblème de l'arc jurassien, est en péril.* Article in 24heures on **03.08.2011**. **URL :** http://www.24heures.ch/actu/serie/paturage-boise-embleme-arc-jurassien-peril-2011-08-03

MAGRIN, G., C. GAY GARCÍA, D. CRUZ CHOQUE, J.C. GIMÉNEZ, A.R. MORENO, G.J. NAGY, C. NOBRE AND A. VILLAMIZAR (2007). *Latin America. Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, pp. 581-615.

MALECKI, E.J. (2007). *Cities and regions competing in the global economy: knowledge and local development policies.* In: Environment and Planning C: Government and Policy 2007, volume 25, pp. 638 - 654.

MALYNOVSKA, O. (2006). *Trans-border Migration of the Population of the Ukrainian Western Frontier Areas in the Context of EU Enlargement*. In: Iglicka, K. (ed.), Transnational Migration-Dilemmas. Warsaw, Center for International Migrations.

MANCEBO, F. (2001). *Discontinuités, lisières et territoires. Tentative de généralisation de la notion de frontière et de compréhension des dynamiques frontalières.* Manuscrit auteur, publié dans « Sud-Ouest Européen », 10 (2001) p. 77-87.

MANDER, L., CUTTS, N.D., ALLEN, J. & MAZIK, K. (2007). *Assessing the development of newly created habitat for wintering estuarine birds*. In: Estuarine, Coastal and Shelf Science 75(3), pp. 163-174.

MAPA - MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACION (2004). *Castilla y León*. In: MAPA (ed.) Libro Blanco de la Agricultura y el Desarrollo Rural, MAPA, Madrid, pp. 469-522.

MAREAN, C.W., BAR-MATTHEWS, M., BERNATCHEZ, J., FISHER, E., GOLDBERG, P., HERRIES, A.I., JACOBS, Z., JERARDINO, A., KARKANAS, P., MINICHILLO, T., NILSSEN, P.J., THOMPSON, E., WATTS, I. & WILLIAMS, H.M. (2007). *Early human use of marine resources and pigment in South Africa during the Middle Pleistocene*. In: Nature, 449 7164, pp. 793–794.

MARINE INSTITUTE (2004). *A National Survey of Water-Based Leisure Activities in Ireland 2003*. URL: http://www.marine.ie/NR/rdonlyres/2A571A28-486D-4CA5-B697-7D796AD31AAA/0/SurveyofWaterBasedLeisure.pdf

MARMIER, S. (2011). Personal Interview with Sylvain Marmier, Fédération nationale des syndicats d'exploitants agricoles, on 27 September 2011.

MARTINEZ SANCHEZ-MATEO, H.S. (2010). *La estructura del transporte y sus implicaciones territoriales en Castilla-La Mancha*. Consejo Economico y Social de Castilla-La Mancha. Colección Tesis. N. 9.

MARTÍNEZ, M.L., INTRALAWAN, A., VÁZQUEZ, G., PÉREZ-MAQUEO, O., SUTTON, P. AND LANDGRAVE, R. (2006). *The coasts of our world: Ecological, economic and social importance.* In: Ecological Economics (63)2-3.

MATHEY, J. & STUTZRIEMER, S. (2010). *Landscape and nature protection in the Czech-German-Polish border region. Successes, deficits, perspectives of a mining and industrial area.* In: EUROPA XXI, vol. 20 (European Union external and internal borders – interactions and networks), pp. 145-160.

MATHEY, J. (2012). *Einleitung zum erreichten Entwicklungsstand in der Umweltqualität*. In: LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT (IOER): Project ‚Begrüntes Dreiländereck – Evaluation umweltschonender Sanierungs- und Entwicklungsprozesse im deutsch-polnisch-tschechischen Dreiländereck' (english title: Green Border Triangle – An Evaluation of Environmentally Benign Rehabilitation and Development Processes in the German-Polish-Czech Border Triangle), unpublished manuscript.

MCARTHUR, L. (2011). *Minister's Answer Undermines Justification For The Air Discount Scheme Cut*. Press Release of Liam McArthur, MSP for Orkney, of 15.06.2011. URL: http://www.liammcarthurmsp.org.uk/press-releases.php?detail=y&id=876

MCDOWELL, N. & SHIELDS, Y. (1998). *A Profile of Boating Activity on the Irish Sea*. Marine Resource Series, Marine Institute.

MEÄNMAA (2011). *Meänmaan yhistys*. URL: http://www.meanmaa.net/

MEE, L. (2010). *Between the Devil and the Deep Blue Sea: The coastal zone in an era of globalisation*. *Estuarine, Coastal and Shelf Science*.

MEHLUM, H. MOENE, K. & TORVIK, R. (2006). *Institutions and the Resource Curse*. In: The Economic Journal, Volume 116, Issue 508, pp. 1–20.

MEINER, A. (2010). *Integrated maritime policy for the European Union — consolidating coastal and marine information to support maritime spatial planning.* In: Journal of Coastal Conservation 14(1).

MENDELSOHN, R. (2000). *Efficient adaptation to climate change*. In: Climatic Change, 45, pp. 583–600.

MENDELSOHN, R., MORRISON, W., SCHLESINGER, M.E. & ANDRONOVA, N.G. (2000) *Countryspecific market impacts of climate change*. In: Climatic Change, 45, pp. 553-569.

MERTENS, T., DEWOLF, P., VERWAEST, T., TROUW, K., DE NOCKER, L., COUDERE, K. (2008a). *An Integrated Master Plan for Flanders Future Coastal Safety.* Proceedings of the 31st International Conference on Coastal Engineering, 31 August – 5 September 2008, Hamburg (Germany), pp. 4017-4028.

MERTENS, T., TROUW, K., BLEUKENS, K., DE NOCKER, L., COUDERE, K., SAUWER, C., DE SMEDT, P., LEWIS, C. & VERWAEST, T. (2008b). *SAFECoast: An Integrated Master Plan for Flanders Future Coastal Safety*. Coastal Division of the Flemish Community, Belgium.

MERTENS, T., VERWAEST, T., DELGADO, R., TROUW, K., DE NOCKER, L. (2010). *Coastal management and disaster planning on the basis of flood risk calculations*. In: Proceedings of the 32nd International Conference on Coastal Engineering, 30 June – 5 July 2010, Shanghai (China).

MIGRANTS AT SEA (2011). *Italy Criticises Malta Regarding Search and Rescue Response.* Blog entry of 8 April 2011. URL: http://migrantsatsea.wordpress.com/2011/04/08/italy-criticises-malta-regarding-search-and-rescue-response/

MILES, L., GRAINGER, A. & PHILLIPS, O. (2004). *The impact of global climate change on tropical forest biodiversity in Amazonia*. In: Global Ecol. Biogeogr., 13, pp. 553-565.

MILEVA, M. (2007). *Sustainable Agriculture and Rural Development in Mountain Regions (SARD – M) Project - Assessment of the strengths and weaknesses of mountain policies in the SEE Europe (Balkans): National Report for the Republic of Bulgaria.* FAO.

MILIJIĆ, S., MARIĆ, I., & BAKIĆ, O. (2010). *Approach to Identification and Development of Mountain Tourism Regions and Destinations in Serbia with special Reference to the Stara Planina Mountain*. In: SPATIUM International Review No. 22, pp. 19-28.

MILLARD, J. (2005). *Rural Areas in the Digital Economy*. In: D. Schmied (ed.), Winning and Losing - the Changing Geography of Europe's Rural Areas. Sage, pp. 90-123.

MILLENNIUM ECOSYSTEM ASSESSMENT (2005). *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC. URL: http://www.maweb.org/documents/document.356.aspx.pdf

MINISTRY OF AGRICULTURE AND FORESTRY (2003). *Ylä-Lapin metsä- ja porotalouden yhteensovittamista koskeva toimintaohjelma*. programme paper.

MINISTRY OF EMPLOYMENT AND THE ECONOMY OF FINLAND (2011). *Alueelliset talousnäkymät syksyllä 2011*. URL: http://www.temtoimialapalvelu.fi/files/1304/alueelliset_talousnakymat_2_2011_web.pdf

MINISTRY OF THE ENVIRONMENT OF THE CZECH REPUBLIC (2006). *State Environmental Policy of the Czech Republic 2004-2010*. Prague.

MIRWALDT, K. (2009). *The Small Projects Fund and Social Capital Formation in the Polish-German Border Region: An Initial Appraisal*. In: European Policy Research Papers, No 68, European Policies Research Centre, University of Strathclyde, Glasgow.

MISSION PARLEMENTAIRE SUR LA POLITIQUE TRANSFRONTALIERE, REPUBLIQUE FRANÇAISE (2010). *Rapport de mission : Les frontières, territoires de fractures, territoires de coutures*.

MKW WIRTSCHAFTSFORSCHUNG, EMPIRICA KFT (2009). *Scientific report on the mobility of cross-border workers within the EU-27/EEA/EFTA countries*. Final report.

MLADENOV, C. (2011). *Demographic Potential and Problems of the Settlements Network in the Mountains of Bulgaria*. In: G. Zhelezov, Sustainable Development in Mountain Regions: Southeastern Europe. Springer.

MOINE, A. (2003). *Evolution d'un Espace de Production Transfrontalier : Un ou des Systèmes ?* 6èmes Rencontres de Théo Quant. URL : http://hal.archives-ouvertes.fr/docs/00/13/12/39/PDF/Article.pdf

MOINE, A. (2003). *Systémogénèse d'un espace de production transfrontalier : le Jura Horloger*. In : Mappemonde 71 (2003.3). URL: http://www.mgm.fr/PUB/Mappemonde/M303/Moine.pdf

MOINE, A. (2011). Interview with Alexandre Moine, Professeur de Géographie, Laboratoire ThéMA UMR 6046 Université de Franche-Comté, on 30 September 2011.

MONFORT, P. (2009). *Territories with specific geographical features*. European Commission, Regional Policy Working Papers no. 2009-02.

MONTAGNES DU JURA (2006). *Ce que les élus doivent savoir : C'est quoi ? Ça sert à quoi ? Ça coûte combien ?* URL: http://www.montagnes-du-jura.fr/pro/var/ezwebin_site/storage/original/application/a9278b145010305a3fdd5b26e192e44a.pdf

MORITZ, M. (2008). *Spatial Effects of Open Borders on the Czech Labour Market.* (IAB Discussion Paper, 30/2008), Nürnberg.

MORRISSEY, A.K. & O'DONOGHUE, C. (in press). *The Irish marine economy and regional development.* In: Marine Policy, vol 36 (2012), pp 358–364.

MORRISSEY, A.K., O'DONOGHUE, C. & HYNES, S. (2011). *Quantifying the value of multi-sectoral marine commercial activity in Ireland*. In: Marine Policy, vol. 35, Issue 5, pp 721-727.

MOSS, R.H., BRENKERT, A.L. & MALONE, E.L. (2001). *Vulnerability to Climate Change: A Quantitative Approach*. Pacific Northwest National Laboratory, RichlandWashington.

MOT (2011). *The Longwy European Development Pole*. URL: http://www.espaces-transfrontaliers.org/en

MÜLLER, S., RUSTERHOLZ, H. & BAUR, B. (2006). *Effects of forestry practices on relict plant species on limestone cliffs in the northern Swiss Jura mountains.* In: Forest Ecology and Management 237 (2006), pp. 227–236.

MUNICH RE (2010). *Geo Risks Research*. NatCatSERVICE. URL: http://www.munichre.com/de/reinsurance/business/non-life/georisks/natcatservice/default.aspx

MVA CONSULTANCY (2010). *HITRANS Access to Hospitals*. Report prepared for HITRANS.

NAESS, L., THORSEN NORLAND, I., LAFFERTY, W. & AALL, C. (2006). *Data and processes linking vulnerability assessment to adaptation decision-making on climate change in Norway*. In: Global Environmental Change 16 (2), pp. 221-233.

NAESS, O. & HOLMAN, I. (2009). *Vulnerability Assessments in the Developed World: The UK and Norway.* In: Assessing Vulnerability to Global Environmental Change. Making Research Useful for Adaptation, Decision Making and Policy, edited by A. G. Patt, D. Schröter, R. J. T. Klein and A. C. de la Vega-Leindert. London, Earthscan, pp. 41-78.

NAIRN, V. (2007). *Broadband/ICT and its wider uses.* The Highland Council.

NAKICENOVIC, N. & SWART, R. (eds.) (2000). *Emissions Scenarios*. Cambridge, Cambridge University Press.

NEGROPONTE, N. (1995). *Being Digital*. Vintage Books, New York.

NELISSEN, E. & NEVALA, A.M. (2006). *An exhaustive analysis of employment trends in all sectors related to sea or using sea resources. Country Report – Belgium*. ECOTEC Research and Consulting.

NELSON, R. et al. (2011). *Border Security in a Time of Transformation. Two International Case Studies—Poland and India*. URL: http://csis.org/files/publication/100715_Nelson_BorderSecurity_web.pdf

NEWRLY, P. (2002). *Transnationaler Regionalismus: Die grenzüberschreitende Zusammenarbeit am Oberrhein – ein Beispiel für die Fortentwicklung der europäischen Integration?* Münster-Hamburg-London.

NICHOLLS, R.J., P.P. WONG, V.R. BURKETT, J.O. CODIGNOTTO, J.E. HAY, R.F. MCLEAN, S. RAGOONADEN & C.D. WOODROFFE (2007). *Coastal systems and low-lying areas*. In: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, pp. 315-356.

NICK FORREST ASSOCIATES LTD, THE SCOTTISH INSTITUTE OF SUSTAINABLE TECHNOLOGY (SISTECH), BLACK & VEATCH LTD. (2008). *Scottish Hydropower Resource Study: Final Report.* Study commissioned by the Scottish Government through the Hydro Sub Group of the Forum for Renewable Energy Development in Scotland (FHSG).

NILSSON, B. (2010). *Ideology, environment and forced relocation: Kiruna - a town on the move*. In: European Urban and Regional Studies, vol. 17 no. 4, pp. 433-442.

NORDIC WORKING GROUP ON GLOBALISATION AND CROSS-BORDER COOPERATION (2010). *Nordic Cross-border Cooperation Committees and Cross-border Authority Integration*. Nordregio Electronic Working Paper 2010:3. Stockholm. URL: http://www.nordregio.se/en/Publications/Publications-2010/Nordic-Cross-border-Cooperation-Committees-and-Cross-border-Authority-Integration/

NORDREGIO (2004). *Analysis of mountain areas in EU Member States, acceding and other European countries.* Report prepared for the European Commission. Stockholm, Nordregio.

NORRIS, M., PARIS, C. & WINSTON, N. (2010). *Second homes within Irish Housing Booms and Busts: North-South Comparisons, Contrasts and Debates Holiday*. Environment and Planning C: Government and Policy, vol. 28, Issue 4, pp. 666-680, Pion Ltd.

NORTHLAND (2011). *Development Projects*. URL: HTTP://WWW.NORTHLAND.EU/S/KAUNISVAARA.ASP

NRK (2010). *Millioner til liten nytte*. URL: http://www.nrk.no/kanal/nrk_sapmi/1.7340752.

NRK (2011). *Drømmen om Ishavsbanen brister*. URL: http://nrk.no/nyheter/distrikt/troms_og_finnmark/1.7808299

NSD (2012). *Norrbotten behöver inte räddas*. URL: http://www.nsd.se/nyheter/artikel.aspx?ArticleId=6688448

NYTTBREDBÅND.NO (2011). *Bredbånd i kommuner*. URL: http://www.nyttbredband.no/kommune/bredband-k%C3%A5fjord

O'HAGAN, A.M., BALLINGER, R., BALL I. & SCHRIVERS, J. (2005). Corepoint: European Legislation And Policies With Implications For Coastal Management.

OBSERVATOIRE INTERREGIONAL DU MARCHÉ DE L'EMPLOI (2007). *Situation du marché de l'emploi dans la Grande Région.* 5th Report. Saarbrücken, INFO-Institute.

OBSERVATOIRE INTERREGIONAL DU MARCHÉ DE L'EMPLOI (2010). *Situation du marché de l'emploi dans la Grande Région.* 7th Report. Saarbrücken: INFO-Institute.

OBSERVATOIRE STATISTIQUE TRANSFRONTALIER (2011). *Carte du territoire observé*. URL: http://www.statregio-francosuisse.net/telechargements/cartes_transfrontalier/territoires.html

OCSTAT (2008). *Le secteur bancaire à Genève*. In: Coup d'Oeil 36.

OCSTAT (2010). *Les frontaliers à Genève. 1er semester 2010*. URL: http://www.ge.ch/statistique/tel/publications/2010/tableaux_bord/trav_frontaliers/tb-tf-s1-2010.pdf

OCSTAT (2011). *Statistiques cantonales*. URL: http://www.ge.ch/statistique/domaines/03/03_05/tableaux.asp#8

ODE VLAANDEREN (2008). *Wind Energy in Flanders*. Proceedings of the European Wind Energy Conference (EWEC) 2008 Conference, Brussels.

ODZIEMCZYK, A. (2006). *Deutsch-tschechische Kooperationsnetzwerke – Eine interkulturelle Betrachtung* (German-Czech cooperation networks: an intercultural perspective). In: HOLEČKOVÁ, R., NEUBERT, A. & STEGER, TH. (eds.) Sächsisch-tschechische Unternehmenskooperation. Probleme und Chancen (Saxon-Czech business cooperation: problems and opportunities), Munich & Mering, Rainer Hampp Verlag, pp. 55-65.

OECD (2002). *Measuring the Information Economy*. Paris, Organisation for Economic Co Operation and Development.

OECD (2007). *Climate Change in the European Alps - Adapting Winter Tourism and Natural Hazards Management.* Organisation for Economic Cooperation and Development.

OECD (2007). *OECD Territorial Reviews, Luxembourg*.

OFEV - OFFICE FÉDÉRAL DE L'ENVIRONNEMENT (2010). *Jahrbuch Wald und Holz 2010 / Annuaire La forêt et le bois 2010*. URL: http://www.bafu.admin.ch/publikationen/publikation/01578/index.html?lang=fr

OFFICE FEDERAL DE L'INDUSTRIE, DES ARTS ET METIERS ET DU TRAVAIL (OFIAMT) (1956). *Mesures de la Confédération en faveur des populations montagnardes*. Berne, Ofiamt.

OFFICES STATISTIQUES DE LA GRANDE RÉGION (2011). *Structure de la population.* URL: http://www.grande region.lu/eportal/pages/HomeTemplate.aspx

OFFSHORE WIND INDUSTRY GROUP - OWIG (2010). *Scotland's Offshore Wind Route Map - Developing Scotland's Offshore Wind Industry to 2020.*

O'HAGAN, A.M. & COOPER, J.A.G. (2001). *Extant Legal and Jurisdictional Constraints on Irish Coastal Management.* In: Coastal Management, 29. pp. 73-90.

OKRASKA, E. (2005). *Poland: Redevelopment Strategies at Different Levels*. In: MÜLLER, B., FINKA, M. & LINTZ, G. (eds.) Rise and Decline of Industry in Central and Eastern Europe. A Comparative Study of Cities and Regions in Eleven Countries. Berlin. (Central and Eastern European Development Studies - CEEDES), pp. 155-178.

OLMA, N. (2010). *The Polish-Ukrainian Special Partnership 1990 – 2010*. Athens.

Operational Programme Canary Islands 2007-2013, ERDF. Programme for Community assistance from the European Regional Development Fund (ERDF) under the 'Regional competitiveness and employment' objective in the Autonomous Community of the Canary Islands. URL: http://www.gobiernodecanarias.es/hacienda/media/PROGRAMA%20OPERATIVO%20%20FEDER%20CANARIAS%202007-2013_tcm15-4462.pdf

Operational Programme 'Sicily'. ERDF regional operational programme for Sicily 2007-2013. URL: http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=IT&gv_reg=ALL&gv_PGM=1044&gv_defL=7&LAN=7

ORKNEY ISLANDS COUNCIL (2011). *Councils Team Up On Air Discount Scheme Concerns*. Website of Orkney Islands Council. URL: http://www.orkney.gov.uk/Default.aspx.LocID-0cznew0ol.RefLocID-0cz00d.Lang-EN.htm

OSBERGHAUS, D. & REIF, C. (2010). *Total Costs and Budgetary Effects of Adaptation to Climate Change: An Assessment for the European Union*. Discussion Paper, no. 10-046, Mannheim, Centre for European Economic Research. URL: ftp://ftp.zew.de/pub/zew-docs/dp/dp10046.pdf

OSE - OBSERVATORY ON SUSTAINABILITY IN SPAIN (2009). Sustainability in Spain 2009: Integrated assessment atlas (2009). Universidad de Alcalá.

OSE - OBSERVATORY ON SUSTAINABILITY IN SPAIN (2010). *Sostenibilidad en España 2009.* URL: http://www.sostenibilidad-es.org/sites/default/files/_Informes/anuales/2009/sostenibilidad_2009.pdf

OSE - OBSERVATORY ON SUSTAINABILITY IN SPAIN (2011). Sostenibilidad en España 2010. URL : http://www.sostenibilidad-es.org/sites/default/files/_Informes/anuales/2010/sostenibilidad_2010.pdf

OSPAR COMMISSION (2000). *Quality Status Report 2000, Region II – Greater North Sea*. OSPAR Commission, London.

OSTAJ - OBSERVATOIRE STATISTIQUE TRANSFRONTALIER DE L'ARC JURASSIEN (2010). *Population et logement*. URL: http://www.ostaj.org/uploads/media/OSTAJ_PopLogment_2010.06.30.pdf

OSTAJ - OBSERVATOIRE STATISTIQUE TRANSFRONTALIER DE L'ARC JURASSIEN (2010). *Économie de l'Arc Jurassien: Évolutions récentes*. URL: http://www.ostaj.org/uploads/media/EconomieAJ_01.09.2010.pdf

OSTAJ- OBSERVATOIRE STATISTIQUE TRANSFRONTALIER DE L'ARC JURASSIEN (2009). *Une comparaison des salaires entre la Franche-Comté et l'Arc jurassien suisse*. URL : http://www.conference-

transjurassienne.org/fileadmin/Docs_groupes_de_travail/OSTAJ/OSTAJ_salaires2009_01.pdf

OSWALT, P. & RIENIETS, T. (2006a). *Atlas of shrinking cities (atlas der shrumpfenden städte)*.

OSWALT, P. (2006b). *Shrinking cities; volume 2: interventions*. Ostfildern, Hatje Cantz Verlag.

OUTER HEBRIDES COMMUNITY PLANNING PARTNERSHIP (n.d.). *Community Planning in the Outer Hebrides.* URL: http://www.ohcpp.org.uk/index.php?option=com_content&view=article&id=74&Itemid=199

PACHAURI, R.K. & REISINGER, A. (Eds.) (2007). *Synthesis Report: Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. IPCC, Geneva.

Palermo: rientra sciopero selvaggio autisti trasporto pubblico. Article on Tiscali Sicilia of 10 August 2011. URL: http://notizie.tiscali.it/regioni/sicilia/feeds/11/08/10/t_16_02_ADN20110810194251.html?sicilia

PANTEIA (2010). *Ex-Post Evaluation of the INTERREG 2000-2006 Community Initiative funded by the Regional Development Fund. Final Report to the European Commission DG Regio.* Zoetermeer.

PAPAZOVA, N. (2008). *Bulgarian-Serbian Cross-Border Mountain West Stara Planina*. Assignment in the framework of the course "Managing Sustainable Mountain Development" at Perth College, University of the Highlands and Islands.

PAQUÉ, K.-H. (2010). *Wo stehen Ostdeutschland und Mitteleuropa heute? Bemerkungen zu Messung und Vergleich der Produktivität* (Where are East Germany and Central Europe today? observations on the measurement and comparability of productivity). In: INSTITUT FÜR WIRTSCHAFTSFORSCHUNG HALLE (IWH) 20 Jahre Deutsche Einheit. Von der Transformation zur europäischen Integration. (Twenty years of German unification: The transformation to European integration), Conference book. IWH special issue 3/2010. Halle (Saale), pp. 169-182.

PARKSTAD LIMBURG (2009). *Herstructureringsvisie voor de woningvoorraad Parkstad Limburg*. Heerlen, Parkstad Limburg.

PARKSTADMONITOR (2010). *Parkstad Limburg in cijfers*. Heerlen, Parkstad Limburg. URL: http://parkstad-limburg.buurtmonitor.nl

PARRENO CASTELLANO, J. M. (2008). *Turismo sostenible y diversificacion de la oferta en las islas Canarias (Espana)* (Sustainable tourism and offer diversification in the Canary Islands, Spain). In: Études caribéennes, April-August 2008. URL: http://etudescaribeennes.revues.org/1343

PARRY, M., ARNELL, N., BERRY, P., DODMAN, D., FANKHAUSER, S., HOPE, C., KOVATS, S., NICHOLLS, R., SATTERTHWAITE, D., TIFFIN, R. & WHEELER, T. (2009). *Assessing the Costs of Adaptation to Climate Change: A Review of the UNFCCC and Other Recent Estimates*.

London, International Institute for Environment and Development and Grantham Institute for Climate Change.

PARRY, M.L., CANZIANI, O.F., PALUTIKOF, J.P. et al. (2007). *Technical Summary*. In: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, pp. 23-78.

PARSONS, E., WARBURTON, C., WOODS-BALLARD, A., HUGHES, A., & JOHNSTON, P. (2003). *The value of conserving whales: the impacts of cetacean-related tourism on the economy of rural West Scotland*. In: Aquatic Conservation: Marine and Freshwater Ecosystems 13 , pp. 397-415.

PATT, A., SCHRÖTER, D., DE LA VEGA LEINERT, A.C. & KLEIN, R.J.T. (2009). *Vulnerability Research and Assessment to Support Adaptation and Mitigation: Common Themes from the Diversity of Approaches*. In: PATT, A., SCHRÖTER, D., KLEIN, R.J.T. & DE LA VEGA LEINERT, A.C. (eds.) Assessing Vulnerability to Global Environmental Change: Making Research Useful for Adaptation Decision Making and Policy. London, Earthscan.

PAVIS, S., PLATT, S. & HUBBARD, G. (2000). *Social Exclusion and Young People In Rural Scotland*. Report No 210 produced for The Joseph Rowntree Foundation.

PEARCE-HIGGINS, J.W. (2011). *How ecological science can help manage the effects of climate change: A case study of upland birds*. In: Marrs, S.J., Foster, S., Hendrie, C., Mackey, E.C., & Thompson, D.B.A. (eds.) The Changing Nature of Scotland. TSO Scotland, Edinburgh, pp. 397-414.

PENCK, M., BROPHY, J. & NASH, R. (2009). *Implications for the natural heritage of Ireland's coast and inland waterways.* In: KELLY, B. & STACK, M. (eds.) Climate Change, Heritage and Tourism: Implications for Ireland's Coast and Inland Waterways. The Heritage Council of Ireland Series. An Chomhairle Oidhreachta/ the Heritage Council.

PICHLER, V. & SOROKOVA, M. (2005). *Viliam and Magdalena: Utilisation of natural forests for ecotourism: matching goals and reality*. In: For. Snow Landsc. Res. 79, ½. Pp. 185–194.

PINILLA, V. & SAEZ, L.A. (2009). *Tendencias recientes en la evolución de la población de las comarcas aragonesas: el problema de las comarcas demográficamente regresivas. 2000-2007*. Centro de Estudios sobre la Despoblacion y Desarrollo en Areas Rurales (CEDDAR) and Fundacion de Economía Aragonesa (FUNDEAR). Rolde de Estudios Aragoneses. Zaragoza.

PINILLA, V., AYUDA, M.I. & SAEZ, L.A. (2008). *Rural depopulation and the migration turnaround in Mediterranean Western Europe: A case study of Aragon*. In: Journal of Rural and Community Development, 3, 1, 2008, pp. 1-22.

PINNEGAR, J.K., CHEUNG, W.W.L. & HEATH, M. (2010). *Fisheries*. In: Annual Report Card 2010-11, Science Review. Marine Climate Change Impacts Partnership.

PINOA, J. & MARULLB, J. (2012). *Ecological networks: Are they enough for connectivity conservation? A case study in the Barcelona Metropolitan Region (NE Spain).* In: Land Use Policy 29, pp. 684–690.

PKP POLSKIE LINIE KOLEJOWE S.A. (2011). *Interaktywna mapa modernizacji linii kolejowych.* URL: http://www.plk-inwestycje.pl/index.php?id=9&L=2

Plan Eolico de Castilla La Mancha (2010). URL : http://www.jccm.es/web/es/CastillaLaMancha/index/plan1212700430333pl/1193043192499.html

PLAN MINER - Plan de la Minería 2006-2012. URL : http://gobierno.aragon.es/Temas/Minas/Subtemas/PlanMiner/ci.01_Plan_MINER.detalleTema

PNR JURA VAUDOIS (2011). *Charte: Section B.: Territoire et stratégies 2013-2022.* PNR Jura vaudois, St-George.

POLICY RESEARCH CORPORATION (2009). *The economics of climate change adaptation in EU coastal areas. Country overview and assessment: Outermost regions.* Study done on behalf of the European Commission, Directorate General for Maritime Affairs and Fisheries. URL: http://ec.europa.eu/maritimeaffairs/climate_change/outermost_regions_en.pdf

POLISH-ONLINE.COM (2011). *Grenzübergänge nach Polen.* URL: http://www.polish-online.com/polen/reisetipps/grenzuebergaenge.php

POMMER, C. (2005). *Region Erzgebirge - SWOT-Analyse für den Bereich „Umwelt"' Nutzung von grenzüberschreitenden natürlichen Ressourcen als Entwicklungspotential* (Analysis for the environmental area). In: RESNAFRONT. SWOT-Analyse. pp. 5-39.

PORTAIL DE LA GRANDE RÉGION (2011). *Carte du réseau des Parcs Naturels de la Grande Région.* URL *:* http://www.granderegion.net/pictures/photos/shared/autres-cooperations interregionales/RESEAU_PARCS_NATURELS_CARTE.pdf.

Portal de las Comarcas de Aragón (2011). URL : http://www.comarcas.es/index.php/mod.servicios/mem.listado/relcategoria.10/chk.ab022f1134edcea05fde0b209371172a.html

PRAGUEMONITOR (2010). *Many Romani children fail to go on to higher education.* Online article on Prague Monitor on 30 December 2010. URL: http://praguemonitor.com/2010/12/30/many-romani-children-fail-go-higher-education

PRESIDENCIA DEL GOBIERNO DE ESPAÑA (2005). *Plan de Actuación Específico para Teruel*. Gobierno de España, Madrid.

PRESIDENCIA DEL GOBIERNO DE ESPAÑA (2005). *Plan de Actuación Específico para Soria.* Gobierno de España, Madrid.

PRESIDENZA DELLA REGIONE SICILIA, DIPARTIMENTO REGIONALE DELLA PROGRAMMAZIONE. *Documento Unitario di Programmazione della Politica Regionale 2007-2013*. URL:

http://194.243.81.173/Portals/0/Altri%20documenti/DUP_Sicilia_2007_2013_Delibera_n_206_2010.pdf

PREUSSCHER, C. (2006). *Euroregionen haben sie sich bewährt? Funktionen, Aufgaben und Perspektiven* (Euroregions proven themselves? Functions, tasks and perspectives). In: JANSSEN, G. (ed.) Europäische Verbünde für territoriale Zusammenarbeit (EVTZ). (European Association for territorial cooperation) Berlin. LIT Verlag, pp. 79-84.

PRICE, M.F. (1999). *Cooperation in the European mountains 1: The Alps.* Cambridge and Gland, IUCN.

PRICE, M.F., DIXON, B., WARREN, C.R. & MACPHERSON, A. (2002). *Scotland's Mountains: Key Issues for their Future Management.* Scottish Natural Heritage, Battleby.

PRICE, M.F., LYSENKO, I. & GLØERSEN, E. (2004). *Delineating Europe's mountains*. In: Revue de Géographie Alpine, 92, 2, pp. 61-86.

PRODES - Promotion of Renewable Energies for Water Production through Desalination. *Example of project development opportunities in Greece, Italy, Spain and Portugal*. URL: http://www.prodes-project.org/fileadmin/Files/D5_2_Developemtn_Opportunities.pdf

Programa de actuación en las comarcas mineras 2008-2012. URL: http://www.ayudas.net/Programa_actuacion_comarcas_mineras_2008-8471BT1ERP15O2PQ.htm

PROGRAMME OPERATIONNEL DE COOPERATION TERRITORIALE EUROPEENNE INTERREG IV FRANCE-SUISSE 2007-2013. URL: http://www.europe-bourgogne.eu/engagement-europe/t-pointerreg-france-suisse.PDF

PROJET D'AGGLOMERATION (2007). *Projet d'agglomération franco-valdo-genevois*. Cahier annexe 1. Geneva.

PRUTSCH, A., GROTHMANN, T., SCHAUSER, I., OTTO, S. & MCCALLUM, S. (2010). *Guiding Principles for Adaptation to Climate Change in Europe*. ETC/ACC Technical Paper 2010/6, November 2010. Copenhagen, European Environment Agency.

PS PUBLIC SERVICE (2005). *Creating Communities of the Future*. Devolved Government Issue 10. Article on PublicService.co.uk on *13 December 2005. URL:* http://m.publicservice.co.uk/article.asp?publication=Devolved%20Government&id=202&content_name=ICT&article=5215

PUCHALA, P. (2011). *Feasibility check of the Tatra National Park's potential for PAN Parks certification.*

PYLYNSKYI, Y. (2008). *Undocumented migration, Counting the Uncountable, Country Report – Ukraine*. Athens, ELIAMEP.

QUINN, B. (2004). *Dwelling through multiple places: a case study of second home ownership in Ireland.* pp. 45 – 59, in, Hall, C.M. and Muller, D.K., Tourism Mobility and Second Homes. Between Elite Landscapes and Common Ground, Channel View Publications, Clevedon.

RAI (2007). *Restaurant Association of Ireland - Annual Report 2007*.

RASMUSSEN J. *Islands: Centres hubs, spheres and … - metaphysical islandscapes in social theory*. URL: http://www.keg.lu.se/IGUislands/J_Rasmussen_paper_draft.pdf

RAUSCHMAYER, F., PAAVOLA, J. & WITTMER, H. (2009). *European Governance of Natural Resources and Participation in a Multi-Level Context: An Editorial*. In: Environmental Policy and Government, 19, pp. 141-147.

REC - THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE (2007). *Trans-Boundary Cooperation through the management of shared natural resources - Experience and lessons from six years of work in three pilot areas – the Neretva Delta, Skadar/Shkodra Lake and West Stara Planina.* In: Second Preparatory Conference to the 15th OSCE Economic and Environmental Forum, Zaragoza, Spain, 12-13 March 2007.

REC - THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE. (n.d.). *West Stara Planina Activities*. URL : http://archive.rec.org/REC/Programs/REREP/Biodiversity/planina/PlaninaActivities.html

RECAÑO, J. (2004). *Las migraciones internas de retorno en España durante la primera mitad de la década de los noventa; Implicaciones demográficas y territoriales*. Papers de Demografia, 243. Centre d'Estudis Demogràfics. Barcelona.

REDDING, S. & VENABLES, A. J. (2004). *Economic geography and international inequality*. In: Journal of International Economics 62, pp. 53–82.

REGERINGSKANSLIET (2011). *En nationell bredbandsstrategi*. URL: http://www.sweden.gov.se/sb/d/12313

REGIONAL ENVIRONMENTAL RECONSTRUCTION PROGRAM (2003). *Project REReP 4.3.23: "Promotion of networks and exchange of experience between stakeholders in 3 crossborder sites: Neretva Delta, Skadar Lake and West Stara Planina"*. 6th REReP TF Meeting – 7th November 2003, Brussels.

REGIONE SICILIA (2001). *Primo Rapporto sul Turismo in Sicilia*. URL: http://pti.regione.sicilia.it/portal/page/portal/PIR_PORTALE/PIR_LaStrutturaRegionale/PIR_TurismoSportSpettacolo/PIR_Turismo/PIR_6584964.046479105/sintesi.pdf

REGIONE SICILIANA. *Analisi della Situazione Economica della Sicilia 1999-2003.* URL: http://194.243.81.173/Portals/0/Altri%20documenti/Analisi_SES.pdf

REGIONE SICILIANA. ***Piano Energetico Ambientale Regione Siciliana (P.E.A.R.S.).*** **URL:** http://pti.regione.sicilia.it/portal/page/portal/PIR_PORTALE/PIR_LaNuovaStrutturaRegionale/PIR_AssEnergia/PIR_DipEnergia/PIR_PianoEnergeticoAmbientaledellaRegioneSicilianaPEARS

REICHMAN, S. & RATTI, R. (1993). *Theory and practice of transborder cooperation.* Basel/Frankfurt am Main.

REITEL, B. & MOINE, A. (2005). *Entre Rhin et Jura, des espaces transfrontaliers où émergent des dissymétries spatiales*. In: Mappemonde 77 (2005.1). URL: http://mappemonde.mgm.fr/num5/articles/art05101.pdf

RENNIE, F. & MASON, R. (2005). *Bits or Baubles: The opportunities for broadband to add value to education and learning*. Scottish Affairs No. 53, pp. 31-47.

REPUBLIQUE ET CANTON DE NEUCHATEL, DEPARTEMENT DE L'ECONOMIE: *Programme de mise en oeuvre de la loi fédérale sur la politique régionale pour la période 2008-2011*. URL: http://www.regiosuisse.ch/telechargement/docs/grundlagen-fondements-basi/umsetzungsprogramme-programmes-de-mise-en-oeuvre/up-ne-2008-2011

REPUBLIQUE ET CANTON DU JURA (2011). *Utilisation du bois*. URL: http://www.jura.ch/DEE/ENV/Forets/Filiere-Foret-Bois/Utilisation-du-bois.html

RIBEIRO, M., LOSENNO, C., DWORAK, T., MASSEY, E., SWART, R., BENZIE, M. & LAASER, C. (2009). *Design of guidelines for the elaboration of Regional Climate Change Adaptation Strategies*. Vienna, Ecologic Institute.

RICARD, D. (2009). *Qualité des produits et maîtrise des marchés : le cas des fromages et des AOC jurassiennes.* In: Norois 2009/1 - n° 210, pp. 91-105. URL: http://www.cairn.info/revue-norois-2009-1-page-91.htm

RICHARDSON, R., & BELT, V. (2001). *Saved by the Bell? Call Centres and Economic Development in Less Favoured Regions*. In: Economic and Industrial Democracy22, pp. 67-98.

RICO GONZALEZ, M. & GÓMEZ GARCÍA, JM. (2003). *Mujeres y despoblación en el medio rural de Castilla y León.* AGER, 3. 2003. Revista de Estudios sobre Despoblación y Desarrollo Rural. Pp. 151-184. Centro de Estudios sobre la Despoblacion y Desarrollo en Areas Rurales (CEDDAR). Zaragoza, Spain.

RITCHIE, H. & ELLIS, G. (2010) *A system that works for the sea? Exploring Stakeholder Engagement in Marine Spatial Planning*. In: Journal of Environmental Management and Planning, vol. 53, Issue 6, pp. 701-723.

RKTL (2011). *Game and fisheries research Finland*. URL: http://www.rktl.fi/

ROBERTS, A. et al. (2010). *Transnational comparison: A retrospective study on e-health in sparsely populated areas of the northern periphery.* In: Telemed J E Health 16(10), pp. 1053-9.

ROBERTS, C.M., GELL, F.R. & HAWKINS, J.P. (2003). *Protecting nationally important marine areas in the Irish Sea Pilot Project region*. University of York.

ROBERTS, C.M., GELL, F.R. & HAWKINS, J.P. (2003). *Protecting nationally important marine areas in the Irish Sea Pilot Project region*. University of York.

ROBERTS, D. & THOMSON, K.J. (2000). *Sources of Structural Change in Peripheral Rural Areas: The Case of the Western Isles, 1988/89 to 1997.* Taylor and Francis Journals, Regional Studies.

ROCH, I. (2009). *Entwicklungsphasen im sächsisch-böhmisch-schlesischen Dreiländereck* (Development phases in the Saxon-Bohemian-Silesian three corners area). In: GEOSCAPE, vol. 4, Suppl. pp. 9-36.

ROCH, I. (2012). *Beschreibung des Untersuchungsgebiets*. In: LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT (IOER): Project ‚Begrüntes Dreiländereck – Evaluation umweltschonender Sanierungs- und Entwicklungsprozesse im deutsch-polnisch-tschechischen Dreiländereck' (english title: Green Border Triangle – An Evaluation of Environmentally Benign Rehabilitation and Development Processes in the German-Polish-Czech Border Triangle), unpublished manuscript.

RODRIGUEZ M.C., GARCIA E. & POLEO A. (2005). *High Speed crafts in the Canary Islands*. In: Journal of maritime research, Vol. II. No. 2, pp. 81-91.

RODRIGUEZ, J.-P. (2009). *Sustainable Initiatives in Marginal Rural Areas Of Serbia: A Case Study of Dimitrovgrad Municipality.* Budapest, Agroinform Publishing House.

RODRIGUEZ, V. (2001). *Tourism as a recruiting post for retirement migration*. In: Tourism Geographies 3(1), pp. 52–63.

ROEKAERTS, M. (2002). *The Biogeographical Regions Map of Europe: Basic principles of its creation and overview of its development.* Copenhagen, European Environment Agency.

ROMANO, M. (2005). *Education in Sicily*. Best of Sicily Magazine. URL: http://www.bestofsicily.com/mag/art181.htm

ROSS, C. & MCKINNON, K. (2011). Phone Interview with Claire Ross and Kateryna McKinnon, Highlands and Islands Enterprise, on 2 November 2011.

ROSS, I. (2011). Personal Interview with Ian Ross, Councillor, the Highland Council, on 27 September 2011.

ROYO GRACIA, JF. (2007). *Turismo deportivo en la provincial de Teruel.* STVDIVM. Revista de Humanidades, 13. Pp. 229-255.

ROYO, G.J.F. (2007). *Turismo deportivo en la provincial de Teruel*. STVDIVM. Revista de Humanidades, 13, pp. 229-255.

ROZENBLAT, C., & CICILLE, P. (2003). *Les villes européennes. Analyse comparative*. Montpellier, Maison de la Géographie.

RSPB SCOTLAND, WWF SCOTLAND & FOE SCOTLAND (2006). *The Power of Scotland: Cutting Carbon with Scotland's Renewable Energy*.

RUBIO TERRADO, P. & SANZ HERNDANDEZ, A. (coord) (2007). *Investigación aplicada al desarrollo de territorios rurales frágiles*. Prensas Universitarias de Zaragoza. FEDER. Diputación Provincial de Teruel. Revital. Universidad de Zaragoza.

RUDOLF, B. (2011). *Zu wenig Wasser. Tschechien gehört zu den Ländern mit den niedrigsten Grundwasservorkommen Europas* (Too little water: the Czech Republic is one of the countries with the lowest supplies of groundwater in Europe). In: Prager Zeitung, January 27, 2011.

RUFFINI, F.V., STREIFENEDER, T. & EISELT, B. (eds.) (2006). *Implementing an International Convention: An Approach for the*

Delimitation of the Carpathian Convention Area. Bolzano, European Academy.

RUFFRAY, S. DE & HAMEZ, G. (2009). *La dimension sociale de la cohésion territoriale. L'exemple de l'accessibilité aux maternités dans la Grande Région.* In: L'Espace Géographique 38(4), pp. 328-344.

SAARI, S. (2006). *Balancing between Inclusion and Exclusion: The EU´s Fight against Irregular Migration and Human Trafficking from Ukraine, Moldova and Russia.* Working Paper ´Challenge`. London School of Economics.

SÄCHSISCHE STAATSKANZLEI (2009). *Sachsen – die Fakten 2009* (Saxony – the facts 2009). SV Saxonia Verlag GmbH, Dresden.

SAGE, L. (2011). Phone Interview with Laurent Sage, Chambre de Commerce et d'Industrie, on 9 September 2011.

SALEHI-ISFAHANI, D. & MURPHY JR., R.D. (2007). *Labour Market Flexibility and Investment in Human Capital*. URL: http://www.filebox.vt.edu/users/salehi/creativity.pdf

SALOMON, I. (1998). *Technological Change and Social Forecasting: The Case of Telecommuting as a Travel Substitute*. Transport Research Part C 6, pp. 17-45.

SANTONOCITO, S.D. *Sustainable Tourism and Carrying Capacity in the Mediterranean Area Focus on Sicily*. 3rd IRT International Scientific Conference Vol.1. URL: http://www.arces.it/public/Pubblicazioni_Ricerche/Turismo_Relazionale/Irt_conference/Paper%20Book/Vol%201/Paper%20Book_Vol1_8.pdf

SANZ HERNANDEZ, M.A. (1998). *La explotación minera de Ojos Negros: repercusiones en la estructura social y en la cultura*. Teruel: Revista del Instituto de Estudios Turolenses, Vol. 86, Nº 2, 1998, pp. 157-192.

SASSEN, S. (1991). *The global city: New York, London, Tokyo*. Princeton, Princeton Univ.

SAXONY STATE STATISTICAL OFFICE (2009). *5. Regionalisierte Bevölkerungsprognose für den Freistaat Sachsen bis 2025, Stichtag 31.12.2008 (Variante 1).*

SAXONY STATE STATISTICAL OFFICE (2011). *Cross-border friendship database – Datenbank für grenzüberschreitende statistische Informationen, Tabellen und Zeitreihen zur Bevölkerung und Erwerbstätigkeit*. URL: www.statistik.sachsen.de

SAYRE, L. (2005). ***The EU's organic tiger*. Article on the website of the RODALE INSTITUTE of November 10, 2005. URL:** http://newfarm.rodaleinstitute.org/international/features/2005/1105/italy1/sayre.shtml

SCCIP (2010). *Local Climate Impacts Profile: Highland Council.*

SCHRÖTER, D., ACOSTA-MICHLIK, L., ARNELL, A.W., ARAÚJO, M.B., BADECK, F., BAKKER, M., BONDEAU, A., BUGMANN, H., CARTER, T., DE LA VEGA-LEINERT, A.C., ERHARD, M., ESPIÑEIRA, G.Z., EWERT, F., FRITSCH, U., FRIEDLINGSTEIN, P., GLENDINING, M., GRACIA,

C.A., HICKLER, T., HOUSE, J., HULME, M., KANKAANPÄÄ, S., KLEIN, R.J.T., KRUKENBERG, B., LAVOREL, S., LEEMANS, R., LINDNER, M., LISKI, J., METZGER, M.J., MEYER, J., MITCHELL, T., MOHREN, F., MORALES, P., MORENO, J.M., REGINSTER, I., REIDSMA, P., ROUNSEVELL, M., PLA, E., PLUIMERS, J., PRENTICE, I.C., PUSSINEN, A., SÁNCHEZ, A., SABATÉ, S., SITCH, S., SMITH, B., SMITH, J., SMITH, P., SYKES, M.T., THONICKE, K., THUILLER, W., TUCK, G., VAN DER WERF, G., VAYREDA, I., WATTENBACH, M., WILSON, D.F., WOODWARD, F.I., ZAEHLE, S., ZIERL, R., ZUDIN, S. & CRAMER, W. (2004). *ATEAM Final report. Section 5 and 6 and Annex 1 to 6*. Detailed report, related to overall project duration. Reporting period: 01.01.2001-30.06.2004.

SCHULER, M., DESSEMONTET, P., JEMELIN, C., JARNE, A., PASCHE, N., HAUG, W. (2007). *Atlas des mutations spatiales de la Suisse*. Zurich, NZZ Libro.

SCHULTZ, T.W. (1961). *Investment in Human Capital*. In: The American Economic Review, Vol.51 No.1. URL: http://www.ciefr.com/download/2009_02/09022516022200.pdf

SCOTT, J. & MATZEIT, S. (eds.) (2006). *EXLINEA "Lines of Exclusion as Arenas of Co-operation: Reconfiguring the External Boundaries of Europe – Policies, Practices, Perceptions",* FINAL PROJECT REPORT. URL: http://www.exlinea.comparative-research.net/fileadmin/user_upload/reports_and_publications/exlinea%20final%20report.pdf

SCOTTISH COUNCIL FOR VOLUNTARY ORGANISATIONS (2011). *Climate Change: How will vulnerable groups weather the storm*? Highlands & Islands Equality Forum.

SCOTTISH ENTERPRISE (2005). *Marine Renewable (Wave and Tidal) Opportunity Review.*

SCOTTISH ENTERPRISE (2010). *Innovation in Offshore Wind - support structures.*

SCOTTISH EXECUTIVE (2004). *The Economic Impact of Game and Coarse Angling in Scotland.*

SCOTTISH EXECUTIVE (2007). *Scottish Marine Renewable SEA - Environmental Report Section B: Marine Renewables - Resource and Technology.*

SCOTTISH EXECUTIVE (2007). *Scottish Marine Renewables SEA - Environmental Report Section A: Introduction, Background and Method.*

SCOTTISH GOVERNMENT (2007). *Energising the Outer Hebrides*. National Planning Framework 2008-12. Outer Hebrides Submission. URL: http://www.scotland.gov.uk/Resource/Doc/187960/0052049.pdf

SCOTTISH GOVERNMENT (2008). *Highlands and Islands Scotland: European Regional Development Fund 2007-2013: Structural Funds Operational Programme: Annex F: Summary of Environmental Situation.*

SCOTTISH GOVERNMENT (2008). *Highlands and Islands Scotland: European Regional Development Fund 2007-2013: Structural Funds Operational Programme: Socio-Economic Background.*

SCOTTISH GOVERNMENT (2008). *Review of the Air Discount Scheme.* Scottish Government Social Research.

SCOTTISH GOVERNMENT (2010). *Lewis wind farm*. News Release of 14/01/2010. URL: http://www.scotland.gov.uk/News/Releases/2010/01/14095411

SCOTTISH GOVERNMENT (2010). *Specification - Council Regulation (EC) No 510/2006 on protected geographical indications and protected designations of origin "Stornoway Black Pudding"*. URL: http://www.scotland.gov.uk/Publications/2010/12/08144650/2

SCOTTISH GOVERNMENT (2010). *Target for renewable energy now 80 per cent*. Press release on 23/09/2010. URL: http://www.scotland.gov.uk/News/Releases/2010/09/23134359

SCOTTISH GOVERNMENT (2011). *Developing High Nature Value Farming and Forestry Indicators for the Scotland Rural Development Programme*. Edinburgh.

SCOTTISH GOVERNMENT (2011). *Scotland's Digital Future: A Strategy for Scotland.*

SCOTTISH NATURAL HERITAGE (1995). *The Natural Heritage of Scotland - an Overview*. Mackey, E.C. (ed.). Scottish Natural Heritage, Perth.

SCOTTISH PARLIAMENT (2002). *Rural Tourism.* SPICe Briefing 02/92. Produced for the Enterprise and Lifelong Learning Committee.

SEAI – SUSTAINABLE ENERGY AUTHORITY OF IRELAND (2010). *Strategic Environmental Assessment (SEA) of the Offshore Renewable Energy Development Plan (OREDP) in the Republic of Ireland*. Environmental Report Volume 2: Main Report.

SEAI – SUSTAINABLE ENERGY AUTHORITY OF IRELAND (2011). *Assessment of the Irish Ports and Shipping Requirements for the Marine Renewable Energy Industry.* Prepared on behalf of the SEAI in cooperation with IMDO Ireland.

SEAI – SUSTAINABLE ENERGY AUTHORITY OF IRELAND (2011). *Assessment of the Irish Ports and Shipping Requirements for the Marine Renewable Energy Industry*. Prepared on behalf of the SEAI in cooperation with IMDO Ireland.

SEPA SCOTTISH ENVIRONMENT PROTECTION AGENCY (2008). *Changes in river flow variability in snow influenced catchments in Scotland.*

SERVILLO, L. (2010). *Territorial Cohesion Discourses: Hegemonic Strategic Concepts in European Spatial Planning*. In: Planning Theory & Practice, Vol. 11, No. 3, pp. 397-416.

SHUCKSMITH, M. & PHILIP, L. (2000). *Social Exclusion in Rural Areas: A Literature Review and Conceptual Framework*. Scottish Executive, Edinburgh.

SicilianelCuore.net (n.d.): *Aree protette.* Article on SicilianelCuore.net. URL: http://www.sicilianelcuore.net/aree-protette/

SICILIAPARCHI (2009). *Isolabella, esposto Wwf*. Notizia - 09 Ottobre 2009. URL: http://www.siciliaparchi.com/_newsArchivio.asp?idnews=4173

SIEGRIST, D., AUFDEREGGEN, M., LINTZMEYER, F., & SPIESS, H. (2007). *The Economic Potential of Regional Nature Parks in Switzerland: A Case Study of the Planned Regional Nature Parks in the Canton of Bern.* In: Ingo Mose (ed): Protected Areas and Regional Development in Europe. Ashgate Publishing, Aldershot.

SIMCO, N. & CAMPBELL, G. (2011). *Developing blended learning in higher education – a case study of the University of the Highlands and Islands*. In: Practitioner Research in Higher Education, Vol 5, No 1.

SIMMIE, J. & MARTIN, R. (2010). *The economic resilience of regions: towards an evolutionary approach*. In: Cambridge Journal of Regions, Economy and Society, 3, pp. 27-43.

SIMMONDS, M.P. & DOLMAN, S.J. (2007). *All at Sea: Renewable Energy Production in the Context of Marine Nature Conservation.* Proceedings of the ASCOBANS/ECS Workshop Off shore Windfarms and Marine Mammals: Impacts and Methodologies for Assessing Impacts. (Editor Evans, P.G.H) ECS Special Publication Series No. 49. Feb 2008.

SIMON FERNANDEZ, B., AIXALA PASTO, J., PEREY Y PEREZ, L. & SANAU VILLARROYA, J. (2009). *Efectos económicos de la energía eólica en Aragón (1996-2012*). Economía Aragonesa 56.

SIMON, P. & ACKER, D. (2009). *La place de la télémédecine dans l'organisation des soins.* Direction de l'Hospitalisation et de l'Organisation des Soins, Ministère de la Santé et des Sports. URL: http://www.sante.gouv.fr/IMG/pdf/Rapport_final_Telemedecine.pdf

SIMPSON, C. (2011). Phone Interview with Colin Simpson, Tourism Co-ordinator, The Highland Council, on 1 November 2011.

SKERRATT, S. (2010). *Hot Spots and Not Spots: Addressing Infrastructure and Service Provision through Combined Approaches in Rural Scotland*. In: Sustainability 2, pp. 1719-1741.

SKJÆRSETH, J.B. & WETTESTAD, J. (2002). *Understanding the Effectiveness of EU Environmental Policy: How Can Regime Analysis Contribute*? In: Environmental Politics, 11(3), pp. 99-120.

SKOWRONEK, E. & FURTAK, T. (2009). *Determinants of Change in the Landscape of the Polish-Ukrainian Borderland as exemplified by Rawa Roztocze*. In: Journal of Borderlands Studies, vol. 24, no. 2, pp. 106-122.

SLAVIK, J. (2010). *Entwicklungsphasen des deutsch-polnisch-tschechischen Grenzraums aus wirtschaftlicher, sozialer und Umweltsicht* (Development phases of the German-Polish-Czech border area from an economic, social and environmental perspective). In: GEOSCAPE vol. 5, Suppl., pp. 14-22.

SLAVÍK, J., MORAVEC, J., RYBOVÁ; K. & SLÁNSKÁ, V. (2007). *Begrüntes Dreiländereck – Entwicklung von Natur- und Landschaftsschutz* (Stand Anfang der 1990er Jahre bis heute). Internal materials for the IOER project „Begrüntes Dreiländereck" (english title: Green Border Triangle), unpublished manuscripts.

SMART CONSULTANCY (2010). *Highland Employer Coalition - Review Of Homeworking Pilot Project.* Report prepared for Highlands and Islands Enterprise, Vertex and Highland Employer Coalition.

SMEULDERS, E. & LATTEN, J. (2009). *De verborgen aantrekkingskracht van Parkstad Limburg.* In: J. Latten & S. Musterd (eds.), De nieuwe groei heet krimp; een perspectief voor Parkstad Limburg. The Hague, Nicis Institute, pp. 71 – 83.

SMILIES – SMALL MEDITERRANEAN INSULAR LIGHT INDUSTRIES ENHANCEMENT & SUPPORT. *Local Studies Sicily*. Project co-financed by ERDF. URL: http://www.regione.sicilia.it/cooperazione/print/doc/Sicily_Local_study.pdf

SMIT, B. & PILIFOSOVA, O. (2001). *Adaptation to climate change in the context of sustainable development and equity.* In: IPCC 2001: Climate Change 2001 - Impacts, Adaptation, and Vulnerability- Contribution of the Working Group II to the Third Assessment report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, pp. 877-912.

SMIT, B. & WANDEL, J. (2006). *Adaptation, adaptive capacity and vulnerability.* In: Global Environmental Change, 16, pp. 282-292.

SMITH, A. D. (1995). *Nations and Nationalism in a Global Era.* Cambridge.

SMITH, K. (2002). *Assessing the Economic Impacts of ICT*. STEP Report R-01, STEP Group, Oslo.

SMITH, K. (2006). *The outsiders: the European neighbourhood policy.* In: Balzacq, Thierry and Carrera, Sergio, (eds.) Security versus freedom? A challenge for Europe's future. Ashgate, Aldershot.

SMWA (1994). *Entwicklungs- und Handlungskonzept Euroregion Elbe/Labe* (Development and action concept for the Elbe Euroregion). Kommunalentwicklung Baden-Württemberg GmbH for the Saxon State Ministry for Economics and Labour.

SOHN, C. & STAMBOLIC, N. (2012). *Typology of border regions according to their urban potential.* CEPS/INSTEAD.

SOHN, C. & WALTHER, O. (2012). *Building a cross-border metropolitan region: the political stakes of scalar restructuring.* In: Sohn C. (ed.) Luxembourg: an emerging cross-border metropolitan region. Brussels, Peter Lang, pp. 265-278.

SOHN, C., REITEL, B. & WALTHER, O. (2009). *Cross-border metropolitan integration in Europe: the case of Luxembourg, Basel and Geneva*. In: Environment and Planning C: Government and Policy 27, pp. 922-939.

SOJA, W.E. (1999). *Postmetropolis Critical studies of cities and regions*. Blackwell publishers.

SOLSTEN, E. & MEDITZ, S.W. (1988). *Spain: A Country Study*. Washington, GPO for the Library of Congress. URL: http://countrystudies.us/spain/

SORIA YA! (2011). *La Numantrina*. La voz de Soria Ya! n.4 Primavera 2011. Soria.

SPEHN, E., RUDMANN-MAURER, K, KÖRNER, C. & MASELLI, D. (2010). *Mountain Biodiversity and Global Change*. GMBA-Diversitas, Basel.

SQUIRES, N. & MEO, N. (2010). *Mafia cash in on lucrative EU wind farm handouts - especially in Sicily.* Article on the Telegraph on 05 Sep 2010. URL: http://www.telegraph.co.uk/earth/energy/renewableenergy/7981737/Mafia-cash-in-on-lucrative-EU-wind-farm-handouts-especially-in-Sicily.html

STANKOV, U., STOJANOVIĆ, V., DRAGIĆ, V., & ARSENOVIĆ, D. (2011). *Ecotourism - An Alternative to Mass Tourism in Nature Park "Stara Planina*". In: Journal of the Geographical Institute "Jovan Cvijic" 61(1) , pp. 43-59.

STATE STATISTICS COMMITTEE OF UKRAINE (SSCU) (2009). *Ukrainian External Labour Migration.* Ukrainian Center for Social Reforms (UCSR), Kiev.

STATISTICS FINLAND: http://www.stat.fi/index.html

STATISTICS NORWAY: http://www.ssb.no/

STATISTICS SWEDEN: http://www.scb.se/

STATISTISCHES LANDESAMT DES FREISTAATES SACHSEN (2009). *5. Regionalisierte Bevölkerungsprognose für den Freistaat Sachsen bis 2025* (Fifth regionalized population prognosis for the state of Saxony through 2025).

STEJSKAL, J. (2005). *Czech Republic: Towards the Reclamation of Derelict Land.* In: MÜLLER, B., FINKA, M. & LINTZ, G. (eds.) Rise and Decline of Industry in Central and Eastern Europe. A Comparative Study of Cities and Regions in Eleven Countries. Berlin. (Central and Eastern European Development Studies - CEEDES), pp. 69-80.

STELZENMÜLLER, V., ROGERS, S. I. & MILLS, C. M. (2008). Spatio-temporal patterns of fishing pressure on UK marine landscapes, and their implications for spatial planning and management. – ICES Journal of Marine Science, vol. 65, pp. 1081–1091.

STERN, N. (2006). *The Economics of Climate Change*. *Executive Summary*. Cambridge, Cambridge University Press.

STETTER, S. (2006). *Border Conflicts in Europe*. URL: www.uni-bielefeld.de/Universitaet/Einrichtungen/Pressestelle/dokumente/BI_research/29_2006/Forschungsmagazin_1_06_Grenzkonflikte_76_80.pdf

STIGLITZ, J.E. (1999). *Public Policy for a Knowledge Economy*. Center for Economic Policy Research, London.

STOCKDALE, A. & BARKER, A. (2009). *Sustainability and the multifunctional landscape: An assessment of approaches to planning and management in the Cairngorms National Park*. In: Land Use Policy, 26, pp. 479-492.

STOCKDALE, E. (2004). *Rural Out-Migration: Community Consequences and Individual Migrant Experiences*. In: Sociologia Ruralis, Vol.44 No.2, Blackwell Publishing, Oxford.

STOREY, K. (2001). *Fly-in/Fly-out and Fly-over: Mining and regional development in Western Australia*. In: Australian Geographer, Volume 32, Issue 2, pp. 133-148.

STORPER, M. & VENABLES, A. (2004). *Buzz: face-to-face contact and the urban economy*. In: Journal of Economic Geography, vol. 4(4), pp. 351-370.

SURCHAT VIAL, N., BESSAT, F. & ROULET P (eds) (2010). *Genève Agglo 2030. Un projet pour dépasser les frontiers*. Marseille, Parenthèses.

SUSTAINABLE DEVELOPMENT RESEARCH CENTRE (n.d.). *The contribution of the social enterprise sector to the wastes management industry in the Highlands and Islands.*

SUTTON, G., O'MAHONY, C., MCMAHON, T., Ó'CINNEIDE, M. & NIXON, E. (2008). *IMAGIN Policy Report - Issues and Recommendations for the Development and Regulation of Marine Aggregate Extraction in the Irish Sea*. In: Marine Environment & Health Series, No. 32.

ŠVAJDA , J. (2008). *Participatory conservation in a post-communist context: The Tatra National Park and Biosphere Reserve, Slovakia*. In: International Journal of Biodiversity Science & Management, Vol. 4, Issue 4.

ŠVAJDA, J. & FENICHEL, E. (2011). *Evaluation of Integrated Protected Area: Management in Slovak National Parks*. In: Polish J. of Environ. Stud. Vol. 20, No. 4, pp. 1053-1060. URL: http://cmsdata.iucn.org/downloads/pjoes_svajda_vol_20_no_4_2011__2_.pdf

ŠVAJDA, J. (2007). *Slovakia: Tatry National Park - Site fact file. Natura 2000 networking programme*. URL: http://www.natura.org/sites_sk_tatry.html

SWART, R., BIESBROEK, R., BINNERUP, S., CARTER, T., COWAN, C., HENRICHS, T., LOQUEN, S., MELA, H., MORECROFT, M., REESE, M., & REY, D. (2009). *Europe Adapts to climate Change: Comparing National Adaptation Strategies.* PEER Report, no. 1, Helsinki: Partnership for European Environmental Research. URL: http://www.peer.eu

SWIFT, L.J., DEVOY, R.J.N., WHEELER, A.J., SUTTON, G.D., & GAULT, J. (2004). *Sedimentary dynamics and coastal changes on the south coast of Ireland*. In: Journal of Coastal Research, SI 39, pp. 227-232.

SWISS PARKS NETWORK/NETZWERK SCHWEIZER PÄRKE (Unterstützt vom Bundesamt für Umwelt BAFU) (2011). URL: http://www.netzwerk-parke.ch/en/index.php

TACZANOWSKA, K. (2004). *The Potentials for Developing Cross-border Tourism between Poland and Slovakia in the Tatra Mountains*. Working Papers of the Finnish Forest Research Institute 2. URL: http://www.metla.fi/julkaisut/workingpapers/2004/mwp002.htm

TÄGIL, S. (ed.) (1999). *Regions in Central Europe. The Legacy of History.* London.

TALOUSELÄMÄ (2011). *Suomi ja Ruotsi tappelevat kaivosmiehistä*. Talouselämä. URL: http://www.talouselama.fi/uutiset/suomi+ja+ruotsi+tappelevat+kaivosmiehista/a713655

TAYLOR, P. & ARANYA, R. (2008). *A global 'urban roller coaster'? Connectivity changes in the world city network, 2000-2004*. In: Regional Studies 42(1), pp. 1-16.

TEEB (2010). *The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB*. URL: http://www.teebweb.org/LinkClick.aspx?fileticket=bYhDohL_TuM%3d&tabid=924&mid=1813

TERRY, A., ULLRICH, K. & RIECKEN, U. (2006). *The Green Belt of Europe: From Vision to Reality.* IUCN, Gland and Cambridge.

THACKRAY, D. (2005). *Safeguarding Coastal Culture in the UK: the experience of The National Trust for England, Wales and Northern Ireland*. Proceedings of the Europa Nostra Forum, Bergen, Norway.

THE ASSOCIATION OF FINNISH LOCAL AND REGIONAL AUTHORITIES (2011). *Local government reform and the New Municipality 2017 programme*. URL: http://www.localfinland.fi/en/authorities/newmunicipality2017/Pages/default.aspx

THE MERSEY PARTNERSHIP (2008). *Liverpool Super Port*. The Mersey Partnership.

THE OUTER HEBRIDES COMMUNITY PLANNING PARTNERSHIP (2009). *Forward Together, Single Outcome Agreement 2009-2010*. URL: http://www.ohcpp.org.uk/Single_Outcome_Agreement.pdf

THE OUTER HEBRIDES FISHERIES TRUST (2009). *Fisheries Management Plan.* URL: http://ohft.reefnet.co.uk/wp-content/uploads/2010/02/OHFT-FMP.pdf

THE ROYAL SOCIETY OF EDINBURGH (2008). *Committee of Inquiry into the Future of Scotland's Hills and Islands - Report.*

THISSEN, F. & POELMAN, B. (2009). *Wat hebben grensgebieden gemeen*? In: J. Latten and S. Musterd (eds.), De nieuwe groei heet krimp; een perspectief voor Parkstad Limburg. The Hague, Nicis Institute, pp. 47 – 56.

TISCALI SICILIA (2011).TOL, E.A.J. (2002a). *New Estimates of the Damage Costs of Climate Change, Part I: Benchmark Estimates*. In: Environmental and Resource Economics, 21, pp. 47-73.

TOL, E.A.J. (2002b). *New Estimates of the Damage Costs of Climate Change, PartII: Dynamic Estimates*. In: Environmental and Resource Economics, 21, pp. 135-160.

TOL, R.S.J. & YOHE, G.W. (2007). *The weakest link hypothesis for adaptive capacity: An empirical test*. In: Global Environ. Chang., 17, pp. 218-227.

TOLON-BECERRA, A., LASTRA-BRAVO, X.B., STEENBERGHEN, T. & DEBECKER, B. (2011). *Current situation, trends and potential of renewable energy in Flanders*. Renewable and Sustainable Energy Reviews 15, pp. 4400– 4409.

TOPALOGLOU, L., KALLIORAS, D. & VENIERIS, S. (2009). *Tracing the Determinants of Economic Cross-Border Interaction in the European Union*. In: Spatium, 21 (1).

TOPALOGLOU, L., KALLIORAS, D., MANETOS, P. & GEORGE PETRAKOS, G. (2005). *A Border Regions Typology in the Enlarged European Union*. In: Journal of Borderlands Studies, Volume 20, No. 2.

TORNEDALSRÅDET (2009). *Ishavsbanen – Mulighetsstudie jernbane Kolari-Skibotn.* SWECO. URL: http://img9.custompublish.com/getfile.php/953985.1229.urywvaqpcq/Prosjektrapport+19.06.09.pdf?return=www.storfjord.kommune.no

TOURISM FLANDERS (2002). *Strategisch beleidsplan voor Toerisme en Recreatie aan de kust* (Strategic Policy Plan for Tourism and Recreation at the coast). Westtoer.

TOURISM IRELAND (2009a). *Facts & Figures 2008, Island of Ireland*. Brochure, Tourism Ireland.

TOURISM IRELAND (2009b). *Quarterly Situation & Outlook July 2009*, Brochure, Tourism Ireland.

TRANSPORT SCOTLAND (2008). *Scottish Road Network Landslides Study: Implementation*. Transport Scotland, Edinburgh.

TRAPANI SICILIA (n.d.). *Egadi Islands*. Website of the province of Trapani. URL: http://www.trapani-sicilia.it/english/isole_egadi.htm

TRAVIS, A. (2011). *Planning for Tourism, Leisure and Sustainability: International Case Studies*. CABI.

TSAYEM DEMAZE, M. (2009). *Le parc amazonien de Guyane française : un exemple du difficile compromis entre protection de la nature et développement*. In*: Cybergeo: European Journal of Geography*, Environnement, Nature, Paysage, article 416. URL : http://cybergeo.revues.org/17203

TSCHECHISCHER HYDROMETEOROLOGISCHER DIENST (ČHMÚ), WOJEWODSCHAFTSINSPEKTORAT FÜR UMWELTSCHUTZ (WIOŚ), SÄCHSISCHES LANDESAMT FÜR UMWELT UND GEOLOGIE (LFUG) & UMWELTBUNDESAMT (UBA) (2003). *Gemeinsamer Bericht zur Luftqualität im Schwarzen Dreieck 2002* (Joint air quality report in the Black Triangle).

TSP2020 – The Territorial State and Perspectives of the European Union - 2011 update. Background document for the Territorial Agenda of the European Union 2020. URL : http://www.ums-riate.fr/documents/Territorial_State_and_Perspective_of_the_EU-update_2011.pdf

TURKU SCHOOL OF ECONOMICS AND BUSINESS ADMINISTRATION (SAARA LOUKO) (2008). Deliverable 11: Regional Summary Report-Tornio, Finland, From FP6 project: Challenges and Prospects of Cross Border Cooperation in the Context of EU Enlargement. URL: http://www.crossbordercoop.net/Publications/RSR%20Tornio%20Haparanda.pdf

TURNER, B.L., KASPERSON, R.E., MATSON, P.A., MCCARTHY, J.J., CORELL, R.W., CHRISTENSEN, L., ECKLEY, N., KASPERSON, J.X., LUERS, A., MARTELLO, M.L., POLSKY, C., PULSIPHER, A., & SCHILLER,

A. (2003). *A framework for vulnerability analysis in sustainability science*. In: *PNAS,* vol. 100, no. 14, pp. 8074-8079.

TUULIVOIMAYHDISTYS (2011). *Tuulivoimalaitokset Suomessa*. URL: http://www.tuulivoimayhdistys.fi/tuulivoimalaitokset

UBA - UMWELTBUNDESAMT (2011). *Überschreitung der Critical Loads für Stickstoff (Eutrophierung).* URL: http://www.umweltbundesamt-daten-zur-umwelt.de/umweltdaten/public/theme.do?nodeIdent=2870

UCHIDA, H. & NELSON, A. (2009). *Agglomeration index: towards a new measure of urban concentration.* Background paper for the World Bank's World Development Report 2009.

UHI MILLENNIUM INSTITITUTE (2008). *Strategic Plan 2008-2011.* Inverness.

UHLIG, J. (2005). *Region Erzgebirge – SWOT-Analyse für den Bereich „Raumplanung" – Raumplanung, Flächennutzungsplanung und regionale Entwicklung.* In: RESNAFRONT SWOT-Analyse – Nutzung von grenzüberschreitenden natürlichen Ressourcen als Entwicklungspotential.

UKCP09. (n.d.). *Key Findings for Scotland North.* URL: http://ukclimateprojections.defra.gov.uk/content/view/2153/499/

UKRAINIAN REFUGEE COUNCIL (2010). *The EU-Ukraine readmission agreement – Myths, facts and risks.* Press Statement. URL: http://bordermonitoring-ukraine.eu/files/2010/03/URC_Press_Release.pdf

UMWELTBUNDESAMT (2007a). *Umweltsituation in Österreich: Achter Umweltkontrollbericht des Umweltbundesamtes*. Wien, Umweltbundesamt GmbH.

UMWELTBUNDESAMT (2007b). *Wald und Waldnutzung*. In: Umweltsituation in Österreich: Achter Umweltkontrollbericht des Umweltbundesamtes. Wien, Umweltbundesamt GmbH, pp. 95-104.

UNESCO (2011). *Atlas of the World's Languages in Danger*. UNESCO Publishing, Paris.

UNFCCC (2009). *Copenhagen Accord. Decision CP.15*. FCCC/CP/2009/L.7, 18 December 2009, UNFCCC COP 15, 7.-18 December 2009.

UNHCR (2011). *UNHCR's Recommendations to Poland for its EU Presidency.* URL: www.unhcr.org/4df8d00f9.pdf

UNHCR (2011a). *Ukraine. 2012 Regional Operations Profile - Eastern Europe. Working environment.* URL: http://www.unhcr.org/pages/49e48d4d6.html

UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP) (2007). *Carpathians Environmental Outlook 2007.* Geneva, UNEP.

URQUHART, J. & ACOTT, T. (2011). *Fishing cultures: marine fisheries and sense of place in coastal communities*. In: "It's Not Just About the Fish": social and cultural perspectives of sustainable marine fisheries, 4-5 Apr 2011, Greenwich, London.

UTBILDNING NORD (2012). Website Utbildning Nord - Koulutus Nord - Utdanning Nord. URL: http://www.utbnord.se

VAN DEN EYNDE, D. & NORRO, A. (2009*). Modelling the effect of sand extraction on the Kwinte Bank*. Proceedings of the European Marine Sand and Gravel Group (EMSAGG) Conference, 7-8 May 2009 Frentani Conference Centre, Rome, Italy.

VAN DER BIEST, K., VERWAEST, T. & REYNS, J (2008). *Assessing climate change impacts on flooding risks in the Belgian coastal zone*. LITTORAL 2008. A Changing Coast: Challenge for the Environmental Policies, Venice.

VAN EUPEN, M., METZGER, M.J., PÉREZ-SOBA, M., VERBURG, P.H., VAN DOORN, A. & BUNCE, R.G.H. (2012). *A rural typology for strategic European policies*. In: Land Use Policy 29, pp. 473– 482.

VAN HOUTUM, H. & GIELIS, R. (2006). *Elastic migration: the case of Dutch short-distance transmigrants in Belgian and German borderlands*. In: Tijddschrift voor Economische en Sociale Geografie 97(2), pp. 195-202.

VAN HOUTUM, H. & SCOTT, J. (2005). *Policy Considerations of Project Results: "Good Practices" and Situational Ethics of Cross-Border Cooperation.* EXLINEA Policy Paper, Berlin and Nijmegen.

VAN LANCKER, V., DU FOUR, I., VERFAILLIE, E., DELEU, S., SCHELFAUT, K., FETTWEIS, M., VAN DEN EYNDE, D., FRANCKEN, F., MONBALIU, J., GIARDINO, A., PORTILLA, J., LANCKNEUS, J., MOERKERKE, G. & DEGRAER, S. (2007). *Management, research and budgeting of aggregates in shelf seas related to end-users (Marebasse). Final Scientific Report*. Belgian Science Policy.

VAN ROMPAEY, A., SCHMITZ, S., KESTELOOT, C., PEETERS, K., MOENS, B., VAN HEMELRIJCK, H., VANDERHEYDEN, V., LOOPMANS, M., & VANDEN BROUCKE, S. (2011). *Landscape capacity and social attitudes towards wind energy projects in Belgium "LACSAWEP". Final Report*. Brussels, Belgian Science Policy 2011. (Research Programme Science for a Sustainable Development).

VANOLO, A. (2010). *European Spatial Planning Between Competitiveness and Territorial Cohesion: Shadows of Neo-liberalism*. In: European Planning Studies Vol. 18, No. 8.

VELTZ, P. (2005). *Mondialisation, villes et territoires : une économie d'archipel*. PUF.

VERBURG, P.H., OVERMARS, K.P. & WITTE, N. (2004). *Accessibility and land use patterns at the forest fringe in the Northeastern part of the Philippines*. In: Geographical Journal 170, pp. 238–255.

VERBURG, P.H., VAN BERKEL, D.B., VAN DOORN, A.M., VAN EUPEN, M. & VAN DEN HEILIGENBERG, H.A.R.M. (2010). *Trajectories of land use change in Europe: a model-based exploration of rural futures*. In: Landscape Ecology 25, pp. 217–232.

VERWAEST, T., VANNEUVILLE, W., PEETERS, P., MERTENS, T. & DE WOLF, P. (2007). *Uncertainty on coastal flood risk calculations, and how to deal with it in coastal management: case of the Belgian coastal zone*. In: Flood Risk Assessment II: proceedings of a

conference held by the Institute of Mathematics and its Applications, September 2007. pp. 151-157.

VFR (2011). *Region schafft Zukunft , Ergebnisse auf den Masterplan für Werra-Meißner-Kreis.* Verein für Regionalentwicklung Werra-Meissner e.V., Eschwege.

VILLEGAS, A. (2011). Personal Interview with Ailsa Villegas, Sustainable Development Officer, Highland Council, on 28 September 2011.

VINCENT, M.A., ATKINS, S.M., LUMB, C.M., GOLDING, N., LIEBERKNECHT, L.M. & WEBSTER, M. (2004). *Marine nature conservation and sustainable development - the Irish Sea Pilot*. Report to Defra by the Joint Nature Conservation Committee, Peterborough.

VIRTANEN, V. (2011). *Aluebarometri 2012 – Regionbarometern 2012*. Työ- ja elinkeinoministeriön julkaisuja 42/2011. URL: http://www.tem.fi/files/31464/TEMjul_42_2011_web.pdf

VOLMERT, A. (2008). *The Reinterpretation of Political Tradition: The Catholic Roots of Jurassian Nationalism*. In: Nationalism and Ethnic Politics, 14, pp. 395–427.

WALTHER, O. (2012). *Metropolitan regions and cross-border demographic integration*. In: Sohn C. (ed) Luxembourg: an emerging cross-border metropolitan region. Brussels, Peter Lang, pp. 185-204.

WALTHER, O., SCHULZ, C. & DÖRRY, S. (2011). *Specialized international financial centres and their crisis resilience: the case of Luxembourg*. In: Geographische Zeitschrift 99 (in press).

WARD, W.A. & HITE, J.C. (1998). *Theory in Rural Development: An Introduction and Overview*. In: Growth and Change, Vol. 29:3, pp. 245–258.

WARREN, C.R. & BIRNIE, R.V. (2009). *Re-powering Scotland: Wind farms and the 'energy or environment' debate*. In: Scottish Geographical Journal, 125, pp. 97-126.

WARREN, C.R. (2009). *Managing Scotland's Environment*, 2nd edition. Edinburgh University Press.

WATKISS, P. (2009). *Literature Review for the Scoping Study for a National Climate Change Risk Assessment and Cost-Benefit Analysis.* Defra Contract number GA0208. Metroeconomica, AEA group, and Paul Watkiss Associates. Published by Defra.

WATTAGE, P. (2011). *Valuation of Ecosystem Services in Coastal Ecosystems: Asian and European Perspective*. Ecosystem Services Economics (ESE), Working Paper Series, Jan. 2011. URL: http://eprints.port.ac.uk/2207/1/WATTAGE__Prem_Wattage_-_Draft.pdf

WEBSTER, F. (1995). *Theories of Information Society*. London, Routledge.

WEGENER, M. (2007). *Competitiveness or Cohesion? A Phase Strategy of European Spatial Development.* Paper presented at the Warsaw Regional Forum 2007, published in EUROPA XI 18, pp. 23-38.

WEINSTEIN, M. P., BAIRD, R.C., O'CONOVER, D., GROSS, M., KEULARTZ, J., LOOMIS, D.K., NAVEH, Z., PETERSON, S.B., REED, D.J., ROE, E., SWANSON, R.L., SWART, J.A.A., TEAL, J.M., TURNER, R.E. AND VAN DER WINDT, H.J. (2007). *Managing Coastal Resources in the 21st Century*. In: Front Ecol Environ 5(1), pp. 43-48.

WEINSTEIN, M.P. (2009). *The Road Ahead: The Sustainability Transition and Coastal Research*. In: Estuaries and Coasts, 32, pp. 1044–1053.

WERRA-MEIßNER-KREIS (2011). *Portrait Werra-Meißner-Kreis*. Der Kreisausschuss & mediaprint infoverlag gmbh, Eschwege. URL: http://www.werra-meissner-kreis.net/fileadmin/Downloads_und_Grafiken/R2_Informationsbroschueren/Portrait_WMK_Weka_kom.pdf

WERRA-MEIßNER-KREIS (n.d.). *Wer, Wo, Was – Zahlen, Daten, Fakten zum Werra-Meißner-Kreis.* Der Kreisausschuss, Eschwege. URL: http://www.werra-meissner-kreis.net/fileadmin/Downloads_und_Grafiken/R2_Informationsbroschueren/Wer__Wo__Was_-_Zahlen__Daten__Fakten_zum_Werra-Meissner-Kreis.pdf

WFG (2009). *Lebensraum Werra-Meißner*. Website of the Wirtschaftsförderungsgesellschaft Werra-Meißner mbH. URL: http://www.lebensraum-werra-meissner.de/

WHO (2008). *Protecting health in Europe from climate change*. WHO Regional Office for Europe, Copenhagen.

WHO (2009). *Improving public health responses to extreme weather/heat-waves — EuroHEAT. Technical summary*. WHO Regional Office for Europe, Copenhagen.

WILLET, J. (2011). Interview with Jonathan Willet, Biodiversity Officer, Highland Council, on 14 November 2011.

WILLIAMS, C.H. (2004). *The geography of language.* In: Sociolinguistics – An international handbook of the science of language and society. Volume 1, Berlin, pp. 130-145.

WILLIAMS, E. & VAN DER VELDE, M. (2005). *Borders for a New Europe: Between History and New Challenges.* In: Journal of Borderlands Studies, Volume 20, No. 2.

WILLIAMS, E., FIRN, J. R., KIND, V., ROBERTS, M., & MCGLASHAN, D. (2003). *The Value of Scotland's Ecosystem Services and Natural Capital*. In: European Environment 13, pp. 67-78.

WILLIAMS, M. (1990). *Understanding wetlands*. In: Williams M. (Editor), Wetlands: A Threatened Landscape. The Institute of British Geographers. Special Publication Series. Blackwell, Oxford.

WILLIS, D. (2009*). Marine Conservation Zones in the Irish Sea.* Presentation of Irish Sea Conservation Zones downloaded from http://www.irishseaconservation.org.uk/

WILSON, A. (2010). *Homeworking: Supporting the Financial & Business Services Sector in the Highlands and Islands*.

WILSON, J.C., ELLIOT, M., CUTTS, N.D. MANDER, L., MENDAO, V., PEREZ-DOMINGUEZ, R. & PHELPS, A. (2010). *Coastal and Offshore Wind*

Energy Generation: Is It Environmentally Benign? Energies 3, pp.1383-1422.

WINTERS, S. & ELSINGA, M. (2008). *The future of Flemish social housing*. In: Journal of Housing and the Built Environment, vol. 23, pp. 215-230.

WINTERS, S. & HETLEN, K. (2011). *Housing quality and affordability in Belgium in an international comparison*. Proceedings of the Enhr Conference 2011 – 5-8 July, Toulouse.

WNU – WORLDWIDE NEWS UKRAINE (2011). *Two Giant Fish Images Across the Border Become a Symbol of Polish-Ukrainian Unity.* URL: http://m.wnu-ukraine.com/news/culture-lifestyle/?id=610

WOOLCOCK, M. (n.d.). *The Place of Social Capital in Understanding Social and Economic Outcomes.* Development Research Group, The World Bank. URL: http://www.oecd.org/dataoecd/5/13/1824913.pdf

WORBOYS, G.L., FRANCIS, W.L. & LOCKWOOD, M. (Eds.) (2010). *Connectivity Conservation Management: A Global Guide*. Earthscan, London.

WORK GLOBAL (1999). *An example of ICT from the Outer Hebrides.* Website of the Work Global Project. URL: http://www.work-global.com/news/index.php?id=11

WORLD BANK GROUP & PRICEWATERHOUSECOOPERS (2011). *Paying Taxes 2011 – the global picture*. URL: http://pdfmasher.com/download?project_id=9D51F0EE044AC685B151861C2807458F&s%5B%5D=3915FE898A065B015713E59F6337D3B4

WRIGHT, K. (2009). *Climate Change: The Threat to Species.* SPICe Briefing 09/28.

WWF & EFNCP (2008). *High Nature Value farmlands: Recognising the importance of South East European landscapes - Case Study Report Western Stara Planina (Bulgaria).*

WWF (2008). *Incendio a Torre Salsa*. Notizia inserita in data: set 18, 2008. URL: http://www.wwftorresalsa.com/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=6&cntnt01origid=62&cntnt01returnid=62

WWF (2008). *White Elephants in the Green Mountains - Ski developments in Bulgaria, Romania, Slovakia and Ukraine*. WWF Danube-Carpathian Programme.

WWF (2010). *Slovakia moves to sacrifice wildlife for ski slopes*. WWF Global News. URL: http://wwf.panda.org/what_we_do/where_we_work/black_sea_basin/danube_carpathian/news/?193082/Slovakia-moves-to-sacrifice-wildlife-for-ski-slopes

YLE (2011). *Rautatie Kolarista Kittilän kautta Kemijärvelle?* URL: http://yle.fi/alueet/lappi/2011/03/rautatie_kolarista_kittilan_kautta_kemijarvelle_2473028.html

YOHE, G. & TOL, R.S.J. (2002). *Indicators for social and economic coping capacity - moving toward a working definition of adaptive capacity.* In: Global Environ. Chang., 12, pp. 25-40.

YORDANOVA, M. & MATEEVA, Z. (2011). *The Natural Potential of Mountains in Bulgaria and Its Sustainable Use.* In: G. Zhelezov, Sustainable Development in Mountain Regions: Southeastern Europe. Springer.

YOUNG, N. (2010). *Globalization from the edge: A framework for understanding how small and medium-sized firms in the periphery 'go global'*. In: Environment and Planning A, vol. 42, pp. 838-855.

ZEBISCH, M., GROTHMANN, T., SCHRÖTER, D., HASSE, C., FRITSCH, U. & CRAMER, W. (2005). *Climate Change in Germany: Vulnerability and Adaptation of Climate Sensitive Sectors*. Research Report 201 41253, UBA-FB 000844/e. Dessau, Umweltbundesamt.

www.espon.eu

The ESPON 2013 Programme is part-financed by the European Regional Development Fund, the EU Member States and the Partner States Iceland, Liechtenstein, Norway and Switzerland. It shall support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory.

ISBN