Botnia – Atlantica

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ESPON Project TERREVI

November 2012

# Introduction

ESPON supports policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory. It provides comparable information, evidence, analysis, and scenarios on territorial dynamics, which reveal territorial capitals and development potentials of regions and larger territories. Considering the programme area in its European context adds an important new perspective that can help shaping the programming and the places of implementing projects.

The ESPON TERREVI project focuses on producing evidence for Structural Funds programmes with the aim to support the development of the programmes to be carried out in the 2014-2020 period.

One milestone of this work consists in presenting selected ESPON research pieces in easy-to-understand factsheets for all territorial cooperation programme areas. The aim is to provide the reader with preliminary insight on types of territorial evidence ESPON holds at hand with regard to the possible investment priorities of future programmes. The factsheets certainly only give a first glimpse rather than fully present the work of the large number of ESPON projects that are currently underway. Likewise, each programme area includes diverse development potentials and challenges, which needs targeted information search. However, hopefully this factsheet will contain information, benchmarking the programme area in its larger, territorial context, that is of interest and help to better understand the programme area and to navigate within the richness of ESPON material available.

In addition to the programme factsheets there will be a number of specific programme case studies illustrating how ESPON material can be used to support the development of future programmes e.g. by giving a comparative European dimension to the envisaged SWOTs. These case studies will be carried out in early 2013.

This factsheet is structured in three main parts. The first part presents a selection of indicators that help comparing the situation of the programme area in question with the European average, the average for all programme areas as well as the situation in the countries involved. The second part briefly presents the territorial factors of interest for the programme area. The final part offers guidance on the further use of ESPON results and tools. This is intended as an electronic publication so map quality is generally high to allow users to zoom into specific territories.

This factsheet does not necessarily reflect the opinion of the ESPON Monitoring Committee.

# Europe 2020

Europe, with its member states and their regions, is more exposed to global shocks and international competition than at any time before. As the world becomes more interdependent this trend will continue and shape policy thinking across sectors, borders and geographical scales. At the same time, Europe is characterised by a large territorial diversity meaning that global developments can imply rather different development possibilities and challenges for different European regions and cities.

The differences are partly defined by major geographical structures such as urban systems, access and connectivity, the geographical specificity or population density. At the same time, the differences are also spelled out in the larger development trends that affect an area, and the way and degree to which it is affected.

The data, indicators and territorial evidence provided by ESPON provides insight on both the main structures and larger territorial trends. The fine art is to identify what can actually be influenced by policy-making and, in particular, by place-based policy and territorial cooperation related to your programme area.

This chapter provides a selection of ESPON data related to Europe 2020 objectives of smart, sustainable and inclusive growth, giving also hints as regards the main thematic objectives envisaged in the draft regulations for the next period of EU Cohesion Policy. The Europe 2020 Strategy aims to enhance smart, sustainable and inclusive growth. This strategy has clear territorial dimensions. However, achieving these goals is challenging in the crisis-driven times. Furthermore, the economic disparities are growing as economic trends and the crisis have various impacts on different parts of Europe.

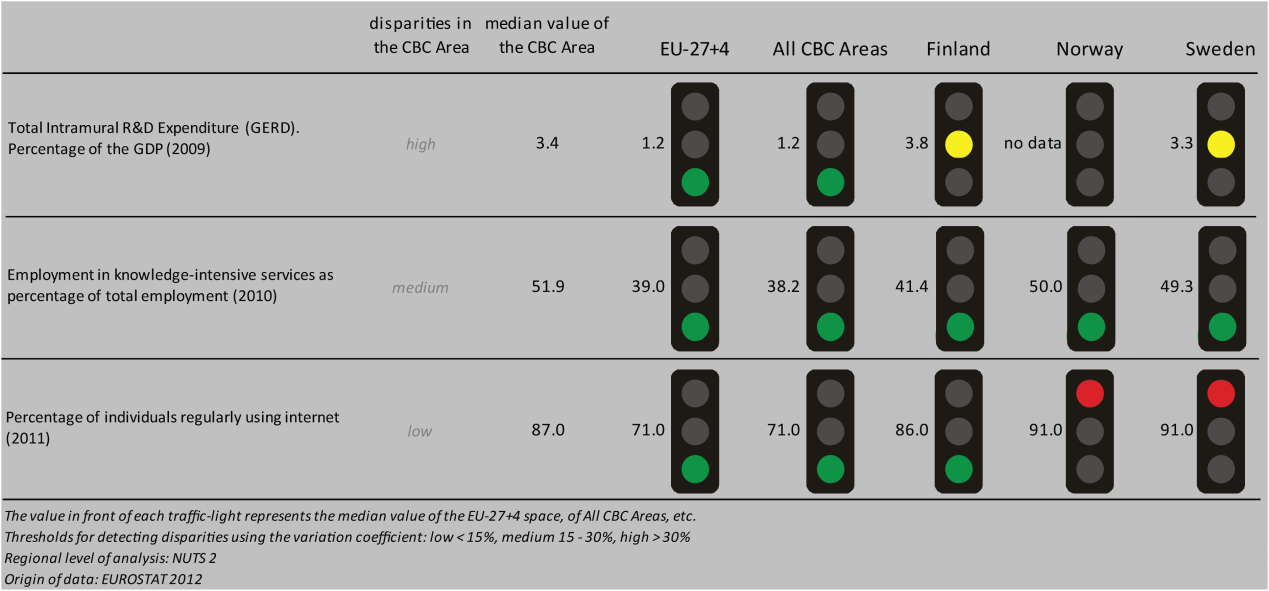
In the following the traffic light for each indicator represents how your programme territory compares to wider European and national medians where green = your programme area performs better for that indicator, yellow = similar, and red = worse.

In creating the traffic lights the median was used as central value indicator for all statistical variables due to its advantages (easy to interpret, it splits the statistical distribution in half) but especially due to the constraints linked to the impossibility of computing means for several indicators (Climate Change, Wind Energy Potential etc.). Therefore, a special attention should be given in reading the median values when the number of NUTS 2 regions is below 7. Using percentiles implies also a high dependence of the final results on the type of statistical distribution. This fact should be considered when establishing the relative position of a CBC Programme Area to a specific country.

EU 27+4 in Traffic Lights and box-plots means the EU Member States as well as Iceland, Liechtenstein, Norway and Switzerland – the ESPON space.

### Smart growth

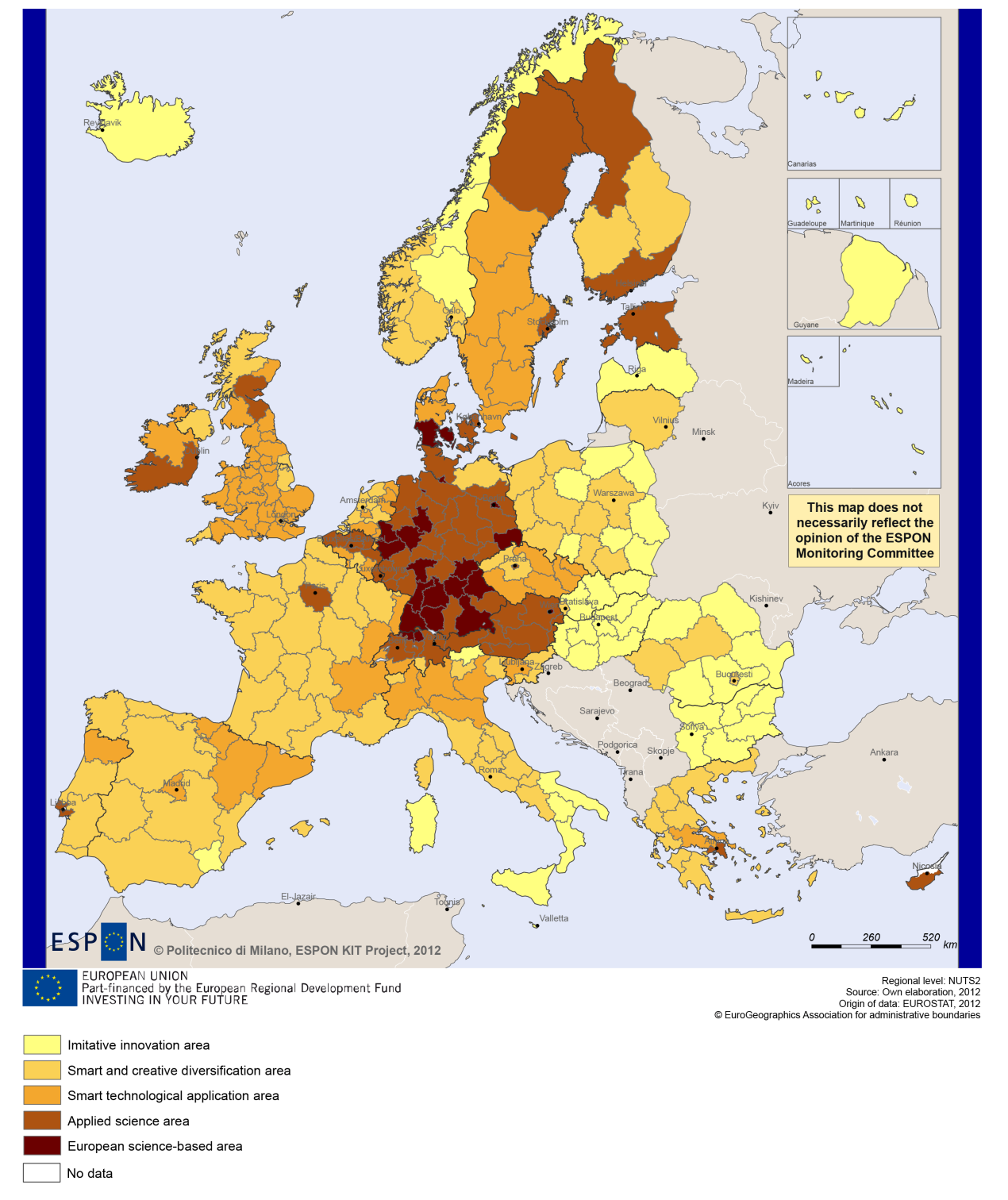
Smart growth refers to developing an economy based on knowledge and innovation. In the framework of the Europe 2020 Strategy it means improving the EU's performance in education, research/innovation and digital society.

According to all indicators reported above, the Botnia - Atlantica CBC area performs at a better level than the EU27+4 space and all CBC areas but mostly underperforms compared to national values. Considering the objective of R&D expenditure - one of the five headline targets in the Europe 2020 Strategy - the CBC area is still in a better position than the EU27+4 space and all CBC. Moreover, the Botnia - Atlantica CBC area is characterised by a high level of internal disparity due to a worse performance of the CBC area compared both Finland and Sweden. Concerning the ratio of employment in knowledge-intensive services, the CBC area had higher values than all European and national areas considered. However, the CBC still has a medium level of internal disparities. In terms of percentage of individuals regularly using internet in 2011, the CBC has higher values than both the EU27+4 space and all CBCs. Compared to Norway and Sweden as a whole, the CBC underperforms, with a low level of internal disparity.

According to the classification of the KIT project, MAP 1 identifies a very varied territorial pattern of innovation:

* ‘Applied science area’, in the northern Swedish CBC part and the regions of Keski-Pohjanmaa, Aaland and Varsinais-Suomi in Finland. It is associated to a quite high generality and originality of science-based local knowledge, and a high degree of attractiveness of knowledge coming from other regions.
* ‘Smart and creative diversification area’ in, in the Finnish coastal part of Länsi-Suomi. It is defined by a low degree of local diversified applied knowledge, internal innovation capacity, high degree of local competences, creativity and entrepreneurship, external knowledge embedded in technical and organizational capabilities;
* ‘Smart technological application area’, in Blekinge län and Hallands län, in the Swedish part of the cooperation area. It is defined by a high product innovation level, with a limited degree of local applied science and R&D endowment, and a high creativity which allows translating external basic science and applied science knowledge into innovation.
* ‘Creative imitation area’, in the Norwegian part of the CBC area. It is associated to a low knowledge and innovation intensity, entrepreneurship, creativity, a high attractiveness and a high innovation potential.

**MAP 1 – Territorial Patterns of Innovation (ESPON KIT project) for the CBC Botnia – Atlantica**



### Sustainable growth

Sustainable growth refers to promoting a more resource efficient, greener and more competitive economy. Within the Europe 2020 Strategy it means e.g. building a more competitive low-carbon economy that makes efficient, sustainable use of resources, protecting the environment, reducing emissions and preventing biodiversity loss, capitalising on Europe's leadership in developing new green technologies and production methods, and introducing efficient smart electricity grids. In the framework of the Europe 2020 Strategy it means focus on competitiveness, resource efficiency, climate change and biodiversity.

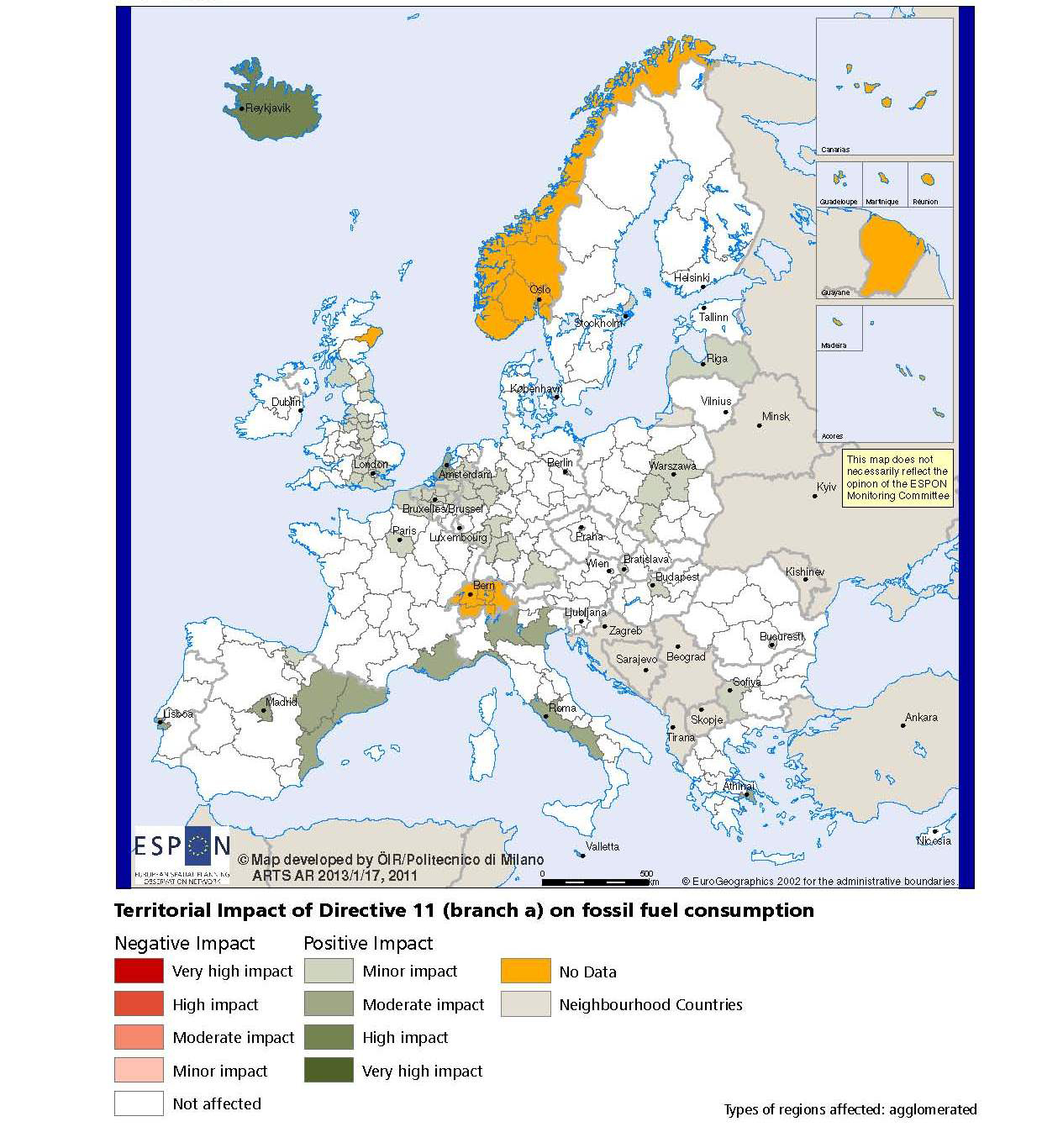
In the CBC area, wind energy seems to have higher potential compared to the EU-27+4, all CBC areas together, Norway and Sweden. It is comparable with Finland. It should be added that the disparity of the level of wind energy potential within the CBC area is high.

The ozone concentration in the CBC area is lower than in the CBC areas together and the EU27+4 levels. It is somewhat comparable to the Swedish level. The value in the area is higher than on the national level of Finland. The CBC area is as vulnerable to climate change as Sweden and Finland. The EU27+4 area, the CBC areas in total and the national level of Norway seems to have a higher values than the CBC area.

There is no territorial impact of Directive11 on fossil fuel consumption (Map 2) to the CBC area, but it should be mentioned that there is no data available for Norway.

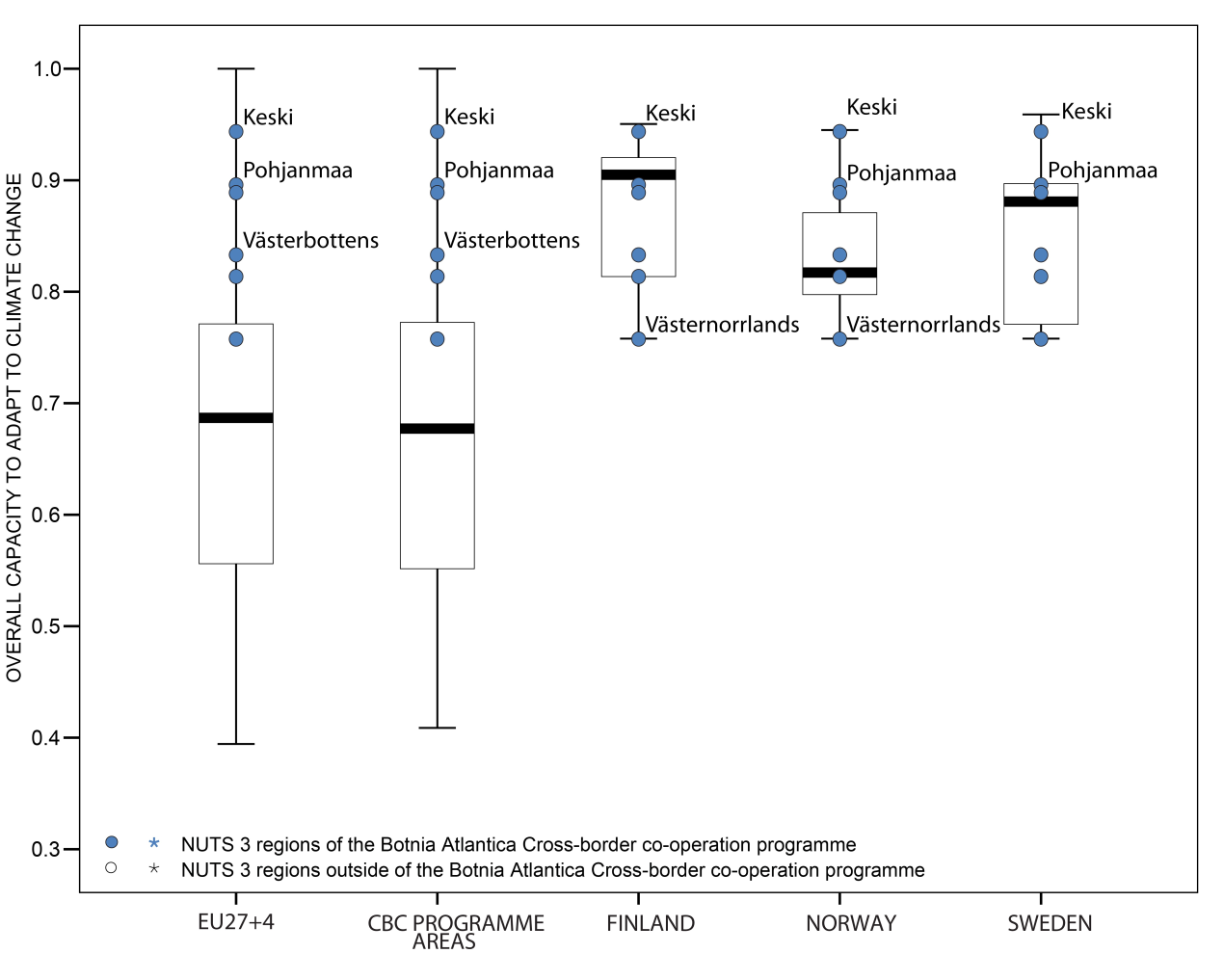
Compared to an above-average level capacity in Norway, Finland and Sweden, the CBC area’s capacity to adapt to climate change is similar to the EU27+4. The Finnish Keski stands out for its highly above-average capacity to adapt to climate change according to the Box-Plot1.

**MAP 2 - Territorial impact on fossil fuel consumption of Directive on the promotion of clean and energy-efficient road transport vehicles (ESPON ARTS project) for the CBC Botnia – Atlantica**



**BOX-PLOT 1 – Combined adaptive capacity to climate change (ESPON CLIMATE project) for the CBC Botnia – Atlantica**

*“Adaptive capacity (adaptability)” to climate change indicates the ability or potential of a system to respond successfully to climate change and variability, and includes adjustments in behaviour, resources and technologies.*



### *How to read the box-plots?*

*The box-plot is a statistical and mathematical tool used to visualize numerical data sets and to compare its statistical distribution.*

*Because it is used in exploratory analysis of databases, this representation is sensitive to the quality of the central value selected to explain the symmetry, shape and distribution variability. In the case of a box-plot, the most used central value is the median, because it has the quality of sectioning the data string into two halves, so that 50% of the cases will be above the central value and the other half will be below it. Since the purpose of the representation is to highlight outliers’ behavior, it uses a box that encompasses half of the cases, i.e. values that are in the range defined by the percentile of 25% and 75%. If a region has a value in this box then it can be considered that it has, according to the variable in question, a situation close to the average behavior of all regions analyzed.*

*When a region consistently deviates from the average profile of the analyzed territorial context, this behavior will be noted in the chart only when certain thresholds of statistical tolerances are exceeded, this being pointed in the diagram with segments perpendicular to the middle box, segments called the "whiskers".*

### Inclusive growth

Inclusive growth refers to fostering a high-employment economy delivering social and territorial cohesion. Within the Europe 2020 Strategy it means raising Europe’s employment rate, helping people of all ages anticipate and manage change through investment in skills & training, modernising labour markets and welfare systems, and ensuring the benefits of growth reach all parts of the EU. In short the key factors are employment and avoiding risk of poverty and social exclusion.

The CBC area shows lower values of long-term unemployment than the EU27+4, all the CBC areas in total and Finland, but comparable to Sweden. It has however higher rates than the Norwegian national level. In respect to at-risk-of –poverty rate, the CBC area shows better results than the EU27+4, the CBC areas in total, and the national levels of Sweden and the Slovak Republic. The value is comaprable to the national level of Finland and higher than the national level of Norway.

The same is true for the percentage of secondary or tertiary education attainment of persons aged 25-64 and 20-24, which is only equal to the CBC area compared to the Finnish national level.

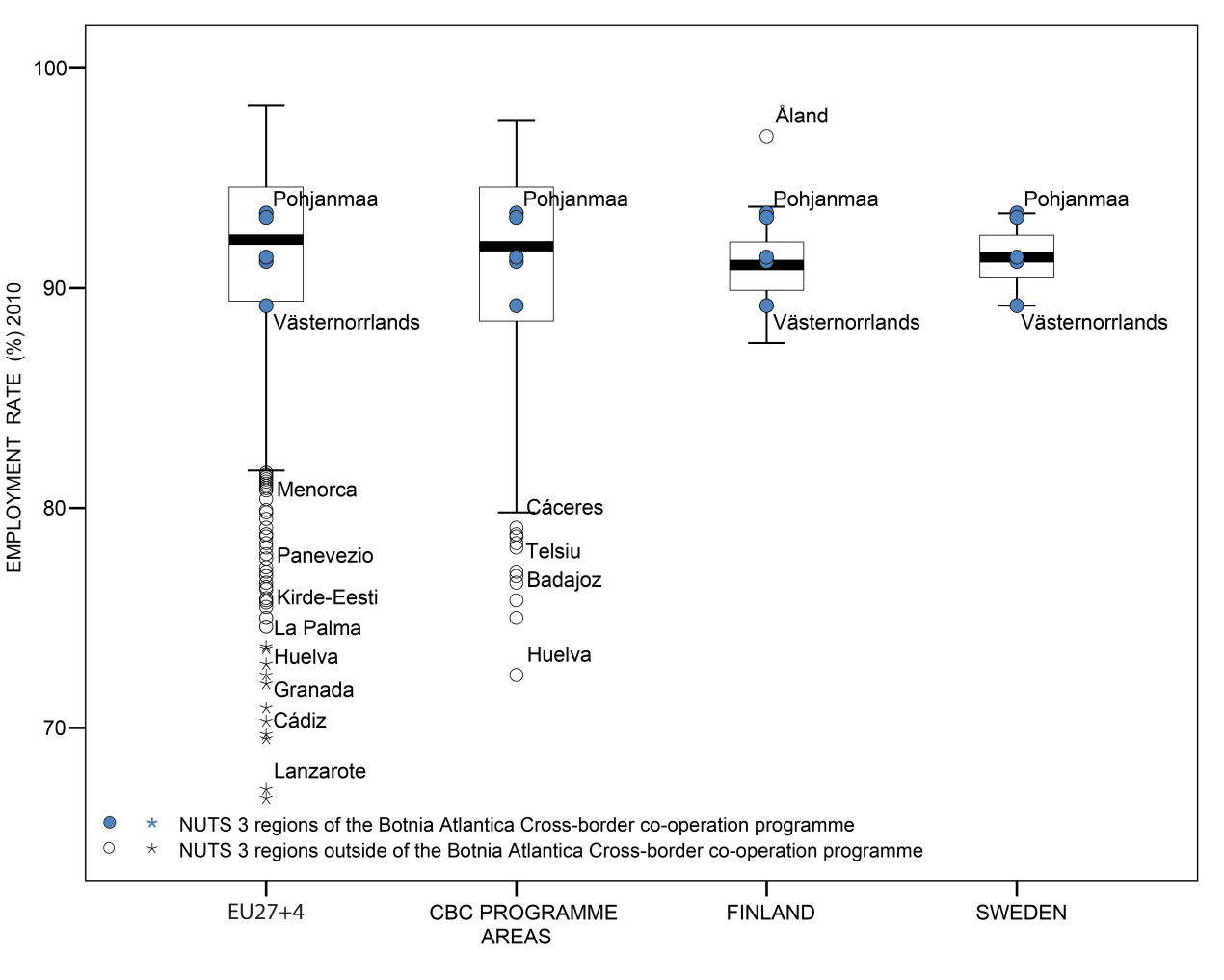
For all the possible scenarios on the change in labour force until 2050 drawn in the ESPON DEMIFER project (Map 3), the situation is similar between all sides of the CBC area. The change in labour force witnesses negative effects on all sides for all the scenarios imagined. Only in the scenario of a “expanding market europe” positive effects can be imagined for all sides of the CBC area.

Box plot 2 shows that the employment rate in Finland and Sweden is short below the average of the EU27+4 and all CBC programme areas together.

**MAP 3 – Change in Labour Force 2005-2050 (ESPON DEMIFER project) for the CBC Botnia – Atlantica**



**BOX-PLOT 2 – Employment rate 2010 within the CBC Botnia – Atlantica**



*(see “How to read the box-plots?” on page 8)*

# Territorial factors of interest for the programme area

Territorial cooperation programmes can make a difference for the future development of cross-border and transnational territories in Europe. Some of the factors can be analysed by European wide data sets and using some studies having specific maps, figures and tables concerning the areas of the cooperation region.

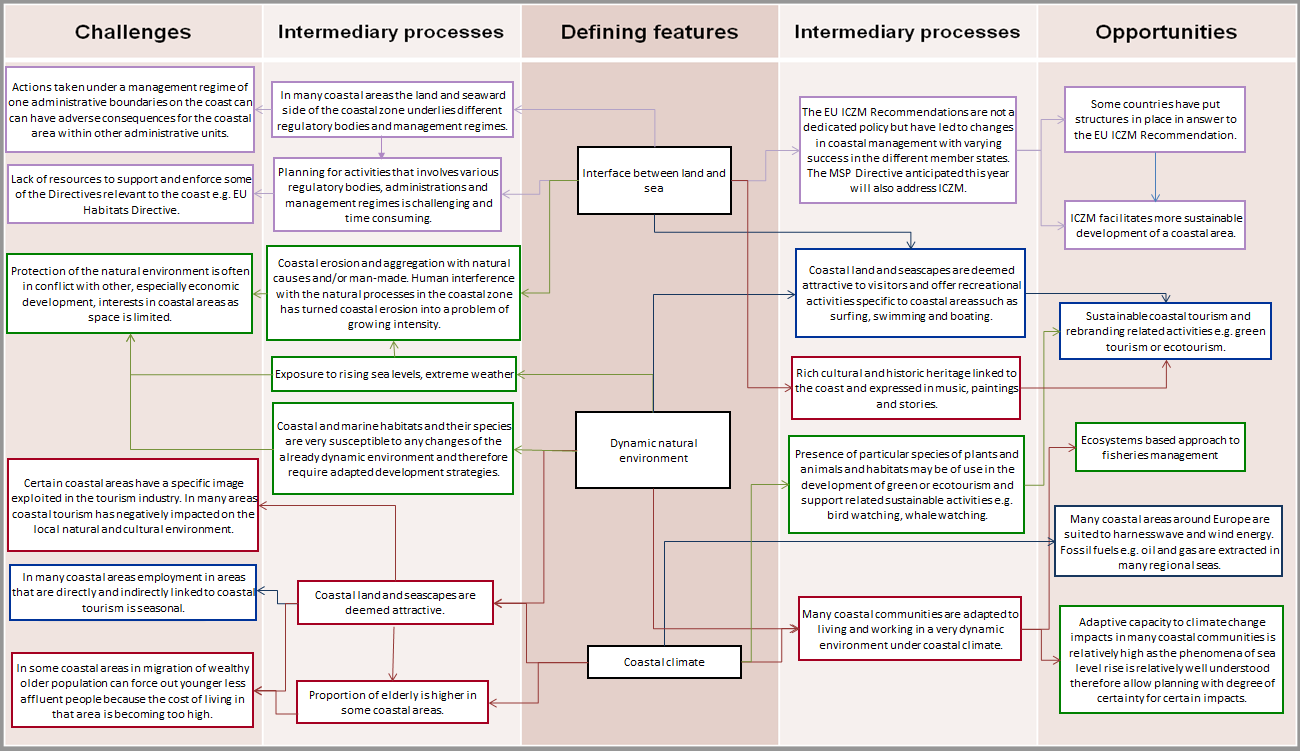
In a European perspective the programme area is mainly characterised as rural, with some regions being close to a city and some being remote. Urban centres in the programme area are e.g. Bodø, Umeå and Vaasa. Otherwise, the programme area is largely characterised by small settlements and low population density.

Being in the periphery of Europe, the multimodal accessibility of the programme area is below European average. So is also the number of border crossings per 100 km border. This is directly linked to the settlement structure and the low urban potential which also implies that there is only limited potential for building cross-border functional areas.

The remote and rural character of the programme area comprises a wide range of development opportunities and challenges. In European perspective the area has varying geographical characteristics. There are a number of coastal regions, and the Norwegian and Swedish parts comprise mountainous regions and also a large number of sparsely populated areas – in a European perspective.

ESPON GEOSPECS has developed a nexus models for coastal regions (see figure), mountainous regions and sparsely populated areas linking defining features via intermediary process to development challenges and opportunities. These models can be of interest for further developing the discussion about the challenges and opportunities in the programme area.

ESPON GEOSPECS PROJECT –FINAL REPORT, PAGE 103:  
Nexus model for coastal areas



**MAP 4 – Urban-rural typology of NUTS3 regions including remoteness (DG Regio) for the CBC Botnia – Atlantica**



*(Accessible=close to a city)*

**MAP 5 – Multimodal accessibilty (ESPON Accessibility Update) for the CBC Botnia – Atlantica**

*“Potential Accessibility Multimodal” scores accessibility of NUTS 3 regions by road, rail and air relative to the European average in an Accessibility Index.*



# Recommended ESPON reading

ESPON provides an essential underpinning for translating into practice the calls for integrated and place-based approaches to economic development, when analysing a programme area or deciding about future programme priorities. ESPON has published a wide range of exciting reports providing valuable territorial evidence for future territorial cooperation initiatives.

The table below shows examples of relevant projects for the Cooperation Region. However, you have to study other ESPON reports as well in order to capitalise fully on the European information available for the cross-border programming.

|  |  |  |
| --- | --- | --- |
| **ESPON study** | **Topic** | **Content** |
| EDORA | Rural areas | It provides evidence on the development opportunities of diverse types of European rural areas and reveals competitiveness options (see maps in Appendix 1). |
| CLIMATE | Climate change | It analyses how and to which degree climate change will impact on the competitiveness and cohesion of European regions and Europe as a whole (see from map 1 to 23). |
| TIPTAP | Territorial impact assessment | It provides a tool for the ex-ante assessment of territorial impacts of policies to deliver evidence on the territorial impact of policies (see from map 2.3.1 to 2.3.9). |
| CAEE | Agglomerati-on economies | It aims at a better understanding of the economic costs and benefits of large urban agglomerations (see figure 1). |
| TRANSMEC | European cooperation | It develops a method providing guidance on how ESPON results can add value to support territorial cooperation programmes (see map 27 and from map 36 to 39). |
| SEMIGRA | Rural migration | It describes selective migration in rural regions (see map 1, 4 and 5) and Västernorrland as a case study (Annex 2B). |
| KIT | Innovation | It describes knowledge and innovation and potentials of regions (see from map 3.1.1 to 4.4.1). |
| SGPTD | Growth poles | It provides evidence about performance and roles of European secondary cities (see from figure 2 to 2.12). |
| GEOSPECS | Specific types of territories | It analyses specific types of territories and the Torne Valley, on the border between Sweden and Finland (see Annex 28). |
| TeDi | Territorial diversity | It provides evidence on territorial development processes. A case study of North Calotte area (see map 3 and figure 2). |
| RISE | Integrated strategies | It describes the Regional Integrated Strategies in particular for the Swedish NUTS 3 region of Västerbottens. |
| TRACC | Transport accessibility | It provides evidence to support the policy of transport and accessibility improvement with a particular focus on Finland. |
| PURR | Rural regions | It describes the potential of some rural areas and towns with a focus on: the North Sea, the Irish Sea, the Baltic Sea. |

Furthermore, some of overall ESPON products of particular interest for territorial cooperation are:

* **ESPON Synthesis report** “new evidence on smart, sustainable and inclusive territories” provides an easy to read overview on ESPON results available.
* **ESPON Territorial Observations** is a publication series, which on a few pages presents policy relevant findings deriving from latest ESPON research.
* **ESPON 2013 Database** provides regional information provided by [ESPON projects](http://www.espon.eu/main/Menu_Projects/) and [EUROSTAT](http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home).
* **ESPON Hyperaltas** allows comparing and analysing a region’s relative position at European, national and local scale for a wide range of criteria.
* **ESPON MapFinder** provides access to the most relevant ESPON maps resulting from ESPON projects and reports.
* **ESPON Typologies** provides nine regional typologies for additional analysis of regional data to be considered in the European context.

All ESPON reports and tools are freely available at  
**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.