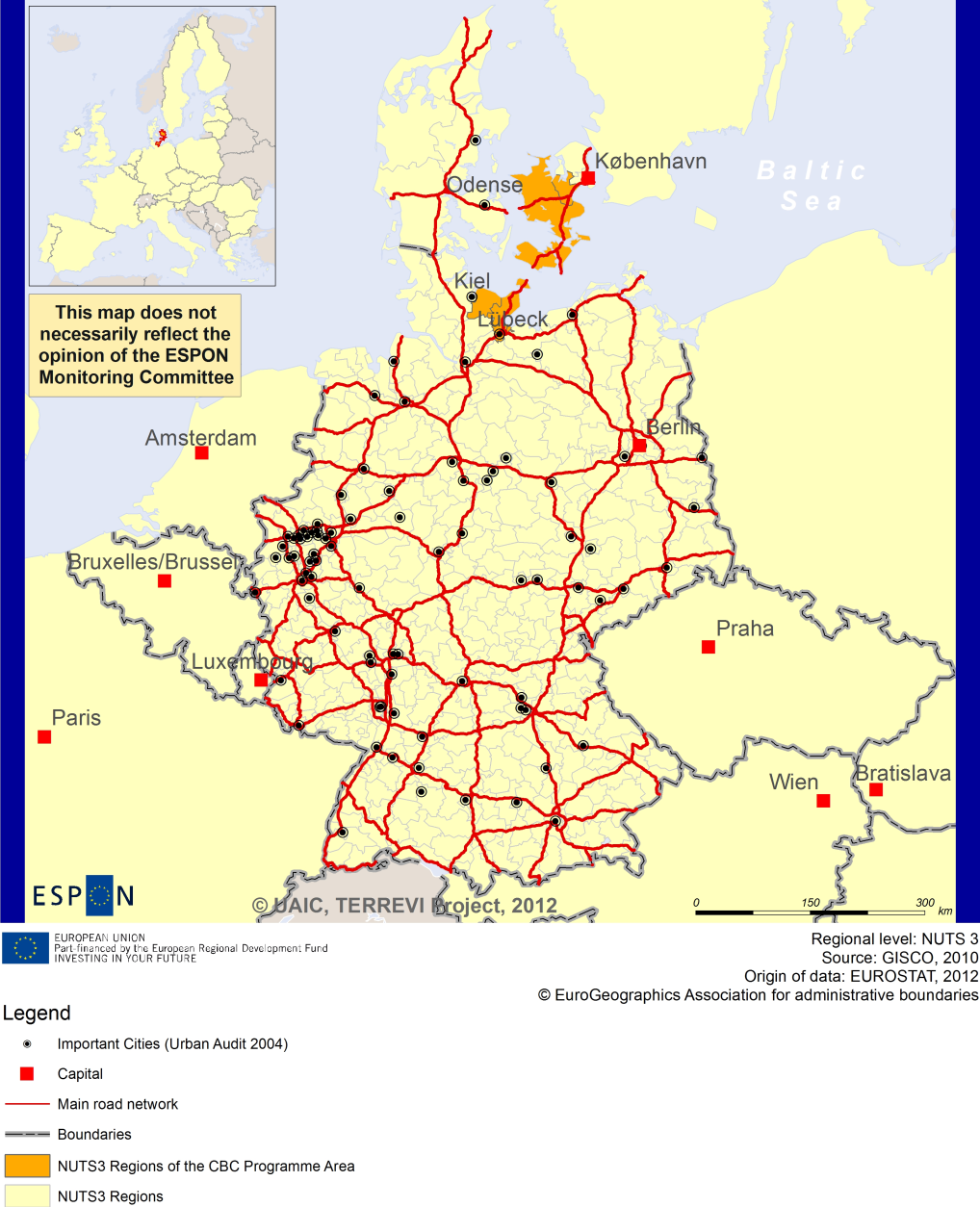
Denmark – Germany



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.

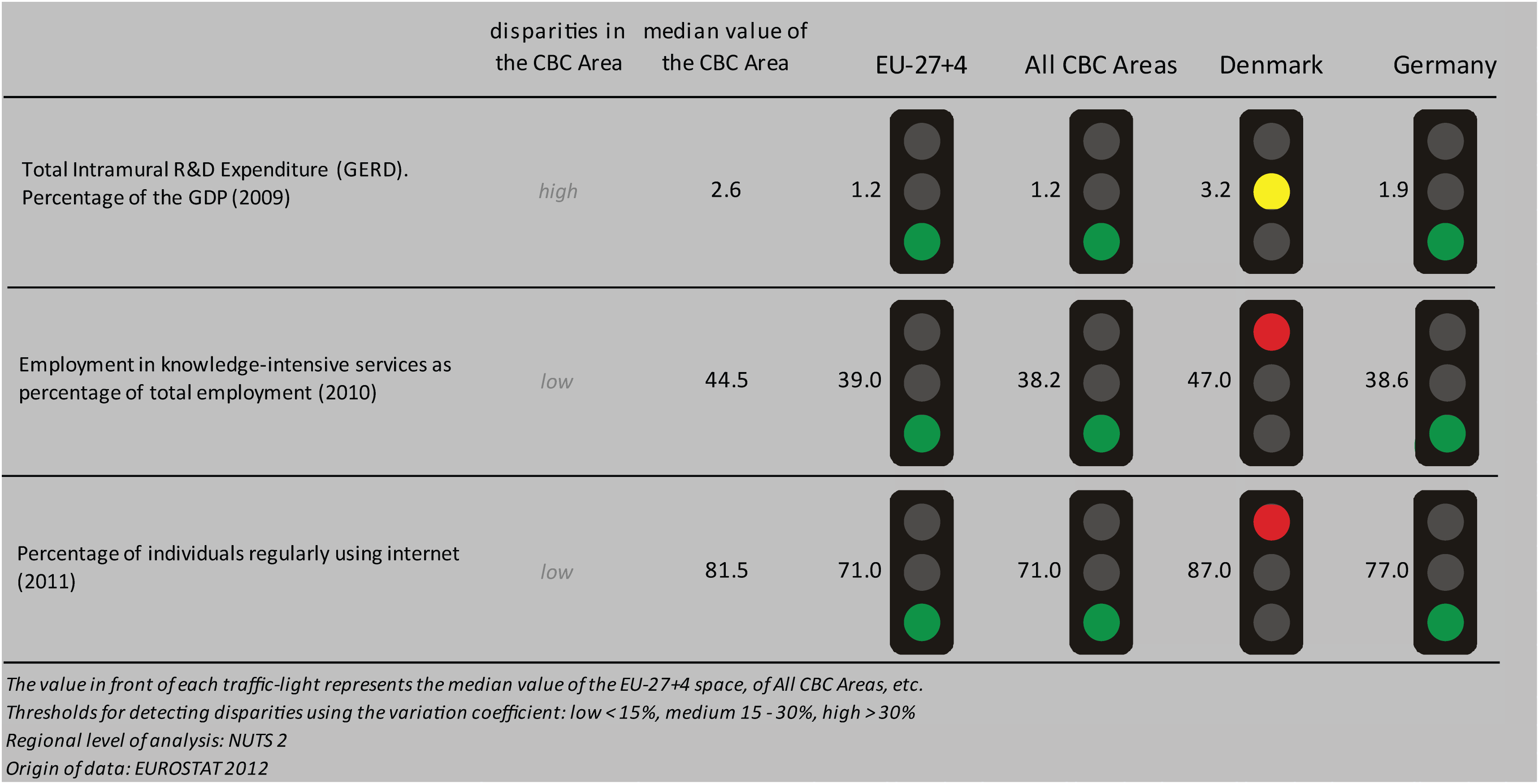
In the following the traffic light for each indicator represents how your programme territory compares to wider European and national medians where green = your programme area performs better for that indicator, yellow = similar, and red = worse.

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.



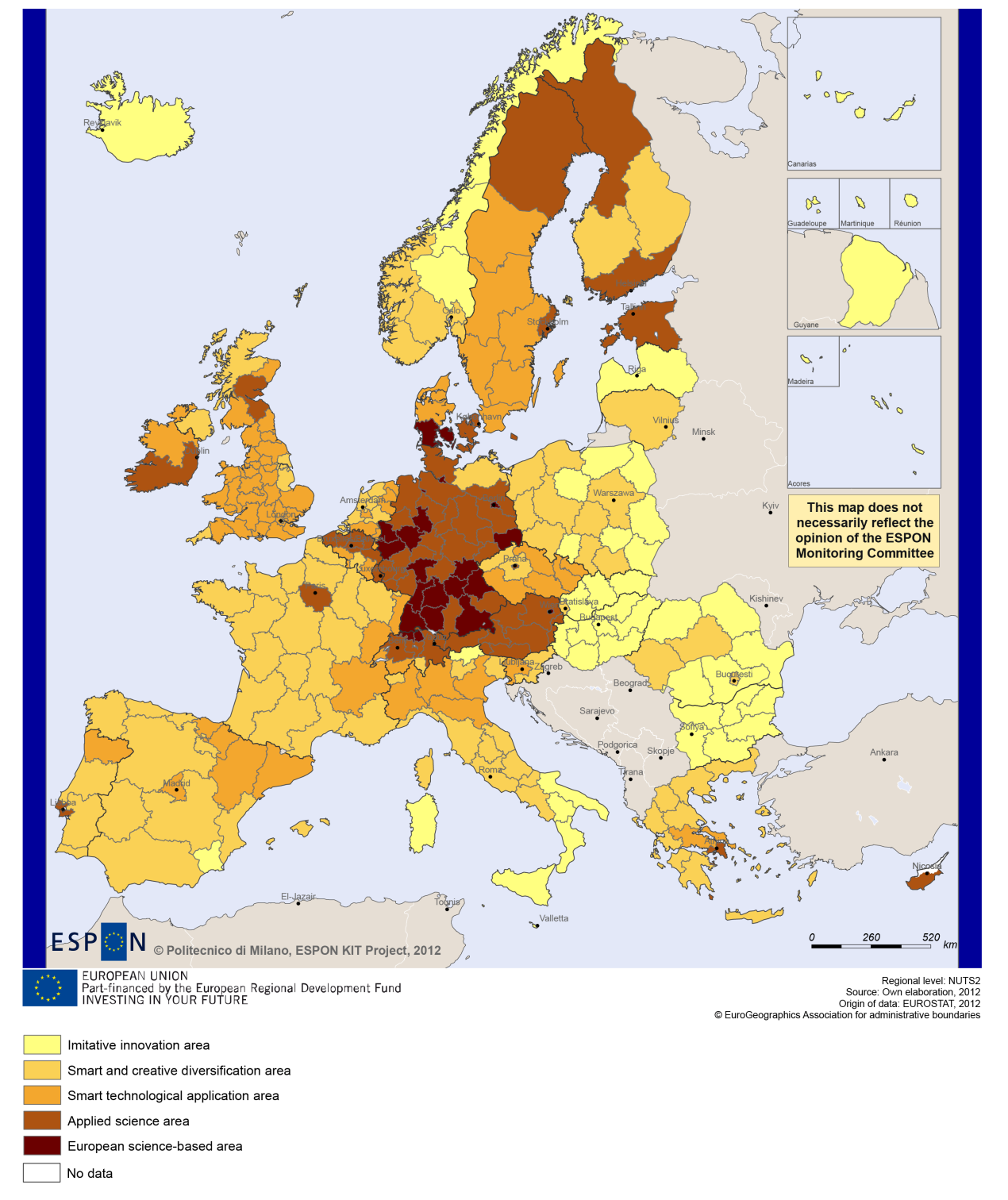
According to all indicators reported above, the Denmark - Germany CBC area performs better than the EU27+4 space and all CBC areas. Considering the objective of R&D expenditure as a percentage of GDP - one of the five headline targets in the Europe 2020 Strategy - the CBC area is in a better position than the EU27+4 space and all CBC. However, the Denmark - Germany CBC area is characterised by a high level of internal disparity. The CBC area shows a quite similar performance to Denmark but performs better than Germany.

Concerning the ratio of employment in knowledge-intensive services to the total employment in 2010, the CBC area has higher values than EU27+4 space and all CBCs; slightly higher than Germany and lower than Denmark. The distribution inside the CBC results in a low level of internal disparity.

In terms of percentage of individuals regularly using internet in 2011, the CBC has higher values than both EU27+4 space and all CBCs, but it performs slightly worse than Denmark and better than Germany, with a low internal disparity.

According to the classification of the KIT project, MAP 1 identifies a single cross-border territorial pattern of innovation. Indeed, the whole CBC is described as an ‘Applied science area’. 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.

**MAP 1 – Territorial Patterns of Innovation (ESPON KIT project) for the CBC Denmark - Germany**



### Sustainable growth

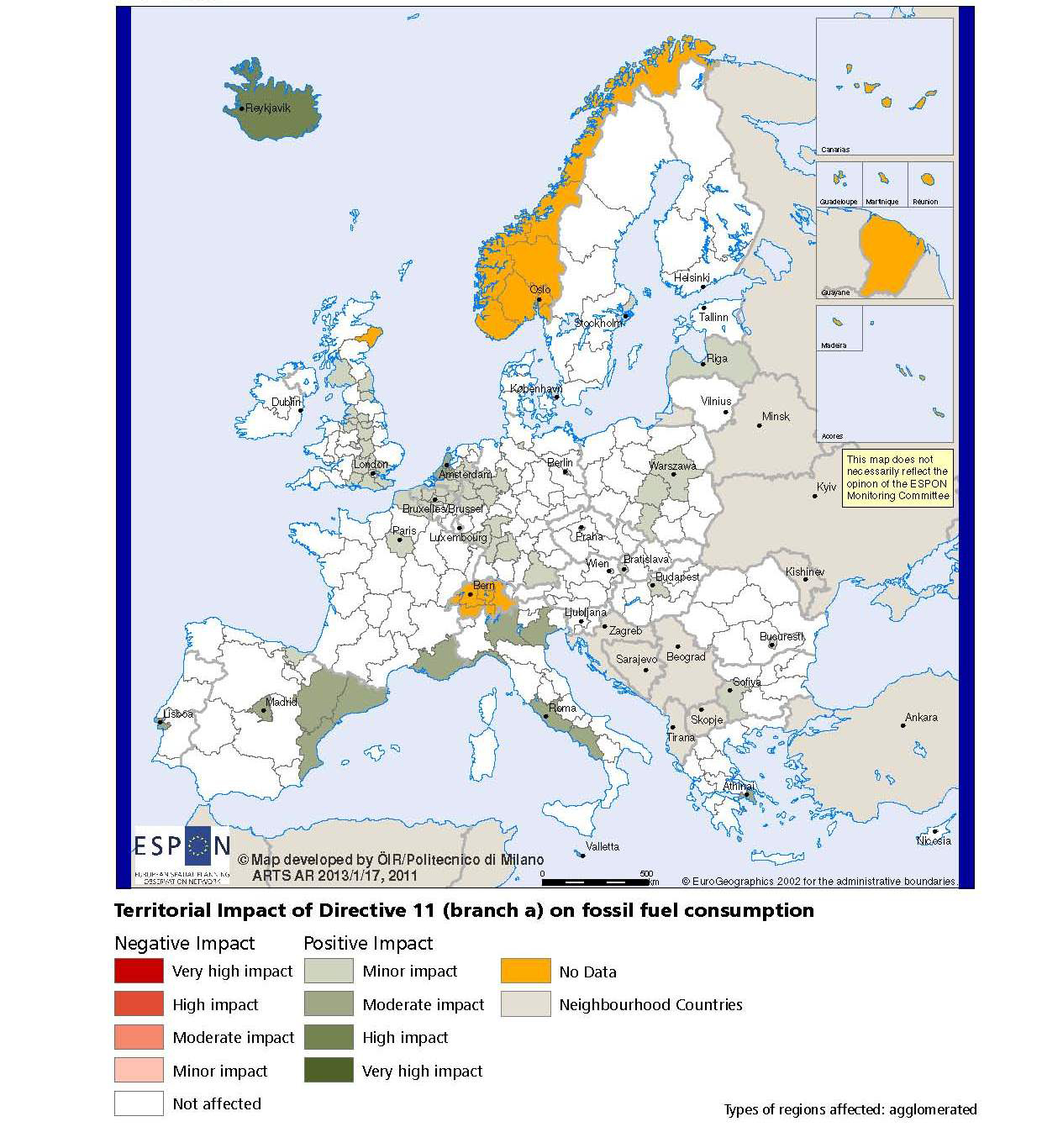
Sustainable growth refers to promoting a more resource efficient, greener and more competitive economy. Within the Europe 2020 Strategy it means e.g. building a more competitive low-carbon economy that makes efficient, sustainable use of resources, protecting the environment, reducing emissions and preventing 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.

The CBC area of Denmark - Germany performs considerably better compared to the EU-27+4, all CBC areas or Germany. The use of wind energy could be one of the cornerstones in building a competitive low-carbon economy in the EU. The potential for using this sustainable energy source in the CBC area of Denmark - Germany is considerably higher than in the EU-27+4 in general or all CBC areas, but the CBC region’s potential also exceeds the level of Germany and even the level of Denmark in this regard. At the same time the ozone concentration is substantially lower than in other parts of Europe in general, and is also much below the level of Germany, while it is at around the same level as in Denmark. At the same time, the CBC region’s potential vulnerability to climate change is also substantially lower than the EU-27+4 or all CBC areas’ medians. Generally, the level of potential vulnerability to climate change is at a similarly low level as that of Germany (the CBC median is slightly lower) and as in Denmark (the CBC median is slightly higher).

BOX-PLOT 2 also reflects the strength of the CBC region with regard to its combined adaptive capacity to climate change, which is generally higher than most other EU-27+4 or CBC regions. The overall level of combined adaptive capacity of the Denmark-Germany border-regions is similar to the level of the German regions; however, all border-regions have a similar or weaker performance than the Danish median value.

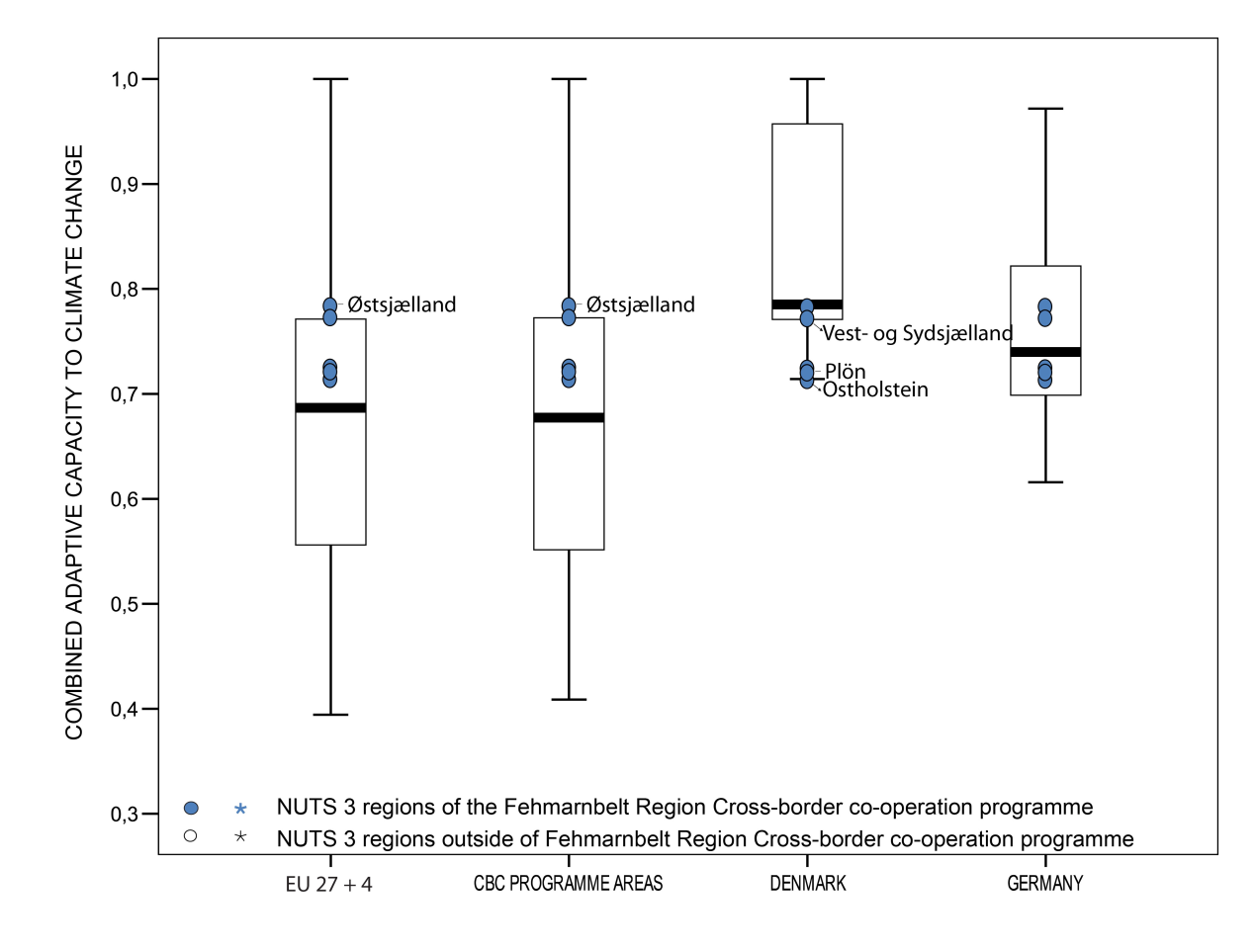
According to MAP2 Directive 11 has no visible impact on fossil fuel consumption on either side of the border.

**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 Denmark - Germany**



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

*“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?*

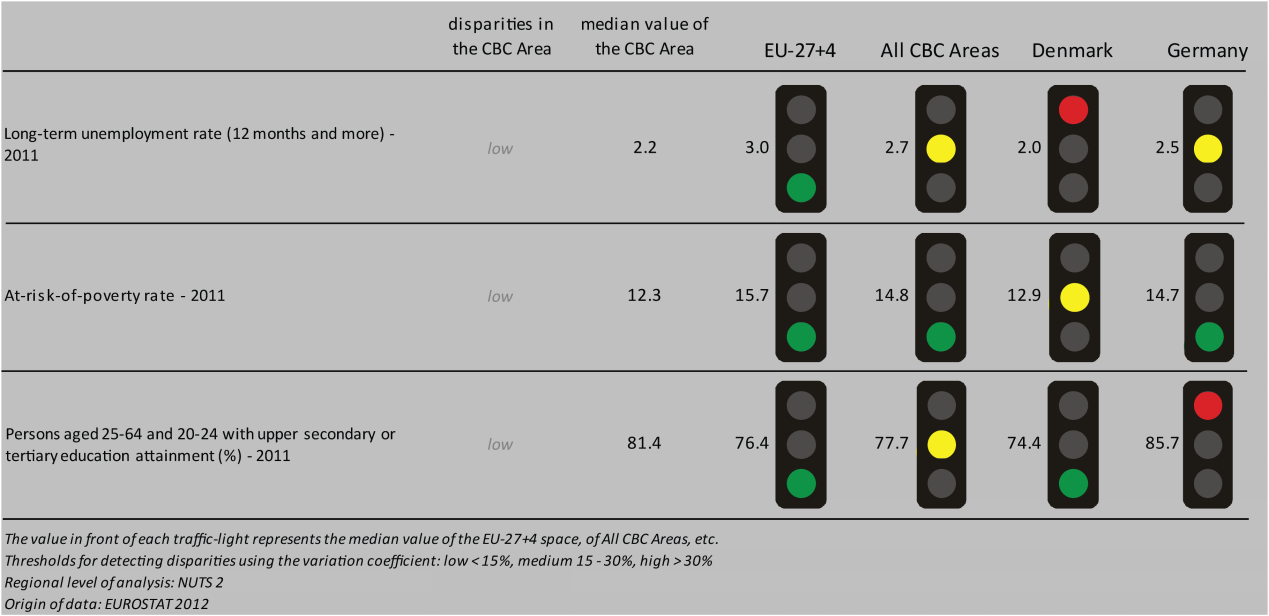
*The box-plot is a statistical and mathematical tool used to visualize numerical data sets and to compare its statistical distribution.*

*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.



Overall the CBC area is characterised by a similar employment situation (according to the three selected employment indicators) to that of the EU-27+4, all CBC areas, Denmark or Germany. The long-term unemployment rate and the share of people at risk of poverty are generally slightly lower than the European and national medians (except for the unemployment rate in Denmark that is slightly lower than in the CBC region). The share of persons aged 20-65 with upper secondary or tertiary education attainment slightly exceeds the median-level of the EU-27+4, all CBC areas and of Denmark, while it is slightly lower than the relevant value for Germany.

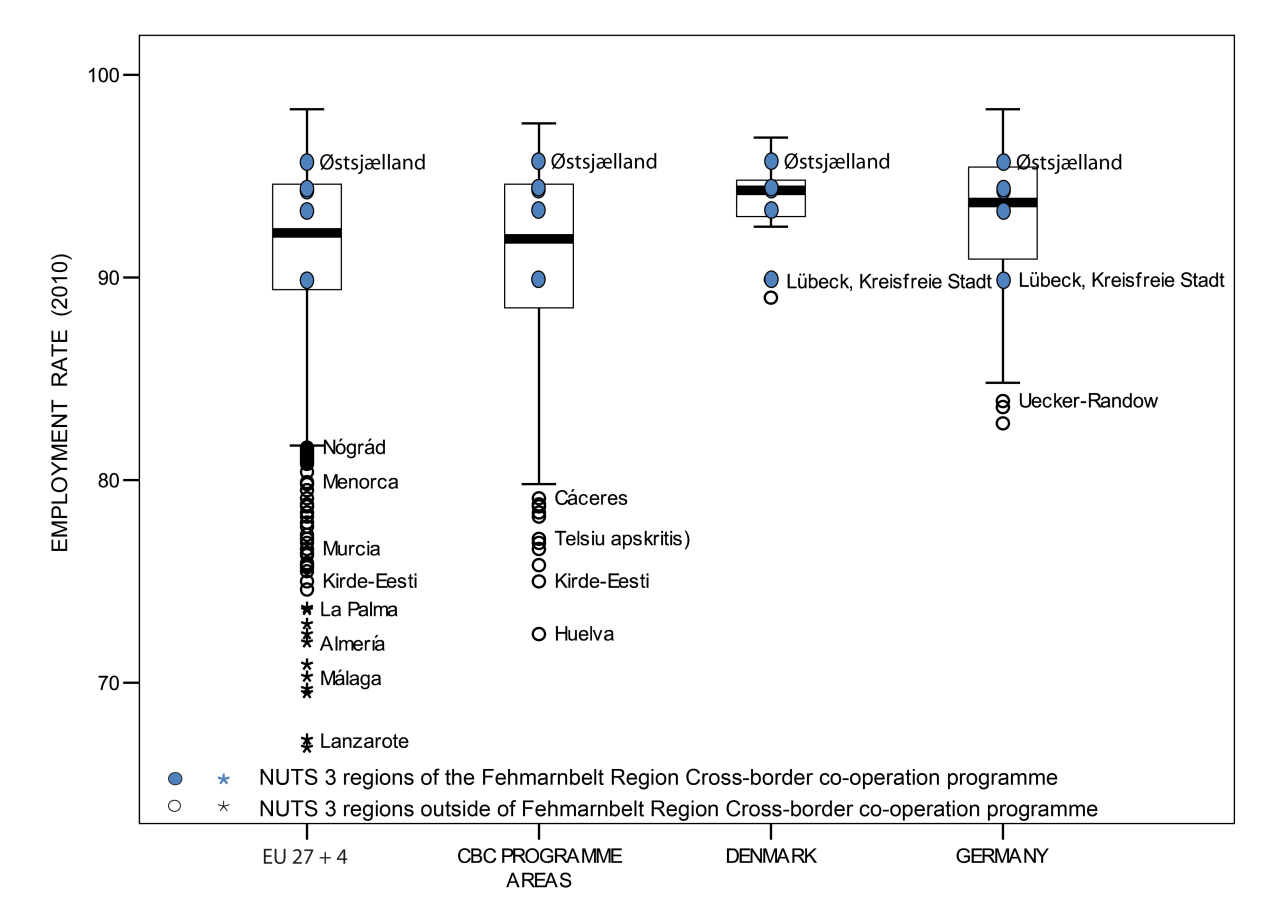
According to BOX-PLOT 2, most of the border regions have a higher employment rate than the EU-27+4 or the all CBC areas’ medians. The performance of the NUTS3 regions is similar in this regard to the national medians. The Danish region of Østsjælland stands out among the border-regions, with it’s higher than average employment rate in both the European and the national contexts. Instead the main urban centre of the programme, the city of Lübeck, performs lower than average in case of the employment rate.

To further explore the role of policies the ESPON DEMIFER project has developed four scenarios to show how various policy bundles can lead to different trajectories of developments in population and labour force. All scenarios predict a labour force decrease on both sides of the border. In all cases a high level of decrease is estimated on the German side of the border, while the various scenarios foresee a more limited (low to medium level) decrease on the Danish side.

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



**BOX-PLOT 2 – Employment rate 2010 within the CBC Denmark - Germany**



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

# Territorial factors of interest for the programme area

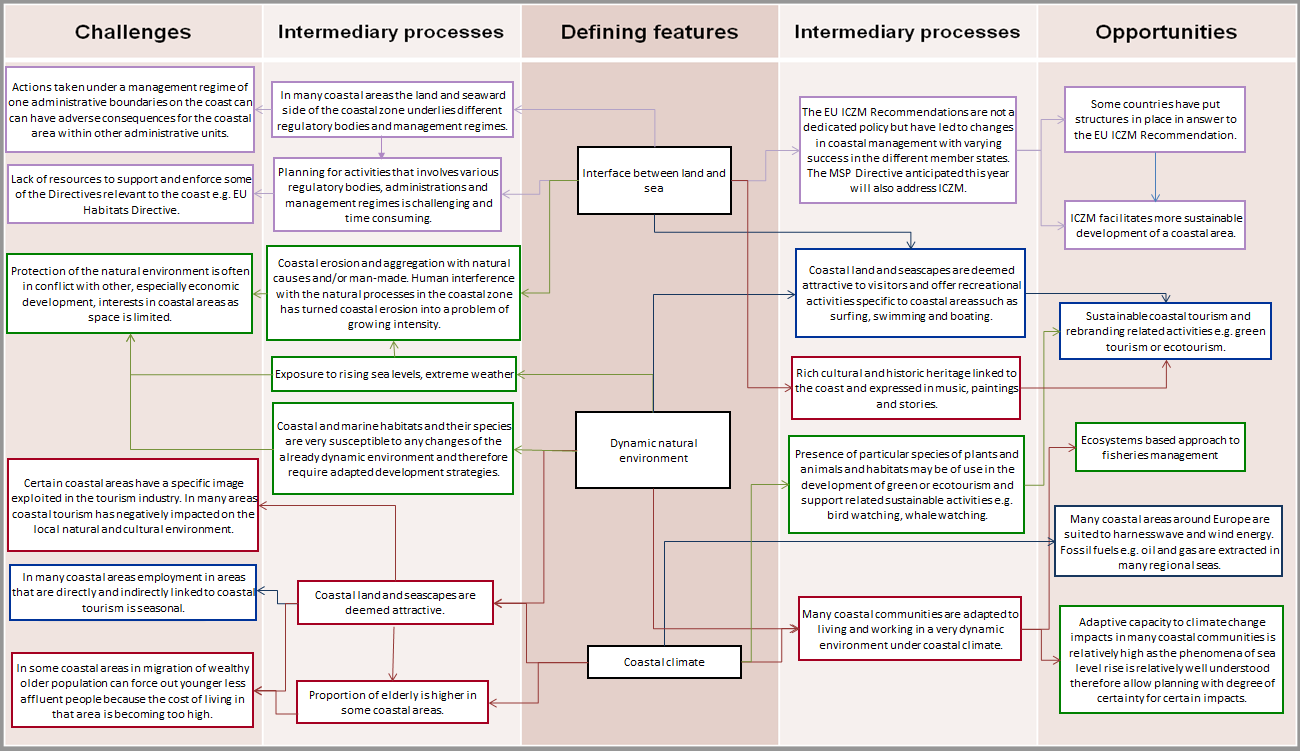
Territorial cooperation programmes can make a difference for the future development of cross-border and transnational territories in Europe. Some of the factors can be analysed by European wide data sets and using some studies having specific maps, figures and tables concerning the areas of the cooperation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

In a European perspective the programme area is mainly comprised by intermediate regions close to a city on the German side, and remote rural areas on the Danish side. The main urban centre within the programme area is Lübeck. Furthermore, parts of the programme area benefit from the nearest urban centres of European and international importance, i.e. Copenhagen and Hamburg.

This concerns both the access to services and infrastructure. In a European perspective most parts of the programme area have about European average international and multimodal accessibility. Furthermore, there are also good opportunities for one-day business trips within the European urban network from Hamburg and Copenhagen. The role of the region for rail and road traffic from or via Germany to the Nordic countries is widely discussed as is the potentials of a fixed bridge between Denmark and Germany to better link the transport infrastructure. In terms of ICT access and use the programme area has in a European perspective high and partially even very high values.

The intermediate and rural character of the programme area comes also with a number of challenges, not at least with regard to the environment. Furthermore, the programme area comprises a number of islands and is mainly comprised by coastal regions. All this comes with particular development challenges and opportunities. ESPON GEOSPECS has developed nexus models for coastal regions as well as for islands, linking defining features via intermediary process to development challenges and opportunities (see figure for coastal regions). These models can be of interest also for further discussions 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 Denmark - Germany**



*(Accessible=close to a city)*

**MAP 5 – Multimodal accessibilty (ESPON Accessibility Update) for the CBC Denmark – Germany**

*“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 on potential accessibility indicators). |
| SEMIGRA | Rural migration | It identifies the main reasons and consequences of selective migration in rural regions in order to develop strategies for territorial development (see map 1, 4 and 5). |
| KIT | Innovation | It describes patterns and potentials of regions in terms of knowledge and innovation economy and explores development opportunities (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). |
| ATTREG | Attractive-ness | The project provides a better understanding of the contribution of European regions and cities to economic performance and it identifies the key ingredients of attractiveness in different types of territories. In particular Annex 4/6 of ATTREG concerns the case study of Lübeck, which is part of the CBC area. |

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.