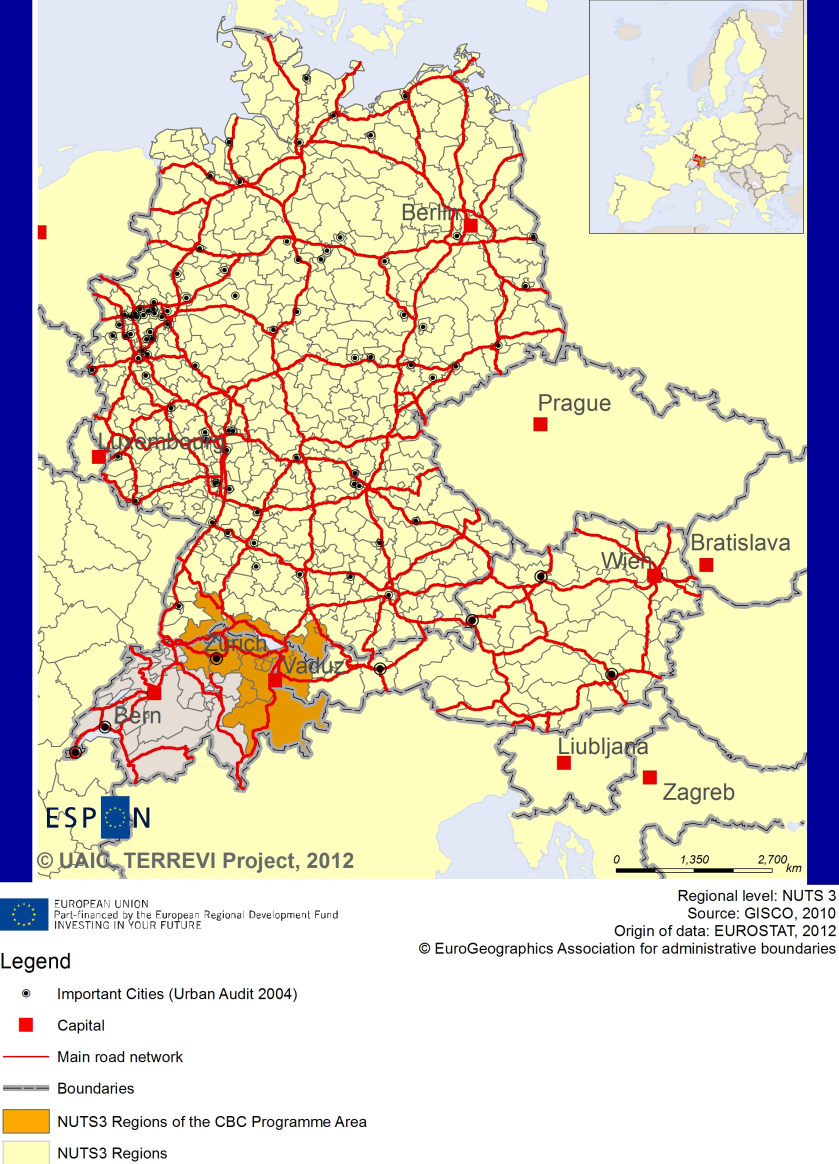
Alpenrhein – Bodensee – Hochrhein

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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.

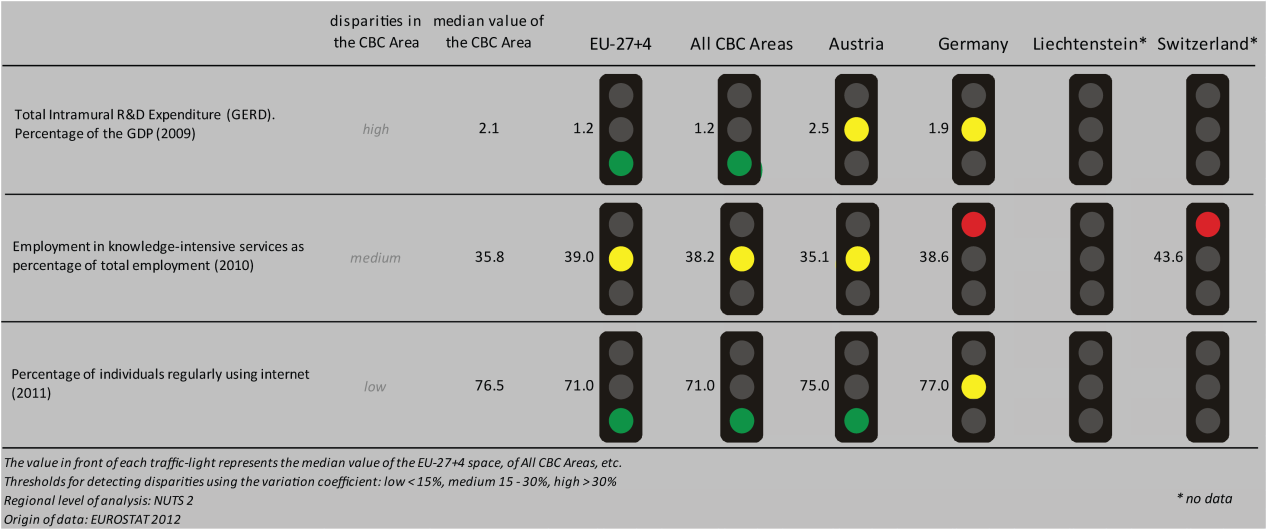
In the following the traffic light for each indicator represents how your programme territory compares to wider European and national medians where green = your programme area performs better for that indicator, yellow = similar, and red = worse.

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 Alpenrhein - Bodensee – Hochrhein CBC area performs better than both the EU27+4 space and all CBC areas.

Considering the R&D expenditure as percentage of the GDP - 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. Nevertheless, the Alpenrhein - Bodensee – Hochrhein CBC area is characterised by a high level of internal disparity. The area globally performs similarly to Austria and to Germany.

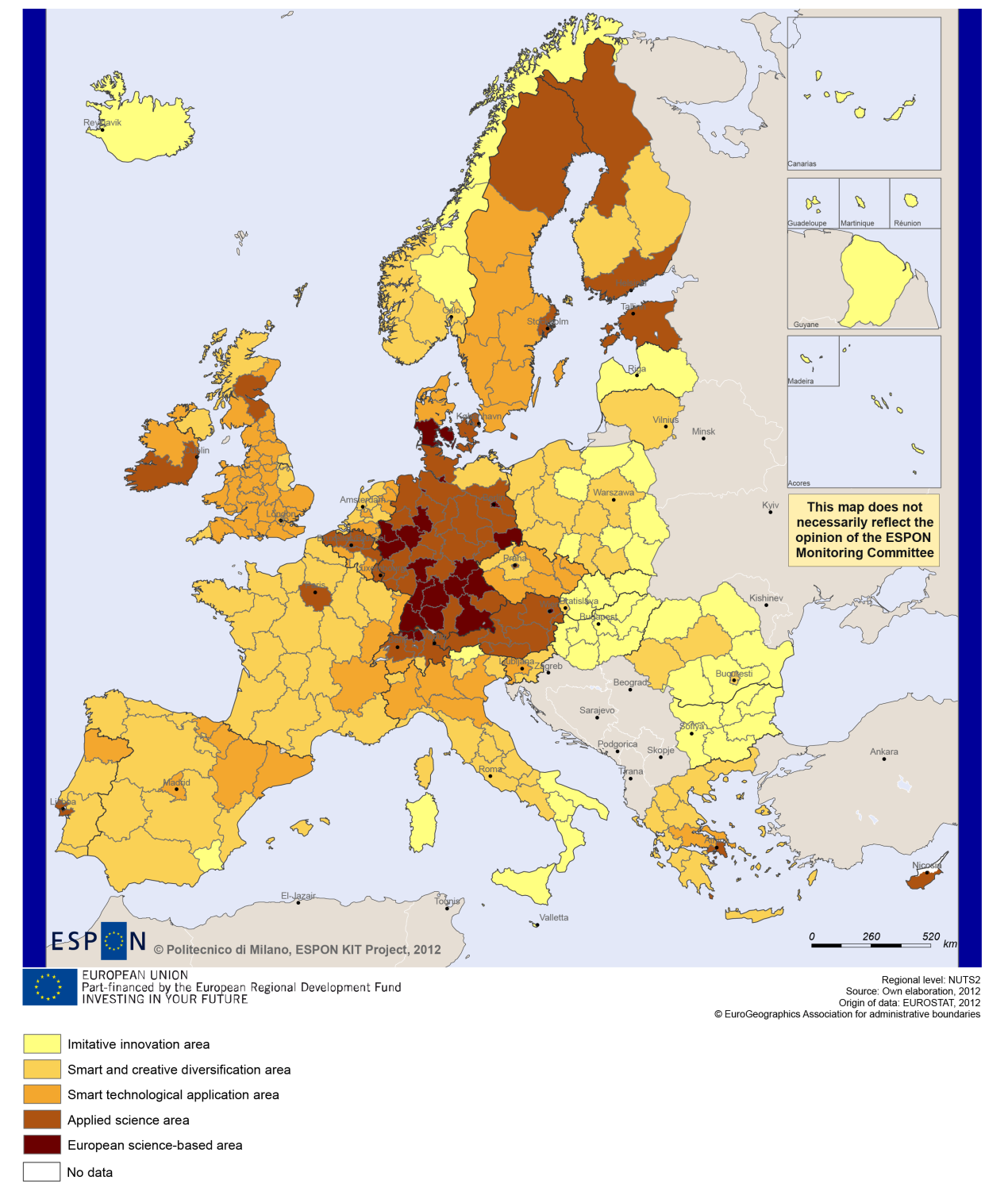
Concerning the ratio of employment in knowledge-intensive services, the CBC area has about the same values as both the EU areas considered and Austria. However, it shows slightly lower values than Germany and Switzerland, while there is a medium level of internal disparity within the CBC area.

In terms of percentage of individuals regularly using internet in 2011, the CBC enjoys higher values than all European areas and Austria, but it performs slightly worse than Germany. Regarding this indicator, the situation of the CBC area is quite homogeneous.

According to the classification of the KIT project, MAP 1 identifies three territorial patterns of innovation concerning the CBC area:

* ‘Creative imitation area’, in Liechtenstein. It is associated to a low knowledge and innovation intensity, entrepreneurship, creativity, a high attractiveness and a high innovation potential;
* ‘European science-based area’, around the cities of Zurich, in Switzerland, and the regions of Schwarzwald-Baar-Kreis and Konstanz in Germany. It is characterised by strong knowledge and innovation, specialized in general purpose technologies, with a high generality and originality of science-based local knowledge;
* ‘Applied science area’, on the South / South-Eastern part of the CBC area including German, Austrian (Bludenz-Bregenzer Wald and Rheintal-Bodenseegebiet) and Swiss parts. 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 Alpenrhein – Bodensee - Hochrhein**



### 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.

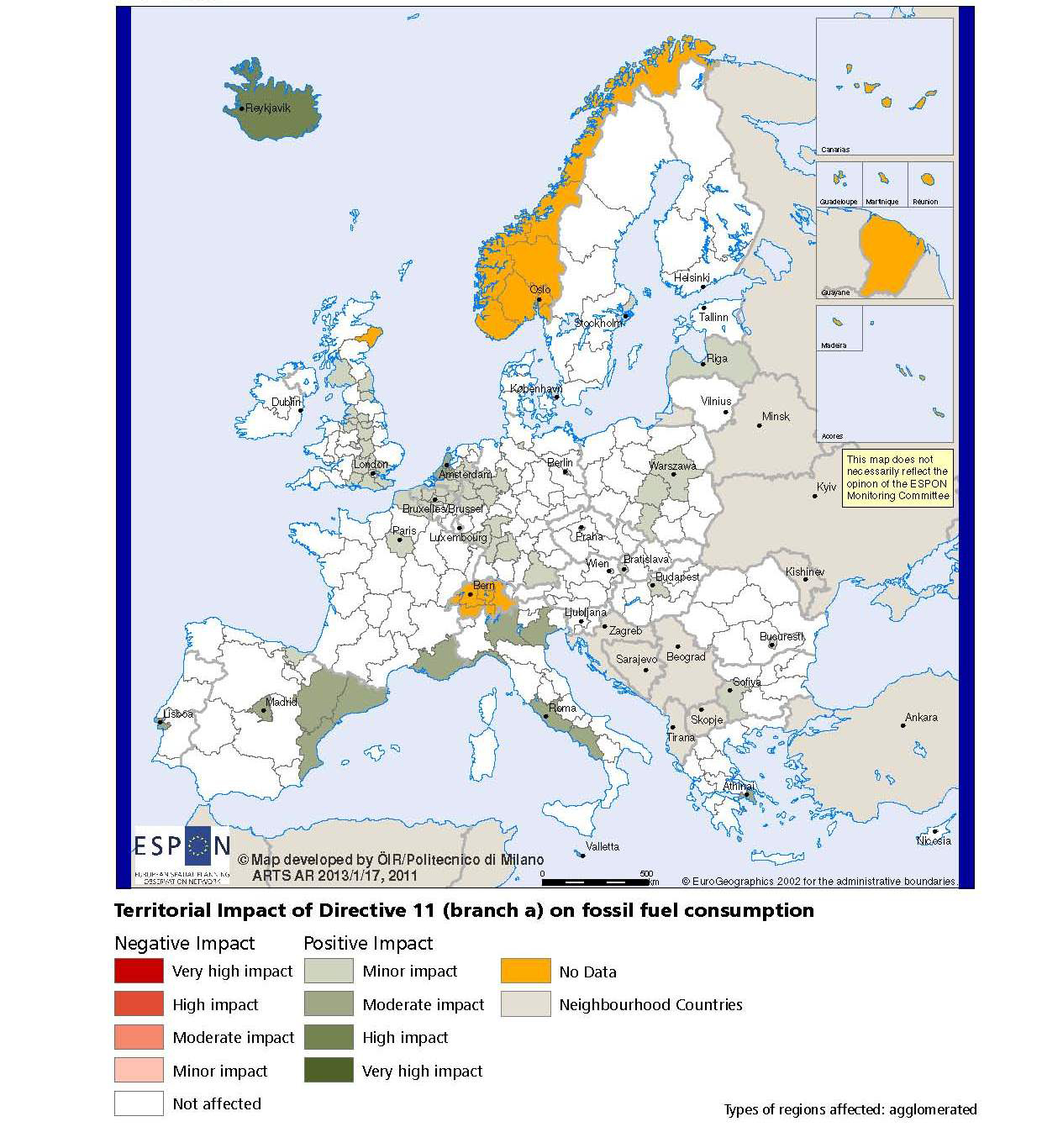
In the CBC area, wind energy seems to have a lower potential compared to the EU-27+4 as well as all CBC areas together. The value is also lower than in Germany and Austria. However, it seems to have more potential than in Liechtenstein and Switzerland. It should be added that the disparity of the level of wind energy potential within the CBC area is high.

The ozone concentration in the CBC area is lower than in all CBC areas together and in the EU-27+4 as well as the national levels of Germany and Austria. The CBC area is not as vulnerable to climate change as the EU27+4 area, the CBC areas in total, the national level of Austria and Germany. For these two values no data of Liechtenstein and Switzerland is available.

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

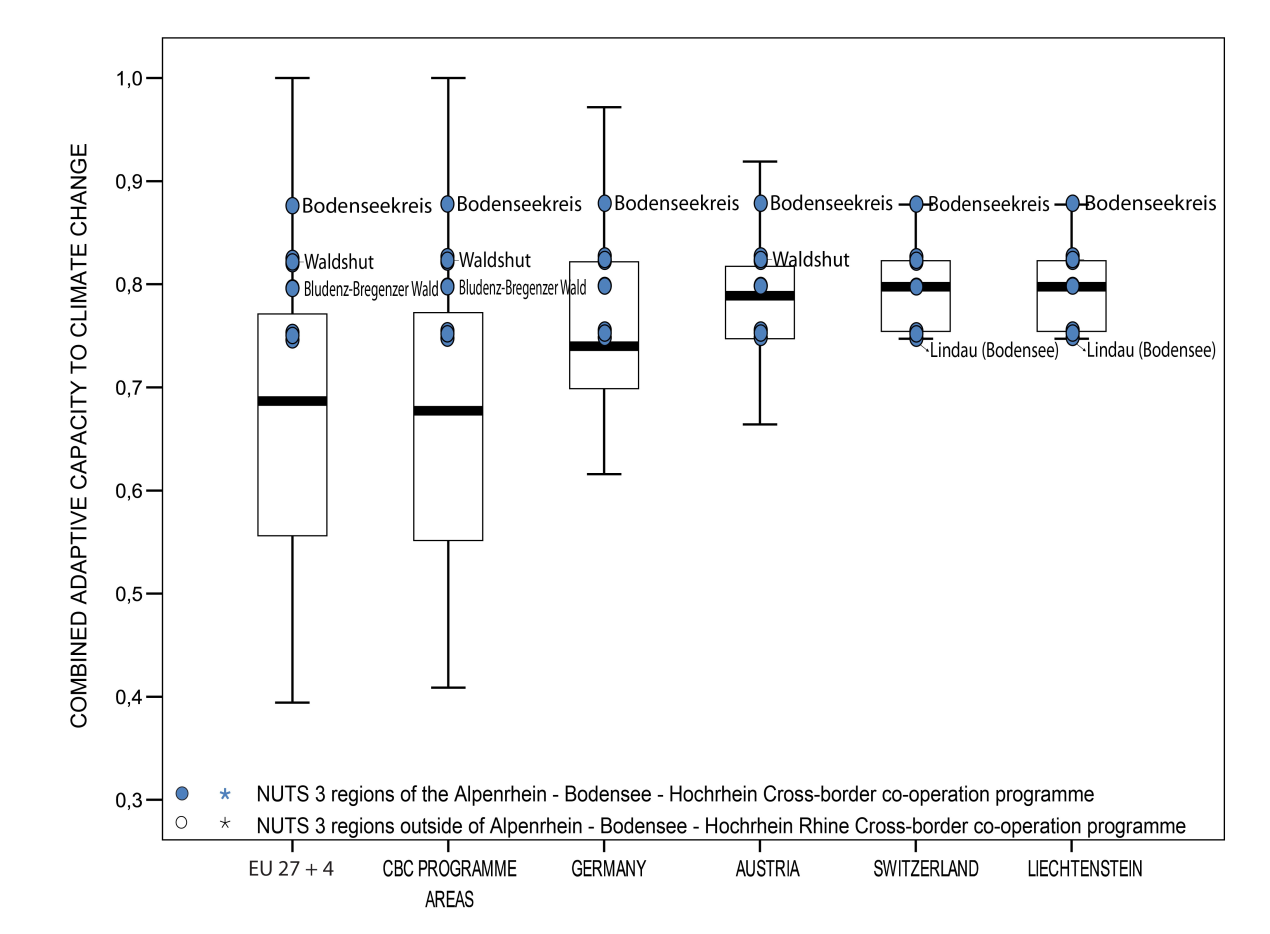
Compared to an above-average level capacity in Austria, Liechtenstein and Switzerland, the CBC area’s capacity to adapt to climate change is similar to the EU27+4 and Germany. Bodenseekreis stand out for their above-average capacity to adapt to climate change according to the Box-Plot1.

**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 Alpenrhein – Bodensee - Hochrhein**



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

*“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 CBC areas in total, Switzerland and Germany, but comparable to Austria. In respect to at-risk-of –poverty rate, the CBC area shows much better results than all – the EU27+4, the CBC areas in total, and the national levels of Austria, Switzerland and Germany.

The same is true for the percentage of secondary or tertiary education attainment of persons aged 25-64 and 20-24.

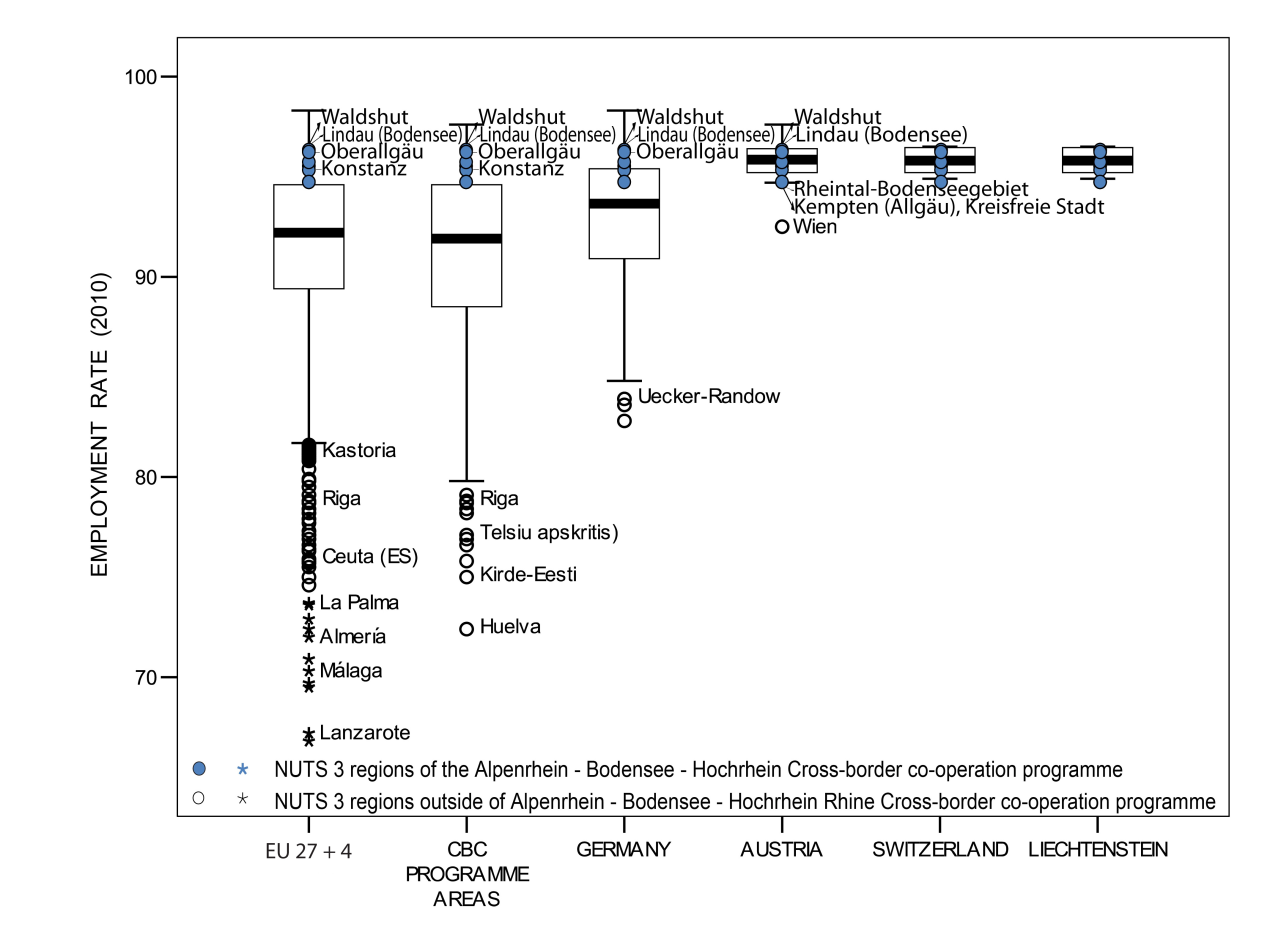
For all the possible scenarios on the change in labour force until 2050 drawn in the ESPON DEMIFER project (Map 3), the situation differs between all sides of the CBC area. The change in labour force witnesses negative effects on all sides for all the scenarios imagined. Only in the scenarios of “expanding market europe” and “growing social europe” positive effects can be imagined for Austrian and Swiss parts of the CBC area.

Box plot 2 shows that the employment rate in Austria, Switzerland and Liechtenstein is more positive than all the CBC areas together, the EU27+4 and Germany. The German area Waldshut shows the most positive figures while the German region of Uecker-Randow is below the averages of the CBC areas, the German, Swiss and the Austrian national levels, and also the EU27+4 level.

**MAP 3 – Change in Labour Force 2005-2050 (ESPON DEMIFER project) for the CBC Alpenrhein – Bodensee - Hochrhein**



**BOX-PLOT 2 – Employment rate 2010 within the CBC Alpenrhein – Bodensee - Hochrhein**

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*(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.

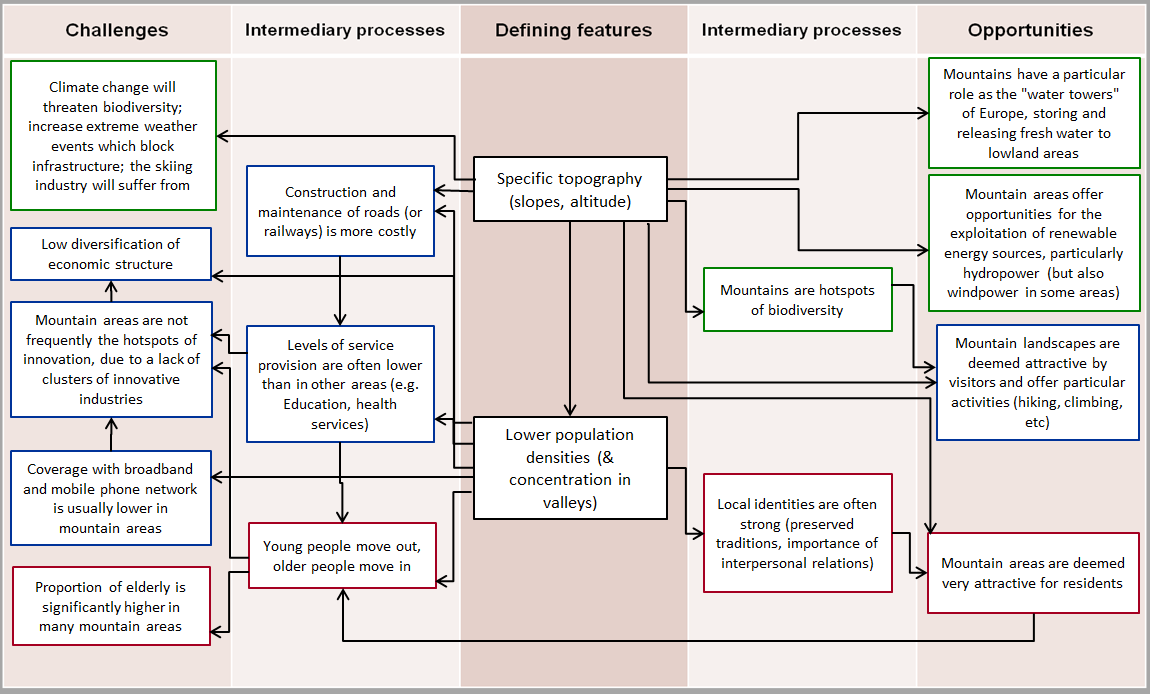
In a European perspective the programme area comprises mainly intermediate regions (in-between urban and rural) as well as some rural regions close to a city and some urban areas. The main urban area is Zurich. Other centres are e.g. Konstanz, Vaduz and St. Moritz. However, most parts of the programme area comprise only minor settlements, in a European perspective.

Whereas most parts of the programme area have below European average accessibility, Zurich and the areas around it have above European average accessibility values, including opportunities for one-day business trips within the European urban network. The use of internet and access to the Information Society in the programme area is mainly described as high in a European perspective.

The intermediated character of the programme area with a lot of areas close to a city comprises a wide range of development opportunities and challenges. One of these concerns the low urban potential for strengthening cross-border functional areas.

In European perspective the area is widely characterised as mountainous. ESPON GEOSPECS has developed a nexus model for mountainous regions linking defining features via intermediary process to development challenges and opportunities (see figure). This model can be of interest for further developing the discussion about the challenges and opportunities in the programme area.

ESPON GEOSPECS PROJECT – FINAL REPORT, PAGE 102:  
Nexus model for mountain areas



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



*(Accessible=close to a city)*

**MAP 5 – Multimodal accessibilty (ESPON Accessibility Update) for the CBC Alpenrhein – Bodensee – Hochrhein**

*“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). |

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.