ESPON

DeTeC
Detecting Territorial Potential and Challenges

Scientific Platform and Tools Project 2013/3/6

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This report presents the final results of a “Scientific Platform and Tools” 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 most recent documents produced by finalized and ongoing ESPON projects may be downloaded from the web site.

This basic report exists only in an electronic version.

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A. Executive summary

The European Observation Network for Territorial Development and Cohesion (ESPON) strives to inspire policy-making by providing territorial evidence on a variety of spatial scales. The objective of the Detecting Territorial Potential and Challenges (DeTeC) project has been to develop practical guidance on how local and regional stakeholders can use ESPON knowledge to detect territorial potential and challenges. The project included an extensive review and systematization of ESPON projects, in addition to direct engagement with local and regional practitioners and policymakers through six regional laboratories. The main output of the project is an interactive e-handbook providing practical guidance and authentic examples of applications of ESPON knowledge. By means of the conceptual framework, the territorial approaches, the ESPON methods, the regional laboratories, and the interactive handbook, the project addresses two of the main challenges of using ESPON knowledge at the local and regional levels.

1. *ESPON has produced an extensive knowledge base of spatial indicators and thematic maps. Quantifiable indicators are a fundamental element of most applied research and targeted analysis projects. Although a general aim of ESPON is to use and produce data for the whole of Europe to assess various territorial dynamics in cities and regions, the choice of indicators is one of the key challenges in analysing and using ESPON knowledge at the local and regional levels.*

2. *To confront the challenges with vague and general indicators, often represented at aggregated spatial scales, the DeTeC project has developed territorial approaches and identified innovative ESPON methods, and has linked them through key questions in an interactive and multidirectional way. By focusing on generic approaches and methods, problems regarding representation, scale and timing of specific indicators can partly be avoided.*

3. *The applicability of the conceptual framework has been assessed through regional laboratories across Europe. Through the regional laboratories, the DeTeC project has engaged directly with local and regional practitioners and policymakers in various local contexts, each with different challenges and opportunities. General scepticism towards what ESPON could provide was initially evident, but through the regional laboratories, which included context-specific elaborations of territorial approaches and ESPON methods, it was concluded that ESPON knowledge could reveal territorial potential and challenges from a European perspective.*

4. *To support the local and regional applicability, usage, and relevance of ESPON knowledge, the DeTeC project has developed an interactive e-handbook. The handbook is a concise and easy-to-use reference providing the following.*

    a. Practical guidance for strategic local and regional policy-making through the five territorial approaches. These approaches are designed to focus attention on important issues and to encourage new perspectives in local and regional development processes.

    b. Authentic examples of good practices derived from the regional laboratories and a collection of ESPON methods. Local and regional practitioners can use these as inspiration to identify the specific territorial potential and challenges in their region.

A European perspective offers new possibilities for exploiting new and underused territorial potential for local and regional development. Understanding the position of a region or city in a larger territorial context is of major importance in developing new regional strategies and policies, and for capitalizing on territorial potential. These larger contexts include relations with neighbouring regions, macro-regional, European, and global contexts.

The DeTeC project has striven to meet increasing demand for innovative and relevant knowledge to assist practitioners and policymakers in identifying territorial potential and utilizing regions' larger territorial contexts to turn challenges into opportunities. The project has undertaken an extensive review and systematization of ESPON knowledge, developed five novel territorial approaches, and identified 10 innovative ESPON methods. The local and regional applicability of this conceptual framework has been assessed through six regional laboratories, and the framework forms the basis of the interactive handbook.

The conceptual framework

The DeTeC conceptual framework was developed through a thorough review of ESPON projects. Its main focus has been on Priority 2 Targeted Analysis projects, because they were developed in close collaboration with stakeholders, but Priority 1 Applied Research projects and Priority 3 Scientific Platforms and Tools projects were also reviewed. The review processes focused on how indicators connect concepts and methods. Based on the review, the conceptual project framework was developed through a systematic, stepwise process. The methods were categorized according to the territorial concept(s) to which they apply. In addition, other ESPON publications, European policy documents and research literature were reviewed. Through this process, a number of ESPON methods were selected for further analysis, and five territorial approaches were developed.

A territorial approach is essentially a geographical perspective concerning local and regional development, taking into account territorial specificities, and assistance to structure policies, practices and processes in territorial terms; that is, the ways in which current ESPON knowledge can be used to understand territorial challenges, opportunities and key policy areas for regions, as follows.

1. Global and future challenges and potential
2. Comparing territorial performance
3. Functional areas and internal coherence
4. Current and potential external linkages
5. Opportunities for territorial governance

The ESPON methods have been analysed and filtered according to three criteria. They must have been developed or significantly enhanced by ESPON work (i.e., innovative), they must have analytical power for the identified territorial approaches, and they must be transferable for application and use by practitioners. Ten ESPON methods were validated through the regional laboratories and found to be particularly valuable and practical, as follows.

1. Cross-border Institutional Mapping
2. Multilevel Governance Analysis
3. Assessing Functional Integration
4. Assessing Polycentricity
5. Multithematic Territorial Analysis
6. Understanding Differential Growth
7. Urban Growth Modelling

8. Spatial Scenarios
9. Territorial Impact Assessment
10. Territorial Performance Monitoring

The regional laboratories

Regional laboratories were conducted to assess the regional applicability of the territorial approaches and ESPON methods. The laboratories were conducted in six carefully selected regions across Europe, reflecting the diversity of regions with very different challenges and potential, which is the essence of a territorial, place-based approach to policy-making. The selected regions were as follows.

- Edinburgh and South East Scotland (United Kingdom)
- Skåne (Sweden)
- Podlasie (Poland)
- The Danube–Kris–Mures–Tisa (DKMT) Euroregion (Hungary, Romania, Serbia)
- Styria (Austria)
- Malta

The regional laboratories provided important benefits, ensuring that DeTeC's results were oriented towards practitioners and policymakers. They helped to identify three "key questions" for each of the territorial approaches, which would assist practitioners in identifying their own regional contexts when considering the territorial approaches. The practical applicability of the ESPON methods was discussed during the laboratories, and as a result, the initial list of ESPON methods was reduced to the final 10 presented in the handbook (as listed above). During the regional laboratories, a draft of the handbook was presented, and the local and regional stakeholders contributed significantly to its refinement.

The laboratories revealed that ESPON is interesting for local and regional development, but the specific outcomes of ESPON projects are not well known among local and regional stakeholders. Thus, the laboratories were valuable for providing participating practitioners with information about ESPON knowledge that acknowledges their local realities and needs. Through the laboratories, it was also clear that the experiences and professional competences of regional practitioners throughout Europe vary greatly. The laboratories highlighted the importance of not only "making ESPON knowledge more accessible" (to practitioners) but also "making more accessible ESPON knowledge". The DeTeC Handbook relates to the former, while upcoming ESPON work should focus on the latter.

The interactive handbook

The interactive handbook for detecting territorial challenges and potential is the main tangible outcome of the project. As a novel contribution to ESPON, it is available as an e-book for mobile platforms. The DeTeC conceptual framework outlined above translates directly into the handbook's structure. The guiding principle underpinning its development has been to present information in a way that provides quick access to new insights on territorial potential and challenges to help practitioners and policymakers in their daily work. Therefore, the focus has been on usability and accessibility with plenty of visualizations, brief but specific text explanations, and an interactive user interface. These features should allow for effective and efficient use.

The main objective of the handbook is to provide guidance on the ways in which local and regional practitioners and policymakers can use ESPON knowledge to gain a deeper understanding of their regions' position in a larger territorial context. The

handbook was designed to engage local and regional stakeholders, practitioners and policymakers in the fields of regional development and spatial planning. These actors are responsible for making and implementing strategic decisions that influence the medium and long-term development of their regions and cities. While engaging local and regional practitioners and policymakers, the handbook was not designed to "replace" the decision-making process. This means that the structure and content of the handbook does not (and cannot) provide answers to specific questions. Rather, it provides different possibilities and alternative perspectives for managing a problem or issue.

The definition and identification of the requirements of the project's target audience were necessary to develop a conceptual framework that combines the methodological approaches with the needs of practitioners and policymakers. Direct engagement with them in the regional laboratories allowed these needs to be identified, and policymakers and practitioners were actively involved in development. Moreover, the development of an e-handbook provides new possibilities for working in a non-linear and interactive fashion. The final interactive handbook, in the form of an e-book, consists of five chapters.

- Chapter 1. Introduction
- Chapter 2. Territorial Approaches
- Chapter 3. ESPON Methods
- Chapter 4. Regional Laboratories
- Chapter 5. ESPON Resources

Future co-production of knowledge

Through the various activities performed within the DeTeC project, we can conclude not only that the methods and approaches developed by ESPON are relevant to regional and local stakeholders—practitioners and policymakers—but also that there are challenges in applying and using ESPON at the regional and local levels. Discussions in regional laboratories have provided valuable knowledge on the local and regional needs related to spatial planning and regional development. The information gathered about the necessity for further analysis and research is mainly related to communication, scale and scope of indicators, and currency of the data.

The ESPON Programme is known to many regional and local stakeholders as a European programme that analyses territorial trends at a macro level, and for its European maps. There is a perceived lack of communication of results and outputs to practitioners and policymakers at lower regional and local levels, and it is often felt that ESPON projects are not useful for planning and development purposes at these levels. However, there is interest in including a European perspective. An underlying problem is that analyses are mainly conducted at an aggregated regional level (i.e. NUTS 2), and regional and local actors generally possess much more detailed data on their regions and local areas. According to the opinion of the regional representatives, data on a much lower scale than this are needed to analyse regional challenges and potential. Data comparability between regions (e.g., differences in definitions of indicators), the problem of the scale of data and of maps concerning intraregional disparities, and the problem of up-to-date data are main issues. For instance, an example of one of the regional laboratories—held in Malta—shows that analyses at the NUTS 2 level are not satisfactory for local and regional practitioners. In addition, the state of Malta is not clearly visible on the maps showing the entire European Union, and thus the maps lose their relevance for small territories.

In the future, it will be important to encourage increased interaction between researchers and various stakeholders on different spatial scales throughout the projects (i.e., in the formulation, implementation and dissemination of methods). The added value of a European perspective for local and regional development needs to be emphasized, and good practice examples need to be provided, because it is not general knowledge among practitioners and policymakers at the regional and local level that ESPON knowledge supports the daily work in regional planning and development. There is also a need to promote and intensify data collection and harmonization in smaller geographical areas. This is no doubt a concern shared by many participants in ESPON projects—the inevitable "Catch-22 moment" between offering pan-European coverage and providing robust research findings on an appropriate territorial scale.

From local and regional perspectives, ESPON knowledge could become more accessible through more user-friendly publications, tools and websites, but at the same time, there is a demand for further reading options and in-depth analysis in greater detail. A crucial activity for the programme in future will be to continue to conduct sound research and to provide policymakers with targeted analyses. The close interaction between research and policy is also the hallmark of ESPON. The transnational co-production of territorial knowledge is a way forward in converting the challenges of using ESPON knowledge at local and regional levels into opportunities.

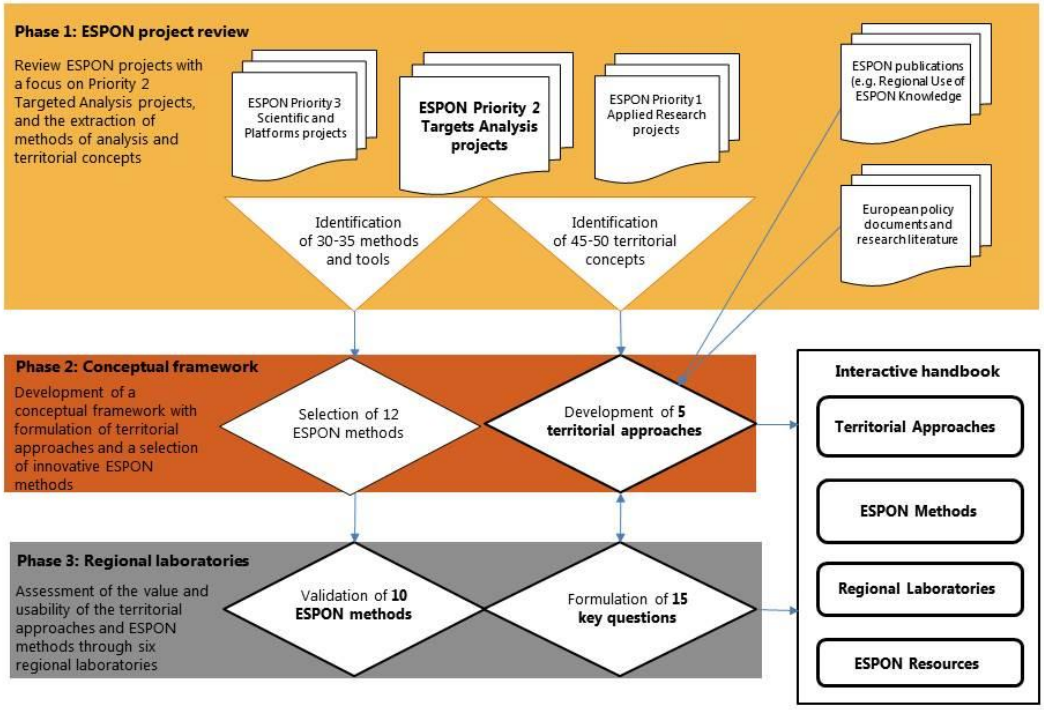


Figure 1 An overview of the DeTeC project

B. Report

B1. Introduction

How can the European Observation Network for Territorial Development and Cohesion (ESPON) contribute to local and regional development? How can analytical approaches and methods developed and used in various applied research projects and targeted analyses in the ESPON programme contribute to detecting territorial potential and challenges at local and regional levels? These were two of the overarching questions explored within this ESPON Priority 3 Scientific Platform and Tools project—Detecting Territorial Potential and Challenges (DeTeC).

The specific objective of the ESPON DeTeC project is to develop a practical guide for local and regional stakeholders, practitioners and policymakers using ESPON knowledge to identify territorial potential and challenges. By applying a variety of territorial approaches taking a wider European perspective, policymakers and practitioners are expected to turn challenges into opportunities. This can be achieved by providing examples of good practices for linking ESPON results with local and regional issues, in addition to illustrative examples of the application of territorial approaches and ESPON methods. The main output of this project is an interactive e-handbook providing practical guidance and authentic examples to practitioners and policymakers in an easy and understandable way.

The project consisted of three main phases: a systematization and review of ESPON approaches and methods, processing and development of a framework for using ESPON knowledge, and interaction with regional stakeholders through regional laboratories in six regions of Europe. Ultimately, the project focused on synthesis, transferability, and dissemination, producing an interactive handbook. This report (B) focuses on results and contexts of the project, while the attached Scientific Report (C) provides information on the processes: methods and research activities.

1.1. Territorial cohesion and place-based policy

A wider European perspective on local and regional development must be understood in relation to the European policy agenda and its key concepts. Territorial (or place-based) approaches for regional development within Europe are a key element in the territorial agenda and in territorial cohesion policies.

Territorial cohesion was introduced as a third dimension of the EU's cohesion policy, alongside economic and social cohesion, under the Lisbon Treaty. It is now an integral part of the EU's overarching Europe 2020 strategy. However, the topic has been discussed since the early 1990s (e.g., in the *European Spatial Development Perspective* (ESDP, 1999)) but has become more prominent with the expansion of European territory and the inclusion of new member states in the 2000s. Territorial cohesion was first explicitly addressed in *Territorial Agenda: Towards a More Competitive and Sustainable Europe of Diverse Regions* (TA, 2007). In this policy document, the normative notion of territorial cohesion was declared to be the most important task of territorial policies in Europe, while the existing territorial diversity within the EU was to be simultaneously exploited. This was further articulated in the *Green Paper on Territorial Cohesion* issued by the European Commission in 2008 (CEC, 2008). Since then, a central objective of EU regional policy and research has been to develop a common mindset on the definition of territorial cohesion and its significance in terms of policy co-ordination.

A short encyclopaedic definition is “a principle of promoting economic prosperity and social justice within the European Union (EU) in order to avoid socioeconomic fragmentation and greater regional disparities” (Scott, 2009). However, it is still a vague concept, perhaps intentionally and necessarily so, because a robust definition would render it politically unusable (Davoudi, 2005; Vanolo, 2010). According to some researchers, territorial cohesion and competitiveness have become depoliticized high-level politics, and the internal contradictions have been naturalized through the harmonization of contradictions (Vanolo, 2010). Territorial cohesion can be understood in different ways; for example, as socio-economic convergence, as economic competitiveness, as spatial planning, or as policy co-ordination (Evers, 2012). The territorial cohesion concept thus has a tension between socio-economic balance between regions on the one hand, and territorial competitiveness on the other, which becomes an issue for spatial planning and policy co-ordination.

The most recent *Territorial Agenda: Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions* (TA 2020, 2011) has been adapted to the Europe 2020 strategy, the general road map of EU policy targets in regard to central policy fields (employment, energy, education and innovation). The TA 2020 takes up the “policy triad” proposed by the Europe 2020 strategy; namely, smart, sustainable and inclusive growth (and it is thus related to concepts such as sustainable development and smart specialization). In this way, the document underlines the importance of a territorial and/or place-based approach to reflect the territorial diversity and challenges in Europe’s cities and regions.

The TA 2020 also asserts that the diversity of territories has potential for development. For this, a place-based approach to policy-making as elucidated in the “Barca Report” (2009) is central, and it requires evidence-based policy-making and integrated functional area development. In the Barca report, a place-based policy is defined as follows.

> A *place-based policy* is a long-term strategy aimed at tackling persistent underutilisation of potential and reducing persistent social exclusion in specific places through external interventions and multilevel governance. It promotes the supply of integrated goods and services tailored to contexts, and it triggers institutional changes. In a place-based policy, public interventions rely on local knowledge and are verifiable and submitted to scrutiny, while linkages among places are taken into account. (Barca, 2009, p. vii)

A report entitled *Place-based Territorially Sensitive and Integrated Approach*, developed during the Polish Presidency of the EU during the second half of 2011, elaborated on the benefits and methodology of place-based approaches (in the report, the terms *territorial approach* and *place-based approach* are used interchangeably). The report concluded that the most important general elements of a place-based approach are the following.

1. Recognition of territorial diversity in pursing overall developmental goals; i.e., different ways of addressing developmental goals and priorities for different parts of a given territory, i.e. different “places”.
2. Institutions:
   - having mandate or capacity to harmonize/coordinate, guide in harmony the development of “places” (supra-place actors and institutions);
   - having mandate or capacity to guide, influence and foster development of a “given place” (a place with particular actors and institutions);

- capable to assess the impact of their own actions on the actions of other actors. (Zaucha et al., 2013, p. 11)

In line with the place-based approach (and the practice-oriented research perspective) outlined above, potential cannot be defined a priori, but place-based policies need to be derived from a given place; that is, from within the region but simultaneously harmonized across space. A key question is thus: what inherent capacities and potential must a region acquire, develop or regain to confront and adapt to new challenges? To detect territorial potential, external challenges and factors exogenous to the region as well as its internal capacities and endogenous potential need to be considered. It is also to crucial to recognize both the internal coherence of the region and its functional area, as well as the fact that no region is an island but that all are part of a larger territory through various linkages and flows. Finally, it is essential to identify territorial governance opportunities and capacities; a region must confront these challenges and turn them into opportunities.

The ESPON Programme has become the nucleus of scientifically robust knowledge in terms of territorial analysis, but it also considers the applicability and identification of policy options in support of responses to the territorial dimension in general and the political objective of territorial cohesion in particular.

1.2. Background: the ESPON programmes

The ESPON knowledge base provides tremendous opportunities for responses to various regional challenges (and exploitation of potential), and there is a demand for further knowledge from local and regional practitioners and policymakers. Various ESPON projects have revealed that territorial capital and opportunities for development are inherent in Europe's regional diversity. Consequently, diverse territories have a variety of combinations of resources and capacities to promote the Europe 2020 Strategy as well as the EU Cohesion Policy. Territorial diversity, particularly in the economic base, entails a need for tailor-made regional strategies building on endogenous potential and synergies through co-operation so that regions, cities and larger territories can achieve smart, sustainable and inclusive growth.

Since its beginning in 2002, ESPON has produced an extensive evidence base in the form of scientific reports, targeted analyses, thematic maps, and spatial indicators. A general objective of its programmes has been to use and produce European-wide harmonized data to assess various territorial dynamics in cities and regions. The programmes have striven to cover the entire "ESPON space", including the whole European Union (EU-15, or more recently EU-27 or even EU-28) plus Switzerland, Norway, Iceland and Liechtenstein in the territorial analysis. In some projects, even candidate countries or neighbouring regions of the European Union have been analysed. ESPON has been set up to bridge gaps in knowledge about European territorial development by bringing together researchers and the policy community, "to inspire policy-making by territorial evidence" (see www.espon.eu).

The first period of ESPON from 2002 to 2006 involved more than 600 researchers and 130 institutions focusing on ways to analyse spatial dimensions across Europe. The programme included 35 major studies, making particular use of quantitative methods and GIS platforms to illustrate their results. The content of the projects was very much aligned to the thematic scope outlined in the *European Spatial Development Perspective* of 1999, such as the role of cities in regional development, urban–rural relations, polycentricity and accessibility.

The ESPON 2013 programme has been divided into four priority areas, which in various ways have contributed to a European knowledge base on territorial development and cohesion, including data sets, themes of indicators, regional typologies, thematic maps, and, not least, territorial approaches and methods. The mission of the ESPON 2013 Programme has been defined as follows.

> Support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory by (1) providing comparable information, evidence, analyses and scenarios on territorial dynamics and (2) revealing territorial capital and potentials for development of regions and larger territories contributing to European competitiveness, territorial cooperation and a sustainable and balanced development. (www.espon.eu)

The ESPON 2013 Programme has included more than 65 different projects in priority areas: 25 Priority 1 Applied Research projects, 23 Priority 2 Targeted Analysis projects, 10 Priority 3 Scientific Platform and Tools projects, and 7 Priority 4 Transnational Networking Activities.

Each of the priority areas has contributed knowledge. Applied Research projects have focused on a variety of issues in territorial development from a pan-European perspective, responding to a number of predefined policy and research questions in areas such as “Attractiveness of European Regions and Cities for Residents and Visitors” (ATTREG), “Future Orientation for Cities” (FOCI), “Knowledge, Innovation, Territory” (KIT), “European Land Use Patterns” (EU-LUPA), “Geographic Specificities and Development Potentials in Europe” (GEOSPECS), and “Territorial Impact Package for Transport and Agricultural Policies” (TIPTAP). These thematic projects, focusing on specific sectors and/or regions, have been complemented with cross-disciplinary perspectives and methodological and conceptual projects such as “Assessment of Regional and Territorial Sensitivity” (ARTS), and “Territorial Approaches to New Governance” (TANGO), which in particular have analysed how projects, policies and programmes related to territorial development issues on various scales unfold. The Applied Research projects have thus analysed the drivers, impacts and opportunities of territorial development from various perspectives, often with the help of quantifiable data and a range of indicators, commonly presented in advanced thematic maps.

The Applied Research projects mentioned above have provided valuable input for this project, especially for the development of territorial approaches. However, the Targeted Analysis projects have been of particular importance for the DeTeC project because it has clearly focused on local and regional use, applicability and transferability of ESPON knowledge. Targeted Analysis projects are demand-driven in that they use ESPON evidence in analyses requested by local, regional and national stakeholders. In contrast to Applied Research projects, which are conducted solely by transnational groups of researchers and experts, Targeted Analysis projects integrate a range of stakeholders (policymakers and practitioners working at the local, regional and national scale). These stakeholders propose and define the thematic scope, monitoring (interim) the usefulness and applicability of their findings. The so-called ESPON methods have been derived from Targeted Analysis projects. However, other Scientific Platform and Tools projects have also been crucial for the DeTeC project in general and the development of the interactive handbook in particular.

As a Scientific Platform and Tools project, the DeTeC project contributes to the systemization, accessibility and utilization of ESPON knowledge by providing new

tools for other programmes of European Territorial Co-operation as well as national, regional and local stakeholders, practitioners and policymakers. The ESPON Database project is an example of the 10 larger Scientific Platform and Tools projects. In the open database, a variety of territorial indicators from the various ESPON projects have been collected and organized. The ESPON Database currently includes over 700 indicators categorized into 12 themes.

ESPON has developed a large number of indicators for use in analysing and detecting territorial potential and challenges. In addition, many ESPON projects have focused on structuring and prioritizing indicators for thematic and geographical areas. For example, the KITCASP project used stakeholder workshops to identify four key themes and 20 key indicators for territorial cohesion and spatial planning. Another ESPON project intended to bridge the gap between research and policymaking and to promote territorial cohesion in the Baltic Sea region is the BSR-TeMo project. The project developed an indicator-based tool for monitoring territorial development in the Baltic Sea Region, which allows for comparison and benchmarking with other European regions.

The focus of the ESPON DeTeC project has been on approaches and methods used and developed in ESPON. It complements other Scientific Platforms and Tools projects, as well as Applied Research projects that have focused on indicators.

As mentioned above, another ESPON publication that has been vital for this project is the so-called Malmö report, the *Regional Use of ESPON Knowledge* (ESPON, 2010), which outlines the concept of territorial approaches. The rationale for the territorial approaches came from a perceived demand to integrate the territorial perspective into European policymaking and EU's cohesion policy, and to connect policy demand and targeted analyses. Practitioners and policymakers at the local and regional levels are increasingly aware that their region is becoming part of a wider European territory. There is a clear demand to integrate the European perspective into their regional development strategies and policy actions, and wish to have a better understanding of the interaction between European developments and the territorial trends in their region in order to make better use of territorial potential and to adapt better to certain challenges (ESPON, 2010, p. 8).

1.3. Overview of the DeTeC project

The first phase of the project reviewed and analysed various ESPON projects with a particular focus on Targeted Analysis projects. The projects were systematized and analysed by focusing on key concepts, themes of indicators, methods of analysis and their representations. On this basis, relevant individual methods refined and/or developed within ESPON were identified and analysed, with particular attention to illustrative examples of the application and use of these methods in projects in diverse geographical contexts. The ESPON methods are the first key component of the conceptual framework developed in phase two of the project and are the basis of the handbook.

Territorial approaches are the second key component of the framework for using ESPON knowledge in local and regional contexts that was developed and processed during the second phase of the project. A territorial approach is essentially a geographical perspective on local and regional development and assists in the structuring of policies, practices and processes in territorial terms. In total, five distinct territorial approaches were developed, based on previous ESPON knowledge and experiences. The report *Regional Use of ESPON Knowledge: Inspiration for Researchers and Practitioners involved in Regional Territorial Analysis and Policy Development* (2010) from the seminar "The ESPON Knowledge Base as Potential for

Territorial Analysis and Policymaking at Regional Level" (Malmö, Sweden, 2009) was a crucial starting point. The territorial approaches were also developed in relation to recent and ongoing debates within European policy discourse and in the context of research in the fields of regional studies and human geography.

In the third phase of the project, the local and regional applicability of the conceptual framework and the interactive handbook have been tested through regional laboratories in six locations across Europe. At a first target group meeting, the ESPON programme and the territorial approaches developed in the DeTeC project were presented and discussed. Before the second engagement with local and regional stakeholders, practitioners and policymakers, the conceptual framework was applied to local and regional issues. During stakeholder workshops, organized in collaboration with local and regional stakeholders, the applicability of the conceptual framework and the usefulness, form and content of the interactive handbook on detecting territorial challenges and potential were discussed and assessed.

The conceptual framework linking territorial approaches, ESPON methods, and good practices in the application of ESPON knowledge derived from the regional laboratories in local and regional contexts is an integral part of the interactive handbook produced in the final part of the project. The interactive handbook has been produced as an e-book providing multidirectional usage with key questions providing navigation between territorial approaches and ESPON methods, and with direct linkages through various ESPON resources and regional examples. An e-book has provided new possibilities regarding navigation in a non-linear and interactive fashion. It also offers general guidance to the ESPON Programme and in particular includes information on ESPON projects, tools and maps. The experience of the regional laboratories was synthesized into a concise report (see Appendix I), and the knowledge generated through the project has been disseminated at a policy seminar and in reports.

B2. Conceptual and interactive framework

A region's territorial challenges and potential can be approached in a variety of ways in terms of policy-making or research analysis. A territorial approach can reveal and detect challenges and potential of a region in their wider territorial context and from a European perspective. As mentioned above, it is essentially a geographical perspective on local and regional development, and assists in the structuring of policies, practices and processes in territorial terms. The territorial dimension implies a cross-sectorial perspective, and the integration of social and economic policies. Furthermore, a place-based approach is directly relevant to policy, because it "covers important elements and mechanisms for smart, inclusive and sustainable growth", as well as increasing "policy performance" (Zaucha et al., 2013: p. 10).

In the DeTeC project, five territorial approaches were developed to assist regional stakeholders, practitioners and policymakers in detecting territorial potential and challenges in strategic local and regional development. The territorial approaches contribute to the structuring of problems of the local and regional specificities, by providing a European perspective. Policymakers and practitioners may debate the ways in which problems should be formulated, and the extent to which one policy issue should be seen as linked to another. They may consider whether their current focus should be expanded, or conversely whether a complex of related problems should be broken down into more manageable parts.

Developing a conceptual framework has been a cornerstone of the DeTeC project, and it constitutes the backbone of the interactive handbook by providing a structure to link European experience from ESPON with local and regional potential and challenges. The conceptual framework consists of two key elements: territorial approaches and innovative ESPON methods, as follows.

I Five **territorial approaches** developed in the DeTeC project (see next section).

1. Global and future challenges and potential
2. Comparing territorial performance
3. Functional areas and internal coherence
4. Current and potential external linkages
5. Opportunities for territorial governance

II Ten **ESPON methods** derived from Targeted Analysis projects that are particularly relevant for detecting territorial potential and challenges in a region (see Scientific Report C).

1. Cross-border Institutional Mapping
2. Multilevel Governance Analysis
3. Assessing Functional Integration
4. Assessing Polycentric Development
5. Multithematic Territorial Analysis
6. Understanding Differential Growth
7. Urban Growth Modelling
8. Spatial Scenarios
9. Territorial Impact Assessment
10. Territorial Performance Monitoring

2.1. Territorial approaches in context

The five territorial approaches were developed based on previous ESPON knowledge and experience, as mentioned above. The approaches have also been developed in the context of key research debates around topics such as new economic geographies, new regionalism and territorial governance, and relational and territorial approaches to regions.

Globalization and regionalization processes offer both challenges and opportunities for regions to develop new paths. However, the geographic distribution of developments, opportunities and challenges across Europe is uneven, meaning that regional context and local resources are increasingly important. In light of these glocalization processes, regional policy must be not only context sensitive and place based but also oriented toward, and adapted to, larger territories, because regions do not develop in isolation but are increasingly dependent on, and integrated with, the world around them.

The territorial approaches are first rooted in the tension between exogenous forces and endogenous growth potential, which is directly reflected in the first two territorial approaches. The first territorial approach (see Box 1) has been developed based on the view that territorial development of a region is increasingly influenced by external processes such as globalization. It is therefore important to identify, monitor and analyse macro challenges and global changes that directly or indirectly influence the territorial development of a region. The approach focuses on the external forces that act on the region and is concerned with megatrends related to overarching themes such as climate change, demography and new technologies, as well as globalization and regionalization processes.

Box 1. Territorial Approach 1—Global and future challenges and potential

To detect the potential and challenges of a region, it is important to analyse its global and future challenges and potential. A territorial focus on the external trends and processes of globalization and regionalization entails detecting current and future trends affecting the region, such as environmental changes, shifting demographic structures and technological developments. It also requires a focus on the potential and challenges of cultural and economic globalization processes and the ways in which politics and policies on a variety of scales are imposed on a region.

However, it is important to recognize the internal potential and specificities of a region; that is, its endogenous potential and territorial capital (Davoudi et al., 2008). The second territorial approach (see Box 2) has been developed based on the idea that every region is unique and strives to improve its performance. To detect and expose the territorial specificities and to compare the region's performance, it is essential to contextualize the region in relation to other spatial entities. The performance and attractiveness of a region relates to its comparative advantage and possibilities for agglomeration of economies and endogenous growth. A key concept related to the evaluation of the territorial performance of a region is territorial capital. The OECD defines territorial capital as "[referring to the] stock of assets which form the basis for endogenous development in each city and region, as well as to the institutions, modes of decision-making and professional skills to make best use of those assets" (OECD, 2001, p. 13).

Box 2. Territorial Approach 2—Comparing territorial performance

To detect the territorial potential and challenges of a region, it is important to analyse and compare its territorial performance and its European regional competitiveness. This territorial approach emphasizes that every region in Europe has different regional assets and advantages that can be identified by comparing regional performance. The territorial attractiveness and performance of a region is to a large degree dependent on its comparative advantage, potential for endogenous growth and agglomeration of economies, and its territorial capital.

Cities and towns, regions and places are parts of networks that extend far beyond traditional territorial borders. They are "spaces of flows" and "spaces of places" (Castells, 1996) and sites in "distanciated economic networks" (Amin & Thrift, 2002, pp. 76). A region is affected not only by its immediate surrounding areas but also increasingly by other places around the world. This of course has crucial implications for both regional analyses and regional policies. There is a tension between policy-making and research, and between bounded regional territories and relational flows and regional formations. This is recognized in the third and the fourth territorial approach.

The third territorial approach (see Box 3) was developed based on the view that every region is internally diverse and that each administrative region is part of multiple functional areas. There is a plethora of regions, and new regional formations are emerging on a variety of scales based on different criteria, such as economics, culture, politics, history, international or national connections and domestic relationships. Over recent years, much emphasis has been placed on concepts such as mega-regions or global city regions to describe metropolisation processes and the new regional formations of globalization. Metropolisation is a process of "increasing concentration of economic development potentials of the research-intensive industries and knowledge-intensive services on metropolitan regions and urban agglomerations" (Krätke, 2007, p. 25). It is a complex urbanisation processes including new spatial forms and "the intensity and range of the city's external interactions" (Bourdeau-Lepage & Huriot, 2002, p. 424).

Box 3. Territorial Approach 3—Functional areas and internal coherence

To detect the territorial potential and challenges of a region, it is important to analyse its functional areas and internal coherence. This territorial approach focuses on the spatial form and structure of the region. Every European region is internally diverse, and each administrative region can be part of multiple functional areas. A functional area can extend beyond the administrative territory of a region, and a region can be part of multiple functional areas. Furthermore, the functional (and administrative) area can be more or less coherent depending on the issues that are considered.

Although regions are most often conceived in terms of core and periphery, the spatial structure of many regions is more complex and can often more accurately be described in terms of morphological and relational polycentricity. This has been especially true since polycentrism became one of the most important spatial strategies for achieving territorial cohesion in Europe. Polycentricity refers to an empirical pattern and can be analysed and detected on different (European) scales from the intra-urban (e.g., London and Paris) to the inter-urban (e.g., the Randstadt region) (Kloosterman & Musterd, 2001), while polycentrism is a normative and prescriptive political concept (Vandermotten et al., 2008).

The fourth territorial approach (see Box 4) has been developed based on the view that external flows and relational networks, expressed in ways such as international relations and cross-border interactions, increasingly influence regions. The connectivity and accessibility of a region is dependent on various networks and flows: transport linkages, ICT, business networks and the spatial position of the region in the European urban and regional system. The concept of spatial integration is essential in this regard.

In the Study Programme on European Spatial Planning (the predecessor of the ESPON programme), which followed the European Spatial Development Plan (ESDP), spatial integration was defined as:

> a system of links (flux, similarities, proximity, territoriality, connectivity, …) between territories, which is the emerging result of concrete social, economic, and cultural relationships, but this system is also a structure which influences and sometimes determines the further development of social, economic and cultural links. (de Boe et al., 1999, p. 30)

The concept of spatial integration includes functional integration and cross-border integration, and relates to issues of polycentricity and urban systems (Vasanen, 2013, p. 411).

Box 4. Territorial Approach 4—Current and potential external linkages

To detect the territorial potential and challenges of a region, it is important to analyse its current and potential external linkages. This territorial approach focuses on the cross-border relations and external networks of a region. Regions are "glocal" places, increasingly influenced by global flows and multiscalar relational networks. Current and future linkages can span regional, national and international borders, and include international relations and cross-border interactions. The connectivity and accessibility of a region are dependent on various networks and flows, such as transport linkages, ICT, business networks, and the spatial position of a region in relation to the European urban and regional system.

An overarching challenge is, of course, how to govern open and fluid regions and scales. The fifth and final territorial approach (see Box 5) is based on the view that territorial organizations, institutional arrangements and practices are crucial for regional development. Detecting Opportunities for Territorial Governance means exploring different forms of institutional arrangements and organizational practices that can turn regional challenges into regional opportunities. Territorial governance concerns not only the conceptualization and spatial representation of a region as a material object but also governing the spatial practices through which the region becomes meaningful (Ellingsen & Leknes, 2012).

Box 5. Territorial Approach 5—Opportunities for territorial governance

To detect the territorial potential and challenges of a region, it is important to analyse opportunities for territorial governance. A territorial approach to governance emphasizes the territorial organization, institutional arrangements and practices that are crucial for regional development. Governance is the process of co-ordinating actors and institutions, integrating policies and programmes, and mobilizing public and private stakeholders. In addition, territorial governance focuses on contextual adaption and realization of local and regional specificities.

A territorial perspective on governance contrasts with other forms. Governance of a territory could be defined as:

> the formulation and implementation of public policies, programmes and projects for the development of a place/territory by
> 1) co-ordinating actions of actors and institutions;
> 2) integrating policy sectors;
> 3) mobilising stakeholder participation;
> 4) being adaptive to changing contexts; and
> 5) realising place-based/territorial specificities and impacts. (ESPON TANGO, 2012).

2.2. Content and form of the handbook

The five territorial approaches plus the ESPON methods are the key components in the conceptual framework (content) and provide the structure of the interactive handbook (form) developed in the DeTeC project. A handbook provides guidance on a particular subject and is usually an authoritative reference work within a particular field or an instruction manual. A handbook differs from other forms of written communication, such as newspaper articles, books, and reports, in that it is not intended to be read from beginning to end. It should function as a quick reference with specific information so that it can be easily and frequently used by its target audience.

A first crucial step in producing any handbook is to define the main target group and ways in which the handbook will be used. The main target for the DeTeC handbook on detecting territorial potential and challenges has been defined as policymakers and practitioners (i.e., stakeholders) in executive leadership positions making strategic decisions at local and regional levels in the fields of regional development or spatial planning. The focus was thus on two types of civil servants rather than on politicians—on practitioners and policymakers rather than on decision-makers according to the distinctions in the ESPON TANGO project. The handbook is to be used in long-term strategic development, for purposes such as supporting the design, implementation or evaluation of regional development plans and programmes.

As a guide to strategic policymaking for local and regional development targeting practitioners and policymakers (rather than decision-makers) the handbook should engage its users without directing the decision-making process, meaning that the structure and content provide various possibilities and alternative perspectives on problems or questions rather than simply providing answers. Thus, through its conceptual framework (content) and interactive structure (form), the ESPON handbook provides the following.

- Practical guidance for strategic local and regional policy-making through the five territorial approaches, both by focusing attention on important issues and by providing new perspectives on local and regional development processes
- Authentic examples of good practices derived from regional laboratories and a collection of ESPON methods that local and regional practitioners can use to detect specific territorial potential and challenges in their region

The conceptual framework structures the five territorial approaches and the 10 ESPON methods outlined above in a way that makes the large amounts of information and knowledge provided by ESPON available to, and usable by, local and regional practitioners and policymakers.

Producing the handbook in the form of an e-book has provided new possibilities regarding both the amount of information provided and navigation in a non-linear and interactive fashion (in contrast to simple hierarchical step-by-step processes). Consistent with the notion that a handbook should provide support for problem analysis and policy development in various contexts, the e-book format provided the opportunity to develop an interactive multidirectional conceptual framework beyond linear structures such as decision trees (cf. Greenberg & Baron, 2000, p. 472). By focusing on multidirectional interlinkages (between approaches and methods), the conceptual framework of the handbook can be used in a range of ways, for different problems, within diverse contexts, and by a variety of actors.

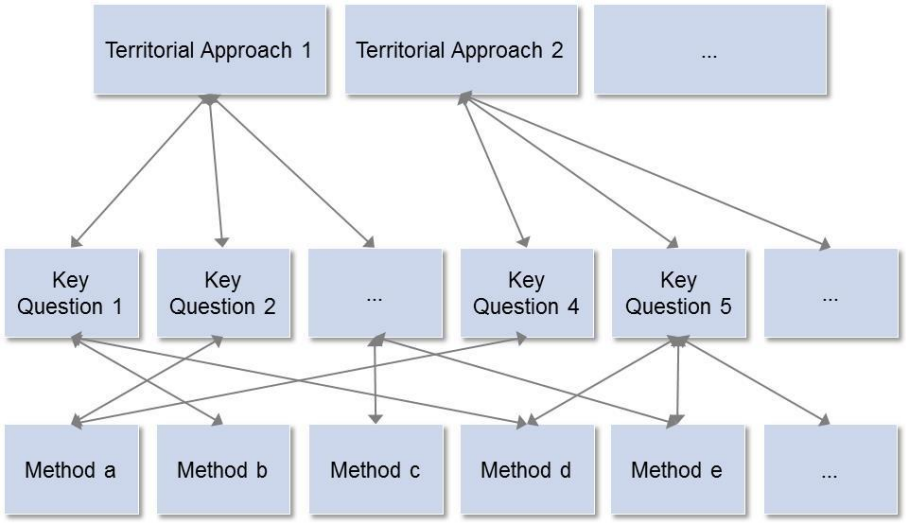


Figure 2 The structure of the conceptual framework

The structure of the conceptual framework interlinks approaches and methods with demand for knowledge by local and regional stakeholders and their specific issues and questions. Key questions were developed in collaboration with stakeholders, practitioners and policymakers during the regional laboratories to facilitate navigation between territorial approaches and methods. One method may apply to several territorial approaches or key questions; therefore, various aspects of territorial approaches and key questions may be interlinked, as follows.

- Key questions for detecting **Global and Future Challenges and Potential** of a region from a European perspective are as follows.
  - What are the main external macro challenges for the region?
  - What are potential trends and scenarios for the development of the region?
  - How will national and international directives and policies influence the region?
- Key questions for detecting and **Comparing Territorial Performance** of a region from a European perspective are as follows.
  - What are the characteristics and the comparative advantages (and disadvantages) of the region?
  - How is the region performing in certain fields compared with other regions in Europe?
  - What is the potential for endogenous growth and agglomeration of economies?

- The key questions for detecting the **Functional Areas and Internal Coherence** of a region from a European perspective are as follows.
    - What are the functional areas and wider territory of the region?
    - How is the region structured in terms of polycentric development?
    - What is the potential for internal territorial coherence within the region?
- The key questions for detecting **Current and Potential External Linkages** of a region from a European perspective are as follows.
    - What are the external linkages of the region in terms of relational networks and flows?
    - How is the region positioned within the wider European spatial and socio-economic system?
    - What is the potential for spatial integration and cross-border development?
- Key questions for detecting **Opportunities for Territorial Governance** of a Region from a European perspective are as follows.
    - What are the institutional arrangements and practices of the region?
    - How are governance practices spatially co-ordinated and integrated?
    - What are the opportunities for collaboration and institutional capacities?

The conceptual framework structures and combines territorial approaches and ESPON methods (content) through key questions in a multidirectional manner. This means that it is possible to move from a territorial approach to certain methods (as shown in bullet points above) and vice versa, and from a method to a territorial approach (as outlined below in Table 1). The interactive handbook (form) thus allows different pathways to accessing and exploring ESPON knowledge on the territorial potential and challenges of a region.

Table 1 Linking ESPON methods to territorial approach via key questions

	Method	Main project source	Key questions for methods	Territorial approach
1	**Assessing Functional Integration**	METROBORDER	**3.1** What are the functional areas of the region? **3.1** How is the region structured in terms of polycentric development? **4.1** What are the external linkages of the region in terms of relational networks and flows? **4.2** How is the region positioned within the wider European spatial and socio-economic system?	TA3, TA4
2	**Assessing Polycentric Development**	POLYCE	**3.1** What are the functional areas of the region? **4.2** How is the region positioned within the wider European spatial and socio-economic system?	TA4, TA3
3	**Cross-border Institutional Mapping**	METROBORDER	**4.1** What is the potential for spatial integration and cross-border development? **5.2** How are governance practices spatially co-ordinated and integrated? **5.3** What is the potential for collaborations and institutional capacities?	TA4, TA5
4	**Multilevel Governance Analysis**	CAEE	**5.1** What are the institutional arrangements and practices of the region? **5.2** How are governance practices spatially co-ordinated and integrated?	TA5
5	**Multithematic Territorial Analysis**	ULYSSES	**2.1** What are the characteristics and comparative advantages (and disadvantages) of the region? **2.2** How does the region perform in certain fields compared with other regions of Europe? **3.1** What are the functional areas of the region? **3.2** How is the region structured in terms of polycentric development?	TA2, TA3
6	**Spatial Scenarios**	ESPON SS-LR	**1.1** What are the main external macro challenges for the region? **1.2** What are the potential trends and scenarios for the development of the region?	TA1
7	**Territorial Impact Assessment**	ESPON EATIA,	**1.3** How will national and international directives and policies influence the region?	TA1
8	**Territorial Performance Monitoring**	ESPON TPM	**1.1** What are the main external macro challenges for the region?	TA1
9	**Understanding Differential Growth**	SURE	**2.1** What are the characteristics and the comparative advantages (and disadvantages) of the region? **2.2** How does the region perform in certain fields compared with other regions of Europe?	TA2
10	**Urban Growth Modelling**	POLYCE	**2.3** What is the potential for endogenous growth and agglomeration economies? **3.1** What are the functional areas of the region? **3.3** What is the potential for internal territorial coherence in the region?	TA2, TA3

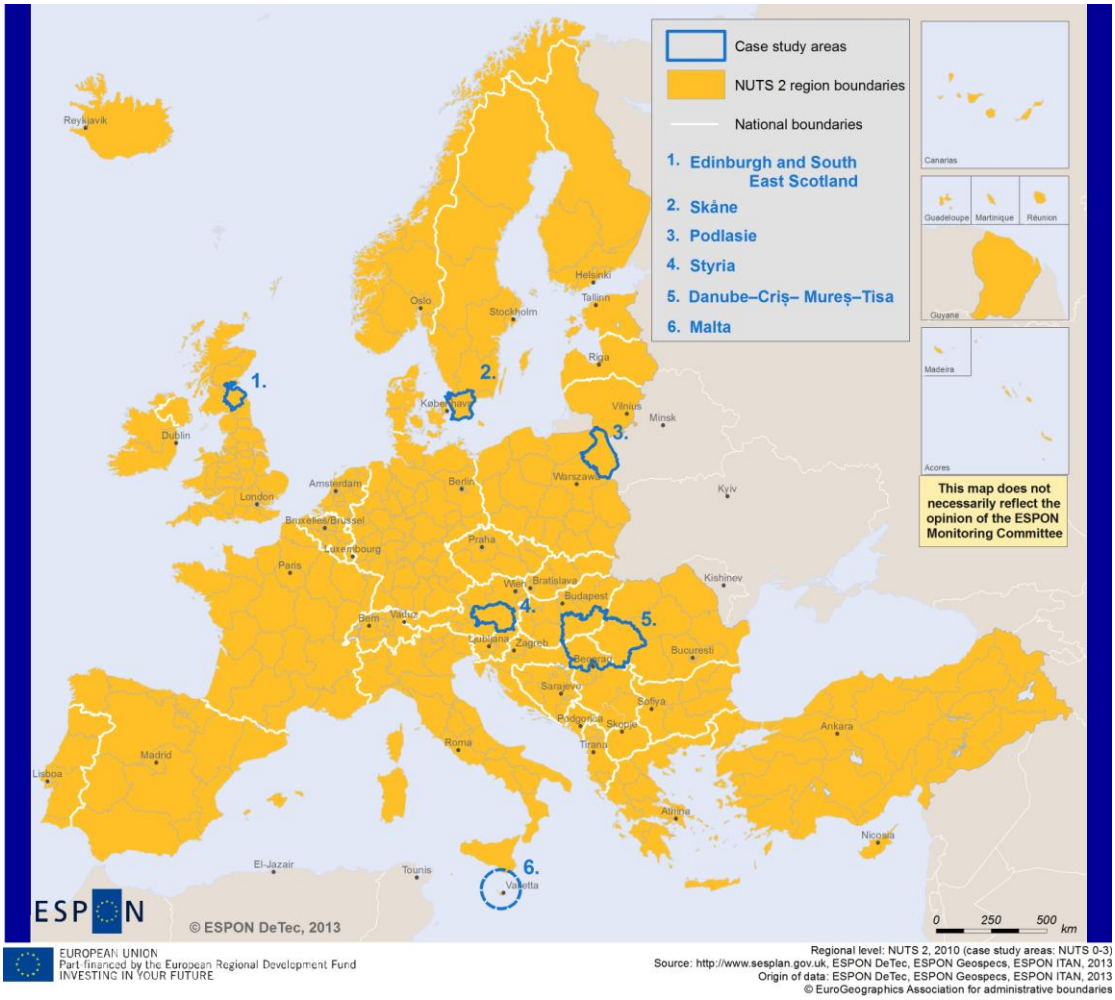
B3. Regional laboratories and practices

Regional laboratories are an important innovation of the DeTeC project. The principal purpose of conducting regional laboratories was to assess the relevance and applicability of the conceptual framework with territorial approaches and ESPON methods, and through this interactive process to develop a usable and interactive handbook. The regional laboratories provided opportunities to collaborate with local and regional stakeholders in exploring how European experiences and ESPON knowledge can be used to confront practical regional challenges and to turn them into opportunities. The regional laboratories were conducted in six locations around Europe (see Map 1; see also Scientific Report C3 for more information on the use of regional laboratories as a method).

The locations of the regional laboratories were carefully selected to represent a diversity of territorial specificities. Three of the regions—Skåne in Sweden, Podlasie in Poland and Styria in Austria—are subnational administrative regions, which is how regions are most commonly perceived. However, as mentioned above, there are other types of regions, such as the transnational cross-border Danube–Kris–Mures–Tisa Euroregion, and the city region of Edinburgh and South East Scotland. Malta is a state, but in some cases considered a region. This diversity of types of regional territories has been crucial in investigating the applicability of the territorial approaches and methods, and the ways in which they can be adapted to different territorial specificities and used in the operationalization of place-based approaches.

Direct interaction and close collaboration with, and input from, local and regional stakeholders, practitioners and policymakers has been vital for assessing the regional applicability of the conceptual framework and usability of the interactive handbook. The regional laboratories have enabled discussion of its content and form in relation to the specific questions, issues and problems of the participating stakeholders. In the initial target group meetings with key stakeholders in the regions, the conceptual framework was presented, with a focus on the territorial approaches and ESPON knowledge in general. During the meeting, this was related to the ongoing work in the regions with strategies, plans and programmes. Participants collaborated to identify and formulate region-specific questions and issues (or challenges). On the basis of these questions and issues, the appropriate ESPON methods were elaborated and presented at the second stakeholder workshop in an interactive way, reflecting the structure and content of the conceptual framework, and the form of the handbook. Following this methodology, the practical regional challenges (and potential) and knowledge demand from the participating stakeholders was matched with European experience and ESPON knowledge. The feedback to the participants on the applicability further elaborated the structure of the conceptual framework and the interactive handbook.

The regional laboratories outlined below provide practical examples of the application of ESPON knowledge in various regional contexts. The territorial approaches and ESPON methods were discussed and used in various ways for a range of issues in the laboratories, highlighting both the transferability of the approaches and methods and the importance of place-based approaches to local and regional policy and development.

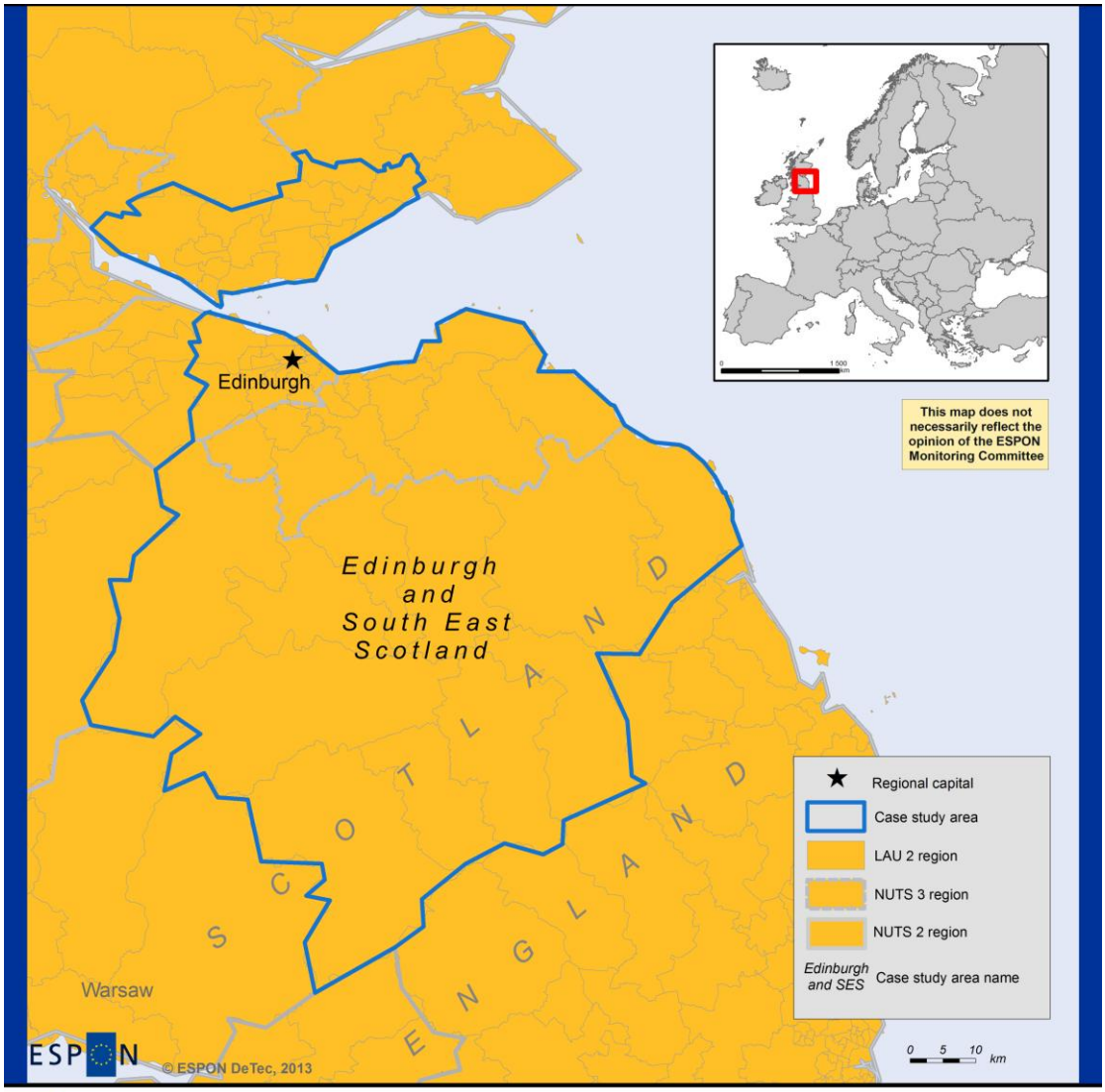


Map 1 The regional laboratories in the ESPON DeTeC project

3.1. Edinburgh and South East Scotland

Edinburgh and South East Scotland is a city region in Scotland with a population of around 1.2 million. In its current form, it is a young region established in 2006. It consists of six council areas: City of Edinburgh, East Lothian, Fife (mid and west), Midlothian, Scottish Borders and West Lothian Councils. In 2008, Scottish Ministers established the Strategic Development Planning Authority (SDPA) for Edinburgh and South East Scotland. The authority (SESplan) is financed by the six authorities (councils). The SDPA is involving stakeholders and the general public in facilitating the creation of the Strategic Development Plan (SDP) for the city region.

At the time of the regional laboratory, the city region of Edinburgh and South East Scotland was about to undertake the development of the Strategic Development Plan II (SDP II). The region faces specific challenges within the housing and transport sector that required the integration of transport and land use planning, which according to the local and regional practitioners and policymakers were challenging specifically in terms of costs, funding and governance. The lack of a common identity and vision for the city region as well as a city regional perspective was perceived as an overarching challenge for regional development.



Map 2 Edinburgh and South East Scotland

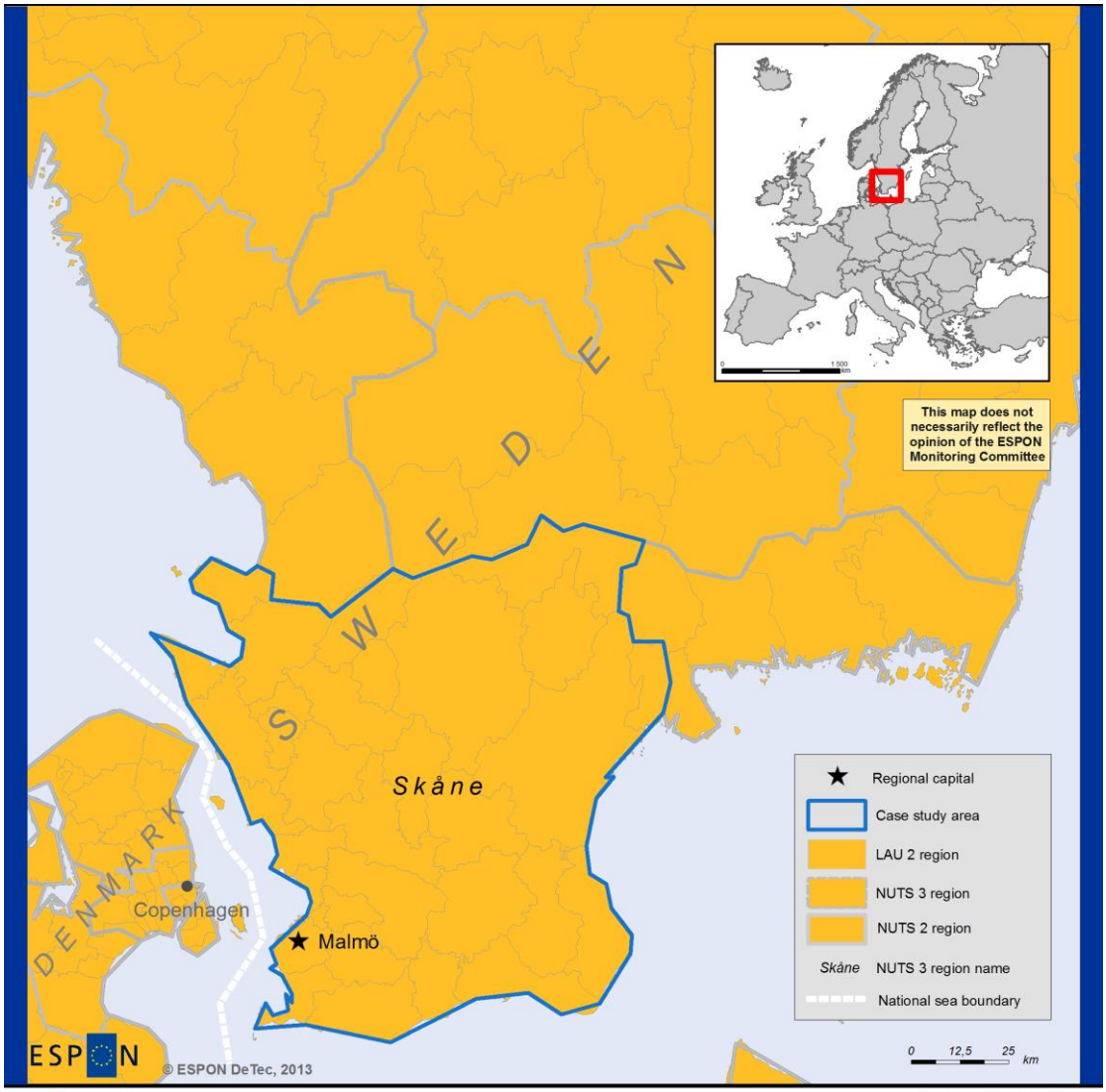
During the regional laboratory, a European perspective in general was perceived as helpful, and the territorial approaches were seen as relevant for the city region's identification with Europe. Two territorial approaches were considered to be directly relevant to addressing these challenges: global and future challenges and potential, and opportunities for territorial overnance to promote internal coherence and territorial governance. Following the logic of the conceptual framework, two related methods were identified as of particular interest if applied to the region: Territorial Performance Monitoring and Multilevel Governance Analysis. Territorial Performance Monitoring could help the city region to translate macro challenges (and their possibilities) to the city regional level and to provide insights on dealing with these challenges effectively.

The establishment of an authority (SESplan) that represents all six councils is an advantage in confronting the future challenges of the region. However, there is a significant challenge in finding the "right governance" for the city region, including leadership and distribution of power. A specific suggestion from the regional laboratory was that the city region should conduct a mind-mapping exercise as outlined in the instructions for Territorial Performance Monitoring, as part of the

process for developing the SDP II and detect challenges (and possible solutions) at the city regional level. This could potentially contribute to constructing a governance setting that would reflect the diversity of the city region and also foster a city regional identity.

3.2. Skåne

Skåne is the southernmost region of Sweden. According to the ESPON regional typology, the region is a second-tier metropolitan region and an intermediate urban–rural region. It is also a border and coastal region. Today, over 1.2 million people live in Skåne, and the population is growing. However, the population is unevenly distributed, with over 80% living in urban areas and 70% in the western part. Region Skåne is the authority responsible for regional development and growth, and it manages the Regional Development Programme and the Strukturbild för Skåne *spatial development programme.*



Map 3 Skåne in Sweden

The concept of polycentricity is an integral part of the *Strukturbild för Skåne* spatial development programme. A pilot study for the programme even used ESPON methods to analyse the polycentric development of the region. The local and regional stakeholders emphasized the challenge of integrating a European perspective into regional development strategies that focus on local and regional matters and politics, because such a perspective is often rather broad and general. Nevertheless, there was an interest in ESPON knowledge, especially regarding the development of indicators and methods.

During the regional laboratory, it was emphasized that expanding the territorial perspective beyond the region of Skåne, and exploring new larger geographies, could add value to future strategic regional development projects and programmes. Links and co-operation with neighbouring regions were highlighted as an important future and potential challenge, and in this regard, ESPON knowledge and territorial approaches could be useful. In particular, the territorial approaches and methods related to the definition and assessment of functional areas of a region, and linkages and collaboration with neighbouring regions, were seen as interesting. The territorial approaches of detecting the functional areas and internal Cohesion, and detecting current and potential external linkages were thus seen as directly relevant, and opportunities for territorial governance was also applicable.

The regional laboratory discussed the polycentric development of Skåne and ways to approach the larger territory of Skåne, initially with a specific focus on tools, data and methods related to the morphological urban areas (MUA) and functional urban areas (FUA) of the region. Delimitation of European regions sparked a particularly interesting discussion on the territorial scale of analysis and the ways in which ESPON delimitations relate to national administrative boundaries and functional cities and regions. Another discussion concerned the results from the METROBORDER project: for example, the facts that on the one hand, the Copenhagen–Malmö region has strong interactions through cross-border collaboration and strong convergence through similarity of GDP per capita, and on the other hand, the interaction between the regions was weak in terms of interaction through cross-border commuting and convergence of foreign citizenship of residents. On this basis, it was concluded that there was potential for further cross-border interaction.

3.3. Podlasie

Podlasie is a European Union border region. It has a total population of 1.2 million inhabitants. For this reason, Podlasie is a significant transit area connecting western and eastern parts of Europe. At the transregional level in Poland, there are three main socio-economic strategies. Podlasie is included in the Strategy for the Development of Eastern Poland by 2020.

The Podlasie region is a border region, and the regional laboratory identified its peripheral location as one of its main challenges. Another more general challenge is to strengthen its territorial performance, and there is a potential need to detect new functional areas that could diversify the market and direct investments appropriately to enhance internal coherence and to achieve efficient independent self-organization in the region. Developing a properly functioning region in terms of governance was stressed as essential for policy-making and strategic planning as well as for territorial organization and the institutional arrangements that are crucial for the regional development of Podlasie.

During the regional laboratory, particular attention was paid to the territorial approach for detecting and comparing territorial performance. Detecting current and potential linkages to other regions was perceived as interesting and potentially important for

the future development of Podlasie. Although the territorial approaches were initially apprehended as rather vague and unclear, the related methods were seen as applicable in practice. For instance, the Understanding Differential Growth method could help the Podlasie region to detect its economic drivers, including accessibility, human capital and quality of life, and thus be relevant and potentially applicable in regional planning. Thus, it could be integrated into the Strategy for the Development of Podlaskie Voivodeship by 2020.

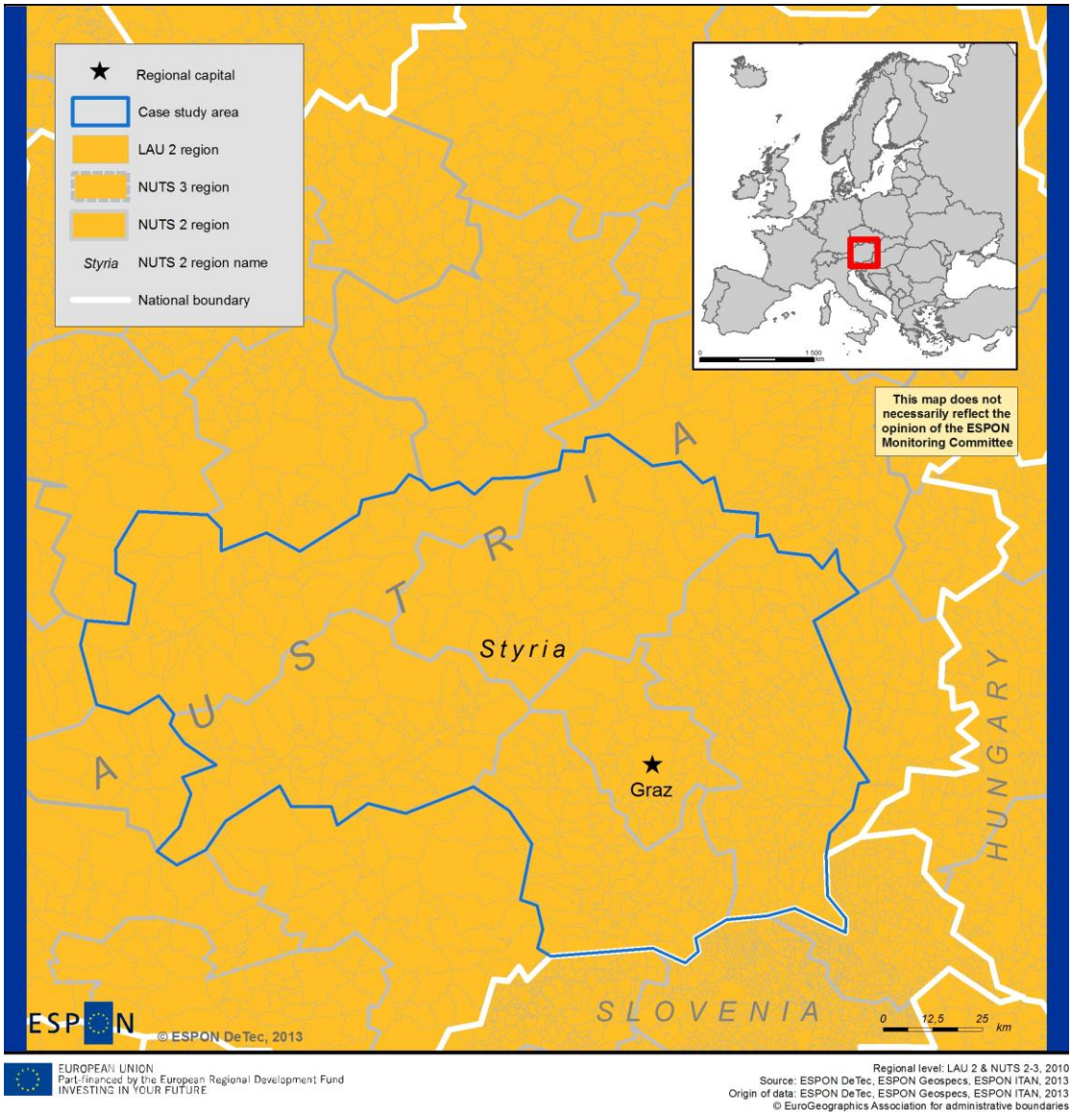
Another challenge was related to detecting the functional areas and internal coherence of the region and the need to detect other potential functional areas; for instance, for the purposes of the updated version of the Podlaskie Voivodeship Spatial Development Plan. In relation to this objective, the method of Assessing Functional Integration, as an interesting example of an investigative method, and the potential for a map of spatial integration that would reveal functional areas were discussed.

Map 4 Podlasie in Poland

3.4. Styria

Styria is one of nine Austrian federal states (Länder) and is located in the centre of Austria. According to the ESPON regional typology, the region is an urban–rural as well as a mountainous region. Styria is also a border region. It shares its external border with Slovenia and Hungary, and its internal borders with the federal states of Upper Austria, Lower Austria, Burgenland, Carinthia and Salzburg. The Austrian Conference on Spatial Planning (OEROK) is the co-ordinative body for planning at the national level in Austria. The conference was founded by the federal government, the federal states and the municipalities. Additionally, the OEROK drafts the Austrian Spatial Development Concept, the current edition of which was published in 2011.

In 2013, the so-called *Landesentwicklungsleitbild—Räumliche Strategie zur Landesentwickling*, a sustainable spatial strategy for the development of Styria, was updated. The functions of the strategy include positioning Styria in relation to other regions, the federal government and the European Union. For this purpose, the territorial approaches of global and future challenges and potential, and comparing territorial performance of a region seemed appropriate for the needs of Styria.



Map 5 Styria in Austria

In the regional laboratory, comparisons of regional performance in the European context as well as the embeddedness of Styria in the wider European context were identified as interesting topics. However, an overarching concern was that ESPON knowledge is not taken up by local and regional stakeholders because of a lack of communication of results and outputs. It was emphasized that ESPON approaches, methods and analyses are mainly conducted at the NUTS 2 level and thus are not particularly useful for regional planning purposes, for which data at a much lower scale than NUTS 2 are needed to analyse regional challenges and potential fully.

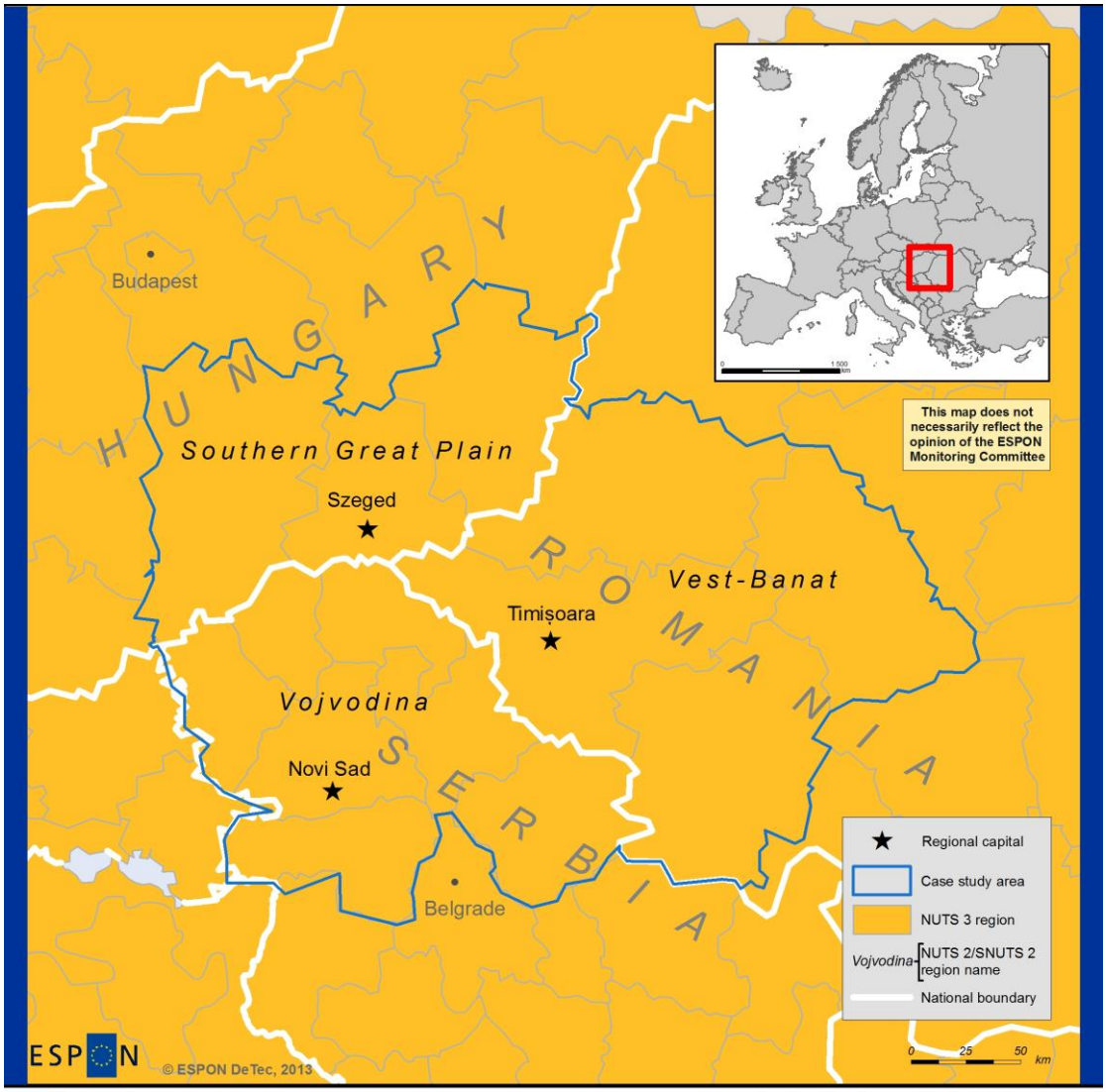
However, a presentation of maps from the ESPON Atlas publication initiated an interesting discussion on the challenges and potential of Styria in the European context as well as on the possible added value of European-scale data and maps for regional development in Styria. The discussion focused on indicators of the Europe 2020 Strategy, because this strategy has a major impact on current and future EU policies, and the upcoming funding period and regional strategies would have to be linked to the strategic goals. Thus, there was discussion concerning detection of global and future challenges and potential, as well as detecting and comparing territorial performance. Therefore, the method of Territorial Impact Assessment was relevant and applicable because it represents a user-friendly tool that can be adapted to the regional level. The method of Multithematic Territorial Analysis was also perceived as interesting

3.5. Danube–Kris–Mures–Tisa

The Danube–Kris–Mures–Tisa Regional Co-operation was established in 1997, in Szeged (Hungary). It is commonly known as the DKMT Euroregion. This transnational cross-border region consists of the following administrative units: Bács-Kiskun, and Csongrád County (Hungary), Arad, Hunedoara, Caras-Severin and Timis County (Romania), and the Autonomous Province of the Vojvodina (Serbia).

The DKMT Euroregion is a transnational region with parts of its territory located outside the European Union. During the regional laboratory the key actors represented various institutions and had varying perceptions of regional challenges and potential that were frequently in opposition. However, it was agreed that the DKMT Euroregion requires an efficient cross-border administrative system and regulations. In this respect, the current and potential external linkages and opportunities for territorial governance territorial approaches were found interesting. The visualization and categorization techniques of the Cross-border Institutional Mapping method were appreciated. Moreover, Multilevel Governance Analysis was considered to be a suitable method for analysing transnational co-operation and detecting relations between municipal, regional and national institutions.

Another challenge of the region is the transnational networks of the region and the challenges and opportunities related to current and potential external linkages. It was discussed whether the method of Assessing Polycentric Development could not only detect polycentricity but also support the sustainable development of the region. It was concluded that it may identify the type of polycentricity that had developed in the region (morphological, relational, or polycentricity in governance), so the regional development could be targeted more efficiently.

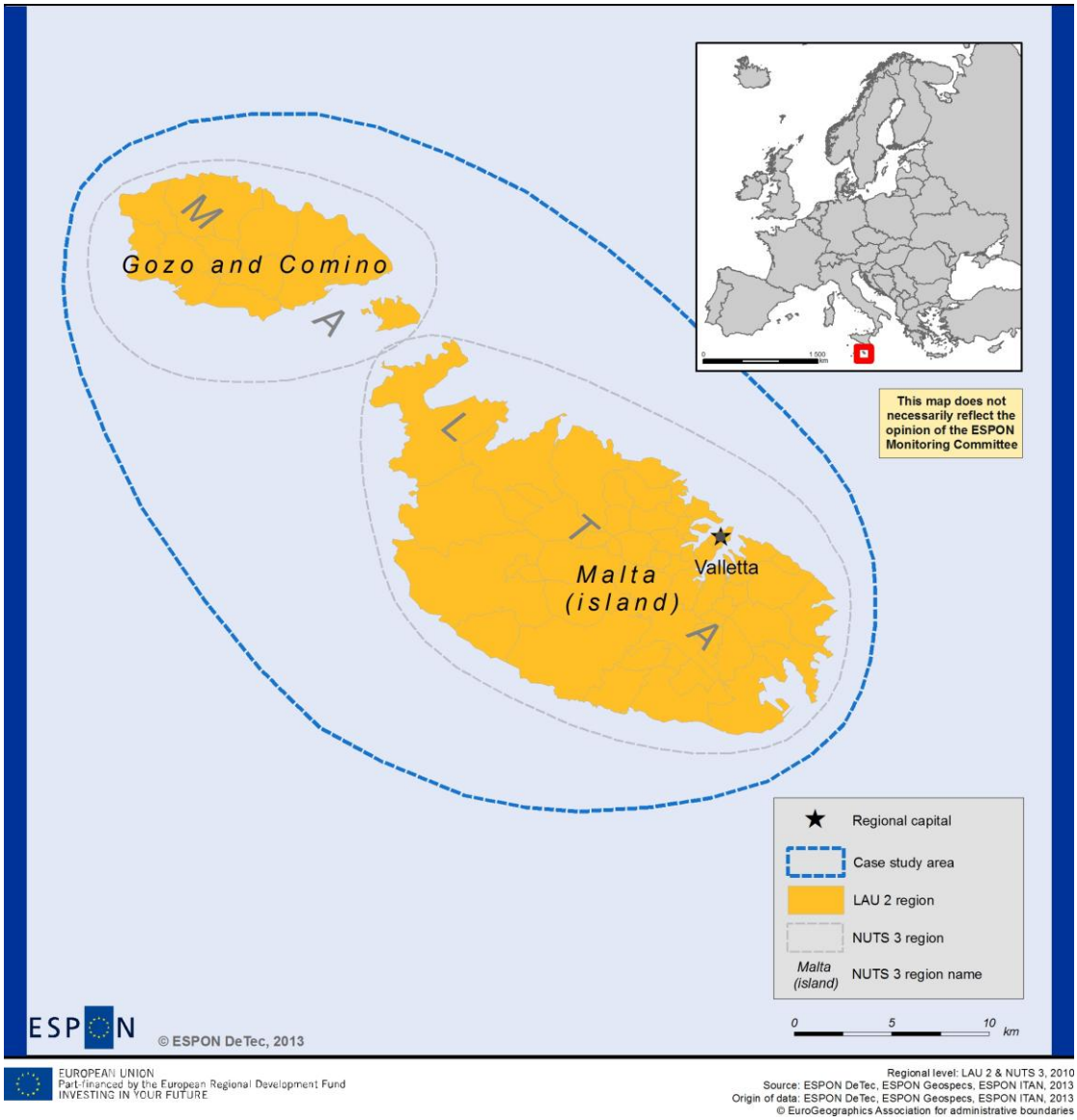


Map 6 Danube–Kris–Mures–Tisa (DKMT) Euroregion

3.6. Malta

Malta is the southernmost member state of the European Union. It is a centralized and unitary state with a population of more than 415,000 (in 2010), which is steadily increasing. The Malta Environment and Planning Authority (MEPA) is responsible for the preparation of the Strategic Plan for Environment and Development (SPED), which will regulate the sustainable management of land and sea resources and provide a strategic spatial policy framework for the environment and development until 2020.

The regional laboratory in Malta was conducted in relation to the preparation of the SPED. A draft version of the plan outlines the important future issues, challenges, and opportunities foreseen by the Maltese government, including innovation and research, climate change, environment and cultural heritage as well as social issues such as poverty. The document, which is well founded on in-depth background research, should ensure sustainable management of resources and protection of the environment, and should guide future developments in Malta.



Map 7 Malta

In light of the many issues included in the document, a need for a generic approach was expressed. A key question during the regional laboratory was thus how ESPON could contribute to this and how a European perspective could apply in the context of the development of the SPED. Moreover, the methods related to detecting how exogenous factors affect Malta, described in detecting global and future challenges and potential of a region, and more specifically the two methods of Spatial Scenarios and Territorial Impact Assessment, were found to be most promising

Malta's performance in certain fields compared with other spatial entities in Europe was also of interest. The Multithematic Territorial Analysis, maps from the ESPON Atlas, and a territorial profile of Malta from the European perspective were shown. Malta's performance against the Europe 2020 strategy targets was analysed and discussed. Furthermore, the key questions connecting ESPON knowledge to regional issues, especially with regard to the territorial approaches, were found to be especially useful in the discussions.

In addition, the regional laboratory provided interesting insights into the relationship between a small member state such as Malta and the ESPON Programme, the

regional applicability of data and methods used in ESPON projects, and current national and regional policy development in Malta. The question of scale is an essential issue for the successful application of ESPON knowledge in practice, on both the local and regional levels. Concerns regarding the level of analysis were expressed, because ESPON reports provide substantial information at the national or NUTS 2 level but only limited information for regional analysis.

3.7. Regional and practical use of ESPON

The regional laboratories provided illustrative examples of different ways to use ESPON knowledge and the use of the conceptual framework to detect and analyse practical regional challenges. The territorial approaches and ESPON methods can be applied in different contexts and may be relevant for a variety of regional issues related to regional development strategies, policies, programmes, or projects. The approaches can be used to explore new possibilities and methods to overcome challenges. The regional laboratories explored different possibilities for using ESPON knowledge in strategic policy-making and regional development processes, as follows.

1. The regional laboratory in Edinburgh and South East Scotland explored the possibilities for using ESPON knowledge for detecting the global and future challenges of the region and its opportunities for territorial governance. The methods of Territorial Performance Monitoring and Multilevel Governance Analysis were particularly interesting for developing the “Strategic Development Plan” for the recently formed city region.

2. The regional laboratory in Skåne explored the possibilities of looking beyond their regional boundaries and detecting current and potential external linkages of the region. Multithematic Territorial Analysis and Assessing Functional Integration were particularly interesting in the ongoing strategic development of the regional “Strukturbild Skåne” programme and in exploring the wider functional territory of the larger Öresund region.

3. The regional laboratory in Podlasie explored the possibilities of using ESPON knowledge to detect opportunities for functional areas to improve internal coherence, as well as territorial performance and governance patterns in a wider European context. Understanding Differential Growth and Cross-border Institutional Mapping were two particularly interesting methods in relation to the preparation of the “Podlasie Regional Development Strategy”.

4. The regional laboratory in the Danube–Kris–Mures–Tisa explored the possibilities of using ESPON knowledge to detect current and potential external linkages. Cross-border Institutional Mapping and Multilevel Governance Analysis was particularly interesting for developing a more efficient cross-border administration system, and for co-ordination of municipal, regional and national institutions.

5. The regional laboratory in Styria explored the possibilities of using ESPON knowledge to place the region in a wider European perspective in relation to global challenges and potential as well as territorial performance. Comparing the territorial performance of a region was a relevant approach in relation to the *Landesentwicklungsleitbild*, and for positioning the region in relation to other European regions. Territorial Impact Assessment was a particularly interesting method for analysing exposure and sensitivity to European directives.

6. The regional laboratory in Malta explored the possibilities of using ESPON knowledge to identify global challenges and potential, as well as for understanding the region performance in a European perspective. In relation to the preparation of the “Strategic Plan for Environment and Development”, Spatial Scenarios was a particularly interesting method, in addition to Multithematic Territorial Analysis.

B4. Conclusions

First, it can be concluded that there is local and regional interest in ESPON. Moreover, overall knowledge of ESPON and of the findings of its projects is generally not extensive, and Scientific Platform and Tools projects such as the DeTeC project are important. In the DeTeC project, a number of challenges have been identified regarding the application and production of ESPON knowledge, but the project also provides potential for turning these challenges into opportunities. Some challenges have mainly been deduced from the reviews, analyses and systematization of ESPON, while others derive from the regional laboratories and engagement with local and regional stakeholders.

4.1. Two challenges and two potential opportunities

1. *ESPON has produced an extensive knowledge base of spatial indicators and thematic maps. Quantifiable indicators are a fundamental element of most applied research and targeted analysis projects. Even if a general aim of ESPON is to use and produce Europe-wide data to assess various territorial dynamics in cities and regions, the indicators are also a key challenge in both analysing and using ESPON knowledge at local and regional levels.*

2. *To confront the challenges with vague and general indicators, often represented at aggregated spatial scales, the DeTeC project has focused on developing territorial approaches and identifying innovative ESPON methods, and linking them in an interactive and multidirectional way through key questions. By focusing on more generic approaches and methods, problems regarding representation, scale and timing of specific indicators can partly be avoided.*

3. *The applicability of the conceptual framework has been assessed through regional laboratories across Europe. Through the regional laboratories, the DeTeC project directly engages with local and regional practitioners and policymakers in various local contexts with different challenges and potential. Initially there was general scepticism towards what ESPON could provide, but through the regional laboratories, which included local and region-specific elaboration of territorial approaches and ESPON methods, it was concluded that ESPON knowledge could help to detect territorial potential and challenges by providing a European perspective.*

4. *To support local and regional applicability, usage and relevance of ESPON knowledge, the DeTeC project has developed an interactive e-handbook. The handbook is a concise and easy-to-use ESPON reference providing the following.*

    a. Practical guidance for strategic local and regional policy-making through the five territorial approaches. These approaches are designed to focus attention on important issues and to open up new perspectives in local and regional development processes.

    b. Concrete examples of good practices derived from the regional laboratories and a collection of ESPON methods. Local and regional practitioners can use these as inspiration to detect the specific territorial potential and challenges of their region.

Alongside, and in relation to, these four practical purposes, the lessons learned and challenges identified in the regional laboratories and the DeTeC project can be related to representations, scale and time aspects on the one hand, and to the intersections between research, policy and practice on the other. There is, however, considerable tension both between and within these aspects. In conclusion, a revised "ESPON" approach with increased emphasis on co-production of knowledge may be perceived.

4.2. Representations, scale and time

Regions across Europe are interested in ESPON and its extensive knowledge base. Through the various activities of the DeTeC project, it can be concluded that methods and approaches developed within ESPON are relevant for regional and local stakeholders but also that there are significant challenges in applying and using them at the regional and local levels. The discussions in the regional laboratories have provided valuable knowledge on local and regional needs and conditions.

ESPON is known by many regional and local stakeholders for its maps and spatial representations, and as a European programme that analyses territorial trends at a macro level. There is a perceived lack of communication of results and outputs delivered to practitioners and policymakers at lower spatial levels, and it is often considered at the regional and local levels that ESPON projects are not useful for urban or regional planning, or for development purposes at these levels. The added value of a European perspective and the ways in which it directly supports daily work in regional development and spatial planning is not common sense for practitioners and policymakers at the regional and local level. More interaction with various stakeholders—for example, through Targeted Analysis projects and more good practice examples—could help in resolving these issues. From a local and regional perspective, ESPON knowledge could become more accessible through more user-friendly publications, tools and websites, but at the same time, there is a demand for "read more" options and more in-depth analysis on a more detailed scale.

The added value of ESPON is the interpretation and supply of data and indicators. However, these data must be current and produced in interaction with regional users, or they will have little incentive to use it. The user-friendly and ready-to-use tools (e.g., the ESPON ARTS TIA Quick Check Tool) have been received positively. Participants in the regional laboratories reported a need to sharpen ESPON in terms of content, to reduce the complexity of the ESPON language and to provide illustrative examples; these measures would provide an incentive for more detailed consideration of ESPON results. The screening of ESPON (scientific) reports for usable information is a task that local and regional practitioners rarely consider, because it is very demanding and time-consuming. A handbook that takes over that task and provides a concise overview of approaches and methods, indicating final and scientific reports for further information, would provide added value in the daily work of policymakers and practitioners at local and regional levels.

A general concern expressed in the regional laboratories was that ESPON knowledge is not adjusted to the issues that arise on local and regional scales. Practitioners and policymakers rarely implement ESPON recommendations because they are not adapted to local challenges and generally do not meet their expectations. An underlying problem is that analyses are mainly conducted at the NUTS 2 level, which does not allow for the correct assessment of the situation across Europe, and that regional and local actors generally possess much more detailed data on their sphere of influence, which adds to this perception. According to the regional laboratories, data on scales below NUTS 2 are needed to analyse regional

challenges and potential. Data comparability between regions (e.g., differences in definitions of indicators), the problem of scale of data and maps of intraregional disparities, and the problem of current data are the main issues. For example, data on this level do not provide any significant input to the analysis of Malta. The practitioners and policymakers who took part in the regional laboratories identified the necessity of collecting data at the lower administrative levels, which could be more applicable in comparisons of regions, as well as in detecting challenges and potential originating from the regions, not only those affecting the region (an up–down process).

The available statistical data are often also outdated in the eyes of the practitioner—for example, statistical data for 2010 do not show the most recent and actual trends and practices—moreover, they do not seem to provide practitioners with assistance in their daily work. If ESPON can continue to provide updated and harmonized data, it will be beneficial because incompatibility of data from various countries is an obstacle to comparisons or regions and analyses of interregional relations.

4.2. Research, policy and practice

Research concepts and policy concepts used in ESPON are difficult to translate into local and regional practices. First, the approaches, methods, analyses, typologies, and classifications often refer to large spatial units; hence, the general scale of the outcomes rarely provides insight into intraregional diversity. Moreover, an important matter is the terminology and methods of determining indicators that do not always correspond to national and local contexts. Complex terminology and sometimes fuzzy definitions are problematic but also necessary. If a concept is defined too rigidly, it may become politically unusable, but conversely, if it is too fuzzy, it is not usable within applied research and/or comparative targeted analyses. However, it should be noted that the terminology and usage of concepts in different research and analysis projects is ambiguous. From the view of local and regional stakeholders, the linguistic questions are even more mundane but no less important. Practitioners and policymakers at the local level are often not familiar with the specific EU terminology; more importantly, the Euro-English language is a significant barrier but also provides potential. Finally, having an understanding of the target groups is essential, to adapt and adjust approaches, methods and analysis accordingly, and because there is no one-size-fits-all approach.

A crucial issue in the future will be to continue to conduct sound applied research and to provide policymakers with targeted analyses. It is difficult to balance on the tight rope between applied research and policy consultancy, but this is also the strength of ESPON: to bring together policy-making and research, and in collaboration to create new knowledge. This is a challenge, particularly because empirical evidence stemming from social science work (as it inevitably does for ESPON) normally allows various interpretations and policy options and, for this reason, cannot be considered to be an unambiguous guide to policy-making. ESPON results (including approaches and methods) can only inspire stakeholders (if they match the current needs at a certain place and time) and do not guarantee any universal appreciation or relevance. However, this close interaction between research, policy and co-production of knowledge is also the hallmark of ESPON, primarily exemplified by the targeted analysis projects.

The transnational co-production of territorial knowledge could, however, be further strengthened by applying some of the findings and suggestions from the various projects in the ESPON programme. Many of the ESPON projects have emphasized notions such as cross-border collaboration and policy integration across sectors, and

various forms of multilevel and multiscalar governance. Integration and collaboration are all very well in theory, but applying them in practice is another matter. To collaborate across sectors and scales it is important first to have a common language for communication and also to know and understand the rationales and conditions of all sides, for researchers and policymakers, and for local and regional stakeholders, as well as for members of the Commission of European Communities.

C. Scientific report

As a Scientific Platform and Tools project, the ESPON DeTeC project has focused on the development of analytical approaches, methods and tools for use in evaluations of territorial policies. Following the "ESPON" approach to research, the project has been grounded in evidence-based analysis with the aim of providing policy-relevant implications and considerations to support further competitiveness and cohesion in the ESPON territory. To develop a handbook on detecting territorial potential and challenges, the project included three research activities: systematization of approaches and methods, the development of a framework to utilize ESPON knowledge, and assessing its regional applicability through conducting regional laboratories.

In addition to these research activities, a key task of the project has been to disseminate ESPON knowledge; that is, to synthesize and transfer knowledge. The project has had a strategic scientific approach characterized by an integrated, multidisciplinary, and cross-thematic focus. A combination of applied methods has been used, combining extensive, intensive and synthetic research (see Figure 3).

To demonstrate the use of ESPON knowledge to detect territorial potential and challenges, it has been crucial to link and thus to contextualize concepts and methods developed in ESPON projects to regions and their territorial development and specific issues. In this respect, and for the purposes of the DeTeC project, it has been necessary to develop territorial approaches and to identify ESPON methods. The territorial approaches help regions to take a European perspective and provide guidance both to focus and to broaden strategic work with regional development. The ESPON methods show how this can be done, and they also operate as inspirational and illustrative examples of detection of territorial potential and challenges. The following chapter describes the analytical process of reviewing the vast amount of ESPON knowledge to derive the territorial approaches and ESPON methods.

The systematic review of ESPON projects and the construction of a conceptual framework, including territorial approaches and methods, can be described as extensive research. Extensive research activities are often abstract and theoretical, and extensive techniques are required for generalization. Intensive research is empirical and specific, and associated with qualitative analysis and case-study-based research. The regional laboratories, with target group meetings and stakeholder workshops, can be described as intensive research activities with in-depth analysis but also with direct engagement with stakeholders, who are actively involved in the collaborative production of knowledge.

Synthetic research is the combination, connection and analysis of quantitative data and qualitative material derived from extensive and intensive research. Both the systematization of approaches and methods, and the development of the framework for utilizing ESPON knowledge have been key activities in the synthesizing of knowledge. The regional laboratories have also been crucial for assessing vertical knowledge transfer from the pan-European and national levels to local and regional levels, as well as for horizontal knowledge transfer across regions in Europe. The project has taken a multiscalar but also context-sensitive approach, recognizing the importance of different levels (the European macro level, the transnational/national meso level, and the regional/local level) for actors and practices.

The project has been practice oriented and has taken inspiration from the "practice turn" in social sciences. The practice turn is not a single set of theories but rather a family of theories—"theories of practices"—that generally offer inspiring approaches

of going beyond dichotomies such as theory/practice, science/politics, discourse/action, or global/local (e.g., Cetina, Schatzki, & Von Savigny, 2000). It emerged from dissatisfaction with both structuralist and post-structuralist theories to engage with and grasp the complexities of contemporary society and phenomena such as “third spaces” including international and regional organizations such as the EU and new forms of multilevel and multiscalar governance. Theories of practices in this project are especially relevant and interesting because they concern the relations between academia and politics, and instead of instructing practitioners, the research activities depart from the problems of the practitioners.

Thus, the ESPON DeTeC project has had an integrative structure with a clear focus on practices, utilization of knowledge, and synthetic research. The project departed from an extensive review and systematization of approaches and methods. This inventory has been used as a foundation for the construction of a conceptual framework, including territorial approaches and ESPON methods. The framework has been assessed and evaluated through regional laboratories involving local and regional practitioners and policymakers. After the regional laboratories, the framework has been revised and translated into an interactive handbook on detecting and utilizing territorial potential.

Aristotle’s distinction between potentiality and actuality is useful at a general level to understand what potential may be. Potentiality refers to initial conditions of a matter (or region) and is thus not the same thing as possibility: “to say that x is potentially F is to say that x already has actual features in virtue of which it might be made to be F by the imposition of a F form upon it” (Shields, 2013). In conclusion, the potential of a region refers to the latent abilities of the region, and potential needs to be defined based on the inherent features of the region. However, a region is not a fixed material entity, not set in stone, but a social construction that is continuously changing and evolving (cf. Paasi, 2004).

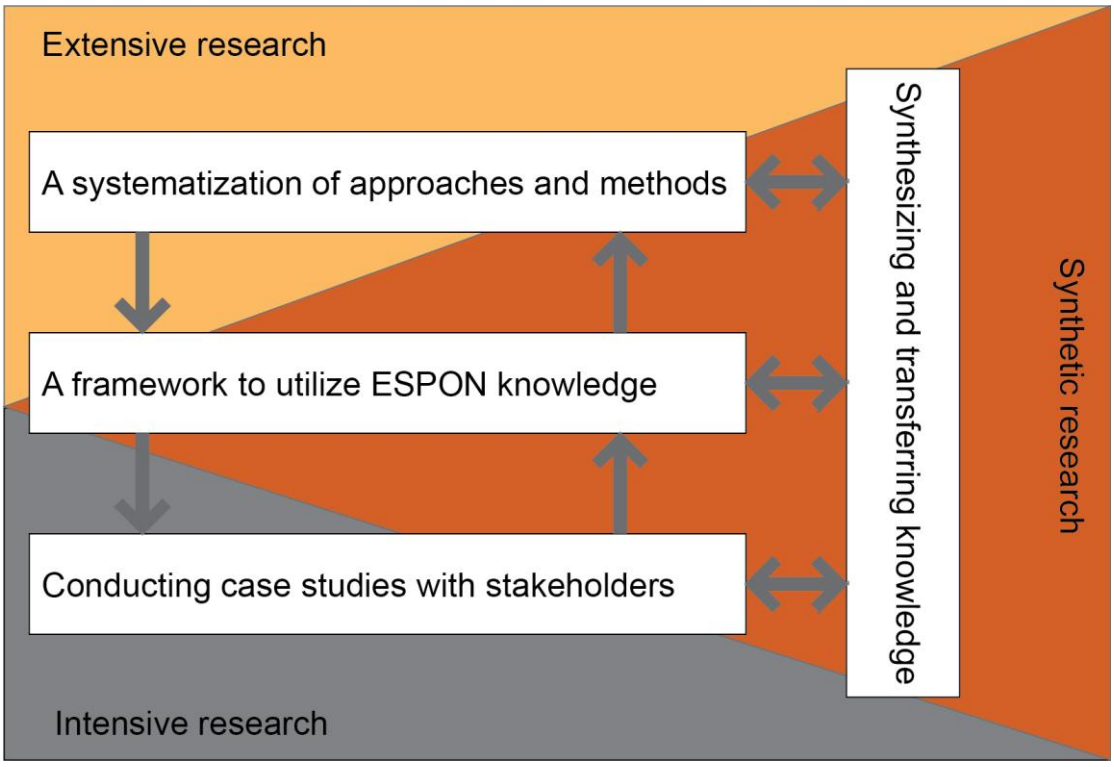


Figure 3 The scientific and methodological approach of ESPON DeTeC

C1. Systematization of approaches and methods

The DeTeC project has systematically reviewed ESPON projects to identify useable and innovative ways of detecting territorial potential and challenges, and to create an inventory of ESPON knowledge and European experience. The systematic review has been conducted in two parallel processes with different focuses: 1) to develop territorial approaches, and 2) to identify ESPON methods.

1.1. Developing territorial approaches

A territorial approach, as described in the main report, is essentially a geographical perspective on local and regional development, and an aid to structuring policies and processes in territorial terms. Furthermore, the territorial dimension implies a cross-sectorial perspective, and the integration of social and economic policies. A territorial approach also contributes to structuring of the set of decision problems faced by decision-makers. Policymakers and practitioners may debate the ways in which problems should be formulated, and the extent to which one decision should be seen as linked to another. They may consider whether their current focus should be enlarged, or conversely whether a complex of related problems should be broken down into more manageable parts.

An important starting point of this project has been the relational geographical conceptualization of regions and scales. Both regions and scales are social constructs "structured and institutionalized in complex ways in de/reterritorializing practices and discourses that may be partly concrete, powerful and bounded, but also partly unbounded, vague or invisible" (Paasi, 2004, p. 542). A region is thus not only a larger place but also open and fluid, and not a fixed territorial entity between the national and local scales (just as a place is both global and local (cf. Massey, 2004)).

The development of territorial approaches in the DeTeC project departed from the approaches outlined after the ESPON seminar in Malmö 2009. The "Regional Use of ESPON Knowledge" report (ESPON, 2010) indicates that territorial approaches "[are] ways to approach the larger territory and intend to provide corresponding examples of policy and research questions, research methods and research outputs" (ESPON, 2010, p. 11). The report identifies six potentially interesting territorial approaches related to ESPON projects and regional policy challenges (and potential), as follows.

- Exposing the characteristics of a region
- Indicating the performance of a region
- Detecting the network relations of a region
- Detecting the larger functional area to which a region belongs
- Detecting the influences on a region
- Detecting the influence of a region on other territories

These six approaches have been critically reviewed in the light of a systematic review of ESPON projects and are related to ongoing policy discussions within the EU and in the context of current research debates in regional studies and human geography (see main report B). Through this, we developed five refined territorial approaches, as follows.

- Detecting **global and future challenges and potential** of a region
- Detecting and **comparing territorial performance** of a region
- Detecting the **functional areas and internal coherence** of a region
- Detecting **current and potential external lLinkages** of a region

- Detecting **opportunities for territorial governance** of a region

The applicability of the territorial approaches for regional development and the daily work of regional stakeholders was a guiding principle in this process. The applicability of these approaches was assessed and discussed during the regional laboratories (see below). During the development process, five frequently cited general analytical and policy concepts in ESPON were particularly useful: territorial capital, metropolisation, spatial integration, polycentricity, and territorial governance.

1. The first territorial approach, **global and future challenges and potential**, was developed based on the idea that the territorial development of a region is increasingly influenced by external processes and macro challenges such as globalization, climate change, energy supply and demographic development. It is therefore important to identify, monitor and analyse macro challenges and global changes that directly or indirectly influence and affect the territorial development of a region; that is, the exogenous forces.

A key issue in detecting global and future challenges and potential is to analyse the *territorial capital* of a region, or its "endogenous potential" (Davoudi, Evans, Governa, & Santangelo, 2008). Territorial capital is a concept used in several ESPON reports (cf. ESPON SS-LR), and it refers to a region's territorial assets for endogenous development (cf OECD, 2001 cited above). Territorial capital includes various types of capital, such as intellectual capital, social capital, political capital, cultural capital, material capital and geographical capital. Territorial governance, with vertical and horizontal co-ordination between sectors and levels of government, is crucial for using territorial capital efficiently for territorial development (ESPON 2.3.2, 2007, p. 18).

2. The second territorial approach, **comparing territorial performance**, has been developed based on the idea that every region in Europe is unique and strives to improve its territorial performance from a European perspective. To detect, expose and compare the territorial performance of a region, it is important to identify the type of region and other comparable regions, for which the typologies developed within ESPON may be used (ESPON, 2009). The performance of a region relates to its attractiveness and comparative advantage, potential for agglomeration economies and endogenous growth. Agglomeration economics is the study of how concentration of economic activities leads to positive external effects in terms of factors such as "technological spillovers, an increasingly skilled labor pool, and firm–supplier networks" both within industries (localization economies) and across industries and sectors (urbanization economies) (ESPON CAEE, 2010, p. 5)

A key ESPON policy and research concept that can be useful in this context is metropolisation, which has been the focus of, for example, the ESPON POLYCE project. In this project, the concept was used to indicate a specific form of urban restructuring, urban growth and polycentricism (ESPON POLYCE, 2012). In the project, it is emphasized that metropolisation is a process defined by a number of interconnected aspects and processes of spatial concentration of (new-knowledge-intensive) economic activities, command and control functions and human capital. However, there is uneven geographical development of the process.

> [M]etropolisation is not similar throughout all cities, of course. Economic and demographic growth in the agglomeration, economic restructuring and polycentric features on different scales appear way differently in different cities. Also, the process of metropolisation reaches beyond city borders, producing a specific social, economic and spatial outcome,

> which depends on local influencing factors. Through these place-related influencing factors, metropolisation leads to specific local metropolitan characteristics. It produces metropolitan profiles, which differ throughout European cities, although metropolisation is a general trend. (ESPON POLYCE, 2012, p. 7)

3. The third territorial approach, **functional areas and internal coherence**, has been developed on the basis that every European region is internally diverse and that each administrative region can be part of multiple functional areas. To detect the challenges and potential of a region, it is important to identify and understand both its internal coherence and its functional areas. A functional area can extend beyond the administrative territory of a region, and a region can be part of multiple functional areas. Furthermore, the functional area (and administrative territory) can be more or less coherent. It is also possible to distinguish between functional and morphological urban areas. Consequently, a functional urban area can consist of one or more morphological urban areas, but neither is limited to administrative boundaries.

A key policy and research concept for explaining this is spatial integration, indicating the existence of interactions between areas separated by a boundary. The concept of spatial integration thus includes functional integration and cross-border integration but also relates to issues of polycentricity, urban systems, and territorial governance, for the following reasons.

> These interactions are not limited to the economic sphere, but concern also other flows or transactions (cultural, political relations, migration, etc.). The existence of interactions does not necessarily mean that the territories converge. Some relationships can be highly asymmetric and be fed by strong differentials. It is therefore necessary to complete the analysis by considering the possible convergence of the territories. (ESPON METROBORDER, 2010, p. 37)

In the Study Programme on European Spatial Planning (the predecessor of the ESPON programme), which followed the European Spatial Development Plan (ESDP), spatial integration was defined as:

> a system of links (flux, similarities, proximity, territoriality, connexity, …) between territories which is the emerging result of concrete social, economic, and cultural relationships, but this system is also a structure which influences and sometimes determines the further development of social, economic and cultural links. (de Boe, Grasland, Healy, Hanquet, & Robert, 1999, p. 30)

In line with this, it is possible to approach integration systematically in a dynamic way with regard to different fields: density, transport networks, urban networks, flows, territorial homogeneity, administration and policy grids. The ESPON METROBORDER project analysed functional cross-border integration in terms of interactions (flow analysis and barrier effects) and convergence (analysis of homogeneity and discontinuities) between territories.

4. The fourth territorial approach, **current and potential external linkages**, has been developed based on the idea that external flows and relational networks that are expressed through channels such as international relations and cross-border interactions increasingly influence regions. It is thus important to analyse the current and future potential of such linkages, spanning regional, national and international borders. The connectivity and accessibility of a region is dependent on various

networks and flows such as transport linkages, ICT, and business networks, but also on the spatial position of the region in the European urban and regional system.

Polycentricity, which is a key concept within European spatial planning, is potentially useful for detecting Current and Potential External Linkages of a region. ESPON emphasizes that polycentricity concerns different types of urban networks and co-operation beyond traditional municipal and regional borders (ESPON 1.1.1, 2005, p. 54). Polycentricity is often perceived as "a self-explanatory concept, characterising something that is opposite to monocentric on the one hand and dispersal and sprawl on the other" (ESPON 1.1.1, 2005, p. 51).

> A polycentric urban system is a functionally integrated socio-spatial entity that consists of multiple urban nodes, which may differ in size yet all play important roles in the system and are linked through intensive reciprocal and multidirectional relations with further development influenced by governance strategies that recognize, consider and support future enhancement of mutual interests, complementarities, synergies and potential for collaboration. (ESPON POLYCE, 2012, p. 21)

In the POLYCE project, three different aspects of polycentricity are analysed, as follows.

- *Morphological polycentricity*: structure of nodes according to their size and significance (rank and size)
- *Relational polycentricity*: reciprocal and multidirectional flows and interactions between nodes
- *Relational polycentricity* in governance: mutual interests, considerations, inspiration, collaboration, complementarity in decision-making in and between nodes

5. The fifth territorial approach, **opportunities for territorial governance**, was developed on the basis that territorial organization, institutional arrangements and practices are crucial for regional development, and that there has been a general shift from government to governance. To detect territorial challenges and potential, it is therefore imperative to analyse the territorial governance, and government structure and practices within a region.

Territorial governance is a useful concept in itself, especially because it includes issues such as policy integration, collaborative planning, cross-border co-operation, and institutional capacity. It is a concept that refers to the formulation and implementation of policy-making in a territory. Governance is not the same as government, nor is it the opposite, but it refers to the involvement of multiple actors in policy-making (ESPON 2.3.2, 2007). In theoretical terms, territorial governance can be defined as "the process of organization and co-ordination of actors to develop territorial capital in a non-destructive way to improve territorial cohesion at different levels", and more importantly:

1) territorial governance is different from governance because its object is the territory, a complex object per se, and its aim is to regulate, to govern, to manage territorial dynamics through the pilotage of a multiplicity of actors;

2) the meaning, approaches and effects of territorial governance are different at different territorial levels, even if there are consistent issues that define territorial governance actions (vertical and horizontal relations, involvement and participation, territorialisation). The importance of these issues differs,

depending on the territorial level in which the action is taking place. (Davoudi et al., 2008, p. 50)

The ESPON TANGO project, which focuses on new forms of territorial governance, defines it “as the formulation and implementation of public policies, programmes and projects for the development of a territory” (2012) The ESPON METROBORDER (2010) project distinguishes between institutional multilevel governance and geographical multiscalar governance. Other projects on territorial governance have focused on co-ordination of activities and policies, vertical co-ordination between actors and policies at different hierarchal levels according to the principle of subsidiarity on the one hand, and horizontal co-ordination (multichannel governance) between different actors and policies at the same level on the other. This co-ordination also depends on the inclusion of actors from civil society and the territorial dimension.

1.2. Identifying ESPON methods

To identify methods for detecting territorial potential and challenges, ESPON projects have been systematically reviewed through a rigorous process, including a number of steps: selection, review and analysis of relevant projects, and identification and specification of methods of analysis, validation and assessment.

First, ESPON Priority 2 Targeted Analyses projects have been the main source of ESPON methods because they were developed in collaboration with regional stakeholders and thus already reflect their needs. After an initial scan, 15 projects were selected for the in-depth review process. The main criterion in this initial selection was that the projects at hand should not be too narrow and/or specific in their aim and scope, and they should not focus only on a particular theme, (e.g., airports, like ESPON ADES, or demography, like ESPON SEMIGRA), nor should they be too specifically programme oriented (e.g., ESPON TranSMEC).

Review guidelines were developed with a scheme of questions guiding the review process through the vast amount of information. They were based on the rationale that a concept is analysed through indicators using specific (qualitative or quantitative) methods. A hypothetical example was the concept of polycentricity, which can be conceptually operationalized in terms of functional urban areas that can be measured through train, car and bus commuting with statistics derived from Eurostat. The indicators of train, car and bus commuting can be analysed through flow analyses and illustrated by maps. The project reviews thus focused on the analytical and methodological approaches of the projects examining the relations between concepts, indicators/sources, and analysis/presentation, through a set of critical questions, as follows.

- What is the key concept(s) operationalized in the project (e.g., polycentricity, regional integration, territorial capital, territorial cohesion, multilevel governance, institutional capacity)?
- How are the key concepts operationalized (e.g., expressed by a number of related analytical subconcepts such as functional urban areas, cross border integration, territorial assets, regional innovations, and network connectivity)?
- What indicators, criteria and/or principles (e.g., GDP, commuting patterns, firm locations, leadership, and patents) are being applied to assess/measure the related analytical concepts?
- How are the indicators analysed and used (e.g., benchmarking, SWOT analysis, flow analysis)?

- How are the indicators informed? What are the empirical sources (e.g., statistics, case studies, surveys)?
- How are the findings presented/illustrated (e.g., maps, flow charts, schemes, models)?

To filter and analyse the key concept(s), and to understand the motivation for choosing these concepts as well as examining how these were operationalized in the project was a challenging task. Most ESPON projects have adopted several analytical concepts, various more or less innovative methods and a wide range of indicators. There were a range of different concepts used in ESPON and derived from macro concepts such as globalization, urbanization, sustainable development, and smart specialization, as well as subconcepts with a high degree of operability such as operationalized concepts. It has occasionally been difficult to distinguish between themes of indicators and concepts, as in the case of governance and demography. The definition and usage of concepts were to a large degree dependent on the general character (i.e., micro, meso or macro concepts) and the territorial scale of their applicability (e.g., European, national, regional or local). Through this procedure, 45–50 territorial concepts and the 30–35 of those applied or generated in ESPON projects were identified.

There are numerous methodological approaches used in ESPON related to territorial profiling (such as benchmarking or indexing for quantitative variables), stakeholder interaction (such as questionnaires, interviews, workshops, or Delphi), statistical analysis (such as econometrics or regression analysis), evaluation (such as impact assessment or SWOT analysis for qualitative data), and scenarios, as well as literature reviews and policy analysis. Various ESPON projects with a particular focus on territorial indicators have been developed, expanded and enhanced in several directions.

Table 2 Analytical matrix linking concepts, indicators and methods

Method category	Methods of analysis	Themes of indicators	Key concept		
			Analytical concept	Analytical concept	…
Stakeholder interaction					
Statistical analysis					
…					

Finally, based on the project reviews and through project matrixes, and in co-ordination with the development of territorial approaches, innovative ESPON methods of analysis have been identified. One focus of the method reviews was thus the innovative aspect of the projects, and their relevance for detecting territorial potential and challenges: for example, if the ESPON project developed a new and/or revised method (i.e., EATIA, TPM, SS-LR) or used or combined existing methods in innovative ways (i.e., METROBORDER, POLYCE).

Subsequently, the methods were connected to concepts such as functional integration, polycentric development and territorial governance. Each method was

described in a fact sheet that included indicators supporting the methods and an example of the method's application in previous ESPON project(s). The fact sheets were circulated for a quality check by respective project leaders to ensure the accuracy of the reviews and to provide opportunities for insight. An additional benefit of this exercise was to facilitate interactions within the ESPON community and to connect various projects.

Eventually, 10 ESPON methods of analysis were included in the handbook, as follows.

1. **Assessing Functional Integration** is a method developed in the ESPON METROBORDER project, which explored European cross-border and metropolitan regions in relation to the concept of polycentricity. The project goal was to identify criteria, potential and governance practices for polycentric cross-border metropolitan regions, including recommendations for development strategies in two case regions: the Upper Rhine region and the Greater Luxembourg region.

2. **Assessing Polycentric Development** is a method developed within the ESPON POLYCE project that has analysed five central European capital cities in relation to the concepts of metropolisation and polycentricity. The project emerged at the request of city administrators for research on their future competitive and co-operative potential, both with each other and with other metropolises. A main goal was to conduct a comparative analysis of Bratislava, Budapest, Ljubljana, Prague and Vienna, and their related surrounding areas, in order to gather in-depth information on their specificities and commonalities.

3. **Cross-border Institutional Mapping** is another method developed in the ESPON METROBORDER project, as above.

4. **Multilevel Governance Analysis** is a method developed in the ESPON CAEE project, which explored the process of agglomeration in cities and regions across Europe. The analysis has contributed better knowledge of the optimal scales for urban form and agglomeration, and has enabled deeper understanding of dynamic processes related to urban agglomeration.

5. **Multilevel Thematic Territorial Analysis** is a method developed within the ESPON ULYSSES project, which was an experimental and innovative project supported by 18 European border and cross-border areas. The purpose of the project was to use applied research results from ESPON as a benchmark for cross-border spatial development planning. The project performed six comprehensive and multithematic cross-border territorial analyses in Europe.

6. **Spatial Scenarios** is a method that has been refined in ESPON SS-LR, which was intended to update a spatial scenario model developed by ESPON 2006 (project 3.2), which built a new qualitative set of scenarios, and to develop further a quantitative foresight model called MASST. Particular focus was placed on integrating recent societal trends and challenges, including the economic crisis, globalization processes, the roles of emerging economies, energy trends and new roles for rural areas. A specific output of the project was the construction of Spatial Scenarios for the Spanish province of Barcelona, including a set of policy recommendations for future development.

7. The ESPON EATIA project developed the **Territorial Impact Assessment** method, a systematic framework for supporting national, regional and local administrations in anticipating the potential positive and negative impacts of EU

directives. The aim was to develop models for avoiding potentially costly and negative impacts and to enhance economically, socially and environmentally positive outcomes for as many regions and localities as possible.

8. The ESPON TPM project developed the **Territorial Performance Monitoring** method. The project was intended to provide an assessment and development tool for regional monitoring of four major global challenges—demographic change, climate change, a new energy paradigm and globalization. The tools within the project were applied in five stakeholder regions—Catalonia, Flanders, Greater Dublin, Navarre and North-Rhine Westphalia—with the aim of providing analytical support for strategy building by examining how experience can be shared and drawn upon in the development of more effective territorial policy actions.

9. **Understanding Differential Growth** is a method developed in the ESPON SURE project, which has explored new ways of conceptualizing and measuring imbalances in lagging European regions by seeking key indicators to explain why they lag behind while others accelerate their growth rates. This was achieved through a systematic comparison of factors relevant to economic growth and successful cohesion policy over the past 15 years in convergent regions

10. **Urban Growth Modelling** is a method developed in the ESPON POLYCE project, which analysed five central European capital cities in relation to the concepts of metropolization and polycentricity. The project emerged at the request of city administrators for research on their areas' future competitive and co-operative potential, both with each other and with other metropolises. A main goal was to conduct a comparative analysis of Bratislava, Budapest, Ljubljana, Prague and Vienna, and their related surrounding areas, to gather in-depth information on their specificities and commonalities.

C2. A framework for utilizing ESPON knowledge

To provide practical guidance on ways in which practitioners and policymakers can utilize ESPON knowledge for detecting territorial potential, a conceptual framework was developed as a basis for the interactive handbook This was done based on the systematic review of ESPON knowledge in relation to the identification of ESPON methods and in conjunction with the development of territorial approaches.

The conceptual framework has been a crucial element linking European experience of ESPON projects to regional potential and challenges. It provides a structured framework for making the ESPON knowledge supply meet demand at the regional level. The conceptual framework structures the territorial approaches and ESPON methods in a way that makes ESPON knowledge available in a usable form for practitioners and policymakers.

Following the context-sensitive scientific approach of the DeTeC project, the research-oriented systematization and synthesis of approaches, methods and other ESPON resources had to be linked with the practices of local and regional stakeholders. To determine the applicability of ESPON knowledge for stakeholders, practitioners and policymakers in different territorial contexts, a key issue was to identify the main target groups and potential usage of the handbook. Based on an internal workshop exercise, the main target groups and forms of usage identified include the following.

1. The target groups are policymakers and practitioners in the field of regional development or spatial planning who are in executive or leadership positions, making strategic decisions at the regional or municipal levels.

2. The guidance document is to be used in long-term strategic development; for example to support the design or evaluation of regional development plans and programmes.

A handbook on territorial approaches and methods should be of added value to practitioners and policymakers by providing support for problem analysis and policy development It shall also support strategic decision-making, defined as *"the process of making choices from among several alternatives*" (Greenberg & Baron, 2000, p. 331). The handbook is expected to be a source of inspiration for both practitioners and policymakers acting at different territorial levels (from the local to European). As an aid for deciding on different alternatives, the handbook somehow needs to engage its users without taking over the process (cf. Watson & Dennis Buede, 1987). This means that the structure and content of the handbook cannot provide an answer to specific questions but rather should provide a variety of possibilities and alternative perspectives regarding a problem or question.

> Rather than reporting their perceptions to an aide entrusted with synthesizing them, decision-makers are seen as synthesizing those perceptions from pieces of their experience. In this conception, the aide may prompt them regarding where to look, suggest alternative perspectives (drawn from the aide's own experience), and even force them to work harder. (Watson & Dennis Buede M, 1987)

2.1. From a conceptual framework …

ESPON approaches and methods can provide input to improve long-term strategic development and decision-making; however, synthesising techniques and perspectives must be done with sensitivity to the peculiarities of individual problems and territorial specificities. The conceptual framework was set up and tested during the regional laboratories with the mindset that practitioners and policymakers should also have the right to ignore advice when a method is not appropriate for their problems. A balance had to be found between the side that knows the method as opposed to the side that knows the problem (Watson & Dennis Buede, 1987). Regional stakeholders are the experts on their respective territories and therefore need to define the problems. They also have experience of managing certain problems. ESPON knowledge and the European perspective can only be of added value if they are adapted to regional practices.

The structure of the conceptual framework takes into account the interlinkages between approaches and methods, as well as the knowledge demand of the stakeholders and their angles of approach to certain regional issues. The definition and identification of the end users' requirements was necessary to develop a conceptual framework that combines all methodological approaches with the needs of policymakers and practitioners at the regional and municipal level. By direct engagement with stakeholders in the regional laboratories, these needs were identified, and policymakers and practitioners were actively involved in the co-production and further development of the conceptual framework.

According to the framework, the main pressing issues in each of the six regional laboratories were identified in collaboration with regional stakeholders. This

identification process revealed weak spots in the conceptual framework and the regional applicability of ESPON knowledge. Some of the issues mentioned during the regional laboratories concerned the structure of the framework, indicating that the entry points into the guidance document needed further elaboration. The main concern was to align the specific research or policy questions of the regional representatives with the inventory of approaches and methods of ESPON projects. The interaction and engagement with regional stakeholders revealed that the definition of a set of key questions to specify the rather general territorial approaches would be of added value to a handbook for detecting territorial approaches and methods that should guide practitioners and policymakers through ESPON knowledge.

Issues of applicability of ESPON analyses or methods in different spatial contexts as well as issues concerning data availability and comparability were also raised during the regional laboratories. These were also considered during the further elaboration of the conceptual framework by clarifying definitions of requirements for the data and methodology of the ESPON methods described above, as well as providing examples of cases where such methods have been applied. However, The handbook provides guidance and clear instructions on important methodological issues for practitioners to decide whether a method can be applied in their specific context (given the appropriate conditions; for example, that comparable data are available on the appropriate scale and the methodology suits the spatial context).

Following the research questions of ESPON projects as well as policy questions of regional stakeholders, the regional laboratories proposed 15 inherent key questions connected to the territorial approaches and ESPON methods. The key questions facilitate navigation through territorial approaches and ESPON methods for detecting territorial challenges and potential. One method may apply to several territorial approaches or key questions, and therefore some aspects of territorial approaches and key questions may overlap (see Figure 4).

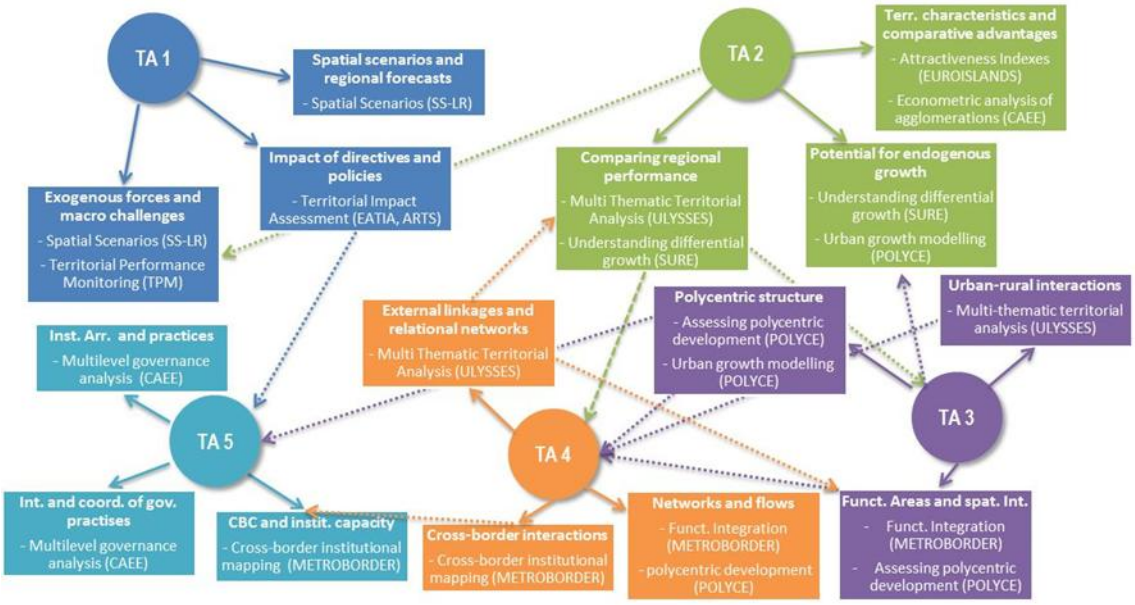


Figure 4 The interlinkages of the conceptual framework

The conceptual framework combines territorial approaches, key questions and methods multidirectionally, allowing paths to generate knowledge on the territorial potential and challenges of a region. To display the interlinkages and to enhance usability, the handbook has been designed with interactive functionalities. By showing interlinkages between approaches and methods, the handbook can aid in structuring a set of decision problems. Policymakers and practitioners may debate the ways in which problems should be formulated, and the extent of their perceived linkages. They may consider whether their current focus should be enlarged, or conversely whether a complex of related problems should be broken down into more manageable parts (cf. Rosenhead, 1989, p. 127f.).

2.2. … to an interactive handbook

On the basis that the handbook should support problem analysis, policy development and decision-making, the conceptual framework was first established in a tree structure (cf. Greenberg & Baron, 2000, p. 472). However, because of the interactive functionality of the e-book format of the handbook, different entry points for initiating a query are possible. The user of the handbook can access information from the information on five territorial approaches or from ESPON methods or from the regional laboratories. The handbook also provides direct access to additional ESPON resources, with information and links to relevant ESPON projects, publications and tools, and information of how the framework can be used in a section on the regional laboratories. For example, the method of Urban Growth Modelling, which was applied in the ESPON POLYCE project, can be used to identify a region's characteristics and performance as well as to identify functional areas and to determine its degree of integration.

In the process of producing the handbook, the conceptual framework was presented to stakeholders during the regional laboratories. It was crucial that the conceptual framework should be presented to practitioners and stakeholders in an illustrative and accessible format to improve its applicability further. The presentation for detecting territorial potential and challenges was based on the list of territorial approaches and key questions, including ESPON methods, and structured according to the logic of the conceptual framework. It was used in the regional laboratories to show practitioners and stakeholders how to utilize ESPON knowledge in the field of regional development in an efficient way and to offer insights into the possibilities of applying ESPON knowledge at various territorial levels. Additionally, the regional laboratories served as testing grounds for the applicability of the conceptual framework and evaluated the degree of applicability of some components of ESPON knowledge in different territorial contexts.

The workshops were organized to facilitate and to make use of authentic examples. For example, Malta is currently working on a "Strategic Plan for the Environment and Development", whereas in Scotland there, is a focus on a "Strategic Development Plan for Edinburgh South East Scotland II", which provided a common point for discussions on the identification of opportunities and challenges. Apparent differences in the selection of the most relevant territorial approaches justify the choice of regional laboratories to conduct in-depth analyses. The six European regions considered are diverse in numerous aspects, including geographical location, social development, and membership of the European Union (regions of old and new EU member states and those outside the EU). However, most interestingly from the DeTeC point of view is that the selected regions vary in terms of their current needs and problems. Most of the regions are now in the process of developing strategic plans for the future—these spatial, economic and social studies are all distinct. In all cases, these documents have become a solid reference point for territorial

approaches and methods of analysis, which has facilitated discussion and brainstorming with regional practitioners and policymakers.

The handbook's currency and subject matter depend on the issues analysed in ESPON projects, but the handbook is intended to be a source of knowledge and guidance for practitioners and policymakers in the future, when challenges regarding regional policy may change. This fact could limit the applicability of the interactive handbook if it were to focus on indicators and data, but because its main focus is on more general and generic approaches and methods, this is a minor issue.

The handbook was adapted and produced based on, and aligned to, feedback and comments received during the regional laboratories. Most comments received during regional laboratories concerned the practical use of the interactive handbook. The conceptual framework—the approaches and methods—are simultaneously diverse and general, and it is has been stressed that the final handbook should be well structured and user-friendly, that it should use a vocabulary that is familiar to the potential users and that sophisticated scientific concepts and the key policy terms should be explained explicitly; for example, in a glossary. The amount of text should also be carefully considered because an overloaded and too text intensive handbook would hinder its application in everyday work. Its potential users in general do lack the time to read it carefully, and a more synthetic approach to particular issues (with the possibility of becoming acquainted with details on additional pages) would improve its applicability.

The interactive features of the handbook were appreciated, as was the idea of publishing it as an e-book. However, it should be ensured that the e-book can be read on all of the most common operating systems. The handbook should also use the other features of an e-book, such as a multiple entry points and interlinkages, and incorporate features such as a search engine to facilitate searches for methods of analysis and/or illustrative examples from past ESPON projects. The handbook should also use the potential of directly linking to other ESPON resources and provide direct access to various additional resources, illustrative examples and case studies. The interactive multitouch e-book format also provides numerous possibilities for adding visual elements, symbols and icons as well as for including features such as galleries, video, interactive diagrams, and 3D objects.

C3. Regional laboratories as an interactive method

Regional laboratories have been an important and innovative methodological approach of the DeTeC project. The main idea of the regional laboratories was to include both research and policy activities, and especially to involve policymakers, members of local authorities, non-governmental actors and other practitioners directly. The regional laboratories facilitated co-production of knowledge through interaction between researchers, practitioners and policymakers, and played an important role in validating the conceptual framework and assessing its regional applicability. Through the regional laboratories, authentic examples of ways in which the selected regions can identify and use their territorial potential and/or address particular challenges, including a European outlook and combining ESPON results with local as well as regional knowledge, were also provided. In addition, the regional laboratories have been important channels for the dissemination of ESPON knowledge.

3.1. Selection of case laboratories

As a method, the regional laboratory uses a case-study-based research approach, which is directly in line with the practice-oriented approach adopted for the project. The notion of knowledge co-production was an essential premise in this approach. Methodologically, the project has been structured around participatory design as a knowledge-generating process (Bergold, 2007). According to Bergold and Thomas: "*participatory research involves a joint process of knowledge-production that leads to new insights on the part of both scientists and practitioners*" (2012).

The project has partly used a multiple-case design that allows not only testing of theoretical concepts but also comparisons and more nuanced interpretations of empirical phenomena (Bhattacherjee, 2012). However, case studies can have many forms and can be applied in many contexts, and the regional laboratory can also be characterized as intervention in a real-life context and a form of evaluation research (Yin, 2009). In the DeTeC project, the "intervention" is related to the assessment of the conceptual framework (with territorial approaches and ESPON methods) in actual practical circumstances. The multiple-case study approach also allows for comparisons between cases and prompts discussion regarding the general applicability of approaches and methods. Being aware of the drawbacks of the case study approach (e.g., Benbasat et al., 1987), the organizers planned the selection process of the case study regions carefully to provide a set of cases representing various areas, problems and localities in Europe. Furthermore, the regional laboratories organized in the selected case studies gathered a wide variety of stakeholders, practitioners and policymakers, who enriched the discussion and the assessment of the territorial approaches by providing the perspectives of participants representing a range of institutions.

In case-study-based research, a key issue is the selection of cases. In this project, the selection of the regional laboratories was embedded in the broader objective of information maximization (Flyvbjerg, 2001) together with the aim of gathering a wide variety of regions across the ESPON territory. The regional laboratories have also been important nexuses in the learning process, which enabled moving to upper levels in the learning process. According to Flyvbjerg (2001), context-independent knowledge and rules are crucial, but only at the basic levels of the learning process. Thus, the additional knowledge gathered through the regional laboratories' analyses, hence through "gaining the experience", complements the previous, theoretical knowledge. This learning process has been explicitly illustrated in this project, with the theoretical constructs being first elaborated then tested by regional laboratories in the selected regions.

In practice, the selection procedure consisted of two steps. In the initial phase, the list of potential regional laboratories based on stakeholders already or previously involved in ESPON projects was created. The second step was to address the need for the different types of cities and regions, in accordance with the ESPON typology of territories (urban–rural regions; metropolitan regions; border regions; island regions; sparsely populated regions; outermost regions; mountainous regions; coastal regions; regions in industrial transition), and for balanced geographical coverage (Northern and Western Europe, Central and Southern Europe, Eastern Europe) together with special consideration of old as well as new EU member states.

Adopting the aforementioned criteria, six regions across Europe were selected to play the role of the regional laboratories: the Danube–Kris–Mures–Tisa Euroregion, Edinburgh and South East Scotland, Malta, Podlasie, Skåne and Styria. It should be noted here that all the regions (or parts of the regions), apart from Styria

(Steiermark), are or have previously been involved in ESPON projects. The selection of Styria was based on the desire to use an external reference point to assure the transferability of the project's outcomes to regions that have not been directly involved in ESPON projects in the past.

Another important criterion has been the significant differentiation of selected regions, because they have various sizes, inner characteristics and administrative structure. The Danube–Kris–Mures–Tisa Euroregion, for example, is a border region of more than 3.4 million inhabitants including two Hungarian counties (Bács-Kiskun County, Csongrád County), three Romanian counties (Arad County, Caras-Severin County, Timis County) and the Autonomous Province of Vojvodina. Skåne is one unitary region with 33 municipalities and a population of 1.2 million. Podlasie is of similar population size but consists of 118 municipalities and is located on the border of ESPON territory. The republic of Malta is a densely populated island, while Edinburg and Sooth East Scotland is a sparsely populated mountainous region being and part of the United Kingdom.

The regions also represent a variety of administrative types with contrasting governance structures. Podlasie, Skåne and Styria are all subnational administrative regions. Edinburgh and South East Scotland is an emerging subnational entity but is also part of the United Kingdom. Malta is a sovereign state, while Danube–Kris–Mures–Tisa is a cross-border supranational Euroregion. This diversity of selected regions has been considered to be a key element in the assessment of the conceptual framework and the handbook's applicability in detecting territorial potential and challenges in varied regions.

After the selection, regional profiles were developed for each region. The concept of regional profiling to reveal the characteristics and to indicate the performance of a region was used in projects such as the ESPON RISE project. The regional profiles consisted of two parts. The first was a rather quantitative and concise presentation of each region, whereas the second, which was of a qualitative nature, provided a broader approach, allowing positioning of each region in relation to the others and globally within the European space. The characteristics of the regions were based on secondary materials in the form of statistical data, surveys and policy documents.

Regional profiles were important to position the regions in the wider European scene. There was also an underlying idea of presenting the performance of the selected regions on the basis of previous or ongoing ESPON project results. However, the regional profiling faced numerous methodological difficulties, because not all European regions were considered in ESPON projects, and the lack of comparable data from certain regions and thematic fields was an obstacle in drawing a comparative picture of the region's performance. For example, data for the Danube–Kris–Mures–Tisa Euroregion were difficult to access, which complicated the proper evaluation of its positioning and overall performance. Because this Euroregion is spread over two EU countries (Hungary and Romania) and includes one non-EU country (Serbia), the possibilities for collecting comparable information appeared to be quite limited. Moreover, in previous comparisons, strong divergences between the Hungarian and Romanian parts of this Euroregion have been observed, and overall assessment of its economic performance was difficult.

3.2. Structure and processes of the regional laboratories

Regional laboratories have been used to assess the regional applicability of the conceptual framework for detecting territorial potential and challenges, and to produce a workable and applicable handbook. According to Flyvbjerg, "concrete experiences can be achieved via continued proximity to the studied reality and via

feedback from those under study" (2001, p. 72). Hence, the organization of regional laboratories has been conducted in collaboration with established local and regional contacts. The aim of these laboratories was thus to benefit from a double exchange of knowledge: project partners disseminated the ESPON knowledge, presented the conceptual framework and provided examples of good practices, while the practitioners and policymakers contributed their regional knowledge in analysing potential and challenges. In this manner, the laboratories were planned as a mode of collecting materials and obtaining practitioners' perspectives and assessment with regard to the content-oriented purpose. The laboratories took place in the actual case study regions.

The regional laboratories were intended to provide in-depth knowledge on ways for a region to analyse, distil and make use of its territorial potential. To this end, synthesis of the ESPON knowledge was crucial. The regional laboratories should also be considered to be a way of verifying the level of transferability of various methods and analytical approaches that have proven to be relevant for detecting territorial potential and challenges. This role was attributed to the interactive handbook, the content and applicability of which was evaluated during the regional laboratories. In addition, the laboratories were used to receive feedback on the handbook and assessment of its applicability and usefulness in the daily work of stakeholders. They were also opportunities to present the ESPON programme. Thus, the regional laboratories tested the possibility of vertical (from pan-European and national to regional and local levels) and horizontal (between different regions) transfer of knowledge in Europe. The regional laboratories have been conducted in two steps: a target group meeting and a stakeholder workshop.

Target group meeting

The target group meeting gathered key stakeholders from the region—stakeholders, practitioners and policymakers involved in strategic regional planning and regional development. A common structure for all target group meetings had been established, but it allowed for adaptation to the specific regional setting. This first part of the target group meeting focused on taking advantage of previously developed materials from ESPON projects. This was especially important when the participants were unaware of specific topics researched in the ESPON programme. The presentation of regional profiles was rather flexible, because the main goal was to adapt the presentation to the specificity of the region where the group meeting was held.

In the next step of the target group meeting, the ESPON DeTeC project was presented. The presentation included an explanation of the conceptual framework. This was followed by discussions concerning the territorial approaches. According to the specific circumstances of each region investigated in this project, the partner responsible for the laboratory selected a set of three territorial approaches that were most relevant to the needs of the region. This selection had to be justified on the basis of knowledge about the region gained through desktop research before the laboratories were held. In this way, the researchers presented individually selected territorial approaches, explaining their bases and their applicability to the region. This applicability was understood according to the two time scales: in daily work (addressing the most pressing issues) and on a long-term basis.

The target group meetings were seen to be interactive and to provide outputs on the needs of the participants. For this reason, the participants were asked to comment on the choice of the priority territorial approaches and their applicability from their perspective as regional key players. Assessment of the territorial approaches was on

the basis of their applicability, completeness and significance. The added value of these target group meetings lay in the opportunity to broaden the issues that territorial approaches addressed by providing additional intrinsic questions. The outcome of the target group meeting was a selection of the territorial approaches (perhaps the same proposed by the partner team) that were then assessed based on their application during the stakeholders' workshop.

Stakeholder workshops

The regional workshops dedicated to the regional stakeholders were preceded by a brief presentation of the ESPON programme and the DeTeC project. Subsequently, a summary of the previous meeting was presented, including the questions previously raised and the presentation of selected territorial approaches that would be tested during the ongoing workshop. The workshops were designed for an in-depth presentation of the methods of each of the selected approaches relevant to each region. The modes of evaluation of the approaches varied across the regions regarding the number and background of stakeholders gathered. In some cases, the workshops gathered (at least some) participants similar to those in the previous target group meetings. This is one of the common techniques for focus groups and is used to encourage conceptualization (see Morgan et al., 2008). Each group of stakeholders assessed the applicability and relevance of methods presented to their region, through a precise rating grid or brainstorming (in groups in some cases where the number of participants was high), called a "professional discussion forum". These also covered the illustrative examples of ways for regions to exploit their territorial potential.

To build interactions based on sharing and comparing thoughts about the topic, the workshops contained three stages: introductions were designed mainly to summarize the outcomes of the previous target meeting and to emphasize the topics that would then be discussed. The assessment of the methods presented was the second phase. This involved the participants and encouraged them to share their opinions. Finally, the third stage was practical to some extent, as the participants could test the preliminary version of the handbook.

The final part of the workshop concentrated on the handbook. The aim of this part of the workshop was to collect opinions and critiques from the stakeholders about this guide. During the stakeholders' workshop, only the draft version of the handbook was presented because the elaboration was still in progress. For this reason, the participants in the workshop were not able to test all the options.

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Annex

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