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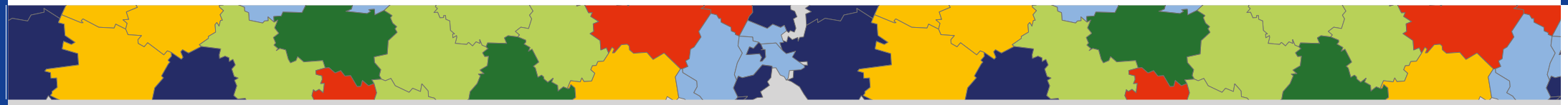

Detecting Territorial Potential and Challenges

An interactive handbook for policy-makers and practitioners
on how to use ESPON knowledge at local and regional level

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ESPON Programme and projects, the complete reports and list of partners involved can be found at www.espon.eu The ESPON website always presents the latest developments in the ESPON Programme and findings from ESPON projects. It offers the opportunity to consult in detail ESPON publications, tools, project reports and indicators available in the ESPON database.

Disclaimer: The content of this report is based on the results of applied research projects by transnational teams of research taking part in the ESPON 2013 Programme. As such, the maps and texts do not necessarily reflect the opinion of the ESPON Monitoring Committee.

The present publication has been developed within the ESPON DeTeC project, including partners Nordregio: Nordic Centre for Spatial Development, OIR: Austrian Institute for Regional Studies and Spatial Planning, and IGSO PAS: Stanisław Leszczycki Institute of Geography and Spatial Organization Polish Academy of Sciences. Nordregio has been lead partner and managed the production of the handbook.

Partners

NORDREGIO
Nordic Centre for Spatial Development

www.nordregio.se

ÖIR

http://www.oir.at/en

PAN IGiPZ

http://www.igipz.pan.pl

WHAT DOES THE HANDBOOK PROVIDE AND WHO IS IT FOR?

This handbook on detecting territorial potential and challenges provides guidance on how local and regional practitioners and policymakers can use ESPON knowledge. It is based on the idea that understanding a regions' position in a larger territorial context is essential and that a European perspective can help to turn challenges into potential.

The handbook is a concise and easy-to-use ESPON reference providing:

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

The handbook is designed for local and regional stakeholders, practitioners and policymakers, in the fields of regional development and spatial planning. It is guide for long-term strategic development, e.g. to support the design and evaluation of regional development plans and programmes.

HOW CAN THE HANDBOOK BE USED?

The handbook structures and combines territorial approaches and ESPON methods through key questions in a multidirectional manner. This means that a territorial approach directs the reader to relevant methods and vice versa. The regional laboratories offers authentic examples of how the approaches and methods can be used in various regions. The handbook is also through the ESPON resources chapter a concise reference work to ESPON.

TERRITORIAL APPROACHES	ESPON METHODS
REGIONAL LABORATORIES	ESPON RESOURCES

There are three main pathways of using and exploring the handbook:

- Through the territorial approaches: detecting global and future challenges and potential is, for example, essential for all regions not least for an island state like Malta, and a method that can help with this is Spatial Scenarios.

- Through the ESPON methods: Assessing Polycentricity is for example an appropriate method for approaching the functional areas and internal coherence of a region, which can be of interest both for cross-border regions such as Skåne and rural regions such as Podlasie.

- Through the regional laboratories: a newly formed region such as Edinburgh and South East Scotland or a transnational region such as Danube-Kris-Mures-Tisa might for example be interested in detecting opportunities for territorial governance and methods such as Cross-border Institutional Mapping.

WHEN TO USE THE HANDBOOK?

As an interactive guide to strategic policymaking for local and regional development targeting practitioners and policymakers the handbook engage its users without directing the decision-making process. The structure and content provide various possibilities and alternative perspectives on problems or questions rather than simply providing answers. The user can quickly engage with the material, either to gain new insights or to get quick information to more specific issues. A handbook is not meant to be read from beginning to end; instead, it should act as a quick reference with specific information and can be turned to repeatedly.

HOW TO NAVIGATE THE HANDBOOK?

The handbook presents information in a multidirectional way, by offering different pathways to explore how ESPON knowledge can be used to detect territorial potential and challenges of a region. The interactive content includes both internal and external links, glossary explanations, interactive map galleries and videos. Readers can for example, swipe through a collection of interactive maps or watch an explanatory video. All tables, figures and maps can be enlarged to full size by tapping on them, including explanatory texts. There is also a glossary explaining key concepts. A content overview provides a full overview of the different chapters and subsections in the handbook. When exploring the handbook it is possible to use the home button to get back to the overview. The handbook includes the following four features for interactive navigation:

External links	Internal links
Glossary	

How was the handbook produced?

Phase 1 of developing the handbook began with a review of all projects in the ESPON 2013 Programme. A specific focus was on Priority 2 Targeted Analysis projects to emphasize ESPON projects involving direct cooperation with regional and local practitioners. The review identified more than 45 territorial concepts and around 35 methods or other tools of analysis that were applied or developed within different ESPON projects.

During **phase 2**, the territorial concepts were sorted into groups based on their thematic scope. The methods and tools were also grouped based on the concepts they help to analyse and interpret. The review of key concepts was supported with an analysis of important EU policy documents and research literature.

In particular, this included the 2009 ESPON Working Paper "Regional Use of ESPON Knowledge". From this process, the key concepts were used to develop five territorial approaches on how current ESPON knowledge can be used to understand territorial challenges, potential and key policy questions of regions. A territorial approach is essentially a geographical perspective on local and regional development, and it helps to structure policies, practices and processes in territorial terms.

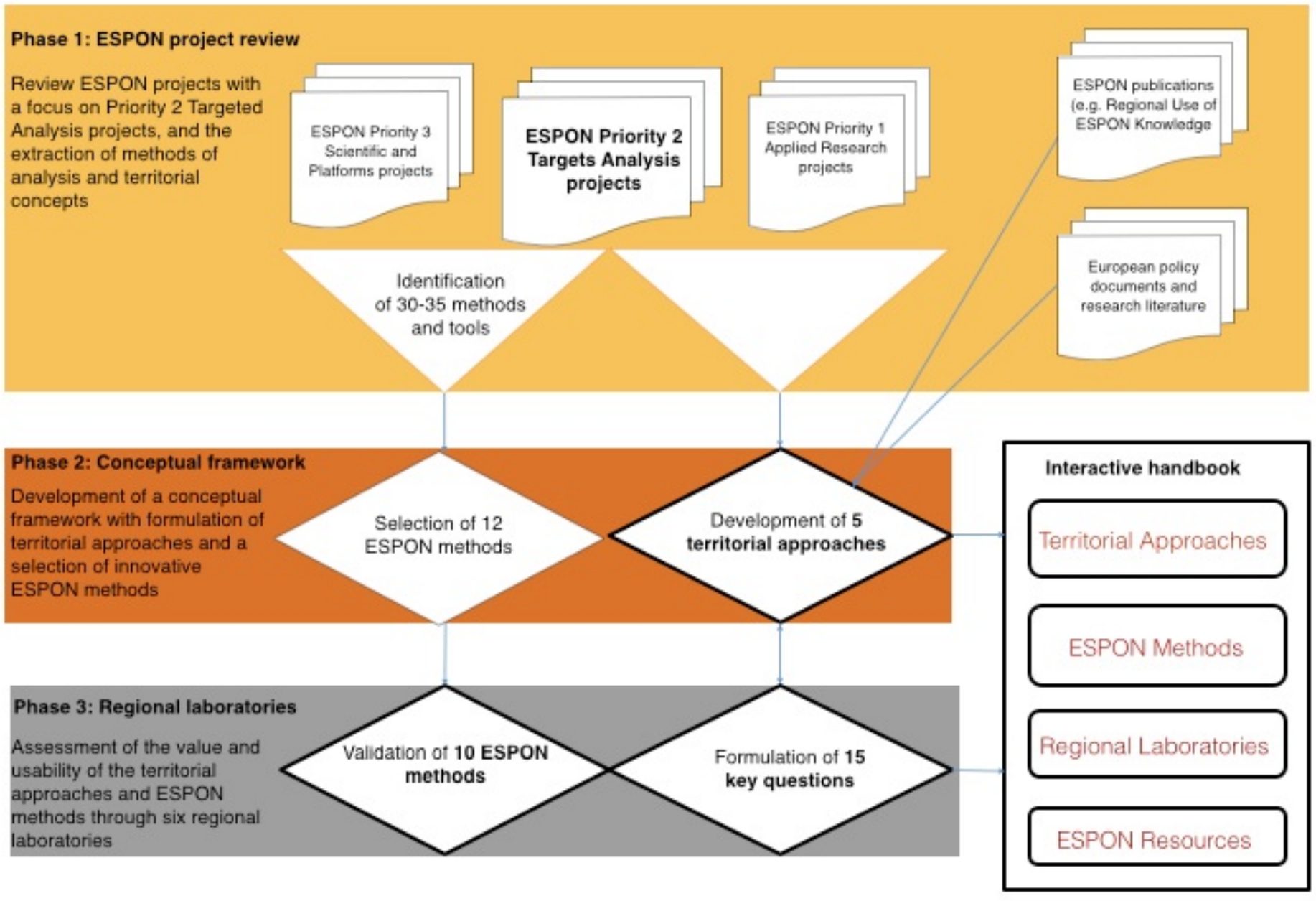
Simultaneously, the 35 methods, indicators and tools were narrowed into ten ESPON methods based on three criteria.

1. They must have been developed or significantly enhanced by ESPON work (i.e. being innovative),
2. they must have analytical power for the identified territorial approaches,
3. and they must be transferrable for application and of use for practitioners and policymakers.

Therefore, while territorial approaches provide entry points, the ESPON methods can be used to interpret the territorial approaches and answer their key questions.

In **phase 3**, the applicability and value of the five territorial approaches and the ten ESPON methods for different types of European regions were further scrutinised in the six regional laboratories. The importance of the five territorial approaches was validated, and through this process three key questions were developed for each territorial approach. These 15 questions intend to assist practitioners in identifying their own regional contexts when considering the territorial approaches. Participants in the regional laboratories were also presented with a draft of the handbook and contributed significantly to its refinement

THE PROCESS OF CREATING THE HANDBOOK



Content overview

CHAPTER 1

TERRITORIAL APPROACHES

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 neighboring regions, macro-regional, European, and global contexts.

A territorial approach can be used as a way to reveal and detect challenges and potential of a region within their wider territorial context from a European perspective. A territorial approach is essentially a geographical perspective on local and regional development, and a help to structure policies, practices and processes in territorial terms. The DeTeC project has developed five territorial approaches that provide considerations and advice for detecting territorial potential and challenges of a region. Through 15 key questions the five territorial approaches are directly connected to different innovative ESPON methods.

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

The five territorial approaches have been developed in the context of EU policy and research, using the collective knowledge of ESPON projects, together with the policy and research literature accounting for the current state of knowledge on territorial development in Europe. Foremost, this includes the understanding of a *place-based policy* approach to policy-making, as described by the Barca Report from 2009, as a central pillar of territorial cohesion policy. The *Lisbon Treaty* from 2007 established territorial cohesion as the third dimension in the EU's Cohesion Policy alongside economic and social cohesion. It is now an integral part of *Europe 2020 Strategy*, and in the *Territorial Agenda* 2020 Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions.

Territorial cohesion is about capitalising on the unique sets of strengths of each region, while also keeping in mind the challenges and vulnerabilities. It includes managing the concentration of people and economic activity to promote balanced spatial development, as well as enhancing accessibility within and among regions so that people can live where they want while being provided with appropriate access to services. Improving cooperation between regions, especially in terms of functional territories and macro-regional approaches, is also an important aspect of territorial cohesion. Combined, these aspects assert that the territorial aspects of regions which makes regions both similar and unique are a potential for development.

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.

Key questions to ask:

1. **What are the main external macro-challenges for the region?**
2. **What are potential trends and scenarios for the development of the region?**
3. **How will national and international directives and policies influence the region?**

ESPON Methods that can help to answer these questions are:

- Spatial Scenarios and Territorial Performance Monitoring help identify the main external macro-challenges.
- The question of potential trends and scenarios for development can be addressed through Spatial Scenarios.
- Territorial Impact Assessments directly address the impact of national and international directives and policies.

Regional policy must not only be context sensitive and place-based but also oriented toward, and adapted to, larger territories, because regions do not develop in isolation but are increasingly and integrated with the world around them. ESPON Synthesis Reports outline key trends and challenges from the local to the global level so that regions can both identify their challenges and potential but also compare with other regions sharing their issues.To anticipate local impacts of future national and EU policies it is also important to understand important policy concepts such as *territorial cohesion* and *territorial capital*.

This territorial approach was explored in the following regional laboratories:

- Edinburgh and South East Scotland
- Styria
- Malta

TERRITORIAL APPROACH 2

COMPARING TERRITORIAL PERFORMANCE

ESPON Methods that can help to answer these questions are:

- Understanding Differential Growth and Multithematic Territorial Analysis to identify what are the characteristics and the comparative advantages (and disadvantages) of the region.
- The two methods can also support the understanding of how a region is performing in certain fields compared with other regions in Europe.
- Urban Growth Modelling helps to show what is the potential for endogenous growth and agglomeration economies.

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 territorial 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*.

Key questions to ask:

1. **What are the characteristics and the comparative advantages (and disadvantages) of the region?**
2. **How is the region performing in certain fields compared with other regions in Europe?**
3. **What is the potential for endogenous growth and agglomeration economies?**

Every region in Europe is unique and strives to improve its territorial performance from a European perspective. To detect, expose and compare the territorial specificities, and to compare a region's performance, it is helpful to use the *ESPON regional typologies*. These can not only be used to identify territorial characteristics, but also to identify comparable regions and different territorial development processes. For example, typologies of urban-rural relations and industrial transition can be used to identify *metropolisation* processes.

This territorial approach was explored in the following regional laboratories:

- Styria
- Malta
- Podlasie

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 - each administrative region can be part of multiple functional areas, just as a functional area can extend beyond the administrative territory of a region. Furthermore, the functional (and administrative) area can be more or less coherent depending on the issues that are considered.

Key questions to ask:

1. **What are the functional areas of the region?**
2. **How is the region structured in terms polycentric development?**
3. **What is the potential for internal territorial coherence of the region?**

ESPON Methods that can help to answer these questions are:

- Assessing Functional Integration, Assessing Polycentricity, Multithematic Territorial Analysis and Urban Growth Modelling to determine what are the functional areas of a region.
- Assessing Functional Integration and Assesing Polycentricity for determining how the region is structured in terms of polycentric development.
- Multithematic Territorial Analysis and Urban Growth Modelling to determine the potential for internal territorial coherence.

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. 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.

This territorial approach was explored in the following regional laboratories:

- Podlasie
- Skåne

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.

Key questions to ask:

1. **What are the external linkages of the region in terms of relational networks and flows?**
2. **How is the region positioned within the wider European spatial and socio-economic system?**
3. **What is the potential for spatial integration and cross-border development?**

ESPON Methods that can help to answer these questions are:

- Assessing Functional Integration offers the ability to examine external linkages in terms of relational networks and flows.
- Assesing Polycentricity and Assessing Functional Integration assess a region's position within Europe's wider spatial and socio-economic system.
- Cross-border Institutional Mapping supports discovery of potential for spatial integration and cross-border development.

Spatial integration indicates the existence of interactions between areas separated by a boundary. It therefore includes functional integration and cross-border integration, but also relates to issues of *polycentricity*, urban systems, and *territorial governance*. The existence of linkages does not necessarily mean that regions converge. In contrast, some relationships can be highly asymmetric and can be fed by strong differentials. It is therefore necessary to consider both the possible territorial convergence and divergence within for example cross-border regions such as Skåne or Danube-Kris-Mures-Tisa region.

This territorial approach was explored in the following regional laboratories:

- Skåne
- Danube-Kris-Mures-Tisa
- Podlasie

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.

Key questions to for detecting territorial governance ask:

1. **What are the institutional arrangements and practices of the region?**
2. **How are governance practices spatially coordinated and integrated?**
3. **What is the potential for collaborations and institutional capacities?**

ESPON methods that can help to answer these questions are:

- Multilevel governance analysis for detecting the institutional arrangements and practices of a region
- Cross-border Institutional Mapping and Multilevel Governance Analysis for detecting the spatial coordination and integration of governance practices.
- Cross-border Institutional Mapping can also be used to identify further potential for collaborations and institutional capacities.

Territorial governance is a useful concept since it includes issues such as policy integration, collaborative planning and cross-border cooperation. It is useful to think about the following points in the context of developing *place-based policy* and cross-sectoral collaborations:

- co-ordinating actions of actors and institutions
- integrating policy sectors
- mobilizing stakeholder participation
- being adaptive to changing and evolving contexts
- realizing territorial specificities and their impacts on development.

This territorial approach was explored in the following regional laboratories:

- Edinburgh and South East Scotland
- Danube-Kris-Mures-Tisa
- Skåne

CHAPTER 2

ESPON METHODS

ESPON has developed and refined numerous methods that can be used for analysing the many dimensions of local and regional development. The following ten ESPON methods have been identified as particularly useful and that can be directly applied for detecting the territorial potential and challenges of regions. In combination with the territorial approaches presented in the previous chapters they offer good ways **how to address different policy issues**.

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

The methods have been identified through a review of all ESPON projects, with a focus on Priority 2 Targeted Analysis projects that directly involve regional practitioners. The methods have been scrutinized in the six regional laboratories and ten were identified as being the most useful.

Analytical methods can be simple to implement, using readily available data and only requiring a few steps, or they can be much more complex, requiring detailed data and consultation with experienced experts. However, this discrepancy does not always determine the value the method offers to practitioners in each region. This is instead determined by the characteristics and important policy issues facing the region.

The following presentation of each ESPON method provides basic information on the key elements of the methods and gives an example of how it has been applied in practice. The methods are also linked to the five territorial approaches and the specific key questions which the method can be used to answer. Finally, direct links for more detailed information are given.

ASSESSING FUNCTIONAL INTEGRATION

Useful when considering:

1. *Functional areas and internal coherence*
   - *What are the functional areas of the region?*
   - *How is the region structured in terms polycentric development?*
2. *Current and potential external linkages*
   - *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?*

Developed within ESPON project: *METROBORDER*

Explored within regional laboratory: *Skåne* | *Podlasie*

Functional integration could be understood and assessed in terms of cross-border interaction and convergence between regions, but is also closely related to the concept of *spatial integration*. While interactions consider flows and barriers, convergence is about whether two regions are converging socially and economically. Interactions can be indicated through cross-border commuters and public transports while cross-border convergence can be indicated through similarity of GDP per capita and foreign citizenship of residents (as in Table 1).

Through the method of Assessing Functional Integration each indicator can be analysed on its own and compared with other regions, but they can also be synthesized and classified to assess the effects of cross-border interactions. For instance, do increased cross-border commuting volumes (perhaps caused by new transport connections) lead to regions converging socio-economically or are existing imbalances being exasperated further? These are important questions for ensuring that investments are coordinated and made efficiently at the regional level, but also to ensure that Europe's goals for territorial cohesion are being met.

TABLE 1 CROSS-BORDER INTERACTIONS AND CONVERGENCE

	Interactions		Convergence	
Cross-border metropolitan areas	Cross-border commuters	Cross-border public transport	Similarity of GDP per capita	Foreign citizenship of residents
Luxembourg	5	5	1	5
Saarbrucken	3	3	5	2
Basel	4	4	2	3
Strasbourg	1	1	5	1
Geneva	4	4	2	4
Aachen-Liege-Maastricht	2	2	4	5
Lille	3	1	5	3
Nice-Monaco-San Remo	3	2	2	3
Copenhagen-Malmo	2	4	4	2
Vienna-Bratislava	1	5	3	1
Katowice-Ostrava	No Data	1	5	No Data

1= very weak, 2 = weak, 3 = moderate, 4 = strong, 5 = very strong.

(Source: ESPON METROBORDER)

FUNCTIONAL INTEGRATION IN CROSS-BORDER AREAS

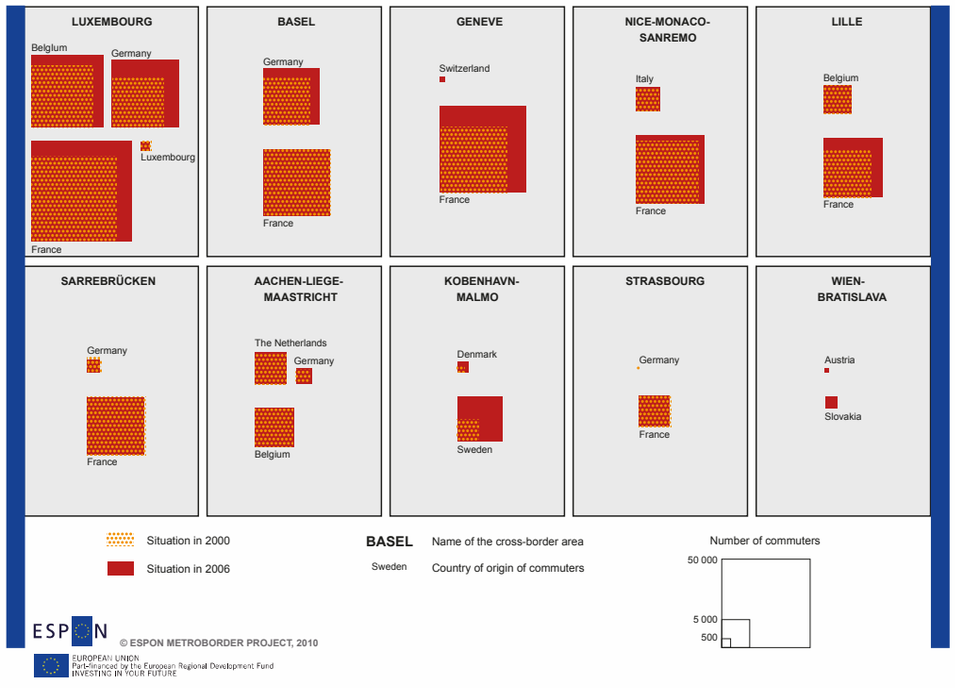
The METROBORDER project assessed functional integration in cross-border areas through analysis of interaction and convergence indicators. As illustrated in Table 1, each indicator is scaled with values between 1 (low intensity of a phenomenon) and 5 (high intensity of a phenomenon). For instance, a level of 5 is given for cross-border commuters when the number of cross-border commuters exceeds 20% of the population of the metropolitan core.

The findings show very interesting patterns of integration. For instance, it appears that regions with the greatest similarity of GDP (4 or 5) to have relatively low interactions (Strasbourg, Lille). Conversely, differences in GDP are found in cases where cross-border commuting is high (Luxembourg, Basel, Geneva, see Figure 1). This provides evidence that the economic differences themselves are a driving force of the interactions, with economically attractive places being a driving force of cross-border interactions. However, the question of who is benefitting from these interactions is a sensitive issue.

Additionally, cases where the cross-border public transport score is higher than the commuting score (Copenhagen-Malmö) would indicate a situation where the supply of public transport infrastructure is not being met with expected or planned demand. This indicates further potential for functional integration in these cross-border areas.

FIGURE 1 CROSS-BORDER COMMUTES IN METROPOLITAN AREAS

Cross-border commuters in metropolitan areas, 2000 and 2006



(Source: ESPON METROBORDER)

ASSESSING POLYCENTRICITY

Useful when considering

1. *Functional areas and internal coherence*
   - *What are the functional areas of the region?*
   - *Current and potential external linkages of a region*
   - *How is the region positioned within the wider European spatial and socio-economic system?*

Developed within ESPON project: *POLYCE*

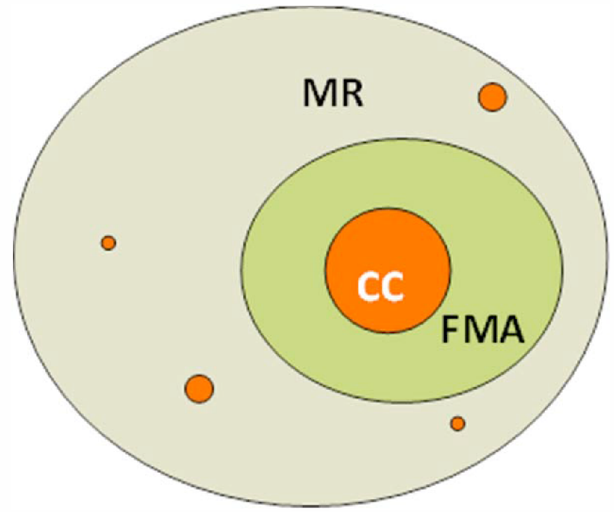
Explored within regional laboratory: *Skåne* I *Danube-Kris-Mures-Tisa*

Assessing Polycentricity is a method based on the concept of *polycentricity*, which describes how development can be spread between urban cores and secondary urban nodes in the hinterland. These nodes are connected through different types of links that reduce functional distances. These include physical links such as transport connections and public service infrastructure, but also governance and firm networks as well.

Polycentric development can occur at a number of scales. It can reflect the urban core and neighborhood nodes within a wider urban area or the connections between urban regions within wider interregional, national and even international contexts.

Polycentrism as a policy strategy allows for regions to expand the functional area to benefit from agglomeration advantages while reducing or avoiding their negative aspects (i.e. congestion). New linkages improve accessibility and create new network connections, thus spreading development between national and regional urban cores and their secondary urban centers.

FIGURE 2. DELIMITATION OF URBAN AREAS

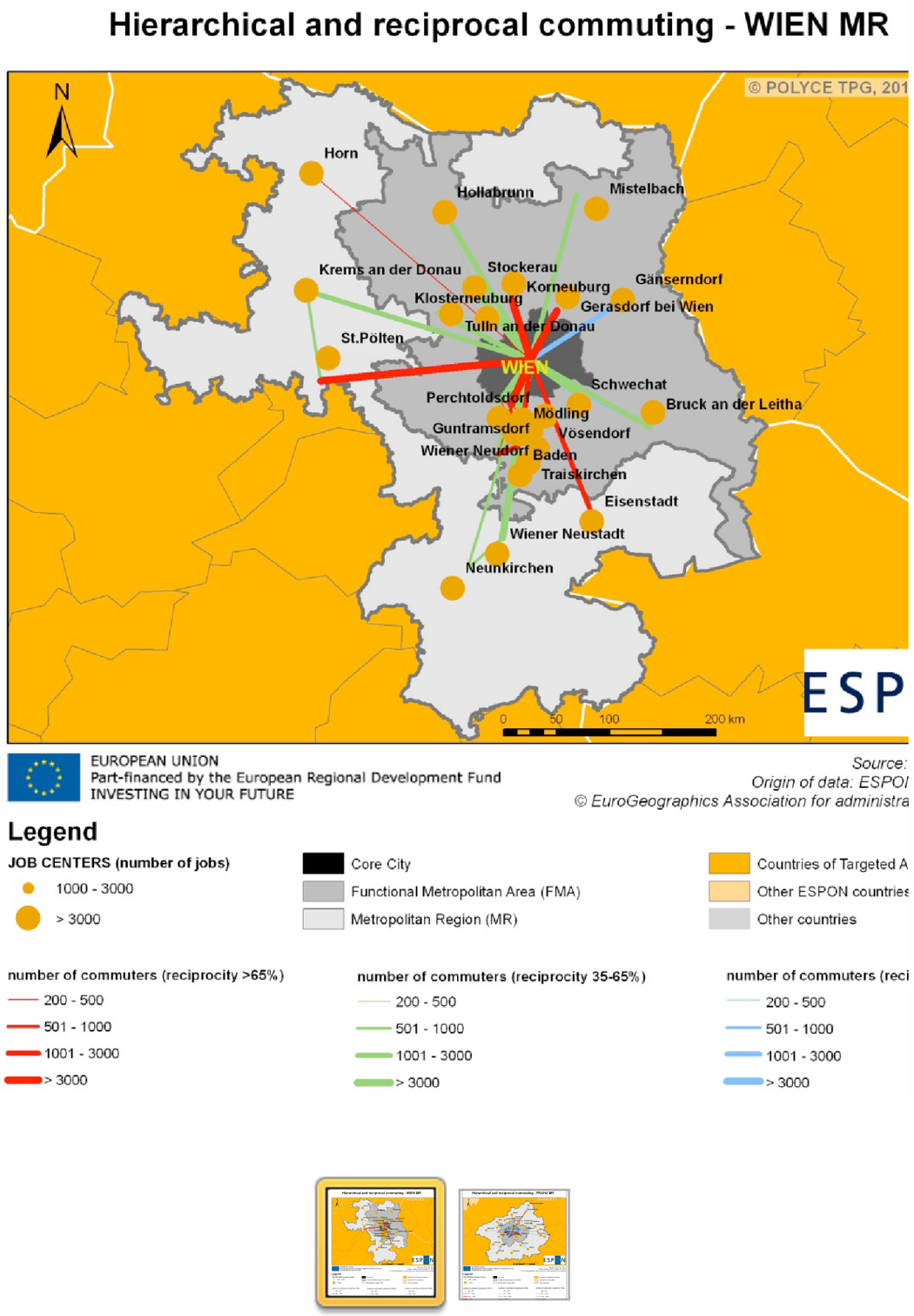


Core City (CC), Functional Metropolitan Area (FMA) and Metropolitan Region (MR). (Source: ESPON POLYCE)

Apart from general agglomeration advantages, the benefits of polycentricity are diverse. They include a better use of place-based assets and widening product, service and labour markets. Also, accessibility is often a key driver of attractiveness, which is now particularly important for peripheral areas seeking to retain their human capital.

To apply this method is first important to consider three delimitations of a city-region shown in Figure 2. The core city (CC) is the main city, often a regional or national centre, according to its administrative border. The functional metropolitan area (FMA), includes the core city, and is the daily commuter catchment of the city-region. The metropolitan region (MR) is the wider region including the peripheral nodes that can be a part of the city-region's economy

Map gallery 1 polycentricity in vienna and Praha



Assessing polycentricity in Vienna and Prague

Assessing Polycentricity was developed within the POLYCE project and tested in six case regions, including Vienna and Prague. Two main aspects of polycentricity are assessed by the method:

- Morphological polycentricity measures urban nodes according to their size and significance in metropolitan area (MR). The basic data requirements are population size and number of jobs within urban nodes of the functional metropolitan area (FMA) and metropolitan area (MR). This provides initial insight on the urban structure and ordering of urban nodes within a metropolitan area.

- Relational polycentricity takes the insight of morphological polycentricity and measures the functional linkages and relations between urban nodes in a metropolitan area (MR). The basic data requirements are two-way commuter flows between each job centre within urban nodes of the functional metropolitan area (FMA) and metropolitan area (MR). As shown in Map Gallery 1 the two-way flows are used to determine how large and how balanced the flows are between urban nodes.

For instance, Map Gallery 1 shows that Vienna has high level of relational polycentricity, the flows between the city core and the urban nodes are quite balanced (green and red indicating reciprocity of 35-55% and >65% respectively). Therefore, the urban nodes are well connected and promote commuting in both directions. This is in contrast to Prague, where the domination of blue lines represent commuter flows leading to the city core. This relational polycentricity is deemed to be lower.

CROSS-BORDER INSTITUTIONAL MAPPING

Useful when considering:

1. *Current and potential external linkages*
   - *What is the potential for spatial integration and cross-border development?*
2. *Opportunities for territorial governance*
   - *How are governance practices spatially coordinated and integrated?*
   - *What is the potential for collaborations and institutional capacities?*

Developed within ESPON project: *METROBORDER*

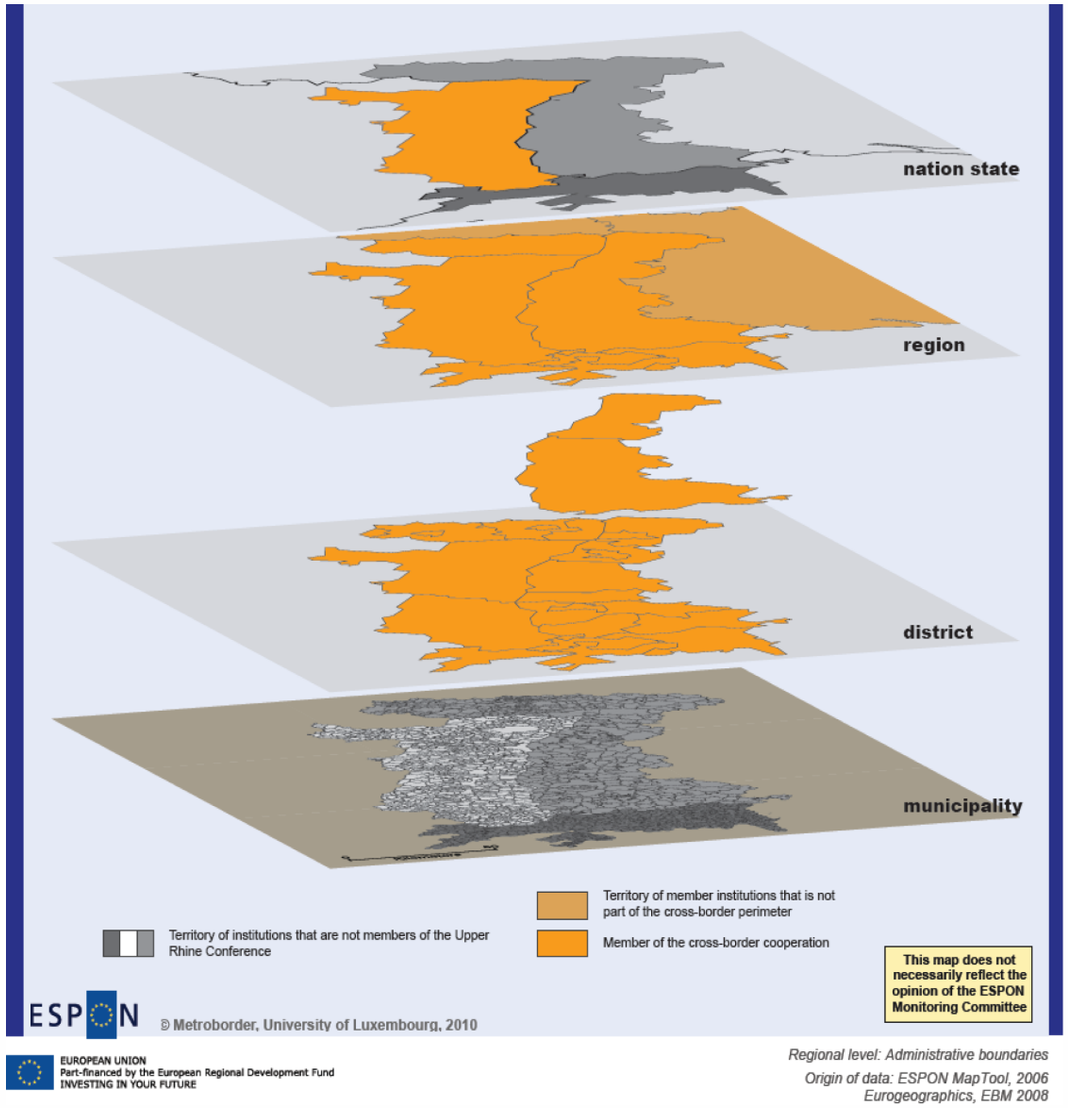
Explored within regional laboratory: *Danube-Kris-Mures-Tisa* | *Podlasie*

Territorial governance is a complex process, especially in cross-border regions where very different institutional structures and practices exists. At the same time, fostering cooperation between and among public and private institutions as well as civil society is a crucial aspect of *spatial integration* within cross-border regions.

Cross-border Institutional Mapping is a useful method for analysing these processes and discovering new opportunities for collaboration. The method combines visualisation techniques (see Map 1) and categorisation of complex, multilevel political matters. It focuses on the territorial scope, mandate and organisation of the cooperation through a four-step process:

Step 1: Mapping the geographical scope of local, regional, national and supranational authorities and other relevant governance institutions that are involved in cross-border cooperation.

MAP 1. EXAMPLE OF MULTILEVEL MAPPING UPPER RHINE

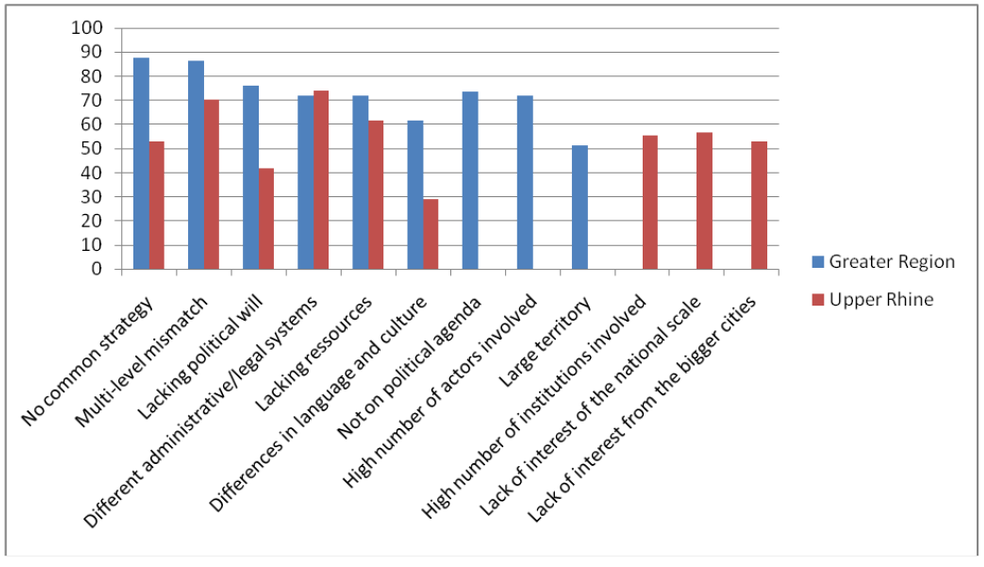


Multilevel mapping provides a general view of administrative structure of a territory. A 3D 'pooled' map shows the geographical scope of the governing authorities present in the region. (Source ESPON METROBORDER)

Step 2: Mapping all relevant domestic actors regardless of their involvement in the cross-border cooperation (i.e. cross-border policy development, action arenas, political projects, etc). This gives a picture of the actors that are in place and could be developed into cross-border alliances in the future.

Step 3: Political topography mapping is the most ambitious, time-consuming step. It provides a contextual analysis of actual governance mechanisms taking place and their territorial implications. This includes the evaluation of power relations among key actors and hidden territorial agendas, etc. It requires regionally specific information collected through policy documents and interviews with the regional stakeholders identified in step 2.

TABLE 2. IMPORTANT BARRIERS TO CROSS-BORDER COOPERATION



During the first round of the survey the most important barriers of cross-border cooperation were identified in both the Upper Rhine (UR) and Greater Region of Luxembourg (GR). It was sent to 156 stakeholders in GR and 81 in UR. (Source: ESPON METROBORDER)

The interviews should focus on:

- who is involved in which processes,
- what are the relations to exterior actors,
- what policy fields are being addressed or should be addressed through cooperation,
- and what are the main barriers to cooperation and how have they been overcome.

Step 4: This two-step forecasting exercise includes the identification of challenges, potential and policy priorities, which in turn provides strategic policy options that can harness the potential of being a cross-border metropolitan region. The first round opens up the challenges, potential and policy priorities and the second round elaborates and filters the results into policy priorities.

CROSS-BORDER ANALYSIS UPPER-RHINE AND GREATER REGION

Cross-Border Institutional Mapping was developed in the METROBORDER project, which applied it in the Upper Rhine region (including Strasbourg and Basel) and the Greater Region of Luxembourg, both of which are among the most important cross-border commuting regions in Europe.

Table 2 shows the results of part of the first round of the survey in both regions. While ‘multilevel mismatch’, ‘different administrative/legal systems’ and ‘lacking resources’ are identified as common barriers, the results show wide differences between a number of other factors, and even the presence of six completely unique barriers to one region or the other. This signifies the importance of place-based factors shaping cross-border cooperation opportunities, and therefore the need for this type of regionalized analysis.

MULTILEVEL GOVERNANCE ANALYSIS

Useful for when considering:

1. *Opportunities for territorial governance*
   - *What are the institutional arrangements and practices of the region?*
   - *How are governance practices spatially coordinated and integrated?*

Developed within ESPON project: *CAEE*

Explored within regional laboratory: *Edinburgh and South East Scotland* / *Danube-Kris-Mures-Tisa*

Effective multilevel *territorial governance* arrangements within a region depends on at least two prerequisites: 1) good municipal cooperation paired with 2) municipal autonomy to act upon agreed city-regional activities. Also, institutionalised regional governance can assume a leadership in policy development and ensure that higher governance levels recognise the economic importance of regions.

The method of Multilevel Governance Analysis is helpful for discovering and identifying the roles and relations between municipal, regional and national institutions, and the policies that influence growth and development within a region. This is done through workshops and interviews with key stakeholders. The CAEE project has established three prerequisites (with a number of key factors as shown in Table 4) that should be met for regions to fully exploit their capacity to influence economic growth:

Municipal level: municipalities are able to effectively coordinate regional initiatives if there are low levels of institutional fragmentation (which reduces coordination costs) and when they have autonomy to act upon agreed metropolitan activities.

Metropolitan/city-regional level: metropolitan governance becomes institutionalised at this scale and has 'change capacity' in policy spheres that influence economic development.

Regional-national level: the economic importance of metropolitan areas and city-regions are formally recognized at the regional and national levels.

MULTILEVEL GOVERNANCE OF FOUR DIFFERENT REGIONS

The CAEE project carried out a Multilevel Governance Analysis for the metropolitan regions of Barcelona, Dublin, Lyon and Manchester. The key factors above were assessed through interviews with key stakeholders to create qualitative narratives of how the regions are meeting the three prerequisites of good multilevel governance for influencing growth. For instance, Table 3 shows the high number of local administrative units in Barcelona, which directly translates into the high administrative fragmentation noted in Table 4.

TABLE 3 NUMBER OF LOCAL GOVERNMENT UNITS IN THE PROVINCE OF BARCELONA

Local administration units	
Municipalities	947
Provinces	4
Supralocal entities	409
Mancomunitats	75
Consortiums	291
Counties	41
Metropolitan authorities	2
Infralocal entities	59
Total	**1,419**

The table shows the institutional fragmentation at the city-region scale, including municipalities, provinces, supralocal entities and infralocal entities. (Source: ESPON CAEE)

TABLE 4 MULTILEVEL CONTEXTS OF METROPOLITAN AREAS/CITY-REGIONS

Case study	Barcelona	Dublin	Lyon	Manchester
Characteristics				
1. Municipal level				
Degree of local administrative fragmentation	High	Low	High	Low
Municipal autonomy	Medium	Low	Medium	Medium-Low
2. Metropolitan/city-regional level				
Relevant institutions	Province of Barcelona (city-region) + various metropolitan institutions & networks (variable geographies)	Dublin Regional Authority	Grand Lyon (metro) Région Urbaine de Lyon (city-region)	Greater Manchester 'family' of metropolitan institutions
Autonomy	Low	Low	Medium	Medium-Low
Capacity	Low	Low	High	Medium
Clarity/strength of leadership	Low	Low	High	Low in principal, high in practice
Economic development focus?	Variable	Yes	Yes (latterly)	Yes
3. Regional & national levels				
Recognition of city within formal spatial development plans/policies	Low	High (due to capital city status)	Medium	Low
Informal influence on regional & national policy & investments	Low, overall, but variable	Low	Medium	Medium

The table shows assesses each of the case study areas against these three broad criteria. There to be significant variation between the case study areas. (Source: ESPON CAEE)

MULTITHEMATIC TERRITORIAL ANALYSIS

Useful when considering:

1. *Comparing territorial performance*
   - *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?*
2. *Functional areas and internal coherence*
   - *What are the functional areas of the region?*
   - *How is the region structured in terms polycentric development?*

Developed within ESPON project: *ULYSSES*

Explored within regional laboratory: *Skåne* / *Styria* / *Malta*

Multithematic Territorial Analysis investigates how a region is performing compared to other regions or to general European policy goals, such as the *Lisbon Treaty* and *Europe 2020 Strategy*. The method contributes to detecting the characteristics and comparative advantage of a region and identification of important policy areas The comprehensive analysis consists of two steps:

1. territorial profiling
2. and territorial performance.

The relationships between the results of the territorial profiling and the territorial performance analysis are determined by an in-depth statistical analysis using catching-up analysis, principle component analysis and a multiple regression analysis. This produces indications on the capacity of (cross-border) regions to achieve their strategic policy goals expressed as policy targets.

The first step is **territorial profiling** through four themes of indicators:

1. Profiling the demographic change of the region by analysing settlement and migration patterns, and measuring population growth and population structure.

2. Profiling the *polycentricity* of the region by identifying morphological and functional urban areas, and by measuring rank-size distribution.

3. Profiling the urban-rural relationships of the region by measuring how different population patterns and densities relate to land use.

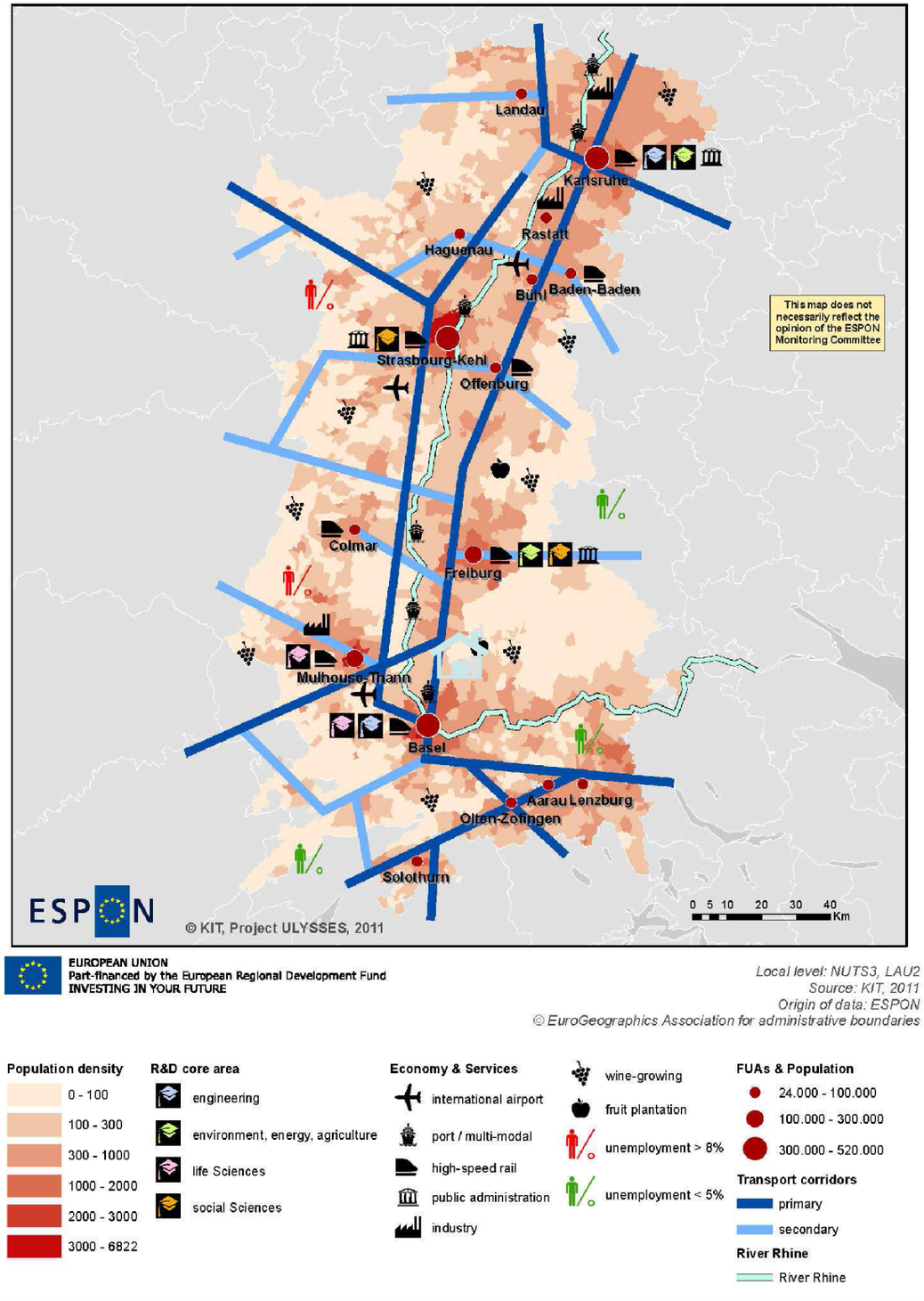
4. Profiling the accessibility and connectivity by measuring multimodal accessibility, i.e. the combined effects road, rail and air on travel time.

TABLE 5 TERRITORIAL PERFORMANCE INDICATORS

Variable name	Geographical scale	Source	Time frame
Economy and employment			
GDP per capita			
Catching up analysis	NUTS 3	EUROSTAT, Russian Statistical Institute	1997-2009
Indexed to leader			
Coefficient of deviation			
Gross value added by NACE	NUTS 3	Eurostat	1997-2008
Employment by NACE	NUTS 3	Eurostat	2000-2008
Innovation and research			
GERD, HERD, BERD	NUTS 2	Eurostat	2007
Employment in medium and hich tech manufacturing	NUTS 2	ESPON DB (Regional Innovation Scoreboard)	2004
EPO Patents by per million of inhabitants	NUTS 2	Eurostat	2007
Social cohesion			
Long term unemployment	NUTS 2	Eurostat	2009
Unemployment rate	NUTS 3	Eurostat	2010
Youth unemployment rate	NUTS 3	Eurostat	2010
Population at risk of poverty after social transfer	NUTS 3	Eurostat	2008
Environment			
Share of Natura 2000 areas	NUTS 3	European Commission's 5th Cohesion Report	2009
Solar energy resources	NUTS 3	EC 5th Cohesion Report	1981-1990
Wind energy potential	NUTS 3	EC 5th Cohesion Report	2000-2005
Ozone concentration exceedances	NUTS 3	EC 5th Cohesion Report	2008
Urban waste water treatment	NUTS 2	EC 5th Cohesion Report	2007
Soil sealed area	NUTS 3	EC 5th Cohesion Report	2006
Regional sensitivity to climate change (cultural, economic, environmental, cultural)	NUTS 3	ESPON DB	1961-1990; 2071-2100

Main indicators for conducting territorial performance analysis (Source: ESPON ULYSSES)

Map 2 Multithematic territorial analysis in upper rhine



The map illustrates main findings from a case-study conducted in Upper Rhine valley developed within ULYSSES project. (Source ESPON ULYSSES)

The second step is detecting the **territorial performance** of the region. This refers to the capacity of the region in achieving a set of predefined, indicator-based policy targets, such as the *Lisbon Treaty* and *Europe 2020 Strategy* goals. In keeping with EU policy reporting, the indicators are divided into four different categories: economy and employment, innovation and research, social cohesion and environment.

Multithematic Territorial Analysis in upper rhine

A Multithematic Territorial Analysis was carried out for the Upper Rhine cross-border region in the ULYSSES project. The analysis showed that the region performs well with respect to the *Lisbon Treaty* and *Europe 2020 Strategy*. Most of the *NUTS* 3 units of the region are above the national and EU averages in most indicators, including GDP per capita.

The Multithematic Territorial Analysis showed that the region has high attractiveness by steadily growing immigration and a high share of in-commuters. The analysis also indicated a polycentric urban structure and that there is dense network of larger and medium sized cities. Even if the cross-border area performed well the analysis also identified some important challenges for the region. The current transport network is highly focused on national demand and further development across the border is necessary for exploiting full capacity of the cross-border cooperation area. Managing various types of land-use conflicts (environment, settlements, economy and transport) was also identified as a key challenge.

The analysis provided analytical support for updating a number of development strategies for the region and for initiating new and strengthened cooperation opportunities between the stakeholders in the cross-border regions.

SPATIAL SCENARIOS

Useful when considering:

1. *Global and future challenges and potential*
   - *What are the main external macro-challenges for the region?*
   - *What are potential trends and scenarios for the development of the region?*

Developed within ESPON project: *SS-LR*
Explored within regional laboratory: *Malta*

Forecasting exercises can be beneficial for regional development and spatial planning efforts, particularly as decision-support tools that present information to a diverse audience. Spatial Scenarios is a method that can be applied at both local and regional level. The scenarios investigate how global trends will impact regional development, i.e. it transfers general European scenarios to the local and regional scales.

The scenario-building methodology is based on identifying institutional, socio-demographic and economic driving forces of change, and their possible alternative trajectories. The SS-LR project has developed three spatial scenarios (see Box 1). The scenarios are not classical trend scenarios, since they take shifting driving forces, such as globalisation, the new energy paradigm, climate change, social development and the recent economic crisis into account. These descriptive scenarios can be translated into a quantitative foresight for *NUTS* 2 regions (through the MASST economic model) and for NUTS 3 regions (through the MASST sub-model: MAN-3).

BOX 1. THREE QUALITATIVE SCENARIOS OF ESPON SS-LR

The **Reference Scenario** is not a trend scenario in the conventional sense, because the simple extrapolation of past trends does not seem meaningful in a context where numerous underlying factors are continuously evolving. Nevertheless, it foresees that previous economic failures linked to debt-driven demand in advanced countries, as well as the general 'financialization' of western economies will call for drastic changes. The pattern of China and BRICs countries supporting western consumption with low-price goods will also change.

The **Pro-active scenario** assumes that proactive international climate change agreements are generating significant economic growth in Europe. The realization of the scenario requires the active involvement of economic actors and of the civil society. A wide spectrum of sectors – manufacturing, energy, construction, agriculture, transport, R&D and advanced services – will benefit from the spread of the new "green economy paradigm"; and aggregate demand will benefit from new investment opportunities.

The **Defensive scenario** assumes a slow recovery from the crisis in the western economies and in Japan. While global demand remains modest, BRICs maintain their comparative advantages in low-cost production and are also progressing in technology-intensive sectors, thus competing more intensely with Europe. Few foreign investments are made in the less developed countries of the world, so that new external markets hardly emerge. Inflation is lower than in the Reference scenario. Low interest rates could feed new speculative bubbles, threatening the stability of the global economy.

MASST is an economic model that combines two interactive parts: a pure macroeconomic regional growth model based on past-growth, and a simulation algorithm for estimating future growth. At the *NUTS* 3 level, the model can explain differential growth rates of provinces with respect to their territorial specificities (i.e. *territorial capital*).

The MASST model requires the following macroeconomic data:

- GDP
- interest rates
- productivity
- FDI stock
- exchange rates
- employment growth by sector
- regional structure
- population growth
- unemployment rate
- settlement structure

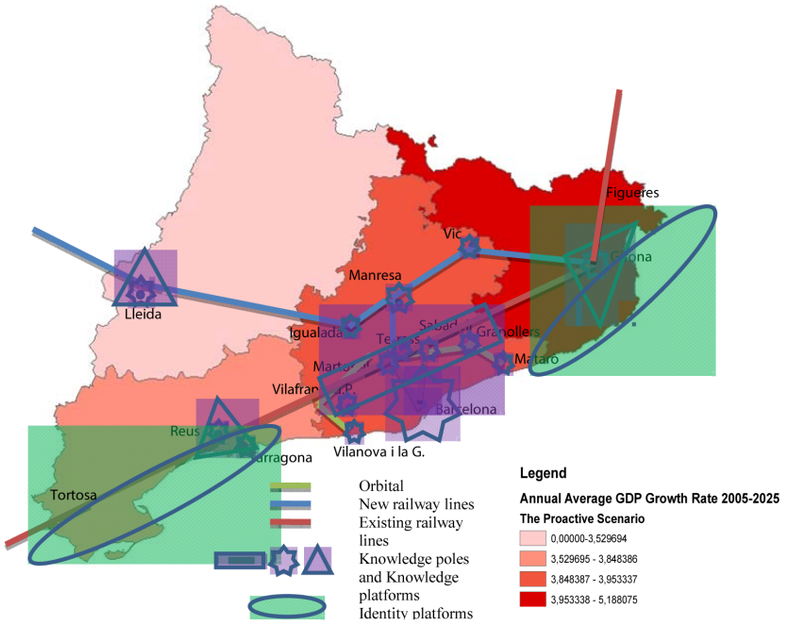
The MAN-3 sub-model then looks at NUTS 3 level specificities according to differentials with the same indicator at the NUTS 2 level. The MAN-3 indicators are:

- GDP growth
- share of service employment
- share of craft and related trades workers
- share of touristic structures
- share of urban fabric
- share of people under 20 years of age
- share of migratory balance
- growth of the electoral turnout growth rates in the European elections

Spatial Scenarios in province of Barcelona

In SS-LR, the scenario building presented above was used to analyse future challenges and development trajectories in the province of Barcelona. The case study was based on qualitative and quantitative scenarios as well as contributions made at workshops and conferences. The three scenarios were further developed in line with Barcelona's strategic economic context and territorial factors, as well as the current policy challenges and potential.

Map 3 Spatial scenarios in the province of Barcelona



The Spatial Scenarios method has been used to analyse future challenges and development trajectories in the Province of Barcelona. It summarizes the economic and territorial development strategy introduced in the Pro-active scenario. (Source ESPON SS-LR)

This work generated a set of policy options and strategies for the Province of Barcelona, including an economic and territorial development strategy based on the pro-active scenario. The results of this process are summarised in Map 3.

TERRITORIAL IMPACT ASSESSMENT

Useful when considering:

1. *Global and future challenges and potential*
   - *How will national and international directives and policies influence the region?*

Developed within ESPON project: *EATIA*
Explored within regional laboratory: *Styria*

Territorial Impact Assessment (TIA) is a method that provides the EU, its Member States and their regions with an understanding of the regional and local consequences of European directives and other policy proposals. It is also used to detect opportunities for enhancing *territorial governance*. TIA process developed within the EATIA project is based on four steps: screening, scoping, assessment and evaluation.

In the **first** step, national authorities use a checklist representing objectives of European *territorial cohesion* and other national sustainability objectives to conduct a screening to determine if a TIA is necessary based on the potential impacts of a policy proposal.

If a decision is made to go ahead with a TIA, the **second** step is for national authorities to define its scope. Using a checklist such as the one presented in Table 6, they will steer the TIA by determining the nature of major territorial impacts that are likely to result from the proposed policy.

In the **third** step, the TIA is carried out by regional and/or local authorities. It considers the impact of a policy proposal at the regional/local scales depending on place-based characteristics.

ESPON VIDEO 1 TERRITORIAL IMPACT ASSESSMENT VIDEO

A European level TIA 'Quick check' tool aimed at European-level policymakers and practitioners which ex-ante analyses the impact of EU policies and directives.

Based on the information from the TIA, national governments conduct an evaluation in the **fourth** step. This determines whether the potential impacts identified are significant and how undesirable impacts could be circumvented or mitigated. Impact matrices, evaluation maps and radar charts may be prepared for effectively communicating the results.

An insightful TIA requires active involvement of national, regional and local authorities (governments) as well as thematic experts and other relevant stakeholders. It can enhance territorial governance in two directions:

- by making local and regional stakeholders more aware of new opportunities for development arising from better understandings of EU initiatives
- and by directly including local and regional insight within national and EU policy proposals.

TIA OF THE EU HABITATS DIRECTIVE IN NORTH PORTUGAL

Following the screening and scoping phases (see Table 6) a territorial impact assessment of the EU habitats Directive in the Northern region of Portugal was undertaken. The result of the assessment shows the

TABLE 6 TIA SCOPING CHECKLIST

Policy, policy elements or policy options	Subfield	Significant impact? Yes (☒) No (X) Uncertain (?) Not applicable (N/A)?	Nature of impact (e.g. positive, negative, direct, indirect, etc.) and justification.	Location (e.g. widespread, restricted, coastal zone, mountain area, estuarine zone, etc.)	Comments
A Create conservation measures of habitats and species	Land resources	?	Positive, direct	Restricted, mountain areas	
	Biodiversity	☒	Positive, direct	Restricted, mountain areas	
	Built environment	?	Positive, direct	Urban areas	Uncertain impact magnitude
	Economic development	?	Negative/positive	widespread	Uncertain impact magnitude; depends on the balance between the impacts on different economic activities
	Industry	?	Negative		
	Civic and public construction	?	Negative		Uncertain impact magnitude
	Tourism	☒	Positive, indirect	Mountain area	
	Demography	X			
	Social inequalities and protection	X			
	Coherence	X			
	Subsidiary	X			
.....					

This checklist is completed by national authorities to determine the nature of potential impacts and their location. (Source: ESPON EATIA)

TABLE 7 ASSESSMENT TABLE - IMPACT SIGNIFICANCE

POLICY ELEMENT Assessment criteria	A	B	C
Land resources	+1	+1	0
Biodiversity	+2	+2	0
Built environment	+1	+2	0
Agriculture	0	0	0
Industry	-2	-2	0
Civic and public building	-1	-1	0
Tourism	+1	+1	0
Demography	-1	-1	0
Social inequalities and protect.	-1	-1	0
Coherence	0	0	+2
Subsidiary	0	0	+2

Table shows the crossing of policy elements with each assessment criteria, and gives it a degree of significance that can vary on a numeric scale. (Source: ESPON EATIA)

scoring results for the important territorial impacts of the directive (see Table 7). This exercise allowed the crossing of policy element (A, B and C in Table 7) with each assessment criteria to generate a degree of impact on a graded scale. Consequently, it identified which policy elements had the most significant impacts and which assessment criteria would be most susceptible to suffer significant impacts as a result of implementation.

The final stage of the assessment process included an evaluation of the overall impact of the EU Habitats Directive on key policy objectives in the region. In this case the four main goals of the region's Spatial Development Plan (Prot-Norte) were used to ensure the greatest policy coherence:

1. consolidation of the urban system
2. definition and implementation of key networks and connectivity systems
3. preservation and enhancement of territorial support
4. sustainable management of productive resources of territorial dependence

As shown in Table 8, an evaluation matrix was used to profile the evaluation results. The relationships between the three main actions of the EU Habitats Directive and the policy goals of Prot-Norte were evaluated in terms of convergence (☒), divergence (X), neutrality (-) or uncertainty (?).

TABLE 8 EVALUATION MATRIX: REGIONAL LEVEL

Action of directives	1	2	3	4
Create conservation measures of habitats and species	X	X	X	☒
Create Natura 2000 network of protected sites	X	X	X	☒
Promote ecological coherence with landuse planning and development policies	☒	☒	?	?

PROT-NORTE (Regional Spatial Development Plan – North) (Source ESPON EATIA)

TERRITORIAL PERFORMANCE MONITORING

Useful when considering:

1. *Global and future challenges and potential*
   - *What are the main external macro-challenges for the region?*

Developed within ESPON project: *TPM*

Explored within regional laboratory: *Edinburgh and South East Scotland*

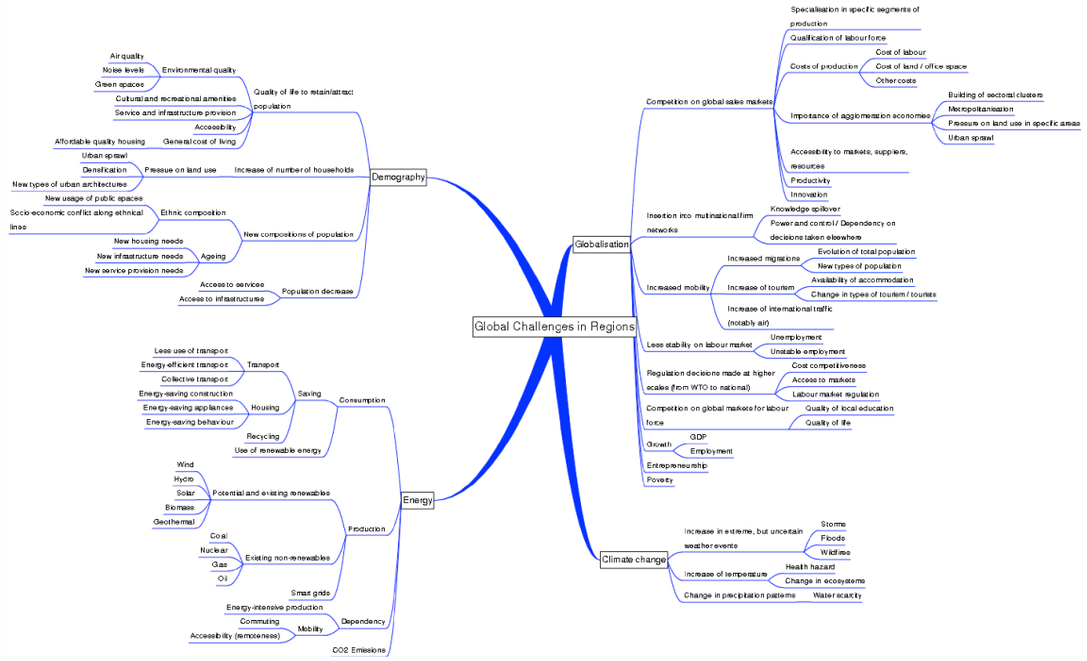
Translating macro-challenges into sub-national perspectives is increasingly important both for producing effective regional policies and for addressing challenges at the European level. Yet place-based knowledge on some of the key macro-regional challenges (climate change, energy supply, demographic development and globalisation) is often limited and appropriate regional planning tools are rare.

Through Territorial Performance Monitoring a region can learn more about how macro-challenges are translated to the regional level and how to deal with associated challenges effectively.

The method starts with a mind-mapping exercise where global macro-challenges such as globalisation and demographic change, climate change and energy supply, are translated into regional issues (see Figure 3). Next, the regional issues must be translated into measurable indicators in order to allow a permanent monitoring process (e.g. benchmarking against Europe). These indicators can be both quantitative or qualitative.

The qualitative aspect includes a description of how a region perceives its regional competences and possible responses to the macro-challenges.

FIGURE 3 MIND-MAP FOR TRANSLATING CHALLENGES INTO REGIONAL ISSUES



Step 1 - The global macro-challenges are translated into regional issues through a mind-map. The mind-map should be seen as the beginning of creating a set of indicators, not the result, of a reflection process. (Source ESPON TPM)

Four key aspects should be addressed:

1. awareness of macro-challenges
2. resilience of the planning system
3. effectiveness of strategies and policies
4. threats/opportunities of macro-challenges

These four key aspects are addressed through questionnaires to regional stakeholders. For instance, Table 9 illustrates how a questionnaire might address key aspect number 2: *resilience of the planning system*. A feedback process on the first outcomes of the questionnaire is then performed to validate the results. This could be accomplished through a focus group, simple feedback from selected stakeholders, ranking techniques, and/or confirmation with the quantitative indicators that are also used.

TABLE 9. RESILIENCE OF THE PLANNING SYSTEM

2. Resilience of the planning system	
Items	Appraisal questions
1. Strategic capacity of the planning system	1. Vision a. Does the planning system make use of visions of regional territory? b. Is it an explicit vision or it is a combination of different contributions, mainly sectorial? c. Is there a predominance of a specific sector / discipline / field or is it comprehensive and inter-sectorial? d. Are the contents of the vision (objectives, spatial concepts and/or policy goals) regularly updated based on changes in the spatial dynamics of the region or new challenges? e. Are the contents of the vision shared (among stakeholders, different bodies of the administration, NGOs citizens)? f. Is there flexibility to update the overall objectives of the region (vision) depending on new challenges or must the objectives be adhered to for the lifetime of the plan? 2. Objectives 1. Is the planning system based on a number of different objectives that feed into the overall vision? If so, what are they? e.g economic development, transport, environment 2. Is the planning system able to formulate direct/indirect lines of intervention in relation with the vision (in particular in the case of a macro-challenge has to be dealt with)? 3. Are measures usually content-wise coherent with the general vision? 4. Is there a time-plan for delivering objectives and can it e reviewed and adjusted if required? 5. Is there any form of prioritization in the time plan and in the organization of the objectives? 6. Have the objectives a budget and a feasible capacity? 7. Are stakeholders involved in the definition and the actuation of the objectives? Which (typologies of)

Step 2 A qualitative description of how the region perceives its regional competences and possible responses to the macro-challenges on regional level. Four parts are important and addressed in questionnaires sent to regional stakeholders (Source: ESPON TPM).

In the quantitative aspect, regional issues identified as relevant in the mind-map are translated into indicators. These indicators can be derived from several sources such as the Europe 2020 Strategy, Eurostat or other ESPON projects. Each region might want to use their own quantitative objectives, for example based on national policies. Table 9 provides an example set of quantitative indicators.

TABLE 10 QUANTIFIED EUROPEAN POLICY OBJECTIVES

Indicator	*Policy reference value*	*Source*
Employment	75% of the 20-64 year olds	EU2020 Strategy
Expenditure in R&D	3% of GDP	EU2020 Strategy
School drop out	below 10%	EU2020 Strategy
Third level education	40% of 30-34 year-olds completing third level education	EU2020 Strategy
Greenhouse gas emissions	8% reduction by 2008-2012 (compared with 1990 levels)	6th Environment Action Program (EAP), 2002
Greenhouse gas emissions	20% reduction	20-20-20 targets in EU2020 Strategy
Renewable energies	20% on renewable energies	20-20-20 targets in EU2020 Strategy
Energy efficiency	20% increase	20-20-20 targets in EU2020 Strategy

Step 3 The elements identified as relevant in the mind-map, have to be translated into measurable quantitative or qualitative indicators in order to allow a permanent monitoring process (Source: ESPON TPM).

UNDERSTANDING DIFFERENTIAL GROWTH

Useful when considering:

1. *Comparing territorial performance*
   - *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?*

Developed within ESPON project: *SURE*

Explored within regional laboratory: *Podlasie*

The reasons why some regions continue to lag behind while others are able to accelerate their economic growth rate is of key importance for the success *territorial cohesion*. A deeper understanding of differential growth factors and finding systematic ways of comparing them therefore can enhance the developing policy to improve regional economic performance. The method of Understanding Differential Growth also provides an awareness raising mechanism on which policy options are available and how they can be implemented.

The SURE project identified 14 key factors that influence economic growth. The key factors can be grouped into three categories: economic drivers with a positive influence on economic growth, economic enablers which effect economic growth negatively, and availability and implementation of EU funds which have positive effects on economic growth (see Tabl 11).

1. Economic drivers refer to key factors that can have a direct and positive influence on economic development. The indicators are:

TABLE 11 FACTORS OF ECONOMIC GROWTH

No.	factors of influence	direction of influence	factor category
1	knowledge and innovation potentials	+	economic drivers
2	accessibility	+	
3	connectivity	+	
4	quality of life	+	
5	economic structure (for example high share of service sector)	+	
6	regional financial means (EU funds)	+	
7	Population structure/growth	+	
8	Company taxation	-	economic enablers
9	Taxation for highly qualified persons	-	
10	Regulation of labour markets	-	
11	Regulation of product markets	-	
12	Efficiency of regional administration	+	EU funds allocation
13	Level of decentralisation (regional autonomy)	+	
14	Political loyalty and stability (e.g. low level of corruption)	+	

Relevant factors of economic growth and their direction of influence (Source: ESPON SURE)

- knowledge and innovation potential (patent applications, shanghai score points, human resources in science & technology, tertiary education workers, R&D Expenditure)
- accessibility (multimodal accessibility, airport connectivity, potential accessibility)
- connectivity (internet users)
- quality of life (adult working age, mortality rate)
- economic structure (labour market participation rates, informal economy, primary sector employment, per capita GDP)
- regional financial means (EU structural funds)

- population structure/growth (total population, population density, population growth)

2. Economic enablers refer to factors that can have an indirect influence on regional economic development. Depending on the regional context, they either stimulate or hinder growth. The indicators are:
   - company taxation
   - taxation for highly qualified persons
   - regulation of labour markets
   - regulation of product markets

3. EU fund allocation refers to the precondition factors for economic drivers and enablers and for the overall economic prosperity of convergence regions. This was a main focus of the SURE project which commented how the efficiency of the regional administration and institutional capacity in allocating funds and managing large sums is actually more important than the amount available. In fact, regions may lag behind even further if policy implementation is not managed properly, regardless of the amount of money that that is available. In other words, planning and effective governance of policy coordination matters most. The indicators are:

- efficiency of regional administration
- level of decentralization (regional autonomy)
- political loyalty and stability (e.g. low level of corruption)

UNDERSTANDING DIFFERENTIAL GROWTH IN PODLASIE

The SURE project developed this method in four EU convergence regions, including Podlasie (Poland). This included a SWOT analysis which showed that Podlasie should concentrate on reinforcing the economic drivers of the region, including accessibility, human capital and quality of life. A SWOT analysis indicated that the region is still characterized by a lack of business investment, over-dependence on agriculture, and an inflated informal economy is strong.

Another key conclusion was that the region should strive for modernising the public sector in order to ensure that applying EU funds to these economic drivers will actually lead to significant improvement in economic growth (see table 12). The SWOT analysis identified a number of key aspects that the regional authority should keep in mind as they develop policy options as well as management and implementation routines.

TABLE 12 SWOT-ANALYSIS CONDUCTED IN PODLASIE

STRENGTHS - Potential for synergies in administration and processes (building infrastructure and digital competence) - Introduction of common standards in e-administration processes (electronic services) - New funding sources	WEAKNESSES - Generalizations and compromises resulting from the participation of Podlasie in the "Eastern Poland Broadband Network" project (providing broadband internet access to mostly remote and rural areas) - Marginal use of public online services by citizens and business
OPPORTUNITIES - Fundamental increase of know-how in digital literacy of civil servants - Improvement of efficiency of communication between the regional and the local level	THREATS - Unsatisfactory involvement of the municipalities and their needs in the programme leading to acceptance problems - Low acceptance of programme / results in municipalities resulting in delays already witnessed

SWOT IN Podlasie (Source: ESPON SURE)

ESPON METHOD 10

URBAN GROWTH MODELLING

Useful when considering:

1. *Comparing territorial performance*
   - *What is the potential for endogenous growth and agglomeration economies?*
2. *Functional areas and internal coherence*
   - *What are the functional areas of the region?*
   - *What is the potential for internal territorial coherence of the region?*

Developed within ESPON project: *POLYCE*
Explored within regional laboratory: *Skåne*

What are the different costs and benefits associated with urban development? This is an especially important questions as cities are increasingly becoming urban agglomerations, functionally integrated metropolitan areas that are part of urban systems crossing administrative borders. Traditional understandings of place-based costs and benefits of urban development thus need to be complemented with non-conventional variables such as functional networks, sprawl, *polycentricity*, *metropolisation* and density.

Urban Growth Modelling is a method that offers an approach to answer these questions through a cost-benefit analysis of city size. The results describe if the development possibilities of city-region (in terms of population) considering how it performs in relation to determining factors of city size equilibrium. In turn, practitioners can discover which variables should be put in focus in order to achieve the greatest benefits of their investment.

While the formula for implementing the model is rather technical, an understanding of the variables it considers offers direct insights on the determinants of optimal city size and the added value of the methods. At a basic level, the model combines both traditional and nonconventional independent variables. The dependent variable of the formula is the size of the city measured through population.

Traditional costs:

- cost of living (i.e. average rent)
- social conflict and malaise (i.e. crimes per inhabitants)

Nonconventional costs:

- urban sprawl (i.e. percentage of the functional urban area that is not developed)

Traditional benefits:

- quality of life and amenities (i.e. tourist inflows)
- urban creativity and diversity (i.e. diversity index)
- agglomeration economies and density (i.e. population density)

Non-conventional benefits:

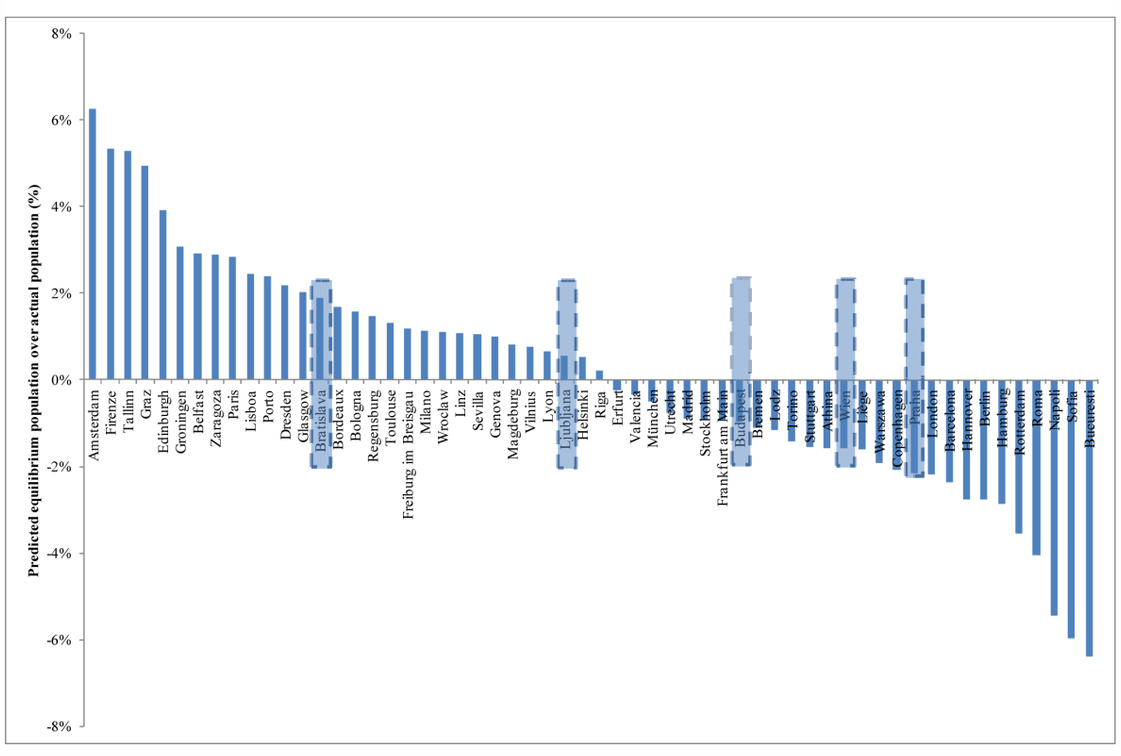
- metropolitanisation and a high level of urban functions (i.e. workforce in advanced producer services);
- relational polycenctricity and city networks (i.e. participation in Framework Programmes)

The analysis of both traditional and non-conventional variables will show practitioners how agglomeration economies and density matters, but also that nonconventional views in terms of networks and functions also matter, and can help cities to achieve a higher size equilibrium. It is also notable that urban size represents a joint source of positive as well as negative externalities for the city.

URBAN GROWTH MODELLING IN 59 CITY-REGIONS

Urban growth modelling has been applied within the POLYCE project to analyse city size equilibriums on 59 city-regions within the EU27. The evidence from project suggests that modern paradigms explain much of current disparities in terms of urban performance (and in particular of city size). While rent still represents the single highest cost associated to urban size, cities now benefit not only from attracting highly educated professionals, and hosting a rich and diversified labor market, but also from urban amenities, which are found to be associated with improved urban performance. The results also show that being connected to a network, i.e., being relationally polycentric, also fosters urban performance.

TABLE 13 CITY SIZE AS PREDICTED BY THE URBAN GROWTH MODEL (ESPON POLYCE)



Urban growth modelling has been applied within the ESPON POLYCE project to analyse city size equilibriums on 59 city-regions within the EU27 (Source: ESPON POLYCE).

CHAPTER 3

REGIONAL LABORATORIES

During fall 2013 local and regional policymakers and practitioners working with long-term strategic development and spatial planning in different regions in Europe participated in six regional laboratories. The laboratories was organized by the ESPON DeTeC project in collaboration with key local and regional stakeholders and consisted of two meetings with the objective to explore the applicability of the ESPON knowledge, the territorial approaches and ESPON methods in different contexts. All the regions have there unique regional specificities, and different potential and challenges, depending on there size, and type, position and location within Europe.

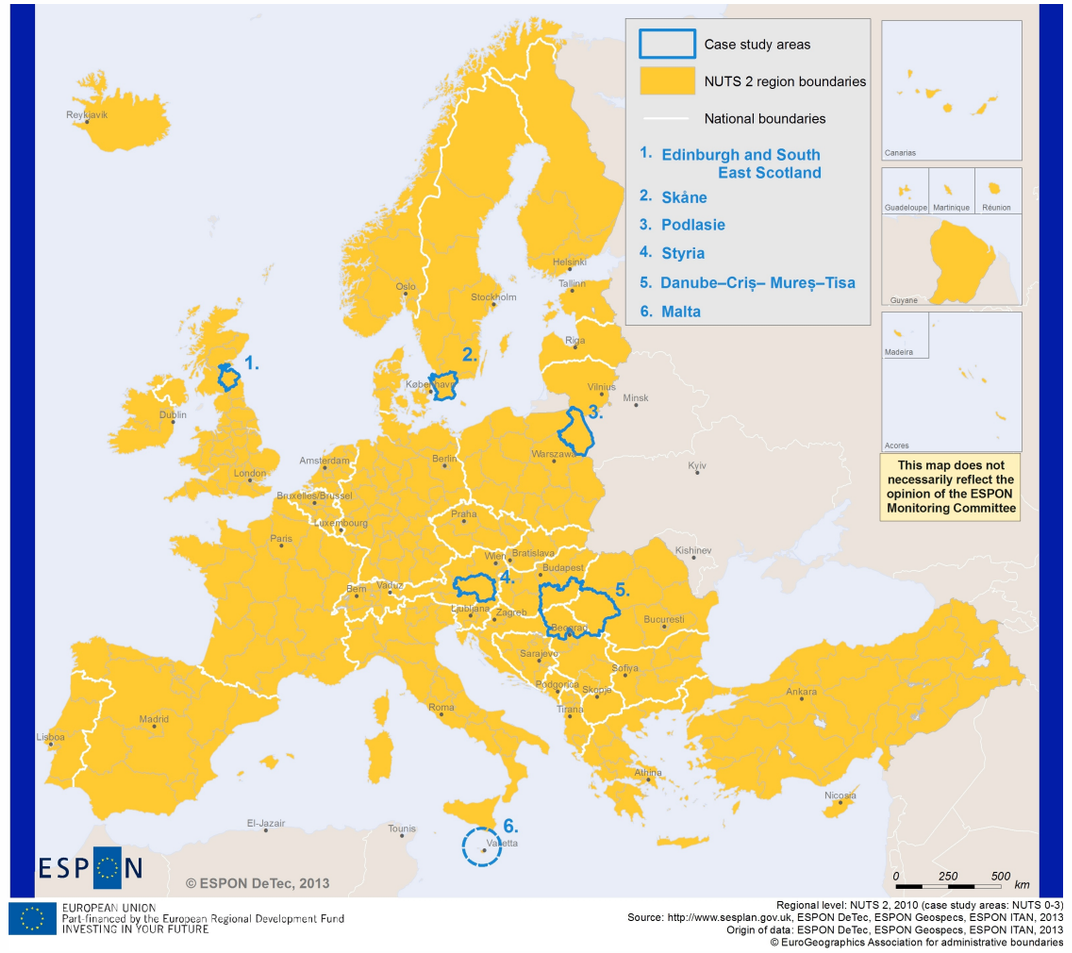
The regional laboratories explored different possibilities to use ESPON knowledge in strategic policy-making and regional development processes:

1. Edinburgh and South East Scotland explored possibilities to use ESPON knowledge for detecting global and future challenges of region and opportunities for *territorial governance*.

2. Skåne explored possibilities to look beyond their regional boundaries and detect the current and potential external linkages of the region.

3. Podlasie explored possibilities to use ESPON knowledge to detect the potential of detecting functional areas and internal coherence, as well as territorial performance and governance patterns in a wider European context.

MAP 1 THE REGIONAL LABORATORIES OF THE DETEC PROJECT



4. The Danube-Kris-Mures-Tisa explored the possibilities to use ESPON knowledge to detect the current and potential external linkages of the region.

5. Styria explored the possibilities to use ESPON knowledge to put the region in wider European perspective by using global challenges and potential as well as territorial performance.

6. Malta explored possibilities to use ESPON knowledge in order to identify global challenges and potential, as well as for understanding their regional performance in a European perspective.

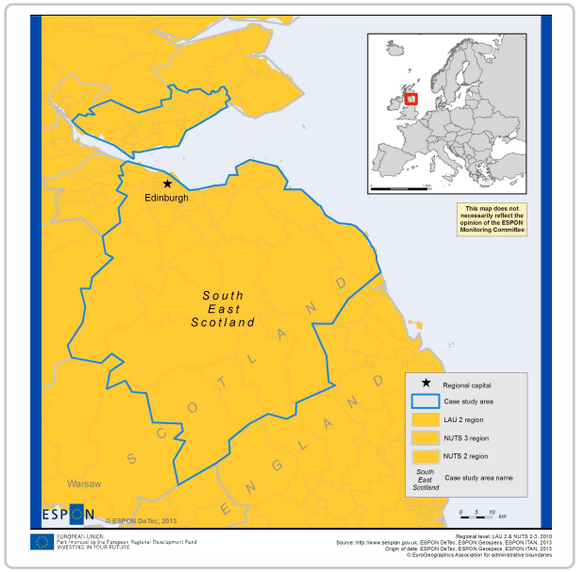
Table 1 Regional laboratories fact-sheets 2010

	STATE	NUTS 3	LAND AREA (KM2)	TOTAL POPULATION	POPULATION DENSITY	GDP PER CAPITA (EURO)	GDP PER CAPITA (PPS)
Edinburgh and South East Scotland	United Kingdom	Clackmannanshire and Fife East Lothian and Midlothian Scottish Borders Edinburgh City Falkirk West Lothian	7 939.3	1 359 198	171.2	28 481	28 196
Skåne	Sweden	Skåne	11 035.4	1 231 062	112.1	32 675	26 468
Podlasie	Poland	Białostocki Łomżyński Suwalski	20 187	1 189 731	58.9	6 751	11 217
Danube-kris-Mures-Tisa*	Hungary Romania, Serbia	Bács-Kiskun Csongrád Arad Caraş-Severin Timiş Vojvodina Vojvodina Serbia	59424,2	4 365 575	73.5	5 483	10 712
Styria	Austria	Graz Liezen Östliche Obersteiermark Oststeiermark West- und Südsteiermark Westliche Obersteiermark	16 252.2	1 208 372	74.4	29 605	26 983
Malta	Malta	Malta Gozo and Comino	316	414 372	1316.4	15 203	21 077

* Data for Vojvodina Vojvodina Serbia (RS12) from 2009 (Serbian NSI) and is based on a transfer key.

EDINBURGH AND SOUTH EAST SCOTLAND

Edinburgh and South East Scotland is a city-region in Scotland with a population of around 1.3 million (2010). 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.



IDENTIFYING GLOBAL CHALLENGES

The territorial development of Edinburgh and South East Scotland is increasingly influenced by external processes and macro-challenges such as climate change, energy supply, demography and globalisation. There is a need to identify, monitor and analyse these challenges and translate them to the city-regional level. ESPON knowledge could help for instance to understand how globalisation and competition relate to strategic development opportunities.

During the regional laboratory the global challenges and future potential was explored and the accompanied key questions were identified as relevant: What are the main current and future macro-challenges (and potential) for the city-region? How is the city-region monitoring and developing its *territorial capital* in a European perspective?

The ESPON method Territorial Performance Monitoring was found relevant for this task. Regional and local practitioners and policymakers were especially interested in the convenient mind-mapping technique that is applied in the method.

UNDERSTANDING GOVERNANCE PATTERNS

Considering that Edinburgh and South East Scotland is a rather new region, and SESplan is a young institution as well, stakeholders also focussed on opportunities for territorial governance. This territorial approach was used as an entry-point for discussing issues such as, government structure, institutional arrangement and institutional capacity as well as finding a common vision for the city-region.

The process towards the next Strategic Development Plan could involve a more structured approach to analyse the governance structures of the city-region. The method of Multilevel Governance Analysis was discussed during the regional laboratory as a tool for addressing the question of how governance practices are coordinated vertically (through governing scales) and horizontally (across sectors). Knowing the governance structures could also contribute to identifying a common vision for the city-region and strengthening the identity of Edinburgh and South East Scotland.

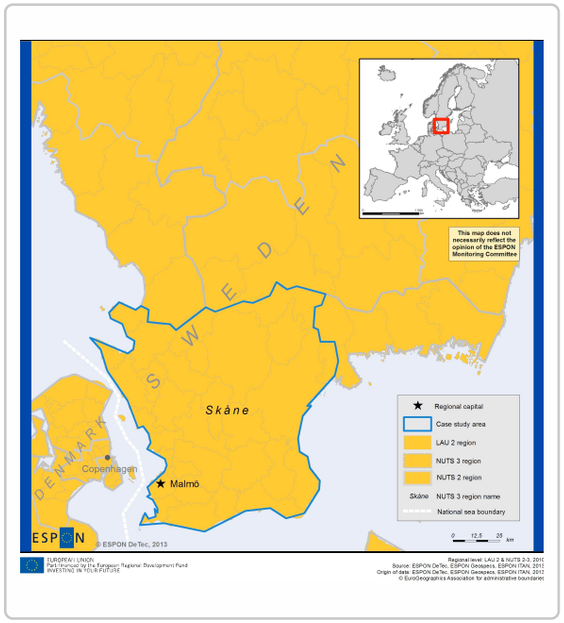
SKÅNE

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. Over 1.2 million people live in Skåne (2010), 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.

LOOKING BEYOND REGIONAL BOUNDARIES

Skåne expressed a particular interest in linkages and collaborations with neighboring regions and possibilities of including the European perspective. They underlined that it could be interesting to expand the territorial perspective beyond the region of Skåne and explore new, larger geographies. To be able to do that the regional laboratory first explored functional areas and internal cohesion of the Skåne region and issues of defining the core cities, functional metropolitan areas and regions, as outlined in the method of Assessing Polycentricty. Also Urban Growth Modelling was discussed in relation to this, with focus on costs and benefits of city size.

Polycentricity has been a key concept in the development of the spatial strategy of Skåne, and the region has applied ESPON knowledge for understanding its level of polycentric development. In this context, identifying current and potential external linkages of a region was stressed as particularly interesting from Skåne's perspective. Three ESPON methods were explored, including Multithematic Territorial Analysis and Assessing Functional Integration.



GOVERNING CROSS-BORDER POLYCENTRICITY

Multithematic Territorial Analysis can help a region to analyse its polycentric development across administrative borders. In the ULYSSES project such analysis showed Skåne's interactions with the northern part of Germany.

Meanwhile, the METROBORDER project assessed the functional integration between Copenhagen and Malmö in the Öresund region. The region showed strong interaction through cross-border collaboration and strong convergence through similarity of GDP per capita; however, the interaction within the Öresund region is relatively weak when it comes to cross-border commuting and convergence through foreign citizenship of residents. Potential for more cooperation throughout the Öresund region and beyond therefore exists, which is why the regional laboratory also explored opportunities for territorial governance.

PODLASIE

Bordering Russia, Lithuania and Belarus, Podlasie is an EU cross-border region and an outermost region in a Polish perspective. As a result, the region is a significant transit region connecting the western and eastern parts of the continent. The region is mainly rural, with a population of about 1.2 million inhabitants (2010). At the trans-regional level there are three main socioeconomic strategies in Poland and Podlasie is included in the Strategy for the Development of Eastern Poland by 2020.

SUPPORT FOR ASSESSING FUNCTIONAL AREAS

One of the main territorial challenges in the Podlasie region has been the establishment of the Bielski functional area, which is anticipated to become a sub-regional growth pole. Also, the region is currently preparing the "The Podlasie Regional Development Strategy 2020" (PRDS2020), which stresses the need for deeper knowledge on the strategic implications of developing the regions' internal territorial coherence. The territorial approach of detecting functional areas and internal coherence was therefore used as a way of exploring options. Within this approach, the ESPON method Assessing Functional Integration was considered for supporting the region in understanding its form as a functional region and potential for developing its internal coherence.

UNDERSTANDING DIFFERENTIAL GROWTH

Another ESPON method explored during the regional laboratory was Understanding Differential Growth, which can help regions to identify and compare factors that are most relevant for improving regional economic performance, i.e. comparing territorial performance of the region. The idea is that once the right factors are identified they can be supported through good regional policy. The analysis performed in SURE project showed that Podlasie should concentrate on reinforcing the existing economic drivers of the region including accessibility, human capital and quality of life. The results also promoted investment in modernising the public sector and the need to seek effective alternatives to an over-dependence on agriculture.

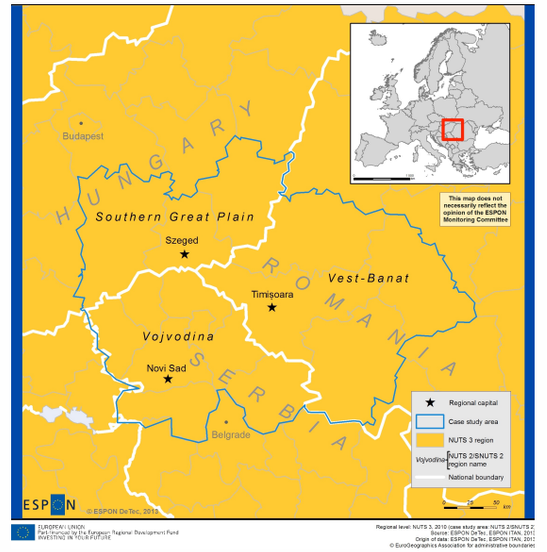
FINDING OPPORTUNITIES FOR COOPERATION

Another key issue for Podlasie is exploring the potential of developing networks of cooperation, i.e. detecting current and potential external linkages. The region is challenged by its role as a border region with non-EU member states, which makes promoting cooperation through traditional EU policy lines, including ESPON, more challenging. At the same time, cooperation with other parts of Poland is equally significant, especially concerning neighboring areas. The stakeholders participating in the regional laboratory therefore showed an interest in undertaking a Cross-border Institutional Mapping, which provides a possibility to visualize and categorize cooperation opportunities.

DANUBE-KRIS-MURES-TISA

The Danube–Kris–Mures–Tisa Regional Cooperation 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).

DKMT has a unique geopolitical position in a transnational setting, constituting two EU members and a non-EU state. The General Assembly of DKMT Euroregion comprises leaders of the regional public administration institutions in each country, which are responsible for preparatory, co-ordinating and strategic decision-making of the regional cooperation.



SUPPORT FOR CROSS-BORDER GOVERNANCE

The DKMT Euroregion is a cross-border region and a transnational region with parts of its territory located outside the European Union. The functioning of such a transnational cooperation is a complex and sophisticated process, which implies the necessity for effective *territorial governance* within the region. Understanding opportunities for territorial governance and more knowledge on institutional collaboration and coordination was consequently emphasized during the regional laboratory.

As a result, Cross-border Institutional Mapping was discussed as a particularly interesting ESPON method for analysing institutional development in the region.The method applies a multilevel mapping of cross-border institutions as a systematic inventory of the geographical scope and scale of local, regional, national and supranational authorities and other relevant governance institutions that are cooperating within the region.

The local and regional practioners and policymakers who participated in the regional laboratory also identified Multilevel Governance Analysis as a method for gaining a better understanding of the relations between municipal, regional and national institutions in the region.

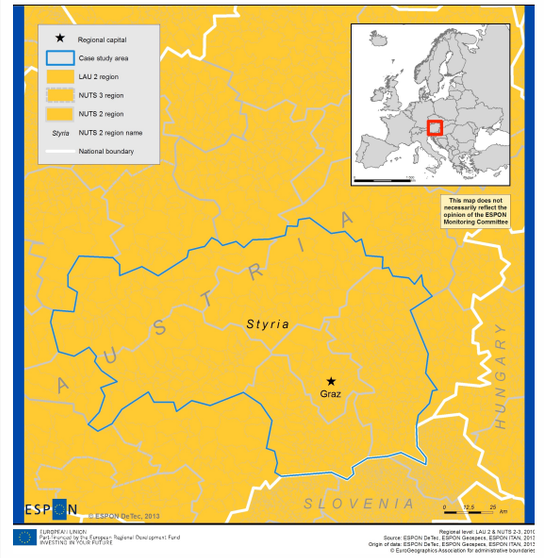
EXPLORING CROSS-BORDER POLYCENTRICITY

Another challenge of the DKMT Euroregion is the transnational networks of the region and the challenges and potential related to the current and potential external linkages. During the regional laboratory it was discussed if the method of Assessing Polycentricity could not only detect *polycentricity* but also contribute in supporting sustainable development of the region.

STYRIA

Styria is one of nine Austrian federal states (Länder) and is located in the centre of Austria. According to the ESPON regional typology, it 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.

On the regional level, laws on spatial planning as well as development programmes are passed in the nine federal provinces which are also responsible for their implementation. On the national level the Austrian Conference on Spatial Planning (OEROK) functions as coordination coordination body of spatial planning and is responsible for the drafting of the Austrian Spatial Development Concept, which was most recently published in 2011.



THE REGION IN A WIDER EUROPEAN PERSPECTIVE

Styria´s practitioners and policymakers expressed an interest for comparing their regional performance and embeddedness in a European context. These analyses can guide regional policy-making in general, but also help to introduce a European view into local and regional policy development.

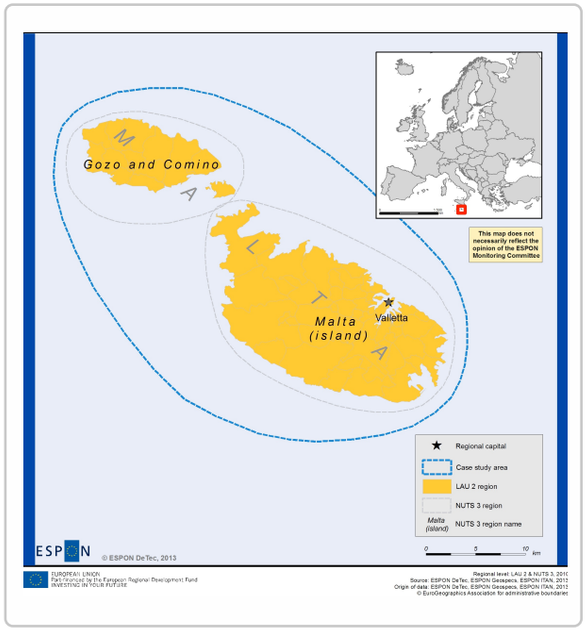
To create a better understanding of the region in wider European context and manage key policy questions, the territorial approaches of global and future challenges and comparing territorial performance were there for used for analytical support. A focus of the discussion was on how it is important to identify, monitor and analyse exogenous forces that could directly or indirectly influence Styria's territorial development. At the same time, the stakeholders participating recognized the importance of focusing on endogenous potential and *territorial capital* of a region.

ASSESSING REGIONAL PERFORMANCE

Analysing exposure and sensitivity to European directives through a Territorial Impact Assessment was identified as a useful tool during the regional laboratory. Stakeholders also gravitated towards Multithematic Territorial Analysis in order to compare regional performance both to other regions and in relation to EU goals and visions. The method consists of two steps: profiling the region and detecting its performance. This can help Styria understand which aspects of its territorial profile are most important in explaining the regional capacity to achieve policy targets as well as providing specific inputs to traditional qualitative decision-making tools, such as the standard SWOT analysis.

MALTA

Malta is the southernmost member state of the European Union. It is a centralized and unitary state with a population of about 415,000 (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.



UNDERSTANDING FUTURE POTENTIAL

Malta is preparing a strategic plan for the island. According to the draft Strategic Plan for the Environment and Development (SPED) the island's thematic issues and key challenges concern innovation and research, climate change, environment and cultural heritage as well as social issues such as poverty. The discussion in the regional laboratory thus focused on the general need for a comprehensive territorial approach.

Regional development is increasingly influenced by external processes and macro-challenges, and ways of monitoring and analysing local and regional impacts are important for delivering efficient policies. One way of thinking about long-term macro-challenges in parallel with more short-term pressing issues is covered by the territorial approach global and future challenges and potential. Therefore, the method of Spatial Scenarios were discussed in the regional laboratory. The method helps translating European macro-trends into local and regional challenges.

PERFORMANCES AT DIFFERENT SCALES

The question of scale was another important issue discussed during the regional laboratory, especially with regards to comparing the territorial performance. A key question which was addressed in this context was: How is the Malta is performing in certain fields compared to other spatial entities in Europe? With help of a Multithematic Territorial Analysis as well as maps from the ESPON Atlas, a territorial profile of Malta in European perspective was shown and its performance according to *Europe 2020 Strategy* targets was analysed and discussed.

CHAPTER 4

ESPON RESOURCES

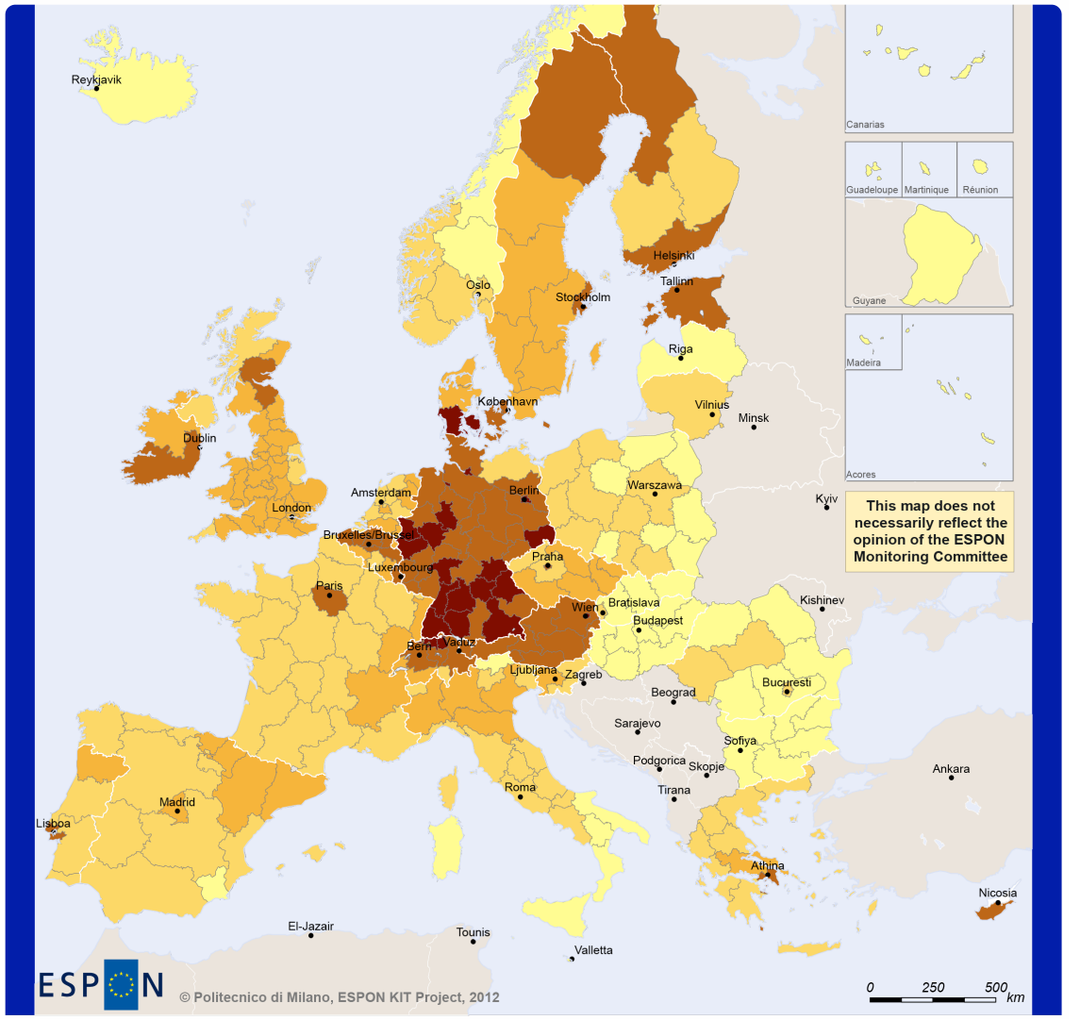
The cornerstone of ESPON is to produce knowledge that helps a range of practitioners understand territorial dynamics in Europe. It provides perspectives to territorial development that range from the local to the EU scale, it supports various types of cooperation and it serves as an important link between regional issues and EU policy development.

ESPON resources aim provide policymakers, practitioners and other relevant users at all administrative levels with data and information of European research on territorial development and cohesion. Most resources are available online via the ESPON website. This section provides an introduction to a selection of these resources and a selection of ESPON Targeted Analysis projects as well as a brief introduction to the ESPON 2013 programme.

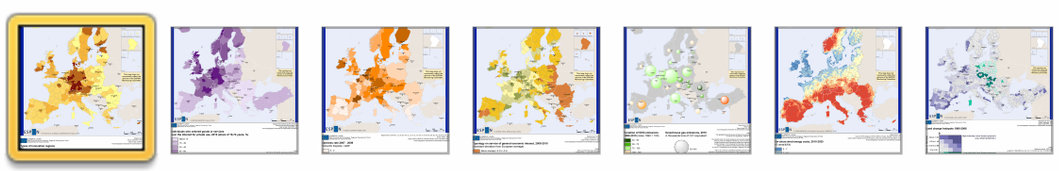
ESPON resources consist of three sections:

1. ESPON tools and maps
2. ESPON projects
3. ESPON 2013 programme

MAP GALLERY 1 ESPON MAPS

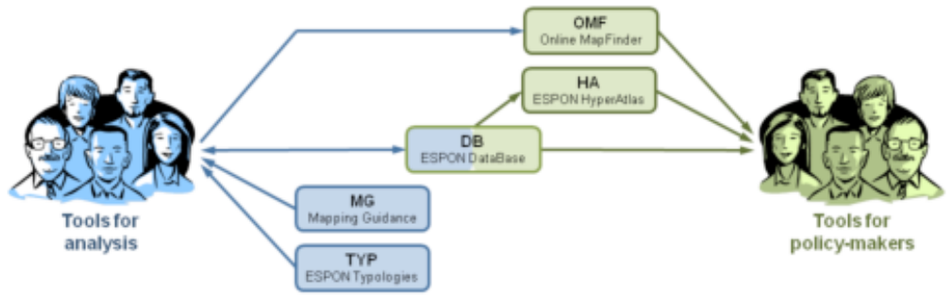


Territorial patterns of innovation in ESPON regions (2012)



ESPON TOOLS AND MAPS

The different ESPON tools and maps are targeted at different stakeholders across Europe and should provide detailed support based on demand. There are specific tools targeted analysis and for policymakers.



ESPON 2013 DATABASE

The ESPON 2013 Database offers regional information and data provided by ESPON projects and by the European statistical office of the European Union, EUROSTAT. The information and data available in the database can support policy-makers and researchers in understanding and analysing territorial development across Europe. It could also create better knowledge about potential and challenges faced by a region or a city in a European context. Based on indicators covering all regions in Europe, the database can support a better understanding of on-going trends and makes it possible benchmark a region or a city in European setting. The ESPON 2013 Database has a component specifically for policy-makers, which is focused on providing data for decision-support on territorial development. The database contains data at different levels, including neighborhood, local, regional, and urban. The regional and local data use the *NUTS* classification, including NUTS 1, NUTS 2 and NUTS 3.

ESPON VIDEO 1 ESPON DATABASE FOR POLICYMAKERS

ESPON Database provides comparable indicators covering all regions of Europe. It supports better understanding of past and future trends in different types of European territories and makes possible to benchmark your region and city in the European context.

The database project is central component of the ESPON scientific platform and an important tool for providing data, indicators and (visualization) tools for monitoring and analysis of territorial development across Europe. The aim of establishing a database is that it should contribute to a deeper understanding of territorial structures, the current situation and past and future trends of different types of European territories in relation to the various geographical contexts (from local to global) and within a large variety of themes.

The datasets in the platform are collected from European statistical organizations, including EUROSTAT, the European Environment Agency, and from ESPON projects.

ESPON VIDEO 2 ESPON DATA NAVIGATOR

Data Navigator gives you access to sources of key statistical territorial data, data series, geographical datasets and other valuable information at different administrative levels.

ESPON VIDEO 3 ESPON ONLINE MAP FINDER

The ESPON Online Map Finder now makes this possible, providing access to the most relevant maps from ESPON projects and reports. It allows users to search, download and print maps.

DATA NAVIGATOR

ESPON Data Navigator aims to provide easy access to regional statistical data sources to policymakers at the European, national, regional or local levels, scientists, statistical offices and the general public. It is especially useful when searching for complete datasets or when benchmarking a specific region. The Navigator offers a search tool for finding available data sources by country, theme or territorial scale.

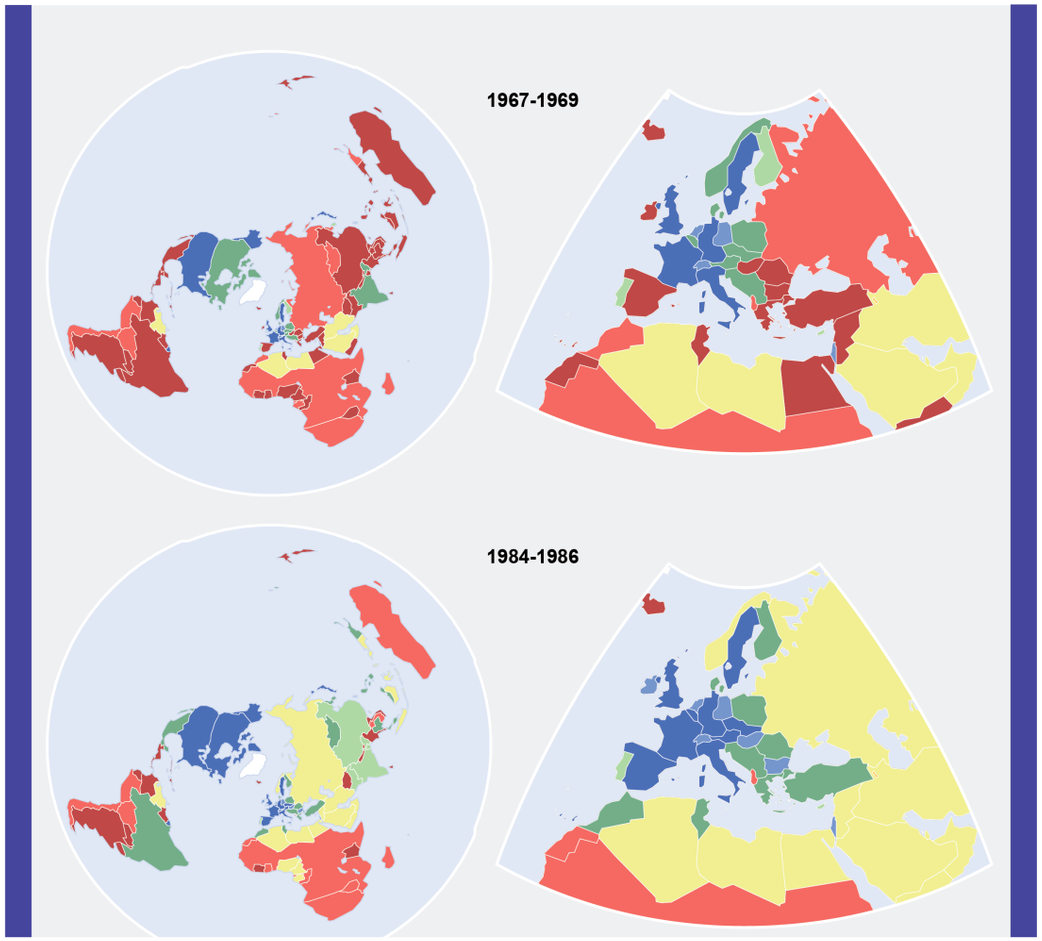
ESPON HYPERATLAS

The ESPON HyperAtlas is an online tool for multi-scalar territorial analysis. It offers the possibility for a region or territorial unit to evaluate its relative situation in a wider European territorial context based on several indicators. It allows for conducting spatial analysis and visualization of similarities/dissimilation between territories, including a range of indicators. For example, a local policymaker can easily compare and analyse their region's relative position at a European, national or local scale for a whole set of criteria, such as GDP/inhabitant, unemployment and accessibility. The tool is also available in expert mode, which provides access to more advanced features, such as Lorenz curves, box plots and spatial autocorrelation.

ESPON ONLINE MAPFINDER

The ESPON Online MapFinder is a web application where you can conveniently search, display, zoom and download maps that have been developed within the ESPON research programme. Each map includes an explanatory text and key observation for policymakers. Swipe right to explore available a selection of maps from the online mapfinder.

Map gallery 2 Available maps in online map finder (Maximize to view full map)



Theme Economy and trade: Country profiles in trade and exports, 1967-2006

The map shows how national trade and export profiles have changed during the period 1967-2006. In the late 60s the world was characterised by a clear distinction between small number of countries with high technology (e.g. USA, Japan, EU15) and a majority of countries characterised by export of primary groups. Very few countries were integrated to the intermediate category of export of textile and electronics (e.g. Canada, India).

ESPON PROJECTS

Targeted Analysis projects are demand-driven in that they use ESPON evidence in analyses requested by local, regional and national stakeholders. The Targeted Analysis are carried through in close cooperation between stakeholders, a group of experts and the ESPON Programme and emphasis is put on the operational use of the results of the analyses in practice.

This sections contains the eight different Targeted Analyses from which the ten ESPON methods was derived. It includes a short description of the project and link to the project homepage where it possible to download reports and maps.

Agglomeration economies: CAEE **- The Case for Agglomeration Economies in Europe**

The CAEE project has explored the process of agglomeration within cities and regions across Europe. The analysis has contributed to a better knowledge of the optimal scale for urban form and agglomeration, and for deeper understanding of dynamic processes related to urban agglomeration.

Convergence regions: SURE **- Success for Convergence Regions' Economies**

The SURE project has explored new ways of conceptualizing and measuring imbalances within lagging European regions by identifying key indicators for understanding why specific regions lag behind and others accelerate their growth rates. This was achieved through a systematic comparison of factors relevant for economic growth and successful cohesion policy over the last 15 years in convergence regions.

Cross-border development: ULYSSES **- Using applied research results from ESPON as a yardstick for cross-border spatial development planning**

The ULYSSES project was an experimental and innovative project supported by 18 European border and cross-border areas. It aimed at using 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 cross-border regions in Europe.

Metropolitan regions: METROBORDER **- Cross-Border Polycentric Metropolitan Regions**

The METROBORDER project explored European cross-border and metropolitan regions in relation the policy concept of *polycentricity*. The project goal was to identify criteria, potential and governance practises for polycentric cross-border metropolitan regions. This included recommendations for development strategies in two case regions: the Upper Rhine Region and the Greater Luxembourg Region.

Metropolitan regions: POLYCE **- Metropolisation and Polycentric Development in Central Europe: Evidence Based Strategic Options**

The POLYCE analysed five central European capital cities in relation to the concepts of *metropolisation* and polycentricity. The project emerged from the wish of city-administrations for research on their future competitive and cooperative potential, both among each other and towards 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 elaborate in–depth results on their specificities and commonalities.

Scenarios: SS-LR **- Spatial Scenarios: New Tools for Local-Regional Territories**

The SS-LR project aimed to further develop the MAAST foresight model. A particular focus was placed on integrating recent societal trends and challenges, including the economic crisis, globalisation processes, the roles of emerging economies, energy trends and new roles for rural areas. A concrete 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.

Territorial impact assessment: EATIA **- ESPON and Territorial Impact Assessment**

The EATIA project developed a systematic territorial impact assessment (TIA) 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.

Territorial performance: TPM **- Territorial Performance Monitoring**

The TPM project aimed at providing an assessment and development tool for regional monitoring of four major global challenges: demographic change, climate change, a new energy paradigm and globalisation. The tools within the project were applied in five stakeholder regions - Catalonia, Flanders, Greater Dublin, Navarre and North-Rhine Westfalia - with the aim of providing analytical support for strategy building by looking at how experiences can be shared and used in developing more effective territorial policy actions.

ESPON 2013 PROGRAMME

The ESPON 2013 Programme, the European Observation Network for Territorial Development and Cohesion, was adopted by the European Commission on 7 November 2007. The mission of the ESPON 2013 Programme is the following.

> *"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.*

Since its inception ESPON has contributed with pan-European evidence and knowledge about European territorial structures, trends, perspectives and policy impacts, enabling comparisons amongst regions and cities. Key principles of the programme are that policy demand defines applied research themes and that the results should be useful for the stakeholders. ESPON is thus supporting a European-wide understanding and involvement by communicating new comparable information for policy development.

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.

Tap to explore a slideshow of ESPON 2013 Programme

PRIORITY 1: APPLIED RESEARCH PROJECTS

Applied research on different themes of European territorial dynamics is the core business of ESPON, providing scientifically solid facts and evidence at the level of regions and cities. These results make it possible to assess strengths and weaknesses of individual regions and cities in the European context. The applied research is conducted by transnational groups of researchers and experts. In total 25 different projects on a variety of cross-thematic and thematic issues provide a substantial amount of new evidence on European territorial trends, perspectives and policy impacts.

PRIORITY 2: TARGETED ANALYSIS PROJECTS

Targeted analyses are conducted together with different stakeholders. It is an important project type that makes use of ESPON results in

practice. Stakeholders express their interest and ESPON provides a team of experts that carry out analysis in collaboratively. Stakeholders then make use of the European perspective in policy considerations for their territorial context, in strategy development or other activities, that benefit urban and regional development. So far, 23 targeted analysis projects have been initiated using ESPON evidence in analyses.

PRIORITY 3: SCIENTIFIC PLATFORM PROJECTS

Scientific platform projects contribute to the access and use of the ESPON knowledge and provide new tools and evidence for other Programmes on European Territorial Cooperation as well as regional and urban actors. The ESPON Database project is one of the ten larger projects related to this Priority. It deals with territorial indicators and monitoring, as well as tools related to territorial analyses, typologies, modelling and updates of statistics.

PRIORITY 4: TRANSNATIONAL NETWORKING ACTIVITIES

Transnational networking activities are focused in the capitalisation of ESPON results including media activities and different ESPON publications. Events such as ESPON Seminars and Workshops are regularly organised and a transnational effort in the capitalisation is ensured by a network of national ESPON Contact Points.

ESPON REPORTS AND PUBLICATIONS

ESPON publish a number of synthesis reports and handbooks to support local and regional policymakers. Below you will find links to relevant publication on ESPON website, which can guide through territorial dimensions. This includes Synthesis Reports, Scientific Reports, Territorial Observations, Evidens Briefs and Seminar Reports. ESPON Territorial Observations and ESPON Evidens briefs aim at providing policymakers and practitioners with short and concise information on important new evidence on the European territory and its regions.

ESPON SYNTHESIS REPORTS

First ESPON 2013 Synthesis Report: New Evidence on Smart, Sustainable and Inclusive Territories

Second ESPON 2013 Synthesis Report: Territorial insight: Where to focus what types of investments

ESPON TERRITORIAL OBSERVATIONS

Territorial Dynamics in Europe: Gateway Functions in Cities

Territorial Dynamics in Europe: Regions Integrating Land and Sea

Territorial Dynamics in Europe: Natural Hazards and Climate Change in European Regions

Territorial Dynamics in Europe: Regions and cities in the global economy

Territorial Dynamics in Europe: The Creative Workforce

Territorial Dynamics in Europe: Trends in Internet Roll-out

Trends in Economic Performance of European Regions 2000-2006

Territorial Dynamics in Europe: Trends in Accessibility

Territorial dynamics in Europe: Trends in population development

ESPON EVIDENCE BRIEF

March 2014 Territorial Evidence for European Structural and Investment funds

December 2013 Secondary cities as important growth poles

November 2013 Services of General Interest

November 2013 Post-crisis migration trends

November 2013 Territories with Geographic Specificities

September 2013 Territorial Dimensions of Europe 2020 Strategy

May 2013 European Territorial Cooperation