ESPON SCALES
Breakdown and capitalisation of ESPON results on different scales

ECP Transnational Networking Activity

Final Report | Main Report

EUROPEAN UNION
Part-financed by the European Regional Development Fund
INVESTING IN YOUR FUTURE

This report presents the final results of Transnational Networking Activities conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU27, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

Information on the ESPON Programme and projects can be found on www.espon.eu

The web site provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

This basic report exists only in an electronic version.

List of authors / Transnational Project Group

Federal Institute for Research on Building, Urban Affairs and Spatial Development (Lead Partner)
Kirsten Hohmann
Volker Schmidt-Seiwert
Peter Schön

University of Luxembourg
Estelle Evrard
Tobias Chilla
Kerry Pearce

Austrian Conference on Spatial Planning
Andrés Peña

VÁTI Hungarian Nonprofit Limited Liability Company for Regional Development and Town Planning
Csilla Hoffmann
Gergö Szanko

Office for National Economic Planning
Csilla Hoffmann

Federal Office for Spatial Development (ARE)
Marco Kellenberger

External experts

Austrian Institute for Regional Studies and Spatial Planning
Erich Dallhammer (ÖIR)
Pia Kaiser (ÖIR)
Joanne Tordy (ÖIR)

Table of contents

ANNEXES

See separate documents

Annex 1: Summary and overview of compulsory actions and contractual obligations

Annex 2: List of the materials developed by the project

Annex 3: Types of policy-relevant NUTS scales

Annex 4: Contents of the seminar questionnaire

Annex 5: Seminar Reports

Annex 6: Guidelines for the dissemination of ESPON results in different spatial contexts

Table of figures:

List of tables

List of abbreviations

ARE	Swiss Federal Office for Spatial Development
BBSR	Bundesinstitut für Bau-, Stadt- und Raumforschung - Federal Institute for Research on Building, Urban Affairs and Spatial Development
Climate	Climate Change and Territorial Effects on Regions and Local Economies in Europe
CoZiCo	COmparing – ZOoming-in – COmpleting
CU	ESPON Co-ordination Unit
DEMIFER	Demographic and Migratory Flows Affecting European Regions and Cities
ECP(s)	ESPON Contact Point(s)
EDORA	European Development Opportunities in Rural Areas
ESPON	European Spatial Planning Observation Network
EU-LUPA	European Patterns of Land Use
FOCI	Future Orientation for Cities
FUA	Functional Urban Area
GEOSPECS-	Geographic Specificities and Development Potentials in Europe
LAU	Local administrative unit
MA	ESPON Managing Authority
METROBORDER	Cross-Border Polycentric Metropolitan Regions
MUA	Morphological Urban Area
NUTS	Nomenclature of territorial units for statistics
ONEP	Office for National Economic Planning
ÖROK	Österreichische Raumordnungskonferenz- Austrian Conference on Spatial Planning
ÖIR	Österreichisches Institut für Raumplanung – Austrian Institute for Regional Studies and Spatial Planning
POLYCE	Metropolisation and Polycentric Development in Central Europe: Evidence Based Strategic Options
ReRisk	Regions at Risk of Energy Poverty

SGPTD	Secondary growth poles in territorial development
SS-LR	Spatial Scenarios: New Tools for Local-Regional Territories
TA2020	Territorial Agenda of the European Union 2020 Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions
TeDi	Territorial Diversity in Europe
TIPTAP	Territorial Impact Package for Transport and Agricultural Policies
TPG	Transnational Project Group
VATI	VÁTI Hungarian Nonprofit Limited Liability Company for Regional Development and Town Planning

A. Executive summary

The ESPON project "Breakdown and capitalisation of ESPON results on different scales/ SCALES" is a Transnational Networking Activities project under Priority 4 "Capitalisation, Ownership and Participation" of the ESPON 2013 programme. Its aim is to ensure the relevance, effectiveness and sustainability of ESPON results. The "Transnational Networking Activities" projects involve ESPON Contact Points (ECPs) as partners. They cooperate to jointly disseminate the ESPON results on a transnational level, to transfer the results of the Europewide studies onto the regional and local level thus arousing interest for ESPON outside the ESPON network. Furthermore, the results of the project work may serve as a basis to formulate recommendations for revising and developing the ESPON programme.

In the SCALES project, ESPON Contact Points from Luxembourg, Austria, Switzerland/Liechtenstein, Hungary and Germany jointly develop strategies facilitating an application of the ESPON results on various territorial levels.

The project consists of two main work packages: First of all, the ESPON results were reflected via five thematic clusters in the context of the participating countries. The topics were defined from the Territorial Agenda[1]. They cover the main fields of European territorial development policy-making: (1) cities, regional development and planning, (2) urban-rural relations, (3) economy and innovation, (4) transport and mobility and (5) risk management, climate change and culture.

Secondly, three strategies for facilitating "scales-sensible dissemination" were developed: European comparison; Zooming in; Bi-/multilateral comparison.

These strategies were used to break down the ESPON results within the five thematic clusters related to the participating countries. During four thematic seminars and one final seminar they were used to present the ESPON results and discuss them with stakeholders, practitioners and the scientific community.

The main results of the project are summarised throughout this report; the parts of the report that can help other ECPs to improve their dissemination activities will be published as Guidelines, which will increase the visibility and usability of the results obtained in the SCALES project.

ESPON as a source of territorial information

ESPON constitutes an important source of information for civil servants and politicians who are looking more and more for reliable, interesting and easy to use information on their own territory. However, the information provided especially by the ESPON maps raises immediately a number of very concrete questions that stakeholders for the most part find difficult to answer on their

[1] In the preparation phase of the SCALES project, the Territorial Agenda 2007 had been in force.

own. ESPON Contact Points (ECPs) as key actors placing the ESPON results back into the local, regional and national contexts and debates face this challenge directly. Against this backdrop, the main question for the SCALES project is: Which strategies can ECPs develop to make the best use of ESPON results in front of very different audiences, taking into account the local, regional and national contexts?

The success of disseminating ESPON results is influenced by scale-related challenges

The experience gathered in the five countries involved in the project suggests that most of the dissemination challenges relate to scales questions. They are linked to the NUTS system, to sectoral policies and to the target group.

Scales challenges related to the NUTS system:

Comparing EU regions implies working mostly on the basis of the European nomenclature of territorial units for statistics (NUTS). The main criterion to structure the NUTS categories is the population. Existing or newly aggregated administrative units in the member states were used to implement this system.

ESPON deliveries – especially maps – show the ESPON results mainly on NUTS 2 (in the majority) or NUTS 3 level. Due to the diversity of the implementation in the NUTS system, this leads to several challenges that the dissemination of ESPON results has to deal with:

- There is an extreme territorial discrepancy regarding the size of statistical units between the member states, both in terms of population and area; ESPON results given in the same NUTS category can therefore not be compared easily, even though the system gives this impression.
- As statistical units, NUTS units are often not congruent to relevant administrative and/or political units, so the data are less usable, and there is often no direct contact person or target group where the ESPON results can be disseminated to.
- Most of the ESPON maps are available at NUTS 2 level only, which in some countries are not policy-relevant units.
- There are very few data available on lower level (e.g. below NUTS 3), which hampers the dissemination towards local stakeholders. The GEOSPECS project has provided a database of indicators for six themes on LAU2 level; more projects like this would largely benefit the local levels.
- In some smaller countries, there are no NUTS units on a sub-national level, therefore no regionalised territorial information is available from ESPON.

Scales challenges relating to sectoral policies:

The constitutional setting of a member state strongly influences the territorial level on which target groups have to be addressed. Dissemination strategies therefore should take into account the level at which sectoral and territorial policies are decided and implemented in each member state.

The scale of how ESPON information is disseminated best depends also on the topic; while e.g. metropolitan issues are better addressed through information on a local or regional level, questions of globalisation developments or climate change need information on a global or European level.

Scales challenges relating to the target group:

Different target groups have specific interests depending on the territorial level of their work: local and regional stakeholders will be interested in local and regional data, while ministries might be interested in regional and national data.

The CoZiCo approach to deal with scales challenges

To deal with these challenges, the project partners in the SCALES project developed a targeted dissemination strategy, the so-called CoZiCo approach which is based on the methods COmparing, Zooming-In and COmpleting.

Comparison is about comparing the situation of another region with the region back home in order to illustrate parallel or diverging trends. It can also be of interest for local stakeholders to compare the situation of their region with other EU regions that have similar patterns of development.

Zooming-in may help small states or regions with strong transregional/cross-border interdependencies to take into account more specific debates. It works through either increasing the size of the map or by delivering the data at a finer scale.

Completion means either illustrating the situation with comparable national information if data are missing in an ESPON report, or by adding more relevant data to the existing one, e.g. on a lower NUTS level which is of higher political or administrative relevance.

Assessing the method through interactive seminars

In the SCALES project, the partners organised five seminars, one in each country and hosted by the respective TPG partner, each with a different focus on the topics and the question of scales.

The seminars aimed at presenting results of ESPON projects of the ongoing or past programming period and at discussing how these results can be used on

different territorial levels while at the same time testing different dissemination strategies and raising awareness of ESPON activities in different stakeholders groups.

The seminars focused on:

- Urban-rural relationship
- Cities, regional development and planning (labelled through polycentricity)
- Accessibility, innovation and economy
- Climate change and risk management
- ESPON's role in serving transnational cooperation

The five seminars took place in each of the participating countries from October 2011 to October 2012. Each event was organised by the respective ECP of the host country as a one-day seminar, lasting between 4.5 to 7 hours. Except from the seminar in Budapest, which was held in English, all other seminars used the national language (German and/or French) as working language with an English translation.

In most cases presentations took place in a lecture setting and were followed by more interactive elements. In all seminars special emphasis was put on involving different levels of decision making, as well as researchers and practitioners in the debate. Complementary, inputs from representatives of the ESPON contact points and questions from the audience contributed to the discussions.

Lessons learnt

The SCALES project partners have gathered several lessons learnt from the work that result in recommendations for the work of the ESPON ECPs to deal with scales-related challenges, but also recommendations for the future design and work of the ESPON programme.

Lessons learnt for ECPs can be summarised:

- Develop a scales-related dissemination strategy
    - taking into account the needs of different target groups and topic-related scales questions
    - considering the size of your country and the number of potential ESPON users to find the right addressees
- Enhance the usability of ESPON deliveries
    - by summarising ESPON results or by complementing them with additional information

  - by translating the English material into the national language(s)
  - through national publications and national seminars

The Co-Zi-Co approach can be used for these actions.

Lessons learnt for the ESPON programme are:

- Take the NUTS problematic into account
  - by providing more information for the (most relevant) NUTS 3 level
  - by providing more information on LAU level as well
- Provide more information
  - close thematic gaps (especially social topics)
  - focus on providing basic territorial knowledge, reduce policy recommendations

The SCALES project group has published the main results of the project as a separate guideline document. These so-called “Guidelines for the dissemination of ESPON results in different spatial contexts” are found in **Fehler! Verweisquelle konnte nicht gefunden werden.**.

B. Report

1. Presentation of the overall strategy

1.1 Main dissemination challenges

Designed in the 90's, the ESPON programme was the first programme to offer a comparison of the latest spatial trends across all EU member states (15 at that time). This programme proved to be innovative as it studied European trends and the impact of EU policies on the European territory. The original aim to provide information, analysis and data at EU level remains a challenge in terms of consolidating the datasets and indicators. Especially during the second programming period (2007-2013) an additional challenge arose: EU policies now have to be implemented at national, regional and local level. During the next programming period (2014-2020), this challenge will be further enhanced insofar as the 'place-based approach' (Barca, 2010) encourages strategy development on the basis of territorial assets and particularities of each local and regional authority. To do so, local, regional and national stakeholders need increasing amounts of information on current trends affecting their own territory. Therefore, civil servants and politicians are looking more and more for reliable, interesting and easy to use information on their own territory. For this purpose ESPON constitutes an important source of information. First, with the help of maps, ESPON allows to situate very quickly EU regions in comparison with each other across Europe. Second, ESPON provides information on a wide range of highly important topics (e.g. globalisation, research and innovation, environment, energy). Conversely, this very quick information provided by maps raises immediately a number of very concrete questions that stakeholders for the most part find difficult to answer on their own.

Besides the interpretation and the usability of the results for their specific regional and national context, stakeholders raise questions about indicators, data quality and about their relevance with regard to their specific local and regional setting. Therefore, ESPON contact points (ECPs) are key actors to place back the ESPON results into the local, regional and national contexts and debates. Against this backdrop, the main question for the SCALES project is: what strategies can ECPs develop to make the best use of ESPON results in front of very different audiences (civil servants, politicians, planners, and scientists), taking into account the local, regional and national contexts? The experience gathered in the five countries involved in the project suggests that most of the dissemination challenges relate to scales questions. They are summarised in the following subchapters. Chapter 1.2 then describes the strategy that was developed in the project to deal with these challenges.

1.1.1 Investigations of the NUTS system related to scales

The comparison of EU regions implies working mostly on the basis of the European nomenclature of territorial units for statistics (NUTS). This system has been developed by the member states and Eurostat in the 70's and has been transferred to EU regulation in 2003. The purpose was to establish a reference scheme allowing a comparison between territorial units in member states on 3 different regional levels (NUTS1, 2, and 3) including the national level as NUTS 0. Particular regions can represent several NUTS level.

The regulation indicates classification criteria for each level on the basis of the population, ranging in NUTS 1: from 3 to 7 million, in NUTS 2: from 800.000 to 3 million and in NUTS 3: from 150.000 to 800.000 inhabitants (Regulation (EC) No 1059/2003, article 3, paragraph 3). But these size criterion is in fact of secondary importance only.

The existing administrative units within the member states are the first criterion used for the definition of NUTS regions, "existing administrative units within the member states shall constitute the first criterion used for the definition of territorial units". First and foremost, territorial units are classified on the basis of administrative units. Administrative unit is a "geographical area with an administrative authority that has the power to take administrative or policy decisions for that area within the legal and institutional framework of the member state" (ditto, article 3, paragraph 1). This in fact explains the deviation of the population criteria in some countries and some regions, which sometimes limits the comparison of regions within the same NUTS level.

Table 1: Effective minima and maxima of population* by different NUTS levels in the SCALES countries

	NUTS 1		NUTS2		NUTS3	
	Min	Max	Min	Max	Min	Max
Germany	661,000	17,845,000	513,000	5,162,000	34,000	3,443,000
Luxemburg	512,000	512,000	512,000	512,000	512,000	512,000
Hungary	2,971,000	3,985,000	941,000	2,971,000	205,000	1,722,000
Austria	1,769,000	3,611,000	285,000	1,714,000	21,000	1,699,000
Liechtenstein	36,000	36,000	36,000	36,000	36,000	36,000
Switzerland	7,870,000	7,870,000	334,000	1,756,000	16,000	1,351,000
NUTS Regulation threshold	3,000,000	7,000,000	800,000	3,000,000	150,000	800,000

* Rounded values on basis of Eurostat 2011 population figures

Additionally to the differences in population size of the administrative settings within the member states, it is difficult to find clear correspondences regarding the policy competences and the regional policy relevance at each NUTS level.

To illustrate the significance of the NUTS system in each country, we summarise the situation for each SCALES country.

NUTS system in Switzerland and Liechtenstein

NUTS level 0 and 1 correspond to the nation state. NUTS level 2 comprises both single cantons and aggregations of cantons. This results in 7 so-called “Grossregionen”. They have no political function, being purely statistical units. Because many of those “Grossregionen” are a conglomerate of spatially completely different cantons, their meaning for statistical purposes is rather limited. On NUTS level 3 are the (26) cantons – they are strong political units in a very federally organized country like Switzerland. Because of the huge variety of the cantons (their population range from 16,000 to 1,35 million), analyses at NUTS 3 level are somehow limited as well, but nevertheless quite common because of the cantons’ important political role. In Liechtenstein, with a population of some 36,000, NUTS 0-3 are attributed to the nation state, with no further sub-units.

NUTS system in Germany

The highest regional level NUTS 1 is covered by the 16 Bundesländer. The NUTS 2 level represents the medium regional level, although it does not exist in every Bundesland. Only 5 Bundesländer have regional units with administrative responsibilities on this level (Baden-Württemberg, Bayern, Hessen, Nordrhein-Westfalen and Sachsen). In Berlin, Brandenburg, Hamburg, Bremen, Schleswig-Holstein, Mecklenburg-Vorpommern und Saarland units of this level are also highest regional level (NUTS 1). In Niedersachsen, Sachsen-Anhalt and Rheinland-Pfalz the level is built of groups of administrative units. At NUTS 3 level, “Landkreise” and “kreisfreie Städte” are important cities or associations of communes, whose representatives are elected. The population range of NUTS levels does not correspond with the NUTS regulation thresholds, especially on nUTS 3 level, which in fact due to the division into small units constrains comparison with other countries.

NUTS system in Hungary

At NUTS 1 level, three units have been defined gathering planning and statistical regions: Central Hungary (Central Hungary), Transdanubia (Central Transdanubia, Western Transdanubia, Southern Transdanubia) and Great Plain

and North (Southern Great Plain, Northern Great Plain, North Hungary). The seven Hungarian planning and statistical regions are represented at the NUTS 2 level. Their delineation in the process of accession related to structural funds purposes might explain the congruence with the regulation thresholds, within the national planning systems they are of less importance. The counties and the capital city of Budapest are the 20 NUTS 3 level units of Hungary.

NUTS system in Austria

At NUTS level 1 Austria has been divided in three units, in which several federal provinces “Bundesländer” are grouped together: western Austria (Vorarlberg, Tyrol, Salzburg, Upper Austria), eastern Austria (Lower Austria, Burgenland, Vienna) and southern Austria (Carinthia and Styria). The nine Austrian provinces are represented at the NUTS level 2. NUTS 3 level consists of 35 units which are formed by merged municipalities, whereby each municipality is assigned precisely to one unit. Vienna forms an exception: as a federal province it is represented on NUTS level 2 but also on NUTS level 3 with its own unit.

NUTS system in Luxembourg

The administrative setting in Luxembourg is based on the national and local levels. As the regional level does not exist in Luxembourg, the state level, NUTS 0, is used for all three NUTS categories.

Overall evaluation and development of a scales-related typology of policy-relevant units

The “political representativeness” of NUTS regions is of crucial importance in the process of translation of ESPON findings in the national perspective. The better the NUTS level correspond with the regional level of political acting, the more valuable is the direct use of ESPON results. In other words, if ESPON maps present results on a regional level which not corresponds with the regional level of political acting or planning, the information value of ESPON decreases.

The comparison of administrative and statistical units in the SCALES countries and their political importance (see Figure 1) reflects this complexity in the SCALES countries. The presentation of the NUTS units representing different levels of administrative or political competences, or of the regions being just groupings of administrative units or are mainly oriented to EU funding show that in this cases there is no contact person or target group on the ground to disseminate ESPON results to.

Especially the NUTS 2 level turns out to be only of limited importance in some countries like Hungary or Switzerland respectively in parts of the country like in Germany.

This does not negate the fact that in those cases a political representation at a higher level could be the target group for dissemination. This in turn is based on the assumption that the policy makers at that higher level are interested in the challenges and opportunities of their (sub-) regions. The problem is that in many countries this higher level is directly the national level.

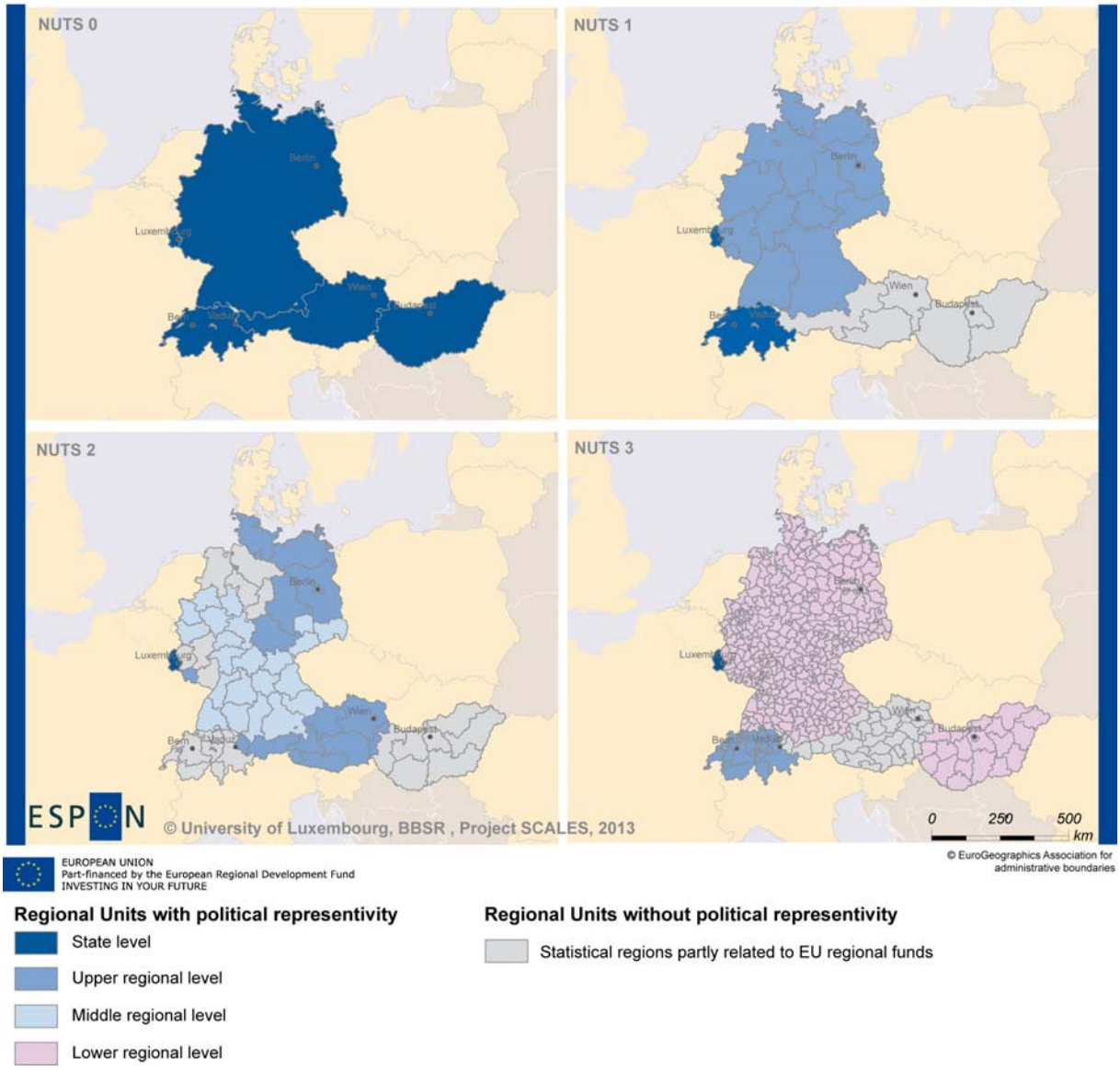

Figure 1: Comparison of administrative and statistical units in the SCALES project countries

If we look the highest policy-relevant unit in the ESPON countries and which NUTS level they belong to, the countries can be classified in four overall groups:

- Type A: Highest policy-relevant unit on sub-national level is NUTS 1 level
- Type B: Highest policy-relevant unit on sub-national level is NUTS 2 level
- Type C: Highest policy-relevant unit on sub-national level is NUTS 3 level
- Type D: Highest policy-relevant unit on sub-national level is below NUTS 3 level

The SCALES TPG tried to classify all ESPON countries into these groups. The result can be found in Figure 2; a list with more details about the countries and some subgroups can be found in **Fehler! Verweisquelle konnte nicht gefunden werden.**. It is based on a rough overview of the countries' political and administrative structure and will be discussed with the respective ECPs to make sure the description, the classification and the conclusions are correct.

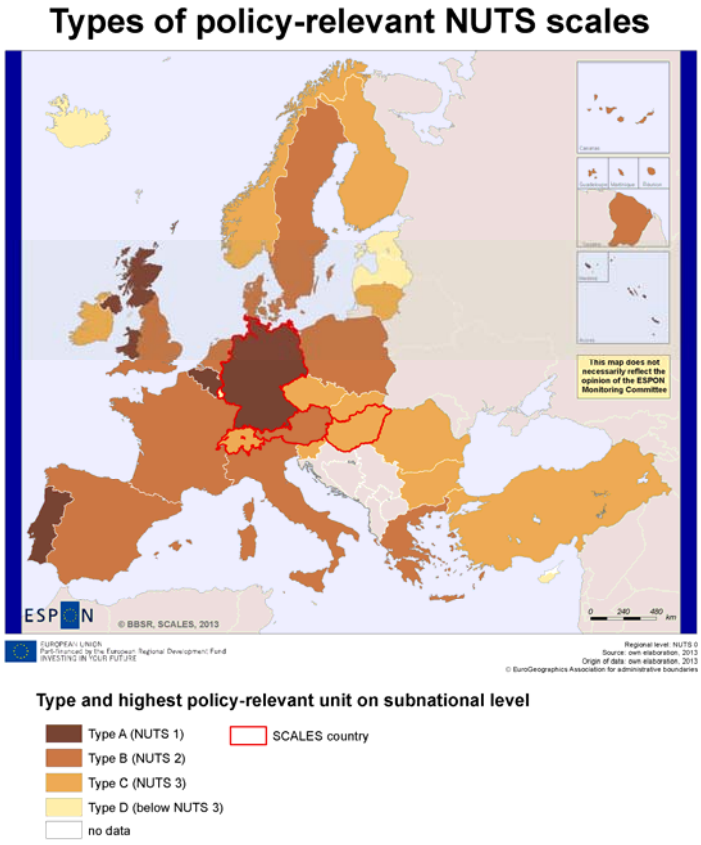

Figure 2: Types of policy-relevant NUTS scales(summarised classification)

1.1.2 Scales challenges related to the NUTS system

Against this backdrop, the SCALES project aims at developing guidelines for the dissemination of ESPON results to cope with the following challenges:

Distinct territorial discrepancy – Size and form of statistical units

First, this is certainly very trivial; one has to point out the important territorial discrepancies (in terms of size and form of the territorial units) at different levels in Europe. At a first glance, ESPON maps blur them in the sense that they give the impression that territorial levels can easily be compared from one state to another. But these territorial discrepancies become obvious as soon as stakeholders confront their knowledge of a specific region with its cartographic representation. The map showed in Figure 1 helps to keep this complexity in mind.

Even in countries with similar constitutional backgrounds, differences are important. The highest regional level of the federal states of Austria, Germany and Switzerland are located at different NUTS levels (respectively NUTS 2, 1 and 3). In centralised and medium sized countries like Hungary, two NUTS level do not fit with elected political bodies. In small countries like Luxembourg and Liechtenstein, the same unit is used for each NUTS category. Therefore, considering different countries at the same NUTS level reveals very different political authorities.

Non-congruence of statistical and administrative/political units

This situation arises above all within medium sized countries, which did not develop an intermediate regional governance level. In this case, groups of regions have been aggregated and considered as acting for NUTS 2 level (e.g. Switzerland) or for NUTS 3 (e.g. Austria). Another pattern can be found in a number of centralised former Eastern countries that have a local political level but lack a regional level. As a result, some countries developed statistical units to implement the EU regional policy (Hungary at NUTS 2 level).

Limited availability of data at NUTS 3 level

Even if ESPON is working hard on data availability and on the continuity of datasets, data are not always available on all NUTS levels, especially at NUTS 3 level. Most of the ESPON maps are available at NUTS 2 level only. However, as the map in Figure 1 (page 20) clearly shows, the NUTS 3 level is a relevant scale for most of the SCALES countries as it represents an administrative territorial unit with a political mandate (Hungary, Switzerland and Germany).

In general, the provision of comparable regionalised data for the entire European territory is a major challenge for ESPON projects. Eurostat is the first source for the analytical work of the projects but does not provide all relevant data for the ESPON exercises. Next come the National Statistical Offices, which sometimes provide comparable data contemporary and on a deeper regional level, but sometimes can not provide comparable data hinder the data acquisition and end up in lacking data.

Lacking data on lower level (esp. below NUTS 3)

Addressing local stakeholders directly might be challenging, as ESPON usually does not work on statistical information at a level lower than NUTS 3. Efforts are currently undertaken to start working at LAU 1 and 2 levels as well. Studies at these levels remain in the framework of targeted analysis (priority 2). GEOSPECS delineations are based on LAU2 units. In addition to data at NUTS 3 level, the TRACC project worked on indicators at LAU2 for the case studies and developed raster representation of space

Non-existence of statistical NUTS-units on sub-national level

In small countries like Luxembourg and Liechtenstein, which are organised on two levels only (communal and national level), ESPON information is merely available at national level as countries did not develop sub-national units even for statistical purposes (as Hungary did for example at NUTS 2 level). In these cases, ESPON results are mostly interesting for stakeholders in positioning their country in a wider transnational context..

In addition, in the very specific case of Luxembourg, cross-border interdependencies are increasing. The cross-border cooperation area around Luxembourg (“Greater Region”) comprises the highest number of commuters (200.000 people). ESPON analysis can be very interesting as it can offer a transnational perspective. ESPON research projects dealing with cross-border interdependencies (Metroborder, Ulysses, Geospecs) revealed however the challenge of receiving comparable data and foremost, flow data. In this particular context, ESPON information is mainly interesting to position the country in its regional and European context; the subnational level cannot be addressed directly.

When disseminating ESPON results, ECPs face a double challenge. After having identified the most relevant information for their national context, ECPs have to find the most relevant addresses to receive it. Therefore, developing targeted dissemination strategies implies taking into account:

- Where is the decision being taken? Depending on the topic considered, different administrative levels might be relevant.

- What information do stakeholders need? Depending on the topic, different target groups might be of interest. Land use might interest planners and architects while accessibility in Europe might be interesting for regional and national policy makers.

1.1.3 Scales challenges relating to sectoral policies

Scales challenges however do not only occur because of the NUTS problematic, but also because of the different levels of policy action that vary considerably between the ESPON member countries.

Taking into account the territorial dimension in sectoral policies

Latest key political documents in Europe (especially the Lisbon Treaty, 2007 and the EU2020 strategy, 2010, but foremost the Territorial Agenda 2020) insist on the relevance of the territorial dimension. A direct consequence is the intention to take into consideration the territorial dimension in sectoral policies. Again, ESPON can play a key role in providing reliable, helpful and valuable information. To do so, dissemination strategies should take into account the level at which these policies are concretely decided and implemented in each member state. Depending on the constitutional setting of each country (federal or centralised/decentralised state), target groups can be considered at different territorial levels.

Sectoral policies and dissemination strategy

Depending on the topic addressed, the relevant scale to approach the question both from a research and from a dissemination point of view might differ.

- To address metropolitan developments, NUTS are rather insufficient/ inadequate. Functional Urban Areas (FUAs) and Morphological Urban Areas (MUAs) are much more useful even if they present their own constraints. The scale addressed is then local or regional rather than national or European.
- In addition, it might be more appropriate to address globalisation developments or climate change at global or European rather than at local level.

The following table gives an overview of the most relevant level for the topics discussed at the SCALES seminars. (More details about the seminars can be found in chapters 2 and 3.2.) There is no level given for transnational cooperation, since this covers a lot of different thematic topics for which the right level has to be identified individually. The table also provides information where non-administrative units are the best choice.

Table 2: Most relevant territorial levels for SCALES seminar topics

	Local	Regional	National
Polycen-tricity	LAU		
	Functional Urban Areas		
Urban-rural relations		NUTS 3	
Economy / innovation		NUTS 2	NUTS 1
Accessibility		NUTS 3	
Climate change		bio-geographic climatic regions NUTS 2/3	

1.1.4 Scales challenges relating to the target group

Civil servants, political representatives, researchers and planners are the most important audiences for ESPON in all member states. Presumably each of these user groups has different expectations with regard to ESPON results. At the same time, except for researchers, all the other target groups may have specific interests depending on the territorial level of their work. Local and regional stakeholders will be interested in local and regional data (the European comparison being a supplementary perspective) while ministries might be interested in regional and national data. At the same time, in some very specific situations (e.g. like in Luxembourg where the cross-border dimension is increasingly important in decision-making processes), addressing the question of the most relevant level of information is a naturally must.

Scientists, who are not dealing with questions of policy and politics, often need other levels of information display than administrative units like NUTS.

1.1.5 Summary of the scales-related challenges

All these challenges show that ESPON results need to be translated in order to be useful. Approaching the ESPON results in terms of scales seems to be an important element prior to the development of dissemination strategies. To summarise, scales are involved in three dimensions:

- *Territorial scales* (NUTS) are one of the most important basis on which ESPON relies to provide information (object of dissemination)
- *Policy scales* relate to the territorial dimension of sectoral competences in different member states (relevant space to consider for dissemination)
- *Target group-specific scales* have to be taken into account to deal with the information needs of specific target groups.

The project aims at assessing the relevance of these assumptions. To do so, a specific methodology has been developed that will be described in the following chapter.

1.2 COmparing – Zooming-In – COmpleting (CoZiCo): methodology to address the scales challenges

A large number of challenges have been identified in the previous section, which are thought to cover general ESPON experiences and could be recognised as overall dissemination challenges. It would be a good and as well challenging exercise to present for example an indicator for which data are available at all relevant NUTS in one European map, but taking into account all 31 ESPON countries, the EU Candidate Countries, the Western Balkans and Turkey would go beyond the scope of this project, but might inspire a joint upcoming ECP activity to delineate the reasonable regional levels.

The first undertaking of the project to overcome these challenges in the process of ESPON result dissemination is the CoZiCo approach elaborated for the 5 events that were held during the ESPON SCALES project, well knowing that Priority 4 projects of ECPs are not entitled to provide new research.

However, they are responsible for developing targeted dissemination strategies at their own national level. To deal with the scales-related problems, an easy-to-use method was developed and assessed by the five ECPs of the SCALES project, the Co-Zi-Co approach.

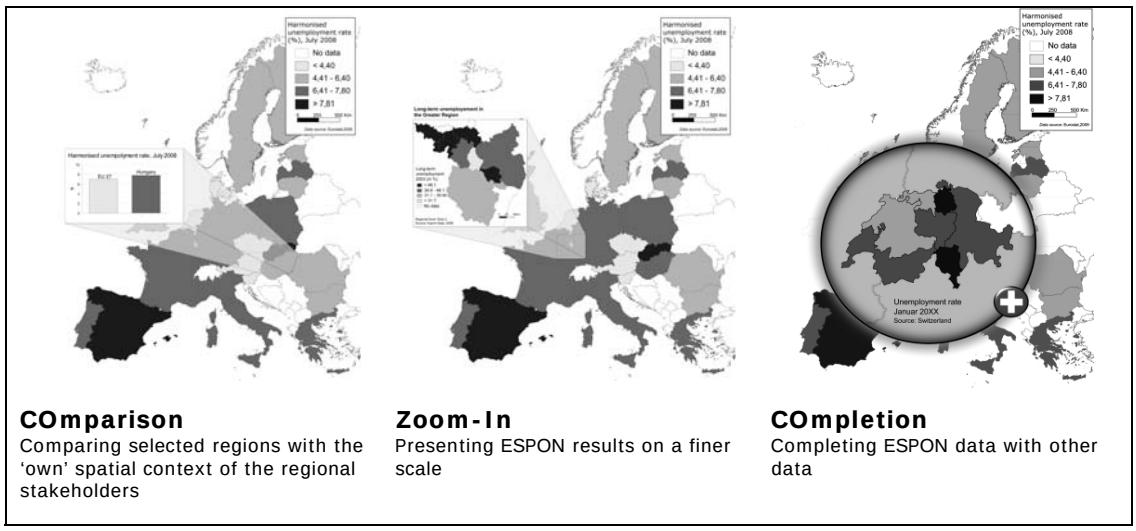

Figure 3: The CoZiCo approach

1.2.1 Comparison

In the interpretation of regional settings, comparison is the entrance point to communicate ESPON results by the ECPs and also by other users of ESPON results. It is about comparing the situation of another region with the home region in order to illustrate parallel or diverging trends. The users, however, have to keep in mind the scales-related problems outlined in Chapter 1.1 that

affect the comparability of ESPON results. Evidently, comparing regions implies that they are comparable.

Comparison is also an important element to take into account when policy makers develop their own territorial policies. Local stakeholders may compare the situation of their region with other EU regions having similar patterns of development. They may analyse those policy actions that are taken in other areas and use them as a basis for developing their own actions.

The following picture shows how, during one of the SCALES seminars, a comparison between Budapest and Munich was made. The Comparison approach was in this case combined with Zooming-in, which will described later. Here, the cities are comparable because of the similar population size.

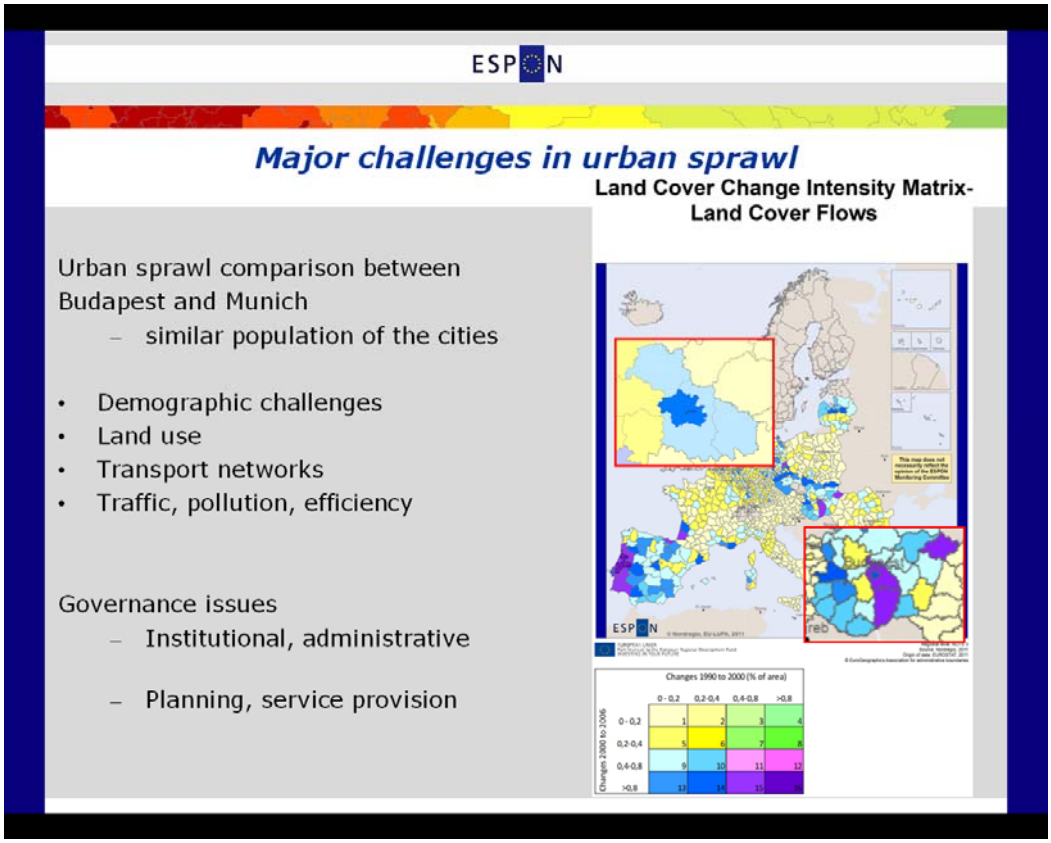

Figure 4: CoZiCo example: Comparison between Munich and Budapest

Comparison activities have to take the right scale into account. This is very well illustrated by the two following maps from the DEMIFER project. They show the same content with different spatial resolutions: on the NUTS 2 level (on the left) and on the NUTS 3 level (on the right). If a comparison is done on a very low scale, it might be more helpful to use the higher resolution, whereas for comparison on a higher scale the more aggregated version provides better help.

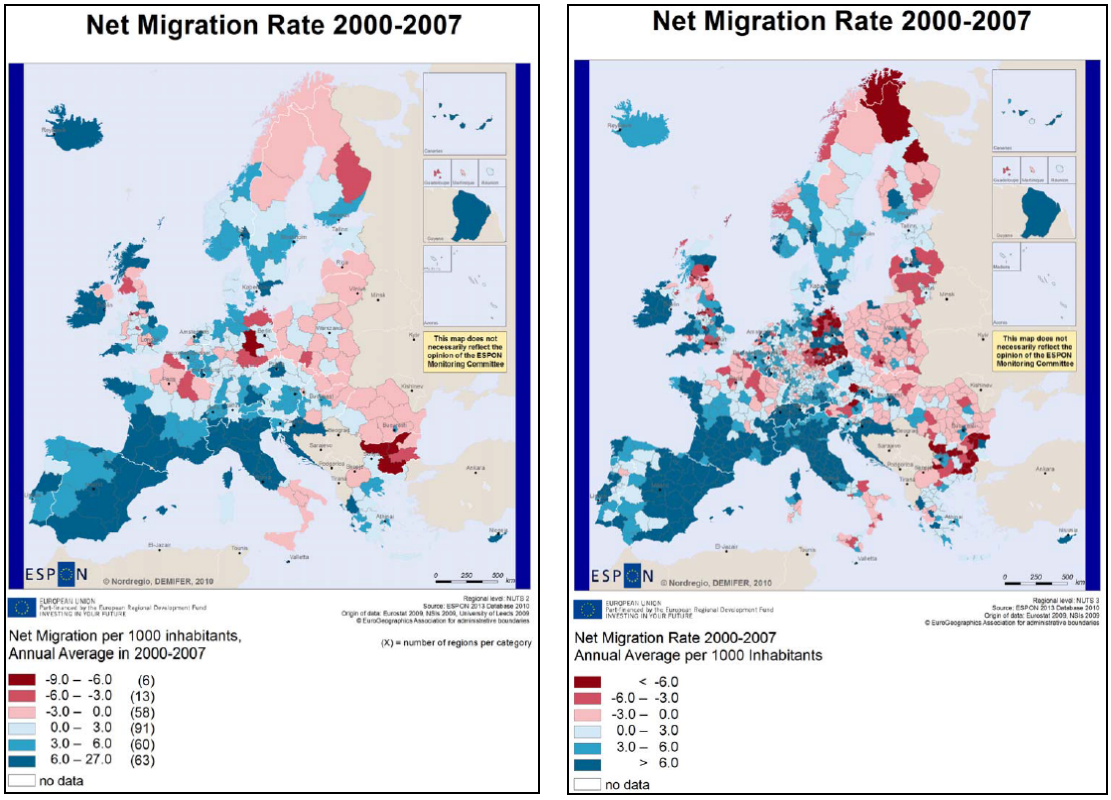

Figure 5: NUTS 2 / NUTS 3 map comparison for identical topic

Another way of comparison which was tested in the SCALES project is to compare the results of different ESPON projects. The following figure shows how this was done at the Budapest seminar. The speaker compared how specific types of rural areas – identified in the EDORA project – were influenced by migration, which had been analysed in the DEMIFER project. The regions were comparable because they belonged to the same type.

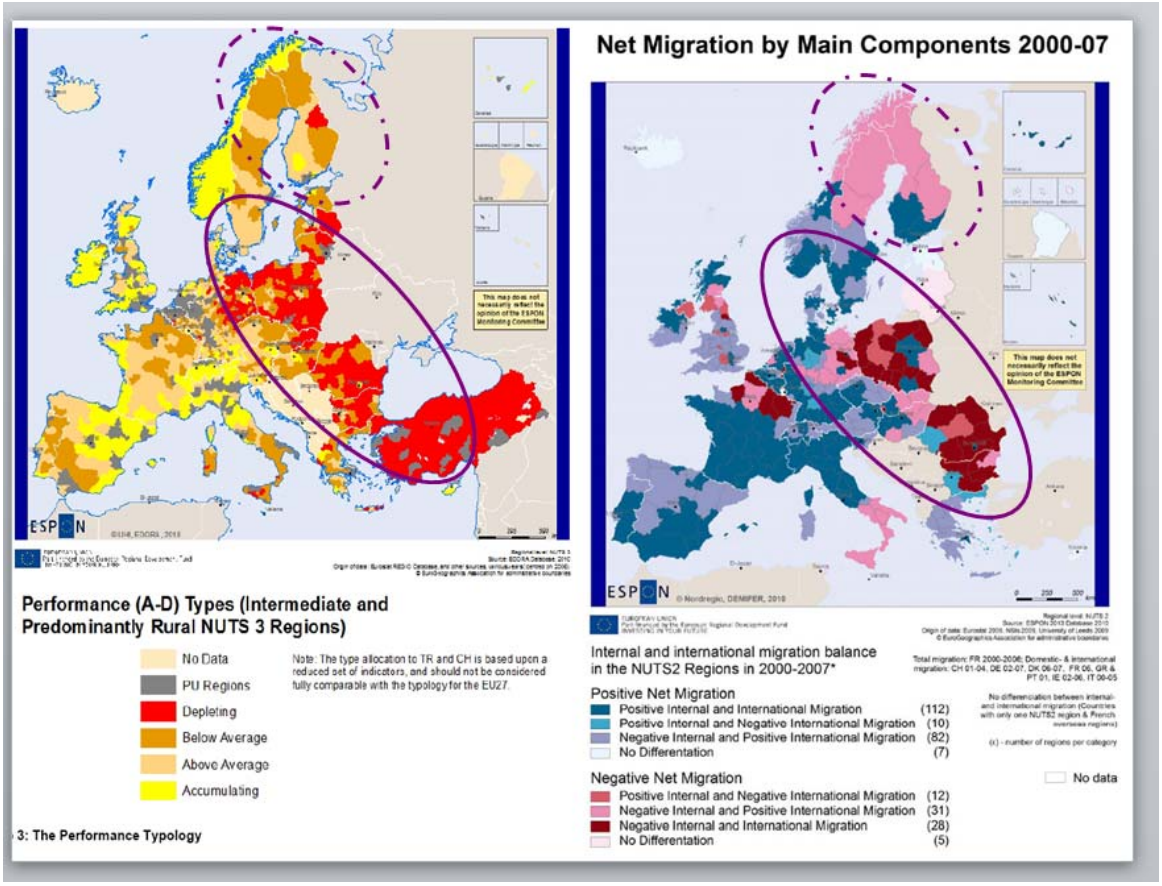

Figure 6: CoZiCo example: Comparison between DEMIFER and EDORA maps (Budapest Seminar, for more information: see Budapest seminar report)

The following picture shows a summary of the comparison done for the INTERREG IV B areas and their individual impact from climate change; the comparison was not done by way of a map but summarised in words. This is also a good example how the presentation of ESPON results was adapted to the needs of a specific target group, since not a map with administrative units was shown, but the results were aggregated into target group-specific areas. Here, regions were compared on the basis to which INTERREG area they belong.

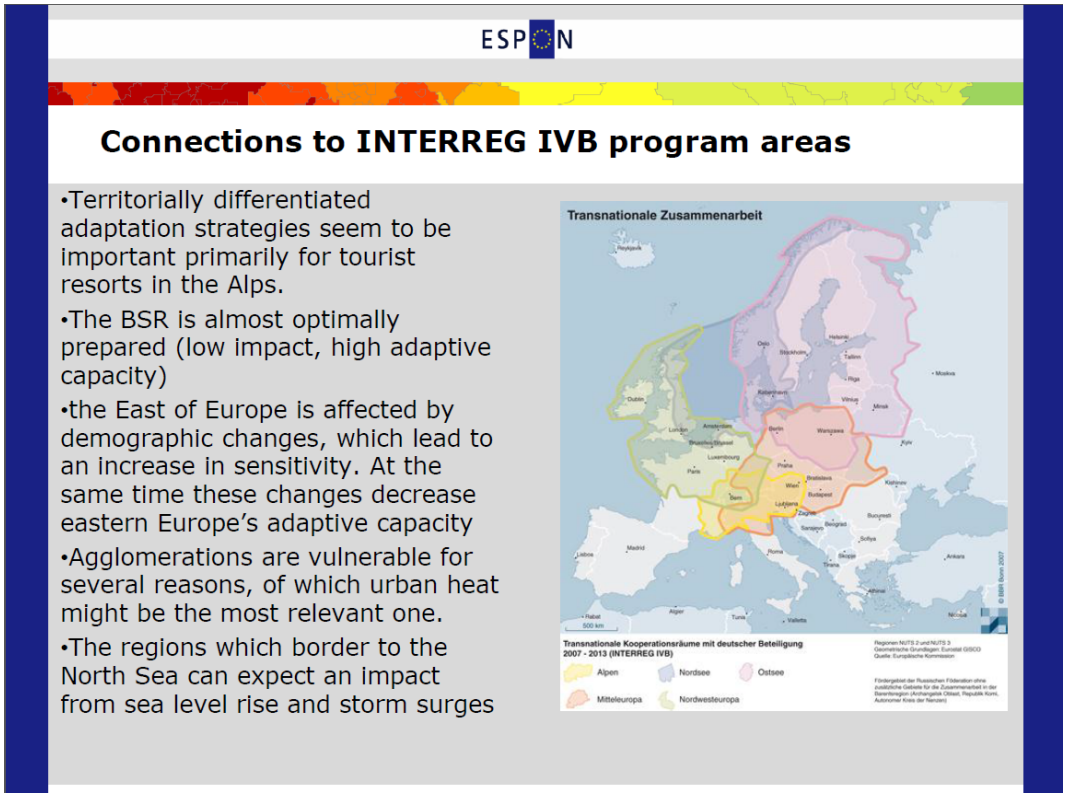

Figure 7: CoZiCo example: Comparison of the impact of climate change on the INTERREG IV B areas

1.2.2 Zoom-in

Zooming-in may be used by simply increasing the size of the map; it is often automatically used together with the Completion approach, which means that data or an analysis are delivered at a finer scale.

This strategy can help small countries or regions having strong functional interdependencies at transregional level or across borders to take more specific debates into account. An example of this approach is shown in the following picture.

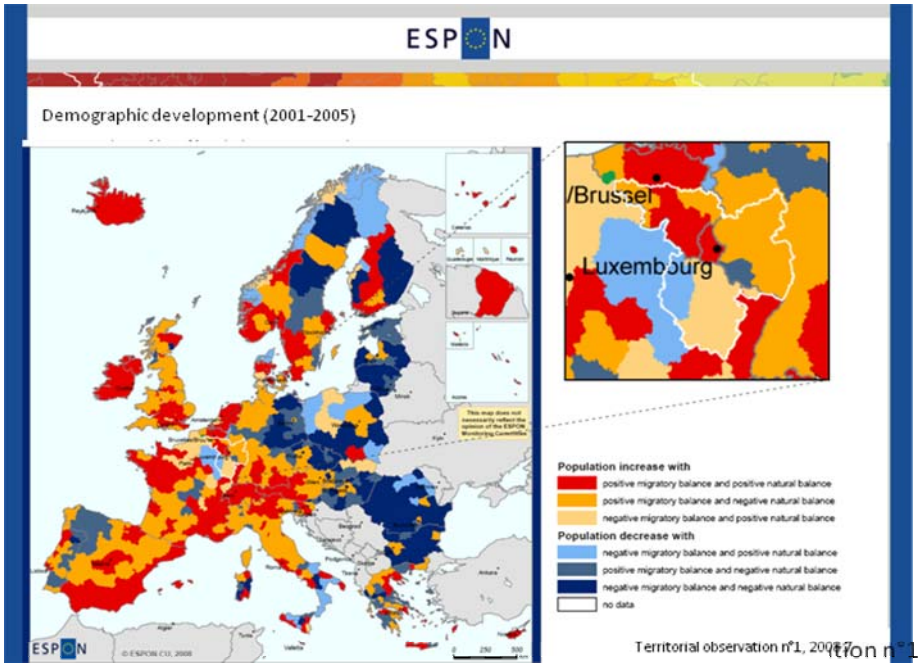

Figure 8: CoZiCo example: Zooming-in the demographic challenges of the Greater Brussels Region and Luxembourg

Zooming-in can also be used together with the Comparison approach. Instead of looking at the whole map, the Zooming-in approach proposes to take a limited number of regions on the map, increase their size and compare them (while using the precautions described in the Comparison chapter above). This can be particularly interesting for the analysis of geographical specificities or regions that share similarities in relation to a specific topic.

1.2.3 Completion

Experience has shown that a considerable number of ESPON maps lack data for regions or complete countries. The reasons are manifould, e.g. that the data was not available at the time of the respective ESPON project. Especially in this case, if the data is available later, completing the information by adding these new data is a possibility of better using ESPON information in the national context.

Evidently, when applying this strategy, one has to make sure that the data are comparable and must let the audience or the readers know about the different data sets.

If data are missing in an ESPON report, illustrating the situation with comparable national information might be a good strategy to avoid showing a region as a white patch.

The experience from the SCALES project and the seminars shows that completion can also be used to launch a discussion with stakeholders and to take a very specific situation that ESPON might not have studied in a targeted analysis into account. Comparing general ESPON information with more specific additional data can be helpful. The following two pictures show how this was done at the Luxembourg seminar; in addition to the information from an ESPON project (METROBORDER), data from the national ministry was shown, both investigating the issues arising from the important number of commuters in the cross-border space around Luxembourg.

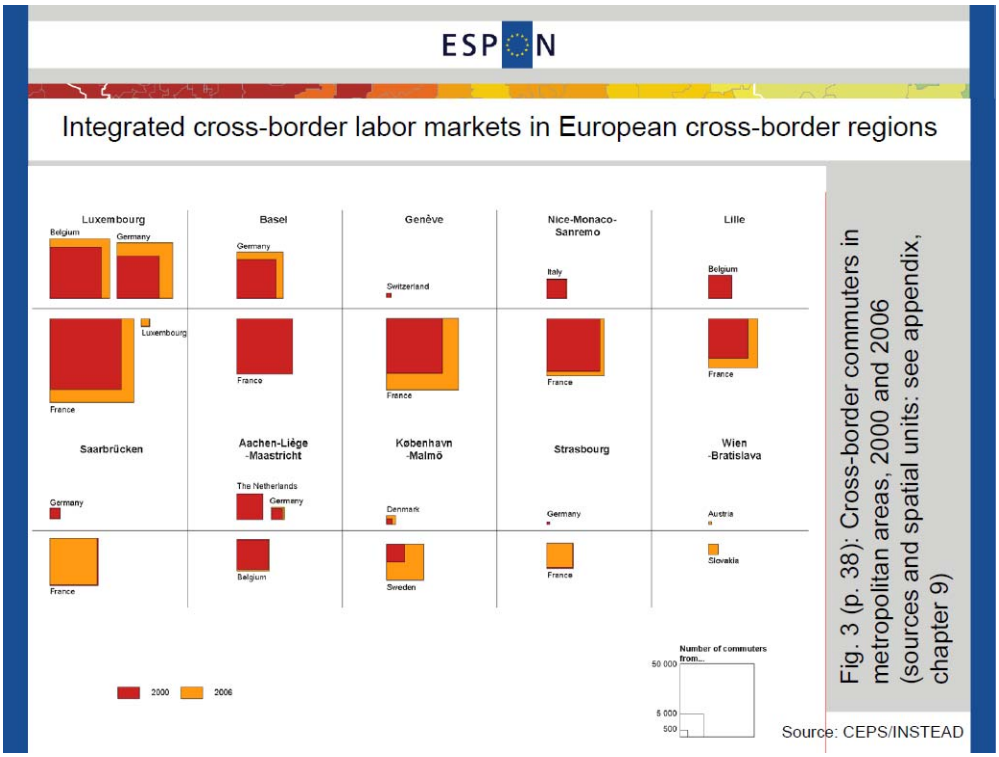

Fig. 3 (p. 38): Cross-border commuters in metropolitan areas, 2000 and 2006 (sources and spatial units: see appendix, chapter 9)

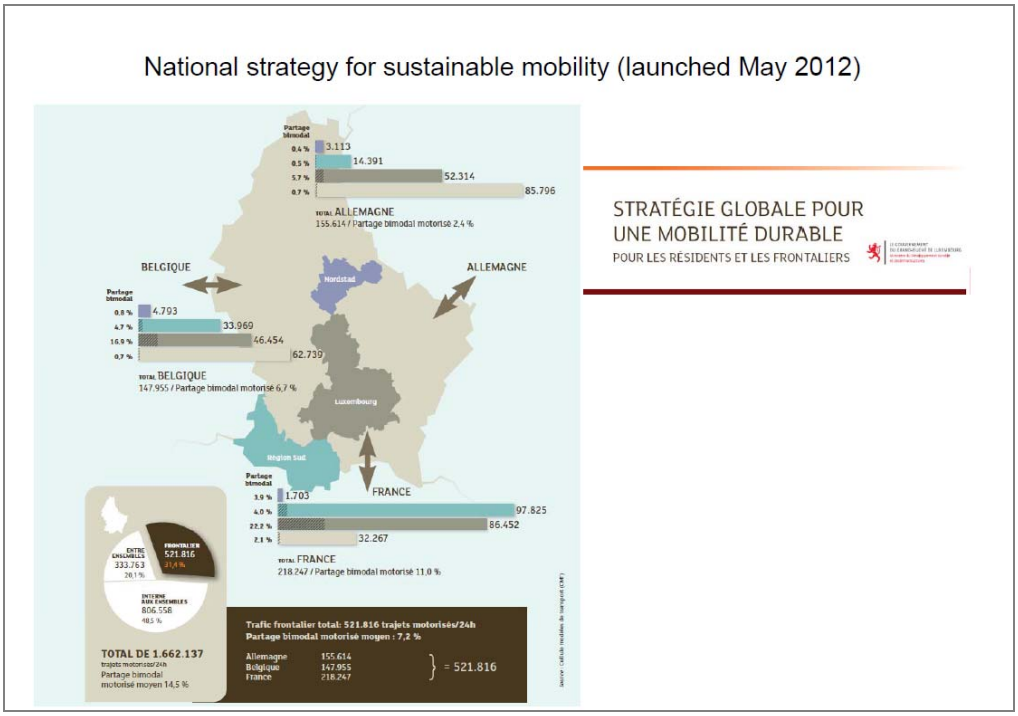

Figure 9: Completion example from the Luxembourg seminar: adding other sources to ESPON information

Another way of completing information is to add more relevant data to the existing ones. The following figure shows an example from the seminar in Vienna. The ESPON map (on the left), which shows information about temperature change on the NUTS 3 level, was supplemented with additional data. This example is also interesting because when including more detailed data, the speaker did not take a smaller administrative level, but the information was displayed as a raster graphic without administrative borders. This is a very clear example how specific target groups have specific information needs in terms of spatial resolution of the information, something that has to be taken into consideration by ECPs when designing dissemination activities.

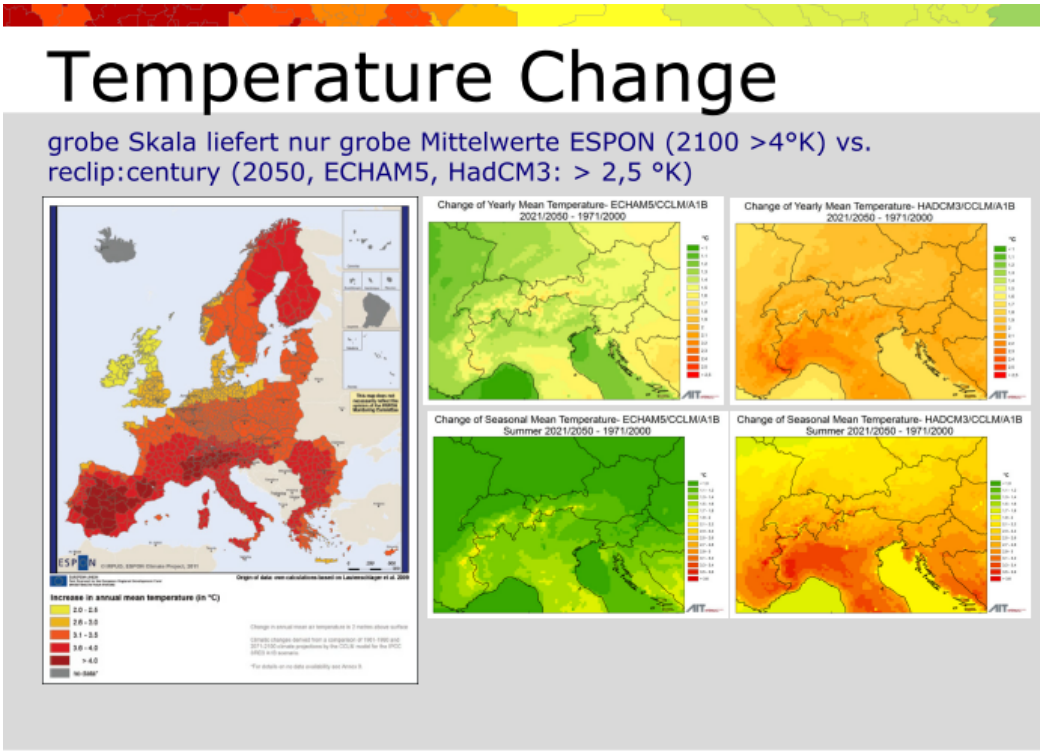

Figure 10: CoZiCo example: Completing Europe-wide information (ESPON/Climate project) with more detailed regional data

The Completion approach has also been applied by using the methodology provided by a project and redo the analysis on lower levels. This is what the Hungarian ECP did in an ECP publication about ESPON results for Hungary.[2] The following figure shows the cover page of this publication that features a map which, in addition to the ESPON results on NUTS 2 level (taken from the DEMIFER project), illustrates an analysis made on LAU 1 level.

The contents of this publication were stimulated by the SCALES project; however, it had to be produced outside the project and with national resources.

[2] Available online at http://www.espon.hu/Docs/ESPON_Publication_EN_Sum.pdf (Full version in Hungarian at http://www.espon.hu/Docs/ESPON_kiadvany_20111222.pdf)

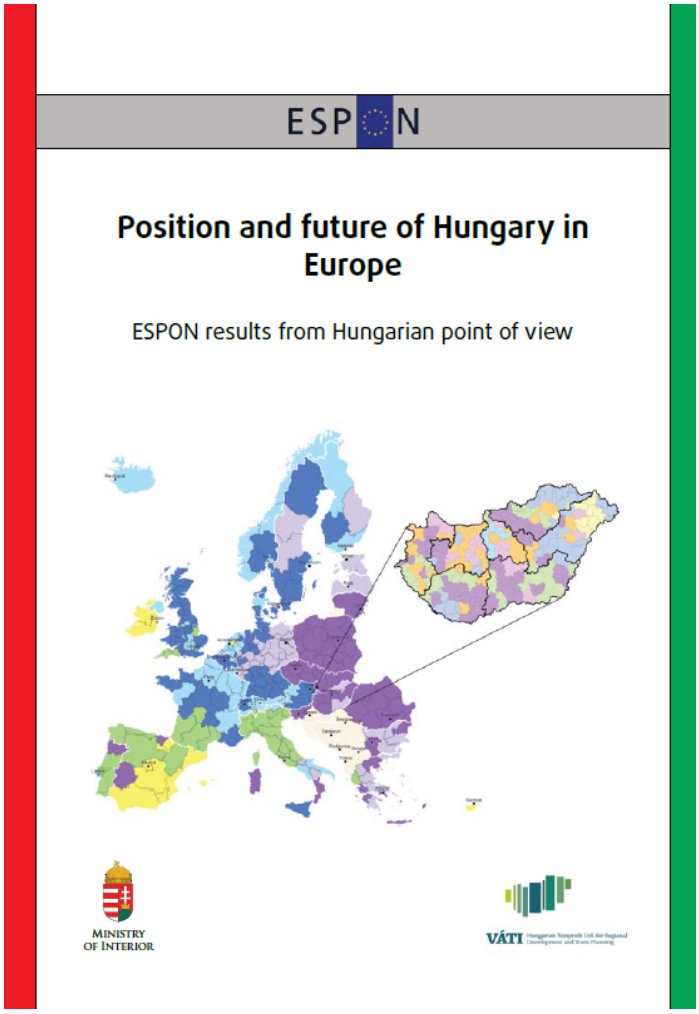

Figure 11: Cover page of Hungarian ESPON publication with a "Completion" example

ECPs need internal resources to either complete the information or to ask national experts to deliver additional information. This strategy might be useful but more demanding in terms of technical ability and financial resources.

1.3 Assessing the method through interactive seminars

Each seminar intended to address very pressing questions and to launch a debate in each country. At the same time, each topic referred to the scales problematic and targeted dissemination strategies have been developed. To do so, the seminars' topics relied on the main aspects of the territorial agenda. Topics were as follows:

For each seminar, a series of guiding questions were developed to structure the debate and to target the most important questions to be addressed on the basis of the very specific context. The following overview shows the topics for the individual seminars, the main scales challenge and the guiding questions addressed in this seminar.

In addition, ECPs colleagues were involved in each seminar. They had the task to bring an external output and to add to the 'comparison' dimension. The general approach and the interlinkages are summarised in Figure 12.

Topic	Country in charge	Main scale problematic	Guiding questions
Urban and rural dimension	Hungary	Mainly local and regional topic	What are the interdependences between metropolitan regions and their catchment areas? What are the challenges and opportunities for rural peripheries and which role have small and medium-sized towns? What does structural change mean for traditional agricultural areas?
Cities, regional development and planning (labelled through Polycentricity)	Luxembourg	- No ESPON information below the national level - High cross-border interdependencies	What is the role of polycentricity in Europe and in the Greater Region? What is the role of the cross-border dimension and how does it influence policies? What are the success factors for regional development?
Economy, innovation and transport	Switzerland + Liechtenstein	- Competencies mainly at Canton level - at the same time (due to high population density, small-scale spatial interrelations) need for high resolution spatial data & analysis (municipal level	What are the linkages between economic development and innovation? How will these factors influence the spatial structure? What are the related spatial challenges for spatial policy development on different spatial scales?
Climate change	Austria	- highly European or global issue - how to discuss it with national / regional stakeholders	Which aspects of climate change are discussed and relevant in the context of spatial planning? Which spheres (natural environment, population, housing etc.) are considered more affected? What capacities regarding "mitigation" and "adaptation" are described?
Final seminar	Germany	- Wrapping-up and disseminating the results of the SCALES project towards a relevant political audience	How can we use ESPON results for designing the INTERREG B programmes? Which conclusions can be drawn for designing the ESPON 2020 programme?

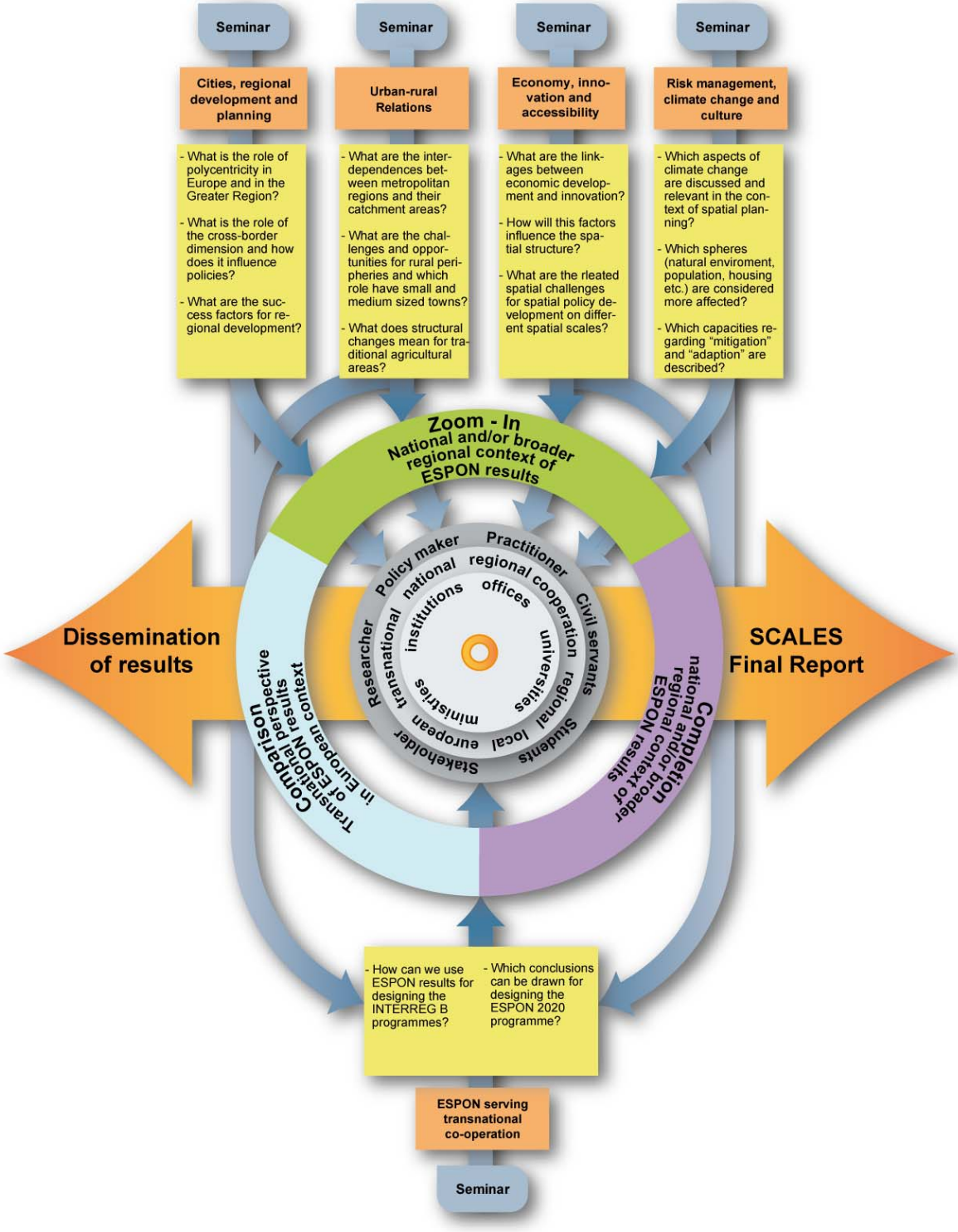

Figure 12: The SCALES approach through seminars and reports

2. Description of the implementation of the separate actions

In the SCALES tender, the five partners had agreed to organise five seminars throughout the project, one in each country and hosted by the respective TPG partner, each with a different focus on the topics and the question of scales.

The seminars were intended to provide an initial approach to enhance the usage of ESPON results and to give floor for discussion where the stakeholders from different levels can consider their experience and views on the related issues. They were supposed to bring together ESPON experts (from programme and project level), national and international experts for the specific topic of each event.

The seminars aimed at presenting results of ESPON projects of the ongoing or past programming period and at discussing how these results can be used on different territorial levels while at the same time testing different dissemination strategies and raising awareness of ESPON activities in stakeholders from different contexts.

2.1 Thematic scope of the seminars

The ESPON Scales seminars covered a very broad thematic range reflecting the main fields of European territorial development policy making[3]. Thus, the seminars focused on

- Urban-rural relationship (Budapest, ECP HU)
- Cities, regional development and planning (labelled through polycentricity (Luxembourg, ECP LU)
- Accessibility, innovation and economy (Bern, ECP CH/LI)
- Climate change and risk management (Vienna, ECP AT)
- ESPON's role in serving transnational cooperation (Berlin, ECP DE)

The seminar on urban-rural relationships (Hungary) dealt with the interdependencies between metropolitan regions and their catchment areas as well as with the challenges and opportunities of rural periphery and structural change in traditional agricultural areas. Taking place in Budapest, special attention was drawn to the fact that the relationship between rural and urban areas differs widely throughout Europe, most prominently between Western and Eastern member states. Besides focusing on the theme of urban-rural relationship the event presented the possible utilisation of ESPON results on each territorial scale. The findings of ESPON results extracted from EDORA,

[3] This policy is based mainly on the EU2020 Strategy, along with the European Spatial Development Perspective and the Territorial Agenda.

GEOSPECS, TIPTAP, TRACC, FOCI, EU-LUPA, SS-LR, SEMIGRA, RERISK and some additional results from DEMIFER, SGPTD, POLYCE, CLIMATE and METROBORDER were used to support the discussed points.

In Luxembourg, the seminar focussed on polycentric development in Europe, in Luxembourg and in its surrounding cross-border region ("Greater Region"). The seminar discussed how this concept shapes spatial planning at different scales, whether polycentricity can be measured and which governance tools can be developed to favour polycentricity. Polycentric development was stressed as the notion at the heart of political discussion not only at European level, but also in Luxembourg and its border regions at that very point of time. Therefore, the seminar contributed to the ongoing political reflections at the time. The content-related inputs refer to the results of the ESPON projects METROBORDER, ULYSSES but also to SGPTD, FOCI.

The seminar in Switzerland covered a lot of ground thematically: from accessibility to innovation to economy. The seminar discussed the linkages between these three topics, the related specific challenges for spatial policy development at different spatial scales and its impacts on Switzerland's spatial structure in future. The presented topics were seen as important factors in the national debates in Switzerland and Lichtenstein on spatial development, especially in the context of transportation/infrastructural planning and regional development or regional policy. In the course of the seminar, results from the ESPON projects TRACC, KIT, FOCI, SGPTD and the ESPON 2013 Database were presented and discussed.

The seminar in Vienna revolved around the challenges of climate change and risk management for spatial development in Europe. Climate change related results from selected projects (CLIMATE, RERISK and to a lesser extent EDORA and GEOSPECS) were presented, discussed and confronted with regional climate change signals to compare the effects of scale. Special emphasis was put on the spheres (forestry, tourism, infrastructure, ...) regarded as most affected as well as on mitigation and adaption capacities. Another focus of the seminar was to discuss the utility and relevance of ESPON results for spatial planning on national and regional level, in particular for Austria.

The seminar in Berlin was the last in the SCALES seminar series. As such, it was planned to be more political than scientific and to provide a sort of summary from the other seminars. Due to the time of the seminar – end of October 2012 – the focus was put on discussing on a political level the benefits from ESPON and potential necessary adjustments of the ESPON programme, since at this time the Multiannual Framework 2014-2020 as well as the new ESPON Programme would be discussed. It was decided to focus on INTERREG B regions since they have specific problems and tasks where ESPON findings could help; this potential of ESPON is however mostly not know to INTERREG stakeholders. Since currently

the most important issues in the INTERREG B programmes are transport/accessibility, climate change and innovation, a seminar programme was developed that provided insights into these topics.

2.2 Implementation and organisation

The five seminars took place in each of the participating countries from October 2011 to October 2012. Each event was organised by the respective ECP of the host country as a one-day seminar, lasting between 4.5 to 7 hours. Except from the seminar in Budapest, which was held in English, all other seminars used the national language (German and/or French) as working language with an English translation.

Although quite different in the seminar design and with diverse thematic focus, the seminars had common core elements. Each seminar started with a general presentation of the ESPON programme and introduction of the ESPON Scales project. Thereafter the focus was turned to the specific thematic priority of the event: Results from ongoing or finalized ESPON projects - relevant to the topics discussed - were presented while at the same time highlighting identified challenges with the scale of the presented results.

In most cases presentations took place in a lecture setting (see pictures in Figure 13) and were followed by more interactive elements. In all seminars special emphasis was put on involving different levels of decision making, as well as researchers and practitioners in the debate. Complementary, inputs from representatives of the ESPON contact points and questions from the audience contributed to the discussions.

Figure 13: Pictures illustrating lecture setting elements (Budapest and Berlin seminars)

Apart from this general procedure each seminar set other priorities in the workshop design:

The seminar in Budapest aimed at reaching the decision-makers at different levels. The seminar began with a brief overview on the on-going ESPON projects results and was followed by presentations of the Hungarian ECP on three challenges focusing on the theme of the seminar. In the second section four ESPON project stakeholders shared their experiences on the utilisation of ESPON results in a panel discussion involving the audience as well. The discussion brought together representatives of transnational, national, regional and local levels.

The main aim of the seminar in Luxembourg was to compare how stakeholders at different levels of decision making (local, national and cross-border as well as to executive and legislative branches) understand and implement polycentricity. A rather compact format was chosen to allow for the political decision makers to attend the whole seminar and not leave after their contributions. In the first half, different forms of polycentricity have been illustrated through ESPON results. The cross-border interdependencies are particularly important in this region. Therefore, having the presentation from an expert of the Vienna-Bratislava region offered a transnational exchange allowing a comparison of polycentricity between both cases. In the second half, four participants from different political spheres came together in a roundtable discussion. They compared the implementation of polycentricity at different spatial levels. In the end, the public contributed to the discussion.

The Bern seminar was organised along three thematic blocks, each one being devoted to one of the main topics. There were three presentations per thematic block. Generally, the intention was to start each block with insights and new results from ongoing ESPON projects. In order to generate a thematically overarching discussion, some of the three presentations per block had the task to combine or make references to the other main topics of the seminar. It was intended to have a good mix of European, national and regional perspectives. Each ECP had the opportunity to present a short “spotlight” from his or her national perspective, based on ESPON results. After each block there was enough room for questions and a plenary discussion.

The seminar in Vienna was orientated to national and regional policy makers and stakeholders from the public administration, a scientific and research public and private consultants who deal with Climate and/or ESPON projects. This seminar in Vienna was organised by the ÖROK and the ÖIR in cooperation and followed a more interactive concept (see pictures in Figure 14) . A lecture on climate change served as a starting point of the event. This was followed by a world café session where the benefit of ESPON maps were reviewed and discussed by the participants. The world café method was used for a hands-on discussion on the practicability of ESPON maps. Participants could discuss in groups along five exemplary maps of the projects CLIMATE and RERISK and add ideas for the content or the dissemination method. The afternoon started with a fishbowl

discussion, in which three experts (researcher, practitioner and civil servant) discussed the role of spatial planning in climate change and adaptation strategies with active participation of the ECPs and the audience. Finally, the participants discussed in four different working groups their expectations regarding and ESPON.

Figure 14: Pictures illustrating interactive elements at the Vienna seminar (Fish Bowl and World Café)

The aim of the Berlin seminar was to foster the link between ESPON and INTERREG and to make ESPON known to persons and institutions which did not have many contacts with ESPON so far. This was done by bringing together stakeholders from the ESPON programme and ESPON projects as well as stakeholders from the INTERRG programme administration and INTERREG regions, but also experts from the regional government authorities that deal with European/transnational questions or with the topics transport/accessibility, innovation and/or climate change. To achieve this aim, the seminar wanted to show the potential benefits of ESPON research through concrete examples, especially by illustrating the results for the German INTERREG areas and for the specific INTERREG spheres of activity.

The seminar started with presentations from different ESPON projects that deal with the topics transport, innovation and climate, which are of special interest for INTERREG B. After this, introductory presentations gave an insight into several ESPON projects that were started on the initiative of INTERREG cooperation areas and that are linked to German cooperation areas in terms of contents or territory. On this basis, several ESPON and INTERREG actors discussed with the audience ideas how to use ESPON results for shaping the INTERREG B programmes. During the last seminar session, a group of different ESPON actors reflected on conclusions to be drawn from the transnational experience for the ESPON 2020 programme.

The use of an external facilitator had proved to be very helpful for the seminar, especially since it had been a facilitator who knows both ESPON and INTERREG and who therefore presented some sort of a link between the two programmes.

The speakers who presented ESPON-INTERREG projects and who also discussed the relation between the two programmes during a panel discussion also represented this link. Their assessment of ESPON benefits and their ideas for potential improvements were very supportive since-knowing and working for both programmes-they provided a rather unbiased view on ESPON.

The interpretation that was used during the seminar was very important, even if the majority of the seminar participants did not use it; several important stakeholders of transnational cooperation who made valuable contributions would otherwise not have been able to join the seminar and the discussions.

2.3 Involvement of stakeholders and awareness raising in ESPON

It was one of the main objectives of this project to involve policy makers of all levels (global, transnational, national, regional and local) as well as practitioners, the private sector, the scientific community and the general public in the seminar discussions. Their participation should contribute to stakeholder-oriented activities on national, regional and local level in order to raise or deepen awareness and stimulate the use of results of ESPON projects and thus to stimulate interest – in the sense of bottom-up approaches – in targeted analysis proposals under the ESPON Programme.

The seminars succeeded in bringing together a wide range of different stakeholders in fruitful discussions. While some seminars targeted primarily decision-makers of the political and administrative sphere, other seminars put emphasis on reaching civil servants, researchers and practitioners.

The participants experienced the diversity of the ESPON programme by being introduced to many different ESPON projects – applied research and targeted analyses alike – and their results. The attendees were encouraged to discuss the usability of these results in their daily work, especially in respect to the different scales. In this sense, the seminars stimulated the use of ESPON results and provided a platform for stakeholders from different levels to consider their experience and views on the related issues. Thus, the seminars made sure that national, regional and local stakeholders were reached and involved in the process of scale-oriented reflection of ESPON results.

3. Presentation of the main outcomes and achievements

The project's main aim is to communicate the ESPON results by taking into account the specificities of the dissemination target group, their local specificities and the relevant scale to address ESPON topics. For this purpose, five seminars were organised relating the Europe-wide spatial analyses of the ESPON programme to each participating country..

Conclusions were then drawn from the findings of the seminars in order to solve the problem of different data levels and to apply the ESPON results to various spatial levels. In doing so, the question of how the various thematic clusters and related policy areas are related to the various spatial levels from the point of view of spatial monitoring, were analysed: For some thematic clusters, relating ESPON results to the local level seems to be better than to the national level and vice versa; these content related results are described in chapter 3.2.)

Chapter 4 summarises these conclusions as lessons learnt for the ESPON programme in general and for national dissemination in particular. Chapter 3.1 provides an overview of the knowledge gained from the seminar feedback.

3.1 Seminar participation and feedback

During the project, the project partners developed a joint questionnaire which was distributed to the participants at all seminars.

Participation was relatively good in all partner countries: 52 participants in Germany, 41 participants in Switzerland, 36 in Vienna, 59 in Luxembourg and 37 in Hungary (Figure 15). Participation numbers include speakers and SCALES TPG partners, however the TPG partners did not fill out the seminar questionnaires.

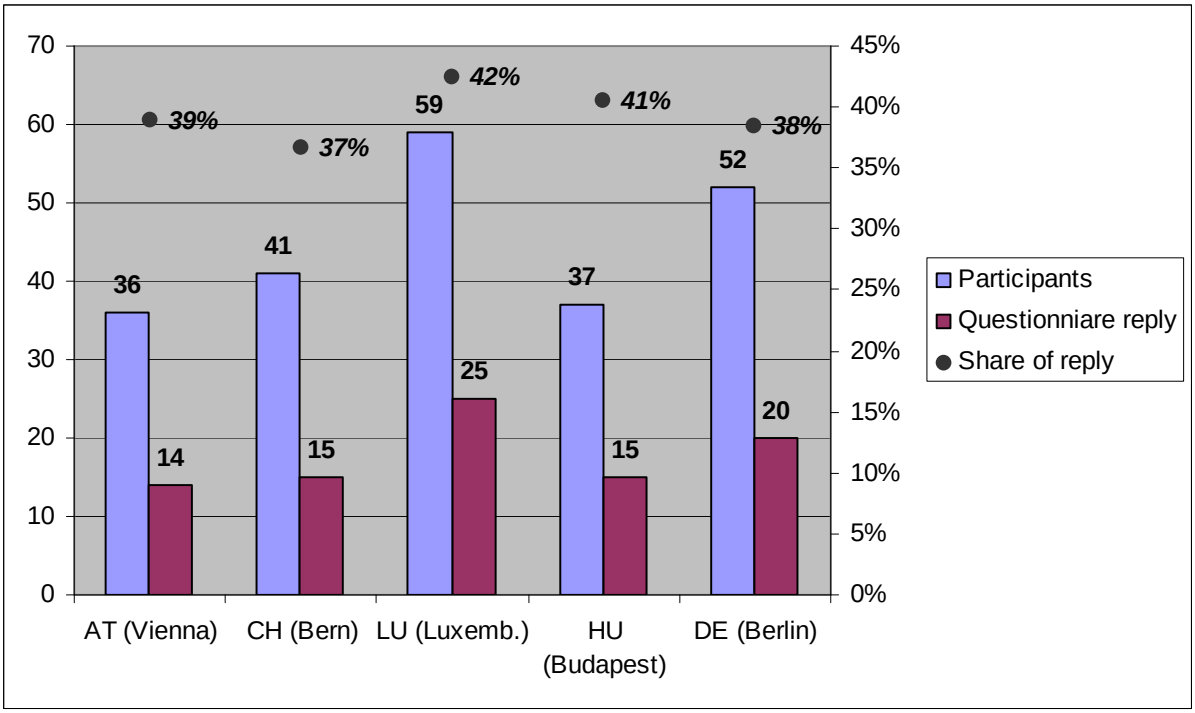

Figure 15: Number of seminar participants (including TPG members), number of questionnaire respondents and share of questionnaire reply

Between 33% and 39% of the participants filled in a questionnaire, which makes a total of 89 questionnaire respondents.

The following subchapters will present some results of the participants' feedback. For the functions and the origin of the participants (subchapter 3.1.1), this is based not on the questionnaires, but on an analysis of the participants' lists. In all other subchapters, the data are based on the questionnaires, which in some cases allowed multiple answers. The feedback is given for the individual seminars only if there were relevant differences, otherwise the replies of all seminars are given as total.

The complete questionnaire can be found in **Fehler! Verweisquelle konnte nicht gefunden werden.**.

3.1.1 Functions and origins of seminar participants

Looking at all seminars (Figure 16), 85% of the participants came from the project partner countries Germany, Austria, Hungary, Luxembourg, Switzerland and Liechtenstein, which reflects the fact that the seminars were organised as national seminars of the ESPON Contact Points.

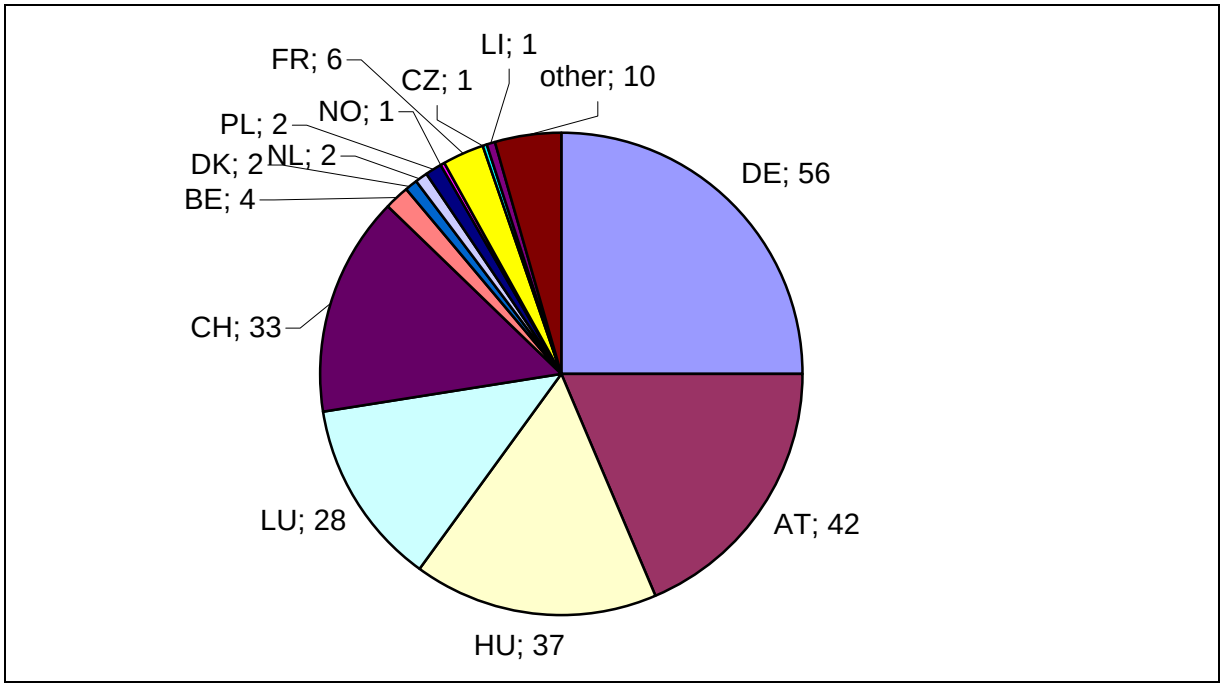

Figure 16: Origin of seminar participants (countries)

If we do not look at the individual countries, but rather at the relation to the country where the seminar took place (Figure 17), it is visible that the participants came mainly from the country itself, but also from neighbouring countries. In addition, a small proportion of participants from farer away was also found.

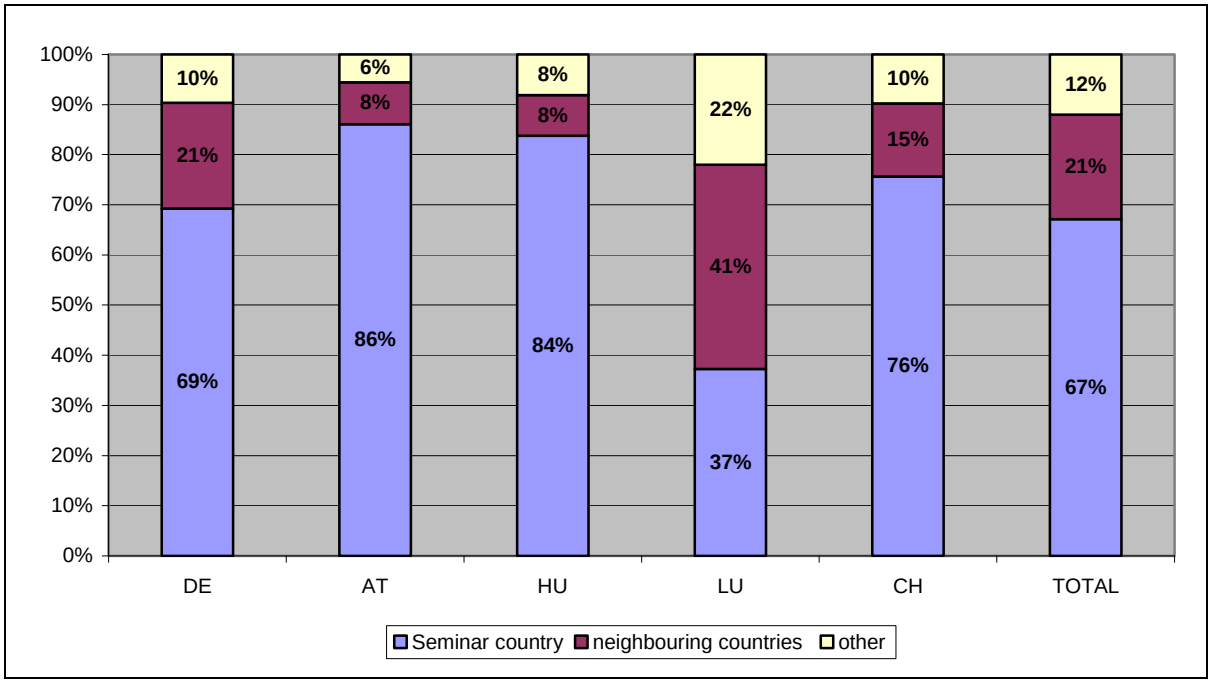

Figure 17: Origin of seminar participants (seminar country, neighbouring countries or other)

Looking at the function of the participants (Figure 18), it can be seen that the focus of the seminars is clearly reflected by the participants: The more scientific-oriented seminars in Vienna and Budapest attracted a much higher number of scientific participants than the more politically-oriented seminars in Bern, Berlin and (partly) Luxembourg.

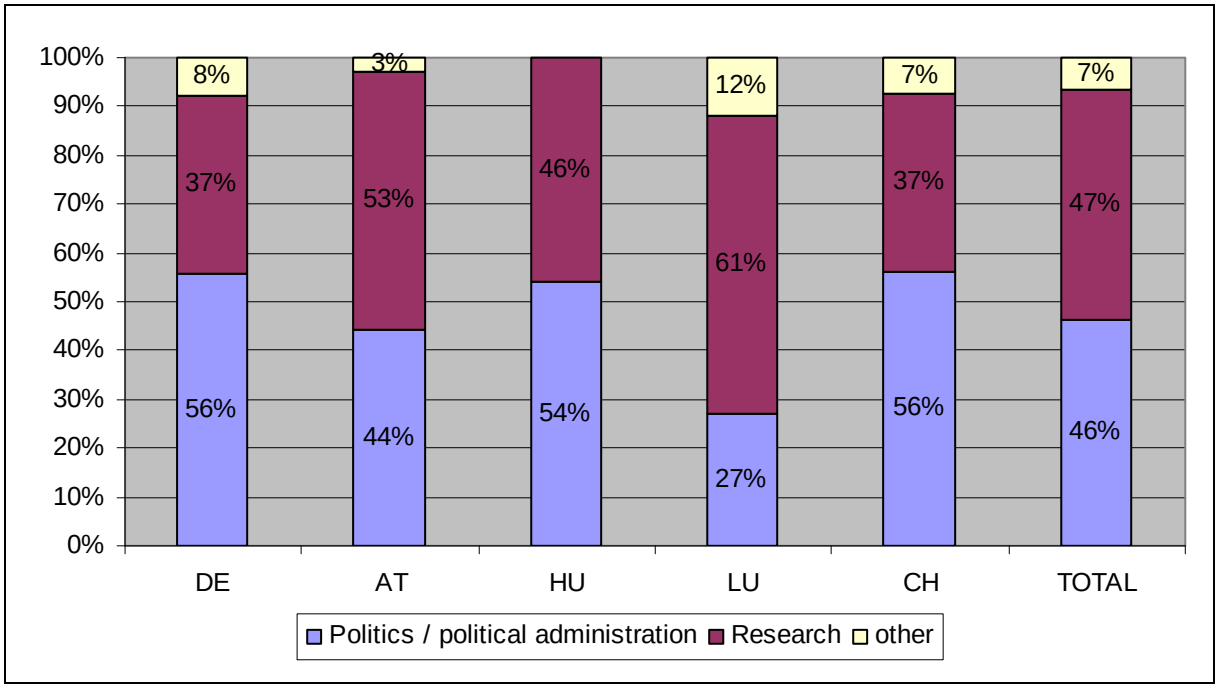

Figure 18: Function of seminar participants

3.1.2 Scales-specific questions

As to the territorial level of concern (see Figure 19), the very low percentage of respondents that are interested in transnational questions in Hungary and Switzerland stands out. Looking at the total picture, there is no clear preference for any territorial level, with the local level being of lowest importance. This figure represents relatively good news for the ESPON programme: local scale is not of primarily interest of the participants. Regional, national and European information are important. Transnational information seems obviously important in cross-border context (Luxembourg) as well as when discussing INTERREG programmes (like during the Berlin seminar).

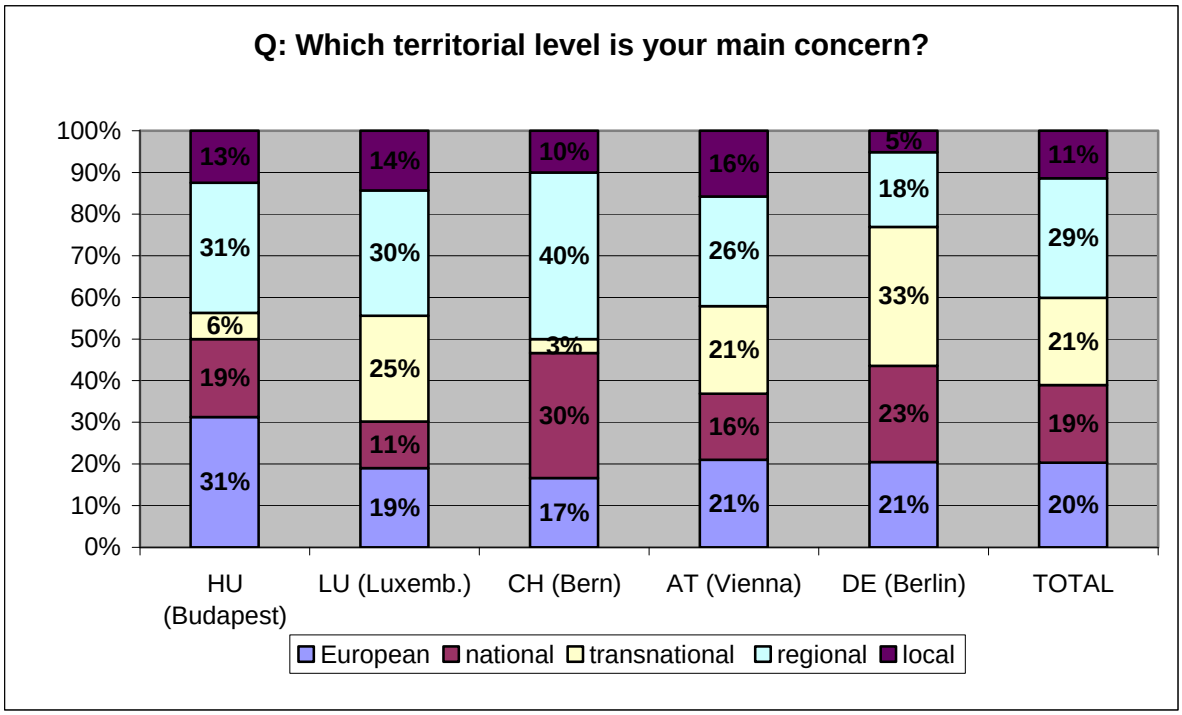

Figure 19: Territorial level of interest for questionnaire respondents (share of questionnaire replies, multiple answers possible)

3.1.3 Knowing and using ESPON

Figure 20 shows that most of the participants had already known about ESPON before visiting the seminars.

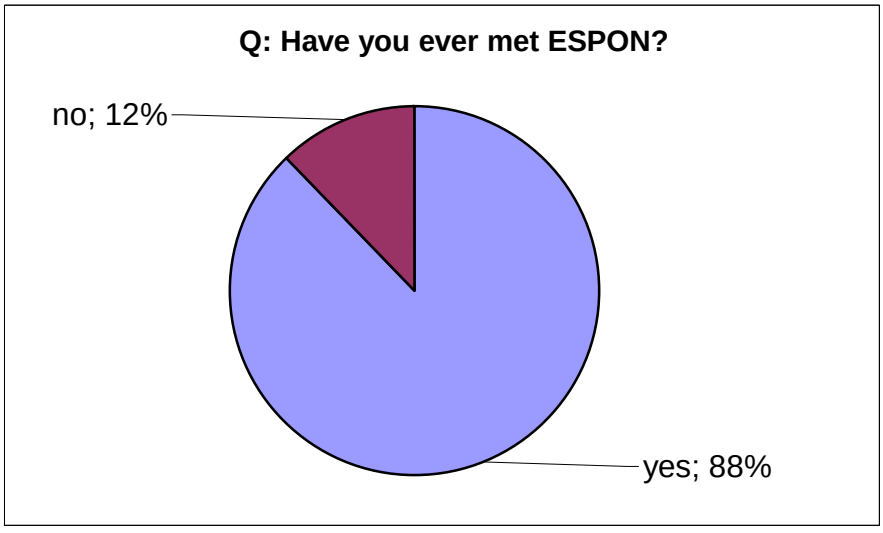

Figure 20: ESPON knowledge of questionnaire respondents (total of all seminars)

As to the means of knowing ESPON, there is a wide variety of means and no clear preference (see Figure 21).

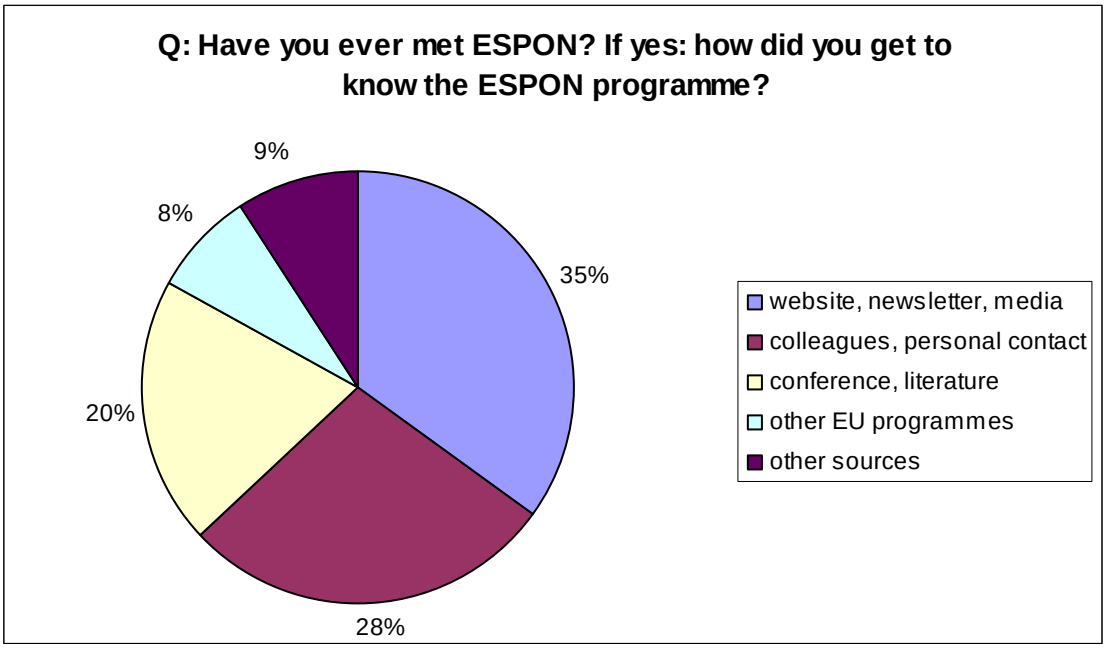

Figure 21: Espon knowledge (total of all seminars, share of questionnaire replies, multiple answers possible)

Figure 22 shows that ESPON was not only known, but also used in the work by 64% of the questionnaire respondents; 28% of the respondents have not used ESPON results so far, but are planning to do so.

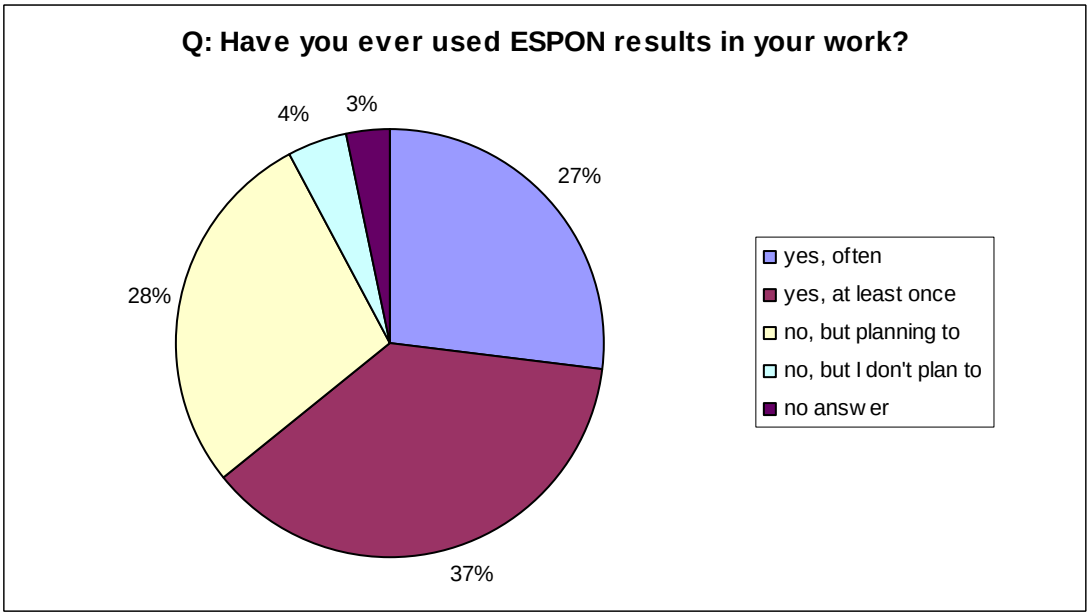

Figure 22: Use of ESPON results in work (total of all seminars, share of questionnaire replies, multiple answers possible)

3.1.4 ESPON deliveries and dissemination means

The following figures shows that out of all ESPON deliveries, maps are valued most (32% of all replies). Political recommendations are the least preferred (13% of all replies). A very interesting observation is that the participants from the more political seminars (DE, LU and CH) showed no exceptional preference for political recommendations - which were least preferred anyway at all seminars. Maps and analysis in reports were valued highest..

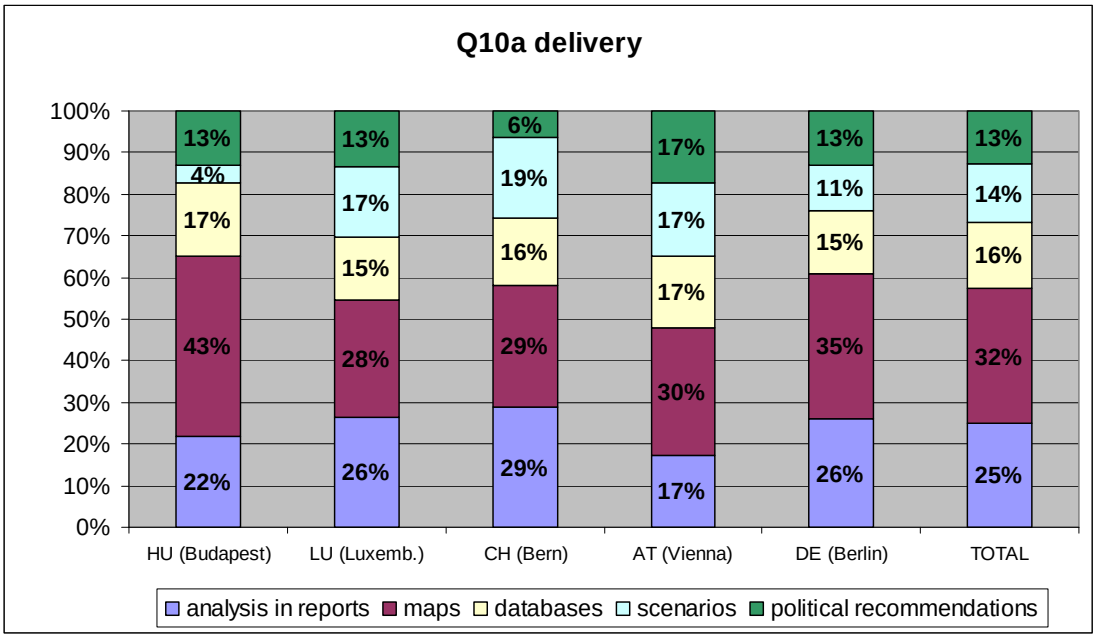

Figure 23: Assessment of usefulness of ESPON deliveries (total of all seminars, share of questionnaire replies, multiple answers possible)

The questionnaire asked for an assessment of the usefulness of different means of disseminating ESPON results (Figure 24). The participants from the more scientific-oriented seminars (Budapest, Vienna) showed a strong preference for publications, whereas the participants from the other seminars preferred direct means of dissemination (workshops and seminars).

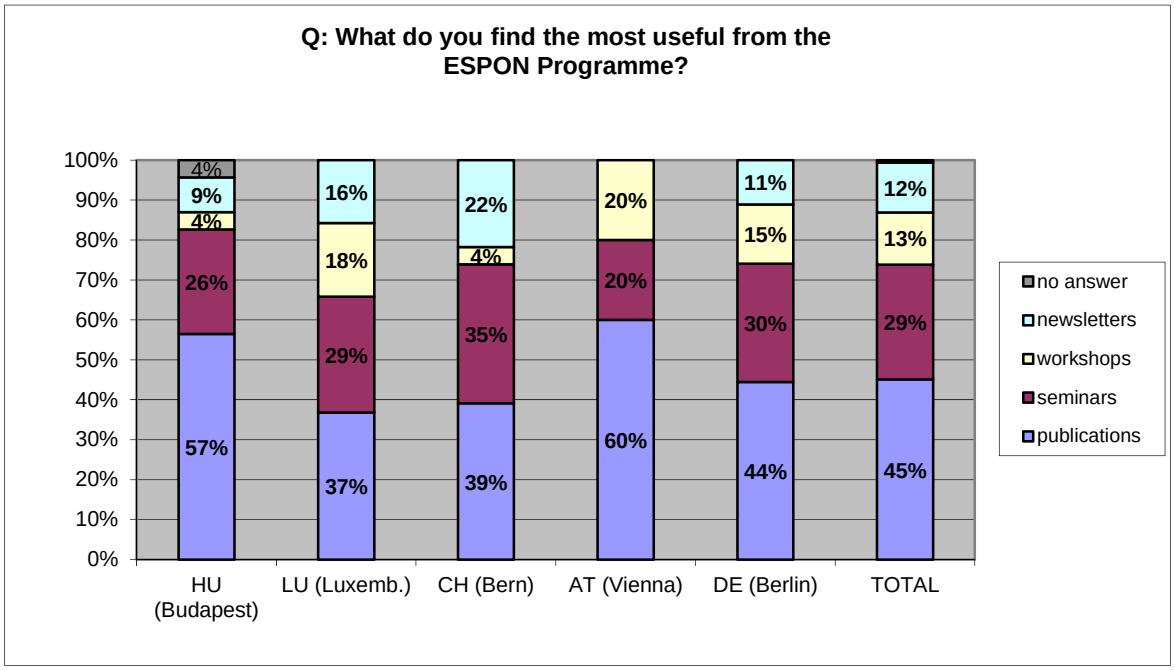

Figure 24: Assessment of usefulness of ESPON dissemination means (share of questionnaire replies, multiple answers possible)

The topics that are of most importance for the future ESPON work are very diverse and can only be interpreted in the framework of the individual seminar. The detailed results for these questions are found in the individual seminar reports.

The support given by the seminar was rated by 49,4 % of the respondents with 4 or 5 out of 5 points (Figure 25).

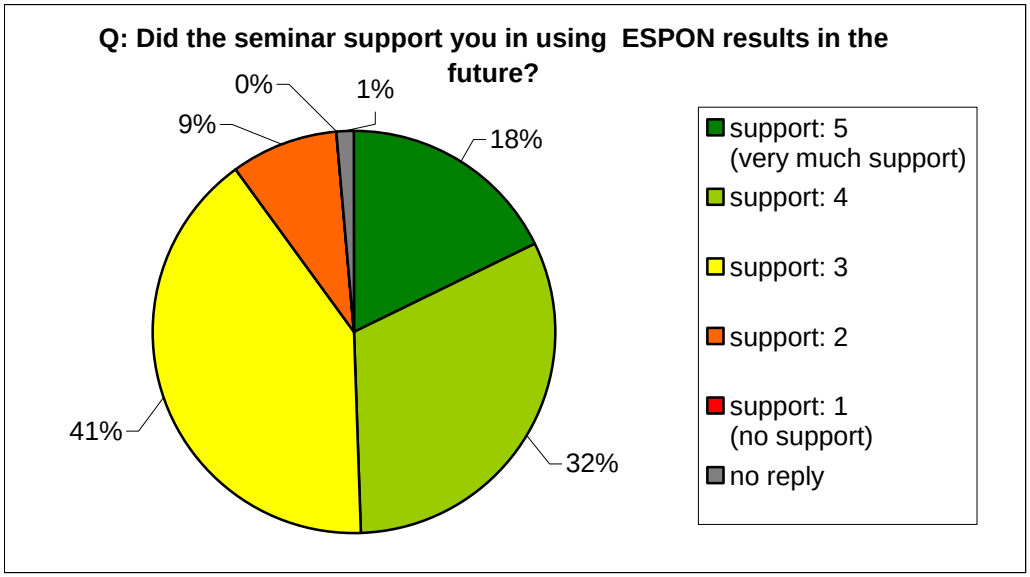

Figure 25: Assessment of support given by the seminar

3.2 Content related results

3.2.1 Urban-rural relations (Hungary)

As the updated Territorial State and Perspectives of the European Union states, the relationship between rural and urban areas differs widely throughout Europe. First of all, a fundamental difference exists concerning urban-rural relations in Western and Eastern member states. This is due to the special characteristics of the latter group such as the less developed “culture” and tradition of cooperation and partnership between municipalities, together with suburbanisation in the East where urban sprawl has boomed in recent decades. Although the distinction between rural and urban areas is becoming increasingly blurred, in particular rural areas close to urban centres where a process of integration of rural and urban spaces is taking place, more remote rural areas with low population density and weak economic background face increasing challenges. The polarisation between capital regions and their wider hinterland is also growing.

Relevant policy documents such as TA2020 also recognises the diverse links that urban and rural territories throughout Europe can have with each other, ranging from peri-urban to peripheral rural regions. The TA2020 also emphasises that urban-rural interdependence should be recognised through integrated governance and planning based on broad partnership. It considers small and medium-sized towns as crucial players in rural areas; therefore it is important to improve the accessibility of urban centres from related rural territories to ensure the necessary availability of job opportunities and services of general interest. The document mentions metropolitan regions which should also be aware their responsibility for the development of their wider surroundings.

The aim of the seminar in Budapest was to address these issues. Besides focusing on the theme of urban-rural relationship the event presented the possible utilisation of ESPON results on each territorial scale.

The Hungarian seminar focused on how the ESPON programme can contribute to tackling the following challenges, which were the guiding questions of the seminar:

- **What are the interdependences between metropolitan regions and their catchment areas?**
    - What are the impacts of metropolitan regions on their wider influence areas?
    - How to manage uncoordinated territorial expansion in immediate surroundings of metropolitan regions?
- **What are the challenges and opportunities for rural peripheries and which role have small and medium-sized towns?**

  - What are the main challenges the different types of rural peripheral areas facing with?
  - What can be the role of small and medium size towns in tackling these challenges?

- **What does structural change mean for traditional agricultural areas?**
  - How important is the rural employment for Europe?
  - How can these areas adapt to the changing economic environment?

As part of the seminar programme, three scales of urban-rural relations were demonstrated by the Hungarian ECP and with reflections from partner ECPs related to the topic. The content of the presentations can be summarised as follows:

Interdependence between cities and their catchment areas

As the first theme, the main interrelationships between metropolitan regions and their catchment areas were investigated. The scale can be defined on two levels: immediate surroundings and wider influence areas. The findings of former and actual ESPON results extracted from FOCI, SS-LR, RERISK, and some additional results from CLIMATE and METROBORDER were used and capitalised from local-regional (immediate surrounding) to macroregional (wider influence area) scales. As part of this process, a good delimitation should be utilized for both categories of impact areas. In our concept, these areas are surroundings of municipalities grouped together according to their functional orientations in order to satisfy the daily operational conditions of people and companies. So we can define them as functional urban areas (FUAs) as the FOCI project uses this terminology. Approximation of wider influence area can be based on MEGA distribution by using a gravity model. The abovementioned approach was used to compare the status of Budapest and Munich, in terms of these interrelationships. Furthermore, similarities and differences in the structures and functionalities of the two catchment areas can be revealed. While Budapest is a national growth pole surrounded by traditional rural areas, Munich is a central service centre surrounded by industrialized regional hinterlands. A completion method as a potential tool for measuring the impact area was involved from the evaluation report of State and perspectives of the Hungarian Settlement Network marking out the catchment areas by Local Labor Markets. An additional map was created about the influence areas based on their population. For comparison, Munich was the counterpoint of Budapest. It was also an element of the discussion to unfold the main drivers of urban sprawl and its major challenges, and relate their effects to the hinterlands. Based on the results of the projects considered the impacts are related to demographic changes, land use issues, transport

organisation as well as pollution. Among the challenges weak land use planning, public subsidiaries for home ownership, poor enforcement of existing plans can be mentioned. According to the projects considered maintaining a high ratio of public transport trips requires high densities and low housing prices requires an increase in land supply at densities set by demand generating a large suburban expansion. City boundaries are becoming diffuse increasing the complexity of levels of governance. There is a need for implementation of stronger policies to control urban sprawl. Land price is an important driver very often not controlled by policies.

The Luxemburgish ECP presented the national and cross border results which can be compared by the Budapest and Munich examples.

Rural peripheries – challenges and opportunities and the role of small- and medium size towns

The presentation concentrated on the main problems and challenges rural peripheries are facing with and some development opportunities. This was based mainly on the findings of EDORA, GEOSPECS and SS-LR projects completed by DEMIFER, SGPTD and POLYCE results. The main challenges of rural areas can be identified as follows: differing nature of urban-rural relation, changing profile of urban and rural areas, weak availability of central functions, social processes, environmental challenges, effects of the global economic crisis. Core-periphery relations in terms of urban-rural connections both at macro-regional and national as well as at regional/local levels were analysed. The issue of peripherality and the related challenges was concerned firstly at macro regional and national levels, with special emphasis on types of rural regions relevant for core-periphery relationship. Outer peripheries which are mainly remote rural areas face with the challenge of ageing, outmigration (especially educated young people), deterioration of business economy and labour shortages. Internal peripheries are located mostly in Central-Eastern and South-Eastern Europe. Their peripherality depends on the poor accessibility and lack of real urban centres. Due to the unfavourable social conditions they face the challenges of social exclusion and ethnic segregation. Due to the fact of data and map constraints one of the main sources for indentifying the challenges at local/regional levels were the case studies collected from EDORA and TeDi projects. The synthesis table includes information on the characteristics and settlement network of rural case study areas, the main challenges they are facing with as well as the development opportunities and potentials. Based on this the relationship between the type of settlement network and the challenges can be defined. In addition, it makes possible to indentify the role of small and medium-sized towns in tackling the challenges and utilising the opportunities. The opportunities such as territorial cooperation, tourism development, economic diversification, strengthening of

residential and leisure function can support the stakeholders at lower territorial levels as best practices to be used in the future as alternative development solutions. At that time of the seminar (October 2011) there was not enough information about topics of small and medium sized towns. The project TOWN, which started in February 2012, has closed these gaps.

The German ECP completed the ESPON project results by zooming into the national findings of Germany and presented the processes at lower territorial scale.

Structural change in traditional agricultural areas

The presentation built mainly on the findings of EDORA project and focussed on the changing urban-rural relationship from economic point of view and the special challenges these areas facing with. The project stated that due to the economic processes the functional interdependencies between rural and urban areas will be much more pronounced in the future in the form of employment, counter-urbanization, commuting patterns and consumption countryside (tourism, recreation, food niches, services). It has been found that this process will not change rural labour markets of all rural areas equally: the functional interdependencies between rural and urban areas will be more pronounced in rural labour markets of more accessible rural areas than in more remote rural areas. To explore the economic and employment issues related to these areas the structural types (which highlight the transformations affecting the agrarian economy and society, and of the increasing impact of global economic forces) developed by the EDORA project was used. The presentation emphasised the results at macro (European, national) and micro (regional, local) levels by using the maps, graphs as well as one of the case studies of the project. Distinction was made between the different regions of Europe with special attention to Hungary and the other SCALES countries. Manufacturing is quite important in the non-urban regions of *Austria* but in the most of rural regions countryside public goods, environmental or cultural assets, or local quality products are the basis of activities, in *Germany* the Consumption Countryside regions have an important role and no „Agrarian regions" can be found. Based on the data the importance of Agrarian regions is evident in *Hungary*. In *Luxemburg* comprised of a single NUTS 3 region belongs to the consumption countryside type.

According to EDORA Final Report both geographic levels should be taken into account in Cohesion Policy in rural areas (macro-level: reflecting persistent systematic variation, micro-level, addressing aspatial variations in territorial assets which constrain localities' responses to exogenous drivers of change). Using a regional typology has a strategic role in the design and implementation of carefully targeted horizontal programmes. Economic diversification of Agrarian

regions is one of the key objectives for these programmes in order to strengthen the adaptation capacity of these areas to the changing economic environment.

As a comparison the Swiss ECP presented the situation of Switzerland by using the findings of EDORA and TeDi projects completed by national results.

Panel discussion

The aim of the panel discussion was to explore the concerns and experiences of stakeholders at different territorial levels on the usage of ESPON results. Representatives of national, transnational, regional and local level were invited in order to better understand the usability of ESPON results on each level.

The project's idea comes from the fact that disseminating ESPON results goes along with several challenges with regard to scales; especially stakeholders from the sub-national level often question the relevance of ESPON for their purposes.

Taking into account that the attendants mainly came from the scientific sphere the afternoon session tried to connect the researchers and the stakeholders, namely the users of results. The answers to the question "What is the added value of the ESPON programme concerning urban-rural relation?" can be concluded as follows:

- Analysing of the urban-rural relationship is a great challenge, every new results coming from ESPON could be useful for future planning of the metropolitan areas, because new information helps the researchers to approach the problems from different views. Practitioners and stakeholders need a unique and clear delimitation method of metropolitan regions, ESPON can contribute to this.
- The project's main aim is not making new typologies, rather utilising and disseminating the outcoming results. The typologies cannot be permanent because of the continuously changing regions. For researchers ESPON projects can provide new ideas for development of methodologies by using them in their own contexts.
- Concerning urban-rural relationship it is of a great importance that we the expressions have been distinguished: rural is not equal to agricultural.
- ESPON can contribute to avoiding that urban-rural relationship and the delimitation of catchment area becomes only an academic problem by raising the awareness on political analyses and territorial consequences. ESPON is a process towards creativity.

3.2.2 Cities, regional development and planning (Luxembourg)

Content related results ('polycentric development')

Polycentricity is a key concept when considering cities, regional development and planning. Whether at national, cross-border or European level, several key political documents promote polycentricity. In the Greater Region building a "cross-border polycentric metropolitan" region is one of the most important strategy on the agenda. As the whole Grand-Duchy is comprised in the Greater Region and faces high cross-border interdependencies mainly in the south, this concept plays also an important role at national level. It is for example a key concept in the national integrative spatial planning concept, "IVL" (gouvernement du Grand Duché de Luxembourg, 2004). Moreover, the Territorial agenda promotes at European level a "polycentric and balanced territorial development" (Territorial agenda 2020, 2011: 7).

The aim of this seminar was to take stock of the ESPON results to discuss the role of polycentricity in regional development at cross-border and national level. Discussing these questions under the prism of polycentricity proved to be very interesting as this concept is well understood by policy makers. It also receives different implementations and interpretations, so that the debate was vivid and fruitful.

Concretely, polycentricity poses several questions:

- To which extent should the different centres of the same polycentric system be similar or complementary?
- Which distance should exist between the centres to ensure sufficient interaction between them?
- Which policy fields should be taken into account when considering polycentricity (economy, metropolitan quality, transport, demography)?

These questions have been reflected on the basis of ESPON results and during the debate with policy makers. Three aspects structured the debate.

What role for polycentricity in Europe and in the Greater Region?

The discussions during the round table showed that depending on the territorial level, polycentricity can receive different implementations ("multi-level polycentricity").

In Luxembourg, two dimensions of polycentricity have been discussed. At first, the discussion compared the importance of the different urban centres. While Luxembourg-city remains the most important urban centre in terms of wealth, demography and metropolitan functions, two other urban centres receive a lot of political interest (Nordstad and Esch-sur-Alzette). Different initiatives have been launched in this respect to ensure the development of these "three centres of

national interest". This objective is for example implemented by the national spatial planning concept and the decentralisation of major research centres and administrations in Esch/Belval. The Nordstad, association of six communes, aims at developing an urban centre complementary to Luxembourg city and to Esch/Belval in the rural environment of the north of the country. The second understanding of polycentricity underlined the current challenges faced by rural areas in Luxembourg. The expression "desertification of the country-side" has been coined. In this respect, different policy options to face this question have been discussed. The state could for instance have more competences regarding land-use.

At cross-border level, polycentricity plays a role in the everyday life of citizens. The 120.000 workers commuting to Luxembourg every day have been labelled 'polycentric inhabitants'. Concrete questions arise from this phenomenon. They relate for example to financing trains, busses for commuters or financing schools for their children in their home country. In several cases, bilateral agreements and/or projects exist to balance the development. Polycentricity has been discussed as a concept that should be further used to balance the development between the different regions. A new step could be undertaken by developing a common cross-border spatial planning concept as suggested by the Metroborder strategy launched at the level of the Summit of the Executives (main political cross-border cooperation institution of the Greater Region).

At European level, participants agreed that Luxembourg is still well positioned, even being hit by the financial crisis. The political aim remains to reinforce its position in comparison to other metropolitan centres. A common cross-border spatial planning concept is considered in this respect as a relevant strategy. Luxembourg's positioning should be reinforced, according to participants especially in the fields of rail and air accessibility, research and development.

The cross-border dimension: which role, how does it influence policies?

Either working at local level (communes) or at national level, the cross-border dimension is very often taken into account by policy makers. These questions are prominent in communes close to a border where specific cooperations have been developed (ex.: European Pole of Development "PED", Alzette-Belval European Grouping for Territorial Cooperation). At national level, cross-border questions are also important as numerous policies (ex.: transport, spatial planning, housing, social security) are influenced by cross-border interdependencies.

Several aspects have been put forward in the debate as important elements for future cross-border projects:

- The ESPON project Metroborder is considered as a common basis for political debate, not only in the Greater Region but also in Luxembourg.

- Some decision makers speak about a “cross-border identity” as a political request to improve the cooperation.
- Further support of the EU is crucial. In this respect, the question has been raised whether the INTERREG funds could be managed in the future at regional/cross-border level as it is the case in some European regions. At the moment, national level is responsible for managing the funds. The European Grouping for Territorial cooperation (EGTC) is considered as being a major tool to involve directly the communes in the cross-border institutions (ex.: EGTC “Alzette-Belval” involving mostly communes from France and Luxembourg).
- At Greater Region level, an important part of Luxembourg’s wealth is created by commuters. Therefore, some specific needs arise in the surrounding regions (e.g. infrastructure, public services). In this polycentric context, different policy options have been discussed to balance the cross-border development (e.g. common regional fund).

Which success factors for regional development?

Success factors to implement polycentricity in the regional development are mainly to be found in the field of governance. The discussions stressed the need for a political vision for the whole region. The Metroborder project is one important step in this process that the policy makers should concretise. In this respect, the political process will have to deal with the sensitive question of complementarities in the region. Therefore, evaluating strengths and weaknesses of each region could be an important step forward. Participants discussed the example of Copenhague/Malmö were Malmö closed its airport to stop the competition between both airports and to reinforce the accessibility in Copenhague. A bridge has been built in 2000 between these cities, flows raised considerably as well as the degree of connectivity of the region abroad.

Some policy makers stressed the importance of a cross-border “Identity” as one element to strengthen the identification degree of the cross-border space.

Finally, one of the most important barriers to cross-border cooperation are the heterogeneous competences between partners on both sides of the border. Therefore, multi-level governance is in this context not a buzzword, rather a very concrete strategy to implement. As spatial planning is a policy relating to a wide range of other cross-border interdependencies (e.g. transport, labour market), developing a common spatial planning concept could be another success factor in this region.

3.2.3 Economy, Innovation and Accessibility (Switzerland)

In an early stage of the SCALES project, it was foreseen to organize one seminar on Economy and Innovation plus another one on Accessibility. This had to be adjusted later in order to make it compatible with the actual number of seminars. Combining Economy, Innovation and Accessibility was a thoughtful decision and made perfectly sense for the Swiss seminar. Switzerland, as a medium-sized, landlocked and partly mountainous country with little natural riches (besides an attractive countryside and water power), always strongly depended on a high innovation rate and good accessibility in order to sustain the local and national economy. A lot of investments went into infrastructure, and national transportation policy permanently ranks high on the political agenda. So the more general context itself provided an ideal setting for an exchange of latest scientific results from the national research community and the international dimension provided by ESPON.

This led to the following Guiding Questions for the seminar:

- What are the linkages between accessibility, economic development and innovation?
- How are these factors influencing Switzerland's spatial structure in the future?
- What are the related specific challenges for spatial policy development at different spatial scales?

During the seminar it became clear that, generally, the discussion on accessibility has already achieved a very „mature" stage – there is a variety of results available, be it from scientific organizations, private consultants or the administration. And there exists at least to a certain extent a common understanding on drivers and impacts. The discussion focused rather on methodological questions.

Some central messages: the European accessibility pattern is quite stable and does not change a lot over time. But it makes a big difference whether we look at it at the European scale or from a national or regional perspective. Most investments are mainly beneficial for the core regions. The gap is widening. Switzerland is investing in infrastructure but also profits from European investments into transportation networks. When comparing accessibility with economic performance, most regions in Switzerland seem to "overperform" (doing even better, economically, than their accessibility values would suggest), some regions even have a clear or strong overperformance. One study suggested that long term impacts of accessibility are much higher than short term impacts.

Changing accessibility patterns over time due to large infrastructure projects (e.g. tunnels) were shown in another presentation. Interrelations between accessibility and population growth, differentiated by types of regions, were analyzed as well. An Austrian perspective on accessibility was offered by the Austrian ECP, highlighting policy goals regarding national accessibility improvements and future infrastructure investments.

The block on innovation received a lot of attention. The final results from the ESPON KIT (Knowledge, Innovation, Territory) project were not yet available at that time, but expectations towards the upcoming final report were already high. There seemed to be a considerable interest from the audience to know more about innovation and its interrelation with territory. This block achieved several goals: on one hand, it showed that ESPON itself is “innovative”, by delivering results for rather new and not so well known thematic aspects of territorial development. On the other hand, the block offered many inspiring linkages with the accessibility and economy blocks.

The KIT project departs from the idea that the linkages between R & D activities, innovation and economic growth are strongly mediated by local territorial assets. First results suggest that there is a high number of regions in Europe where the knowledge economy is still in its infancy. On an innovation “scale”, focusing on regional assets (structure of the economy, employment in R & D sector etc.), most Swiss regions rank very high, as well as many regions in Southern Germany and Austria. As far as European innovation policies are concerned, there is a need for regionally and thematically tailor-made interventions. An innovative aspect presented in this block did combine economy and accessibility by introducing the concept of “non-physical accessibility”. This is a very important aspect in the context of the growing knowledge economy. Besides physical transportation networks, there are also “non-physical” communication networks and relations between companies that are shaping today’s functional regions and global networks. Starting from a conceptual background that brings together the locational behavior of multi-branch, multi-location firms with a value chain approach, the study looked at the extent to which the functional urban hierarchy in Germany is associated with the networking activities of advanced producer services and high-tech firms. The study provides evidence that the functional urban hierarchy in the German space economy is steeper than is claimed by the federal government. A non-nested hierarchy with overlapping and trans-scalar urban networks increasingly challenges the traditional view of a nested hierarchy as an organizing principle of space. A more regional perspective was offered by the example of Liechtenstein. Being situated away from large city regions, Liechtenstein has always been dependent on innovation in order to move forward. The challenge was met with a range of successful strategies, e.g. the planning across borders and investments in R& D. Liechtenstein is well-integrated into a wide range of networks. A German view on innovation was

offered by the German ECP, combining Eurostat and ESPON data to provide a spatial picture of R&D spending, patents per 1000 inhabitants and the pattern of technologically advanced, science based areas.

Economy was the most "open" block, with an immense range of potential subtopics, and it comes as no surprise that ESPON offers a wealth of information in this field. The challenge was therefore to filter and select the information. To a large degree thanks to the input from ECP Hungary, this complex task could be solved: in the first presentation of this block, ESPON results mainly on economy, but also on innovation and accessibility, were presented from a national (Hungarian) perspective. It became clear how well ESPON results can be used to show relevant economic facts and their linkages with territory for a specific country. A recent national synthesis report (Position and future of Hungary in Europe) served as a good basis.

The example of Hungary made evident one of the big territorial challenges of Eastern Europe: the strong polarization, with dominant capital regions. Studies suggest that future development might even worsen the situation. Some regions are literally "left behind". ESPON is not always offering data fine enough to show this, but the approaches and methodologies used in ESPON projects help a lot to discuss general tendencies (in Europe and / or in comparable countries or regions) nationally.

A national monitoring of the economic development of Swiss regions was presented as well. The monitoring has economy in its focus, but as it has to produce policy relevant information for Swiss regional policy actors, it is also very "territorial" in its approach. GDP and employment over the last 15 years show a growing gap between urban and rural regions. On the other hand, regarding gross value added, there seems to be a "catching up" underway. The regional perspective in this last block was focusing on the Swiss Capital City Region (Bern). From an economic point of view, the Swiss capital region (which is not the largest city in Switzerland – Zurich is much larger, Bern ranks 5th) has a mixed profile. Strengths like "presence of national and international organizations" or a well-educated population are contrasted by an image of a "non-innovative administration-dominated" region. The truth lies somewhere in between. The fact that administrative work has become increasingly complex, demanding specialized knowledge and therefore creates many attractive opportunities for private firms, has to be taken into account. The future might be rather colorful than grey.

The final presentation of the day was given by ECP Luxembourg, on how ESPON results can help fuel the national debate on cross-border cooperation.

3.2.4 Risk Management, Climate Change and Culture (Austria)

Climate change is a key challenge for spatial development in Europe. Several projects of the European Spatial Planning Observation Network (ESPON) therefore mention climate change with its implicated risks and challenges as issues. Only a few projects, particularly ESPON Climate, are discussing these issues in detail and spatially explicit.

In the ESPON SCALES seminar in Vienna climate change related results from selected projects – ESPON Climate and RERISK (dealing with energy poverty) - European wide results at NUTS3 scale were presented, discussed and confronted with regional climate change signals to compare the effects of scale. The seminar in Vienna had a quite different character compared with the other seminars of the SCALES project partners. The main idea was to enter into an interactive dialogue with the audience and to discuss the utility and relevance of ESPON results for spatial planning on national and regional level, in particular for Austria. (cf. Annex 6, Seminar Report Vienna).

Guiding question of the seminar was:

- What are the major issues when discussing climate change and risk management and what are the particularities of the situation in Austria

In global terms climate change is the most important eco-political topic. Changes in climate and its impacts are already visible and likely to become more pronounced in the future. Still, the international discussion is slow and too little and the implementation of action takes time. Action in this regard has to be understood twofold: Firstly, the mitigation of climate change, often synonymous with the reduction of greenhouse gas (GHG) emissions. Even if good progress is made in that regard, climate change to some extent has become unavoidable. This leads to the second form of necessary action, the adaptation measures to address climate change impacts. It should be stressed here that implementing measures combating climate change do not imply an economic disadvantage. In a global assessment of the cost-benefit analysis Nicholas Stern (Stern 2006) points out that measures directed against climate change always pay off, because the damage costs are 10 times higher than adaptation or mitigation measures.

In Austria climate change impacts will be very variable due to the fact that some parts are densely populated and others are covered by the Alps that separate the mountainous regions from the Mediterranean space. In the Alps the tourism and biodiversity will be affected most profoundly i.e. decreasing snow cover, melting glaciers, tree line shift, changing species composition. In the Alpine Foothills, the Pannonian Plain, Klagenfurter and Grazer Basin effects are expected mainly on forestry and water.

Within the Climate and Energy Fund framework, the Austrian Climate Research Programme (ACRP) provides a conceptual and institutional framework for

supporting climate research in Austria. So far research focused primarily on energy efficiency and GHG reduction. This holds true even for those calls which name governance and climate protection as their key issue. Although some studies investigate mitigation and adaptation measures, hardly any research on climate change impacts was commissioned by an official body.

The second guiding question of this seminar was:

- Which aspects of climate change are discussed and relevant in the context of spatial planning and regional development?

After several years of intensive debate the draft of the non-binding national adaptation strategy is now available in Austria. So far, Austria shows a high level of adaptive capacities in the disaster management as well as agriculture and forestry while the tourism sector is lagging behind. In order to address this issue, experts bank on adapted regional funding and spatial planning that has the reduction of emissions in focus. Although spatial planning and its instruments are seen as major leverage to combat climate change, it has to be kept in mind that it is only one player among others who mostly represent short-term economic and political interests. This is aggravated by the fact that spatial planning itself pursues contradicting goals: enhancing or sustaining a certain level of quality of life in the city (e.g. through green and open space) versus high-density housing developments in order to spare natural resources in a compact city.

Having focussed on Austria it has to be noted that climate change is a global phenomenon and does not stop at administrative boundaries. It takes a problem-oriented analysis of its effects considering the affected areas, actors and sectors. In that regard supraregional or transnational initiatives are in demand. Impacts on the alpine region for example are simulated with one common model that integrates alpine space in Austria, Italy and Switzerland. The exchange of data or best practices (e.g. dealing with forest fires, or winter tourism in regions where days with snow cover are decreasing) is another example of vital cooperation. The macro-level, such as the EU, is an important knowledge hub that can promote the collecting of comparable data and support nation states by the formulation of their mitigation and adaptation strategy.

- What practical benefits and what added value can ESPON results offer the Austrian professional planning community?

ESPON uses a scientific approach, which is clearly reflected by the complex definitions, indicators and models presented in the deliverables. Thus it requires intense examination by skilled users to comprehend maps and reports. Other sources like Eurostat are used more frequently in order to produce simpler maps or access data.

The seminar revealed that the complexity of the maps and the underlying data often impedes the understanding of the maps. Many times it is not obvious how

the components of the often aggregated indicators have been weighted and to which extent an indicator itself contributes to a greater typology.

Not only the indicators necessitate more explanation but also the definitions, which have been used. Hence the lack of information needs to be either compensated by another way of presentation or by a concise but reasonable explanation in the report or map.

3.2.5 Transnational cooperation (Germany)

The aim of transnational cooperation aims is to promote economic and social cohesion. Major regional imbalances are corrected and territorial disparities are reduced, foster the competitiveness of regions is fostered. The Transnational cooperation programmes aim to support activities related to innovation, the environment, accessibility and sustainable urban development.

To achieve these aims, the programme bodies of the transnational cooperation programmes need reliable and comparable information about their area(s) for the strategic programming and for the implementation. ESPON provides comparable information about European regions; however the stakeholders of transnational cooperation do not know (enough) about ESPON or question the usability of ESPON deliveries. The seminar “ESPON serving transnational cooperation” therefore aimed at making ESPON known and at defining together with stakeholders of transnational cooperation how ESPON could be of better help.

The time of the Berlin SCALES seminar – end of October 2012 – was ideal to discuss on a political level the benefits from ESPON and potential necessary adjustments of the ESPON programme, since at this time the Multiannual Framework 2014-2020 as well as the new ESPON Programme were be discussed. Important insights and results from the seminar could then directly be fed into the ongoing discussions and help improving the future ESPON programme, but also the preparation of the INTERREG programmes. It was decided to focus on INTERREG B regions since they have specific problems and tasks where ESPON findings could help; this potential of ESPON is however mostly not know to INTERREG stakeholders.

Guiding questions of the seminar were therefore:

1. How can we use ESPON results for designing the INTERREG B programmes?
2. Which conclusions can be drawn for designing the ESPON 2020 programme?

The seminar had three sessions: in the first session, the speakers presented knowledge and expertise from different ESPON projects that deal with the topics accessibility, innovation and transport, which are currently the most crucial topics for INTERREG projects. The second and the third session dealt with the question how ESPON can support transnational cooperation and how the future ESPON programme should look like to provide an improved support.

Accessibility is referred to directly or indirectly both in the EU 2020 Strategy and in the Territorial Agenda 2020. It is a combination of opportunities or goals that people want to use or reach and the efforts they have to make to access them; accessibility indicators measure the benefit that households and companies by reaching them. There is a clear correlation between accessibility and economic strength of a region; however there are many exemptions to this rule. Especially the Nordic countries show other factors that successfully boost the economic strength of rather poorly accessible regions, while at the same time other regions do not manage to convert their good accessibility potential into economic power. Experience shows that it is often easier and more successful not to concentrate on bridging distances and overcoming spatial constraints, but to improve the choice of opportunities that are provided in a region.

Policies and policy actions to improve accessibility have to be more than pure transport planning, which was considered to be an important message to the INTERREG areas, who often deal with transport planning projects.

Innovation is also referred to in the EU 2020 strategy, where economic growth is supposed to be based on knowledge and innovation. In a European comparison, Germany as a whole is leading on its way towards a knowledge economy, but parts of northern and eastern Germany are often only European average or even below. The polycentric urban system of Germany promotes economic strength and diversity of innovation; however compared to other European cities the individual German cities are often only in the second row behind London, Paris and other urban regions. Germany is specialized in high-tech industries and is rather average in the field of (public) services. Economy is characterized by growth of high technology industries which are regionally concentrated. A high innovation intensity can be found especially in high technology industry (product innovation, process innovation and marketing innovation).

As to the European cooperation areas, East Germany faces improved prospects and economic stabilisation below the level of the leading innovation regions. Northwest Europe is economically highly developed with the leading European metropolitan areas and many specialized high-tech regions. The Alpine area is economically highly-developed as well and shows low income disparities and large economic and cultural diversity. The North Sea area shows low income disparities but has very diverse economic structures. In Central Europe, big development differences can be found, with stronger economic growth in Central

and Eastern European countries because of catch-up effects. The Baltic Sea Region has relatively small national markets and faces the challenge for transnational networking in order to create critical mass.

ESPON case study analysis shows that it is difficult to establish a link between the participation of a region in EU R&D programmes and the economic performance; it is therefore difficult or even impossible to know how much investment is necessary for an economic improvement.

The ESPON Climate project provides a typology of similar climate change patterns (not a typology of the present climate). Particularly those local economies are sensitive which are dependent on tourism, agriculture and forestry: the Mediterranean region, the Alps, large parts of Eastern Europe, but also Scandinavia (energy demand for heating). Hot spots are mostly in the South of Europe – i.e. the big agglomerations and summer tourist resorts at the coastline. Other specific types of regions (e.g. mountains) are particularly impacted, but partly for other reasons (sea level rise, economic dependency on summer and/or winter tourism). Particularly those countries which may expect a high increase in impact seem to be less able to adapt than others for which the problem is less visible - which is a scenario that runs counter to territorial cohesion. Climate change would trigger a deepening of the existing socio-economic imbalances between the core of Europe and its periphery.

Looking at the Connections to INTERREG IVB program areas, the following can be stated: Territorially differentiated adaptation strategies seem to be important primarily for tourist resorts in the Alps. The Baltic Sea Region is almost optimally prepared (low impact, high adaptive capacity). The East of Europe is affected by demographic changes which lead to an increase in sensitivity. At the same time these changes decrease Eastern Europe's adaptive capacity. Agglomerations are vulnerable for several reasons, of which urban heat might be the most relevant one. The regions which border on the North Sea can expect an impact from sea level rise and storm surges

The sessions "Transnational co-operation – users and providers of ideas" and "Using transnational experience for the future of ESPON" dealt with the guiding questions of the seminar:

- How can we use ESPON results for designing the INTERREG B programmes?
- Which conclusions can be drawn for designing the ESPON 2020 programme?

Both in the introductory presentations and in the panel discussions a number of important benefits were mentioned that ESPON can provide in general and for

INTERREG in special, but also problems were mentioned and proposals for improvement were derived.

The potentials of ESPON for INTERREG cover the provision of data and indicators for INTERREG: as time series, by comparing INTERREG areas with the ESPON space, through raw data and through maps and visualisation. Tools and databases come in addition, e.g. GIS and other software tools, statistical tools, and recommendations for data analysis. Last but not least, the ESPON policy recommendations can support local policies in individual fields of action.

There are however a lot of constraints in putting these potentials into reality for INTERREG: data extraction from the ESPON database is very complicated; data availability usually stops at the NUTS 3 level; the number of projects and the amount of available reports makes it extremely difficult to find and access policy recommendations.

Regarding a further development and improvement of ESPON, the ESPON tools should be improved. It was proposed among others to include INTERREG areas as flag in the data tables of the ESPON database (as for the typologies), to include GIS layers of INTERREG areas in the map kits of the ESPON database, to include much more data on LAU 2 level, and to make an easy web GIS. The RIMAP project that started in spring 2012 will hopefully meet these demands.

The use of the ESPON policy recommendations could be improved by making the access to them much easier, for example through short thematic newsletters and special thematic seminars, both in general and for individual INTERREG areas.

As to data collection and thematic research by ESPON, there are some thematic gaps that still have to be closed; especially social topics have not been treated fully yet by ESPON, but have to be covered, since the growth which Europe aims for should not only be smart and sustainable, but also inclusive. At the same time, the background information has to be deepened, especially regarding the provision of (long) time series and the calculation of flows. ESPON should thus move towards a continuous spatial observation.

A closer link between the ESPON programme and the INTERREG stakeholders, as in the ESPON-INTERREG projects that were presented during the seminar, could help in better matching needs and deliveries. In addition, a closer relationship with DG Regio and the cohesion policy was considered to be needed. To be able to deal with these suggested improvements, a strengthening of the capacities of the ESPON Coordination Unit was deemed necessary.

Scale issues were of high importance throughout the seminar: One of the main problems in using ESPON data for transnational cooperation through INTERREG projects is the scale of the data, since ESPON uses mainly NUTS 3 as lowest scale, while the INTERREG stakeholders need data on LAU 2 level. On the other hand, ESPON provides too many information in very different ways, so the use of

ESPON material has to be simplified and downscaled. The dissemination of ESPON results therefore has to master the task of summarising and condensing information while not providing too simple results on the local level.

4. Lessons learnt

The SCALES project revealed several lessons learnt as well for ESPON as for national dissemination. Several problems were identified as main issues for the dissemination of ESPON results and are listed in this chapter; the first two points are scales-specific, the other points are partly already under discussion in the ESPON community. The SCALES project group discussed a number of measures and activities to tackle these problems and to enhance the use of ESPON. They are described in the following for the main target groups ECPs respectively the ESPON Programme and the ESPON CU.

4.1 Lessons learnt for ESPON Contact Points (ECPs)

Develop a scales-related dissemination strategy

As a result of applying the CoZiCo approach in the seminars, one can draw the conclusions that the most adequate NUTS level considerably varies between member states and between the topics. ECPs have a crucial function to understand this complexity behind ESPON maps in order to translate them properly into their very specific national context.

To improve the dissemination activities, ECPs should develop a country-specific scales-related strategy. The analysis outlined in chapter 1.1 can be taken as basis. The Co-Zi-Co approach as describe in chapter 1.2 could help in designing dissemination methods, be it publications, seminars, or workshops.

Keep the different target groups in mind and take care of topic-related scales questions

When designing dissemination activities like seminars and publications, the ECPs have to take into consideration the target groups and the respective topic. Since the political systems of the ESPON countries are very diverse, this general concept has to be adapted to the country of the ECP, which should be done in the framework of the scales-related dissemination strategy proposed above.

Seminars and publications also have to have the right timing. This shows the example of the Berlin seminar which dealt with the interlinkages between ESPON and INTERREG: the seminar was organised at a time when the new programmes for both initiatives were under development, so the information provided could contribute to the ongoing discussions on the new operational programmes. The seminar would have needed a different approach if it had been organised months later.

Questionnaire feedback from the seminars showed that scientists seem to prefer very in-depth knowledge; in the case of indicators for example they are not satisfied with the mere provision of the indicators, but want to know how they are calculated, why they have been used in that particular way or how plausible the depicted situation is. This wish for in-depth background knowledge includes

the wish for a broad or even full access to the underlying data. ECPs can provide this additional information in seminars by inviting additional speakers, but also through publications or by informing potential users about the ways how to get this additional information. The feedback from the seminars also showed that publications are valued highest from the ESPON deliveries by all groups; the participants from the more scientific seminars however favoured them more than those from the more political seminars, who had a preference for direct and interactive disseminations means like workshops and seminars.

The regional level to be addressed depends on the size of the country and the number of stakeholders

Smaller countries like Luxembourg can much easier address local stakeholders than countries with more inhabitants like Germany, since the interlinkages are much closer and the number of stakeholders to address is considerably smaller. Countries with more inhabitants therefore have to focus on the next sub-national level and to rely more on indirect forms of information dissemination like publications to reach the local level. The funding made available for the national dissemination work of the ECPs has to take these different necessary dissemination means into account.

ECPs in member states with more inhabitants and very high numbers of (potential) ESPON users could try to use existing ESPON means for addressing and including local stakeholders, e.g. by supporting local and regional stakeholders in initiating Priority 2 projects, which cover selected regions in a more detailed way than Priority 1 projects.

The usability of ESPON deliveries has to be improved to foster the use of ESPON results

The SCALES seminars clearly showed that different target groups are interested not only in different topics, but also in different dissemination means. ESPON deliveries should therefore provide more details; for example, as outlined above, scientists are interested in the details of how indicators were calculated and also in the underlying data.

At the same time, the sheer amount of ESPON deliveries is overwhelming and seems to contribute to information overload. Potential users need an easier access to the information. It was highlighted that basically ESPON delivers either very specific project reports or highly synthetic reports. It would make sense to create intermediate publications, for example by “grouping” thematically related topics; the Territorial Observations are going into this direction. Another form could be short thematic newsletters or special thematic seminars that could be organised on a European level in addition to the yearly open ESPON seminar.

These publications and seminars can also be produced respectively organised on national level by the ECPs.

National dissemination capacities have to be strengthened to promote the use of ESPON results

The first experience made already in the preparation phase of the SCALES seminars was that the thematic focus matters. ESPON as "brand" name does not attract but the thematic range presented. It also showed that the ESPON results and current EU policy developments (e.g. TA 2020) are relevant and important, but both can be very abstract for regional and local stakeholders. To transport the ESPON results, a balanced national and European perspective is needed – ESPON only does not work always.

ECPs can translate this by showing the added-value of ESPON in their specific context and by contributing to the national debates.

The seminars made clear that the language barrier is remarkable; while four of the seminars took place in the national language(s), partly with interpretation, the Hungarian seminar, as the first in the seminar series, was fully organised in English. This was seen as a reason why merely scientists from different universities and research institutes attended the seminar and why other target groups were not reached. English is the language of scientists, but not of regional and local actors.

Another language barrier that has to be overcome for a better use of ESPON results seems to be the different topic-related languages that spatial planners and sectoral planners speak, even if they share the same national language.

To overcome the language barriers, more seminars could be organised in the national language(s) to both literally and figuratively translate the ESPON deliveries into national language and national thinking and knowledge. Another way is to comprise ESPON information into national publications, which would serve at the same time the aims of translation, of simplification and of completion of ESPON data with national information. If seminars and publications concentrate on special thematic subjects, they might contribute to reaching more sectoral planners and not only the spatial planning community. The use of ESPON maps works better with national "cut-out" that includes neighbouring regions. In general, printed materials in national languages will enhance visibility.

4.2 Lessons learnt for the ESPON Programme and the ESPON CU

The ESPON programme should take the NUTS problematic into account

The NUTS problematic has to be tackled by the ESPON programme itself: The political system of the member states has to be better taken into account by the research. This means especially that analyses should go beyond NUTS 2 level, e.g. by going to NUTS 3 level, either for the whole ESPON area or only for those member states that most severely need ESPON information on a smaller level. Priority 2 projects could also be used to gather more detailed data for countries that, due to their size and NUTS structure, do not get enough detailed information through the current way of ESPON analysis

The SCALES seminars showed that the relevant level of policy action also depends on the topic; the relevant level of analysis should take this into account and focus on those levels which – for the specific theme to be discussed – are covered by relevant actors.

There are also some improvements that have to be made by the individual ESPON projects. Concerning the project work and regional analysis, the range of investigation should be improved including the national and regional interpretations of results and the stronger orientation not only on European but also on national regional political relevance. There should also be a stronger focus on functional cross-border relations and the transnational perspective.

The need of a close integration of actors and stakeholders into ESPON projects and research was emphasised in several seminars and could help in finding the adequate level of analysis. This would help in better matching stakeholders' information needs and ESPON deliveries, but also to better anticipate how to implement, or deal with, the empirically identified potentials within a region or at the national level.

To be able to provide all data and all maps to potential users of ESPON results, the projects will have to make sure to deliver all materials to the ESPON CU and to feed them into the diverse tools, especially the ESPON database and the MapFinder.

A large number of the proposals mentioned above will result in a considerable increase of work: The organisation of more seminars on European level will need additional resources, as well as the creation of additional thematic publications. This work cannot be done by projects, since it has to be done on a continuous basis.

The ESPON Coordination Unit already has experience with these activities and would therefore be the best player to carry out these activities. Some elements

could be outsourced, and also the ECPs could partly play a greater role. To be able to deal with these additional activities, more financial resources would be needed at the CU.

The usability of ESPON deliveries has to be improved to foster the use of ESPON results

The ESPON tools, first and foremost the ESPON database, but also the ESPON Hyperatlas, seem very difficult to be used by those who do not work with it regularly. However, users do not demand simplicity of the contents, but a better usability and/or help in using these tools. Here again, even more complex (or rather dynamic) contents and usage possibilities are wanted as well; this includes the further development towards a real web GIS where users can individually choose the thematic scope of the displayed maps and can customise the maps by changing classes and their limitations or weights of combined indicators.

The Capitalisation of ESPON results strongly depends on a timely provision of maps and data from the projects. In general the publication strategy should emphasis a thematic grouping of publications to improve knowledge on causalities. Concerning the maps a reduction and verbal interpretation of map legend complexity will improve the communicability. More details about the calculation of indexes would also help to understand the numbers presented in some maps. In a broader oriented communication strategy, the dissemination of ESPON results needs special teaching relating media formats.

The focus of the SCALES project on scale issues and the resulting development of the CoZiCo approach showed that the graphic quality of the ESPON deliveries has to be sufficient if the ECPs want to take scale issues into account. The Zooming-in method, for example, only works if maps are provided as graphic vector file or picture with high resolution. This is usually not the case when maps are provided only as low resolution as image in a report. They have to be provided in suitable format and resolution as individual files for this approach. At the moment, maps can be obtained from the ESPON Coordination Unit (CU), if they are available. With the newly launched ESPON MapFinder, hopefully a direct, quicker, 24/7 download access will be offered. The completeness of information will of course depend on the willingness of the ESPON projects to provide all maps.

The ESPON programme has to be aware that the dissemination problems of the ECPs are not solved by maps; the information in the maps has to be translated and completed by the ECPs.

The policy relevance of ESPON results will be fostered with focused project orientation and the ad-hoc analytical competence

Within the project orientation a stronger and deeper focus of Priority 1 projects on territorial political discussion (e.g. innovation) might enhance the relevance

and visibility in the political scene. In general, the ESPON programme needs a clarification of the Priority 1 project philosophy. The replies from the seminar participants showed that policy recommendations are the least favoured ESPON deliveries, also from the more politically oriented seminars. ESPON projects should therefore provide less direct advice and concentrate on providing a territorial knowledge base. Within the Priority 2, a thematic clustering of projects on a "top-down" approach would open the view on territorial specificities, but also enhance a more systematic model character; at the moment the creation of projects on a pure bottom-up approach is a bit random.

ESPON has to close certain thematic gaps to provide a full view on European spatial development

The thematic focus of the seminars revealed some important thematic gaps in the ESPON analyses. The seminar on urban-rural relations showed that there is a need to get more information about topics of small and medium sized towns. The project TOWN, which started in February 2012, can close these gaps and be a starting point for additional research in this area. The innovation-centred seminar made clear that innovation in the territorial context is considered very important and ESPON could deliver highly relevant new insights.

The seminar on climate change and risk management showed that these topics are handled best when understood as global phenomenon with consequences that do not stop at administrative boundaries. Information has to be provided also on a more detailed geographic resolution.

The seminars in Luxembourg (on polycentricity) and Berlin (on the use of ESPON in the INTERREG framework) revealed the importance of interregional and cross-border data for a wide range of policy-makers and practitioners.

Right now, because of largely concentrating on NUTS 2/3 levels, ESPON analyses mainly focus on questions that can be answered with the available data on NUTS level. Especially social topics have not been treated fully yet by ESPON, but have to be covered, since the growth which Europe aims for should not only be smart and sustainable, but also inclusive. The recent launch of the TIPSE project, which deals with poverty and exclusion, is encouraging; the new ESPON programme should provide for more projects in this area.

Even if priority 2 and 3 projects have been developed in this direction, efforts could be further strengthened to improve datasets, data availability and the flow data. ESPON analysis should not only be oriented towards trends within a (often data-driven) time frame, but should also include structural breaks and policy relevant points of interventions. At the same time, the background information has to be deepened, especially regarding the provision of (long) time series and the calculation of flows. ESPON should thus move towards a continuous spatial observation.

Literature

BARCA, F. (2009): An agenda for a reformed cohesion policy – A placed-based approach to meeting European Union challenges and expectations, independent report prepared at the request of Danuta Hübner, Commissioner for Regional Policy, http://ec.europa.eu/regional_policy/archive/policy/future/pdf/report_barca_v0306.pdf

DÜHR, S., COLOMB, C., NADIN, V. (2010): European spatial planning and territorial cooperation; Routledge, New York

ESPON/IRPUD TU Dortmund (2011): ESPON Climate – Climate Change and Territorial Effects on Regions and Local Economies. Applied Research 2013/1/4. Final Report-Version 31/5/2011. Main Report

EUROPEAN COMMISSION (2010): Europe 2020 – A strategy for smart, sustainable and inclusive growth, COM(2010)2020 final http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF

GOUVERNEMENT DU GRAND-DUCHE DE LUXEMBOURG, (2004): Integratives Verkehrs- und Landesentwicklungskonzept für Luxemburg, http://www.dat.public.lu/publications/documents/broch_ivl/broch_ivl_de.pdf English version: http://www.dat.public.lu/publications/documents/broch_ivl/broch_ivl_en.pdf

INFORMAL MINISTERIAL MEETING OF MINISTERS RESPONSIBLE FOR SPATIAL PLANNING AND TERRITORIAL DEVELOPMENT (2011): Territorial Agenda of the European Union 2020 – Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions, 11.05.11, Gödöllő

KLIMA- und ENERGIEFONDS (o.J): http://www.klimafonds.gv.at/

STERN, NICHOLS: (2006) Stern Review on the Economics of Climate Change – see http://www.webcitation.org/5nCeyEYJr

Annexes

see separate documents

Annex 1: Summary and overview of compulsory actions and contractual obligations

Annex 2: List of the materials developed by the project

Annex 3: Types of policy-relevant NUTS scales

Annex 4: Contents of the seminar questionnaire

Annex 5: Seminar Reports

Annex 6: Guidelines for the dissemination of ESPON results in different spatial contexts

www.espon.eu

The ESPON 2013 Programme is part-financed by the European Regional Development Fund, the EU member states and the Partner States Iceland, Liechtenstein, Norway and Switzerland. It shall support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory.

ISBN 978-2.919777-35-8