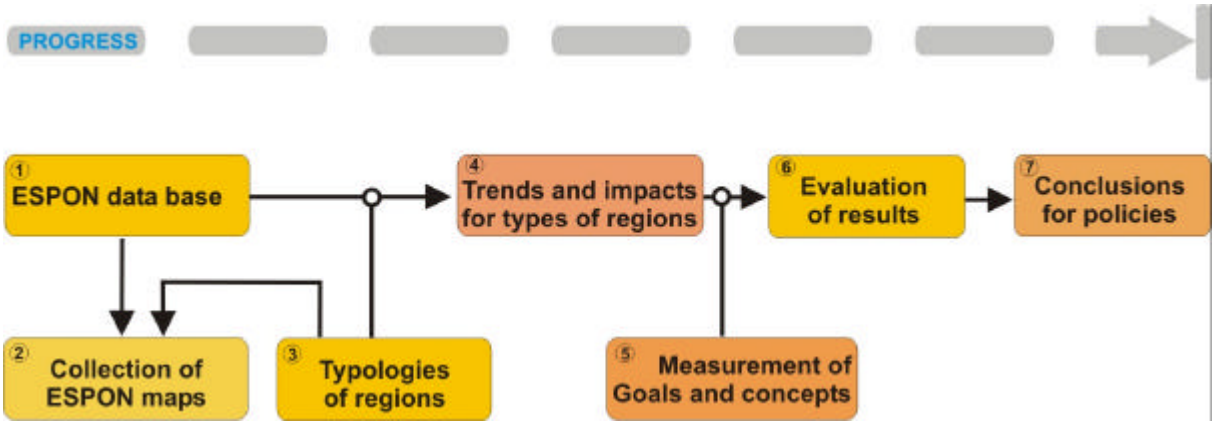
Crete Guidance Paper
– ESPON Co-ordination towards August 2003

by BBR, Bonn, 02. June 2003

In Crete all TPGs agreed that common elements are needed that can be used by different TPGs. These common elements are necessary
(1) to make things simple and efficient by using results from other TPGs and
(2) to achieve coherent ESPON results.

The most important elements of the common platform are:

1. the ESPON data base (core indicators) including
2. typologies of regions;
3. a collection of ESPON maps (visualising the ESPON data base)
4. the analysis of trends and policy impacts related to different types of regions;
5. the operational definition and measurement of policy goals and concepts as a base for
6. the assessment and evaluation of results (trends and policy impacts) with reference to these policy goals and concepts;
7. conclusions for policies.



The structure of this Crete Guidance Paper follows these main topics.

This paper does not intend to fully reflect the richness and deepness of specific thematic studies and their considerations, scientific and analytical approaches, and their policy reflections and conclusions. On the contrary, this paper concentrates and restricts its view on some very basic elements that should be useful to be considered by all (or if not all: by several) TPGs to get comparable and coherent results. These elements are mainly related to the common ESPON data base and its application for territorial and spatial analysis of European trends and policy impacts.

The general idea and philosophy of the “common platform” is best described when starting from the end:

(7) The final aim of ESPON is to draw conclusions for future policy formulation based on the analysis of European spatial development trends and policy impacts.

(6) All TPGs intend to evaluate trends and policy impacts with reference to territorial goals and concepts. The very general question all projects have in common would be: “Are observed trends in line with the basic goals of European spatial development policies (like balanced and polycentric development?)” “Do the results of European policies support these goals?”

(5) Accepting this common general effort to try and give empirically sound answers to these kind of questions there is a need to define and elaborate the operational content of goals and concepts (like balanced and polycentric development). How can we “measure” trends and policy impacts with reference to those goals and concepts?

(4) A more simple and basic approach to these questions is to analyse the performance of specific types of regions. Questions like: “How do the medium sized urban regions in Europe perform (in terms of GDP, accessibility, population development, social integration, sustainable development etc) compared to the large metroplitan areas?” will provide some approximate indications of territorial and spatial aspects of trends and policy impacts.

(3) For these kind of exercises typologies of regions and territories are needed as the background against which to check trends and policy impacts. Based on typologies, statistical measures and indices can be developped to produce tables that summarize spatial structures and trends in quantitative comparative ways.

(2) Besides these tables of statistics, maps are an important tool to visualize and communicate geographical indicators and typologies. Therefore, a collection of maps should be produced to give more qualitative, visual insight into spatial structure and trends in Europe.

(1) The crucial basic common element for doing all this is the setting up of a common data and indicator base (“ESPON data base”) which is the result of a joint effort of all TPGs feeding in their “core indicators” and typologies and which again provides all TPGs with the (frame, reference) data they need for their specific analyses.

1. ESPON data base + list of core indicators

The ESPON data base includes core data, indicators and typologies that provide the common backbone of the ESPON projects. All TPGs will contribute to this common data and indicator base, and in turn, all TPGs will benefit from the ESPON data base by using data and indicators in their own contexts.

The ESPON data base consists of different parts for which the single TPGs take over different responsibilities:

(a) data delivered by Eurostat and other official sources
based on data requests by the single TPGs, project 3.1 has collected and summarised data requests that were sent to Eurostat, national statistical offices and other European agencies. The data, as soon as they are delivered, have been / will be integrated into the ESPON data base by project 3.1

(b) core indicators calculated by TPGs
based on these statistical data the single TPGs create an added value by calculating specific "core" indicators which represent the most crucial aspects of their specific fields of research. These indicators will be delivered by the single TPGs to project 3.1 which again integrates these "core indicators" into the ESPON data base

(c) model result indicators produced by TPGs
based on more complex models (like models of accessibility in Europe) some TPGs produce new data and indicators as results of these models. Like statistical indicators, also these indicators will be delivered by the single TPGs to project 3.1 which again integrates these "core indicators" into the ESPON data base

(d) typologies suggested by TPGs
some TPGs play a central part in creating typologies that will be used by other TPGs as a basis for their analyses. These typologies will also form a basic part of the ESPON data base. Typologies are dealt with in more detail in the next chapter

(e) geo-reference of the data
the ESPON data base includes data of different characteristics, mainly:
- regional statistical data (on NUTS3 level mainly)
- continous data on grid bases (CORINE etc.)
- matrix data on flows and relations

(f) meta information
an important element of all data is the description of the data following unified templates ("meta-information"). When delivering data to be included in the common ESPON data base all TPGs are requested to add the respective meta-information for these data

The main element of communication for the construction of the common ESPON data base is the "list of core indicators". This list includes the planned contents of the common ESPON data base (indicators, typologies and their regional (NUTS-) references), the responsibilites (who delivers what?) and the time schedule (short

term availabilitiy until August 2003 vs. medium and long term). A permanent update of this list of core indicators based on responses of the single TPGs is needed.

The actual list of core indicators is attached to this paper as annex 1.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- respond to the "list of core indicators", i.e.:
  - identifying core indicators
  - formulating data requests
  - taking over responsibility for the delivery of data / indicators to be integrated in the common ESPON data base
- delivery of data / indicators to be integrated in the common ESPON data base
- quality control of the ESPON data base and feedback to TPG 3.1

list of indicators and data deliverables until Aug 2003

task	**time**	**responsible**
list of data requirements sent to EUROSTAT	done	TPG 3.1
data delivery from EUROSTAT, JRC, EEA, ...	stepwise	EUROSTAT
integration into ESPON data base	after delivery	TPG 3.1
list of indicators (cf. SIR 3.1)	30.04.2003	TPG 3.1
feedback on the list of indicators by all TPGs	16.06.2003	TPG 3.1
delivery of additional data by all TPGs	27.06.2003	all TPGs
integration of additional data into ESPON data base	11.07.2003	all TPGs TPG 3.1
quality control of data (all TPGs)	31.07.2003	all TPGs
final ESPON data base version 2003	15.08.2003	TPG 3.1

2. typologies of regions

Five different types of regional typologies will be proposed in this chapter:
(1) typology of urban and rural regions
(2) (inductive) typologies related to specific themes
(3) typologies for specific geographical situations
(4) typologies directly related to Structural Funds discussions
(5) three-level approach of typologies

2.1. urban-rural typology

As a basis for many research questions related to territorial characteristics in Europe, a typology of urban and rural areas is of crucial importance. Therefore, an urban and rural typology has to be developed with high priority.
This urban-rural typology is mainly being developed by TPGs 1.1.1 and 1.1.2.

2.1.1.urban typology

It has been agreed that in the ESPON context the identification and characterisation of (functional) urban regions (FUR) is of great interest. The FURs must be comparable all over the European territory, i.e. they must be identified on base of the same, unified criteria. This does not necessarily mean that the criteria must be met in absolute terms; it rather includes the possibility to include relative criteria (paying attribute to, for instance, small, but relatively important, FURs in low-dense peripheral parts of Europe) as long as these criteria are well defined and European wide comparable.

The identification of cities is a basic step for identifying FURs. However, the definition of cities depend on administrative definitions, and cities as administrative units are hardly comparable over Europe. Therefore, cities should be taken as a starting point for identifying FURs, but not be given a genuine role of its own.

To identify Europe-wide comparable FURs, special attention has to be paid to multipolar, overlapping, polycentric urban regions. In order to identify comparable units clear criteria have to be given. To give an example, when we refer to variables like “headquarter functions”, “size”, “importance” etc., it makes a big difference if we talk about Amsterdam alone, or of the “Delta-Metropolis”. TPG 1.1.1 is expected to present a proposal for a common and comparable approach.

TPG 1.1.1 also proposed to develop a typology of FURs and MEGAs. This approach has to be further developed and agreed upon in the next meeting of Lead Partners.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- define the criteria for the definition of functional urban regions (FURs)
- development/ preparation of a list of cities -> starting point for the identification of FURs
- the identification of FURs and MEGAs
  - defining the characteristics of FURs
  - presentation of specific indicators FURs
  - transformation of FURs into NUTS3-compatible-FURs
  - preparation of a NUTS-3-FUR typology
- integration of the typology into the ESPON data base

deliverables until Aug 2003

task	**time**	**responsible**
criteria for the definition of (functional) urban regions	16.06.2003	TPG 1.1.1
list of cities as starting point for FUR identification	16.06.2003	TPG 1.1.1
identification of FURs and MEGAs	16.06.2003	TPG 1.1.1
draft map of FURs and MEGAs	16.06.2003	TPG 1.1.1
characteristics + specific indicators of FURs and MEGAs	16.06.2003	TPG 1.1.1
transformation of FURs and MEGAs into NUTS3-compatible-FURs	16.06.2003	TPG 1.1.1
delivery of the NUTS3-FUR-MEGA-typology to BBR	11.07.2003	TPG 1.1.1
integration of NUTS3-FUR-MEGA-typology into ESPON data base	31.07.2003	TPG 3.1

2.1.2.typology of rural regions

TPG 1.1.2 which is mainly responsible for the typology of rural regions has presented first results and maps for the Crete seminar. The approach combines European and national reference levels defining rural regions in a national as well as in a European context. This approach has to be further developed and agreed upon in the next meeting of Lead Partners. Other rural typologies (like the OECD typology of rural regions in Europe) were applied by TPG 2.1.3. Both TPGs should check and evaluate the two (or more) typologies for the ESPON context. The aim is to have only one typology of rural regions.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- define the criteria for the definition of rural regions (RR)
  - identifying the RRs
  - defining the characteristics of RRs
  - preparation of maps of RRs
  - transformation of RRs into NUTS3-compatible-RRs
  - preparation of a (NUTS-3-) RR typology
- integration of the RR-typology into the ESPON data base

deliverables until Aug 2003

task	time	responsible
criteria for the definition of rural regions (RR)	16.06.2003	TPG 1.1.2+2.1.3
identification of RRs	16.06.2003	TPG 1.1.2+2.1.3
draft map of RRs	16.06.2003	TPG 1.1.2+2.1.3
characteristics of RRs + specific indicators for RRs	16.06.2003	TPG 1.1.2+2.1.3
transformation of RRs into NUTS3-compatible-RRs	16.06.2003	TPG 1.1.2+2.1.3
delivery of the RR-typology to BBR	11.07.2003	TPG 1.1.2+2.1.3
integration of RR-typology into ESPON data base	31.07.2003	TPG 3.1

2.1.3.combined urban-rural typology

It should be aimed at a combined urban-rural typology (CURT) covering the whole European territory and characterising all European regions on an urban-rural scale. This should be investigated mainly be the TPGs 1.1.1 and 1.1.2.

Additionally other typologies of the main territorial and settlement structure (MTSS) of Europe might be proposed by other TPGs.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- define the criteria for the definition of combined urban-rural typology (CURT)
- define the criteria for the definition of the main territorial and settlement structure (MTSS)
  - preparation of draft maps of CURT/MTSS
  - preparation of a (NUTS-3-) CURT-typology
  - preparation of a (NUTS-3-) MTSS-typology
- integration of the CURT/MTSS-typology into the ESPON data base

deliverables until Aug 2003

task	time	responsible
criteria for the definition of CURT	?	TPG 1.1.1+1.1.2
criteria for the definition of MTSS	?	all TPGs
identification of CURT	21.05.2003	TPG 1.1.1+1.1.2
identification of MTSS	21.05.2003	all TPGs
draft map of CURT/MTSS	16.06.2003	all TPGs
delivery of the CURT-typology to BBR	11.07.2003	TPG 1.1.1+1.1.2
delivery of the MTSS-typology to BBR	11.07.2003	all TPGs
integration of CURT/MTSS-typology into ESPON data base	31.07.2003	TPG 3.1

2.2. (inductive) typologies for specific themes

A second type of regional typologies is related to specific themes. These typologies describe in a bottom up ("inductive") approach certain types of regions which are strong or weak, affected or not affected, attractive or less-attractive with reference to specific ESPON topics (like, e.g., hazard regions, R&D attractive regions, sparsely populated and depopulating regions, peripheral regions etc.). These inductive typologies are results of analyses done by the different TPGs on their specific field of research.

All TPGs are asked to present their results in form of thematic typologies of regions.

This approach is related to the ongoing exercise of the analysis of strength, weaknesses, opportunities and threats and the Regional Classification Analysis proposed in this context.

This approach is also linked to the six fields of disparities introduced in the introductory speech by the Commission (Patrick Salez) in Crete:

- disparities in demography,
- accessibility,
- economic structure,
- research & innovation,
- education level,
- and ICT access.

All these topics are covered by specific TPGs who can contribute to it.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- defining typologies showing regional disparities in different fields of analysis
  - preparation of draft maps of regional disparities
- integration of the different typologies into the ESPON data base

deliverables until Aug 2003

task	**time**	**responsible**
thematic typologies in different fields of analysis (drafts)	16.06.2003	all TPGs
typologies showing regional disparities in the fields of, e.g.:		
demography, ageing population, depopulation	16.06.2003	TPG 1.1.4
accessibility, peripherality	16.06.2003	TPG 1.2.1+2.1.1
economic structure, strengths & weaknesses	16.06.2003	TPG ...
research & innovation	16.06.2003	TPG 2.1.2
education level	16.06.2003	TPG ...
ICT access	16.06.2003	TPG 1.2.2 and others
draft maps on the different analysis fields	16.06.2003	all TPGs
integration of different typologies into ESPON data base	31.07.2003	TPG 3.1

2.3. typologies for specific geographical situations

In addition to the theme related typologies, there is a political demand to identify specific geographical situations in Europe. Among these, there are:

- identification of mountain areas
- identification of islands
- identification of peripheral regions
- identification of coastal areas

In a series of studies commissioned by the European Commission these topics have been dealt with mainly outside of ESPON. Some of the contractors of these studies are also partners in the ESPON programme. The results of these studies should be cross-checked, adapted and integrated into the ESPON data base.

There might be some problems in the timing of these studies compared to the ESPON timing. Therefore, the integration of results in the ESPON data base until August 2003 might be not possible. The further procedure has to be agreed in the LP Meeting.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- defining typologies showing specific geographical situations
  - preparation of draft maps of specific geographical situations
- integration of the different typologies on specific geographical situations into the ESPON data base

deliverables until Aug 2003

task	**time**	**responsible**
typologies for specific geographical situations (drafts)		
▪ criteria for the definition of mountain areas	?	TPG ...
▪ criteria for the definition of islands	?	TPG ...
▪ criteria for the definition of peripheral regions	?	TPG ...
▪ criteria for the definition of coastal areas	?	TPG ...
▪ identification / typology of mountain areas (drafts)	?	TPG ...
▪ identification / typology of islands (drafts)	?	TPG
▪ identification / typology of peripheral regions (drafts)	?	TPG
▪ identification / typology of coastal areas (drafts)	?	TPG
▪		
▪ draft maps on the different analysis fields	?	TPG
▪ integration of different typologies into ESPON data base	?	TPG

2.4. combined typologies for Structural Funds intervention

Neither geographical nor theme-oriented types of regions are per se relevant for EU Structural Funds eligibility. But by combining different dimensions it may be possible to define specific regional problem situations and identify regions for structural funds support.

At the core of SF are the lagging regions defined by the 75%-GDP rule or some other alternative models of calculations. With the data and information available in the ESPON data base it will be possible to calculate alternative solutions for the definition of lagging regions according to the (former) goal-1 criterion.

In addition to this, regional typologies can be developed that – in the SF goal-2 tradition – indicate regions with specific problems and needs. Among these problem regions are:

- regions undergoing structural change and underlying economic weaknesses
- urban problem areas
- rural problem areas

Combining aspects of the previous chapters 2.2 and 2.3 specific problems may cluster and cumulate in certain types of regions which need specific combinations and packages of interventions, for example:

- mountain areas with economic weaknesses
- sparsely populated regions with population decline
- islands and coastal areas with pressures on natural assets
- potential zones of global economic integration

Defining these types of regions can only be seen as an outcome of previous analyses and cannot pre-defined here in detail. Anyway, it will be a challenge for all projects and for the communication between ESPON projects and ESPON policy addressees to further develop these ideas.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- defining typologies concerning Structural Funds goal 1
- defining typologies concerning Structural Funds goal 2
- defining typologies concerning combined problem situations
  - preparation of draft maps
- integration of the different approaches/ typologies into the ESPON data base

deliverables until Aug 2003

task	**time**	**responsible**
defining typologies concerning Structural Funds goal 1	16.06.2003	all TPGs
defining typologies concerning Structural Funds goal 2	16.06.2003	all TPGs
defining typologies concerning combined problem situations	16.06.2003	all TPGs
preparation of draft maps	16.06.2003	all TPGs
integration of different typologies into ESPON data base	31.07.2003	TPG 3.1

2.5. The 3-level-approach of typologies

One of the central elements of the first Guidance Paper, prepared for the first Lead Partner meeting 25/26 Feb 2003, was the introduction of a three-level-approach for analysing spatial development in Europe. Several TPGs supported the idea to perform analyses with reference to 3 spatial levels. Different 3-level approaches have been suggested which are not (yet) congruent.
Alternative 3-level approaches have been used to characterise:

- policy contexts (e.g., European, trans-national, national, regional policy level)
- economic scope and importance (e.g., cities of European, national, regional importance)
- geographic scale and multi-level context (pentagon-periphery, urban-rural, city-suburb)
- size and dimension of objects (e.g., nature areas of European, national, regional dimension)

The next LP meeting should be used to reflect upon the usefulness and usage of these (different) 3-level approaches and try and find commons and parallels between them.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- defining typologies concerning the 3 approaches
  - preparation of draft maps of the 3 approaches
- integration of the different approaches/ typologies into the ESPON data base

deliverables until Aug 2003

task	**time**	**responsible**
typology for policy context, economic scope and importance, geographic scale of core periphery (draft)		
▪ criteria for policy context, economic scope and importance, geographic scale of core periphery	16.06.2003	all TPGs
▪ identification / typology policy context, economic scope and importance, geographic scale of core periphery (drafts)	16.06.2003	all TPGs
▪ integration of different typologies into ESPON data base	31.07.2003	TPG 3.1

3. Production of an „ESPON map collection“

TPG 3.1 suggests to co-ordinate and compile an ESPON map collection until August 2003. This ESPON map collection will represent the main contents of the ESPON data base at this stage of time and will present basic descriptive indicators, regional typologies, and project results in cartographic form. The map collection should include information, comments and interpretations. It is suggested to present a CD-ROM with the ESPON map collection for the 3rd ESPON Seminar in October 2003.

Following the proposal of the ESPON Monitoring Committee the new ESPON map design will include a clause referring to the preliminary character and the authors' responsibilities of all maps published in the ESPON process.

A proposal of maps to be included in the ESPON map collection is attached to this paper as annex 2.

In addition of the ESPON map collection a number of tables will be produced presenting indicators for the basic statistical units as well as for typologies of regions.

A proposal for the ESPON table design is attached to this paper as annex 3.

Short term task list

The main – short term – tasks of the TPGs in this context are:

- production of maps
- integration of the different maps into the ESPON Map Collection

deliverables until Aug 2003

task	**time**	**responsible**
concept for an ESPON compilation of commented maps	16.06.03	All TPGs
identification of contents	16.06.03	All TPGs
maps of basic indicators (based on ESPON data base)	16.06.03	All TPGs
maps of additional indicators (e.g., accessibility)	16.06.03	All TPGs
maps of typologies	16.06.03	All TPGs
maps based on specific tools (e.g., discontinuities etc)	16.06.03	All TPGs
production of maps by all TPGs	31.07.2003	All TPGs
compilation of ESPON maps by 3.1	15.08.2003	TPG 3.1
publication (CD-ROM)	01.10.2003	TPG 3.1

4. Performance of types of regions

In addition to the collection of maps (chapter 3), selected core indicators of the ESPON data base (chapter 1) can be analysed based on the typologies (introduced in chapter 2). This will answer some basic questions of general interest of how different types of regions (defined at different geographical levels – macro-meso-micro level) are characterised and have performed in terms of demographic, economic, social and environmental indicators (as far as available).
Of special interest would be to analyse the policy impacts on types of regions.
This analysis is a first and basic step to get more insight and have some tentative answers on the question if territorial trends are in line with spatial development goals.

Short term task list

The main – short term – tasks of the TPGs in this context are:
- analysis of the performance of different types of regions
  - concept for the analysis of regional types

deliverables until Aug 2003

task	**time**	**responsible**
concepts of the specification of the performance identification of the different indicators		all TPGs
analyse		
▪ demographic, economic, social and environmental indicators	11.07.2003	mainly theme 1
▪ and indicators of policy impacts	11.07.2003	mainly theme 2
with reference to types of regions	31.07.2003	all TPGs
delivery of results to TPG 3.1	15.08.2003	TPG 3.1
trends and policy impacts for types of regions		

5. measurement of policy goals and concepts

To get more in depth analysis of territorial trends and policy impacts it needs more sophisticated analysis and measurement of policy goals and concepts. For goals like "balanced development" some measures, like measures of variance, gini coefficient etc. have been widely established to indicate regional imbalances. For other goals like, e.g., "polycentric development", it seems much more complicated and complex to operationalise and "measure" the degree at which objectives have been achieved. But some TPGs, in their latest Interim Reports, have proposed some innovative measurement methods and indices to operationalise spatial development goals and concepts.
For polycentrism, for instance, a combination of rank size of cities, spatial distribution of cities, and connectivity between cities has been proposed.
These ideas should be further developed and innovative ideas are looked for!
The LP meeting should discuss and, if possible, agree on core operational measures.

Short term task list

The main – short term – tasks of the TPGs in this context are:
- "measurement" of policy goals and concepts
  - preparing a concept for the assessment

deliverables until Aug 2003

task	Time	responsible
ideas and proposals for the measurement of policy goals and concepts	16.06.2003	all TPGs
implementing these proposals to measure:		
▪ polycentrism, polycentric development	16.06.2003	all TPGs
▪ balance, disparities, balanced development	16.06.2003	all TPGs
▪		
presenting draft results	11.07.2003	all TPGs
presenting results	15.08.2003	all TPGs

6. referring analytical results to goals and concepts

One of the central aims shared by all TPGs is focused on the general question:
- do spatial development trends (in population, GDP, state of environment etc.)
- and do European policies (CAP, R&D, TEN-T, ...)
- contribute to goals and concepts of European spatial development policies?

To spell out some of these core questions in more detail:
- do trends in population development support the goal of a more polycentric development in Europe?
- do R&D policies support the goal of a more balanced development in Europe?
- do transport policies contribute to the goal of a more sustainable development in Europe?

Again these questions should be related to the 3-level approach of macro, meso, and micro perspective.

Basically, these assessments will be done with qualitative methods.
But, as far as quantitative methods and measures (as introduced in chapters 4 and 5) can be operationalised and implemented, the questions of relating trends and impacts to goals and concepts can also be dealt with on a more precise quantitative basis.

Short term task list

The main – short term – tasks of the TPGs in this context are:
- evaluation of ESPON results with ESDP goals and concepts
  - identification / measurement of goals and concepts
  - identification / measurement of trends and impacts
  - preparing a concept on evaluation and assessment
- presentation of the results of the evaluation/ trends and impacts

deliverables until Aug 2003

task	Time	responsible
preparing ideas and proposals for a concept on evaluation and assessment	16.06.2003	all TPGs
▪ assessing and evaluating ▪ trends and impacts ▪ with reference to (innovative measures of) goals and concepts (like: polycentrism, balanced development)	31.07.2003	all TPGs
evaluation of results concerning goals and concepts of the ESDP (incl. trends and impacts)	15.08.2003	all TPGs

7. Conclusions for policies

All projects are aware of their policy relevance and will produce conclusions and recommendations related to European policies in the field of spatial development. TPG 3.1 has given some input into the preparation of policy relevant results, including inputs in impact assessment and SWOT analysis. Now it is the turn of the TPGs to analyse their specific field of research and to draw policy conclusions in their field of substance. It will be the task of TPG 3.1 as part of its Third Interim Report to summarise and generalise these single policy conclusions and recommendations. To support this task, elements like SWOT analysis have to be further developed and implemented and guidelines for the presentation of TPGs‘ policy conclusions will be developed that help summarising and generalising these results.

Annex 1: list of core indicators

Annex 2: draft contents of ESPON map collection

Annex 3: proposal for the ESPON table design

ESPON - Core indicators by TPG responsible - 02-06-2003

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Commuter	International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2		
Location of TOP 1500 European Companies	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
Turnover of TOP 500 European Companies	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
Employment of TOP 500 European Companies	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
Gross value added in service sector	EU COM, REGIO, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
University students	EU COM, REGIO, National Statistical Institutes, Estimations	**1.1.1**	EU27+2	NUTS 2	2000
Pupils by school level	EU COM, REGIO, National Statistical Institutes, Estimations	**1.1.1**	EU27+2	NUTS 2	2000
Households	Special query REGIO, National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 3	2000
Income per capita	SES ?, International institutes, National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 2	2000
balance of newly founded and bankrupt firms	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 3 NUTS 2 NUTS 5	2000
Household oriented infrastructure	National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 2	2000
Cross-border activities in border regions	EU COM, national partner involved, Interreg secretariats, others	**1.1.3**	EU27+2	NUTS 2	
Population growth	REGIO, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Natural population growth	REGIO, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Net-migration rate	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Ageing / Dependencies	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Reproduction potential (Gross Reproduction Rate (female births/women in fertile age))	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Population in "functional"/"stragetegic" age	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Total fertility rate	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Passenger on airports	GISCO, others	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	2000
Transport network by mode	GISCO, others	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Transport node my mode	GISCO, others	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Travel time by spatial level and transport mode	GISCO, others, model calculations	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Daytime accessibiltity by transport mode	GISCO, others, model calculations	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Travel costs by transport node	GISCO, others, model calculations	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Network distance to linear distance ratio	GISCO, others, model calculations	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Proportion of main lines connected to digital exchange	others, GISCO	**1.2.2**	EU27+2		
ADSL lines as a proportion of total main lines	others, GISCO	**1.2.2**	EU27+2		

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Cable modem lines as a proportion of total lines installed	others, GISCO	**1.2.2**	EU27+2		
Proportion of exchanges with co-located equipment (local loop unbundling)	others, GISCO	**1.2.2**	EU27+2		
Availability of Internet service with (a) local rate charges (b) unmetered access	others, GISCO	**1.2.2**	EU27+2		
Number of PIAPs per 1000 inhabitants	others, GISCO	**1.2.2**	EU27+2		
Cellular subscribers per 100 inhabitants	others, GISCO	**1.2.2**	EU27+2		
ADSL subscribers per 10,000 inhabitants	others, GISCO	**1.2.2**	EU27+2		
Proportion of households with Internet access	others, GISCO	**1.2.2**	EU27+2		
Proportion of households with broadband Internet access	others, GISCO	**1.2.2**	EU27+2		
Proportion of firms with access to the Internet	others, GISCO	**1.2.2**	EU27+2		
ICT Tele-communication	International institutes, National Statistical Institutes, Estimations	**1.2.3**	EU27+2	NUTS 2	
Intensification of agriculture	EU institutions, International institutes, National Statistical Institutes, Estimations	**1.3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Area exposed to acidification and eutrophication	Coordination center of effects under the working group of effects of the LRTAP Convention (EMEP 150 km GRID)	**1.3.1**	EU27+2	NUTS 2	1990 as possible

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Flood areas	EU COM, REGIO, NEWCRONOS; National Statistical Institutes, Estimations	**1.3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Soil and land use hazards (erosion, seal areas etc.)	EU COM, REGIO, NEWCRONOS; National Statistical Institutes, Estimations	**1.3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Volcanic eruptions	The Smithsonian's Global Volcanism Program	**1.3.1**	EU27+2	NUTS 3	
Floods	EC DG JRC (Natural Hazards project), EEA	**1.3.1**	EU27+2	NUTS 3	
Landslides / avalanches	GTOPO30 USGS	**1.3.1**	EU27+2	NUTS 3	
Earthquakes	NGDC Significant Earthquake Database, Global Seismic Hazard Assessment Program, GNV63 - Natural Hazards Data Base on Earthquakes	**1.3.1**	EU27+2	NUTS 3	
Earthquake/amount of casualties	NGDC Significant Earthquake Database, Global Seismic Hazard Assessment Program	**1.3.1**	EU27+2	NUTS 3	
Earthquakes/extent of damage in US$	NGDC Significant Earthquake Database	**1.3.1**	EU27+2	NUTS 3	
Droughts	From report "A drought climatology for Europe" (Royal Meteorological Society)	**1.3.1**	EU27+2	NUTS 3	
Forest Fires	EC DG JRC (Natural Hazards project)	**1.3.1**	EU27+2	NUTS 3	
Storms	Munich Re (published as "Winter storms in Europe")	**1.3.1**	EU27+2	NUTS 3	
Extreme precipitation (heavy rainfall, hail)	World Meteorological Organization	**1.3.1**	EU27+2	NUTS 3	
Extreme temperatures (heat waves, cold waves)	World Meteorological Organization	**1.3.1**	EU27+2	NUTS 3	
Dam failures	ICOLD (INTERNATIONAL COMMISSION ON LARGE DAMS), World Dam Register	**1.3.1**	EU27+2	NUTS 3	
Nuclear power plants	IAEA	**1.3.1**	EU27+2	NUTS 3	

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Hazards from production plants with hazardous production processes or substances (large-scale chemical works, weapons, fireworks ore processing plants, etc.)	Member States have the obligation to report major accidents to the Commission. In order to fulfil its information obligations towards the Member States, the Commission has established a so-called Major-Accident Reporting System (MARS) and the Community Documentation Centre on Industrial Risks (CDCIR) at the Major-Accident Hazards Bureau (http://mahbsrv.jrc.it/) established within its Joint Research Centre (JRC) in Ispra, Italy.	**1.3.1**	EU27+2	NUTS 3	
Hazardous waste deposits, such as nuclear waste or ore minig stockpiles and tailure dams	ICOLD (only for tailure dams) , MARS, CDCIR	**1.3.1**	EU27+2	NUTS 3	
Marine transport of hazardous goods (oil etc.)	ITOPF (International tanker owners pollution federation)	**1.3.1**	EU27+2	NUTS 3	
Richness of spezies identified of European importance	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.2**	EU27+2	NUTS 2	
Extent and richness of semi-natural habitat type	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.2**	EU27+2	NUTS 2	
Protected natural areas	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.2**	EU27+2	NUTS 2	
Tourist stays	REGIO, National Statistical Institutes,	**1.3.3**	EU27+2	NUTS 2	
Tourist capacity	REGIO, National Statistical Institutes,	**1.3.3**	EU27+2	NUTS 2	
Tourist related employment	NEWCRONOS; REGIO, National Statistical Institutes, Estimations	**1.3.3**	EU27+2	NUTS 2	
Cultural heritage	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.3**	EU27+2		
Market accessibility potential by spatial level and transport mode	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Travel time by spatial level and transport mode	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Travel costs by transport node	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Average speed to market	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Average time to market	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Impact of accessibilty changes on GDP per capita	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
Impact of accessibilty changes on Equivalent income measure of user benefits	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
Impact of accessibilty changes on Employment	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
Impact of accessibilty changes on Unemployment	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
R & D personel	REGIO, National Statistical Institutes, Estimations	**2.1.2**	EU27+2	NUTS 2	
R & D Expenditure	REGIO, National Statistical Institutes, Estimations	**2.1.2**	EU27+2	NUTS 2	
Patents	REGIO, National Statistical Institutes, Estimations	**2.1.2**	EU27+2	NUTS 2	
Utilizable Agricultural Area (UAA) as a percentage of total land area	Eurofarm database, national statistical institutes	**2.1.3**	EU27+2	NUTS 3	2000
Percentage of farm holders under the age of 35 years	Eurostat REGIO Table A2EFARM	**2.1.3**	EU15	NUTS 2	1997 1995 1993 1990
Percentage of farm holders over the age of 60 years	Eurostat REGIO Table A2EFARM	**2.1.3**	EU15	NUTS 2	1997 1995 1993 1990

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Agricultural output per hectare	Eurostat REGIO Tables A2ACCT97 and A2LAND	**2.1.3**	EU15	NUTS 2	Annual 1990-2001
Agricultural output per AWU	Eurostat REGIO Tables A2ACCT97 and A2LAND	**2.1.3**	EU15	NUTS 2	Annual 1990-2001
Percentage value added by agriculture, forestry and fishing	Eurostat REGIO Tables EVABP95 or XE3VABP	**2.1.3**	EU27+2	NUTS 3	Annual 1995-2000
Value of fertilizer input per hectare of arable land	Eurostat REGIO Tables A2ACCT97 and A2LAND	**2.1.3**	EU15	NUTS 2	Annual 1990-2001
Electricity production by power of source	EU institutions,NEWCRONOS, REGIO, International institutes, National Statistical Institutes, Estimations	**2.1.4**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Final energy consumption by energy type and consumption sector	EU institutions,NEWCRONOS, REGIO, International institutes, National Statistical Institutes, Estimations	**2.1.4**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Energy prices for industry (net and tax included)	EU institutions,NEWCRONOS, REGIO, International institutes, National Statistical Institutes, Estimations	**2.1.4**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Structural funds in Euro by funds involved	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.1**	EU15	NUTS 3 NUTS 2	according funding periods
Structural funds in % regional GDP	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.1**	EU15	NUTS 3 NUTS 2	according funding periods
Pre accesion aid in Euro by programme involved	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.2**	ACC12	NUTS 3 NUTS 2	according funding periods
Pre accesion aid in % of regional GDP	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.2**	ACC12	NUTS 3 NUTS 2	according funding periods
Crime rate	International institutes, National Statistical Institutes, Estimations	**2.2.3**	EU27+2	NUTS 3	
Total population	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000 P 1996-1999 p.a 1995 1990 P

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Area	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000 P 1996-1999 p.a 1995 1990 P
Population density	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000 P 1996-1999 p.a 1995 1990 P
Population by age	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Population by sex	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3	2000 1996-1999 p.a 1995 1990
Educational level of population	Special query REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3	
Labour Force	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Labour Force by age	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Activity rates	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3 NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Unemployment rates	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Total employment	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Employment by sector of activity (NACE)	Special query REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Employment by qualification and profession	Special query REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Human Capital	Human capital index; Rolf Derenbach, EU COMM	**3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a
GDP total	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	1996-1999 p.a 1995
GDP per capita	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3 NUTS 2	1996-1999 p.a 1995
Purchasing power indices	Gesellschaft für Konsumforschung (GfK)	**3.1**	EU27+2	NUTS 3 NUTS 2	1996-1999 p.a
Productivity	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3 NUTS 2	1996-1999 p.a
Productivity per hours worked	REGIO, NEWCRONOS, LACOSTS, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	1996-1999 p.a

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Labour costs	NEWCRONOS, LACOSTS, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	1996-1999 p.a

Remarks: L: Yes, but on regional level less than NUTS 3, P: also on regional level more than NUTS 3

Proposal for ESPON Map Collection

Topic	TPG responsible
I. The regions of ESPON	
- NUTS regions in ESPON countries	3.1
II Regional Structures and developments	
II.1 Structure and development of population	
· Population Density and Cities by size	1.1.1
· Settlement Structure	3.1
· Age structure of population	3.1
· Development of Population	1.1.4
· Natural Development	1.1.4
· Regional types depopulation	1.1.4
II. 2 Structure and dynamics of labour market	
· Activity rates	3.1
· Labour Force by age	3.1
· Employment sectoral structure	3.1
Employment by sector of activity	
Employment by sectoral level	
Employment in R&D	2.1.2
· Employment by Educational level	
Employment by highest educational level	
Human capital index	
· Employment professional structure	
· Female Employment	
· Unemployment	
· Development of unemployment	
· Youth unemployment	
II.3 Regional performance	
· Disparities in GDP	3.1
· Sectoral Structure of regional income	
Cross value added in services	1.1.1
GDP in agriculture and agri-food-industry	2.1.3
· Development in GDP	3.1
III. Towards a more Balanced and Polycentric Urban System	
III.1 The Urban System	
· Urban Areas functional urban areas	1.1.1
· Typology of cities and functional urban regions (FUR)	1.1.1
· Megas	1.1.1
· Urban Regions with structural problems	
· Centre oriented accessibility by spatial level and transport mode	2.1.1
III. 2 The Rural-Urban Relationship	
Typology of Rural-urban relations	1.1.2
Agricultural land use	2.1.3
Agricultural farms by age of holder	2.1.3
Agricultural Production	2.1.3
Rural regions with structural problems	

Topic	TPG responsible
IV. Access to Infrastructure and Knowledge	
IV.1 Infra- and Infostructure	
· Transport network, access and use	1.2.1, 2.1.1
· Transport Accessibility	1.2.1, 2.1.1
· ICT network, access and use	1.2.2
· ICT accessibility	1.2.2
· Energy network, access, use	2.1.4
· Energy involvement and sensitvity	2.1.4
IV.2 Peripherality	
· Travel time by spatial level and transport mode	2.1.1
· Travel costs by transport node	2.1.1
· Average speed to market	2.1.1
· Average time to market	2.1.1
IV.3 Effects of Accessibility	
· Accessibility to GDP	2.1.1
IV.3 Education and Knowledge	
· Household orientated infrastructure	1.1.2
· University students	1.1.1
· Pupils by school level	1.1.1
V Cultural and Natural Heritage	
V.1 Natural Heritage	
Extent and richness of semi-natural habitats	1.3.1
Protected areas	1.3.2
Richness of species identified of european importance	1.3.2
Areas exposed to acidification and eutrophication	1.3.1
V.2 Cultural Heritage	
Cultural heritage	1.3.3
Tourist stays and capacity	1.3.3
Tourist related employment	1.3.3
VI Geographical and natural determined regions	
VI.1 Geographical determined regions	
· Coastal regions with structural problems	
· Mountain regions with structural problems	
· Border regions structural problems	3.1
VI.2 Natural determined regions	
· Less favoured areas	2.1.3
· Natural and technological hazards	1.3.1
· Hazard potential and vulnerabilities	1.3.1

Proposal for ESPON tables and regional aggregates

	Indicator A	Indicator B	Indicator C	.....	Indicator n

Table on NUTS level 1
NUTS 0
NUTS 1

Table on NUTS level 2
NUTS 0
NUTS 1
NUTS 2

Table on NUTS level 3
NUTS 0
NUTS 1
NUTS 2
NUTS 3

Order of states:
Belgique-België, Danmark, Deutschland, Ellada, España, France, Ireland, Italia, Luxembourg (Grand Duché), Nederland, Österreich, Portugal, Suomi/Finland, Sverige, United Kingdom, Balgarjia, Kypros, Ceska Republica, Eesti, Magyarország, Lietuva, Latvija, Malta, România, Slovenija, Slovenská Republika, Norge, Schweiz

Aggregates:

EU15	S actual member states
cc10	S 10 accession countries CY, CZ, EE, HU, LT, LV, MT, PL, SI, SK
EU25	S EU15 + cc10
cc12	S cc10 + BG, RO
EU27	S EU15 + cc12
EU27+2	S EU27 + CH, NO

Example for NUTS 3

	Indicator

EU15
cc10
EU25
cc12
EU27
EU27+2

Belgique-België
Région Bruxelles-capitale
Vlaams Gewest
Antwerpen
Antwerpen (Arrondissement)

Mechelen
Turnhout
.
.
.
Dänemark
København og Frederiksberg Kommuner
Københavns amt
Frederiksborg amt
Roskilde amt
.
.
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Bundesrepublik
Baden-Württemberg
Stuttgart
Stuttgart, Stadtkreis
Böblingen
Esslingen
Göppingen
Ludwigsburg
Rems-Murr-Kreis
Heilbronn, Stadtkreis
Heilbronn, Landkreis
Hohenlohekreis
Schwäbisch Hall
Main-Tauber-Kreis
Heidenheim
Ostalbkreis
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Zentralschweiz
Luzern
Uri
Schwyz
Obwalden
Nidwalden
Zug
Ticino

ESPON - Core indicators by TPG responsible - 02-06-2003

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Commuter	International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2		
Location of TOP 1500 European Companies	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
Turnover of TOP 500 European Companies	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
Employment of TOP 500 European Companies	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
Gross value added in service sector	EU COM, REGIO, National Statistical Institutes, Estimations	**1.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000
University students	EU COM, REGIO, National Statistical Institutes, Estimations	**1.1.1**	EU27+2	NUTS 2	2000
Pupils by school level	EU COM, REGIO, National Statistical Institutes, Estimations	**1.1.1**	EU27+2	NUTS 2	2000
Households	Special query REGIO, National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 3	2000
Income per capita	SES ?, International institutes, National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 2	2000
balance of newly founded and bankrupt firms	Bussiness information companies, International institutes, National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 3 NUTS 2 NUTS 5	2000
Household oriented infrastructure	National Statistical Institutes, Estimations	**1.1.2**	EU27+2	NUTS 2	2000
Cross-border activities in border regions	EU COM, national partner involved, Interreg secretariats, others	**1.1.3**	EU27+2	NUTS 2	
Population growth	REGIO, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Natural population growth	REGIO, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Net-migration rate	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Ageing / Dependencies	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Reproduction potential (Gross Reproduction Rate (female births/women in fertile age))	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Population in "functional"/"stragetegic" age	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Total fertility rate	International institutes, National Statistical Institutes, Estimations	**1.1.4**	EU27+2	NUTS 3 NUTS 2	2000 1995 1990 as possible
Passenger on airports	GISCO, others	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	2000
Transport network by mode	GISCO, others	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Transport node my mode	GISCO, others	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Travel time by spatial level and transport mode	GISCO, others, model calculations	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
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Travel costs by transport node	GISCO, others, model calculations	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Network distance to linear distance ratio	GISCO, others, model calculations	**1.2.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Proportion of main lines connected to digital exchange	others, GISCO	**1.2.2**	EU27+2		
ADSL lines as a proportion of total main lines	others, GISCO	**1.2.2**	EU27+2		
Cable modem lines as a proportion of total lines installed	others, GISCO	**1.2.2**	EU27+2		
Proportion of exchanges with co-located equipment (local loop unbundling)	others, GISCO	**1.2.2**	EU27+2		
Availability of Internet service with (a) local rate charges (b) unmetered access	others, GISCO	**1.2.2**	EU27+2		

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Number of PIAPs per 1000 inhabitants	others, GISCO	**1.2.2**	EU27+2		
Cellular subscribers per 100 inhabitants	others, GISCO	**1.2.2**	EU27+2		
ADSL subscribers per 10,000 inhabitants	others, GISCO	**1.2.2**	EU27+2		
Proportion of households with Internet access	others, GISCO	**1.2.2**	EU27+2		
Proportion of households with broadband Internet access	others, GISCO	**1.2.2**	EU27+2		
Proportion of firms with access to the Internet	others, GISCO	**1.2.2**	EU27+2		
ICT Tele-communication	International institutes, National Statistical Institutes, Estimations	**1.2.3**	EU27+2	NUTS 2	
Intensification of agriculture	EU institutions, International institutes, National Statistical Institutes, Estimations	**1.3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Area exposed to acidification and eutrophication	Coordination center of effects under the working group of effects of the LRTAP Convention (EMEP 150 km GRID)	**1.3.1**	EU27+2	NUTS 2	1990 as possible
Flood areas	EU COM, REGIO, NEWCRONOS; National Statistical Institutes, Estimations	**1.3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Soil and land use hazards (erosion, seal areas etc.)	EU COM, REGIO, NEWCRONOS; National Statistical Institutes, Estimations	**1.3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Volcanic eruptions	The Smithsonian's Global Volcanism Program	**1.3.1**	EU27+2	NUTS 3	
Floods	EC DG JRC (Natural Hazards project), EEA	**1.3.1**	EU27+2	NUTS 3	
Landslides / avalanches	GTOPO30 USGS	**1.3.1**	EU27+2	NUTS 3	
Earthquakes	NGDC Significant Earthquake Database, Global Seismic Hazard Assessment Program, GNV63 - Natural Hazards Data Base on Earthquakes	**1.3.1**	EU27+2	NUTS 3	
Earthquake/amount of casualties	NGDC Significant Earthquake Database, Global Seismic Hazard Assessment Program	**1.3.1**	EU27+2	NUTS 3	

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Earthquakes/extent of damage in US$	NGDC Significant Earthquake Database	**1.3.1**	EU27+2	NUTS 3	
Droughts	From report "A drought climatology for Europe" (Royal Meteorological Society)	**1.3.1**	EU27+2	NUTS 3	
Forest Fires	EC DG JRC (Natural Hazards project)	**1.3.1**	EU27+2	NUTS 3	
Storms	Munich Re (published as "Winter storms in Europe")	**1.3.1**	EU27+2	NUTS 3	
Extreme precipitation (heavy rainfall, hail)	World Meteorological Organization	**1.3.1**	EU27+2	NUTS 3	
Extreme temperatures (heat waves, cold waves)	World Meteorological Organization	**1.3.1**	EU27+2	NUTS 3	
Dam failures	ICOLD (INTERNATIONAL COMMISSION ON LARGE DAMS), World Dam Register	**1.3.1**	EU27+2	NUTS 3	
Nuclear power plants	IAEA	**1.3.1**	EU27+2	NUTS 3	
Hazards from production plants with hazardous production processes or substances (large-scale chemical works, weapons, fireworks ore processing plants, etc.)	Member States have the obligation to report major accidents to the Commission. In order to fulfil its information obligations towards the Member States, the Commission has established a so-called Major-Accident Reporting System (MARS) and the Community Documentation Centre on Industrial Risks (CDCIR) at the Major-Accident Hazards Bureau (http://mahbsrv.jrc.it/) established within its Joint Research Centre (JRC) in Ispra, Italy.	**1.3.1**	EU27+2	NUTS 3	
Hazardous waste deposits, such as nuclear waste or ore minig stockpiles and tailure dams	ICOLD (only for tailure dams) , MARS, CDCIR	**1.3.1**	EU27+2	NUTS 3	
Marine transport of hazardous goods (oil etc.)	ITOPF (International tanker owners pollution federation)	**1.3.1**	EU27+2	NUTS 3	
Richness of spezies identified of European importance	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.2**	EU27+2	NUTS 2	
Extent and richness of semi-natural habitat type	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.2**	EU27+2	NUTS 2	
Protected natural areas	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.2**	EU27+2	NUTS 2	
Tourist stays	REGIO, National Statistical Institutes, Estimations	**1.3.3**	EU27+2	NUTS 2	
Tourist capacity	REGIO, National Statistical Institutes, Estimations	**1.3.3**	EU27+2	NUTS 2	
Tourist related employment	NEWCRONOS; REGIO, National Statistical Institutes, Estimations	**1.3.3**	EU27+2	NUTS 2	

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Cultural heritage	International institutes, National institutions, National Statistical Institutes, Estimations	**1.3.3**	EU27+2		
Market accessibility potential by spatial level and transport mode	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Travel time by spatial level and transport mode	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Travel costs by transport node	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Average speed to market	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Average time to market	GISCO, others, model calculations	**2.1.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	
Impact of accessibilty changes on GDP per capita	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
Impact of accessibilty changes on Equivalent income measure of user benefits	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
Impact of accessibilty changes on Employment	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
Impact of accessibilty changes on Unemployment	Own model calculations	**2.1.1**	EU27+2	NUTS 3 NUTS 2	1997 - ca. 2020
R & D personel	REGIO, National Statistical Institutes, Estimations	**2.1.2**	EU27+2	NUTS 2	
R & D Expenditure	REGIO, National Statistical Institutes, Estimations	**2.1.2**	EU27+2	NUTS 2	
Patents	REGIO, National Statistical Institutes, Estimations	**2.1.2**	EU27+2	NUTS 2	
Utilizable Agricultural Area (UAA) as a percentage of total land area	Eurofarm database, national statistical institutes	**2.1.3**	EU27+2	NUTS 3	2000

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Percentage of farm holders under the age of 35 years	Eurostat REGIO Table A2EFARM	**2.1.3**	EU15	NUTS 2	1997 1995 1993 1990
Percentage of farm holders over the age of 60 years	Eurostat REGIO Table A2EFARM	**2.1.3**	EU15	NUTS 2	1997 1995 1993 1990
Agricultural output per hectare	Eurostat REGIO Tables A2ACCT97 and A2LAND	**2.1.3**	EU15	NUTS 2	Annual 1990-2001
Agricultural output per AWU	Eurostat REGIO Tables A2ACCT97 and A2LAND	**2.1.3**	EU15	NUTS 2	Annual 1990-2001
Percentage value added by agriculture, forestry and fishing	Eurostat REGIO Tables EVABP95 or XE3VABP	**2.1.3**	EU27+2	NUTS 3	Annual 1995-2000
Value of fertilizer input per hectare of arable land	Eurostat REGIO Tables A2ACCT97 and A2LAND	**2.1.3**	EU15	NUTS 2	Annual 1990-2001
Electricity production by power of source	EU institutions,NEWCRONOS, REGIO, International institutes, National Statistical Institutes, Estimations	**2.1.4**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Final energy consumption by energy type and consumption sector	EU institutions,NEWCRONOS, REGIO, International institutes, National Statistical Institutes, Estimations	**2.1.4**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Energy prices for industry (net and tax included)	EU institutions,NEWCRONOS, REGIO, International institutes, National Statistical Institutes, Estimations	**2.1.4**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Structural funds in Euro by funds involved	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.1**	EU15	NUTS 3 NUTS 2	according funding periods
Structural funds in % regional GDP	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.1**	EU15	NUTS 3 NUTS 2	according funding periods
Pre accesion aid in Euro by programme involved	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.2**	ACC12	NUTS 3 NUTS 2	according funding periods
Pre accesion aid in % of regional GDP	EU institutions, National Administration and Statistical Institutes, Estimations	**2.2.2**	ACC12	NUTS 3 NUTS 2	according funding periods
Crime rate	International institutes, National Statistical Institutes, Estimations	**2.2.3**	EU27+2	NUTS 3	
Total population	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000 P 1996-1999 p.a 1995 1990 P
Area	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000 P 1996-1999 p.a 1995 1990 P

Indicator	Potential Source of Indicator	TPG responsible	Spatial scope	Regional level	Temporal scope
Population density	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2 NUTS 5	2000 P 1996-1999 p.a 1995 1990 P
Population by age	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Population by sex	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3	2000 1996-1999 p.a 1995 1990
Educational level of population	Special query REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3	
Labour Force	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Labour Force by age	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Activity rates	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3 NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Unemployment rates	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Total employment	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Employment by sector of activity (NACE)	Special query REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Employment by qualification and profession	Special query REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a 1995 1990 as possible
Human Capital	Human capital index; Rolf Derenbach, EU COMM	**3.1**	EU27+2	NUTS 2	2000 1996-1999 p.a
GDP total	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2 as possible +pan +med	NUTS 3 NUTS 2	1996-1999 p.a 1995
GDP per capita	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3 NUTS 2	1996-1999 p.a 1995
Purchasing power indices	Gesellschaft für Konsumforschung (GfK)	**3.1**	EU27+2	NUTS 3 NUTS 2	1996-1999 p.a
Productivity	REGIO, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 3 NUTS 2	1996-1999 p.a
Productivity per hours worked	REGIO, NEWCRONOS, LACOSTS, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	1996-1999 p.a
Labour costs	NEWCRONOS, LACOSTS, National Statistical Institutes, Estimations	**3.1**	EU27+2	NUTS 2	1996-1999 p.a

Remarks: L: Yes, but on regional level less than NUTS 3, P: also on regional level more than NUTS 3

Proposal for ESPON Map Collection

Topic	TPG responsible
I. The regions of ESPON	
- NUTS regions in ESPON countries	3.1
II Regional Structures and developments	
II.1 Structure and development of population	
· Population Density and Cities by size	1.1.1
· Settlement Structure	3.1
· Age structure of population	3.1
· Development of Population	1.1.4
· Natural Development	1.1.4
· Regional types depopulation	1.1.4
II. 2 Structure and dynamics of labour market	
· Activity rates	3.1
· Labour Force by age	3.1
· Employment sectoral structure	3.1
Employment by sector of activity	
Employment by sectoral level	
Employment in R&D	2.1.2
· Employment by Educational level	
Employment by highest educational level	
Human capital index	
· Employment professional structure	
· Female Employment	
· Unemployment	
· Development of unemployment	
· Youth unemployment	
II.3 Regional performance	
· Disparities in GDP	3.1
· Sectoral Structure of regional income	
Cross value added in services	1.1.1
GDP in agriculture and agri-food-industry	2.1.3
· Development in GDP	3.1
III. Towards a more Balanced and Polycentric Urban System	
III.1 The Urban System	
· Urban Areas functional urban areas	1.1.1
· Typology of cities and functional urban regions (FUR)	1.1.1
· Megas	1.1.1
· Urban Regions with structural problems	
· Centre oriented accessibility by spatial level and transport mode	2.1.1
III. 2 The Rural-Urban Relationship	
Typology of Rural-urban relations	1.1.2
Agricultural land use	2.1.3
Agricultural farms by age of holder	2.1.3
Agricultural Production	2.1.3
Rural regions with structural problems	
IV. Access to Infrastructure and Knowledge	

Topic	TPG responsible
IV.1 Infra- and Infostructure	
· Transport network, access and use	1.2.1, 2.1.1
· Transport Accessibility	1.2.1, 2.1.1
· ICT network, access and use	1.2.2
· ICT accessibility	1.2.2
· Energy network, access, use	2.1.4
· Energy involvement and sensitvity	2.1.4
IV.2 Peripherality	
· Travel time by spatial level and transport mode	2.1.1
· Travel costs by transport node	2.1.1
· Average speed to market	2.1.1
· Average time to market	2.1.1
IV.3 Effects of Accessibility	
· Accessibility to GDP	2.1.1
IV.3 Education and Knowledge	
· Household orientated infrastructure	1.1.2
· University students	1.1.1
· Pupils by school level	1.1.1
V Cultural and Natural Heritage	
V.1 Natural Heritage	
Extent and richness of semi-natural habitats	1.3.1
Protected areas	1.3.2
Richness of species identified of european importance	1.3.2
Areas exposed to acidification and eutrophication	1.3.1
V.2 Cultural Heritage	
Cultural heritage	1.3.3
Tourist stays and capacity	1.3.3
Tourist related employment	1.3.3
VI Geographical and natural determined regions	
VI.1 Geographical determined regions	
· Coastal regions with structural problems	
· Mountain regions with structural problems	
· Border regions structural problems	3.1
VI.2 Natural determined regions	
· Less favoured areas	2.1.3
· Natural and technological hazards	1.3.1
· Hazard potential and vulnerabilities	1.3.1

Proposal for ESPON tables and regional aggregates

	Indicator A	Indicator B	Indicator C	.....	Indicator n

Table on NUTS level 1
NUTS 0
NUTS 1

Table on NUTS level 2
NUTS 0
NUTS 1
NUTS 2

Table on NUTS level 3
NUTS 0
NUTS 1
NUTS 2
NUTS 3

Order of states:
Belgique-België, Danmark, Deutschland, Ellada, España, France, Ireland, Italia, Luxembourg (Grand Duché), Nederland, Österreich, Portugal, Suomi/Finland, Sverige, United Kingdom, Balgarjia, Kypros, Ceska Republica, Eesti, Magyarország, Lietuva, Latvija, Malta, România, Slovenija, Slovenská Republika, Norge, Schweiz

Aggregates:

EU15	Σ actual member states
cc10	Σ 10 accession countries CY, CZ, EE, HU, LT, LV, MT, PL, SI, SK
EU25	Σ EU15 + cc10
cc12	Σ cc10 + BG, RO
EU27	Σ EU15 + cc12
EU27+2	Σ EU27 + CH, NO

Example for NUTS 3

	Indicator
EU15	
cc10	
EU25	
cc12	
EU27	
EU27+2	
Belgique-België	
Région Bruxelles-capitale	
Vlaams Gewest	
Antwerpen	
Antwerpen (Arrondissement)	
Mechelen	

Turnhout

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Dänemark

København og Frederiksberg Kommuner
Københavns amt
Frederiksborg amt
Roskilde amt

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Bundesrepublik Deutschland

Baden-Württemberg

Stuttgart

Stuttgart, Stadtkreis
Böblingen
Esslingen
Göppingen
Ludwigsburg
Rems-Murr-Kreis
Heilbronn, Stadtkreis
Heilbronn, Landkreis
Hohenlohekreis
Schwäbisch Hall
Main-Tauber-Kreis
Heidenheim
Ostalbkreis

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Zentralschweiz

Luzern
Uri
Schwyz
Obwalden
Nidwalden
Zug

Ticino