

**ESPON Workshop “Assessing Indicators for Territorial Cohesion”
organised in cooperation with the ESPON INTERCO project
20 October 2011**

Developing Indicators for Territorial Cohesion

The ESPON INTERCO project set out to develop a set of comparable and reliable indicators and indices that can be used to measure territorial cohesion, complex territorial development, structural issues, territorial challenges and opportunities as well as territorial effects at different geographical levels and types of regions. These are extremely ambitious aims and over the last months the project has studied, discussed and tested a wide range of indicators and indices and any attempt to prepare a manageable short list illustrated how many important dimensions and facets of territorial development and cohesion need to be considered.

At this workshop ESPON INTERCO puts a number of indicators up for discussion. This is however, by no means, a definite selection, but rather a framework for understanding territorial cohesion and testing how different indicators can be used, presented and discussed in order to inform policy making about their progress in working towards territorial cohesion.

To develop indicators to measure territorial cohesion, it is necessary to sharpen the understanding of what territorial cohesion actually may comprise. The last years of debate have shown that a precise definition of territorial cohesion is impossible. As main stakeholders emphasise different dimensions of the territorial cohesion idea, any attempt to define it will exclude certain understandings and thus lead to a poorer result. To accommodate this and develop indicators of interest for various interpretations of territorial cohesion, five main facets of territorial cohesion have been developed during a series of workshops running from November 2010 to January 2011. Each of the facets stresses different aspects of territorial cohesion and the different facets are by no means mutually exclusive and some of them can in parts also contradict each other. By considering all these different facets, ESPON INTERCO ensures that the indicators identified cover the full spectrum of what territorial cohesion can mean and that all relevant stakeholders can relate to some of the indicators.

Furthermore, ESPON INTERCO underlines that it is not necessarily the indicator itself that is of main interest, but the way we read it. Whereas GDP or poverty indicators as such do not necessarily tell something about territorial cohesion, considering them in relation with other types of change can help to assess whether more cohesive development patterns are emerging within regions. Considering balanced development between regions, a review of the indicators e.g. with regard to differences between urban and rural regions can show whether we over time reach more cohesion between different types of territories. In this regard, it is important to distinguish between coherence of development and convergence, which is not necessarily the objective. Polycentric development and global competitiveness may for example lead to stronger contrasts between regions asserting themselves as European nodes or hubs and other regions, at least in a first phase. The question to be addressed is therefore whether such disparities will be reversible on the long term, whether they lead to unacceptable social tensions or may have detrimental economic effects.

In addition to the discussion of the indicators certainly also the reading and interpretation of them will be a key feature during the workshop.

In order to prepare for stimulating discussions during the workshop, short one-pagers have been developed for the five main facets of territorial cohesion. They provide a short introduction into the facet, a list of proposed indicators for this particular facet and a few tentative reflections on possible reading frameworks.

Certainly, there are many more indicators which could be considered. However, not all desirable indicators are possible, as there are a number of preconditions an indicator has to fulfil to be considered by ESPON INTERCO.

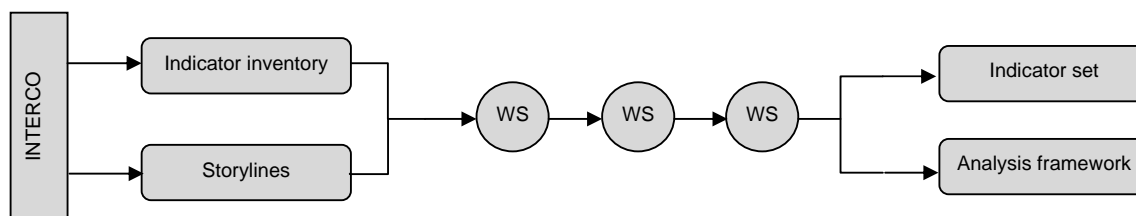
In order to prepare for stimulating group discussions, please read the short summaries before attending the workshop.

Indicator Criteria and Indicator Process

The preconditions for an indicator to be selected as territorial cohesion indicator are:

- They are available for ESPON space
- They are available at sub-national level to grasp the territorial aspects
- They are updated regularly
- They change over time and are sensitive to policy changes
- They are normative, moving from less to more territorial cohesion
- They make it possible to indicate a clear direction of change towards more cohesion for each indicator

In order to identify territorial cohesion indicators, work starts by analysing existing indicators developed and used by other ESPON projects, as well as indicators used in other EC policy documents and studies. Parallel to this the five storylines were developed to ensure that all policy facets of territorial cohesion are properly covered. A series of workshops were held bringing together the works on the storylines with the desk research on indicator analysis to identify a set of so-called 'headline' and 'core' cohesion indicators. Through the workshops the overall analytical framework to analyse territorial cohesion was also sharpened.



Indicator Proposals

The list on the next page presents possible indicators of particular relevance. The green rows indicate the INTERCO top indicators.

To allow for a structured discussion list shows also to which of the five identified facets of territorial cohesion, an indicator is linked. One indicator can be linked to several facts. In the next sections will shortly present the indicators separated for each fact.

We have identified 5 main facets:

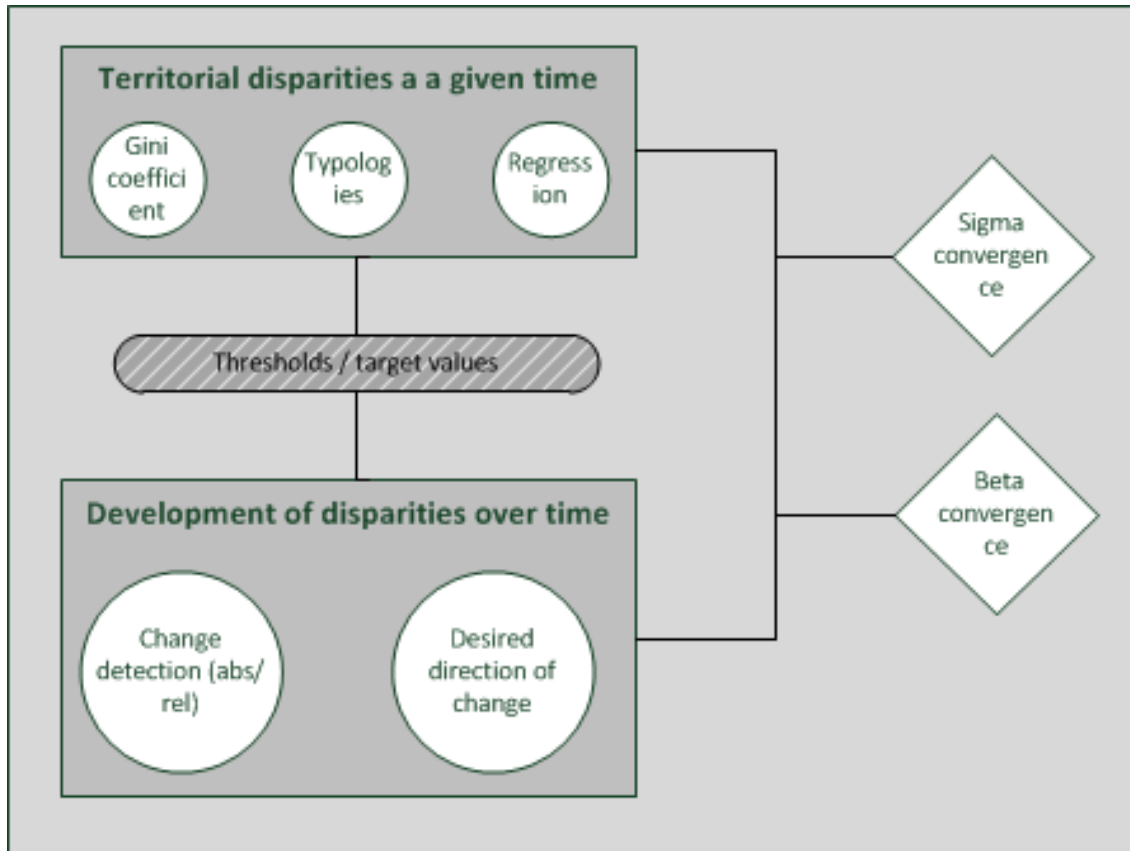
- Smart growth in a competitive and polycentric Europe
- Inclusive, balanced development and fair access to services
- Local development conditions and geographical specificities
- Environmental dimension and sustainable development
- Governance, coordination of policies and territorial impacts

Top indicators

Indicators	Reasoning	Data availability	Desired direction of change	Policies		Storylines				
				EU 2020	TA 2020	Smart ...	Incl. ...	Local ...	Sust. ...	Gov. ...
GDP per capita	Overall economic output of all economic activities	NUTS-3	↗ increase desired, while lagging regions should faster catch up	✓	✓	✓		✓		
Population aged 25-64 with tertiary education	Highly-qualified labour force potential as basis for future R&D activities	NUTS-2	↗ increase desired, while lagging regions should faster catch up	✓	✓	✓		✓		
Employment rate 20-64	Participation of active population in economic activities and in producing net value added	NUTS-2	↗ increase desired, while lagging regions should faster catch up	✓	✓	✓				
Polycentricity index	Composite indicator by ESPON 1.1.1, unfortunately only one point in time	NUTS-1	↗ according to TA 2020, should increase		✓	✓				
Unemployment rate, differentiated by female/male	Quality of regional labour markets, assessing female participation	NUTS-3, NUTS-2	↘ decrease desired				✓			
Disposable household income	Welfare state of a region	NUTS-2	↗ increase desired, with lagging regions catching up faster				✓			
Life expectancy at birth	Proxy for overall health / quality of health-care system	NUTS-2	↗ expectancy should be at least stable, no decrease				✓			
Alternative to the above : Self perceived personal state of health	Degree of well-being with respect to health	NUTS-0, deg. of urb.	↗ increase desired until everybody's perception is very good				✓			
People at-risk-of-poverty or social exclusion	Welfare measure of a region (composite indicator)	NUTS-0, deg. of urb.	↘ reduction of risk to zero desired	✓	✓		✓			
Alternative to the above : % of population living in workless households	Welfare measure of a region (one component of the above composite inidicator)	NUTS-0, deg. of urb.	↘ decrease desired until zero	✓	✓		✓			
Accessibility of grocery services or to compulsory school	Fair access to basic public services	NUTS-0, deg. of urb., raster	↗ the higher access the better, but minimum level needs to be maintained		✓	✓		✓		
Mortality/economic risk from multiple hazards	Risk assessment and vulnerability for environmental hazards	Seamless GIS	↘ decrease desired		✓				✓	
Alternative to the above : Exposure, impacts, vulnerability to climate change	The territorial effects of climate change	NUTS-3	↘ decrease desired		✓				✓	
Air pollution (e.g. PM10 / Ozone concentrations)	Reducing emissions in response to global climate change	NUTS-3	↘ pollution to decrease until zero		✓				✓	
Natural and environmental assets	Preserving the natural environment	Raster	↗ the higher the assets, the better		✓				✓	
Alternative to the above : Soil sealing per capita/per job	De-coupling of economic/demographic development and land take	NUTS-3	↘ decrease desired		✓				✓	
Regional governance indicators (QoG)	Overall performance of governments and public participation	NUTS-2	↗ the higher, the better		✓					✓
Alternative to the above : Trust in legal system	Performance of governments, trust in present systems	NUTS-0, deg. of urb.	↗ increase desired		✓					✓

Analytical framework

Beyond the selection of meaningful indicators of territorial cohesion, the development of a sound analytical framework is at least as important when analysing territorial cohesion. The analytical framework needs to take account for territorial disparities at a given time, and for the development of these disparities over time. Indeed, the analytical framework needs to be able to detect changes and to value these changes in terms of the desired direction of change. The framework furthermore should be able to identify interrelations between two or more indicators, and allows to characterize groups of regions according to certain performance criteria.



A. Smart growth in a competitive and polycentric Europe


Territorial cohesion must contribute to economic growth in order to achieve the aims of Europe 2020 and boost European competitiveness. This implies a strong focus in territorial potentials and the support of smart growth and the connectivity of Europe's economic centres. Only if the economic viable and powerful places in Europe are making full use of their growth potentials and acting as engines for development for larger areas surrounding each of them, will territorial cohesion be possible. These economic centres are at the forefront of development and are important nodes in global economic networks. A key issue is European polycentric development, i.e. the development of a number of interconnected European hubs or Major European Growth Areas (MEGAs) which mutually reinforce each other at lead to the strong growth envisioned for 2020.

Possible territorial cohesion indicators of particular relevance ('headlines') for this dimension (**in bold green : INTERCO top indicators**, i.e. those that can be used as a measure of well-being) :

Indicator overview

Indicator	Level	Reasoning
GDP per capita	NUTS-3	Overall economic output of all economic activities
Population aged 25-64 with tertiary education	NUTS-2	Highly-qualified labour force potential as basis for future R&D activities
Employment rate 20-64	NUTS-2	Participation of active population in economic activities and in producing net value added
Accessibility to grocery stores / schools	NUTS-0, d.o.u., raster	Fair access to basic public services
Expenditures on R&D	NUTS-2	Measuring the future orientation of the economy by maintaining competitiveness through innovations
Population potential within 50 km	Raster, NUTS-3	Proxy for demand for provision of services and as potential for any kind of activities.
Labour productivity in industry and services	NUTS-2	Measure for the competitiveness of a region in global markets
Accessibility to passenger flights	NUTS-3	Connectivity of a region to global business networks

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 = TA 2020 relevant

For this storyline, it appears important to identify regions within which the nodes of European polycentric development are situated and to differentiate them from other regions. The territorial position of regions is in this regard not irrelevant. For some regions may consider that the distance separating them from the nearest development nodes is a challenge, while others may on the contrary find it difficult to assert themselves because they are "in the shadow" of these major nodes (so-called "inner peripheries"). The understanding of Territorial cohesion within this storyline can therefore be based on a combined analysis of stable, structural features such as population potential and education levels, and more dynamic and evolving indicators of regional performance such employment rates.

B. Inclusive, balanced development, and fair access to services

Territorial cohesion is about balanced development focusing on European solidarity and stressing inclusive growth, fair access to infrastructure services and the reduction of economic disparities. There is a strong idea of strengthening the use of development potentials outside the main growth poles and ensuring a minimum of welfare in all regions. Every territory has its own distinct set of potentials for further development – its comparative advantage. Supporting “equal” or fair development opportunities is a key issue, not least expressed in the debate on fair access to infrastructure and services. People and companies in all parts of a territory need to have access to certain standards of services. The delivery of these can depend on the territorial context, i.e. the same service can be delivered by different means in different areas.

Possible territorial cohesion indicators of particular relevance (‘headlines’) for this dimension for this dimension (**in bold green : INTERCO top indicators**, i.e. those that can be used as a measure of well-being):

Indicator overview

Indicator	Level	Reasoning
Unemployment rate (total, by sex)	NUTS-3, NUTS-2	Quality of regional labour markets, assessing female participation
Life expectancy at birth	NUTS-2	Proxy for overall health / quality of health-care system
Disposable household income	NUTS-2	Welfare state of a region
Personal state of health	NUTS-0, d.o.u.	Degree of well-being with respect to health
People at risk of poverty and social exclusion	NUTS-0, d.o.u.	Welfare measure of a region
Population living in workless households	NUTS-0, d.o.u.	Welfare measure of a region
Net migration rate	NUTS-3	Proxy for attractiveness of a region
Population potential within 50 km	Raster, NUTS-3, NUTS-2	Proxy for demand for provision of services and as potential for any kind of activities.
Old-age dependency ratio	NUTS-3	Measuring balance in age-structure of society (avoiding overaging)
Population density	NUTS-3	Population potential, settlement density
Early school leavers	NUTS-1	Measure for education level / quality

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One of the challenges lies in the quantitative assessment of fair access to services. Maps and indicators would in this respect constitute an input to discussions on territorial cohesion, but could hardly be expected to characterise the degree to which territorial cohesion has been achieved or not. One way of assessing whether service provision levels in individual regions are sufficient would be to compare service provision levels and migratory trends. A working hypothesis would be that insufficient service provision leads to net out-migration. There are obvious limitations to such an approach, considering that available datasets may not reflect the most relevant services, that intra-regional demographic polarisation may be more relevant than inter-regional flows and that other factors may explain net out-migration. It may nonetheless constitute a useful starting point for policy discussions

C. Local development conditions and geographical specificities

Territorial cohesion is about place-based policy making, paying particular attention to local development conditions – going below the regional level. Indeed the identification and exploitation / use of tangible and intangible endogenous potentials is the key for development and smart, inclusive and sustainable growth in Europe. Particular attention is given to the specificities of places and their comparative advantages. In many cases the intangible factors of tacit knowledge and local networks (incl. clusters) and the access to the nearest economic centres are considered to be of key importance. Thus territorial cohesion is very much about recognising the territorial diversity in Europe and also the importance of the territorial context and its multifaceted dynamics as key to success. This involves endogenous development potentials and fragilities, as well as exogenous factors such as the impact of developments in other territories, and the impacts of different sector policies at various levels of decision making. This involves certainly also geographical specificities of regions.

Possible territorial cohesion indicators of particular relevance ('headlines') for this dimension (**in bold green : INTERCO top indicators**, i.e. those that can be used as a measure of well-being):

Indicator overview

Indicator	Level	Reasoning
GDP per capita	NUTS-3	Overall economic output of all activities
Population aged 25-65 with tertiary education	NUTS-2	Highly-qualified labour force potential for future R&D activities
Accessibility to grocery stores / schools	NUTS-0, d.o.u.	Fair access to public services
Number of new firms	NUTS-0	Measure for economic vitality, whether political and economic conditions favour new start-ups and entrepreneurship
Population potential within 50 km	Raster, NUTS-3, NUTS-2	Proxy for demand for provision of services and as potential for any kind of activities.
Old-age dependency ratio	NUTS-3	Measuring balance in age-structure of society (avoiding overaging)
Population density	NUTS-3	Population potential, settlement density
Net migration rate	NUTS-3	Positive net migration as proxy for attractiveness of a region

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In this storyline, territorial cohesion is approached as an instrument to achieve economic growth and sustainable development across Europe by unleashing the potentials of diverse territories. The underlying rationale is that some territories may not fully exploit potentials because of local specificities, that may be of a permanent nature. By identifying how these specificities influence social and economic processes, one may then design targeted policy interventions making it possible to reach performance levels that are in line with identified potentials. The indicators listed above are a starting point for such a process, either identifying specificities such as low population potential and imbalances in the age structures or reflecting performance levels through migration rates and firm creation.

D. Environmental dimension and sustainable development

To contribute to the sustainable growth aim of the Europe 2020 strategy, and with regard to need to consider the environment and climate change, territorial cohesion also has an environmental dimension stressing sustainable development. The richness of Europe's natural heritage and landscapes is an expression of its identity and is of general importance. To reverse any process of abandonment and decline and to hand this heritage on to future generations in the best possible conditions requires a creative approach. Territorial cohesion requires a more resource efficient and greener economy.

Possible territorial cohesion indicators of particular relevance ('headlines') for this dimension (**in bold green : INTERCO top indicators**, i.e. those that can be used as a measure of well-being):



Indicator	Level	Reasoning
Mortality / economic risk from multiple hazards	Seamless GIS	Risk assessment and vulnerability for environmental hazards
Air pollution (PM10 / ozone)	NUTS-0	Reducing emissions in response to global climate change
Natural and environmental assets / challenges	Raster	Preserving the natural environment
Soil sealing per capita	NUTS-3	De-coupling of economic/demographic development and land take
Water resources, access to clean water	NUTS-2	Access to an essential resource
Renewable energy resources or production	NUTS-0	Clean energy, potential for local development
Energy intensity	NUTS-0	Striving for more efficient, environmentak-friendly economic activities (de-coupling of energy consumption and output)
Greenhouse gas emissions in CO2 equivalents	NUTS-0	Response to global climate change
Urban waste water treatment capacity	NUTS-2	Capacities for cleaning used waters




Manufacturing and extractive activities and high population concentrations have traditionally been associated with environmental challenges. This perception is progressively changing, with the development of technologies reducing the impact of industrial activities. The awareness of environmental challenges in the rural context is also increasing, with the focus on negative externalities from intensive agriculture and intensive farming and on the high dependence of rural communities on fossil fuel. In this storyline, the pursuit of territorial cohesion implies facing the different ways in which the contradiction between economically, socially and environmentally sustainable development appears in different types of territories across Europe. Indicators of environmental performance such as those listed above may therefore usefully be compared with indicators of economic and demographic concentration and performance.

E. Governance, coordination of policies and territorial impacts

Territorial cohesion is about the need to maintain dialogue with other sectors to strengthen the territorial dimension in various policy fields. Key concerns are the better use of synergies between different policies (vertical and horizontal coordination) as well as the actual costs of non-coordination. Particular emphasis is given to the need for an actual dialogue with the “non-believers”. Furthermore, both approaches to (a) integration of policies (i.e. not only focussing on single sector aims) and (b) involving regions in policy process are often considered as contributing to better policy coordination and awareness of territorial impacts. Also various approaches to territorial impact assessments play an important role in the discussion. Largely, the storylines focus on governance and cooperation processes – as a key aspect of territorial cohesion – rather than actual territorial development features. Therefore this storyline clearly differs from the others as it is in its nature non-territorial. The basic idea is that better vertical and horizontal coordination of policies will lead to more balanced development as they are better territorial targeted and thus support territorial cohesion.

Possible territorial cohesion indicators of particular relevance (‘headlines’) for this dimension (**in bold green : INTERCO top indicators**, i.e. those that can be used as a measure of well-being):

Indicator overview

Indicator	Level	Reasoning
Regional governance indicator (QuG) 	NUTS-2	Overall performance of governments and public participation
Trust in legal system 	NUTS-0, d.o.u.	Performance of governments, trust in present systems
Cooperation agreements (number, budgets) 	NUTS-2	Measures the level of cooperation
Public debt	NUTS-0	Sustainability of financial sector, reducing vulnerability to economic crises, reducing risks for future generations

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Comparing the regional and national quality of governance with economic and social performance levels may provide some insights on the positive feedback loops between these different dimensions of territorial development. However, insofar as horizontal coordination plays a key role for the achievement of territorial cohesion, such an analysis would need to be complemented by studies on how regional and national policies are coordinated across regional borders.