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## REGIONAL TERRITORIAL COHESION: WHAT INDICATORS FOR AN EU SUSTAINABLE PERSPECTIVE?

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### Abstract

Research on territorial cohesion indicators detects and describes a set of territorial cohesion indicators to be applied in the new programming period 2007-2013.

The main aim of the research is to enhance territorial cohesion through the improvement of indicators fit to evaluate and measure the different levels of cohesion at local, national and European level. Thus, the methodological approach has to describe, analyse and detect a set of territorial cohesion indicators and to evaluate the effectiveness and efficiency of the indicators' systems currently used to measure territorial cohesion. This kind of approach is relevant both to current and new Structural Funds programming period. Moreover, the study proposes a methodological approach to implement an effective management system for the 2007-13 Programmes (STeMA).

Sound and efficient indicators' systems are crucial for monitoring and evaluating Structural Funds Programmes and projects.

The 2000-2006 programming period produced a good progress in the quality of such systems which contribute to a more effective Programme management. The current monitoring systems contain inadequacies and the indicator sets can be further developed. In line with the strategic character of the 2007-2013 programming period, more attention must be paid to strengthening the link between Structural Funds Programmes and the Lisbon and Gothenburg Strategy.

This paper provides an overview of the indicators' systems currently used, while featuring also a practical guide to implement an indicators' system suitable to evaluating territorial cohesion in the new programming period. After a description of the territorial cohesion concept and an in-depth overview of the new programming period objectives, the study analyses the main cohesion indicators used at European level and their effectiveness in monitoring activities. Some indicator systems analysed are:

- the 27 indicators concerning employment, innovation and research, economical reforms and social cohesion
- the 42 indicators, that are considered more flexible than the previous ones

- the 14 indicators, chosen among the 42 indicators because of their relevance
- EUROSTAT regional indicators
- ESPON 3.3 project indicators.

In the framework of Lisbon Strategy for a sustainable economic growth, the key challenge to strengthen territorial cohesion implies the improvement of EU regions' territorial "capital" and potentials. The enhancement of territorial integration is achieved through the promotion of trans-European synergies and clusters of competitive and innovative activities. The use of a sound and effective system to manage territorial cohesion Programmes is crucial to promote Lisbon and Gothenburg objectives. Within this context the use of adequate tools, such as indicators, is pivotal to measure, monitor and evaluate the Programmes' impact, result and output.

According to the results of the indicator systems analysis, the most effective methodology to measure cohesion levels is the STeMA (Sustainable Territorial environmental/economic Management Approach), used also in ESPON 3.3 project "Territorial Dimension of the Lisbon/Gothenburg Strategy". This approach pays particular attention to territoriality, economy, employment and the socio-pedagogical sector of intervention. The STeMA process is a multi-disciplinary management system used to calculate territorial capability with regard to competitiveness, sustainability and cohesion. Its standardised methodological approach can be applied at national, regional and sub-regional level by using a dedicated GIS tool. The main cohesion indicators are drawn from ESPON research and aggregated through a qualitative and interactive matrix.

## 1. How to define territorial cohesion

Cohesion is always located and therefore it is possible to measure its territorial regional dimension, which in Europe is strictly linked to the territorial socio-economic system's behaviour.

This connection had already been pointed out by J. Schumpeter (1954) with regard to contents and categories that eventually became a set of variables in the field of geo-economics (Lo Monaco, 1982):

- a) Political action principles, more or less consistent (liberalism, protectionism, etc.)
- b) Consistently applied doctrines (liberalism, Marxism)
- c) Quantitative relations among phenomena (structure of price, demand, etc.)
- d) Inter-dependence relations among economic variables (according to different models, including Walrasian and Keynesian), that are conditioned and affected by indicators' values detectable at regional scale.

Adding to this approach further parameters - deriving from EU focus on the notion of "economic system" as expression of national and regional cohesive values (political structure and organization, history, identity) - cohesion can be assessed in relation to the territorial dimension it puts on at regional level.

Nowadays new assessment methods (Prezioso, 2006) allow for the ex ante assessment of cohesion, by evaluating inter-dependence relations among traditional (and not) economic variables, without focusing on the regional wealth indicators only (e.g. GDP).

According to this new approach, cohesion is evaluated as a quali-quantitative effect of State or Regions policy choice, which affects both effectiveness and mass (population, natural resources, etc.) of a territory, without being affected in return (Lo Monaco, 1983).

Last century's economics and geography defined cohesion's principal features:

- W. Sombart (1967) and the neo-schumpeterians defined it as economic system, "complex of principles and institutions on which, in a given historical time, the organization of a state processes of goods and services' production and distribution is based";
- G. Jaia (1938) defined it as system (basis for the interpretation of cohesion's territorial dimension) that "contribute to manage, discipline, integrate individual and collective activities", towards an economic regime (U. Toschi, 1948) "force of the organization of competing forces in the economic field" where "regional geographical units (...) must identify with political territorial units, i.e. the States";
- P. George (1967) defined it as capability of spreading settled socio-territorial models, adherence to shared socio-economic principles, potential for positively affecting income, gross domestic product, wealth, interest rate through regional operating Programmes.

Indicators derived from these definitions over time have been recently (2007) joined by geographic and geo-economic space, that is the territorial dimension hosting everyday cohesion experiences. Being less abstract of the so-called "spatial", the territory can be studied in multidimensional mode, and be directly perceivable by citizens and citizenships.

When applied to regional economies, all these elements appear as driven by a sole process in the same "dominion": territory. Therefore it happens that, *without cohesion*, some systems hang on to their places of origin (as in many southern Europe regions) and give birth to "cohesive implosion" phenomena.

The cohesion determinants considered by J. Brunhes e C. Vallaux (1921) represent the *whole of a society's inherent values*, a place's implicit identity, the collective and individual feeling of a distinct region.

Cohesive values are also laws and regulations, written and decreed by constituting and solemn acts (as the "Magna Carta Libertatum"); more frequently these are principles at the base of policy actions, that allow operating in respect of ethical non-religious principles, for the community interest, allowing a society to develop through new communicative, relational, organisational and associative forms. In this perspective cohesion can originate an organicist administration of the State (R. Kjellen, 1917), interpretable in geo-political terms (regional federalism).

To date the relation between territory and cohesive political-administrative system, that is the "region", involved only indicators of (ESPON, 2008):

- density
- infrastructures' effectiveness and management
- fixed social capital rate

demonstrating how cohesion is affected in Europe by geographical determinants, according to the level of scale and technical in-depth analysis of the sense of belonging and the productivity of activities performed by individuals and institutions, stimulated and provided by the presence of common values of socio-cultural orientation.

According to M. Weber (1945) the cohesion determinant, although present in all cultures, is a real value only in western societies' post-capitalism systems, which exploit it in order to spread, having accepted competition, free market access of all enterprises producing similar goods, and price competitiveness. This explains the positive results achieved in Europe by the Industrial Districts, of which cohesion has been assessed many times through the measure of *milieu*.

In each territorial context cohesion becomes "geographically" relevant only when it is assumed as "organizing principle" of landscape, where it organises by turning the positional and functional relations among its biotic and abiotic elements into "technical rationality".

Since year 2000 cohesion has been considered a new intervention instrument for the national spread of economic, monetary, social solidarity. Therefore financial resources connected to cohesion pursued different objectives than other communitarian "funds". Thus, benefiting from Cohesion Fund meant to claim to be a not cohesive territory, to show its own regional disparities (as in Greece, Ireland, Spain and Portugal) and the will to reduce them by acting/planning through the operating sectors of environment and transportation infrastructures.

In the consequent planning experiences results have not always been positive. Since 2005-2006 cohesion has been redefined in its contents and carrying modalities in view of the new development cycle 2007-2013, gaining the positive and active meaning of *attractive force capable of holding out against impact, breakdown and separation of an economy or society*. The same positive meaning has been accepted by European economy and society, which today intend cohesion as the capability of a territory's various (anthropic, natural and institutional) components to search and achieve unity and unifying proposals, even in presence of centrifugal pushes (Prezioso, 2006).

Analysing a regional territory and its internal and external cohesion degree means detecting and assessing its resources and the related inter-dependence connections. With regard to cohesion's evaluation, available indicators (EUROSTAT, ESPON, OCSE, JRC, etc.) allow detecting *natural, financial, human and cultural resources*, in quali-quantitative, distributive, temporal terms, highlighting the endogenous modalities by which these territorialised indicators interact.

This approach, called STeMA (Sustainable Territorial environmental/economic Management Approach), operating according the quali-quantitative systemic approach, was experimented in various context (Prezioso, 2003, 2006, 2007) and highlighted the potentials of phenomena such as polycentrism in the long term too, allowing for the elaboration of European territorial scenarios not always favourable to cohesion, which is the starting point for investments of competitiveness in sustainability (Prezioso, 2006) that are co-operative according to the pattern chosen towards EU27 integration.

“Europe System” pointed out cohesion as a regulated element to push towards collective action (multilevel governance), in order to fight the effects of competitiveness deficit in 2007-2013.

The new approach to cohesion asked for a long stage of transformation and development of European and national policies between 2005 and 2007, which involved indications on *social inclusion potential, balanced development and life quality*.

The integration of territorial cohesion indicators, after a series of surveys and four *Reports* (2001-2006), highlighted three extents: **integration, coherence and sustainability** (focal points of the “VII Communitarian Framework 2007-2013” as well); stressing the point on how to deal with cohesion’s regional borders, since it is irrespective of NUTs division, being an indicator of intra and inter trans-border co-operation.

EU traditional administrative regions (NUTs) have little to do with cohesion, which nevertheless has to be assessed through data located inside of a statistic and territorial unity of reference (geo-referencing).

To clarify this concept we must remember how cohesion emerges over time as result of a voluntary integration act, including all passages this act asks for in real life.

Stability, convergence, improvement, performance have so become criteria at the base of the choice of cohesion’s territorial indicators; versus which deregulated (urban and regional) competition relations stand, thus confirming the strict relationship between cohesion and territory. This is strengthened by European Constitution, which devotes a whole section to this principle<sup>1</sup>, determining the future of cohesion must have economic, social and territorial feature (artt. I-14 par. 2: “*the Union has authority in competition with member States with regards social and territorial economic cohesion*”).

Pursuing cohesion is a political commitment for EU, as confirmed by the *2007 Territorial Agenda*.

## 2. From political and programmed cohesion to regional territorial empiricism

With regard to regional dimension, cohesion has been assessed almost exclusively at the scale of urban behaviour. This measure has often been carried out through different mark indicators, sometimes out of synch in time, thus creating a wide gap between empirical experiences at local scale and regional territorial policies. The more this phenomenon is studied and disassembled, the more we part from the subsidiary relation that cohesion also has to observe in the administration field (*multilevel governance*).

Cohesion emerges in the form of polycentrism (Prezioso, 2007), through which it puts on a settled and organizational territorial form; therefore it is hard to rely on an unequivocal typology of territorial cohesion, since regional and sub-regional dimensions transform its connotation over time.

Cohesion’s “scattering” on the territory and urban functions’ fragmentation have their reading scale in polycentric regional and sub-regional systems, that is in regions (NUTs 2) and provinces (NUTs 3). It increases or decreases side by side with other phenomena:

- labour market (there is cohesion when wage-earning labour decreases and self-employment increases, jointly with employment/unemployment variations);
- social disease emerging in neighbourhoods of great polarizing agglomerations, as well as in rising processes of marginalization and social exclusion;

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<sup>1</sup> Section 3 “economic, social and territorial cohesion” (artt.220-224) Bruxelles, October 13 2004 (OR. FR) CIG 87/1/04 REV 1. Orientation towards cohesion was already present in the preamble of the Rome Treaty in 1957: “*the strengthening of the unity of Member States economies for a harmonic development and the reduction of the different regions’ development gap*”. A remarkable event was the introduction of regional policy that, although not specifically provided for in the Treaty and its subsequent modifications, was promoted by the Council in the second half of the 70ies, according to the principle of “harmonic development” of economic activities.

- explosion and diversification of mobility/accessibility home-work areas, stretching space-time models apart (proximity areas coexist with DUS metropolitan areas and global ones);
- urban and territorial regulation and regeneration, with the overlapping of territories and territorial jurisdictions.

Cohesion shapes (and is shaped by) an integrated geographic area: i.e. an area occupied by settlements, enterprises, services and natural, rural, urban, mountain spaces. Many detected regional cohesion by using *functional interaction typologies* (metropolises, megalopolises, sprawls like London, Paris, Tokyo, Milan, Ruhr-Renania, Boston-Washington), to fix and standardise economic and managerial reciprocity rules among economically independent areas (cross-border zones).

In reality regional cohesion depends on its existence at sub-regional scale (NUTs 3), which is characterized in many European regions by the transformation of original localisms into local systems. Different sources more and more draw attention to this capability, which is due to:

- Increase of competition at International level;
- Growth of processes of production delocalization;
- Inclination towards fast innovation of process, product and organization, due to new technologies' implementation (ICT).

From this point of view cohesion's territorial dimension is always represented by an action of local collective interest.

Some authors, including Camagni (1998), contribute the debate by claiming that, also in presence of demographic stagnation, cohesion can give birth to different settlement models, affecting a much wider territorial area. Where local cohesion is stable for at least a decade, as in periurban areas, higher and more lasting environmental values are detected, as well as chances for endogenous investments beyond the city (as in Italy's North-East); when cohesion's attraction fades, phenomena appears of quality loss, functionality lack, rejection of pursuing exogenous economic objectives.

Many claim the *city*, not the territory, emerges as a *two speed cohesion vehicle*: for outcasts and winners. This is measurable in all Fordist cities, where segregation is nevertheless "joined" by strong class solidarity and socialization capability, due to the small size of mobility areas.

On the contrary, in the "exploded" city segregation is "dissociated", with islands of poverty and exclusion that are randomly located inside the city fabric, virtually shaping an archipelago.

In order to recompose this destructured cohesion, according to models of the end of last century, it was necessary a connected tissue organized on three elements:

1. internal accessibility (average mobility time less than 1 hour, diversification and specialization of the activities, complete supply of goods, complex complementarities organized in network)
2. presence of interconnection nodes of differentiated networks, which would grant access to external nodes of the global system
3. self-organization, which leads to a strongly inter-connected landscape, where mobility areas widen and synchronize (as suggested by the Netherlands experience).

This way it seemed possible to customize polycentric cohesive patterns in terms of house-work, leaving the individual free of building an "à la carte" city to substitute for the Fordist integration and post-Fordist disintegration.

This new model, defined as *metropolitanization-regionalization*, ratifies an idea of cohesion in agreement with the Local Bodies' reform of some European countries (France, Italy, Spain), by stressing the role of the territory and forcing policy and programming planners to ponder over what integration model achieve through planning, at what collective cost, what irreversible choices, what governance and government systems more suitable to the complexity, what

criticalities of the scales to be dealt with (micro-territorial for a united and co-operative cohesion, macro-territorial for it to be consistent).

Cohesion starts being represented and measured by a kind of region where economic and social life is directly affected by sufficient intra-border/trans-border integration and inter-dependence: in Europe these are the NUTs, which highlight its macro-economic and infrastructural features, as well as its capability in achieving local integration.

Cohesive NUTs receive and sort out great flows inside and towards urban and productive centres, by organizing their daily directionality, as in the case of the Swiss Cantons and some Netherlands' regions, or their linear transit in trans-border cases.

When flows and exchanges are moderate, cohesion's territorial dimension extends as far as the share of territory interested by integrative relations, since the origin/destination of traditional activities (work, leisure, education, provisioning) takes on a fundamental role.

Nevertheless NUTs are not totally homogeneous territorial units; they are such at the statistic and spatial levels only. In reality they are characterized by strong functional links that mostly originate from economic disparities and cultural/social affinities, and sometimes they define unified cultural landscapes.

To delve inside of them is not easy, because they host different communities.

For instance NUTs 3 are regions inside of regions, and over Europe there are two types of them: 1) institutional provinces, particularly numerous and stable; 2) de-facto provinces, which developed inside of the most recently constituted institutional ones.

Therefore some cohesion's aspects are still evaluated in functional, quantitative or qualitative terms ("elevated, high, medium, low, etc.", or "rare, scarce, spread, etc.", or else "A, B, C, D, etc.").

In this perspective cohesion has also been intended as a variable of global competition among internationalized territories, where economic concentration created hierarchies among cities and city-regions, nowadays important for how territories could turn into active subjects of development.

That's why co-operation among cities involved into shaping a common network is an element of cohesion's measure, and the more the number of agreements, the more we are in presence of a common "bottom-up" social and cultural identity (Cf. Reclus-Datar, 1989).

On this point there were important remarks in the European Spatial Development Perspective (ESDP, 1998), preliminary to European VI Framework Programme, where, for different reasons, ethical-cultural guiding principles were fixed in order to regulate action of those (public and private) subjects that contribute towards the definition of the cohesive development model:

1. a common European interest to keep a balanced and sustainable territorial development, based on the respect for sensitive and highly naturalistic areas, on a human settlement organization that is attentive in matter of land consumption and balanced relation with the territory
2. the implementation into European policy-making of two concepts:
  - in the globalization age, city and urban structure are mere instruments of competition among territorial systems; it is indeed cohesion that acts as fundamental for competitive capability
  - city networks can represent an intermediate level cohesive model of territorial organization, not necessarily polycentric, that lets a medium dimensions' cities system achieve high levels of competitiveness through synergic and subsidiary relationships, network and specialization economies, only if the territory involved is in itself a system yet.

The answer given by many, both for regional cities networks and major metropolises, lies in the connection to wide trans-European transportation and communication network as a cohesive equipotential polycentric choice. That clashes with EU condition for achieving a balanced development and general objectives of territorial equity: to intervene in segregation and poverty areas, to increase competitiveness through better effectiveness and accessibility for external investors: to achieve sustainability by acting on energy network and use of not renewable like land and open spaces.

This divergence is probably due to the sharp “cultural inclination” shown by European Committee on Spatial Development (CSD) to favour (also financially) dealing with urban themes more than cohesion:

- renewal with integrated interventions in troubled neighbourhoods
- citizens’ participation to urban planning choices
- strategic management of town centre renewal
- exchange of *best practice* experiences in urban policies (European Urban Initiative introduced in the informal Ministry meeting in Glasgow)

as if to make all possible efforts to reassert that the metropolis does exist, or to build it where it has never been.

The Commission’s reply to 1998 expectations was poor in Agenda 2000, which opened to Structural Funds the sole troubled neighbourhoods (Objective 2)<sup>2</sup>; which is why we must wait for the implementation of the Territorial Agenda 2007 to exceed meta-models or *policy metaphors* on cohesion.

### 3. Cohesion, between co-operation and competition

Shifting the focus on the connection between cohesion and competition at regional level, it is clear that endogenous development systems may lose cohesion when they project outside.

In this context one of the key themes concerns the revival of urban public works of local prominence, through the mechanisms of international project financing, which on one hand can bring the city closer to the global network, while on the other hand may reduce expectations in terms of urban renewal and service supply.

The result is a tendency towards implementing especially restrictionist planning policies, moderating urban development in order to avert the risk of new elements of discontinuity and disorder. Changing co-operation forms among public and private subjects operating inside the city, or among different territorial governance levels, destabilizes cohesion.

This is undoubtedly a key issue at the urban and large area (Metropolitan area) levels, as it is confirmed by the recent attempts by some cities to achieve a unitary development plan by the use of “forth generation” planning instruments (Prezioso, 2002), the only solution to detect and select endogenous factors fit for the assessment of suitable policy choices.

Research themes and possible solutions have been detected in order to give new impulse to cohesion studies and the related implementation, following the EU push to discuss in terms of cohesive development, thus highlighting a paradox: pursuing cohesion at all costs may blow the territory up, causing functional and settlement fragmentation, multiplying actors and institutions, amplifying the absence of cohesive processes.

In these cases some analysts – prone to a wider and less conventional vision – pointed out government responsibility and its related actions’ relevance and effectiveness in partnership approaches that are not always flexible, contractual, participative.

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<sup>2</sup> A report discussed by European Parliament’s Commission for Regional Policy suggests reinforcing urban policies (knowledge, monitoring, coordination, urban interventions integrated with Structural Funds, as a follow-up of the URBAN programme).



Others get their cue from the range of international experiences (with a specific interest for the French case), where, for tradition and experience, governance rules and cohesion characters coincide at inter-municipal level in the form of voluntary and solidarity associations for co-operation (e.g. the *Loi d'orientation relative à l'administration territoriale* of 1992).

More in line with the following argument, a solution might rely in what we call *scale cohesion* (or *geographic area cohesion*) that, shunning the hierarchical approach of the 60ies, states the failure of the Authorities for their lowest "bottom-up" legitimization, and subsequently assumes the *measure of the principle of sustainability* as cohesion's reference frame.

In *scale* (or *geographic area*)*cohesion* the role played by sustainability is such that population is given a high level of quality life, at the same time not transferring socioeconomic and environmental issues on the outside or on next generations. The sustainable development then openly clashes with cohesive solutions of deregulatory and functionalist kind that are adopted in national and European political arenas, strengthening the role of medium-long term programming.

Deregulation lead to applying models of "corporate" cohesion to the city, following enterprising and marketing logics - also useful in the cohesion's management stage - to answer social and economic decline in the international competition context.

It is obvious that the two dominant models of cohesion until 2004 could only follow:

- the co-operative/institutionalist way, with indirect governance rules, conditioned by single municipalities' (or groups of) interest according to the Francophone scheme
- the argumentative/participative way, according to the Anglophone experience.

In this condition the places of cohesion's policy have proven to be several, and they have been asked by EU for system flexibility and openness, as well as capability to co-operate at different levels according to some principles: *subsidiarity, sustainability, interurban mobility, extended sprawl, "top-down" and "bottom-up" approaches' integration, metropolitan polycentrism.*

That may be the reason why the main effects on cohesion have been observed on urban/rural regions, where it is discernible a recent evolution of the urban landscape, marked by the revival and sharpening of spatial segregation and social exclusion problems, besides issues on environment, transport ineffectiveness, minor cities frailty.

The need for organizing territory according to cohesion criteria is more and more acknowledged by EU member States, in perspective of a successful coexistence of prosperity and handicap areas. Therefore co-operation can be interpreted as a cohesion indicator.

Cohesion may arise also among groups of cities, whose current status in Europe has been analysed in the document pre-arranged for the Ministers Conference of Bristol 2005, *Cities and the Lisbon Agenda- Assessing the performance of city*<sup>3</sup>, in order to verify their contribution for the achievement of the Lisbon Agenda.

Considering that cities are radically different from States and regions, urban trends do not follow global or national ones, and reveal a great variation in European cohesion (for instance in Italy and Germany).

Some key indicators directly correlate the city and the main objectives of the Lisbon Agenda: urban attraction potential for work and investment; innovation and knowledge economy; higher and better occupation. Other indicators highlight connectivity, metropolitanization, ICT supply, environment and culture.

The evaluation favours the medium-large central cities of the Pentagon, in contrast with a peripheral Europe (north of Europe, new Eastern Countries, south of Italy, south of Spain,

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<sup>3</sup> The Document is divided in two parts: the first part analyses the cities' contribution to regional employment and development, while the second part focuses on social cohesion inside cities and urban belts. Analyses are based on Urban Audit and ESPON studies on 258 medium and large European cities.

Greece, Portugal) and an intermediate Europe (north of Italy, France, north-west of Spain, Great Britain). For instance, air connectivity helped cities of the second type to approach global markets (Dublin, Helsinki), effectively absorbing them into the ICT society. Nevertheless multimodal accessibility is not directly proportional to a State GDP, as in Romania and Bulgaria (high accessibility and low GDP) where public transports are a valid alternative to private car use (79% of Budapest citizens rely on public transports). Where this relation is inverted the values are lower (18% in Sheffield), while they are higher (65% in Stockholm, Helsinki and Copenhagen) where ICT technologies drastically reduced the cities' dependence on transportation and distances, overturning the monocentric structure of connectivity in Europe in favour of peripheral cities (Cork, Oulu).

However, for the "Digital Divide" persistence, these features draw a more cohesive north of Europe when related to Spain, Portugal and east of Europe (with rising performance in Slovakia and Estonia only).

EU cohesion policy is affected also by environmental choices and climate change (PM<sub>10</sub> concentration, noise impacts, low waste recycling), while culture has become a vehicle of trans-urban competition (as in Barcelona vs. Madrid and Munich vs. Berlin) and patents are a measure of innovation and growth (Helsinki) or of a highly entrepreneurial contexts (Bulgaria, Poland, Romania).

European employment policy highlights another cohesion's paradox: the cities are the places with the higher employment and unemployment rates (3/4 of EU cities have the lowest ratio of employed residents measured in their whole State), thus making hard the achievement of the Lisbon Agenda's goals (employment rate at 70%). In 2001 this result was reached by a mere 10% of all European cities, while in many countries (Poland, Romania, Ireland, Austria and Denmark) not a single city exceeded the national average, contrary to what was measured in cities and capitals like Paris, Barcelona, Stockholm and Munich.

Urban Audit registered huge disparities of unemployment rate, which concentrates also in medium cities' peripheries, since many employed residents choose to live at the city's edge. In 67% of considered cities the unemployment rate exceeds, sometimes substantially, the national average (in Naples it is 32% vs. a national average rate of 9%) and is generally associated with urban decay.

Foreign presence in the city can affect cohesion negatively. In Germany for example, foreign residents count for 24% in Munich, and 2,5% only in Erfurt or Weimar; in Bulgarian and Romanian cities this percentage is quite low, as in the whole countries.

Shortage of services for the residents is also a factor increasing disparities. In Warsaw 5% of town centre's houses lacks of basic services, as 34% of peripheries'; in Liverpool the percentages are 27% in the centre and 50% in some peripheral zones. This aspect is strictly related with living standards and real estate costs, and thus with the levels of family average income and, more or less directly, with poverty and social exclusion.

#### **4. Territorial cohesion's indicators**

Therefore it is not easy to summarize the main indicators used at national and European level to measure cohesion. There are various kinds indeed and many of them match with the 2000-2006 elaboration for implementing the Lisbon Strategy.

Systematization is proposed below, considering also regional scale's coverage level and data reliability.

Indicators' application at the European (ESPON 3.3 project, 2006) and Italian (National Cohesion Report, 2006) cases allowed testing their reliability. The test had recourse to indicators that are thought to be directly and indirectly fit to measure (social, economic, environmental, cultural) territorial cohesion, statistically and geographically belonging to relevant sets and geographic scales: classical, structural, international, national-regional, urban.

Interaction between these two aspects, accepted by the STeMA model, enabled the territorialization of cohesion, as:

- 1) Classical indicators concern the whole socio-economic structure of a region and are divided into macro areas:
  - **Structural Indicators**, suitable for single theme's confrontation in EU main industrialized countries;
  - **Territorial indicators**, suitable for confrontation among regions;
  - **Competitiveness Indicators**, related to single sectors of intervention.

Their use in the STeMA procedure detected a geographic shift of disparities eastwards and a worse employment situation, due to a weak acceleration of pre-enlargement economic restructuring (technology, ICT, age, migration); thus linking cohesion in these contexts to European Employment Strategy's orientations and priorities like *convergence*, *regional* and *employment competitiveness*, *territorial co-operation*, that could rely on 18 billion Euro from Cohesion Fund in 2000-2006.

- 2) Structural indicators, divided into four sectors, are fit to measure the overall trend of regional economy and define the global economic context where structural reforms on labour, product and capital markets are implemented. These indicators concern sustainable "growth" and structural economic dynamism, macro-economic stability, including overall and female employment rates, and tax rate on low-wages workers as a measure of incentives to employment.

Indicators that are related to economic reforms evaluate progress made towards a higher effectiveness and better functioning of product and capital markets. Also indicators on market integration and prices' related levels are included, so to assess performance in markets' integration and effectiveness.

Indicators on social cohesion concern poverty rate, income spread and risk of social exclusion. In this group some indicators are included to measure disparities in terms of life quality for different age brackets, sexes and population groups.

Regional disparities are as well evaluated through an indicator related to education results (early school leavers)

In 2002 the structural indicators' list was modified, achieving the number of 42 to enable clear, simple and precise political messages, at the same time reflecting the equal prominence granted to Lisbon and Gothenburg in the fields of 1) employment, 2) innovation and research, 3) economic reforms, 4) social cohesion, and 5) environment. The list features also new indicators where sufficient progress was registered in data elaboration: "actual average age of retirement", "business registration" and "finance integration". The inclusion of the "actual average age of retirement" indicator reflects the emphasis placed on it by Barcelona European Council.

In 2003 the European Commission proposed a restricted list of 14 structural indicators, in order to grant a better data coverage for new accession countries and candidate countries in terms of national comparison.

- 3) International indicators, largely deriving from those used to measure competitiveness in structural terms: real and virtual interconnection networks, i.e. physical infrastructures (roads, railroads, harbours, airports, telecommunications) and strategic ones (education, knowledge, research).

Their use serves the purpose of delivering a regional ranking of the economic and social performances that constitute an attraction factor, assessing positive and negative competitiveness trends in each region.

Specifically, the indicators considered for Italian competitiveness assessment are those used by international studies as the World Economic Forum ones. The country ranking is established on the base of two different indexes:

- GCI (Growth Competitiveness Index). This is made up of three basic indexes: technology index; public institutions index; macroeconomic environment index;
- BCI (Business Competitiveness Index). This is made up of two basic indexes: sophistication of company operations and strategy; quality of the national business environment.

Both of them are the result of measures based on official statistical data and data obtained through special sample surveys.

Besides, indicators re-included in the "IMD world competitiveness yearbook" were analysed. This report makes reference to 59 countries or regional economies (selected on the base of their impact on global economy and the availability of comparable statistical information) and defines the ranking of different countries in four main areas:

- economic performance;
- government efficiency;
- business efficiency;
- infrastructure.

Finally, attention was paid to the "Ethical Rating" proposed since 2002 by the European Investment Fund and OECD, consisting of a 37 countries' rating based on five main factors:

- human rights;
- laws and policies on environment;
- relations with developing countries;
- sustainability of the economic structure;
- internal democracy level and security policy.

This rating is given based on indications and evaluations expressed by UN, OECD, International Labour Organisation and EU.

International indicators can be grouped into homogeneous systems, each with its own competitiveness key: competitiveness keys concern the whole of a society's assets, from economic welfare to social services, from human capital to social capital, from public services to infrastructures, up to culture, research and internationalization. The detected systems are usually:

- economic welfare and labour market
- social welfare
- industry
- services
- networks development
- transportation
- agriculture and environment
- culture
- Research & Development
- ICT diffusion
- internationalization

Each homogeneous system corresponds with a set of indicators that are representative of the progress made by each region in the considered development field<sup>4</sup>.

4) Regional indicators, based on country level statistics for the evaluation of cohesion policies, processed by National Statistics Institutes at regional basis, targeted to actions of programming and ex ante assessment of interventions to be carried out in Objective 1 regions through Structural Funds 2000-2006. Such indicators are set out in two levels:

- "key context" indicators, related to all programming sectors, as a basis for the implementation and determination of specified objectives;
- "break" variables, targeted to quantify overall impact of PSM (Purchasing and Supply Management).

Through the structuring and updating of a wide database and regional socio-economic indicators, "key context" indicators and "breaking" variables are an instrument of monitoring and assessment for measuring the achievement of a specific objectives' set, aggregated by sector or macro-area of intervention (demographic, social, environmental and economic), thus enabling an integrated reading of the territory.

Some indicators for the assessment of urban cohesion's policies must be added to this long list. Indeed some countries, as Italy and France, showed the capability of creating different forms of social and cultural cohesion right at this scale. Such experiences can be observed in forms of aggregations among cities or enterprises in processes of local, network or sprawl development.

Nevertheless, the most cohesive models may as well vary over time; changing forms of organization and development of the town fabric, territorial sense of belonging, widespread rooting, identification of common and shared values, capability of competition.

It is useful indeed to remind that it is possible to "die" for too much cohesion and an overly assembled system may withdraw into itself to protect its condition.

For instance, settlement rooting is very high in France, Italy, Greece, Spain and Portugal, although in recent surveys, and specifically for younger generations, a reversal is taking place; while associations are an answer to territorial scattering (data ANCI 2006).

Most of used indicators are of statistical-social nature (EUROSTAT, 2007), that do not exclude those related to services' quality and accessibility, both public and private (public health service, social services, education, purchasing power, etc.) or to the Information-Communication Society (number of doctors and nurses per inhabitant, hospital beds per inhabitant, PC's per inhabitant, Internet connections per inhabitant, public Internet points, etc.).

Indicators are quantitative and qualitative, and vary between a minimum number in favour of the datum availability and a maximum number suitable of analysing the complex system of European cities<sup>5</sup>, according to the guidelines of the Urban Audit City Meeting in Bruxelles (2006), which proposed a nine categories organization:

- Demography
- Social Aspects
- Economic Aspects
- Civic Involvement
- Training and education
- Environment
- Travel and transport

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<sup>4</sup> The selected indicators are usually based on objective, updated and updatable quantitative data from acknowledged and statistically accurate sources.

<sup>5</sup> See "Cohesion Policy and cities" and "Cities and the Lisbon Agenda" presented in Bristol, 2005.

- Information Society
- Culture and Recreation

## 5. How to measure territorial cohesion by STeMA

Social and economic cohesion is a concept that can be defined in relation to different aspects:

- Availability of goods and services perceived as essential;
- Multidimensionality (poverty is a central, not crucial, aspect of social exclusion);
- Social participation;
- Political involvement (level of participation) and social integration;
- Dependence on social exclusion of people, circumstances and processes that determine the impossibility of free self-determination of fundamental aspects of life;
- Processes' dynamics over time, with enduring or cumulative effects;
- Multilevel (individual, familiar, etc.) stratification of exclusion's processes.

In light of this and what has been said in previous paragraphs, we call a **good measure of cohesion level** a methodology with the following features:

### a) Territoriality

The field of social intervention has a first geographic value at level of measure's origin. The territoriality level plays an important role indeed. Some measures are independently initiated and managed at local level, often on the base of specific needs. Other measures, although in a national planning logic, are modulated according to local specificities.

### b) Inter-sectoral dimension

This dimension particularly concerns the following sectors of intervention: *economic, social* in the strict sense of the word, *socio-sanitary, educational* and *labour market*. The local dimension often favours, as in the case of territorial pacts, a virtuous meeting of the different policies implemented.

All these considerations directed the research towards using the methodological structure already successfully tested by ESPON 3.3 project. Particular emphasis is given to the "Quality" determinant, in whose definition various inter-sectoral indicators take part, being suitable to producing a reliable measure of the cohesion level inside of European regions (NUTs 2 level).

The indicators selected for cohesion's definition are shown in the following table:

Table 1: to measure cohesion by quality: the structure of indicators

indicator	category	sector	typology	Determinant	Territorial dimension
GDPpps per capita (GDP)	GDP	Economic variables of Cohesion (EV)	Life quality (LQ)	Quality (Qty)	Territorial Quality dimension at NUTs 2 and 3 (Q 45 and Q 46)
Consumption per capita (CONS)	Consumption				
Level of employment (Emp)	Employment				
Consumer-price index (HICP)	Prices				

Hospital beds (HLT)	Health	Infrastructural variables of cohesion (IVC)		
Hotels beds (Htb)	Leisure (Ls)			
Cultural opportunities (CuOp)				
Typology Multimodal Accessibility Potential (TMAP)	Accessibility			
Old and New technologies (LTD)	Level of Telecommunication development			
Municipal Waste Generation (MWAs)	Municipal Waste	Waste (Ws)	Environmental Quality (EQ)	
Hazardous Waste Generation (Hwas)	Hazardous Waste			
Municipal Waste Recycled (RMWAs)	Recycling Waste			
Degree of vulnerability in Europe (NH)	Vulnerability	Natural hazard		
Total greenhouse emission (SA)	Air	Natural ReElaborations Status (NRS)		
Total gross abstraction of freshwater (SW)	Water use balanced			
CO <sup>2</sup> emissions (CC)	Ozone layer	Climate change		
Confidence in EU commission (CfCom)	Level of citizen confidence (CzCf)	Good Governance		Government quality (GQ)
Confidence in EU council of ministers (CfCM)				
Confidence in EU parliament (CfEP)				
National public participation (PbPn)	Level of Public participation (PbP)			
European public participation (PbPe)				
Early school leavers (EdB)	Base education	Social Cohesion ReElaborations (SCR)	Social Quality and Cohesion (SQ&C)	
Inequity of regional income distribution (SCEc)	Economic Elements for Social Cohesion			
Persons aged 0-17 who are living in households where no-one works (Cer)	Risk of children exclusion	Risk of social exclusion (SEE)		
At-risk-of-poverty rate before social transfers (Pvy)	Poverty			
Female employment (EqOp)	Equal opportunities	Social wellness attitude		

Fertility rate (Fty)	Wellness (Wns)	(SWA)		
Healthy life years (HLY)				

Source: Prezioso, ESPON 3.3 project, Final Report, 2006

The STeMA methodology (Prezioso 2007) detects a series of basic indicators, which, by successive unifications, achieve more and more synthetic and composite indexes (ordered as: categories, sectors and typologies), capable of providing an actual measure of phenomena strictly linked to territorial cohesion, such as:

- Risk of social exclusion
- Disposition to social welfare
- Social cohesion (resources)
- Good Governance
- Level of cohesion's infrastructure variables
- Level of economic variables
- Level of quality of life

In Table 1 are highlighted in yellow the indicators and their subsequent aggregations that the reserach consideres a valid starting point for the elaboration of a synthetic and composite index to measure economic and social cohesion at a territorial (not simply spatial) scale.

## 6. First results on the quality determinant of territorial cohesion in EU regions

In perspective of a full cohesive European policy by 2013, national and regional cohesion must be considered an overriding and combined measure of phenomena ranging from climatic change to deterioration and poverty (health, safety, quality of life), to the not self-sustainable economic and social systems in the great urban areas (irrational use of resources, energy wastage, traffic congestion), so that the EU gives a uniformed and balanced answer to the big issues involving the relations between infrastructure, environment, citizens' health and safety. The new general policies will have to be the result of sectorial actions and policies directly connected to the territorial dimension of cohesion.

Mapping Cohesion's Quality in the spatial view (Fig. 1) shows an attitude to achieve low level of cohesion in Europe, in particular along two parallel axes: 1) the north-south axis from Germany to Italy; 2) the north-south axis from Poland to Greece<sup>6</sup>. Low values are also recorded in Spain, Ireland and Great Britain, while high cohesion level are measured in Portugal, France, Austria, Hungary, Netherlands, Lithuania and all Scandinavian Countries.

Instead, looking at the territorial dimension of Cohesion's Quality (NUTs 2 level, Fig. 2) results are different and Europe achieves a general high level. So, regions that have a territorial typology with high urban influence improve their value, ranking higher in the cohesion scale. Low values are measured in the Centre of Spain and France, South of Portugal, Greece, Czech Republic, Hungary (except Budapest's region), Sweden, and the least settled regions of Finland.

Finally, looking at territorialisation at NUTs 3 level, the map shows a detailed dynamics that is more similar to the map concerning the spatial dimension (NUTs 3 level, Fig. 3).

<sup>6</sup> The two axes are joined in the apex, creating a "horseshoe" shaped area.



Figure 1: composite index final values (CEIS, 2006)

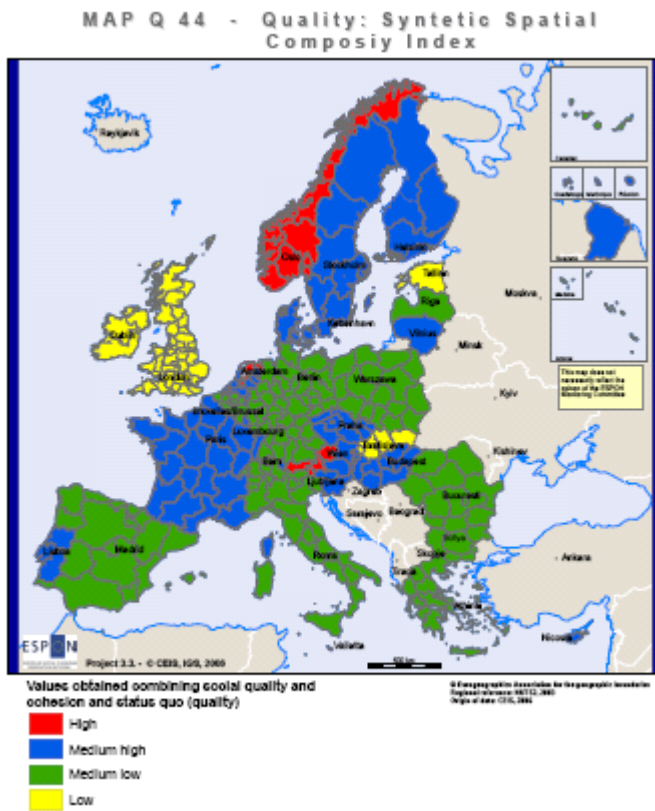
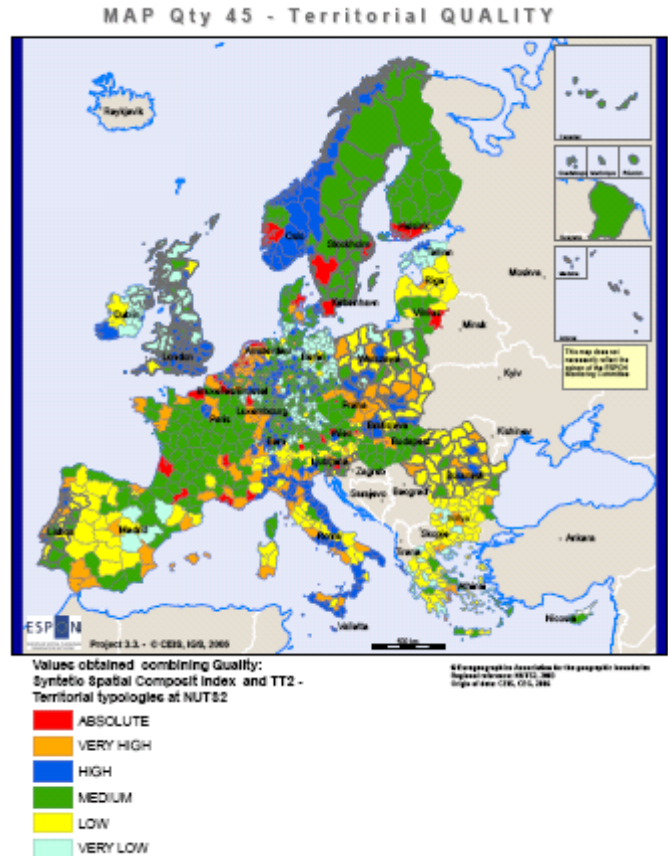
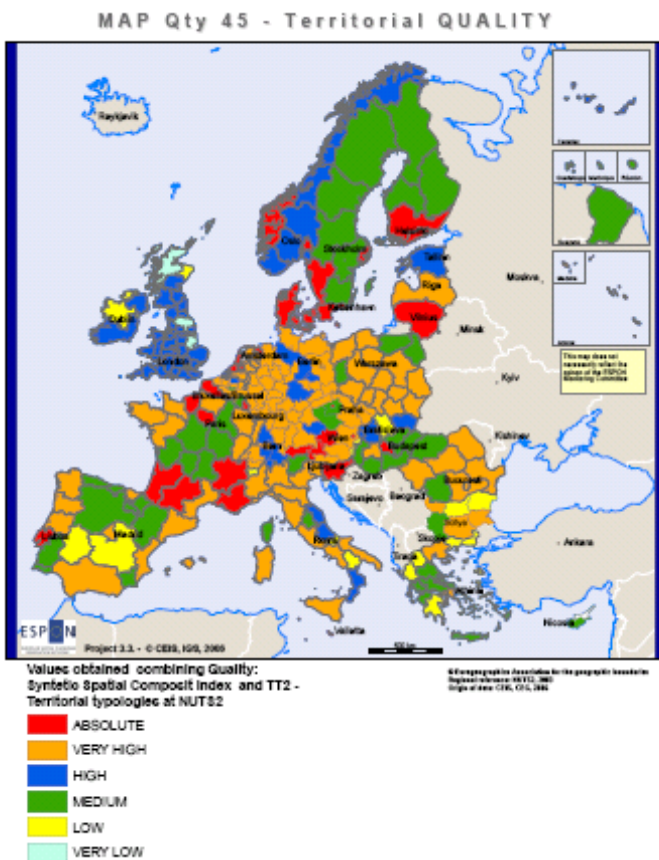


Figure 2: Territorial cohesion:  
final values at NUTS2 (CEIS, 2006)

Figure 2: Territorial cohesion:  
final values at NUTS3 (CEIS, 2006)



The STeMA application and assessment registered, for instance, that in the future some cases of pollution might also take place in the regional economies with the highest per capita expense, where the use of appropriate technologies is still low.

In this direction the concept of "territorial cohesion" is interpreted using the same ESPON 3.3 project's methodological approach, as an *economic process*, and mostly as a *social cohesion process* leading to the definition of targeted actions and policies, in order to build an efficient and effective regional economic system (solidarity, creativity and high life quality) to play an important role in territorial planning and social policies.

But all that is insufficient to grant a successful increase of territorial cohesion and support development. It is therefore necessary the Union to institutionalise the concept of cohesion (and its quality) and permanently embrace it in the decisional processes (institutionalised multilevel governance), so to establish a connection between economic and social progress for a global development to be coherent and sustainable.

This is typified by the behaviour of European institutions and enterprises, to whom the concepts of territorial cohesion and quality have become synonymous with success in competitiveness, as testified by the achievement of certifications like ISO or EMAS, followed by the enlarged concept of social responsibility (i.e. Territorial more than Corporate Social Responsibility<sup>7</sup>) considered as a useful and necessary instrument of cohesion and competitiveness.

The effects of an action towards cohesion could inspire many variations on European regions:

- broadening and strengthening the internal market;
- ensuring open and competitive markets inside and outside Europe (trans-border, trans-national and trans-regional co-operation policies);
- improving national European regulations;
- widening and improving European infrastructure;
- increasing and improving investments on R&D;
- simplifying innovation, TLC's adoption and a sustainable use of the resources;
- contributing to a steady European industrial fundament which would adopt certification systems and CSR (Corporate Social responsibility) as means of cohesion and competitiveness;
- increasing labour market's attractiveness and flexibility;
- increasing investments in human capital by improving education and expertise;
- improving the preservation of public health and environment in the communitarian policies, as an opportunity of sustainable development

The typologies with the strongest impact are analysed below.

### *Social cohesion and Quality of life*

In respect of the Lisbon Strategy's objectives, the overall achievement of a good level of life quality has to be supported by policies addressed to guarantee adequate economic conditions to answer families' need (measured through per capita GDP, level of consumer prices and employment<sup>8</sup>) and an adequate level of all the non-economic aspects that contribute to health, such as public health, which is commonly considered an indirect indicator of productivity and economic dynamism.

European policies on public health service only address the problem of optimising costs/efficiency ratio in health expenses, whereas poor is the attention given towards creating

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<sup>7</sup> European Council of Lisbon, *Green Book*, July 2001

<sup>8</sup> Through an employment revival by creation of new and better job offers, human resources' education and reduction of the unemployment gap.

synergies between health, environmental policies and life quality. New directives have been even outlined by the EU, in order to achieve a stronger collaboration relationship among Countries (common objectives, national action plans and a common report by Commission or Council), connecting to the field of regional policies for social and economic cohesion.

The indicators fit to evaluating *quality of life* show as, concerning economic variables, many regions can rely on a solid base for co-operative development. The level of the Economic Variables of Cohesion shows how a structural intervention is necessary in new accession countries, as well as Portugal, south of Spain, some southern regions of Italy, and central Greece. The good performances of the Pentagon area and Scandinavian Countries were predictable, whereas less predictable is the good dynamics of the economic variables in Ireland.

However a still variably distributed GDP (per capita per purchasing power) requires new and sharper structural actions, especially in the South of Italy and Spain, in Portugal, Greece, and the French overseas regions, in order to let them reach the high values of Austria, Luxemburg, Denmark, Belgium, Ile de France and many regions-capitals<sup>9</sup>. These high values in the centre of EU15 prove that the Pentagon's area, with its extension towards the Scandinavian countries, is already strong with regard to the economic variables. With regard to *the consumer prices index*, there is a clear necessity of interventions of assimilation in the enlargement countries, in direction of the steadier economies in Spain, Portugal, Italy, Cyprus, Netherlands, Denmark and South of Ireland. Also the dynamics of labour suggest structural actions (*level of employment*) like those adopted in the South of Germany, Ireland, England, Austria, Netherlands, North-East of Italy, and some regional enclaves<sup>10</sup>. The level of employment in the New Accession Countries shows as these new economies have started a new reforms' process that is achieving good results.

On the other side, thinking about Life Quality, some structural actions for the *Infrastructural variables of Cohesion* should be implemented in several areas of Europe, and specifically in peripheral regions. Indeed this measure shows a concentric rings' structure, with high values in continental Europe and lower values in peripheral regions.

Structural actions in the areas of employment, innovation, economic reforms and social cohesion must address the complex of economic variables to sustain life quality in the South of Spain and Italy, in Greece, and in the well known regions of Itä-Suomi and Pohjois-Suomi in Finland, in spite of an intense period of Structural Funds utilization.

In fact, we observe the economic variables' value is affected by different aspects, including the de-localization process that involved nearly all European industrialization's historic regions at the opening of the global market. From this point of view, Estonia, Poland, Slovak Republic, Hungary, Slovenia, Romania, Bulgaria or the south of Italy represent more flexible models than Germany or Great Britain.

### *Environmental Cohesion*

The Action Program on environment (which covers a 10 year period starting from 22 of July 2002) can still be considered as a long term planning instrument of EU activities in 4 sectors: 1) climatic change, 2) nature and biodiversity, 3) environment, health and air quality, 4) natural resources and waste. The seven priority thematic<sup>11</sup> strategies, however currently developed, require more detail, since, as of today, no strategies have as yet been definitely adopted; especially considering the effects of the recently enforced Kyoto Protocol<sup>12</sup> in the 141 subscriber countries, which should trigger "flexible mechanisms" based on the market, to accomplish projects linked to "clean development".

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<sup>9</sup> The Comunidad de Madrid, London and Inner London, North-East and East in Scotland, South of Ireland, Noord and Zuit Holland in Netherlands.

<sup>10</sup> Açores in Portugal, Közép-Magyarország in Hungary, Småland med öarna in Sweden, Tees Valley in Scotland, Cyprus.

<sup>11</sup> Since 2001 included in a list of European thematic strategies.

<sup>12</sup> *ONU Convention on Global climatic changes*, Rio de Janeiro, 1992.

The Union has to push “joined implementation” starting from 2008, by supporting/financing, coherently with the Lisbon goal, those projects capable of spreading the most innovative technologies (for instance, towards emissions’ reduction) in old and new countries, fixing consistently 2012 as deadline for the follow-up activities of the first period of fulfilment.

To support this common policy objective, the evaluation of environmental quality used direct and indirect indicators (for instance, air quality and water consumption, waste production and recycling, climatic change and natural hazards, etc.). The result of this evaluation shows how strong policies in support of environmental quality should be implemented in countries like Portugal, Spain, Greece and Austria. A good level in environmental quality is present in the regions of continental Europe and the new accession countries.

Results of the analysis suggest the consideration of policies and actions on air quality as a priority in almost all the old countries, and specifically in Austria, Spain, Portugal, Greece, Ireland and Finland<sup>13</sup>, whereas it has to be noted the low level of CO<sub>2</sub> emission in all the new countries, in Germany and Luxembourg. In the same way, the policies towards a renewable use of waters and the containment of freshwater abstraction have to be a priority for Spain, France, Germany, Luxembourg and Italy, while a good level of freshwater management is recorded in the great majority of the new accession countries (with the exception of Hungary). Therefore, the Natural Resources Status shows a good level in Great Britain, France, Germany and in all the new countries, while requires new and more incisive structural actions for all the other countries of the EU 15.

Concerning waste, average per capita production is quite high in Spain, Switzerland, Belgium, Luxembourg, Netherlands, Denmark and Cyprus if compared to the rest of EU (medium-high in Italy). The generation of municipal waste shows a medium-low level for the large part of EU, except for a vertical strip including Norway, Sweden, some areas of Poland, Czech Republic, Bulgaria and Greece, and some regions of the Mediterranean axis (Portugal, Spain and Italy). Concerning the level of hazardous waste production, this is mostly high in Portugal and medium-high in Spain, except for the peripheral zones; it is still evidently high in the north, in Norway, Sweden, Finland and Latvia, while medium-high values are recorded in Great Britain, in contrast with the medium-low values of Ireland; high values are shown also in some regions of Poland, in Czech Republic and in areas of Hungary and Greece.

The sectorial policies dedicated to waste recycling still have to be strongly supported, especially in the Pentagon area, and along the axis stretching from Spain to great part of Italy, as well as in the south of Norway, Sweden and Finland, and in the whole region of Lithuania. On the other hand, no action seems necessary for the new accession Countries and Greece.

In detail, the level of Waste points out the necessity of rigorous intervention in all the old countries (except for Portugal, Scotland and Wales in UK, some regions in the centre of France and Italy, Greece, Luxembourg and Austria). The new countries (except for Lithuania) have an overall good waste management.

The risk of natural catastrophes, present in the Mediterranean area, in the North of Spain and in that Central Europe area symbolised by a «scorpion», is such that it is necessary to think about supporting an integral group of sectorial policies, directed also to protecting all the natural resources still widely available in Poland, Latvia and Romania, or in Italy and Greece. On the other hand, a low level of natural hazard, considering their geomorphologic structure, is present in the Balkan countries.

Some countries (Great Britain, Germany and Poland) and the wide region that spins around the Italian-Austrian Alpine range appear to have the strongest potential contribution to climate change, key issue of European strategy 2007-2013.

### *Government cohesion*

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<sup>13</sup> Medium high values are also measured in Italy, Belgium, Netherlands and Norway.

Over the last years the EU urged the Institutions to practice the «culture of clear dialogue», confirming the principle of «good governance», which determines participatory processes addressed to reinforcing democracy and to creating new partnerships that would improve the quality of decisions and be a supplementary guarantee for their accomplishment.

The five principles at the roots of both good governance and the changes proposed in the White Book<sup>14</sup> (openness, participation, responsibility, efficiency and consistency) have to be applied at all government levels (global, European, national, regional and local) strengthening a closer interaction between local and regional authorities and the civil society, involving European and national associations, right from the beginning of the policies' elaboration.

Looking at the political-social aspects of government cohesion, these can be measured through the citizens' 'confidence' level in the EU and through the level of participation into political life, which is high in the smallest countries or in the so called «suburbs». Nevertheless the exercise of governance is really good in a few countries only (Italy, Greece, Belgium and Denmark). This result reflects what happens with the level of citizens' confidence in EU institutions, drawing a continental Europe with low (or medium-low) level of confidence and "peripheral" countries with great confidence (Portugal, Spain, Italy, Greece, Slovenia, Romania, Bulgaria, Czech Republic, Estonia and Lithuania). With regard to the level of public participation, the north-south axis (Scandinavian countries - Italy - Greece), featuring a high level of participation, is the Union's dividing line, since both on its right and its left low level of participation is measured.

### *Social cohesion*

Since the 90ies, most of the European governments began a reformation process that, inside a general revision of the social protection system, involved the sector of welfare expense. In consideration of the new challenges posed by the slowing economies, the sharpening of unemployment and 'in-occupation' phenomena, the mutations in the family structure and the growing ageing of the population, the traditional welfare structures appear unsuitable to confront the new conditions.

In this context, the policies opposing poverty and social exclusion, in pursuing the goal of social cohesion, must find immediate implementation (2013), according to the criteria in the *Social Policy Agenda* (2005), an instrument addressed to the achievement of a model of European social state, which the member states have to focus their expenses on. In particular, it is recommended to support the policies actively contrasting the ageing population effects, which include measures towards the reduction of risks of exclusion for the older sections of the population due to technological progress and the barriers set by the knowledge society, thus including in this sector two other foundations of the Lisbon strategy: education and the reduction of sexual disparity in labour conditions.

Moreover, the data observation shows that the level of the *Early school leavers* is high in the Mediterranean area (Spain, Italy, the seaside French regions, Greece), in Portugal and in the south-east of Europe (Bulgaria, Romania). The values recorded in the north-east of France, Latvia and Lithuania are as well alarming. A similar dynamic is noticed for the "Inequity of regional income distribution", so that the level of Economic Elements for Social Cohesion shows how a structural action should be performed in the Mediterranean areas, in Portugal and in the all new countries (except for Poland, Slovakia and Czech Republic).

From the analysis on the *Risk of Social Exclusion* it is clear that EU countries have to act against poverty and social exclusion, aiming to reduce disparities in income distribution and the percentage of population at risk of poverty and of premature withdrawal from the studies (clear indicators of social exclusion).

Looking at the aspects linked to equal opportunities and wellness (an indicator of the *Social Wellness attitude*), they reveal a sort of uniform medium-low attitude with little exceptions

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<sup>14</sup> "European governance" White Book, 25 July 2001 (COM(2001) 428 def.).

(medium-high levels are present in Germany, Austria, Switzerland and Poland). In the analysis of the single indicators it is possible to observe that the level of *Female Employment* is high, or basically high, in all European countries (both old and new), except for Spain, Italy, Greece and Ireland. It is interesting to note that *fertility rate* is high in the Scandinavian countries, France, Great Britain and Ireland, whereas *life expectancy* is high in the Mediterranean countries.

The observation of the data shows imbalances between old and new regions, for instance, in the evaluation of medical care through the *number of hospital beds per inhabitant* (quite low in Portugal, Spain, Italy, Greece, Great Britain, Ireland and the Scandinavian Peninsula).

On the contrary, looking at the aspects linked to playing-recreational wellness, the receptive capability of these same regions (number of hotel beds) is very high, revealing a sort of inverse correlation between investments and expense for life quality services and for cultural and recreational services, the latter being considered more productive for the growth of human capital and of the regional formative level. Some regions, well known for their tourist-recreational appeal, keep their attractive local capabilities<sup>15</sup>.

A reverse of trend would have a positive influence on social cohesion, that we suggest to be evaluated as dependent from several indicators: imbalanced income distribution, "spot" distribution of the resources for social integration, high risk of juvenile exclusion, high and rising poverty risk. All these indicators are combined in a synthetic index that shows the level of Social Cohesion. This measure shows a medium-low level in a horseshoe shaped area that links Italy and Greece, passing through Germany and part of the new countries, whereas a good performance is recorded only in part of France and in the Scandinavian Countries.

In some countries, including Ireland, Italy and Greece, we advise the lowering of the limit for the female population in accessing the labour market (missed implementation of the policies for gender equality), involving as well, with common rules, regions in Belgium, France, the Netherlands and Switzerland, where the project also measured a low fertility rate similar to the Eastern countries, and a similarly low general level of social welfare. The general trend of social quality and cohesion can exclude during this consolidation stage Sweden, Finland, Slovenia and the regions in the Norway-Hungary axis, but not those on the Mediterranean.

In general the search for a better *cohesion* has to be considered a priority in the trans-national co-operation projects for Switzerland and Great Britain, as well as for Poland and Czech and Slovak Republics, whereas Italy, Ireland and Greece should focus on the themes of life quality and environment. All the countries, anyway, should employ part of their own resources on the composite theme of Cohesion to accomplish the Gothenburg strategy, with the regions of central-southern Italy and France in the first place.

For the achievement of a good level of Cohesion in compliance with the integrated objectives of Lisbon and Gothenburg, a greater and general attention to a wider vision is recommended in support of the thematic objectives, represented by the categories characterized in the Quality determinant. Therefore an implementation of these themes would generate positive effects in terms of:

- Increase of Productivity level
- Increase of goods Demand
- Increase of Employment level
- Pricing control
- Public Health improvement
- Increase of Leisure opportunities
- Increase of Physical Relationships
- Increase of Virtual Relationships
- Waste Reduction
- Cleaner production

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<sup>15</sup> South-West, Derbyshire, Shropshire, Berkshire and Essex in Great Britain; Nord Pas de Calais, Loraine and Picardie in France; Hainaut in Belgium; Friesland, Overijssel and North Holland in Netherlands.

- Increase of Waste Recycling
- Natural hazard prevention
- Pollution reduction
- Efficient water use
- Decrease of CO<sub>2</sub> level
- Higher level of transparency and efficiency of bureaucracy
- Implementation of Bottom-Up approach
- Increase of the Education level
- Improvement of the equipotential level
- Protection of Weak social classes
- Decrease of Poverty level
- Increase of Female employment
- Increase of Wellness

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