

Russo, Antonio; Van Der Borg, Jan

Conference Paper

European Cultural Resources and Regional Development: Pressure and Opportunities From the European Enlargement

46th Congress of the European Regional Science Association: "Enlargement, Southern Europe and the Mediterranean", August 30th - September 3rd, 2006, Volos, Greece

Provided in Cooperation with:

European Regional Science Association (ERSA)

Suggested Citation: Russo, Antonio; Van Der Borg, Jan (2006) : European Cultural Resources and Regional Development: Pressure and Opportunities From the European Enlargement, 46th Congress of the European Regional Science Association: "Enlargement, Southern Europe and the Mediterranean", August 30th - September 3rd, 2006, Volos, Greece, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/118399>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

European Cultural Resources and Regional Development: Pressure and Opportunities from the European Enlargement*

Paper presented for the 46th Congress of the European Regional Science Association
University of Thessaly, Volos, Greece 30 August – 3 September 2006

ANTONIO RUSSO, Erasmus University Rotterdam[†]
JAN VAN DER BORG, Ca' Foscari University of Venice

Abstract

This paper presents some results from the ESPON 1.3.3 project “The Role and Spatial Effects of Cultural Heritage and Identity”, started in December 2004 by a network of 12 European Universities under the leadership of Ca' Foscari University of Venice.

The conceptual framework of this paper lies on the assumption that the cultural heritage of Europe is not just an ensemble of tangible assets to be conserved, but rather a dynamism element of the territory, affecting trajectories of regional development. Thus the “marking” and valorisation of the cultural heritage is to be considered an integral component of regional planning, with the potential to increase cohesion within an enlarged European Union. In this light, the ESPON 1.3.3 project sets out to highlight the spatial expressions and effects of heritage assets and identify the (existing or potential) elements of territorial coherence at the regional and local scale, mapping the geographical aspects that are actually strengthening regional identities and networks.

After introducing a list of regional indicators of the European cultural heritage and identity, reflecting elements such as heritage presence, concentration and diversity, based on the NUTS III regional delimitation of Europe, the paper addresses the issue of how cultural aspects are related to the main socio-economic trends shaping Europe and affecting regional cohesion. The study highlights existing spatial patterns in such relations, and identifies emerging issues for inclusion of the cultural theme in spatial planning, especially looking at significant areas for cross-border cooperation.

Keywords: Cultural heritage, spatial analysis, planning, European integration

JEL codes. R12, R53, Z1

* This article is the result of a collective research effort between 12 European research institutes associated in a Trans-national Project Group ESPON 1.3.3, under the scientific coordination of this article's authors. The project was funded by the ESPON programme 2000-2006. The maps included in this paper have been compiled by J. Duch of the Universitat Autònoma of Barcelona.

[†] Corresponding author. Post address: School of Tourism and Leisure (EUTO), University Rovira i Virgili of Tarragona – C. Joanot Martorell 15, 43480 VILA-SECA, SPAIN. E-mail russo@few.eur.nl.

1. BACKGROUND

The European Union and its regions find themselves in a moment of profound change. On one hand they are still going through the paradigmatic transformation into post-industrial, *footloose* economies, which pushes a global competition for financial but more importantly human and social capital. On the other hand, the extension of the European Union to the east inevitably triggers complex processes of social, economic and territorial reorganization.

In this context, the role of Cultural Heritage and Identity (CHI) may very well become a very crucial one. First of all, cultural heritage assets put Europe in a top position with respect to the rest of the world, offering all European regions, none excluded, unique social and economic development opportunities. They are important inputs for the creative industry and the tourist industry, two of the most important (the second already employs more than 10% of its total workforce) and dynamic sectors of the post-industrial economy. Moreover, cultural assets are typical *place products* that cannot be separated nor moved from the regions they are located in. This makes the economic activities associated to the exploitation of CHI almost impossible to re-localize. Thirdly, many cultural assets and traditions are not only points of reference for the local populations but for Europeans as such. In a Europe that is pursuing cohesion and competitiveness simultaneously, CHI forms a sort of a natural bridge between two (apparently) conflicting objectives. This means that CHI should become *a cornerstone of European territorial policy*.

The extension of the European space to 74 million new citizens, hundreds of regions and cultural identities (languages, dialects, and ethnic groups), and a remarkable total of 49 sites in UNESCO's World Heritage List are likely to have a profound impact in term of valorisation and conservation of the cultural heritage of European regions.

- Increased *cultural complexity* at the local, regional and pan-continental level: Europe, and each of its territories, will be richer in cultural resources: more attractive, more interesting, more “contestable”.
- More opportunities for *cultural identification* for European communities: the enlargement toward neighbouring countries re-brings in the European community traces of the heritage of its citizens, who have the opportunity of re-discovering their past traditions and languages.
- More room and coordination potential for *cultural planning*: the enlarged “scale” of the cultural resources of Europe, in terms of landscapes and intangible heritage, means that more possibilities are given to integrate development strategies based on the recognition and valorisation of culture *across territories*.
- Additional *impulses to human mobility*, both driven by cultural consumption (tourism), and a result of a wider availability of cultural intangible elements (a “safer” migration, higher levels of quality of life in selected locations, the attractiveness of cultural production milieus, etc.).

In spite of this belief, the cultural policy of the European Union is very much a *stealth* one, hidden in regional and sector policies that deal with it in an indirect and implicit way, often lacking the necessary coordination and critical mass that may make them truly effective.

The European Spatial Development Perspective, a document signed by the spatial planning ministers of 15 European countries in 1999, endorses this vision. In the final conclusions of the document (European Commission, 1999), it is stated that the aim of spatial development policies is to work towards a balanced and sustainable development of the territory of the European Union. In the Ministers' view, what is important is to ensure that the three fundamental goals of European policy are achieved equally in all the regions of the EU:

- economic and social cohesion;
- conservation and management of natural resources and the cultural heritage;
- more balanced competitiveness of the European territory.

The “cultural issue” has consequently been put in the research agenda of the ESPON programme, an INTERREG initiative due to generate the “knowledge base” for the pursuit of the ESDP objectives. Firstly this research has to deal with the basic issue, that of the “definition” and operationalisation of the concept of CHI for the sake of its measurement and of the evaluation of its spatial effects and role as a catalyst for social and economic development. Gathering twelve research institute of as many European countries under the lead of Ca’ Foscari University of Venice, the ESPON project 1.3.3 was indeed called to formulate a “philosophy” of CHI analysis: this had to sustain and simplify a complex research effort in a policy field with ambiguous and contested boundaries. Secondly, the ensuing measurement of critical dimensions of CHI in the 27 present and future European member states (plus neighbouring countries like Norway and Switzerland) would have to produce a reasonable representation (or mapping) of the stratification of European regions by *themes* and *effects* of culture: distributions of different assets over the territories, concentrations and areas of pressure, clustering of CHI elements, functional diversification in the use of culture, and regional patterns in the association between cultural criticalities, geo-physical features of the territory and main trends in the social and economic development of the Europe of regions (*causation* needing a deeper scrutiny which was left to nineteen case study analysis).

Finally, ESPON 1.3.3 was supposed to yield a preliminary list of policy recommendations or at least key issues to be considered by ESDP in its cascading process towards a planning framework for Europe. At this stage of the research programme such guidelines can hardly be but very general statements, however ESPON 1.3.3 identified a number of critical issues in the relation between territories and their cultural assets. The main message underlying the policy output of the project is that planning should give top priority to on the one hand encouraging a sustainable use of CHI in those regions that are not yet turning this asset in a social and economic development potential, and on the other safeguard CHI in those regions that risk to compromise the (long term) integrity of their tangible and intangible assets, and hence their development potential, by exposing them to an excessive risk from use pressure.

This paper especially focuses on the regional analysis developed within work-package 3 of the project. Section Two presents synthetically the selection of heritage categories and indicators and the methodological problems faced by the researchers. Following are illustrated the most important results of the analysis: in Section Three the construction of regional typologies from cultural “use patterns” and “functional specialisations”, and in Section Four the identification of regularities in the relation between culture and other features of the European space. Section Five concludes reconnecting to policy issues.

2. INDICATORS OF CULTURAL HERITAGE AND IDENTITY

2.1 Standpoints

In coherence with the objectives of the ESPON programme, rather than on a “static definition” and an inventory approach to heritage resources, the project has focused on the spatial expressions of cultural heritage and on the dynamic interrelations between cultural heritage and identity and social and economic development trends.

Our approach is based on the notion that cultural heritage has a “process nature”: the activities of creation, reproduction and preservation or destruction of the heritage assets are deeply embedded in the social and economic transformation of a territory and in its cultural identity. The following statements are standpoints of this approach:

- Cultural heritage is a renewable resource, although to a limited extent, because it does not just “exist” out there, but is continuously being (re-)produced and (re-)elaborated.
- Cultural heritage is a phenomenon of social organization: it is based on social practices. Cultural value is produced through cultural/social practices. As such, CH is intimately linked to the civil society and participation in civic activities.
- There are *subjects* that are active agents in producing Cultural heritage, and *objects* that are the outcomes of the activities of the agents. The two interact in the manner described by Giddens (1984).

A methodological problem arises to this respect: as the project deals with the spatial effects of the heritage, it is difficult to attach a *spatial dimension* to intangible cultural features and to account for the complexity from the superimposition of different cultural element on the space. For this reason the TPG was led to reduce the “dimensions” of culture to a selected number of measurable categories which can be reconnected to a NUTS III spatial level.

2.2 Components of cultural heritage and identity

Cultural heritage and identity components have consequently been subdivided into different *categories* which can be distinguished for the type of spatial effects that they generate; data have been collected regarding:

A – Monuments. Historical buildings (churches, palaces and castles, old mansions, bridges, fountains, etc.) and sites (caves, archaeological remains, battlefields, etc.) have marked spatial characteristics because they are an immobile, structural element of the territory. They generate “flows”, mostly physical flows of visitors and users, and possibly also financial flows from their economic exploitation. Most countries do have national or regional registers of the cultural heritage, subdivided by typology, that are normally available on the web or in geo-referenced format on request.

B – Protected Cultural Landscapes and Conjuncts. This category focuses on the interaction of different cultural elements and on their spatial pattern. These assets have composite nature and occupy a large area in the space, so that it is not possible to pinpoint them to an exact location. Rather than a physical address, they involve a “delimitation” of a territory from the recognition of a “common cultural element” over the physical space. They are subject to different levels of protection. Data have been collected on entries in national lists.

C – Museums and Galleries. This category includes collections of movable tangible heritage and focuses on their “institutionalisation” in a man-made exhibition space (museum or gallery) which also has value as a place for furthering, interpretation and dynamisation of a specific cultural theme or identity of a place. They have spatial impacts because they generate flows and because they can be “moved” or “grouped” in strategic locations.

D – Events. Intangible heritage assets are immaterial expressions of a territory, of a community or of different communities insisting on the same regions, of its economic and social history. They thus provide a “symbolic” backbone for the very recognition of the physical cultural markers of the heritage. Cultural events may be conceived as an explicitation of the cultural idiosyncrasy of a territory, stretching in range from the celebration of traditional folklore to the increasing multiculturalism of metropolitan cities. Only those events with certain characteristics which stress their “spatial effect” and their connection with the local cultural identity, and these criteria have been followed in whatever case it was possible to operate such discrimination

E – Cultural Diversity. Languages, religions, ethnic groupings, social structures are expression of the local identity. The selection criterion for these assets should be the existence of spatial expressions and effects, which need to be *visible*, *traceable*, and *measurable*. The key idea here has been to rank regions according to the *cultural diversity* - which may have positive (a larger development potential from hybridisation of capacities) as well as negative (a diluted identity) connotations. In the end, only the commonly available information on the nationality and ethnic descent of the residents were collected.

F - Cultural Professionals. A dynamic conceptualisation of cultural heritage needs to address the capacity of people to “use” the cultural heritage of a territory in order to generate revenues. A large share of population employed in cultural industries is an element that does give substance to the concept of dynamic heritage: either because its communication and

transmission is made possible, or because its symbolic value is re-elaborated and discussed, generating new cultural meanings. In order to measure the “creative intensity” of a regional economic system it was decided to count people having “cultural” or creative professions, independently from the sector of activity in which they are employed. This involves a delimitation of professions (according to a selection of ISCO-88 codes) to be considered “creative”, which has been derived from other EU studies on the matter¹.

G - Cultural Infrastructure and Organisations. This category includes elements which contribute to the forwarding and transmission of the heritage: institutions and organisations which are not to be considered as cultural heritage per se but reflect the “will” of a community to further, share and promote their cultural heritage, thus defining their identity; namely theatres, cinemas and public libraries. These assets have marked spatial effects because they generate flows (for instance, audiences to performances or students flowing in a place and enhancing its social capital) and networks within and over territories.

H - Intellectual Capital The TPG has also looked at the social side of heritage, taking into consideration the “intellectual capital” of the region, that is the extension of the “capacities” on which the region can count to further its heritage and identity or, else, to dynamise it and valorise it. A region with outstanding cultural features (good universities, high levels of quality of life, aesthetically inspiring and well-preserved landscapes) is capable of attracting the top skilled workers and the best creative talents; on the other hand, these contribute to further growth and diversity of the cultural fabric of the region. Data have been collected on number of graduates in higher education institutions and population over 15 in a region with high attainment level.

2.3 Indicators of cultural heritage and identity

Information in different heritage *categories* of need to be composed with other information in order to produce *spatial indicators*, that is, measures which allow a significant measurement and ranking of the space according to different aspects of interest for this project, and namely the type of spatial effects that they are likely to produce.

Spatial indicators should be conceived as *ratios*; the composition of two or more quantitative measures in one indicator allows the “measurement” (and to some extent the “ordering”) of the territory according to specific dimensions.

The most interesting for this study are:

- PRESENCE of heritage assets (in absolute numbers)
- DENSITY of heritage assets (assets per kmq)

¹ LEG project “CULTURAL STATISTICS IN THE EU”, EUROSTAT Working Paper *Population and social conditions* 3/ 2000/E/N° 1; and the EUROCULT21 project available on-line <http://www.eurocult21.org/>.

- POTENTIAL USE PRESSURE FROM LOCAL RESIDENTS AND VISITORS
- AVAILABILITY OF CULTURAL INFRASTRUCTURE (n. of theatres, cinema screens, public libraries per 1,000 inhabitants)

Other spatial indicators refer to the characteristics of the population:

- CULTURAL PROFESSIONALS IN WORKFORCE
- INTELLECTUAL CAPITAL
- DIVERSITY of population according to nationality or ethnic groupings.

It is also conceptually useful to differentiate between:

Supply indicators. Density indicators are the most adequate to represent supply because they reveal the existence of a concentration of resources which are likely to be at the core of a “supply system” of culture. A regional analysis of the location patterns of CH elements can be the instrument to detect possible cross border cultural linkages and opportunities for the construction of cultural networks.

Demand indicators. Use pressure indicators (albeit potential) partly reflect the existence (supply) of the heritage, but introduce the issue of its “use”. They have a higher degree of ambiguity because they are dependent on assumptions, estimates and management practices. Thus, they need to be evaluated in combination with qualitative indicators which are not always available at the level of a single asset or at the regional level; these aspects will be investigated at case study level.

Structural indicators. Indicators like population diversity, the availability of cultural infrastructure, the orientation to creativity of the local society and the intellectual capital present in a region illustrate the potential to engage in processes of cultural production and reproduction, which is at the basis of a cultural dynamics. Thus, a territory under-endowed in heritage resources but strong in human capital and quality of life aspects has better chances to valorise and “use” its resources than “culturally rich” territories which are poor in structural conditions.

The resulting structure of the indicators is illustrated in Figure 1. For every indicator for which there is sufficient area coverage, maps have been built, at NUTS III level.²

² The NUTS II level has been used as an alternative only in case that the coverage at NUTS III level proved to be insufficient.

Figure 1 ESPON project 1.3.3. Structure of indicators

Heritage categories	Cat. #	Description	Presence	CLASSES OF INDICATORS						
				Density	Availability	Potential use pressure (Locals)	Potential use pressure (visitors)	Potential use pressure (integrated)	Diversity index	% of population
Tangible heritage	A	Immovable individual assets: monuments and sites	A.0: n. of assets in region	A.1: n. of assets in region per kmq		A.2: n. of residents in region per asset	A.3: n. of visitors in region per asset	A.4: n. of residents (*365) and visitors in region per asset		
	B	Immovable entities: protected landscapes and conjuncts	B.0: n. of entities in region	B.1: n. of entities in region per kmq		B.2: n. of residents in region per asset	B.3: n. of visitors in region per asset	B.4: n. of residents (*365) and visitors in region per asset		
	C	Movable objects in collections: museums and galleries	C.0: n. of museums in region	C.1: n. of museums in region per kmq		C.2: n. of residents in region per asset	C.3: n. of visitors in region per asset	C.4: n. of residents (*365) and visitors in region per asset		
	D	Celebrations of local culture: events	D.0: n. of events in region	D.1: n. of events in region per kmq		D.2: n. of residents in region per asset	D.3: n. of visitors in region per asset	D.4: n. of residents (*365) and visitors in region per asset		
Intangible heritage	E1	Groupings of resident population by nationality							E.1: Shannon index of cultural diversity by nationality of residents	
	E2	Groupings of resident population by ethnic descent							E.2: Shannon index of diversity by ethnic descent of residents	
	F	Cultural and creative professionals								F.1: cultural and creative professionals as a share of active population
Infrastructure	G1	Theaters			G.21: n. of theaters per 1,000 inhabitants					
	G2	Cinema screens			G.22: n. of cinema screens per 1,000 inhabitants					
	G3	Public libraries			G.23: n. of public libraries per 1,000 inhabitants					
Intellectual capital	H1	University output: graduates in local HE								H.11: graduates in local higher education as a percentage of local population
	H2	Attainment level of population (high)								H.12: percentage of local residents with high attainment level (ISCED-97 codes 5 and 6)

SUPPLY OF HERITAGE

DEMAND OF HERITAGE

STRUCTURAL INDICATORS OF HERITAGE

3. REGIONAL TYPOLOGIES

3.1 Classification methodology

The article will now focus on the spatial effects (expressions) of cultural heritage, and on correspondent stratifications of the European space through the production of regional typologies and corresponding maps (included in an Annex at the end of the paper). Two directions have been explored by the TPG:

- a. *Integration of more indicators in more complex indices.* This technique is based on the identification of wider issues or “functions” of culture; it elaborates a framework to pass from scores achieved by regions according to simple indicators, to a more complex positioning regarding a set of them.
- b. *Cross-analysis of ESPON 1.3.3 indicators and other territorial and socio-economic features.* The combination of “scores” achieved by regions with respect to selected cultural components and socio-economic and territorial indicators and typologies developed by other ESPON projects may yield interesting indication on how culture interrelates (at the local or general European level) with the main features and trends of the European space, identifying areas for integration of culture into planning.

With reference to *a*, the advantage of multivariate statistical techniques for the analysis of regional data lies in the possibility to identify elaborated “groupings” of regions. Relevant cultural components may be selected according to the research model. This approach generates regional categories with specific spatial configurations, which are of interest in the perspective of the project. The two most promising techniques of this type for building regional typologies are *cluster analysis* and *factor analysis* (in fact there is also the possibility to use the results the factor scores to perform a cluster analysis). The application of these techniques may result in a classification of the data set or a typology, which can be described with variables that are mutually independent.

However, the issue of missing values is a specific problem in the application of multivariate analysis on the data of ESPON 1.3.3³. For this reason the TPG has decided to exclude the use of cluster or factor analysis for the development of regional typologies, and to recur to a simplified analytic method. While the philosophy of factor and cluster analysis is that the “output” in terms of groupings of variables and spatial patterns is not known beforehand, the approach could be reversed. “A priori” labels may instead be established, representing different categories of cultural effects. Through the identification and the “loading” of the indicators in the database that influence such labels, they can be manipulated into complex indices, and the regions ranked accordingly. Clearly, this technique is less solid than advanced

³ Missing data have been a problem in the univariate analysis on the indicators (missing values result in blank spots on the map). In fact, eight of the twenty data series that have been collected Europe-wide have more than one national dataset missing. The incompleteness of the dataset creates even more problems in a multivariate analysis. If factor analysis is conducted on a EU27+2 dataset of *n* variables, the observation is deleted from the analysis when at least one missing country dataset value occurs for only one of the five variables.

statistical techniques like those proposed above; yet it has the indubitable advantages of simplicity and “interpretability”.

3.2 Demand and supply of culture: balances and unbalances

A first analytic approach to the construction of regional typologies considers the supply of cultural resources and demand determinants.

A composite “supply indicator” was built including only the aspects of culture that are more explicitly identifiable as *supply*, therefore only indicators A to D (heritage, protected landscapes, museum and events), and considering *density* (indicators *.1): concentration in space is likely to increase the chances that individual resources are integrated – functionally and in the perception of potential users – as a *supply system*. To do this, the scores received by regions (NUTS II and NUTS III) in indicators A°.1, B.1, C.1, D.1 have been normalised, so as to make them commensurable, added, and the aggregated score re-ranked in three categories (High, Average, Low). The results are mapped in Figure 2. The shape of the distribution appears to be biased: there are relatively few regions with “low” levels of supply.

Two poles emerge as distinct “cultural supply systems” in Europe, one centred on Western Europe and spanning from Holland and Southern England to France and Italy, and another centred on Northern-Central Europe and spanning Scandinavia, Poland, Eastern Germany, Check Republic and Hungary.

The mapping of *potential demand* follows the same ranking procedure. The indicators considered are potential use pressure by local residents on listed assets (same categories as above) at NUTS III level (thus, indicators A°.2, B.2, C.2 and D.2) and potential use pressure by tourists *and* locals at NUTS II level, at which tourist data are available (A°.4, B.4, C.4, D.4). Use pressure is only *potential* because the data on effective uses are generally not available; in this way *potential demand basins* are defined, of which effective demand is obviously a dependent variable. The resulting map is displayed in Figure 3. The distribution is smoother than in the case of supply, and it is obviously associated to population distribution. The coastal regions of Europe emerge as the ones with higher potential pressure levels due to the fact that potential tourist pressure is also considered. The resulting map in Figure 3 does highlight areas where existing tourist activity could become a threat for the heritage resources, like Mediterranean coasts, art cities and European capitals.

The next step in this analysis regards the “match” between (potential) demand and supply, which relates to a key assumption of this project. A sustainable use of the heritage depends on a “balanced relation” between economic uses and preservation of the resources; thus, both over-exploitation and under-exploitation are dangerous. The former, because it might lead to the physical or symbolic destruction of the assets; the second because it neglects the integration of the asset into a process of economic valorisation of the territory, reducing the chances that it will be maintained for the future generations. A subdivision the territory into

“categories” which are affected by different problems can be produced accordingly, to which adequate solutions can be proposed.

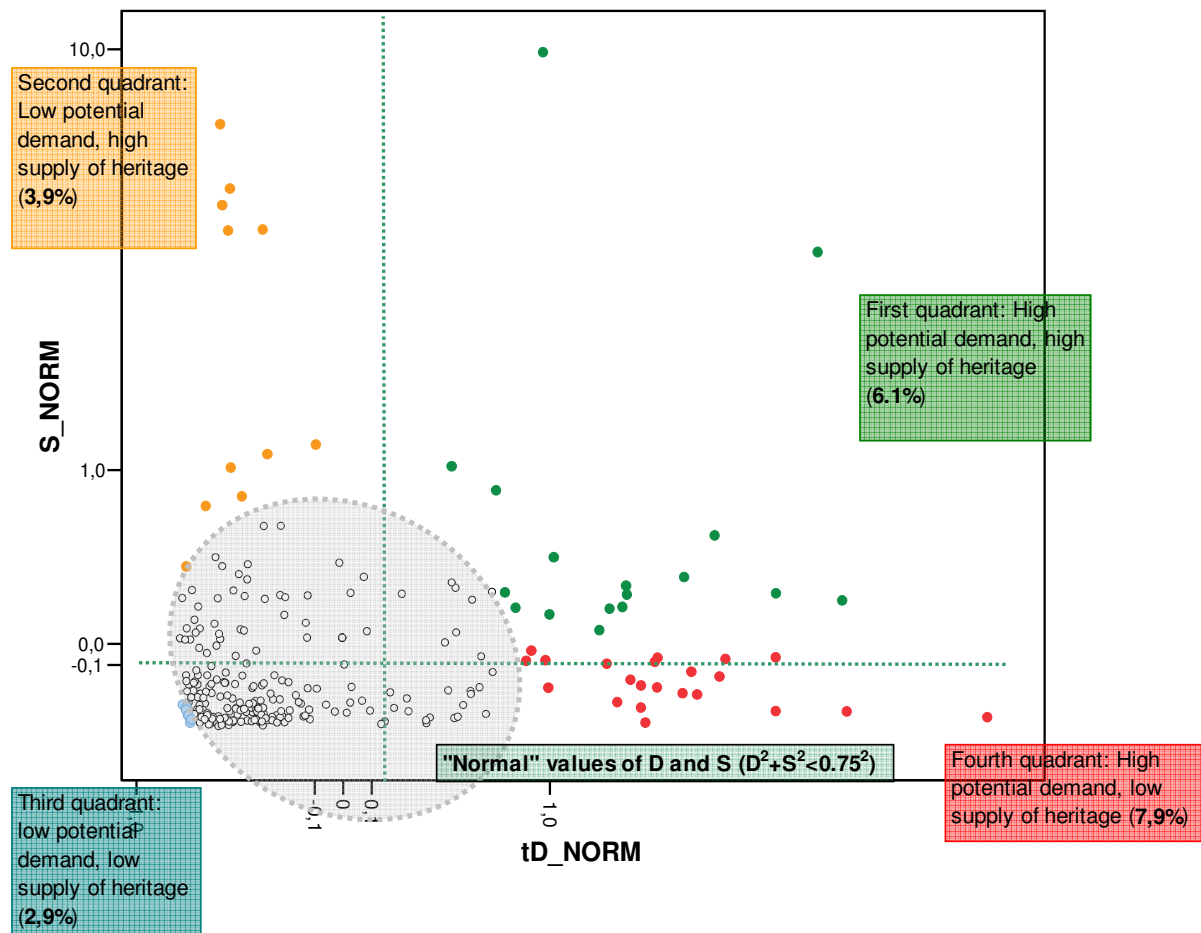
The analysis is now limited to the more interesting NUTS II level of analysis, at which tourism demand data are available. Policy-wise it is useful to “isolate” the pressure from residents from that of visitors. In fact while it can be argued that the former have a structural and ethical relation with the local resources, being a sort of “independent variable” in the problem of conserving or valorising the heritage assets, heritage management policies have to address more specifically the visitor issue, limiting or facilitating visitor use through local planning and marketing. In fact, tourist demand is less predictable, depends crucially on user profiles (thus, we would not expect all sea vacationers in Spanish coasts to turn into cultural visitors during their stay), and is sharply seasonal. Moreover, it is not naturally bounded by the size of the local population as it happens with residents: in principle, potential demand for a world-famous art city like Venice can surpass largely the “social size” of the territory. Finally, it is crucially affected by factors such as accessibility. Thus, tourism management – at local but also at interregional scale – emerges as one of the “policy dimensions” for enhanced regional cohesion and sustainable development.

In the following a scatterplot of the two “derived” datasets of potential visitor demand is produced, based on an elaboration of indicators of demand and supply defined as a above. Each point in the diagram corresponds to a couplet of values of potential demand and supply of heritage in that region. Ignoring points that are too close to the origin to be significantly different from a “normal” situation⁴, we focus on the points that lie outside the grey area and in each of the four quadrants in Fig. 4.

The majority of regions lie within the grey area. In the first quadrant (high D, high S) are regions subject to a very high demand pressure on their abundant heritage resources; thus they are areas of “risk” in the conservation of the heritage but also areas where the production of heritage-related services is more viable. In the second quadrant (low D, high S) are regions where demand pressure is relatively low face to abundant heritage assets; thus, there is potential for an improved “mise en valeur” of the heritage. A few regions in the third quadrant (low D, low S) display low levels of potential demand and low levels of supply; in these regions the issue is not the preservation of the heritage but rather the generation of new cultural assets and values that may become the brand of the area and attract more potential users. The fourth quadrant (high D, low S) picks regions where potential demand is very high but supply is scarce, determining a real “risk” for the preservation of the existing heritage, which should in part be eased through “hard” management, thus limiting access to sites, and in part through the promotion of new cultural assets (for instance, performing arts) offering a larger palette of products for the local and foreign users.

⁴ The grey area corresponds to sums of normalised squares of x and y inferior to 0.75 times the standard deviation for each variable, or $D^2+S^2 < 1.5^2$ where D: potential demand of heritage, or $A^{\circ}.4+B.4+C.4+D.4$, and S: supply of heritage, or $A^{\circ}.1+B.1+C.1+D.1$, where A, ..., D have been all normalised to mean: 0 and variance: 1.

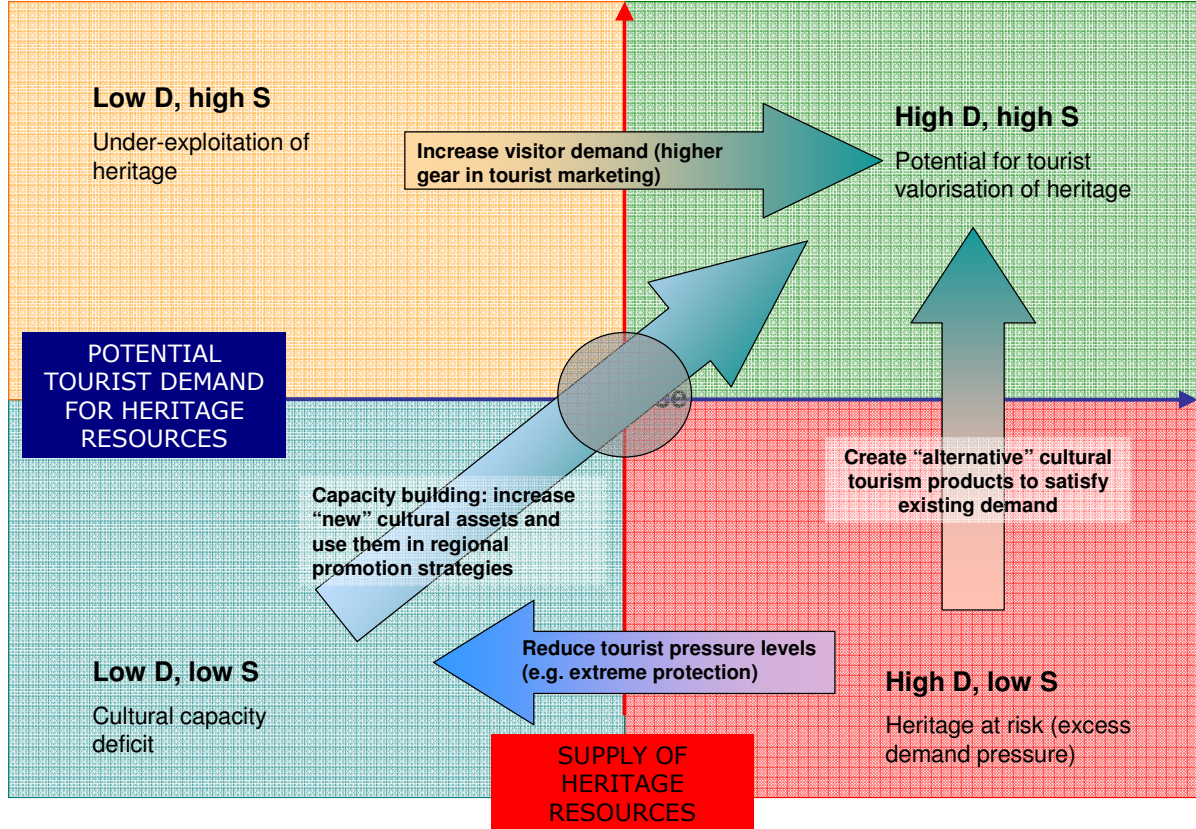
Figure 4 Unbalances between potential demand and supply



The resulting map is shown in Figure 5 (Annex). Regions coloured in yellow are in relative balance (falling into the grey area of the scatterplot). Green areas are those where high demand goes together with high supply, generating a potential for sophisticated strategies of heritage valorisation (among them are the regions of Vienna, Muenster, Liguria, Malta and Inner London). Yellow areas need better valorisation of their assets (among them are Brussels, Antwerp, Prague, Berlin, and most Dutch metropolitan regions).

Pink areas are the ones more “at risk” from excessive pressure and need careful conservation and diversification of culture. Among them, are the regions of the most important European “star destinations” (regions of Venice, Florence, Salzburg), plus Greater Manchester, Cyprus, Schleswig-Holstein). Finally light blue areas need to generate more cultural resources to become more attractive. In this region we find some Eastern-European regions especially in Bulgaria, Romania and Poland.

The policy options at hand for regions that find themselves in “critical” positions are illustrated in the following diagram.



While in principle all regions would want to find themselves in a “safe” situation (grey area) or rather in a potentially rentable position (green area), each would have to act in a different way depending on their initial position. Starting with areas at risk (red region, fourth quadrant), there are two ways to improve the existing situation: either keeping effective tourist pressure to a minimum, through “hard” tourist management (restrictions to access, high entrance tickets, “museification” of the heritage) or through policies to match potential demand with a wider palette of culture-related products like events, performing arts, etc.

“Yellow” areas (second quadrant) clearly need to better market and program their cultural supply in order to attract more visitors and make their heritage supply rentable. Finally, “blue” areas (third quadrant) need to act on both sides, investing in culture as a means to define a regional identity and attract more visitors.

3.3 Functions of culture

The construction of a regional typology based on the relative strength or specialisation of each region according to the various cultural components considered in this study could be made more interesting by combining various indicators to highlight more general functions of

culture, which correspond to by and large to the reduced form of a cluster analysis producing various “labels” or orientations in the cultural endowments of a territory. These may correspond to different focuses in the provision and fruition of culture at the local level, which can be compared but not ordered: one function is not necessarily “inferior” to another (but generates different territorial effects). At the same time, they allow the ordering of region according to each specialisation: one region can be over- or under-endowed in relation to one particular specialisation, and at the same time in relation to others, achieving a multiple specialisation or “excellence” in culture.

Cultural heritage and identity indicators are therefore re-elaborated into measures expressing the relative focus on three different “functions” or specialisations:

- A. The **conservation** of culture: culture as an asset – tangible or intangible - with ethic value and carrier of local identity, which needs to be defended against territorial and market trends which compromise the stability of its provision.
- B. The **production** of culture: culture as a “commodity” which needs to be (re)produced not only to reconstitute the cultural capital which is one key component of contemporary social and economic development and which is continuously wasted due to its idiosyncratic nature, but also (and increasingly so) as a source of economic development insofar it is embedded in production processes (creative industries and other knowledge-intensive economic sectors).
- C. The **valorisation** of culture: culture as a set of social norms and capacities which enrich the local communities and that may be used by the latter to “make themselves known” to the other communities in order to establish good relations for social and economic exchange. Thus culture is about “educating” the local community (so that we can get to know more about ourselves and our identity, and about the “others” and their values) as well as about “educating” the others, or developing and establishing an image, a brand (so that they can get to know more about us).

There are obvious interrelations between any two these specialisations – regions that are rich in heritage dispose of more solid “input” for culture-based production, and they have a relatively easier task in diffusion; regions which are strong at producing culture, may “export it” relatively easier – but it is useful to keep them conceptually separated.

To achieve an ordering of the regions according to each of the specialisations considered and their combinations, it is assumed that each of the cultural components, measured through the use of indicators A to H, has specific effects on any of the specialisations. Such effects could be approximated by attributing a “positive” or a “negative” sign to each indicator⁵.

⁵ After careful analysis, the following algorithms have been used to rank regions according to the three specialisations at NUTS III level:

- Conservation: A2-, B0+, B4-, C0+, C1+, D0-, E1-, G21*+, G23*+, H12+

Subsequently a procedure may be established to rank the scores of each region in more indicators according to the relative specialisation that it achieves in the three areas. The procedure assigns to each indicator score a scale value based on its position in the distribution. The scores obtained by European regions as far as the three specialisations of culture are concerned, are normalised and mapped in Figures 6-8.

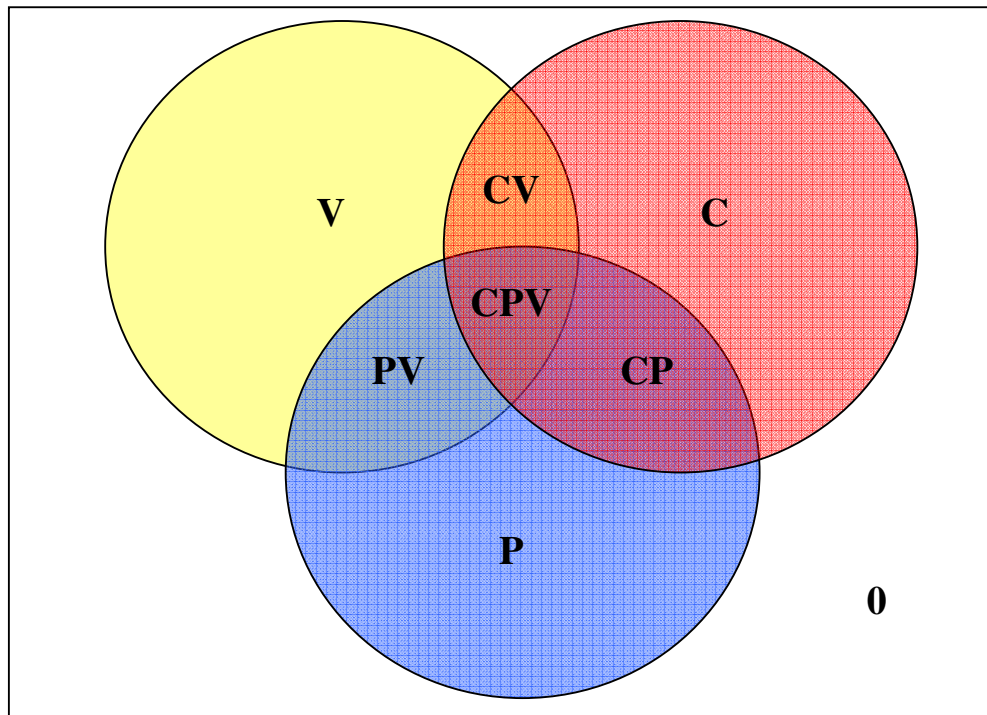
In Fig. 6 we are faced with high values of the specialisation in conservation especially where there is a high availability of heritage resources and use pressure is looser. Conversely, a “low” degree of specialisation in conservation affects those areas which are subject to high use pressure levels. As a general pattern, the specialisation in conservation is higher in rural areas. In Fig. 7 we can see that especially urban areas have a higher propensity to cultural production, with notable exceptions in Southern Italy, South-Central Spain, Finland and Ireland. The picture that emerges is of a high capacity to produce new culture and to elaborate traditional cultural values and skills into new products and services. This capacity seems concentrated in a few “production-oriented” regions of coastal Spain and France, Northern France, Southern England, and the Scania corridor between Denmark and Sweden; other regions in new member countries like Hungary and Romania make it to this map. Finally, the map in Fig. 8 regards the capacity to “valorise” cultural values through visitor experiences and a repertoire of cultural performances and events. The map highlights regions in countries with an established cultural image, like the Mediterranean and Atlantic coasts of Spain, France, Central Italy, the metropolitan regions in the Netherlands, and the UK, plus “outsiders” like Sweden, Ireland, Finland, Hungary and Cyprus.

The scores achieved in the three functions of culture may be combined, and a regional typology is produced according to the score achieved in the triplet “Conservation-Production-Valorisation”. Groupings are built looking at the specialisations for which regions achieve a high score. In this way, each region could fall in one of the eight areas “or “types” illustrated in the diagram of Figure 9 below, which also offers ready-to-use policy implications.

Having tagged all NUTS III regions according to this classification, a categorization of the dataset is obtained. While non-specialised regions are as expected the most numerous group in the dataset (44%), excellence regions are as many as the 11.4% of the total number of NUTS III regions. Regions that are specialised in only one “function” of culture are around a quarter of the dataset, with a prevalence of specialisations in conservation (13.2%). Finally it should be noted that only a few regions (2.4%) excel in conservation and production, two functions that seem to be at opposite extremes. The EU27+2 territory is stratified accordingly as in the map of Figure 10 (NUTS II regions).

-
- Production: A0+, A4+, B0+, B4+, C0+, C1+, C4+, D0+, D1+, D2+, E1+, E2+, G21+, H11+, H12+, F1
 - Valorisation: A0+, A4+, B0+, B4+ C0+, C1+, C4+, D0+, D1+, D4+, E1+, G21+, G22+, G23+, H11+

Figure 9 Classification scheme of European regions according to a combination of the scores achieved in three different functions of culture



- Regions that fall in the **C** area could be called *conservationist*: They don't have particular problems in the preservation of their possibly rich heritage, because of lower-than-average user pressures, and in addition this task may be facilitated by other factors (which could be added to the analysis), like large public budgets and low accessibility. However, they lag behind in the generation of value from the management of the heritage and they do not “use” this cultural strength to promote their territory or to foster education in the community. They should therefore enhance the “market-orientation” of heritage and embed it more firmly in educational and promotional flows information. Among Conservationists, we find secondary urban centres and rural regions with abundant heritage assets like Klagenfurt-Villach, Trier, La Coruña, Vendée, Delft, Wrocław, Central and South Alentejo, Constanta, Jönköping, Durham, and rural Northern Ireland.
- Regions that fall in the **P** area are creative regions where culture is recognised as a value generator, though their cultural heritage and identity may be in peril – which could result in a short life-cycle of the cultural industries and in an excessive exposure to global trends – and again they do not “use” their cultural strength to promote their territory or to foster education in the community. They should be more careful to preserve and promote their heritage making it become a spearhead of education and revitalisation policies. They may be labelled *productionist*. Among them we find a

national capital, Sofia, and urban centres which have specialised in cultural production, like Konstanz, Wiesbaden, Thessaloniki, Bolzano, Palermo, Kosice, Greater Manchester and Coventry.

- Regions that fall in the **V** area are very good at “selling” their cultural image and have solid cultural transmission mechanisms but they have problems in preserving their heritage and in producing new culture. They should focus their cultural policy on the closer “embeddedness” of “cultural window” functions in the local cultural fabric and develop forms of entrepreneurial activity making the best out of it. They are tagged **merchant**. In this category are regions with a distinctively tourist orientation like Luzern, Tarragona, Savoie, Siena, Torun, and Algarve.
- Overlap regions combine in obvious ways. **CP** areas can preserve their heritage and are good at producing new culture but their educational or promotional function is underdeveloped. They are called “**reproductionist**”, and include a number of “secondary” metropolitan regions like Karlsruhe, Arnhem/Nijmegen, Porto, Cluj, Bradford, and Bournemouth.
- **CV** areas do preserve their culture and diffuse it, but they are not effective in generating value from its elaboration in creative goods and services. They will be labelled as “**classroom**” regions). Among them are a number of rural territories with a notable cultural specialisation: Innsbruck, Asturias, Calvados, Dordogne, Chios, Győr-Moson-Sopron, Noord-Friesland, Uppsala, Gotland, Somerset.
- The **PV** area designates regions which are good at producing and diffusing culture, but where heritage and identity are at stake. We tag them “**craftshops**”, including some national capitals and a number of large national centres which being subject to high tourist pressure fail to be completely specialised in conservation: Salzburg, Charleroi, Plovdiv, Genève, Cyprus, Munich, Frankfurt, Köln, Barcelona, Gironde (Bordeaux), Loire, Attica, Turin, Milan, Venice, Florence, Klaipeda, Luxembourg, Riga, Lodz, Gdansk-Gdynia-Sopot, Leeds, Birmingham, Oxfordshire, Edinburgh, and Glasgow.
- Regions falling in the **CPV** area are strong in all three areas of specialization of culture and their position is so to say sustainable; they are labelled here **multi-specialised** regions. This category includes most national capital cities (with the only notable exceptions of Vienna, Oslo, Dublin, Sofia, Vilnius and Bratislava) and a number of regional capitals that are renown and less known art and cultural centres, like Rotterdam, Linz, Bruges, Zurich, Sevilla, Dresden, Krakow, Lille, Belfast.
- Finally, regions which only display low or average value in all three specialisations of culture, are to be named **culturally non-specialised**.

The implicit policy implications following this subdivision of the European territory is, clearly, that any region should aim at becoming an “multi-specialised region” in the terms

described here, thus, enhancing the functional specialisations for which it is lagging. Hence, *reproductionist* regions should better valorise their heritage and cultural assets, for instance through a more explicit tourist orientation, or improving their accessibility; *classroom* regions should be more focused on empowering local communities to revitalise the cycle of cultural production; *craftshop* regions should be more careful about the conservation of heritage assets, which is the base for a sustainable valorisation of the same. And so forth in various combinations.

4. IMPACTS AND SPATIAL EFFECTS OF CULTURE

In this section, the basic cultural indicators of ESPON project 1.3.3 – and their composition into more “complex” indexes or regional classifications – are cross-analysed with data and typologies developed by other ESPON projects.⁶

The objective is to test whether there are significant interrelations, which may be explained by regional development theories, and possibly lead to integrated policy frameworks. The regional territory is stratified accordingly, and the regional stratification mapped to highlight areas of “outstanding” interrelation between culture and other aspects considered by the ESPON programme. The selection of ESPON indicators to be benchmarked against cultural indicators is based on a first scrutiny of correlation and on the non-triviality of the relationships examined. As a general rule, correlation and regional patterns are clearer at NUTS II level. However, not all ESPON indicators are delivered at the NUTS II level, so in some cases an exception will be made. A synthetic illustration of selected results is presented here.

4.1 Culture and regional settlement structures

The relation between the provision and complexity of culture and the structure of urbanisation in the regions of Europe is explored first. This analysis is based on the assumption that urbanisation may be positively correlated with most cultural-supply variables. In fact, through ages, and in particular since the end of the middle-ages, the most important works of art of Europe, the most influential circles of creative thinking, the best schools and universities, and the flourishing of cultural trends and languages, have been closely associated with cities, their power, and their economic strength. Furthermore, cultural services and cultural capital are strongholds of the “renaissance of cities” in the age of the knowledge economy, in which urbanisation factors are strongly related with immaterial features of the territory as quality of life and cultural excellence. It is thus not surprising that as of today, the cultural heritage of most nations – especially in Europe – is concentrated in cities, and that most cultural talents and organisations are attracted by urban locations in a self-feeding cycle of development a la Florida (2002).

⁶ The complete database of the ESPON Project is accessible on the website <http://www.espon.lu>.

Table 1 Average values of cultural indicators for categories of rurality, NUTS III.
Source: ESPON database and ESPON 1.3.3

<i>Average values of indicators for each category of relative rurality</i>										
<i>Relative rurality: share of rural population, index country average=100</i>	A^o.1	B.1	C.1	D.1	G.21*	G.22*	G.23*	H.11*	H.12*	E.1
< 90 low (urban)	2.303	0.039	0.044	0.022	0.009	0.057	0.049	0.013	0.135	0.309
90-110 medium (composite)	0.528	0.020	0.005	0.003	0.010	0.044	0.132	0.138	0.106	0.230
>110 high (rural)	0.716	0.026	0.007	0.003	0.011	0.045	0.131	0.015	0.096	0.226

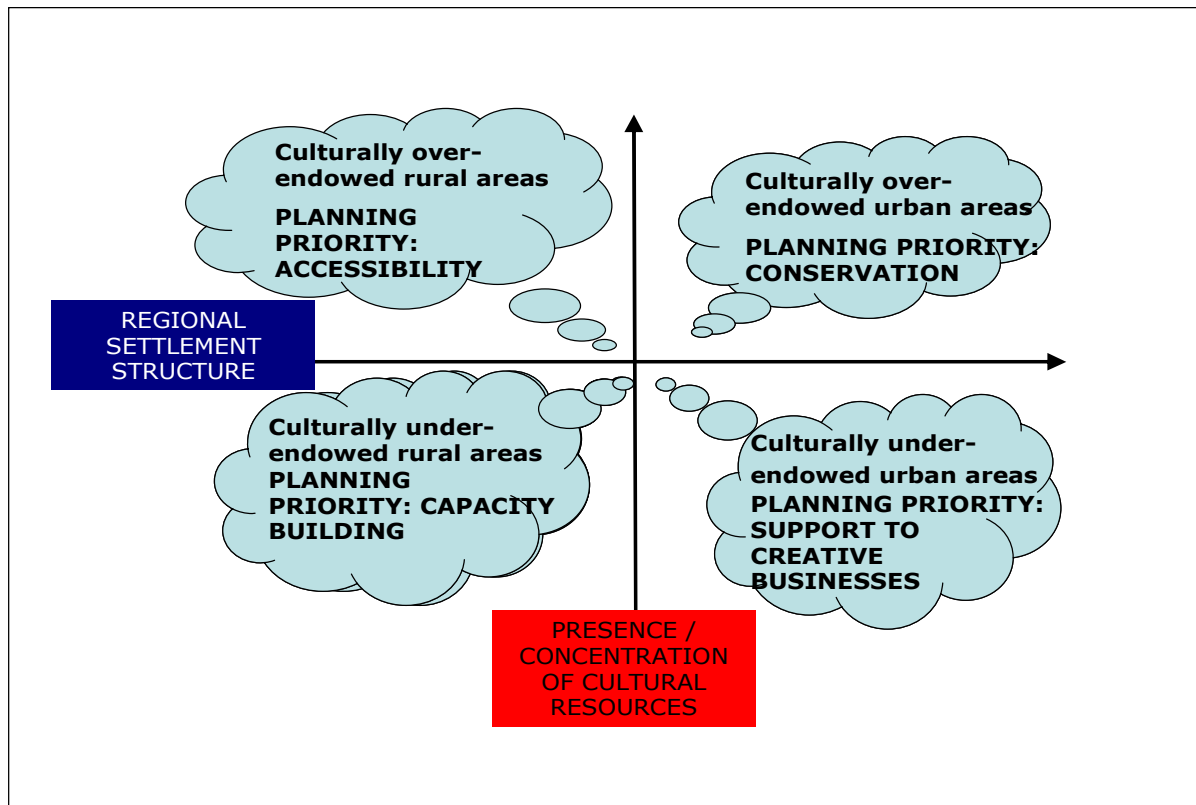
Table 2 Average values of cultural indicators for regional settlement structure types, NUTS II. Source: ESPON database and ESPON 1.3.3

<i>Average values of indicators for each settlement structure type</i>										
Settlement structure type (Settyp99N2)	A^o.1	C.1	D.1	F.1	G.21*	G.22*	G.23*	H.11*	H.12*	E.1
1: very densely populated with large centres	2.049	0.068	0.045	0.064	0.016	0.040	0.044	0.029	0.129	0.428
2: very densely populated without large centres	1.051	0.010	0.006	0.049	0.013	0.060	0.091	0.014	0.115	0.286
3: densely populated with large centres	0.908	0.019	0.032	0.051	0.012	0.043	0.082	0.011	0.115	0.323
4: densely populated without large centres	0.603	0.009	0.007	0.039	0.008	0.049	0.197	0.008	0.086	0.253
5: less densely populated with centres	0.261	0.008	0.004	0.039	0.014	0.054	0.153	0.028	0.096	0.286
6: less densely populated without centres	0.446	0.002	0.002	0.038	0.015	0.051	0.176	0.033	0.087	0.239

Though data are not available for cultural employment growth in EU cities, we can use data from the ESPON database to verify a positive correlation (0.32) between population density and the percentage of cultural occupations in NUTS II regions. Yet the association of urbanisation with cultural components can also be observed at more complex levels. Indeed, cross-correlation between cultural indicators (density of cultural assets) and the “degree of urbanity” (as captured by an indicator of *relative rurality based on national classifications NUTS III, 1985-2001*, elaborated by ESPON project 3.1.), is also positive and significant at 0.34. The average values of the cultural indicators per category of *relative rurality* are illustrated in Table 1. The Table shows a sharp decrease in the values of some indicators passing from the first (urban) to the second (composite) category of rurality (indicators A^o.1, B.1, C.1, D.1, H.12, E.1), while the opposite occurs in the case of cultural variables that are population related, like the “G” indicators (cultural infrastructure) and H.11, indicating a possible “higher level of quality of life” (including the offer of higher education) in areas with a moderate degree of urbanisation. The opposite trend is observed passing to the highest level of rurality; heritage indicators go up, intellectual capital goes down, while the other indicators do not appear to change sensibly.

In Table 2, we provide the average value of selected cultural indicators at NUTS II level for each one of the six basic types of settlement structure defined by population density and situation regarding centres, as produced by the ESPON Project 3.1. The table reveals a clear trend for higher values of the indicators (density of cultural resources, share of cultural occupations, diversity, cultural facilities and intellectual capital) matching with more polarised urbanisation structures and a higher population density.

Figure 11 Policy guidelines according to heritage intensity and settlement structure



A combination of policies may be proposed to address the issue of a better use of the heritage assets in the light of the settlement model (see diagram in Figure 11). Culturally over-endowed urbanised areas have to protect their cultural resources, which constitute one of the elements that make up the identity of the place, in addition to supporting the generation of new culture, a typical feature of post-industrial cities. For instance, the protection and valorisation of the industrial heritage, which is an accepted strategy in Northern Europe while is still under debate in southern and Mediterranean Europe (e.g. Barcelona, Milan) may prove a very good policy to generate city images and create new places for cultural production in an inspiring setting. In culturally over-endowed rural areas the main issue is how to facilitate cultural consumption face to thin demand basins, therefore, improving accessibility is a key policy which nevertheless faces the usual constraints characterising rural and peripheral areas.

The organisation of dedicated cultural routes or itineraries, like the one promoted by the Council of Europe, may be the key to recuperate from this point of view face to more accessible areas. Culturally under-endowed urban areas are not to be intended here as lacking resources in absolute terms, but only looking at heritage elements. Here the key challenge is how to make the best of human creative and organisation resources to generate more cultural activity, and exploit the large local market to make them rentable. This is precisely what many de-industrialising northern European cities have done, notably the British cities, but also the Dutch and German former industrial capitals like Rotterdam or Dortmund. Again, Mediterranean cities have a delay in this sense and will have to replicate that model, adapting to the Southern European contexts. Finally, rural areas with below-average cultural resources need to enhance their cultural capacity, for instance through education and the settlement of “cultural catalysts” in these areas, like museums, events, or universities, and in this way start a cycle of development based on a more explicit use of cultural as an element of regional cohesion. Good examples from Finland, Spain, and Italy can be provided where such strategies have obtained interesting results.

4.2 Culture and accessibility

One key condition for the valorisation of localised resources like culture is accessibility. On one hand, accessibility is a crucial determinant of tourist demand, and affects the location choices of the intellectual capital, that tends to flee out of peripheral areas into more centric regions. On the other hand, lack of accessibility has a clear influence on the conservation of local culture (remote regions are those which more easily maintain local traditions and idiosyncrasies). Hence, there is a trade off associated to remoteness: less accessible tourist regions may be the most interesting to travel to, but the hardest (or more expensive) to reach. A high and positive correlation can be observed between multimodal accessibility (from the ESPON database⁷) and the concentration of cultural resources, which can be explained with the “urban” nature of heritage resources (large cities being more accessible than surrounding areas within national borders), and with the irregular pattern of historical remains in peripheral regions of Europe. Accessibility data are only provided at NUTS III level, which practically impedes further elaborations of interesting issues such as the test of the hypothesis of a strong correlation (and existing spatial pattern) between accessibility and intellectual capital.

We focus on those territories in which lack of accessibility is matched by a high density of cultural resources, offering potential for tourist exploitation (on condition that accessibility will be improved in the future). The opposite information is given by areas which enjoy a very high accessibility, which means that the potential for an excessive level of stress on the heritage is higher. For this we have subdivided accessibility in five categories (1: very low to

⁷ Indicator AcME01N3: Potential accessibility multimodal, ESPON space = 100, NUTS III, year 2001. ESPON project 1.2.1, Authors: Spiekermann & Wegener, Urban and Regional Research (S&W).

5: very high) and in each such category, we highlight areas with an above-normal level density of tangible heritage assets (first percentile of distribution of indicator A°.1). The outcome is presented in the map in Figure 12.

Among highly inaccessible NUTS III areas which enjoy a large supply of tangible heritage assets are, among others, the Bulgarian capital Sofia, the West of Ireland, Larissa, Ragusa, Torun, Cluj, South West Wales; at a slightly higher level of accessibility (but still low) we find Rostock, Aarhus, the Calvados region, Siena, Lodz, Devon. Regions with a very high accessibility and an endangered supply of tangible heritage are Bruxelles, Heidelberg, Copenhagen, Paris, Budapest, Utrecht and Pisa, among others.

4.3 Culture, Economic Development and Regional Competitiveness

Culture, in its various aspects, can be seen both as a precondition and an effect of economic development. On one hand, culturally rich regions have more resources for economic development, and this trend is more pronounced in the current dominant economic paradigm in which cultural and leisure consumption are main economic drivers. On the other hand, intangible cultural resources are partly mobile (e.g. creative talent, institutions, cultural minorities, etc.) and affected by economic development; especially cultural capacities and infrastructure tend to cluster where economic development is more successful, because there are opportunities for personal development and a larger market for culture-related products, generating a self-reinforcing cycle of development based on cultural “excellence” which may lead to widening, rather than reducing, regional disparities. In this context, intraregional (e.g. national) policy may intervene and lead to more balanced opportunities; for instance, keeping a critical mass of cultural capacities, infrastructure and events in peripheral and rural regions, or protecting and valorising the “fixed” elements of the cultural supply: tangible heritage resources but also identity, languages, etc. Moreover interregional (European policy, e.g. INTERREG programs) can reduce the “fleeing” of cultural resources from lagging to excelling regions. These assumptions can be tested by exploring the associations between cultural indicators and selected indicators of cultural performance as available in the ESPON database.

Table 3 Average values of cultural indicators for typologies of lagging regions, NUTS II. Source: ESPON database and ESPON 1.3.3

<i>LagR00N2: Typology of lagging regions (NUTS II)</i>	<i>Average values of indicators for each category of lagging region, NUTS II</i>										
	A°.1	B.1	C.1	D.1	F.1	G.21*	G.22*	G.23*	H.11*	H.12*	E.1
1 - Lagging regions	0.583	0.057	0.009	0.007	0.030	0.009	0.039	0.189	0.022	0.085	0.168
2 - Potentially lagging regions	0.851	0.103	0.018	0.061	0.042	0.020	0.059	0.117	0.031	0.103	0.263
3 - Non-lagging regions	0.957	0.047	0.024	0.009	0.057	0.013	0.051	0.086	0.015	0.115	0.377

First, we wish to obtain evidence of interregional disparity in the field of culture between lagging and non-lagging regions, cross-analysing selected cultural indicators with the LagR0⁸ indicators, which subdivide the European territory in three categories: 1) lagging, 2) potentially-lagging, and 3) non-lagging regions. The average values of the indicators for each regional category at NUTS II level are described in Table 3.

The information on lagging regions can be benchmarked against selected cultural variables. For instance, the correlation⁹ between the categories of lagging regions and the share of workers with cultural professions is high and positive, meaning that passing from a lagging regions (cat. 1) to a potentially lagging regions (cat. 2) and to a non-lagging region (cat. 3), the share of cultural workers increases. This identifies a clear relation between a “specialisation in production” in culture and a good performance of the economy. Again, the causation is circular and ambiguous: cultural professionals are likely to settle in regions and especially cities with a strong post-fordist economic profile but this reinforces these very regions increasing the local human resources pool, playing against increased regional cohesion.

Table 3 shows that both fixed elements of the cultural supply of a territory, like the density of tangible heritage, and “mobile” elements like the density of museums, events, cultural infrastructure, cultural employment, intellectual capital and diversity are lowest in lagging regions and highest in non-lagging regions, indicating that - to some extent - initial regional disparities in the provision of culture may have produced larger differences. It should also be noted that “potentially lagging regions” have in some cases (conjuncts, events, cultural infrastructure, and university output) a relatively larger availability of cultural resources than non-lagging regions, indicating that regional disparities may be recovered by valorising these assets and using it more explicitly as pillar of economic development policies. The same results are found when the analysis is performed at NUTS III level; only the potential for valorisation of cultural assets emerges as even stronger. For instance, the availability of skilled human capital formed in presumably small “university cities” in lagging regions, which normally flees into large cities and labour markets after the completion of studies, if kept in place through well-designed educational and career development policies, could raise the profile of such regions structurally.

Cultural resources may be a driver for economic restructuring in lagging regions, through the generation of jobs and economic specialisation in intangible production sectors. To identify which regions could most benefit from the existing supply of tangible and intangible heritage, we map lagging and potentially lagging regions which enjoy an average to high supply of heritage (SUPPLY variable from the regional typology introduced above).

⁸ Typology of lagging regions, NUTS II-3, year 2000, ESPON projects 2.1.1/3.1, authors Spangenberg, M.; Schmidt-Seiwert, V., Heidbrink, I.

⁹ The Spearman’s Rho non-parametric coefficient was used.

The resulting territorial classification is mapped in Figure 13. Only the “extreme” regions in the relation between the two variables (high or average supply of heritage, lagging or potentially lagging regions) are mapped; all the other combinations are attributed a uniform colour (yellow). Among the regions with a higher “potential for culture-based regeneration” emerging from this exercise, the map points out, among others, most Eastern Germany regions and Southern Italian regions like Campania. Though with a lower supply level, the map also highlights that there is potential for regions like Moravia, Estonia, Slovenia (the whole countries are NUTS II regions), Cantabria, Puglia, Sicily, and most Southern-Poland regions.

Some potentially lagging regions also have good chances of recovering by better using their cultural potential: among regions with a high supply of heritage we find Prague, Berlin, Liege, the Cumbria region, the Peloponnesus region and Sardinia. In the same position but with a lesser but important endowments of heritage are the Basque Countries, Tuscany, the region of Bratislava, Algarve and the northern Sweden.

Next we proceed to analyse the relation of cultural indicators and per capita GNP. The GDP00EHN3 indicator in the ESPON database¹⁰ was used. At NUTS II level, this variable is positively and significantly correlated with A°.1, B.3, C.1, F.1, G.22, G.23, H.12, E.1. In other words, richer regions have a larger provision of tangible cultural assets, museums, cinemas and libraries; there is a higher potential for tourist valorisation of protected landscapes; a higher provision on intellectual capital and a larger cultural diversity. At NUTS III level, the positive association also extends to the density of events (D.1), and theatres (G.21). While this is not entirely surprising in terms of the circular relation between culture and economic development for the reasons seen above, the implications are far-fetching and will be discussed further.

Some of these correlations may be analysed in further depth. As an illustration, the relation between p.c. GNP and the number of cultural jobs is taken into consideration, at NUTS II level. There is linear correlation between the percentage of cultural jobs of active population and GDP (Pearson corr. coefficient = 0.65). The residuals from the regression analysis show that the biggest negative residuals (observed GDP is not as high as the proportion of creative jobs would suggest) are in the regions from Eastern Europe. The largest positive residuals (observed GDP higher than the proportion of creative jobs would suggest) are typical of urbanised metropolitan regions of Western Europe.

Charting the dispersion of values produces a categorisation based on the association between p.c GDP and cultural jobs which has immediate implications for policy. The emerging regional pattern is mapped in Figure 13. The first quadrant (high p.c. GDP; high share of cultural professions) is spearheaded by large metropolitan regions and national capitals such as Inner London, Brussels, Luxemburg, among others. While there are almost no regions in

¹⁰ Gross Domestic Product: Euro per inhabitant, NUTS II/3, year 2000, collected by BBR/Nordregio using Eurostat – Regio data. ESPON project 3.1, authors J. Bublys, V. Schmidt-Seiwert, E.Gløersen.

the fourth quadrant (all regions with high levels of pc GDP also have above-average percentages of employed with cultural professions), in the second quadrant emerges a small group of regions with lower-than-average pc GDP levels face to higher-than-average shares of cultural professions. In the third quadrant, including regions with below-par p.c. GDP levels and shares of employed with cultural professions, a group of predominantly Eastern European regions can be seen as a separate group, disconnected from the general trend. Whether this implies different methods of defining cultural jobs, or an altogether different structure in the relation of the two variables, which could be a legacy of a different political regime, would need further inquiry.

The observed linear correlation between creative jobs and GDP is the result of a logical association of the two, that is, more creative jobs generate more GDP. This is by no means a self-evident assumption; it may as well be the other way round if it is proved that creative jobs are unstable and badly paid (but the existent literature – for instance, the works by Richard Florida (op. cit. and 2004) – points out that this is less and less the case, at least in the most developed countries).

It becomes then possible to propose different policy recommendation for regions positioned in each of the four quadrants:

1. Maintenance of the situation, provision for sustainability
2. If meaningful, support to creative businesses in order to generate extra value to the production that already contributes to high GDP
3. Fostering of creative jobs should be encouraged to generate more GDP
4. Creating circumstances in which existing creative jobs can generate more value

Finally, the relation between unemployment and the density of tangible cultural assets is considered. This relation is interesting because it is revelatory of the capacity of local economies to put to value available assets and generate forms of employment from them. However, the correlation is statistically insignificant, indicating that regional situations are highly different and so the contextual reasons for this relation. The four groups are presented in the map of Figure 15. Above-norm levels of unemployment and scarce endowment of cultural heritage ($A^{\circ}.1$), as well as low unemployment and high density of cultural heritage are therefore to be seen as relatively “normal” relations. In the first group (fourth quadrant) are among others Estonia, Galicia, Andalusia, Northern Finland, Provence-Alpes-Cote d'Azur; in the second (second quadrant) we find, among others, Prague, Stuttgart, Trier, Veneto, Toscana, Utrecht, North and South Holland, and the region of Bucharest. The two “dissonant” quadrants are in this case the first (high unemployment / high density of heritage), in which we find Bruxelles, Eastern Germany, Picardie, Nord-pas-de-Calais, Attica, Lazio and Southern, Lithuania, Latvia, Poland, almost all Bulgaria, and Slovenia, and the third, which have low levels of unemployment but also a low endowment of heritage. In this latter

group we only find Western Finland and Malta. The former group is clearly the most interesting for heritage valorisation strategies.

5. CONCLUSIONS

The availability of an extensive database of data and indicators regarding cultural components is a first step towards the recognition of culture as an element of the European planning space. In this paper we focused, instead than on methodological questions – what is to include in this database and how that should be measured, which remain issues for further discussion –, on the analytical possibilities offered in terms of description, classification and benchmarking of European regions according to the cultural dimension, which according to these authors (in line with what is stated in the ESDP document) should be recognised as a keystone for regional planning and cohesion.

In particular, this paper proposed a double “categorization” of the European territory, one according to the match between demand and supply of heritage elements, which has profound consequences according to the achievement of “optimal balance” between exploitation and preservation of cultural resources, and one according to the “functional specialisation” in culture, which derives from a systematic consideration of the strengths and weaknesses of every region in defending, valorising and communicating their cultural assets. Each such categorisation has important consequences in planning terms. Remembering that heritage is considered in dynamic terms, we propose a policy scheme for which each region, whatever their “initial conditions” but clearly deciding the adequate policy agenda on the base of them, should point to a sustainable use of their assets, neither losing sight of the development potential that they offer, nor of the enabling conditions in terms of accessibility and human capital.

Furthermore, the issue of how culture affects and is affected by other features (physical, social, and economic) of the territory is considered. This preliminary analysis, conducted with simplified statistical and visual methods (certainly to be refined in subsequent stages of the ESPON programme), nevertheless discloses some standpoints for planning: cultural components as those include in this study have an eminently urban profile and are associated to polarised settlement structures; they may be at the base of regional backwardness, but also a possible way to improve economic and social positions. In this effort, accessibility plays a major role. Until now (lack of) accessibility has been mainly thought of in terms of “less dangers for destruction of original cultures”, but now the trend and the approach have changed: original cultures are under pressure and their good accessibility can be seen as an enabling element for development. Finally the relation between unemployment and cultural endowments has been checked, illustrating what regions could make a better use of their cultural potential to generate jobs (mainly in former eastern Europe), and conversely, which regions that have based their success on industrial strength are now in danger of losing their

position in the context of a globalising and footloose economy, if they don't invest instead in what they lack, that is cultural elements rooted to the territory.

Further substantial work needs to be done. In fact, one of the principal policy recommendation is to use the analysis that is presented in this report as a building block for the construction of a European Cultural Heritage Observatory, an observatory that provides constant and consistent inputs for an explicit European policy regarding one of its most precious assets, namely that of cultural heritage and identity.

REFERENCES

European Commission (1999), ESDP: European Spatial Development Perspective Towards Balanced and Sustainable Development of the Territory of the European Union. On-line document http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/sum_en.pdf.

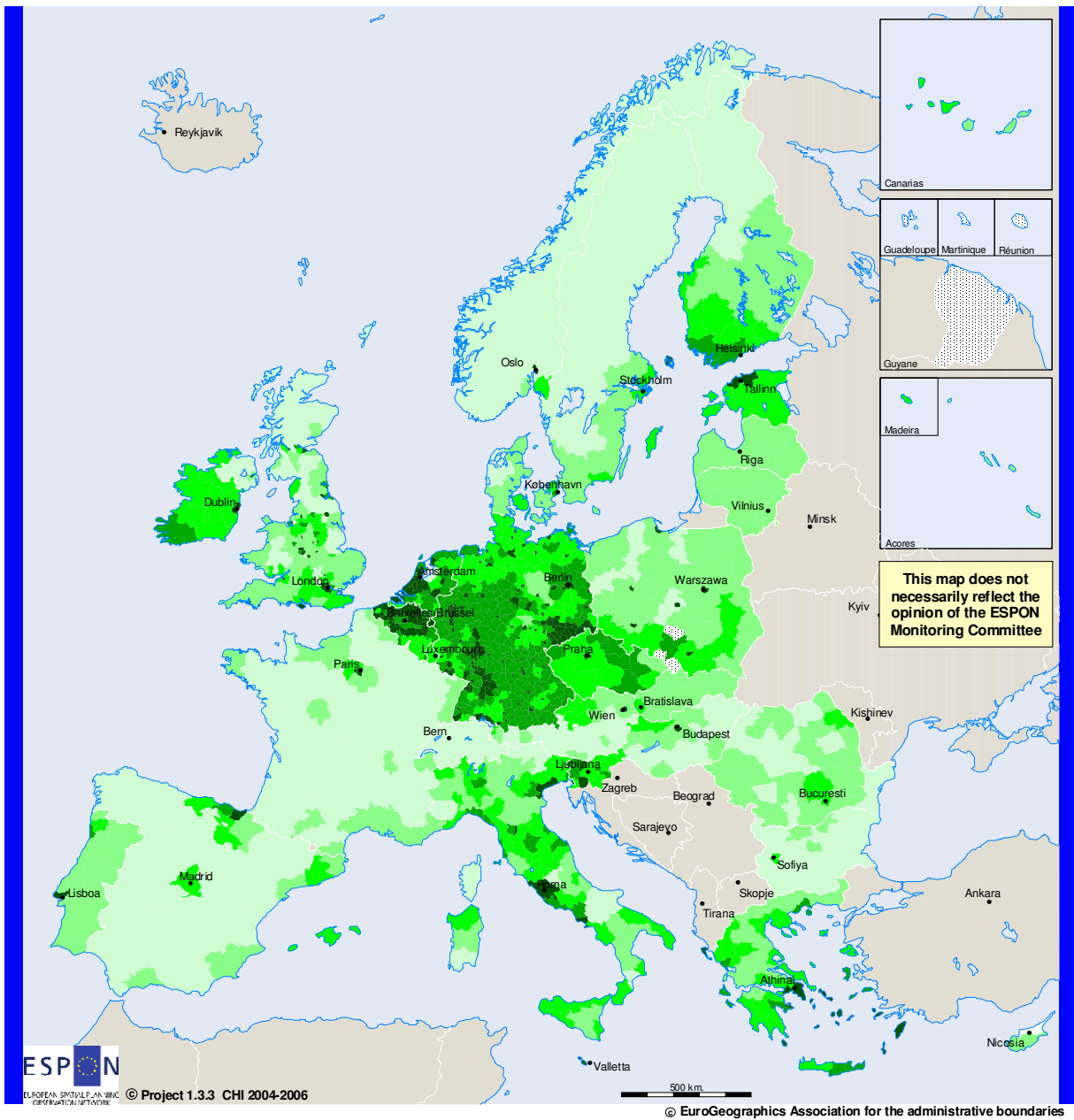
Florida R. (2002) *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life* Basic Books, New York.

Giddens, A. (1984) *The Constitution of Society: Introduction of the Theory of Structuration*. University of California Press, Berkeley.

ANNEX: COLLECTION OF MAPS

Figure 2 Supply of cultural assets in NUTS III regions of Europe

NUTS III: INTEGRATED SUPPLY OF HERITAGE ASSETS



Classification based on the five distribution percentiles

- Very low
- Low
- Average
- High
- Very high
- no values
- no data
- non Espon space

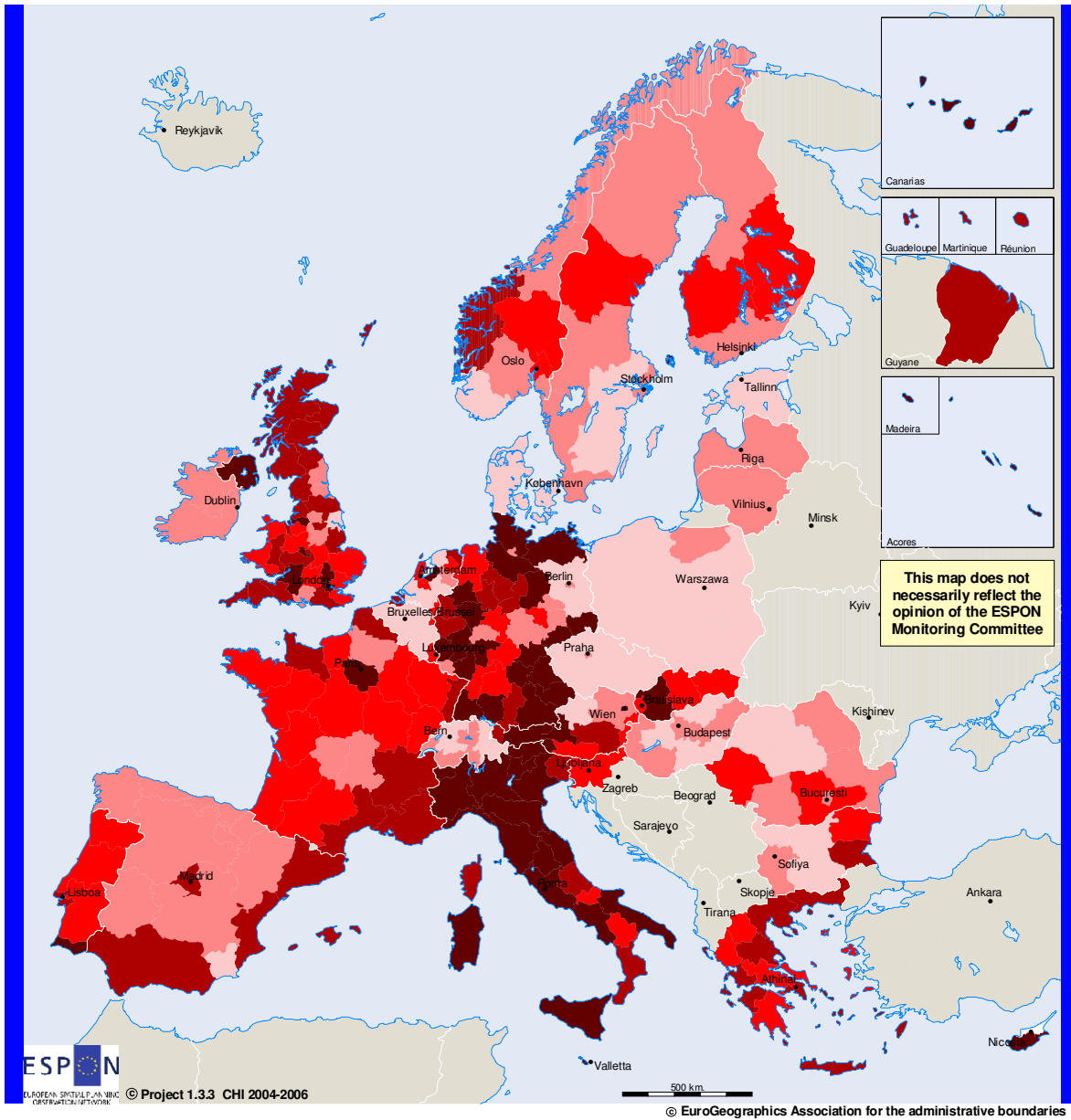
Indicator in database 1.3.3 - Elaboration on indicators: A¹, B.1, C.1, D.1

Algorithm- Indicators normalised and summed, sum normalised

Source- Various sources. See regional metadata (Annex Final Report)

Figure 3 Potential demand of cultural assets by local population and visitors in NUTS II regions of Europe

NUTS II: INTEGRATED POTENTIAL DEMAND OF HERITAGE ASSETS



Classification based on the five distribution percentiles

- Very low
- Low
- Average
- High
- Very high
- no values
- no data
- non Espo space

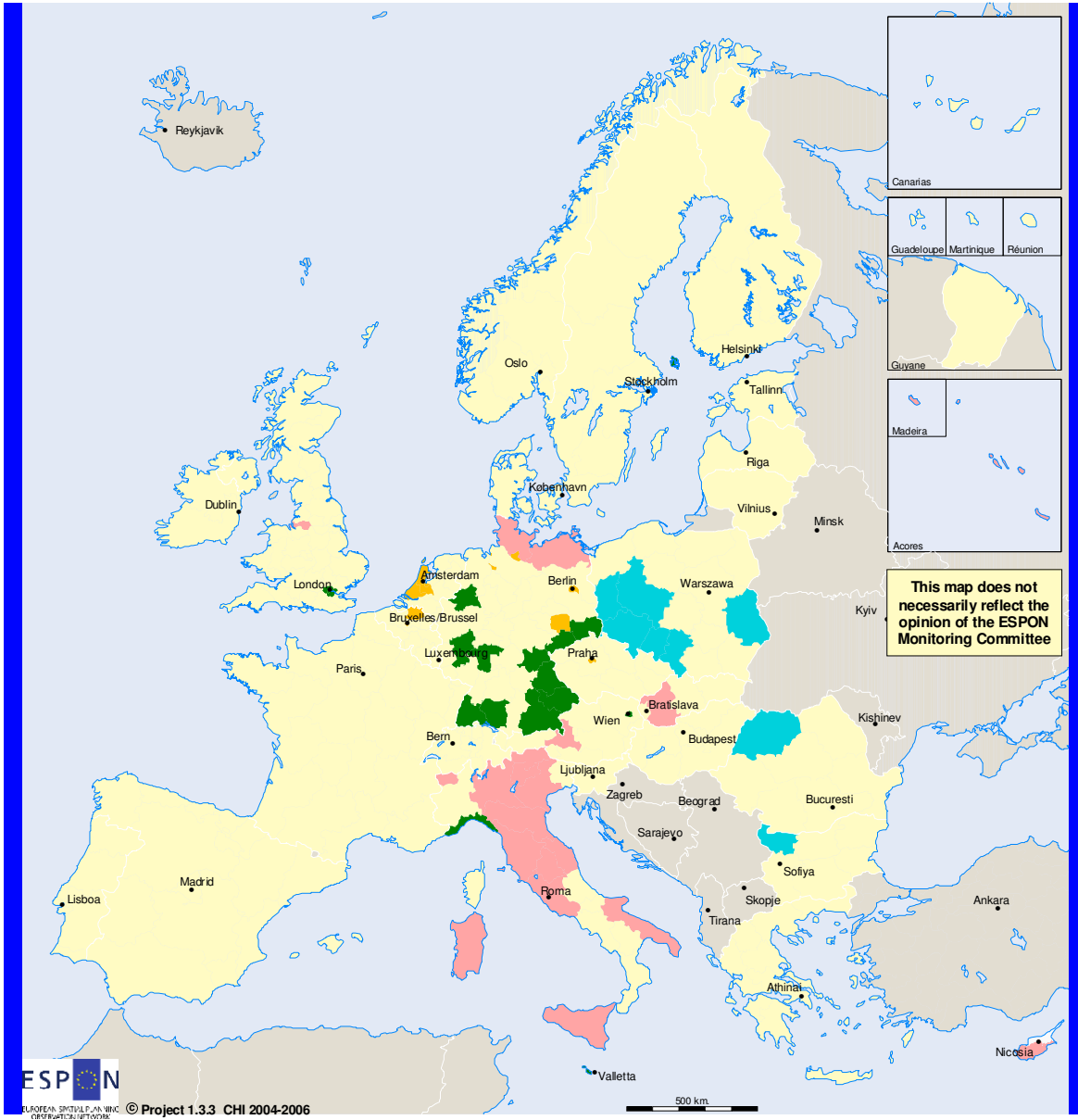
Indicator in database 1.3.3 - Elaboration on indicators: A⁴.4, B.4, C.4, D.4

Algorithm- Indicators normalised and summed, sum normalised

Source- Various sources. See regional metadata (Annex Final Report)

Figure 5 Classification of NUTS II regions according to unbalances between potential demand and supply of heritage resources

NUTS II: BALANCE IN USE PRESSURE



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee



© Project 1.3.3 CHI 2004-2006

© EuroGeographics Association for the administrative boundaries

Regional categories	
 D high, S high (1)	1 (high density of cultural resources, high potential use pressure from local residents);
 D low, S high (2)	2 (low density of cultural resources, high potential use pressure from local residents);
 D low, S low (3)	3 low density of cultural resources, low potential use pressure from local residents);
 D high; S low (4)	4 (high density of cultural resources, low potential use pressure from local residents).
 no values	
 no data	
 non Espon space	

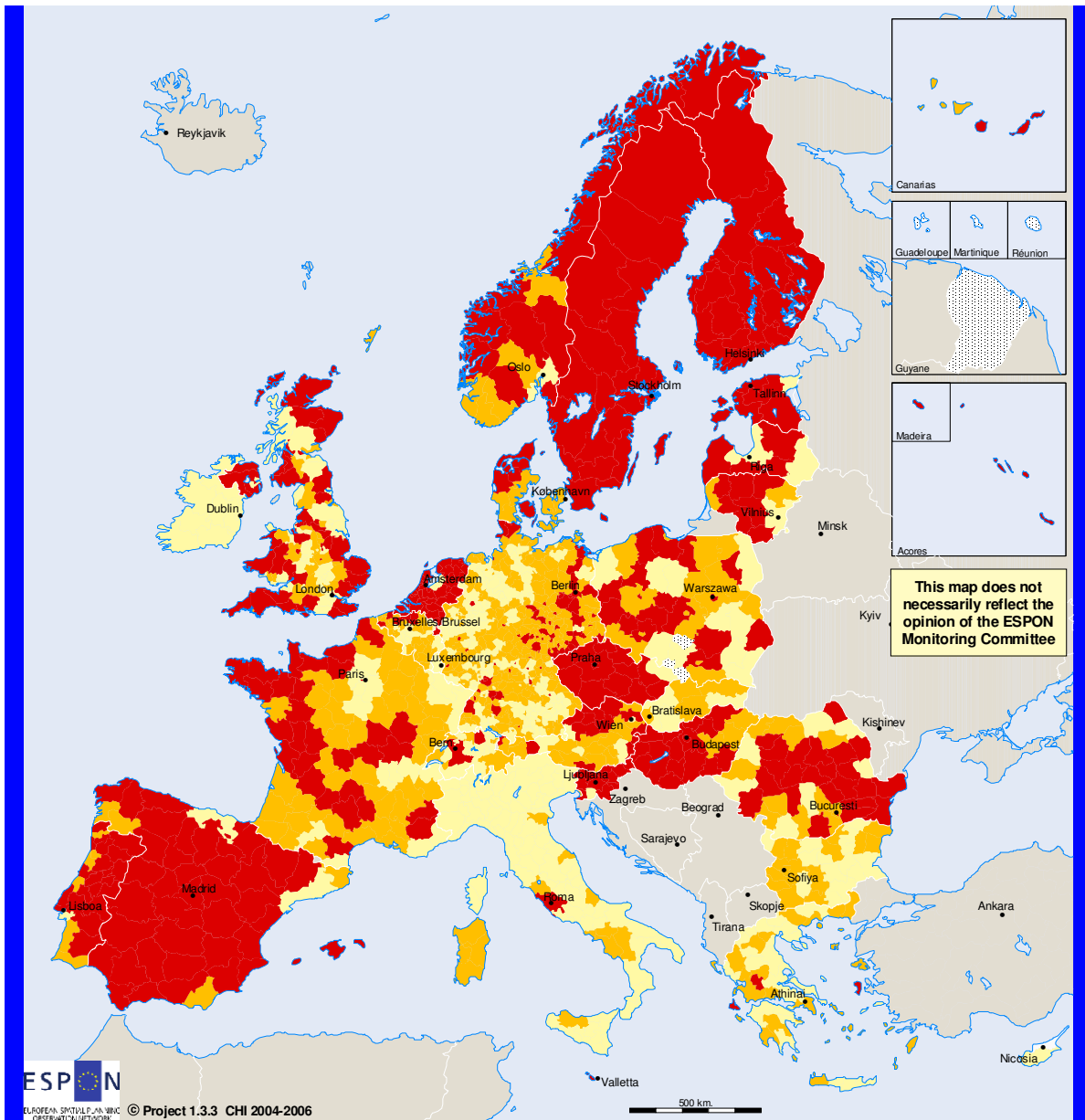
Indicator in database 1.3.3 -
 Elaboration on indicators: A⁹.1;B.1;C.1;D.1; A⁹.3; B.3;C.3;D.3

Source.-
 Various sources. See regional metadata (Annex Final Report)

Algorithm.-
 High and low values based on values larger than 0.75 times the standard deviation for demand and supply.

Figure 6 Specialisation in conservation of cultural heritage. Combined indicator scores obtained by NUTS III regions.

NUTS III: ORIENTATION TO CONSERVATION



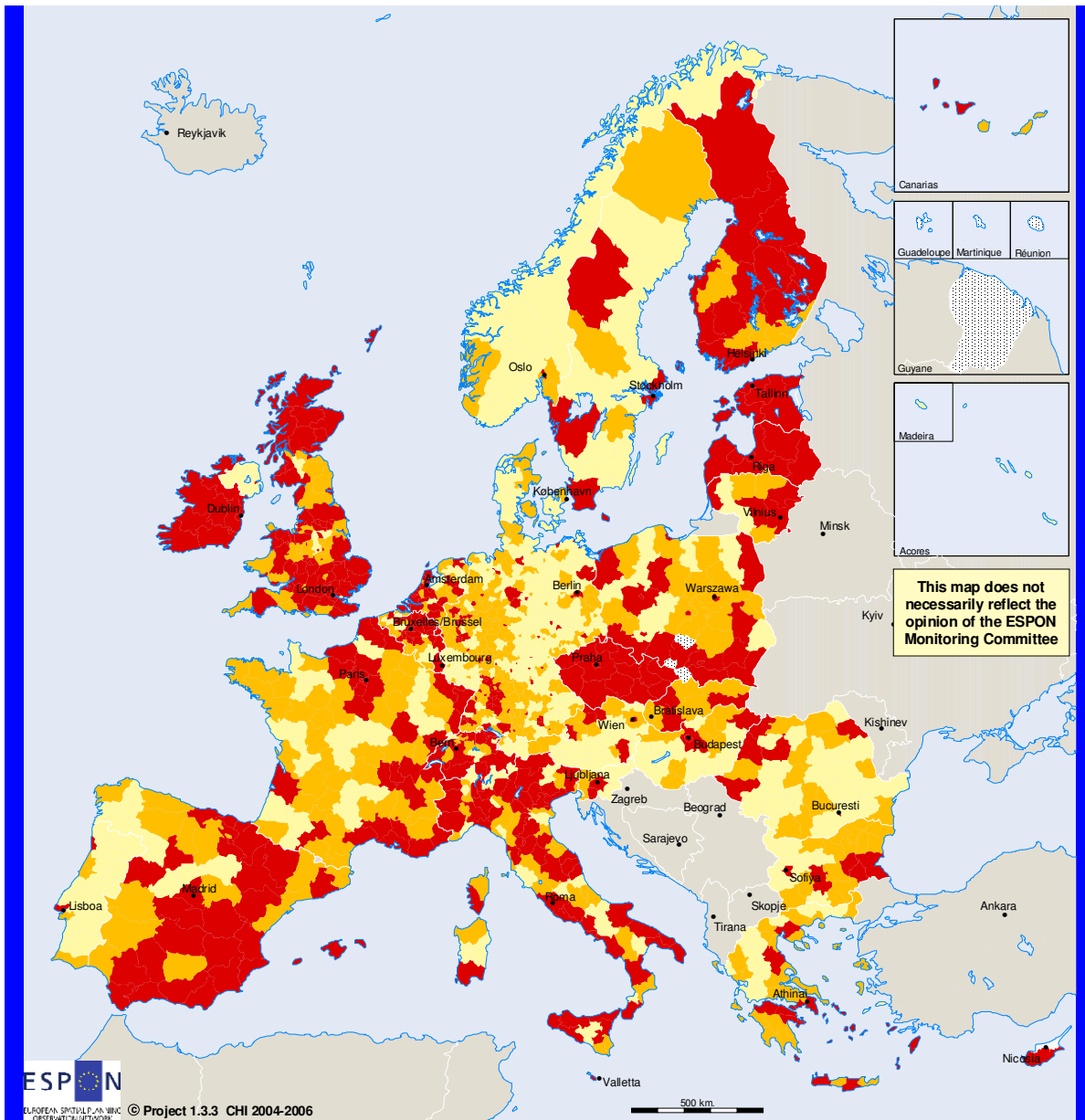
Indicator in database 1.3.3 -
Elaboration on selected indicators
(see detailed methodology in Final Report)

Algorithm -
3 categories:
H (high, first quantile of distribution);
A (average, second quantile of distribution);
L (low, third quantile of distribution)

Source -
Various sources. See regional metadata
(Annex Final Report).

Figure 7 Specialisation in production of cultural heritage. Combined indicator scores obtained by NUTS III regions.

NUTS III: ORIENTATION TO PRODUCTION



ESPON
 EUROPEAN SPATIAL PROGRAMME
 OPERATIONAL PROGRAMME
 © Project 1.3.3 CHI 2004-2006

© EuroGeographics Association for the administrative boundaries

- High (first quartile of distribution)
- Average (second quartile of distribution)
- Low (third quartile of distribution)
- no values
- no data
- non Espo space

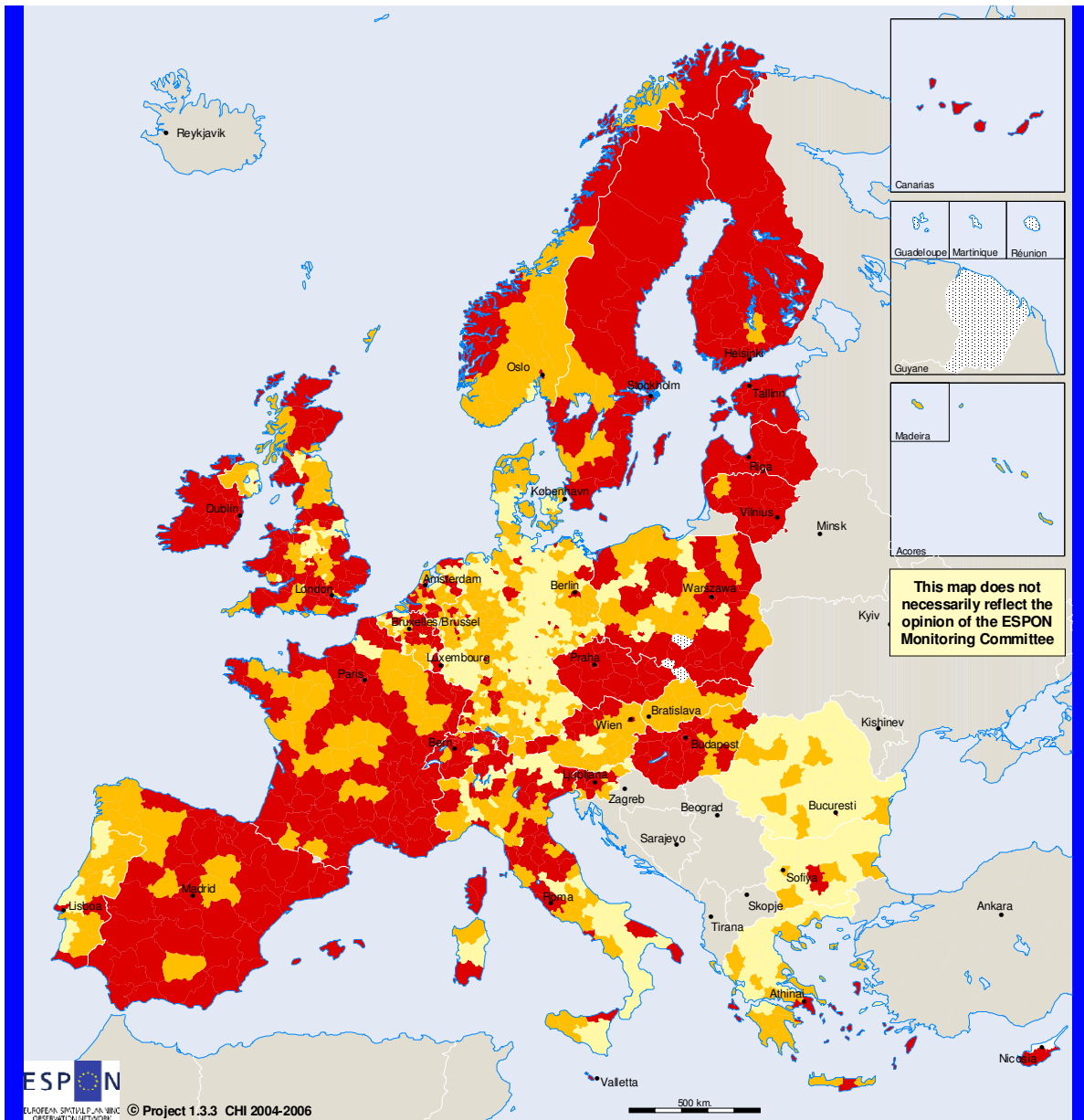
Indicator in database 1.3.3 -
 Elaboration on selected indicators
 (see detailed methodology in Final Report)

Algorithm -
 3 categories:
 H (high, first quartile of distribution);
 A (average, second quartile of distribution);
 L (low, third quartile of distribution)

Source -
 Various sources. See regional metadata
 (Annex Final Report).

Figure 8 Specialisation in valorisation of cultural heritage. Combined indicator scores obtained by NUTS III regions.

NUTS III: ORIENTATION TO VALORIZATION



ESPON
EUROPEAN STRATEGIC AND MONITORING COMMITTEE
© Project 1.3.3 CHI 2004-2006

© EuroGeographics Association for the administrative boundaries

- High (first quantile of distribution)
- Average (second quantile of distribution)
- Low (third quantile of distribution)
- no values
- no data
- non Espo space

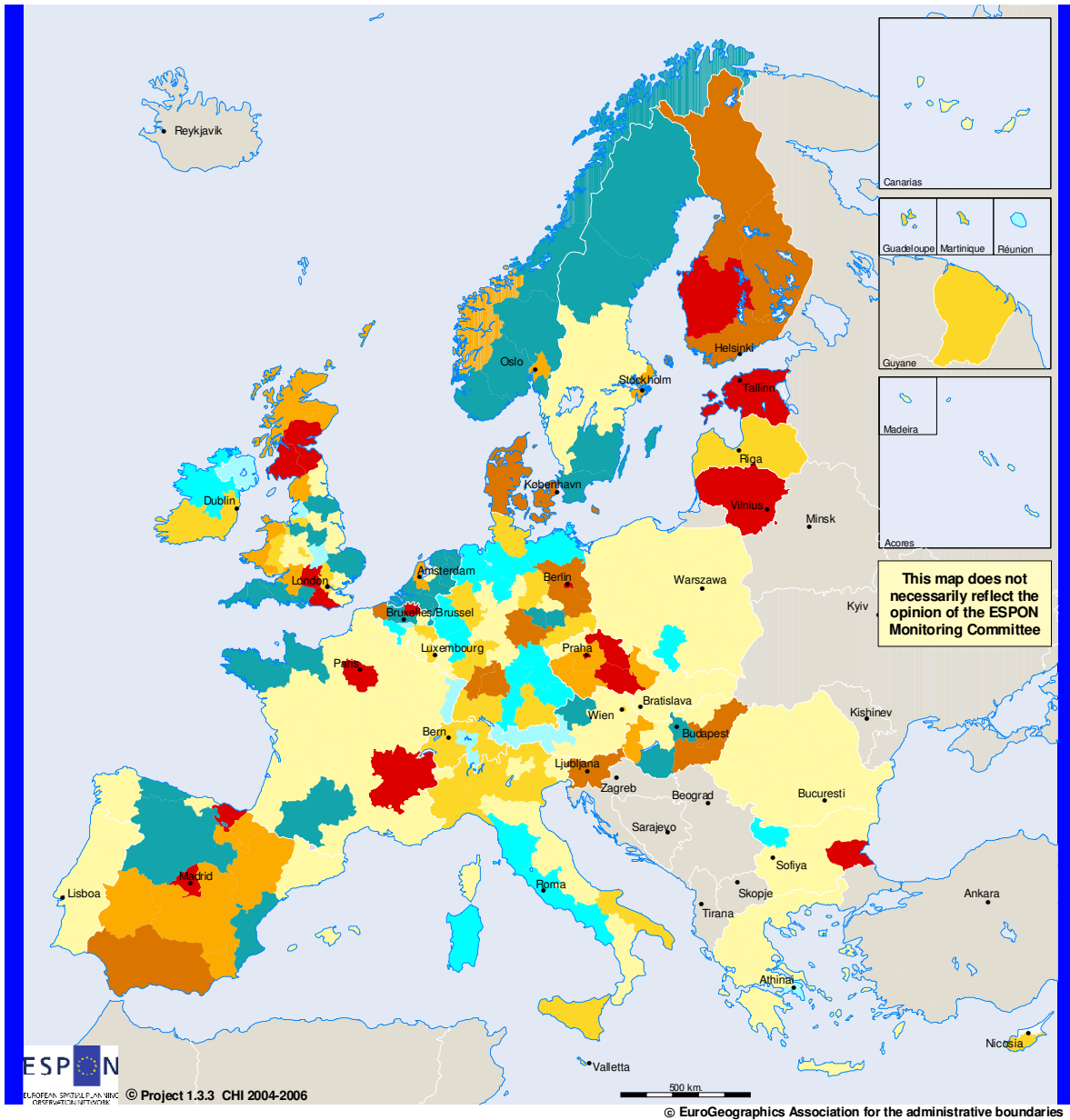
Indicator in database 1.3.3 -
Elaboration on selected indicators
(see detailed methodology in Final Report)

Algorithm.-
3 categories:
H (high, first quantile of distribution);
A (average, second quantile of distribution);
L (low, third quantile of distribution)

Source.-
Various sources. See regional metadata
(Annex Final Report).

Figure 10 Map of EU27+2 (NUTS II) according to the regional classification “conservation-production-valorisation” (CPV).

NUTS II: COMPOSITE ORIENTATION OF CULTURE



- Multi-specialised regions (CPV)
- Reproductionist (CP)
- Classrooms (CV)
- Craftshops (PV)
- Conservationists (C)
- Productionists (P)
- Merchant regions (V)
- Non-specialised regions (0)
- no values
- no data
- non Espo space

Regional categories

CPV (high level of orientation to conservation, production and valorization).
 CP (high level of orientation to conservation and production).
 CV (high level of orientation to conservation and valorization).
 PV (high level of orientation to production and valorization).
 C (high level of orientation to conservation).
 P (high level of orientation to production).
 V (high level of orientation to conservation, production and valorization).
 0 (average or low level of orientation to any aspect of culture).

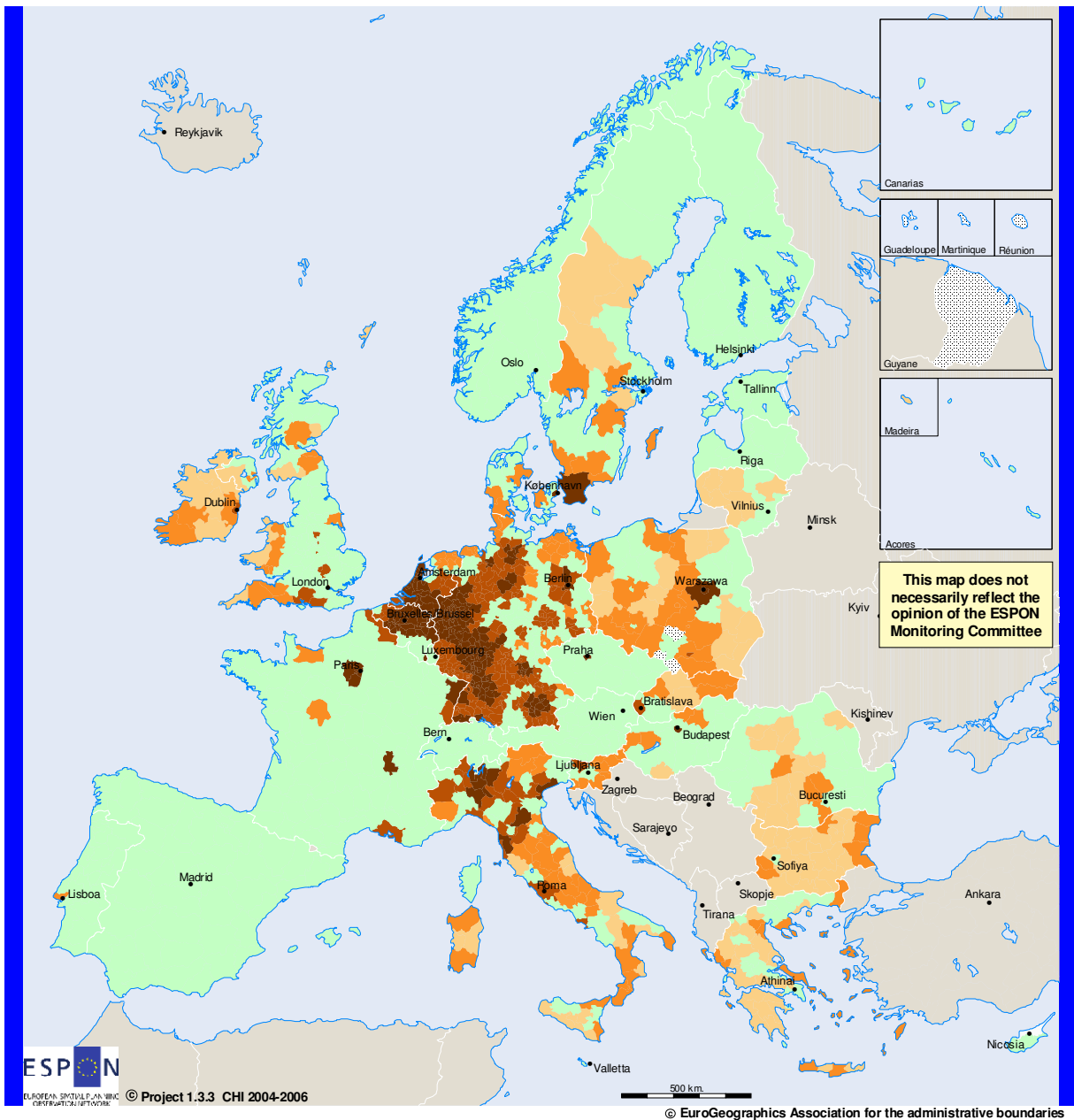
Indicator in database 1.3.3 -
 Elaboration on selected indicators
 (see detailed methodology in Final Report)

Algorithm.- 7 categories

Source.-
 Various sources. See regional metadata
 (Annex Final Report).

Figure 12 Accessibility and density of heritage assets in NUTS III regions.

NUTS III: RELATION BETWEEN MULTIMODAL ACCESSIBILITY AND HERITAGE DENSITY



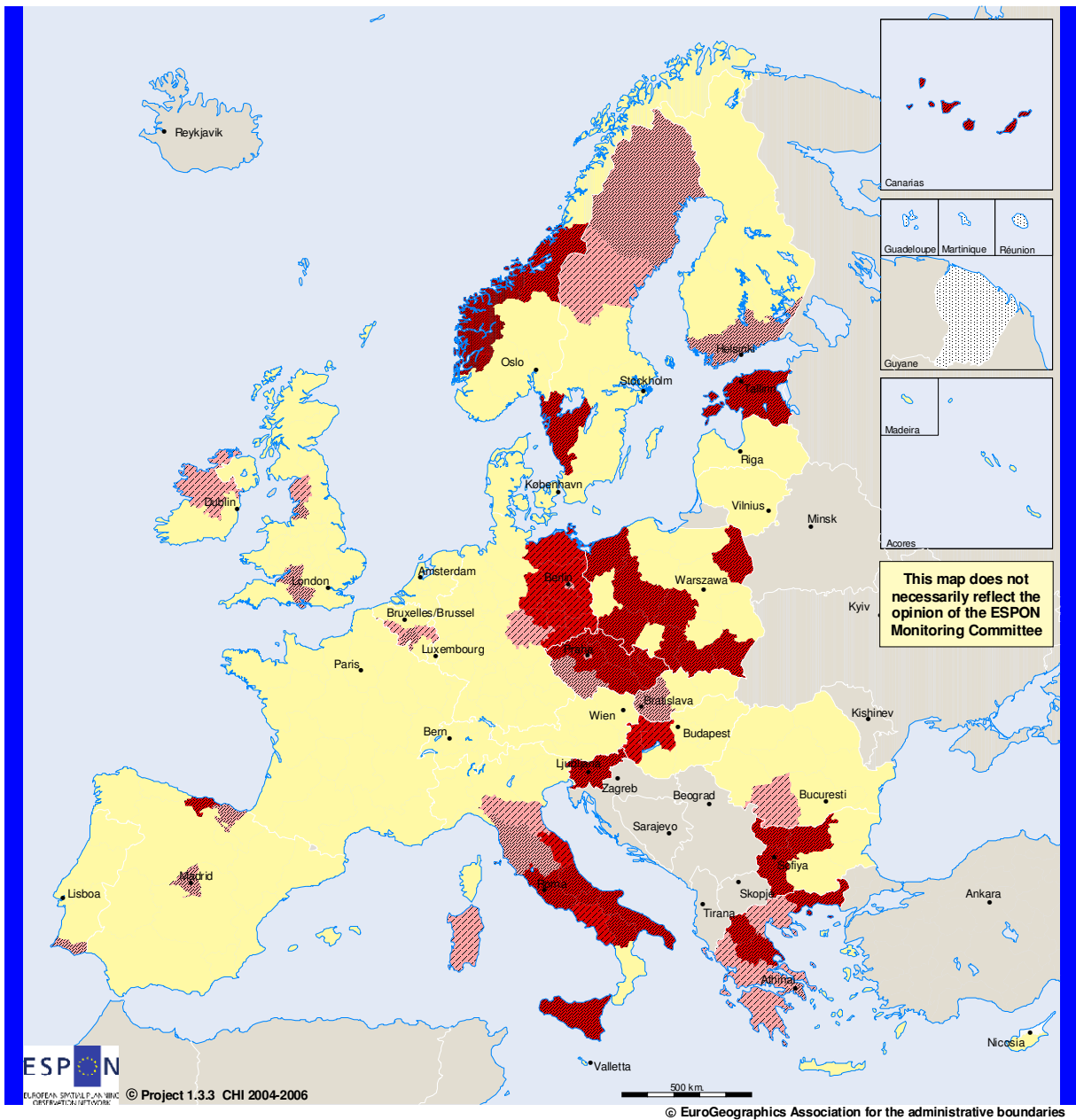
- Very high accessibility , high density of tangible heritage
- High accessibility , high density of tangible heritage
- Low accessibility , high density of tangible heritage
- Very low accessibility , high density of tangible heritage
- Other values
- no data
- non EspoN space

Indicator in database 1.3.3 .-
 Elaboration on indicators: A².1 (ESPON 1.3.3) and AcME01N3 (Potential accessibility multimodal, ESPON space = 100) (ESPON 1.2.1)

Source.-
 Various sources. See regional metadata (Annex Final Report)

Figure 13 Lagging NUTS II regions and levels of cultural supply

NUTS II: RELATION BETWEEN TYPOLOGY OF LAGGING REGIONS AND CULTURAL SUPPLY



- Lagging regions, high supply of heritage
- Potentially lagging regions, high supply of heritage
- Lagging regions, average supply of heritage
- Potentially lagging regions, average supply of heritage
- other regions
- no values
- no data
- non Espon space

Indicator in database 1.3.3 -

Elaboration on indicators: A².1, B.1, C.1, D.1 (ESPON 1.3.3) and LagR00N3 (ESPON 2.1/3.1)

Source.-

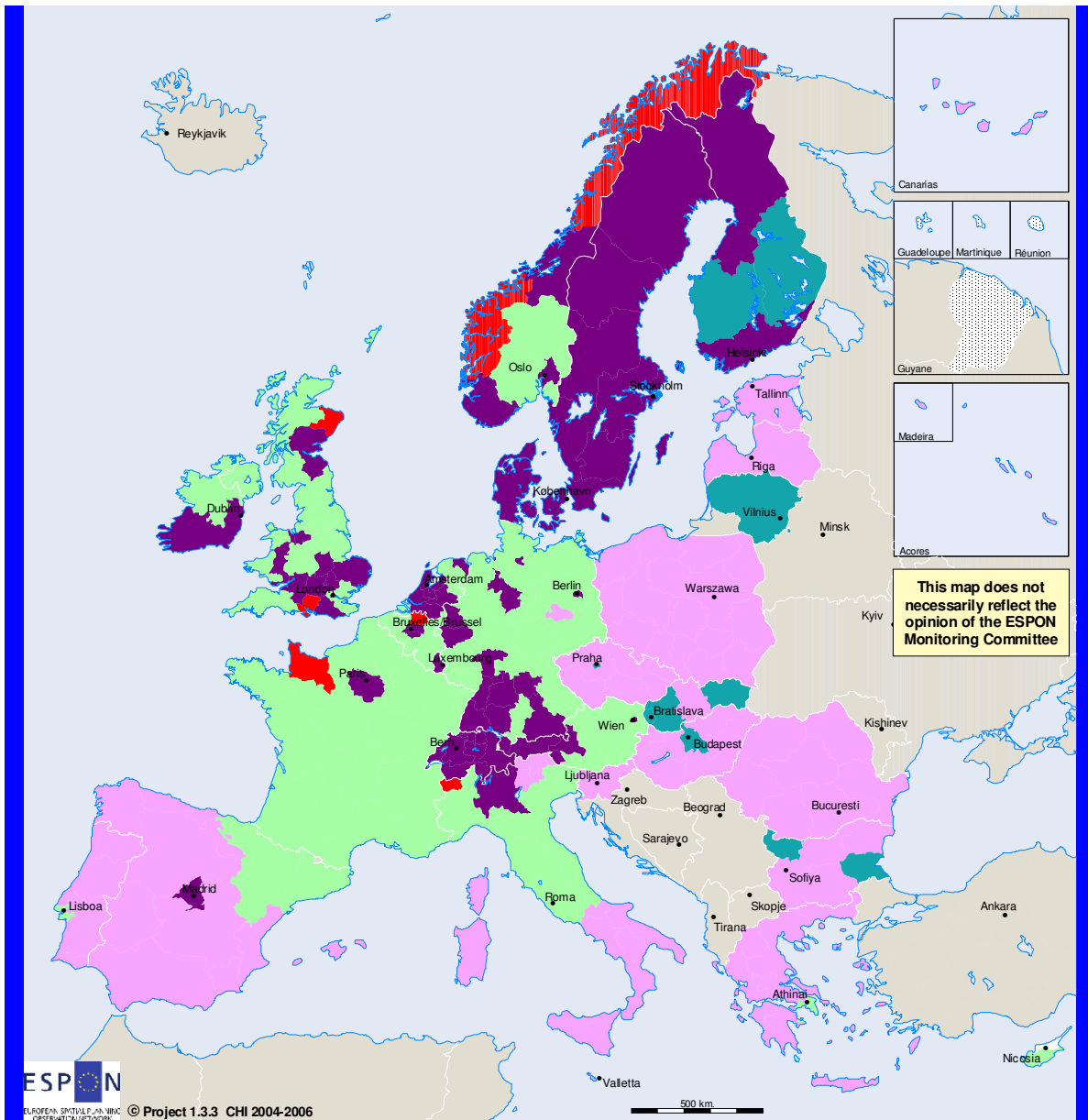
Various sources. See regional metadata (Annex Final Report)

Algorithm.-

Variable "supply of heritage" based on the elaboration of indicators A².1, B.1, C.1, D.1. "High" and "average" levels of supply of heritage based on first and second tertiles of the distribution.

Figure 14 Relation between per capita GDP and share of workers with cultural professions

NUTS II: RELATION BETWEEN PER CAPITA GDP AND CULTURAL EMPLOYMENT
(critical values above 0.75*st.dev.)



- Normal values (0)
- First quadrant (1)
- Second quadrant (2)
- Third quadrant (3)
- Fourth quadrant (4)
- no values
- no data
- non Espo space

Regional categories

- 0: Normal values ($X^2+Y^2 < 0.75 \cdot \text{st.dev.}$);
- 1: First quadrant (X "high", Y "high");
- 2: Second quadrant (X "low", Y "high");
- 3: Third quadrant (X "low", Y "low");
- 4: Fourth quadrant (X "high", Y "low")

Indicator in database 1.3.3 -

Elaboration on indicators: F.1 (ESPON 1.3.3) and GDP00EHN2 (ESPON 3.1)

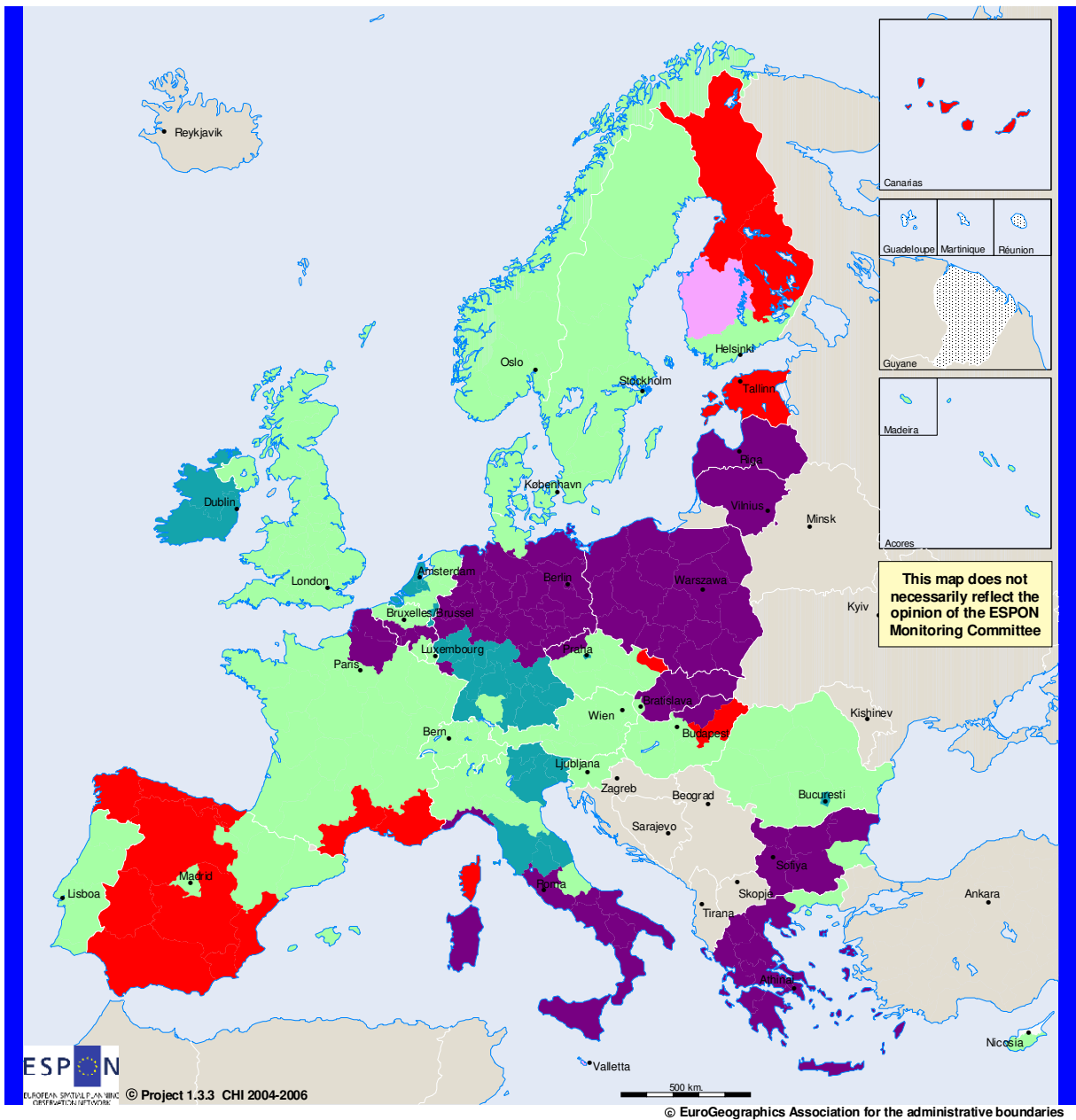
Source.-

Various sources. See regional metadata (Annex Final Report)

Algorithm.- critical values above 0.75*st.dev.

Figure 15 Unemployment and density of tangible heritage

**NUTS II: RELATION BETWEEN UNEMPLOYMENT AND DENSITY OF TANGIBLE HERITAGE
(critical values above 0.75*st.dev.)**



- Normal values (0)
- First quadrant (1)
- Second quadrant (2)
- Third quadrant (3)
- Fourth quadrant (4)
- no values
- no data
- non Espo space

Regional categories

- 0: Normal values ($X^2+Y^2 < 0.75 \cdot \text{st.dev.}$);
- 1: First quadrant (X "high", Y "high");
- 2: Second quadrant (X "low", Y "high");
- 3: Third quadrant (X "low", Y "low");
- 4: Fourth quadrant (X "high", Y "low")

Indicator in database 1.3.3 -

Elaboration on indicators: E.1 (ESPON 1.3.3) and UNRT01N3 (ESPON 3.1)

Source.-

Various sources. See regional metadata (Annex Final Report)

Algorithm.- critical values above 0.75*st.dev.