Europe in the World

Claude Grasland, Clarisse Didelon, Bernard Corminboeuf, Marc Guerrien, Nicolas Lambert, Isabelle Salmon, Laurent Aujean, Gilles van Hamme, Pablo Medina, Christian Vandermotten, et al.

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EUROPEAN SPATIAL PLANNING OBSERVATION NETWORK

ESPON project 3.4.1.

Europe in the World

Final Report – Vol.1

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ESPON 3.4.1
Europe in the World

Final Report – Vol.1

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Participants

Scientific coordination

This work was coordinated by **Claude Grasland** (Professor at University Paris 7, UMR Géographie-cités) and **Clarisse Didelon** (Post PhD at University Paris 7, UMS RIATE)

Core Team

RIATE: Bernard Corminboeuf, Marc Guerrien, Nicolas Lambert and Isabelle Salmon

IGEAT: Laurent Aujean, Gilles Van Hammes, Pablo Medina, and Christian Vandermotten

ITPS: Mats Johansson and Daniel Rauhut

LADYSS: Pierre Beckouche and Yann Richard

UMR Géographie-cités: Nadine Cattan, Christian Grataloup, Guillaume Lesecq and Christine Zanin

Experts

CRS HAS: Györgyi Barta, László Dancs, Imre Nagy, Alexandra Szigeti, and Péter Strömpl

TIGRIS - "Alexandru Ioan Cuza" University: Octavian Groza, Ionel Muntele, Alexandru Rusu, Oana Stoleriu and Georgiana Voicu

ETH Zurich: Marco Keiner

GRUPO SOGES: Alberto Vanolo

ORMES: Mohamed Charef and M'hamed Wahbi

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1) EXECUTIVE SUMMARY

The World is becoming increasingly complex and thus cannot be analysed in a spatial framework restricted to the European Union or to the ESPON area even if the common feeling of "European decline" reinforces the temptation to ignore what is happening 'outside'. The elaboration of the ESPON cartographic template at the beginning of the programme is symptomatic of that fact with its limited framework of 29 countries. As regards ESPON, important milestones were reached with the preliminary study 'One Europe in the World' in the context of the ESPON project 3.1, which proposed a new cartographic template at world scale, and, ultimately, with the launch of the ESPON project 3.4.1 - "Europe in the World".

In this project we decided to focus initially on the elaboration of the long term integrated tools, which we hope will provide the groundwork and a solid basis for what is to follow in this field of study. We therefore elaborate new databases, a new hierarchical division of the World and new templates all of which are among the main outputs of our work (see I). Our main concern however was to introduce the 4th dimension (the World) into the analysis of the ESPON area, which entailed the proposing of a joint analysis of the influence of ESPON on the rest of the World and *vice versa*.

This first volume presents a relatively short synthesis illustrated by original maps tables and figures and organized around our four key questions which try to examine the interaction between ESPON and the World at different geographical scales. The first part, "The Division of the World" proposes a regionalisation of the World according different criteria, with the main objective being to propose a benchmarking of the position of ESPON in respect of other World regions (see II). The delimitation of the ESPON influence area is then studied (see III) by examining different types of relations and flows between ESPON and the rest of the World. The third part focuses on the neighbouring countries and their functional and (where applicable) their potential political integration into the ESPON functional area within the perspective of the European Union enlargement question and the European Neighbourhood Policy (see IV). Finally, in the fourth part we look at the internal differentiation of the ESPON area according to globalisation while trying to measure the strengths and weaknesses of ESPON regions in respect of the demands of the global economy.

1.1. New tools for ESPON researchers: WUTS and the Euromed template

1.1.1. World unified territorial system

Many divisions of the World in "regions" (clusters of states) are actually used by international organisations, either private (transnational firms) or public (UN agencies etc). A great variety of solutions to this question however exist making it impossible to use any of them as a reference point for ESPON work. We have therefore produced a tool that is the elaboration of a harmonised hierarchical system of the World called WUTS (*World Unified Territorial System*) (map 1).

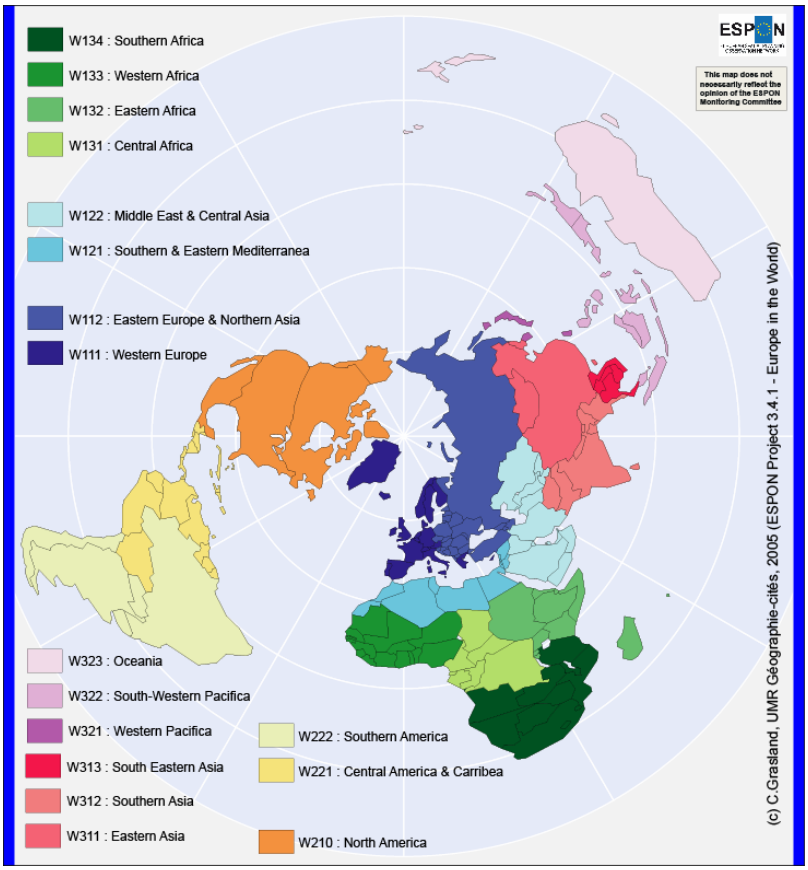
Our WUTS proposal is organised into 5 hierarchical levels, from the state level (WUTS 5) to the World level (WUTS 0). It is based on objective criteria produced in the context of the various research efforts conducted during the project and even if it suffers from certain limits we hope that the WUTS system will provide a useful tool for European policymakers. Its major point of interest is to make a multiscalar analysis of the position of ESPON in the World easier with the harmonisation of territorial units on the World scale to fit European questions.

1.1.2The Euro-Mediterranean template

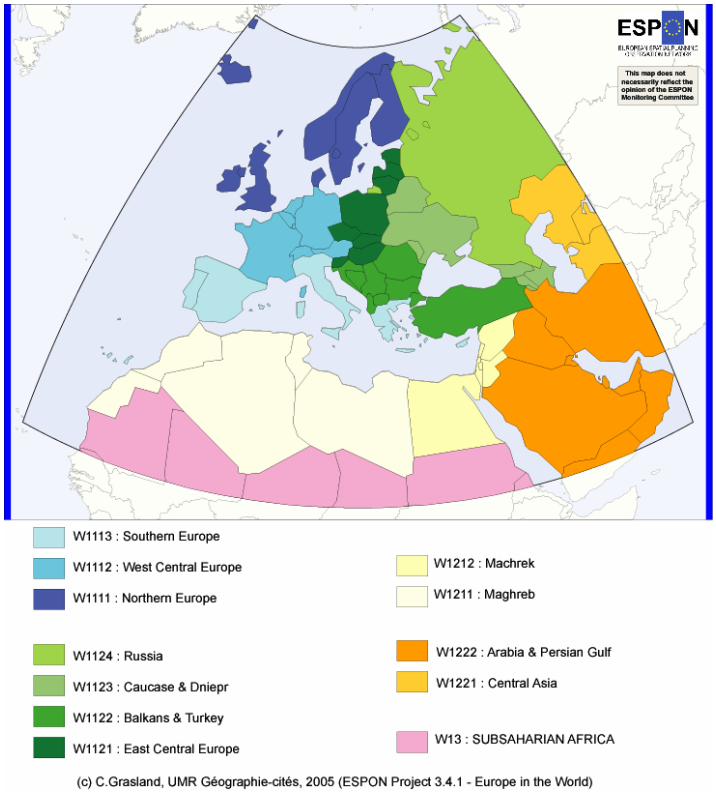
Limiting the research conducted in the ESPON programme to a focus on the EU29 is potentially to generate a number of serious theoretical and practical mistakes and omissions in the analysis of the main trends shaping the European territory. The strategic vision of the ESPON area must therefore be broader. We therefore build a Euro-Mediterranean template widening the vision of ESPON, based on the analyses conducted in the project and showing the importance of the Southern and Eastern neighbours for ESPON. The projection used to build the map template is centred on ESPON and is enlarged to the South by the North African countries, to the East by the Balkan countries plus Turkey, Russia, the countries of the Caucuses and finally by those of Central Asia (map 2). This pan-European view should be taken into account by European policymakers when elaborating long-term strategies for the European Union.

In addition, a WUTS4 level regionalisation has been elaborated for this new template for the purpose of analysing in more detail the functional European neighbourhood. Micro-regions are particularly useful for the analysis of this functional neighbourhood because they introduce internal divisions both within the ESPON area and in its northern and Southern peripheries.

Map 1 : The World in 17 meso regions



Map 2 : The Functional European Neighbourhood in 12 micro regions (WUTS4)



1.2. The "size" of ESPON in the World

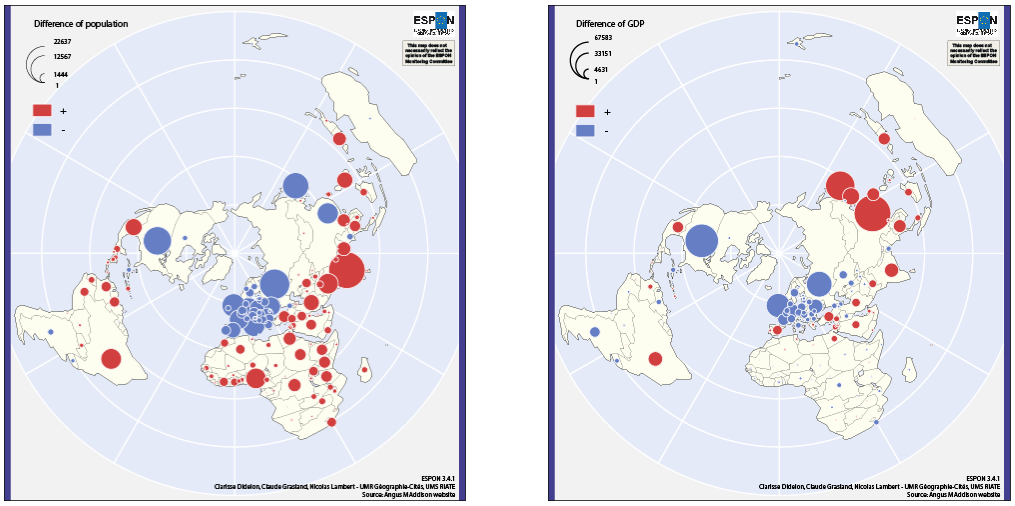
One of the main purposes of the "Europe in the World" project was to outline a clear vision of the position of the ESPON area in the World *vis-à-vis* various indicators and, if possible, from a dynamic point of view. The acquisition of the long term "Maddison database" by the coordination unit allowed us to conduct a number of interesting studies on the evolution of the position of ESPON in the World, both in respect of ESPON's share of World population and World wealth.

With the analysis of the share of World population (map 3) and World GDP (pps) of each state it is clear that a number of very important changes have occurred during the last 50 years with a global transfer of population and wealth from the traditional centres of the Triad to their peripheries. The Triad centres have each experienced a lower increase in their population and wealth compared to the World trend. Their population and wealth did not decrease in absolute terms but their World share was strongly reduced in favour of other countries such as China (in terms of GDP) or India (for population).

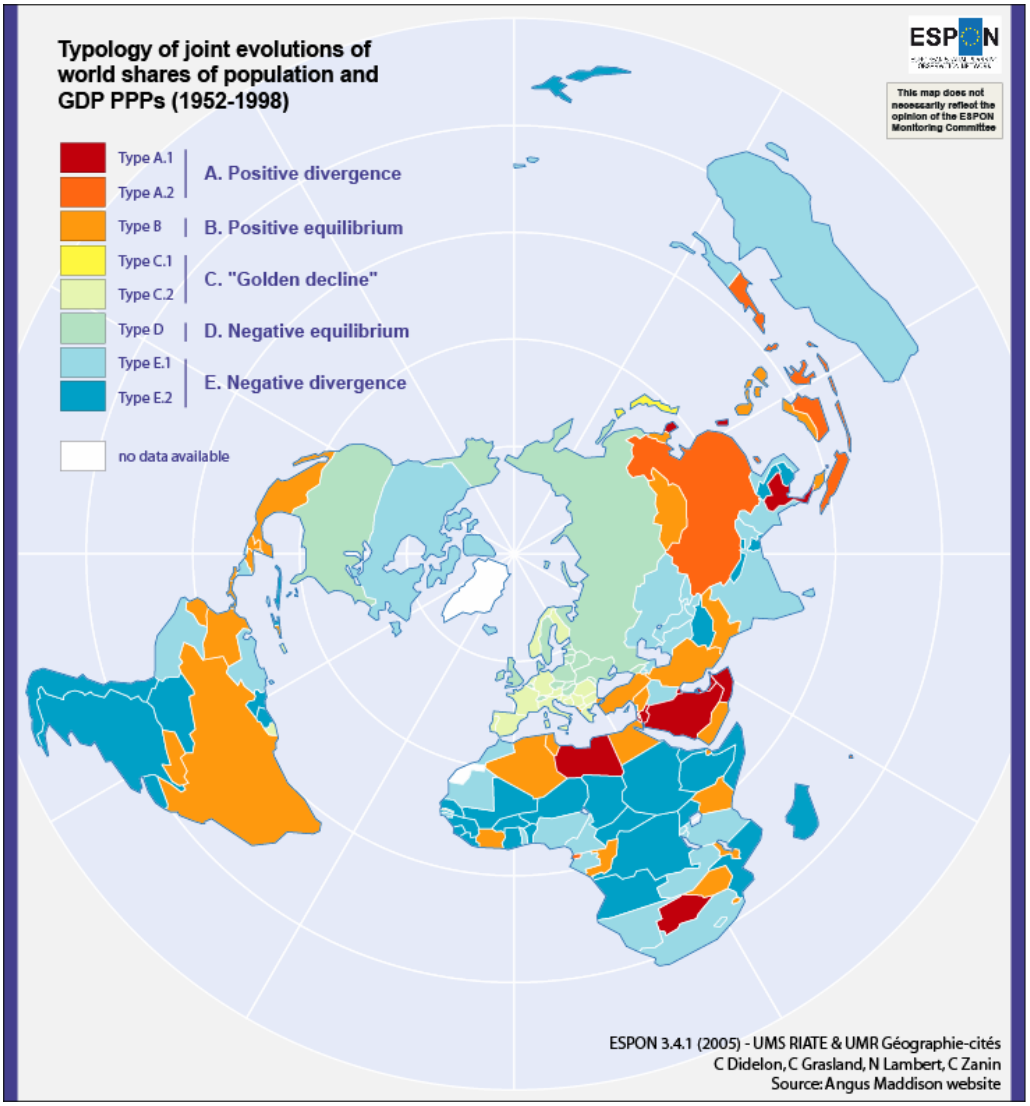
However this analysis of population and GDP pps at the state level is not sufficient for a sound evaluation of the real potential of states. For example, the stability of the level of GDP *per capita* (compared to the World mean) of a given state can be attributed to (1) the joint stability of its share of population and GDP, (2) a joint decline of both factors or (3) a joint increase of both factors.

A synthetic typology of the evolution of the share of World population and GDP of the different states of the World (map 4) reveals that the centres of the Triad have generally experienced a joint decline in their share of GDP and population, but as the reduction was generally equivalent or higher for population than for GDP, they maintained or increased their level of GDP per inhabitant (*type C and D*). The states located in their immediate periphery have however generally experienced the reverse evolution, with a joint increase of their share of population and GDP in the World. Even if their GDP *per capita* did not necessary increase more quickly than the rest of the World, their economic and demographic size has clearly increased. The states in this situation (*type A and B*) define a "Golden ring" of growth from Mexico to Brazil, Northern Africa, the Middle East and south-eastern Asia. It is generally only in the deep peripheries, located at longer distance from the Triad that the worse situation of an increase in the share of population and a decrease of the share of GDP (*type E*) became manifest.

Map 3 : Evolution of World share of population and GDP (1952-1998)



Map 4 : Joint evolution of the share of the World population and GDP PPS from 1950-54 to 1996-2000



1.3 ESPON's Area of influence

Another way of defining ESPON's place in the World is to study how it is embedded in the World by flows. The ESPON area is in a phase of rapid integration both inside ESPON but also between ESPON and the rest of the World. So particular attention should be paid to exchange and cooperation networks that highlight the integration pattern of ESPON area in the World economy.[1]

The analyses of air, trade and migratory flows (FR - Vol. 1 - part B) suggest that it is possible to identify a so-called ESPON "area of influence" in the World. As this area is related to ESPON's "relational network" the result should not necessary be a continuous area organised in concentric circles. Four kinds of criteria have been used gathering 18 variables: accessibility (basic conditions for the development of relations), networks (common language and/or history), interactions (trade flows and air flows) and complementarities (difference of development) (map 5).

A cluster analysis was then applied to the 18 variables in order to define synthetic types of relation between ESPON and the rest of the World. This analysis reveals four main types of ESPON external relations.

Type A: Functional Integration: concerns the states localised in the immediate neighbourhood of ESPON whose trade and air relations are strongly polarised by ESPON. They do not necessary share a common language or religion and they have often been in conflict with ESPON states in the past.

Type B: Responsibility: gathers together the states for which ESPON has significant responsibility for their future development, primarily because of Europe's historical responsibility for colonisation and the exploitation of African countries. Secondly, because Africa could be a major centre of World production in the future while its young population will provide many opportunities. It is then strategically advantageous for ESPON to reinforce its historical relations with these countries forging a new relationship based on 'common ownership' of the political process.

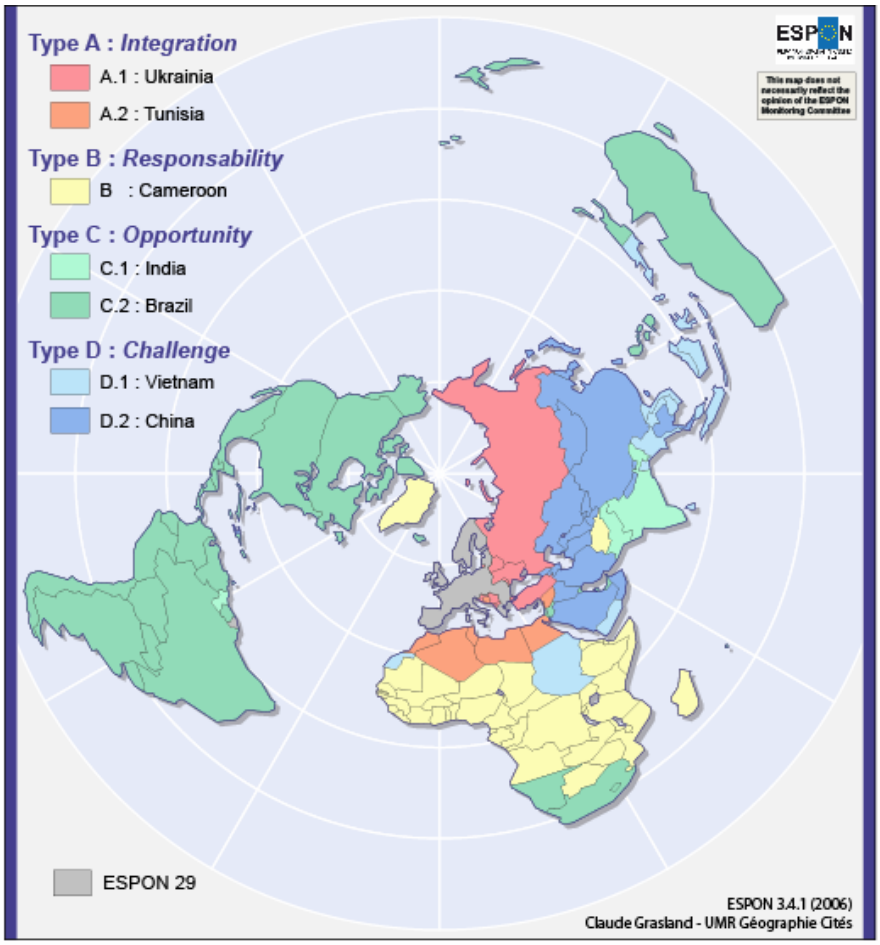
Type C: Opportunity: gathers together countries located far from ESPON but sharing a common language or history. They could potentially be very close allies for ESPON in a global World where services represent the major part of 'added value' and where scientific and cultural innovations are major factors in long term development.

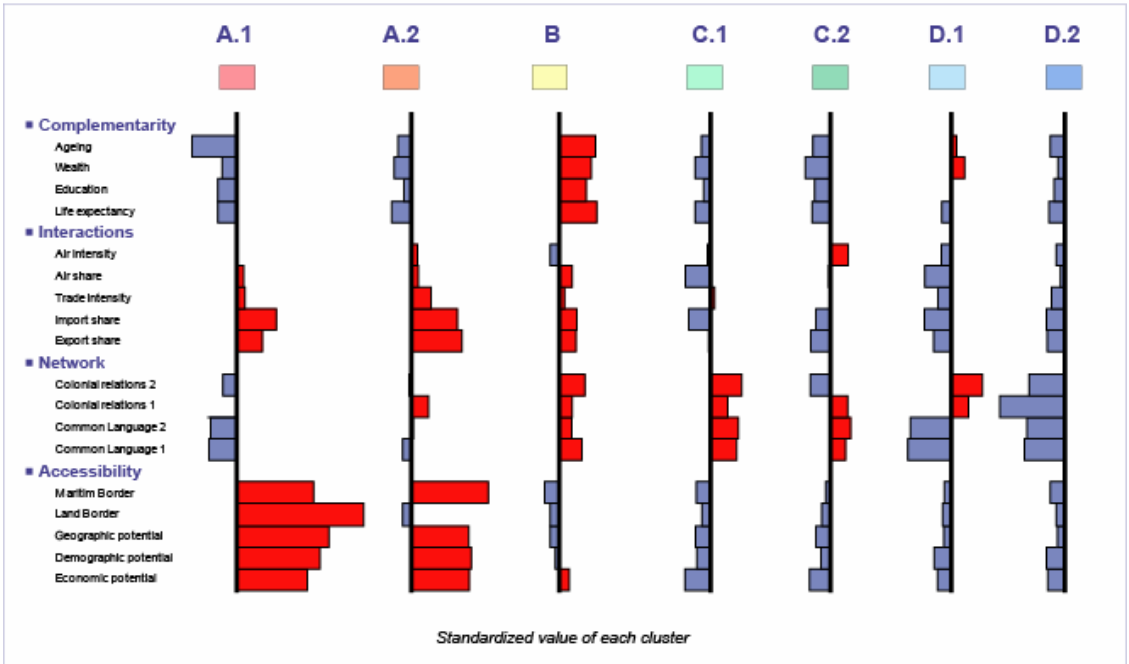
Type D: Challenge, highlights those countries which ESPON is less able to influence or to easily develop cooperative relations because of differences in

[1] This is not to suggest however that the discrete processes of 'political' integration within the ESPON space and 'functional' integration between the ESPON space as a whole and the rest of the world are necessarily coterminous.

language, geographical distance, or the weakness of historical relations. Many of these countries are however located in areas where significant stocks of energy resources are located and/or have dynamic new economies.

Map 5 : Typology of ESPON29 influence in the World





1.4 ESPON and its neighbourhood

The research conducted on the measuring and cartography of territorial cohesion in the ESPON programme has established that the spatial organisation of heterogeneity is a crucial output for territorial planning. Perhaps even more interesting than the traditional global measurement of inequalities is the spatial dimension of heterogeneity that underlines the potential consequence of proximity between regions of different levels of development. From a spatial point of view (figure 1), this heterogeneity can define either regular gradients (if transition between different levels is smoothed) or homogeneous areas separated by territorial discontinuities (if the transition is sharp). This then raises the question of functional integration: are the ESPON area and its neighbours converging or diverging?

The West-East "stair gradient"; the differences between countries are smoothed and relatively gradual when moving from West to East. Each state at an intermediate level is, at the same time, both attracted by its western neighbours and attractive to its eastern ones. The potential flows induced by this organisation are potential vectors for a diffusion of prosperity and development from west to east.

The double North-South discontinuities were mainly visible, for the social criteria of life expectancy during the 1950's In the 1990's the sharp discontinuity previously marked by the Mediterranean Sea disappeared and we observed a gradual transition between Italy and Algeria. At the same time however the level of discontinuities increased between North African countries and Sub-Saharan ones.

The potential demographic and economic dynamism of the North African countries is a major opportunity for ESPON, the harvesting of which probably provides the only possible way of maintaining its position as a global actor at World scale. The evolution of the share of population and GDP of ESPON at World scale decreased between 1950 and 2004 (figure 2). During this period however although this structural trend towards demographic and economic decline continued it was always balanced by the political dynamic of EU enlargement.

It is important however to underline the fact that the question of political enlargement is a false one when considered from a strategic perspective. Many potential political solutions are however available to insure continuing strong linkages between the European Union and its neighbours. What is not at issue here is however the fact that the European Union will be obliged to further develop these linkages in the future if it wants to maintain its global influence in the next 20 years.

Figure 1 Discontinuities between ESPON 29 and its southern neighbours

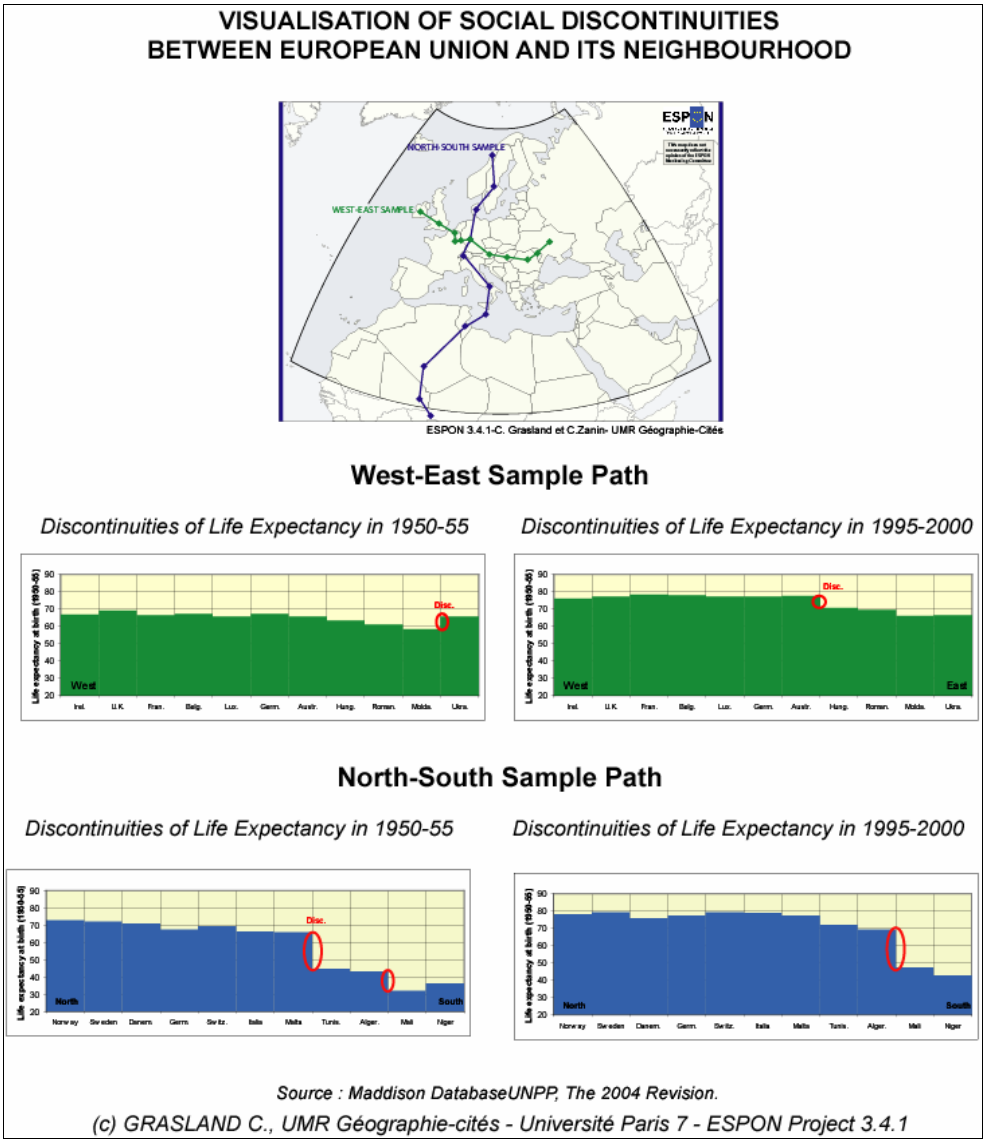
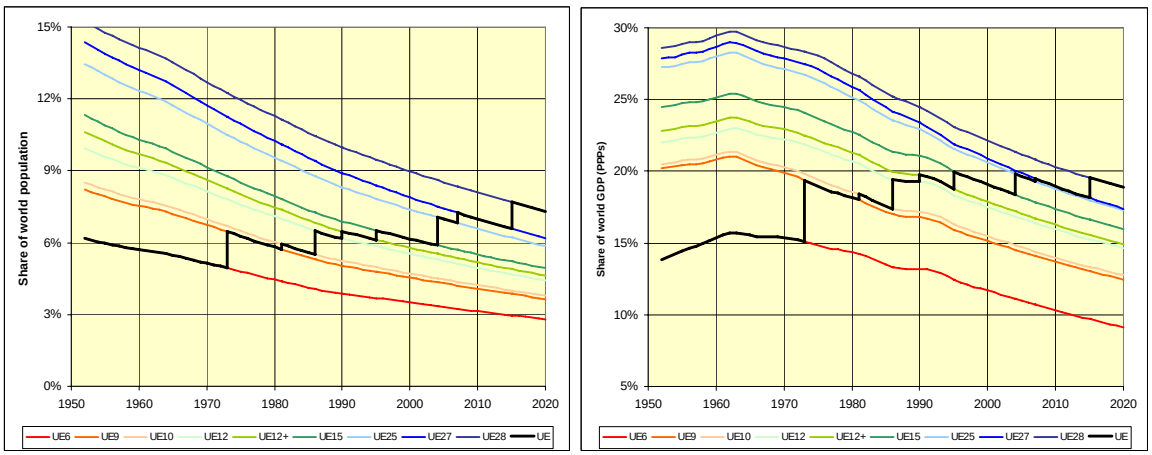


Figure 2 Evolution of the share of World population and World GDP (pps) of the European Union (1950-2020)



1.5 Internal differentiation of ESPON territory

The final objective of the project "Europe in the World" is to provide a general overview of the relations between regions and cities of ESPON and the rest of the World, i.e. to study "the World in Europe", or the influence of globalisation on the ESPON territory.

The structural strength and weakness of the ESPON area have been evaluated on the basis of the sectoral economic structure as well as in relation to a number of indicators addressing the technological levels of the regions. A qualitative typology of regions according to these indicators allows us to identify the competitive or vulnerable regions or cities in respect of the World economy (map 6). Four major types of spaces can be identified according to their relations with the rest of the World.

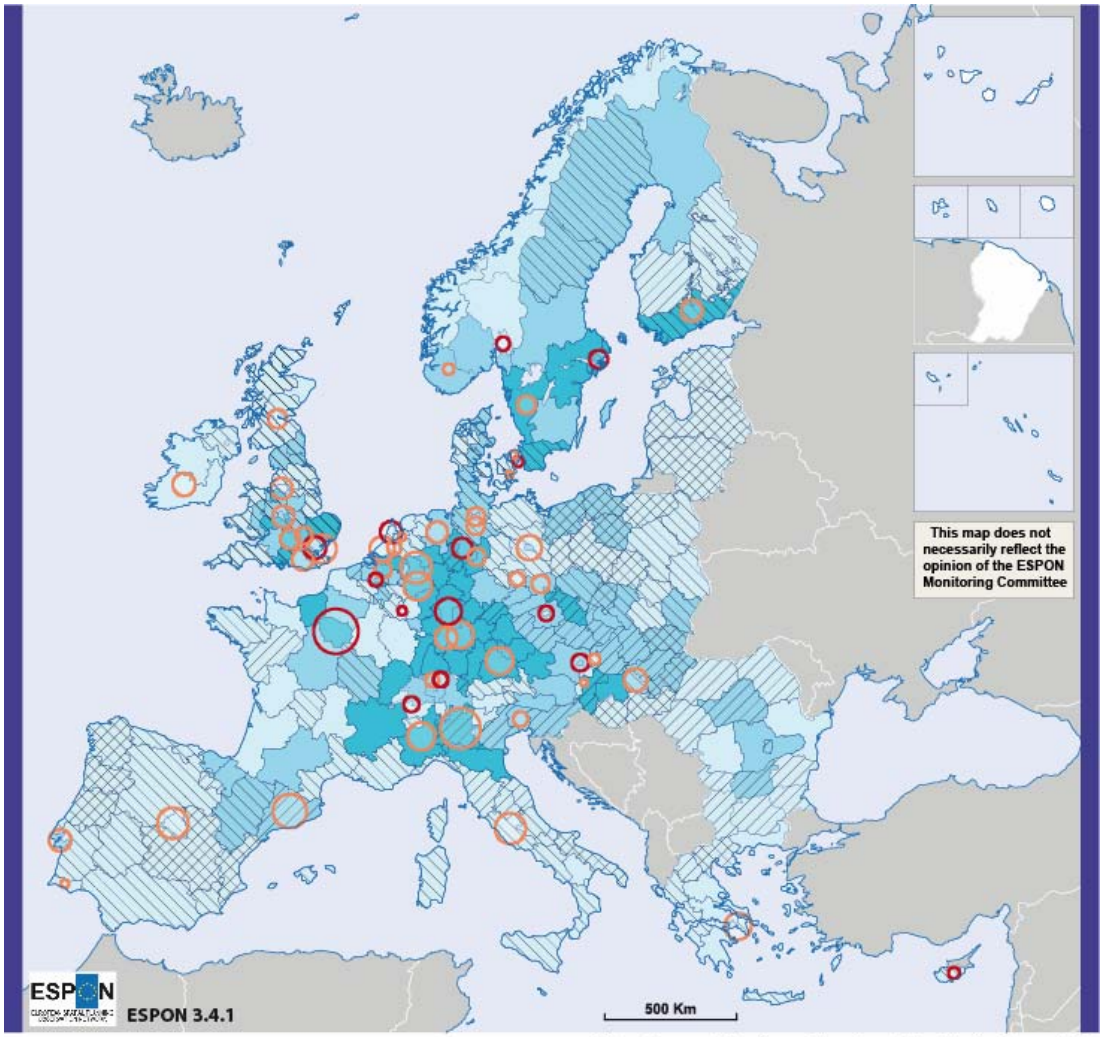
The highly internationalized metropolitan regions, i.e. most of the major ESPON cities; however there are differences in the level of internationalisation that allow us to identify the biggest world metropolises of London and Paris and some very internationalized but less important cities that function as gateways between Europe and the rest of the world.

Central regions of Europe, the "blue banana", without large international metropolises; Most of these areas are characterized by a solid economic structure with a relatively high share of business and financial services, as well as a high technological level.

Peripheral and intermediary regions with a high share of personal services; they have low average technological and internationalization levels and are, to a certain extent, relatively indifferent to the rest of the world. These regions are often more dependant on national or European transfers

Peripheral and intermediate regions with a high share of low-level technological manufacturing industries; They are subjected to international competition, notably in the textiles sector with low cost labour countries. However, in Eastern Europe, these regions mostly benefit from the spatial reorganization of this sector.

Map 6 : Synthesis of the regional insertion in the world economy



Regional level: NUTS2

Internationalisation level
(Cities)
- *Low*
- *High*

Population
(thousands of inhabitants)
- *10 000*
- *2 500*

Structural strengths and weaknesses
- *High share of technological manufacturing industries*
- *High share of personal services*

Technological level
- *Low*
- *Medium*
- *High*

1.6 Policy issues

- **Aid flows and millennium objectives**

ESPON countries have an important external role to play as they belong to the developed World. Development aid flows are a pillar of Millennium development Goal number 8 ("a global partnership for development") where Europe has taken on a special role. But in order for this aid to be effective three conditions must be met: (1) Aid must be adequate enough to spark human development; (2) it must be cost effective with low transaction costs and (3) recipient countries must have primary responsibility for its use, that means that aid must be untied (FR – Vol.1 - part B).

- **Lisbon strategy and the neighbourhood policy**

The main challenge for the European Union in the next 20 years is the decision to either integrate or to ignore the neighbourhood in general and North Africa in particular in its economic and political strategy. A "bunker strategy" designed to protect an economically declining and demographical ageing Europe from migrants would have tragic effects (FR – Vol. 1 - part C). The key to maintaining Europe's place in the World could thus be the setting up of a Marshall plan directed to ESPON's neighbours, primarily to the south, which would have many advantages for both Europe and its neighbouring countries.

- **Territorial cohesion / ESDP**

The concept of territorial cohesion elaborated by European Union through the ESDP and actually applied *inside* the ESPON 29 territory should be reformulated in the wider context of an enlarged space towards both east and south. The spatial structure of heterogeneity (gradient or discontinuity) is not the same in each direction and different strategies thus need to be elaborated, in particular through a new shaping of INTERREG cooperation areas. Strategies for regional development elaborated inside ESPON territory could be transposed to neighbouring countries, in particular in the border regions.

- **Polycentrism and gateway cities**

Gateway cities linking ESPON 29 to the world remain concentrated in the Pentagon, though opportunities exist for their development in peripheral regions, including cities located outside ESPON territory (Istanbul, Moscow, Tel Aviv, Dubai, and Jeddah). What is at stake here is the creation of a strategic plan for the elaboration of a pan-European network of network of cities insuring specialised functions : (i) connection to the global level (London, Paris, Frankfurt, Zurich, Amsterdam) (ii) specialised connections to selected area like Latin America (Madrid), Sub-Saharan Africa (Paris, Brussels), Central Asia and the Middle East (London, Istanbul), Russia (Frankfurt, Moscow), etc. (iii) internal

north-south connections between northern Europe and both shores of Mediterranean Sea.

2. INTRODUCTION

2.1. Wide Wild World

You know I've seen a lot of what the World can do
And it's breakin' my heart in two
Oooh, baby, baby, it's a wild World
It's hard to get by just upon a smile
Cat Stevens, Songs

In a famous paper entitled "Story of the Blues"[2] , two reporters from *The Guardian* newspaper attempted to follow the geographical path of the production of a pair of Lee Cooper LC10s that cost £19.95 at *Cromwell's Madhouse* in Ipswich in 2001. After a fascinating survey which led from Ipswich (UK) to Ras Jebel (Tunisia) and Saklo Agoume (Benin), the reporters identified that a minimum number of 13 states had contributed to the production of the cloth sold in Ipswich and thus to the elementary flows or connections between firms in these countries. The reporters estimated that, *"At a very rough, very conservative estimate, [this pair of LC10s has undergone] a journey of about 40,000 miles[3] on which components and raw materials criss-cross the globe in a sort of jerky, deranged dance"*.

This example is a perfect illustration of the idea that the world is becoming increasingly complex and thus that it cannot simply be analysed in a spatial framework restricted to European Union. In the production chain of the LC10s, 6 states in the ESPON area are included (France, the UK, Germany, Hungary, Italy, and Spain) although the main task of production is carried out in a neighbouring country (Tunisia) with important inputs also emanating from countries located all around the rest of the world (Turkey, Benin, Namibia, Pakistan, Australia, Japan, …). As such, when European policymakers come to take a decision on a subject like the complete liberalisation of the international trade in textiles and clothing, they should be aware that the consequences are not only sectoral and economic but also geographical. This geographical consequence has to be evaluated in different territorial frameworks (inside the EU, in the functional ESPON neighbourhood, and in the rest of the world) and at different scales (national, regional, local). This then is an exceptional opportunity for the ESPON programme to demonstrate that ***space does matter*** and that sectoral problems (trade, research, the internal market …) are not independent and should thus be analysed in their territorial dimension according to a systemic approach at different scales.

[2] "Story of the blues", F. Abrams & J. Astill, *The Guardian*, Tuesday May 29, 2001
[3] About 65 000 kilometres.

Globalisation is not only a purely economic process characterised by the increasing mobility of capital in a borderless abstract space. It is also a strong social and territorial reality which can be illustrated, in the European case, by the increasing number of migrants who try to gain access to the European Fortress and die trying. According to official registration returns, P. Rekacewicz and O. Clochard have established that a minimum number of 4000 people died during the last ten years while trying to gain access to Schengen territory (Figure 3). This is however a *minimum* estimation and in reality the real figure is probably much higher …

Figure 3 : More than 4000 deaths in 10 years at the borders of EU

Source : P. Rekacewicz & O. Clochard, *Le Monde Diplomatique*, Mars 2003

According to Cat Steven's song, we are leaving in a 'wild world' where European policymakers often act as if Europe is increasingly less able to influence the events taking place around them. The common feeling of "European decline" reinforces the idea that after the golden age of the 19th century, our old continent is no longer able to propose any relevant vision of the future to others. There is then a palpable temptation to ignore what is happening outside and to close our minds to the world beyond. This is indeed what was done at the beginning of ESPON programme when the cartographic template of an area of interest limited to 29 countries was elaborated completely ignoring the fact that

contemporary spatial dynamics cannot be correctly analysed in such a limited territorial framework (map 7).

The preliminary study of Europe in the World launched in the framework of the cross-thematic project ESPON 3.1 played a crucial role in the evolution of minds, when it proposed a new cartographic template at world scale which intentionally avoided placing Europe at the centre (map 8). As stated by C. Grasland and C. Grataloup:

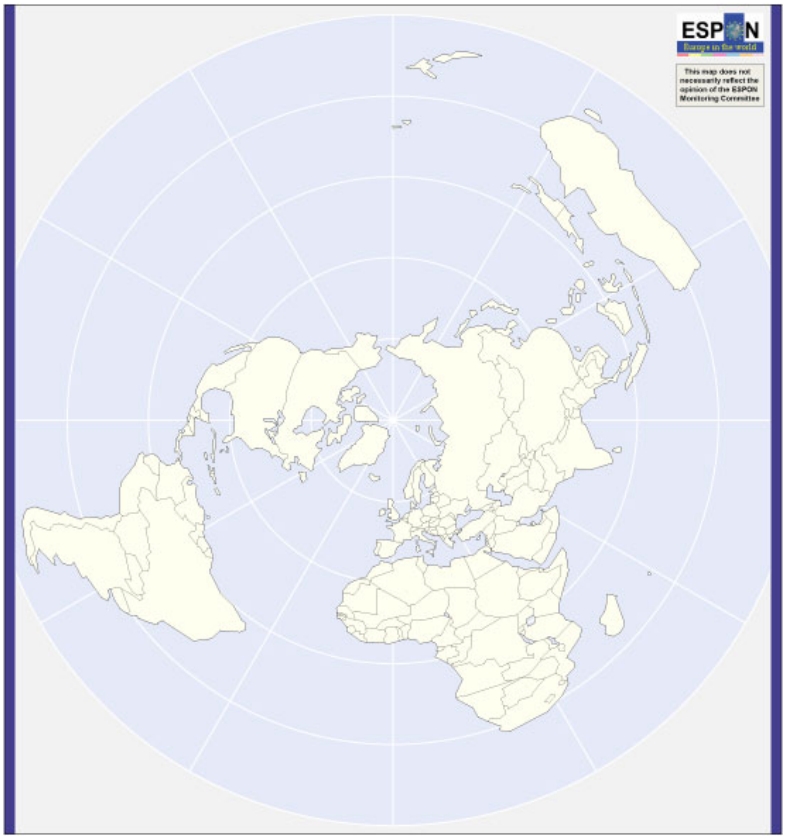
"*The* right planisphere does not exist. The transformation from sphere to plane implies necessarily a deformation of areas and/or angles and/or global shapes. Furthermore, a map of the World can get no satisfaction because the global world is economically organised as a ring around the earth when a map is a plane representation with edges defining a single centre. The more traditional projections (e.g. Hammer Aïtoff, or Mercator), directed toward the north and centred on Europe, express rather well the world's organisation of the XIXth century when the Old Continent ruled the other regions of the Earth. But today we live in a polycentric world. And pictures which try to provide evidences of multiple centralities and competitive influence areas should not induce biases related to false polarisation introduced by the choice of map projections. This is the reason why we proposed to ESPON to choose a polar projection, setting the Northern Hemisphere at the centre, simply because it is the place where 90% of the human beings live. Such a map can easily be revolved in order to emphasize the various centralities. Finally, it appears useful to keep the continuity of the earth surface, avoiding aphylactic maps where continents are floating in an unspecified mixture of ocean and "nothing". In the ESPON context, it is important to bring to the fore a map projection which gives the opportunity of a polycentric, but also universal, representation. Of course, the Southern Hemisphere is badly treated (the disappearance of Antarctica), which proves that any planisphere introduces an implicit subjectivity. But, when looking at the maps in the second part of this report, we can verify that not only rich people but also the majority of the world's poor are fairly represented with this map projection. Finally, none of the world economic centres are advantaged, as the user of such a map can rotate it in any direction. This implicit message is essential for the analysis of a polycentric Europe in a polycentric world."
ESPON 3.1, July 2003, Third Interim Report, Annex B: "Europe in the World", p. 7

This preliminary study was an important milestone on the way to producing a new vision of 'ESPON in the world' though it alone was not sufficient to change traditionally ingrained ways of thinking. Until the decision was made by the ESPON Monitoring Committee to launch project 3.4.1 "Europe in the World" in 2005, the cartographic production of ESPON remained clearly limited to the traditional template of ESPON 29. What was missing was not only technical tools (such as a database elaborated at world scale) but also clear understanding, on behalf of both researchers and policymakers, of the need for ESPON to produce a collective vision of the situation of 'Europe in the World' in addition to the continuing lack of an intermediary level between ESPON and the rest of the World, which was suggested but not achieved in the preliminary study realised by ESPON Project 3.1.

Map 7 : cartographic templates for ESPON

Geographical Base: Eurostat GISCO
Regional Level: NUTS 3

Map 8 : cartographic template for the World



2.2 Which vision of Europe in the World?

How many times must a man look up
Before he can see the sky?
Yes, 'n' how many ears must one man have
Before he can hear people cry?
Yes, 'n' how many deaths will it take till he knows
That too many people have died?
The answer, my friend, is blowin' in the wind,
The answer is blowin' in the wind.

Bob Dylan, Songs.

The collective mental representation of societies does not follow the same rules as that of scientific knowledge. Scientific knowledge is a social product constructed in a precise spatial and historical environment. Scientific activity always maintains a critical view avoiding facile conclusions. Collective representations, on the other hand, appear as natural facts with clear limits and eternal validity. A factor of identity as powerful as "Europe" is therefore necessary related to strong mental representations which cannot be easily modified. The boundaries of the so-called "continent" of Europe determined therefore the other divisions of the World. They are considered as secondary when compared to the main opposition between Europe and the rest of the World. As with the prisoners of the Cave in Plato's allegory, we are unable to produce any relevant visions of the situation of Europe in the World as long as we remain unable to walk out of its limits. Moreover, the situation is further complicated by the fact that we ignore the interminable question of the delimitation of the borders of Europe.

It is not a paradox to suggest that, among the different institutions in charge of policymaking at the European and national levels, DG Regio and the ministers of spatial planning should be seen as those most likely to support a renewal of the vision of Europe in the World. This is so precisely because they are not in charge of external relations (as in DG Trade, DG Relex and the related national foreign and external trade offices). Working mostly at the local and regional level, spatial planners are particularly interested in the question of territorial division while not ignoring the fact that many solutions can be provided in relation to the establishment of various regional typologies based on flows, similarities, accessibility, and networks etc. They are also acutely aware of the effect of globalisation at the local scale. "*Thinking globally and acting locally*" is second nature to spatial planners, something that is not necessarily the case for other researchers and policymakers who are often rather oriented to sectional approaches and thus do not share this particular sense of space and scales.

It is therefore not by chance that a project called "*Europe in the World*" was launched precisely in the framework of an ESPON programme supported by DG Regio and the ministers in charge of spatial planning. The beginning of the 21st

century is an historical moment where all of our traditionally accepted representations of the World appear to be in crisis. To support this point, let us briefly recall the various dominant models of representation of the World that are actually currently available, each of which provides only partial evidence of the reality of the contemporary World[4].

2.2.1 Centre / Periphery: the Triad and its region

The development of a World trade space does not mean a dilution of economic hubs indeed, quite the opposite. While manufacturing activities are affected by relocation this is not generally the case for the core business activities (the stock exchange, management of large firms, high level research etc) all of which remain concentrated in few central places. These core activities are embedded in three major urban areas, three megalopolises. The most important, and the one for which the word itself was coined[5], is still the North-Eastern United States. The European axis, from Milan to London is the older, while the urban area of southern Japan has, for the last thirty years or so, been the third centre. This 'triple core' is often called the "Triad", and it is continuously recomposing itself, both concerning the internal structure of each of its parts (with for example the development of Shanghai in East Asia) and in relation to the continuing competition between them. However, at a global scale, the stability of the "World-cities" is striking as compared to the flexibility of the shapes and localisations of common production activities. The stability of the World economic core can be explained by means of the rarity of the activities and tasks undertaken here but also by the systemic cohesion of the whole that allows for a certain level of continuity. In essence, the triad operates around three eight-hour shifts, while on the global stock exchange the sun never sets; when a stock market closes in Europe another opens in the far east. As a testimony to this interdependence the major global economic flows take place between those three centres.

Peripheries are organised around those major centres. Other big cities and/or high level industrial centres, with areas of intensive agricultural production are often located in close proximity. A high density of tourist spaces has developed to the South of each centre (Caribbean, Mediterranean Sea, and South China Sea). These centres influence the structure of the margins (Central America, the Maghreb, and South East Asia), which are subject to migratory flows while also becoming spaces for the relocation of production and service activities. This first attempt to interpret the nature of the emerging global space associates a ring of three centres, each one organizing a southern space, a zone innervated by major

[4] The following sections are the English translation of a work from C. Grataloup to be published in 2006 in a "Dictionary of Globalisation".
[5] **Gottman, J., 1961**, *Megalopolis* - MIT Press -

migratory flows. This image is not however, of itself, sufficient to provide a complete view of reality.

2.2.2 The north-south opposition: still not obsolete?

We can of course begin from the opposite viewpoint from that which has been sketched out above. All of the dominated peripheries, where the development indicator *per capita* is usually weak, are spaces located to the south of rich regions. The use of the expression North/South is however an unsuitable language habit, because the more southern spaces are not always the poorest. The expression "Little triad" is sometime used to refer to the spaces counterbalancing the northern centres: Australia and New Zealand, South Africa, Latin America (Grasland C., Madelin M., 2001). As economic expressions such as' underdeveloped countries' or political ones like, 'Third-World' are generally seen to belong to a bygone era, the use of cardinal points seems instead to be more apposite. This approach also has the added advantage of avoiding deterministic expressions, or opposing temperate and tropical regions in an unhelpful manner.

It is difficult, today, to consider the developing countries as a homogeneous whole, as perhaps was the case in the 1960's and 1970's. It remains impossible however to ignore the importance of the living standards gap between countries. Indeed, the clear lines that were formerly drawn on the maps, following the shape of the Rio Grande, the Mediterranean Sea and the Amur River are now replaced by non continuous gradients from post-industrial countries to less advanced countries. Indeed, the social gap *within* each country can now often be more important than that *between* national averages. This is not to say however that social differences between societies have disappeared. The North-South vision of the World, even if changed in gradients, is thus still meaningful.

The politically organised and motivated 'Third-World block' at its height in the 1950's and 1960's subsequently disintegrated, shedding members from both its richest and poorest groups. On one hand, countries considered underdeveloped fifty years ago, such as South Korea, eventually joined the OEDC (1996), with other so-called 'emerging' countries likely to follow the same path. On the other hand, less advanced countries, mostly from sub-Saharan Africa are increasingly mired in civil conflict or facing unmanageable social health care problems and as a result are slowly sinking into disorganisation. In addition, former members of the soviet block are now scattered between the rich (Baltic countries), intermediate (Russia), emerging (Vietnam), and poor (Cuba). If a binary view of the World is only relevant for caricatures confronting two "hemispheres", the gap

between a World composed of rich people and large (and densely populated) territories of poverty is still a topical subject, and doubtless will be for some time to come.

On the other hand, the political aspect of such classifications is becoming less and less meaningful. During the Bandung Conference (1955), in the middle of the decolonisation period, the link between underdevelopment and colonial inheritance seemed obvious. When trying to set up the 'third' block of non-aligned countries, distinct from the blocks of the cold war, Third World leaders attempted to invert the 'inheritance' of imperialism on its head. At the beginning of the 21st century however, these basic configurations have changed. That does not mean however that a geopolitical interpretation is no longer accurate, indeed, it may be more accurate than ever.

2.2.3 Permanent features and geopolitical changes

In line with this north-south polarisation, the east-west conflict highlighted the major division of the World during the cold war. The Iron Curtain (or bamboo one) reminded us of this major opposition between two competing projects or worldviews socialism and capitalism. No school book could give a presentation of Europe or of the World without a picture of the Berlin Wall. If, since 1991, there remain a few countries, such as China and Vietnam, which still claim, discretely, to be socialist, they now often add the epithet "market" to their self-descriptions, while in North Korea the reference to communism is used only to underline the regime's opposition to the rest of the World. Concerning the continuing survival of the Castroist regime in Cuba, its duration is now surely only due to the US embargo.

The time of firm great alliances, sealed by fear, is over. NATO remains active only at the price of becoming the World's policeman, intermediary between the unilateral force of the United States and blue helmets of the UN. Moreover, no formerly privileged link is safe from a simple electoral shift. Even the 'special relationship' between the United Kingdom and the United States is increasingly being questioned, while Russia has difficulty in maintaining influence in its so-called "near abroad". And yet the nuclear arsenals are still there. Their modernisation is even expected, with a growing number of states trying to join the nuclear club. Indeed, the victors of the Cold War face increasing difficulty in constraining a group of large and medium-sized powers whose geo-strategic games organize the international scene according to "*realpolitik*" in which ideology and rhetoric are increasingly inseparable, while the search for economic advantage remains the name of the game. It is in this context also that a new China is emerging to regain its world power role.

One could be tempted to see this geopolitical game through the prism of 'clashing civilisations' outlined by Huntington[6] a phenomenon which appeared to be re-emerging again at the end of the twentieth century. This effort in reductionism however conveniently forgot that global politics remains a matter of States: the state division is still the only structure that clearly divides the World, while the interrelations between states continue to embody the international level, contributing to what is a contradictory process and at the same time remaining an essential part of the global order. Because it is an association of states, the UN embodied what, at the international level, slows down or speeds up the reinforcement of World societal level. On one hand a decision can be blocked if a majority of countries on the Security Council or, simply, one of the Security Council's five 'permanent' members votes it down. On the other hand, most global questions are discussed, and even, sometimes resolved. Meanwhile, many UN agencies or parallel organisations have attained a level of autonomy that allows them to act as global actors.

2.2.4 The dialogue between civilisations

At the beginning of the 1990's, missing the clear organising structure of cardinal points, it became fashionable again to use the major divisional criteria provided by the notion of competing civilisations initially formulated in the Eighteen century.[7] This secular vision of the World is itself inherited from a classification of people according to religion. So, the civilisational criterion is often used to turn Islam into the adversary of western, capitalist globalisation. Even if this new binary vision is too simple, (although it is not completely unfounded), the geography of civilisation is very long-lasting. One cannot simply ignore it, as long as there is no confusion between civilisation and religion. [Seems more polemical than scientific….?]

The idea of "great" civilisations however echoes the simplistic 'evolutionary biological' worldview of the nineteen century. But size is often not the predominant factor. Indeed, there have been, and still are, societies composed of a small number of people with very particular identity elements. One can even observe that under globalisation, the state level can be challenged allowing indigenous peoples to reconstruct their identities, with, perhaps, the Chiapas Indians of Southern Mexico being a case in point here. [Claude, this whole paragraph was rather difficult to 'translate', and at the end of it I'm still not sure whether (a) I understood it correctly, or (b) even if I did, whether it actually adds anything to the argument.]

[6] See Samuel P Huntington, 'The Clash of Civilisations' *Foreign Affairs* Vol.72(3) 1993.

[7] This debate does however have much older roots, going back to the beginnings of geography with Herodotus and Pliny, from the rather open ethnography of the former to the 'us-them' dichotomies of the latter. In a modern context Edward Said's discussion of 'Orientalism' is quite apposite here. See, Orientalism Vintage, New York (1979).

There is another trap that must be avoided, namely considering the map to be fixed. Civilisations exist only through the men and women that live in them, transform them and transmit them. The present wave of globalisation did not invent inter-breeding, though it does increase it. For three centuries western thought has sought to engender an opposition between civilisations in the plural, by means of the tool of the hierarchical classification of humankind. While the notion of 'civilised', in the singular, or the most advanced way of life (that obviously they applied to themselves). Today however a global multi-scalar civilisation can be sketched. Without this, the confrontation between civilisations becomes only a mask for the game of geopolitics.

2.2.5 And still for lack of anything better, the continents

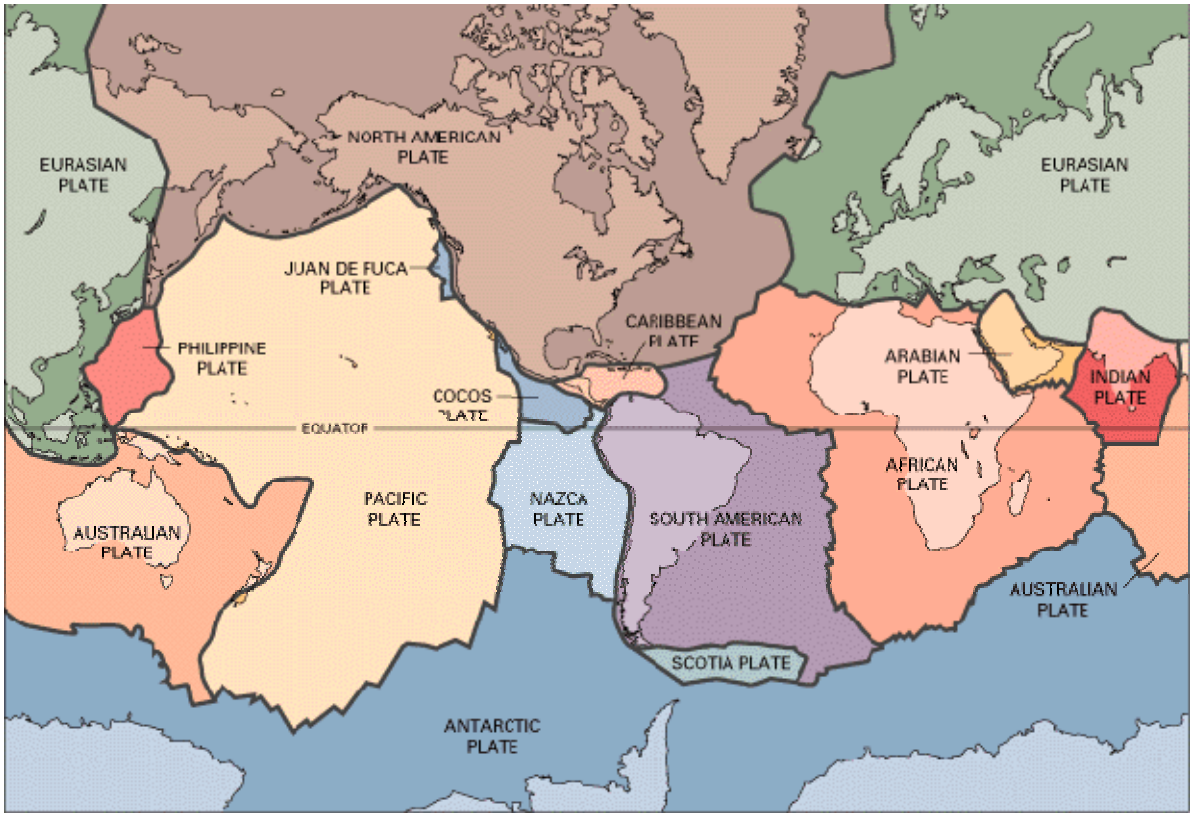
Sometimes, it is difficult today not to reminisce about the Cold War era when the potential for War and the political emergence of the 'Third World' allowed us to divide the World in a pedagogical way. This simplicity was however always a delusion, an obstacle to perceiving the dynamics that were producing our current World (end of the soviet model, emergence of new industrialised countries, fundamentalist reactions...). Perhaps the fact that western and eastern points of view shared a common 'evolutionist' origin, both thinking themselves to be the source of progress, produced a classification that was more temporal than spatial where the World was divided between backward looking (pro-slavery, feudal and underdeveloped states), intermediate (developing, capitalist) advanced (developed countries, liberal or socialist governments). It was however the "development school" that formalised the couplet "centre-periphery" as a view of the World, and first proposed a synchronic vision of classifications (development, underdevelopment). Today the thoughts on the World follow a different stream of historicity for which great historical visions are however suspicious. Focusing on the present, they advantage synchronic divisions that are basically spatial. If however one decides to reject the civilisation view of the World too, the only remaining approach is to classify according to natural, or supposedly "natural", divisions.

A relevant anecdote here is the new museum in Paris which will replace the "*Musée de l'Homme".* The latter opened in 1937 and was totally organised around the evolutionist point of view, from prehistoric times to the native peoples of the ethnographer classified as hunter-gatherers, farmers, or pastoral. Today this point of view is both politically unfashionable and scientifically unsustainable. No agreement could however be reached on how to classify the new collection, which will therefore be arranged in four sections: Africa, America, Asia and Oceania. Moreover, no agreement could even be reached on the name of the new institution, simply now named the "*Musée du Quai Branly*". This

illustrates that there is now a basic mistrust of once respected hierarchies between peoples thus explaining the desire for neutral categories. Of course the absence of 'Europe' here is not accidental!!

Are the continents then really such a neutral way of dividing the World? The most basic definition of a continent is "large area of emerged land" as opposed to islands and archipelagos that are separated by sea and oceans. In some cases the notion of contiguity is added to define a continent. Five continents are usually distinguished (Europe, Asia, Africa, America, and Oceania) though on occasion seven continents are cited with the Americas divided into two and Antarctic added. Let us then have a look at a so-called objective document: the map of the tectonic plates (figure 4).

Figure 4 : Tectonic plates

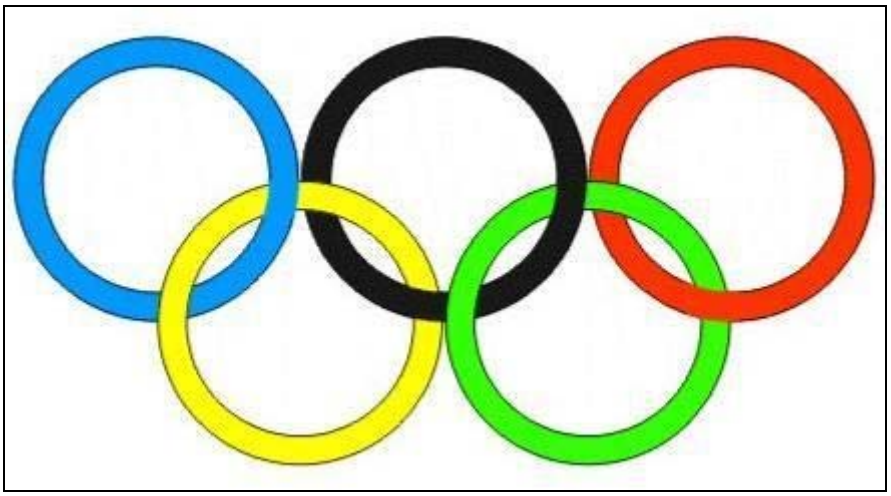


Source: http://pubs.usgs.gov/publications/text/slabs.html (U.S. Geological Survey website)

As the above map illustrates, Europe cannot really be considered, from a geological point of view at least, to be a continent but should instead be viewed as the western extremity of the Eurasian Plate. The continent of Asia, as it is generally understood, is divided between an Arabian Plate, an Indian Plate, a Eurasian Plate and even a North American Plate. America is not a continent either in this sense, being instead divided between a North American Plate, a South American Plate, and a small quasi-oceanic Caribbean Plate. Last but not

least, both the usual definition of a continent and the tectonic plate map allow us to observe that the Antarctic *is* a continent, though it is usually forgotten, perhaps because we consider only populated areas as continents, suggesting that the notion of 'continent' is actually rather more a 'social' than a simple 'physical' construct. The concept of continent seems then to be rather weak particularly in relation to the realities of physical geography. It is thus simply illusory to pretend that the continents as we know them are natural facts, and not simply projections on the World map of the European vision of the world inherited from the medieval era (*Orbis Terrarum Maps*). This division of the World was constructed in the main from a Christian point of view, where the World is unified, surrounded by an ocean and divided in three parts, Europe, Asia and Africa, a view itself inherited from the Myth of the son of Noah. Objectively, only the Americas are an autonomous whole as proximity had effects. Nevertheless, it is clear that the delimitations between Asia, Europe and Africa are a by-product of an arbitrary decision within one particular civilisation. In respect of Oceania, its name alone seems to undercut its continental status.

Figure 5 : Olympic rings



The Olympic Rings logo (figure 5) provides yet another example of the cultural and civilisation perception of the continents. The Olympic rings are the symbol used on the legal flag of the Olympic Games, proposed by Pierre de Coubertin, in 1914. They are known all over the World and they are a symbol of the universality of the Games. The flag itself is made up of five rings each representing one of the "five parts of the World" as M. de Coubertin said or the "five continents" as almost everybody says[8], namely, Africa, America, Asia, Europe and Oceania.

It is often said that the Blue colour is for Europe, the Yellow for Asia, Black for Africa, Green for Oceania and Red for America. The White colour of the background then represents the notion of "Peace". In fact, in the conception of

[8] Including the International Olympic Committee (http://www.olympic.org/)

M. de Coubertin, the colours do not symbolised the continents at all. The six colours are those usually used in the national flags of the countries of the World. Moreover, we could also observe that, in respect of this erroneous interpretation, three of the rings are assigned to continents according to the usual denomination of skin colour. The yellow colour is also the one of the Chinese Emperor. Blue should be logically used for Oceania, but is used for Europe perhaps because the colour blue is the one that a majority of European people prefer, or because more recently the predominant colour of the European flag has become blue (from a European religious point of view blue is also the colour signifying the Virgin Mary). As such then green is used for Oceania because is it the only colour remaining.

As such then, the Olympic rings propose a division of the World into five parts, five continents that could perhaps be seem as objective. The commonly perceived symbol of the rings' colour is however, on closer inspection, a kind of cultural projection of the division based on a perceived division of humankind according to skin colour.

2.2.6 Conclusion

Globalisation accelerated rapidly when the barriers and frontiers that divided the World between 1914 and 1989 came tumbling down. This reassertion of the 'global' moreover, made it difficult to continue to perceive the division of the World into subsets, while the simple self/other dichotomies of the Cold War era were increasingly at odds with a need to reconsider the issue of regional diversity. After the collapse of the East/West and South/North organisational couplet however, we now have a single vision of the World, though this currently remains wedded to the notions of either civilisations or nature.

To take into account all of these individual dimensions thus became increasingly difficult: the pattern of economic regionalisation does not readily equate to the historical civilisation areas, or to the usual continental conventions. The vocabulary is becoming more and more dubious; what then does the term "Asia" now mean? Increasingly, in both statistical tables or in the newspapers, the "Middle East" (from a European point of view) is not in Asia, though, on occasion, Australia is (not absurd when considering economic regionalisation and Triad zones). But what is not surprising from an economic point of view would become shocking in a cultural context (if, for example one was, for example, to view Australia as being Eastern).

What is at stake here then is the need to 'think of' or to 'classify' the World and its regions in a more complex way, at least taking into account a multitude of criteria at the same time. If the global level is to have some meaning, then it

must be seen to logically produce a differentiated space. It is inherited from multiple diversities, it smoothes them or uses them, but it also produces differentiations in an economic, cultural and political sense. Thinking about parts of the World cannot then be done without thinking about the world as a whole, that is to say, all of its social aspects and all of its places simultaneously. What a great work that would be! Fortunately for us the World is not so simple.

2.3. Ambitions and limits of the project ESPON 341

O wonder !
How many goodly creatures are there here !
How beauteous mankind is ! O brave new World
That has such people in 't !
W. Shakespeare (1612), The Tempest, V.1

With limited resources which were, for example, half of that allocated at the same time to other new ESPON project launched in 2005, we were immediately aware that we would be unable to cover everything. We therefore decided to focus firstly on the elaboration of long -term integrated analysis tools which could provide a solid basis for those who will follow us in researching this field. In this spirit, we elaborated new map templates, new databases, new hierarchical divisions of the World, and a new dictionary of concepts. We consider these "technical results" to be a major achievement because they are not in fact based solely on technical considerations alone but actually benefit from all of the research conducted by the TPG as a whole. Moreover, they are specifically oriented toward the needs of European policymakers while providing the source for what we hope, will be a deep renewal of the European vision of the World. The elaboration of the set of integrated tools presented in **volume II** of this final report would not have however been possible without an in-depth analysis of the more theoretical questions that we decided to organise around four key questions presented here in **volume I.** Our approach in this volume was, where possible, to combine global statistical analysis based on exhaustive databases available at World scale (the detailed results of which are presented in **volume II**) with selected case studies designed to ensure an in-depth analysis of specific fields (**volume III**).

Our choice for this **volume I** was to produce a relatively short synthesis, easy to read and illustrated by many original maps, tables and figures which are, on occasion, not comprehensively explained in full methodological or epistemological detail here, thus keeping the text for **volume I** at a manageable length. As such then, the reader is free to continue their analysis and, ultimately, to draw their own conclusions by referring to the subsequent volumes of the report. Clearly, the field of investigation was very wide, as such, it was necessary to have clear targets strongly related to the expectations of the ESPON Programme.

Our analysis of the terms of reference and our knowledge of the existing results of the ESPON programme led us to the conclusion that the most important challenge for the TPG of project 3.4.1 was the introduction of the 4th dimension (the World) into the actual framework of the 3-level approach which has been

the main output of previous ESPON research. More precisely, the introduction of this 4th dimension meant that we had to propose a joint analysis of the influence of Europe on the rest of the World ("Europe in the World") and of the reciprocal influence of the World on the internal differentiation of European territory ("The World in Europe"). At the same time however we did ignore the issue of what "Europe" was. As such, we felt that it was logical to use ESPON 29 as a definitional starting point for a territorial delimitation of the area of interest. In a sense, the correct title of the project should be "**ESPON in the World, the World in ESPON**". Following on from these central objectives, we have identified four key-questions which attempt to examine this interaction between ESPON and the World at different geographical scales.

- **The division of the World into regions (Part A)** tries firstly to propose divisions of the World according to four groups of criteria which are mental representation (how firms, associations, governments etc usually divide the world), accessibility (morphologic distribution of land, population and wealth), homogeneity (structural division of the World according to levels of economic and social development) and interactions (functional organisation of flows in the World). We derive from this analysis a synthetic tool, the WUTS system, which proposes a hierarchy of division of the World into regions of different size. The application of this WUTS system is demonstrated through a short benchmarking exercise between ESPON 29 and the other global integration zones.

- **The delimitation of the ESPON influence area in terms of its functional neighbourhood and networks (part B)** suggests a global-medium scale approach which attempts to answer the question of the delineation of a functional area of countries more related to ESPON than to other parts of the World. Three types of flows are examined (trade, air, migration) in order to fulfil this objective. Questions are also asked concerning the morphology of this influence area. In the case of air flows, the idea of "area" appears to be not that relevant and thus instead we propose to speak of a "network of relation" which does not fulfil the condition of territorial continuity. In the final synthesis, we keep this duality of approach and propose (1) a view of European influence based on a synthetic quantitative criterion and (2) a typology of relational networks of Europe in the World. This typology define four strategic types: integration, responsibility, opportunity and challenge. The conclusion focuses on the possible contributions of ESPON 29 to the Millennium Objectives in relation to their application at world scale.

- **The analysis of ESPON's functional neighbourhood (part C)** is a medium-local scale approach which focuses on the analysis on the area which has been recognised, in part B above, as that which is, or can be, most integrated with, or into, ESPON territory. Special focus is placed here on border regions which are analysed in detailed by means of a number of case studies. We do not however limit the analysis to the land borders of the eastern side of ESPON, we also examine, in detail, the dynamics of those states located on the southern shore of Mediterranean Sea. The issue at stake here is the problem of the elaboration of a global Euro-African region linking the economic core of Western Europe with its eastern and southern peripheries. The states of the ESPON territory has a crucial choice to make then between remaining an integrated area based on homogeneity ("convergence regionalism") and building a more ambitious entity with the southern and eastern Mediterranean countries ("North-South regionalism"). Our analysis supports the idea that the second option is probably more interesting for the ESPON territory from a strategic perspective and could be a major factor in the success of the Lisbon Strategy as it is currently conceived.

- **The analysis of the internal differentiation of the ESPON territory according to globalisation (Part D)** is a local scale approach when we take the World as our reference point. We try here to measure the strengths and weaknesses of European regions and cities in respect of the threats and opportunities afforded by globalisation. We focus in the main on the effect of regional economic structures which fundamentally determine the degree of opportunity or threat that is induced by globalisation. We also attempt to clarify the definition of the potential gateway cities able to connect to ESPON territory at different scales (World, ESPON-Neighbourhood, intra-ESPON etc). Our conclusion's focus on the importance of producing new indexes introducing this 'world dimension' for the better evaluation of ESDP objectives and the goal of territorial cohesion.

- **The very difficult question of the boundaries of Europe** which was mentioned in the terms of reference is *finessed* throughout the main body of the report and it is only in the **Conclusion** that some insights are given on this complicated subject.

The scientific coordinators of this project[9] want finally to underline the pleasure that they had during the preceding 18 months working with a "dream team" of very motivated researchers. Indeed, this is something that has been absolutely

[9] Claude Grasland (UMR Géographie-cités) and Clarisse Didelon (UMS RIATE).

invaluable to the success of this collective project. Thanks also go to the ESPON Coordination Unit and in particular to P. Mehlbye, S. di Biaggio and S. Ferrara for their constant encouragement and support in the realisation of this study. We simply hope that the reader will display the same level of enthusiasm, displayed by the team in the elaboration of this difficult piece of research, with the final output.

3. PART A: DELIMITATION OF WORLD REGIONS

3.1. Introduction

3.1.1 Options for World Regionalisation

The division of the World into 150 to 200 states is a political reality which defines a system of '*international relations*' where each state, whatever its size, theoretically displays full sovereignty, and is therefore considered to be equal in terms of being the bearer of rights, to all others. This is obviously a fiction because, in terms of World power, some states are clearly "*more equal than the others*[10]*"* and, as such, it does not really make sense to compare the population of China and Luxembourg or the GDP of U.S.A. and Djibouti. It is also true that many authors consider the framework of *international relations* (state-to-state) to no longer be an accurate way of analysing the World and propose instead that we focus on *supranational relations* (e.g. more or less integrated regional organisation like EU – political and economical - or NAFTA – purely economical) or *transnational relations* (e.g. network of international global cities).

But whatever the international economic and political reality of this so-called "decline of the state", it is important to underline the fact that the state level actually remains an important factor in research on the divisions of the World because the majority of the statistical information covering the World continues to be produced at the state level. The *"monopoly of the legitimate collection and use of statistical information within a given territory"* [11] remains a fundamental attribute of state sovereignty in the 21th century and we are therefore generally more or less obliged to use the puzzle of states as a building block in any attempt to understand the division of the World based on economic or social criteria.

The heterogeneity of the size of World states in terms of area, population or GDP is a real problem for the realisation of a study on Europe in the World, comparable to the problems encountered in other ESPON projects with, for example, the use of NUTS2 and NUTS3 (ESPON 3.4.3 MAUP). We have thus tried to limit this problem by selecting only 168 states and eliminating the micro-states (ESPON 3.4.1 FIR). It nevertheless remained obvious that our capacity to analyse the World's dynamics continued to be dramatically hampered by this basic heterogeneity in the nature of the national building blocks of the states system.

[10] **G. Orwell**, *Animal Farm*

[11] This is by way of complement to **M. Weber's** definition of the state as "*a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory*."

This is the reason why we decided to establish a hierarchical system of divisions of the World starting from the state level but attempting to propose different levels of territorial aggregation which were thought to be more relevant. The elaboration of this hierarchical system of aggregation of World units is based on various criteria presented in the following sections.

3.1.2 Definition of regions

In geographical terms a "region" can be defined in a general sense as "first significant level of spatial organisation under the global level of reference under investigation". This definition has the benefit of being easy to understand in the case of national contexts where the word "region" is widely used for the description of infra-national territorial divisions, which themselves can be based on various criteria such as administrative and electoral (e.g. *Länder* in Germany), homogeneity for selected criteria (e.g. agricultural or economic regions), the organisation of flows (water basins, functional areas), etc. But these infra-national divisions are generally organised in a hierarchical way with various levels of territorial division and, as such, it is important to bear in mind that, in the narrow sense that will be used here, the word "regions" should be limited only to the first significant level of territorial division or spatial organisation under the reference territory. Smaller divisions will be considered as sub-regions or regions of a different level defined in a recursive manner.

According to the previous definition, the transposition of the concept of region at the World level means that the delineation of a World region is an attempt to define the first significant level of division of the World under the global level of mankind living on the surface of our planet. Dividing the World as such then is not the same as dividing the Earth.

· The **Earth** is a physical and biological system which can be described and divided in many ways according to various criteria (climate, land use, vegetation etc) where the influence of human activity is only one parameter among others. The definition of Earth regions would thus lead to an interesting but complicated and rather technical debate on the so-called "natural" divisions of the planet.

· The **World,** on the other hand**,** is a social system defined by the extension of mankind i.e. by the location of 6.5 billion human beings. Of course, people do not live in space and are, as such, localised to the surface of the earth where they work, love, create etc. This notion of location is not however the full determinant of human activity as people migrate, exchange goods and ideas, fight, and develop material and spiritual links. Dividing the World is thus a rather different task than that of dividing the Earth and can certainly not be based on "natural" criteria but only on *social* facts.

This distinction between Earth and World does not mean that factors like the distribution of climate or the repartition of lands and oceans has not to be taken into account in the proposals of World division. Rather, it is that these factors will always be considered in their relation to human life and human activity and not as external independent factors. Moreover, all of the "social" or "natural" criteria that could be used in the attempt to divide up the World should likewise also be interpreted in their material, functional and spiritual dimensions.

World divisions are not *revealed* but are instead *produced*. They are social forms, in Simmel's (1908) sense, which means that they should be considered as societal tools built in a given societal context in order to fulfil societal objectives.

3.1.3 Which method of regionalisation?

Theoretically speaking, there are two broad approaches to the elaboration of the synthetic division of the World into regions:

· The ***thematic*** approach begins from an examination of criteria according to the usual scientific delimitations (social, economic, demographic, environmental, historical etc) examining inside each field of knowledge the spatial organisation of the World in order to propose synthetic maps in each field. Doing this, we would propose successive synthetic maps presenting the World's economic regions, World historical regions, and the World's environmental regions, etc.

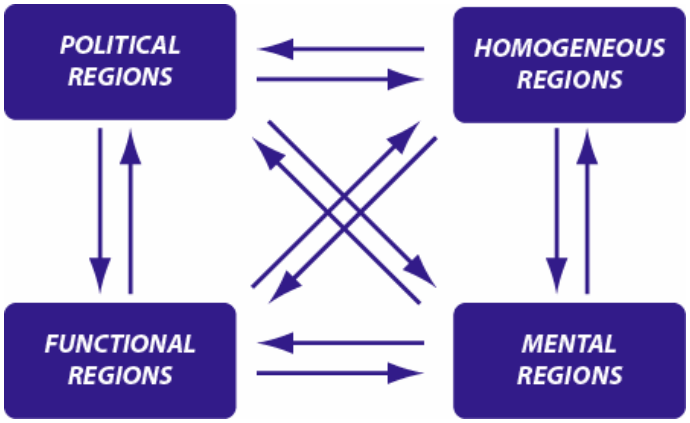
· The ***conceptua****l* approach on the other hand begins from the study of abstract criteria which can be used in the elaboration of regions (similarity, network, belonging, contiguity, flows etc) without addressing *a priori* a particular content. The same thematic criteria, for example demography, can therefore be used in different ways: age structure will be used for the elaboration of homogeneous regions (criteria of similarity); international migration will be used for the elaboration of functional regions (criteria of flows and networks); laws or agreement restricting migration will be used for the elaboration of political regions like the Schengen treaty area.

Both approaches inevitably have their advantages and disadvantages, though they are in fact complementary. The thematic approach is generally the starting point for any in-depth analysis of each the above 'criteria' by specialists in each specific research field. Moreover, it is only when this thematic approach is elaborated that the integrated cross-thematic analysis of the conceptual approach can be realised. In our final report, we have decided to present the thematic approach in volume II (where a deeper explanatory discussion is

presented) and to restrict the discussion in volume I to the synthetic cross-thematic results, which favour the conceptual approach.

In the following sections, we propose to compare four different approaches to the division of the World.

Box 1 : Options for World Regionalisation



MENTAL REGION: Defined by observers using subjective criteria based on individual or collective representations. A typical example of mental regions is the division of the World into «Continents» which do not fulfil any objective criteria but are nevertheless very meaningful for our comprehension of the World. The fact that mental regions are based on subjective criteria does not mean that it is impossible to produce objective measures of these collective representations.

POLITICAL REGIONS: Defined on the basis of treaty or other juridical criteria limiting the sovereignty of states participating in its construction, while agreeing to share certain areas of political decision-making. Various types of political regions can be defined according to the field of political action shared (economy, army, culture etc) and the degree of the transfer of sovereignty to the regional level.

FUNCTIONAL REGIONS: Defined by an observer using one or more criteria relating to effective or potential flows (accessibility) which can be of very different types (people, money, information, goods,) or measured in different ways. Functional regions are not necessarily associated with precise limits and can be organised by gradients (influence areas) or by specific networks.

HOMOGENEOUS REGIONS: Defined by an observer using one or several criteria of similarity which can be of very different types but are generally related to structural situation of the basic territorial units (culture, religion, language, demography, economy, history, environment,) and to their relative spatial proximity (e.g. constraint of contiguity). Homogeneous regions are different from typologies which do not introduce any constraint on spatial proximity or from continents which are purely based on spatial proximity and not necessary on similarity.

3.2: In search of World Regions

3.2.1: A mental approach: the perception of World divisions

Many different visions of the World co-exist simultaneously. For each type of observer, if not for each observer *per se*, each exists as a way of understanding the World and of organising it according to subjective criteria (Box 1). As such, the World does not have the same divisions or regions for each individual observer. It is however possible to produce an objective analysis of these collective representations and to propose a synthesis of mental regions in accordance with different kinds of collective actors. This is what we propose to do here.

International Organisations, Countries, Non Governmental Organisations and global private firms are the main actors at the global level (EIW - SIR p89). They divide the World in order to administrate it, to locate their activities and to organize their relations with other countries / or groups of countries. None of those global actors have a monopoly on prescribing an official division of the World, not even the United Nations. Those actors often propose, on their websites or reports, a map or a picture of the World divided into regions. Those pictures are not necessarily their operational division of the World, but as they are exposed to public opinion, it has been assumed that such maps necessarily have some meaning for the actors involved, and as such at least function as symbols of their power at the World scale. The compilation and statistical analysis associated with (SIR, vol. 1, Key question 1), these maps allowed us to build synthetic representations of World regionalisation according to each type of actor studied, and to observe whether common representations exist.

Two types of cartographic document are presented here. One focuses on the limits between world regions proposed by the actors and presents the stronger mental borders. The second type focuses on linkages and derives from the frequency of common belonging. It is a hierarchy of clusters which summarise the most frequent associations of states in wider World regions for each type of actor.

Continents and geographical factors

The maps of limits proposed by each actor clearly highlight two interesting phenomena. Firstly, none of the actors studied dared to divide a country into two in order to put them into different regions. This was not however the case with European researchers involved in the ESPON programme surveyed on their representations of the World. As such, this perhaps indicates that a very diplomatic – or pragmatic residual level of respect exists among global firms for

'national entities'. The second phenomenon, and the most important one for our analysis, is that, in most cases the limits subconsciously drawn when grouping countries follow those relating to the traditional political outlines of the continents.

Stronger limits (maps 9 & 10) are located between two continents in the sea or ocean (limits crossing the Atlantic, Indian and Pacific oceans and even Red Sea between Africa and the Arabian Peninsula). Terrestrial limits are always thinner than maritime ones, except in the case where they are used to distinguish between two very different spaces from a cultural and development point of view.

This trend using the traditional figure of the continents can also be seen in the average number of regions usually drawn by such actors, namely between 5 and 7, which clearly aligns with the usual number of continents in common opinion. The use of continents to draw World regions makes the divisions more consensual and more legitimate in respect of public opinion as such a division is not based on contestable criteria but on the so-called objective "facts" taught by geography.

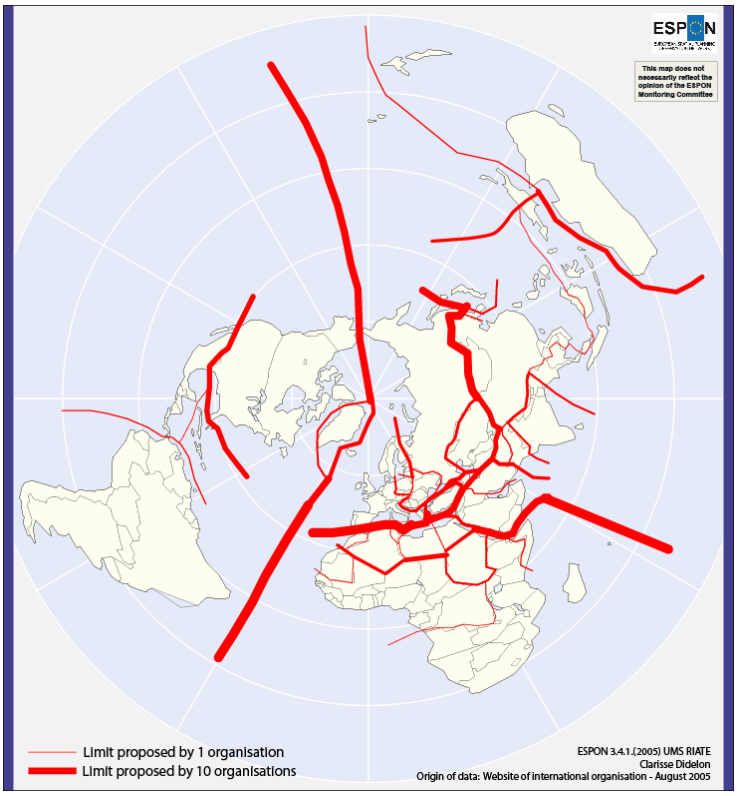
If however one cautiously observes the synthetic regions formed by the most frequent partitions (maps 11 to 15) one immediately notices that their size and composition are quite different for each kind of actor. For example, Europe, for German firms, stops at the Russian border. For International Organisations it goes to Vladivostok but, in some cases, excludes Turkey.[12] This shows that the concept of continents is a dynamic one and that other criteria are used to produce World regions. Geographical discourse is not therefore a "hard fact" in this context. The so-called 'neutral' continental division of the World is in fact a socio-political construct representing and interpreting an aggregation of other criteria.

Those other criteria used in the drawing up of World regions can be identified when observing the stronger terrestrial limits (maps 9 & 10) and the regions of medium and small size located between two large "continental" bodies. The stronger terrestrial limits are those for example between the Russian Federation and China, and North America and Mexico. A thinner limit can also be observed

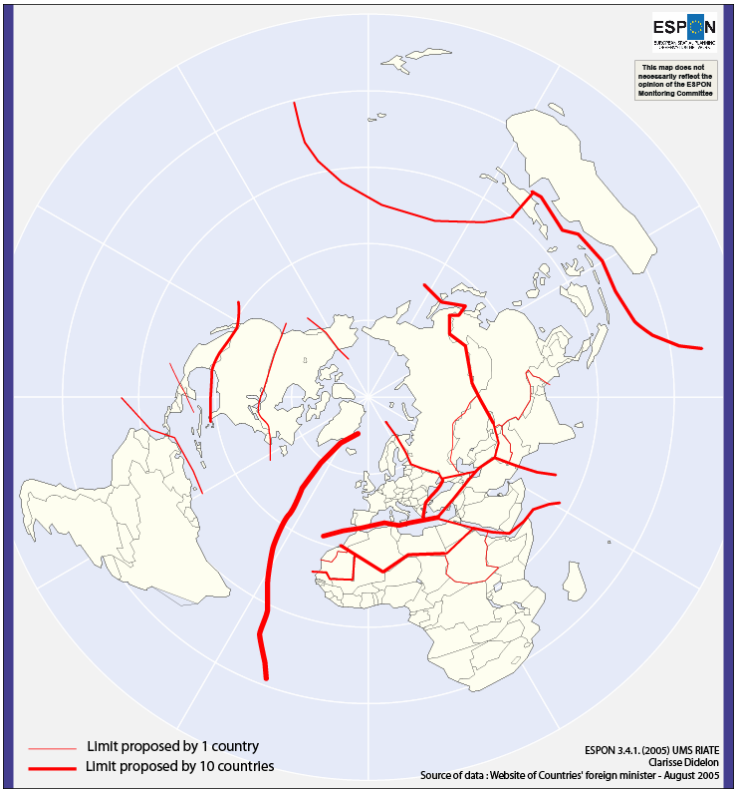
[12] The UN in particular is rather troublesome in this respect, as while many of its agencies place Turkey outside Europe, Turkish representation at the UN General Assembly, and on the Security Council relates to their membership of the WEOG, the West European grouping of states at the UN. Similar functional differentiation occurs in respect of other organisations, with Turkey being 'in' Europe as far as the International Telecommunications Union is concerned, but 'outside' for the International Postal Union! Generally, we can however say that, while a simple majority of the organisations surveyed place Turkey 'outside' the key organisations place Turkey firmly within Europe.

between North African countries and Sub-Saharan ones. For each of these three limits a combination of cultural and economic factors (i.e. level of development) is clearly used.

Map 9 : International organisations limits



Map 10 : Countries limits



Cultural factors

The cultural factor is particularly striking in the identification of a North African region. In most synthetic maps, Africa appears as a continent, without any further sub-division, even when the rest of the World is divided into smaller pieces. But for some of actors, some countries (France, the USA, China, Canada and the UK) as well as for many NGOs, a North African region clearly *does* exist, clearly following the spread of Islam as for all of them this North African region is conjoined with the Arabian Peninsula. Neither firms nor international organisations however dare to postulate the existence of such a region.

The use of the cultural factor can be also be perceived in the appearance of small sub-regions, such as Southern India on USA's map of the World, Central Asia in many International Organisations' synthetic maps, but also in the fact that China considers Australia and North America as belonging to the same World region, whereas Australia is more often located as an Asian sub-region by all other actors.

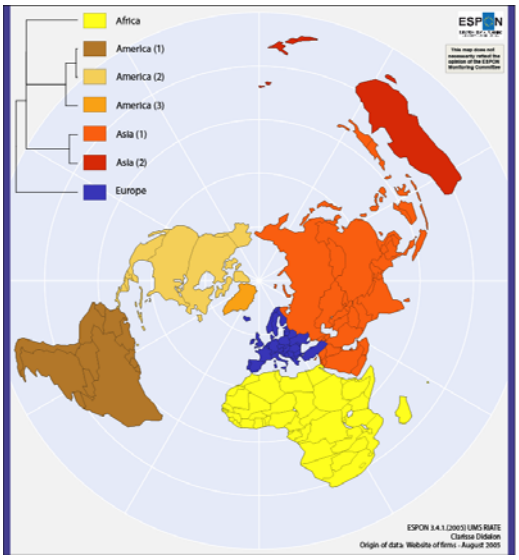
The question of cultural regions comes to the fore however when observing the maps dealing with limits. Some territories (Turkey, Sudan, Greenland) or groups of countries (Eastern Europe, the Caucasian states, Central Asia etc) are totally encircled by limits, indicating the existence of a certain level of uncertainty in respect of their possible allocations. Those areas of uncertainty are very often located between two (or more) cultural areas. The Central Asian countries are linked by recent history to the Russia Federation, though they are now also influenced, from a cultural point of view, to a greater or lesser extent by Iran and Turkey on the one hand, China (West) and Mongolia on the other. The possible examples here are numerous while they also underline a kind of 'struggle of influence' (Greenland between its administrative belonging to Denmark and its cultural and geographical proximity to Northern Canada) or an identity crisis (Turkey between its cultural link with Central Asia and its desire to belong to the European Union).

Development level factor

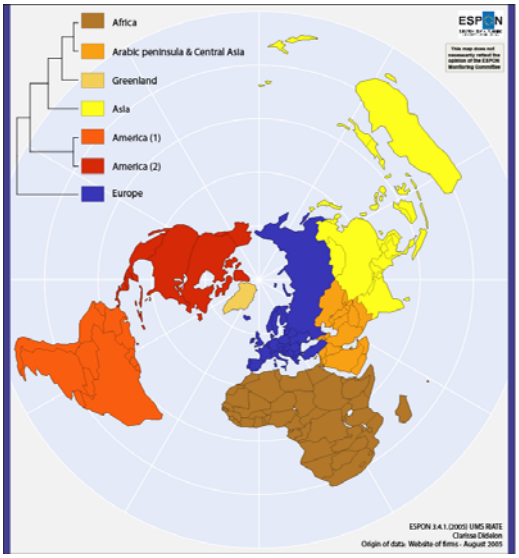
Other divisions of the World also exist, namely, those based on the perception of development levels. Such approaches are more often than not used in the context of sub-regions proposed by International organisations, which often mix geographical and developmental criteria to draw World regions. On one hand, they place the "industrialised developed countries" in the same group without considering distance and contiguity: North Africa, Japan, Western Europe, Australia and sometimes also other parts of World such as South Africa. While the rest of the World is not similarly divided according to development level,

even if it is far from being uniform, and mainly according to the geographical criteria of proximity (South America, South Asia etc). Those representations of the World are not very visible on the maps proposed here as they are more often sub-levels of regionalisation.

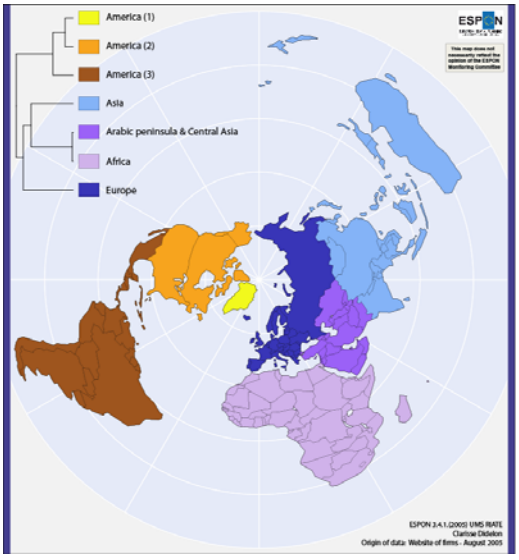
Map 11 German firms dividing the World



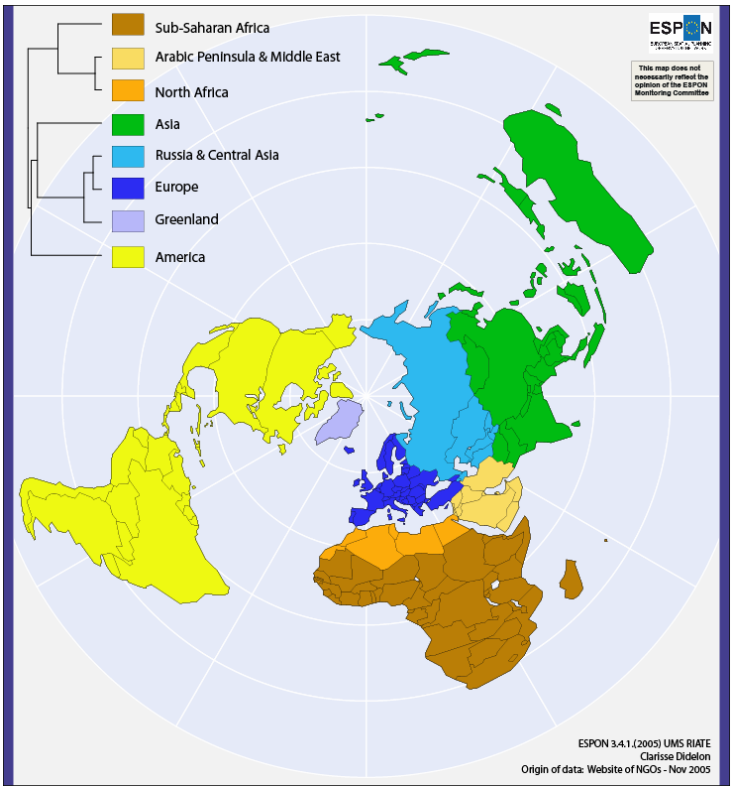
Map 12 : British firms dividing the World



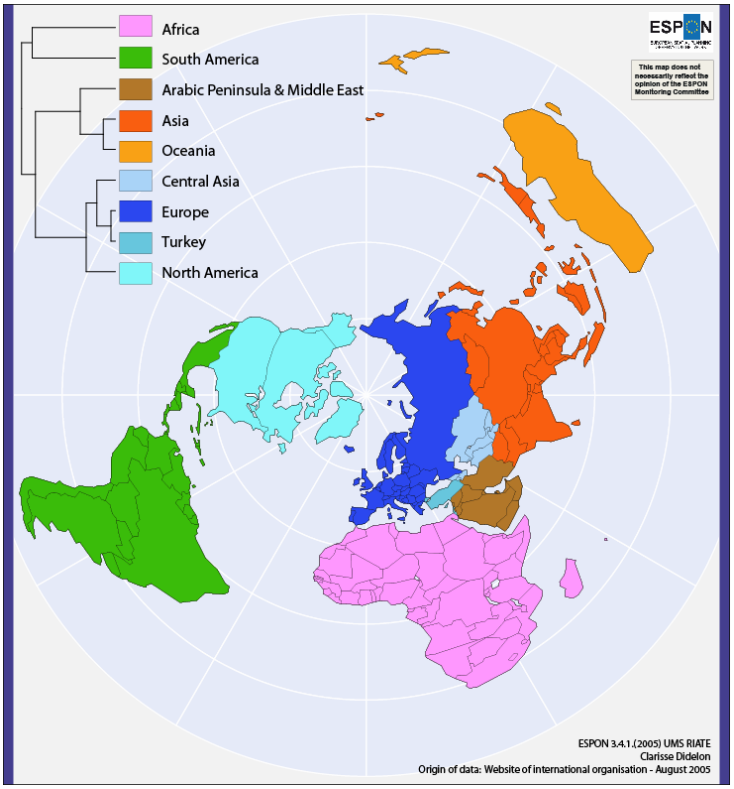
Map 13 : French firms dividing the World



Map 14 : Non Governmental Organisations dividing the World



Map 15 : International Organisations dividing the World



Conclusion: A Eurocentric view of the World.

The dominant criteria used, by the global actors studied here, to divide the World into regions is clearly the "continental" one. One should not however forget that this division was inherited from the European medieval vision (*Orbis Terrarum* Maps) (Cf. Introduction), where the World is unified and surrounded by ocean, and divided into three parts, namely, Europe, Asia and Africa.

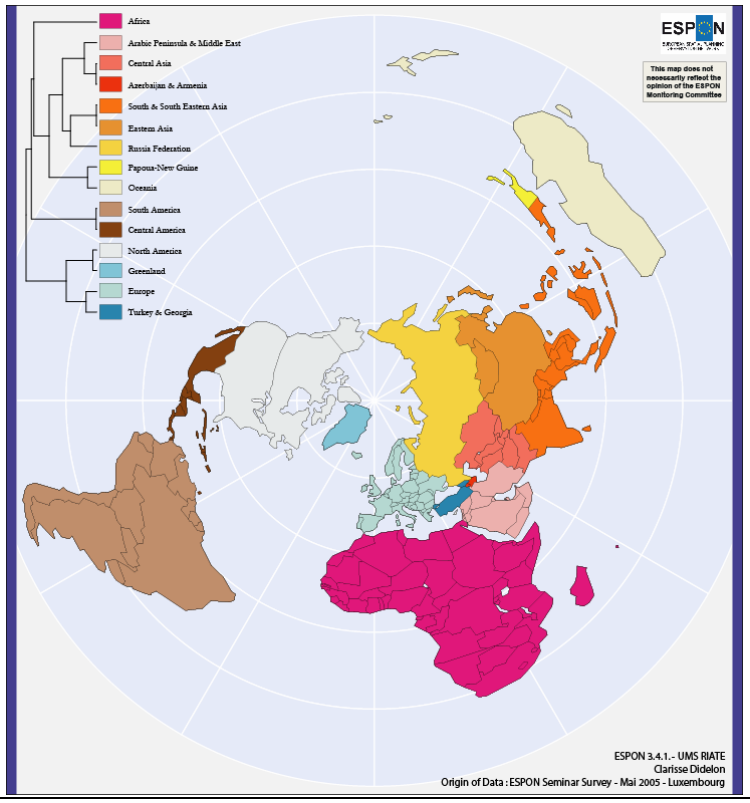
In our study this Eurocentric perception of the World is well illustrated by the significant difference in the regions' sizes. The European region generally encompasses only a few countries gathering together only a small share of the World's surface and population, but it is well identified. Asia, is more variable in size and of numbering more than twenties countries and including China and India, each with $1/6^{th}$ or more of the World's population. The following chapters of this volume aim to construct World regions using criteria other than the type of representation alluded to above to effectively supersede this traditional Eurocentric approach.

Box 2 : The ESPON community's vision of the World (Cf. FR – Vol. 3)

The survey of the ESPON community took place in May 2005 during the ESPON seminar in Luxembourg. We asked more than 100 participants to divide the World into between 2 to 15 regions on a map. The main hypotheses was that the resulting maps should reveal things that people were not generally aware of and could reveal some relations between the individual attributes (nationality, age etc), the criteria used and the chosen limits and regions. The methodology used to analyse the results of the survey is detailed in volume III of this report.

The most common division of the World shared by the participants of the survey was a division into 4 regions, where the first area to be clearly identified on the World map by the ESPON community is a large region formed by a large Europe plus the English (and French) speaking (but not Spanish speaking) parts of North America (blue & gray colours) showing a kind of cultural cluster. The fact that this space was identified first, confirms our perception that the World is indeed organised from our Eurocentric point of view. Southern America (brown), Africa (purple) and Asia (red to yellow), were subsequently identified though they were more often than not perceived as continents. The World in 15 regions shows large spaces such as Africa and Southern America, which are probably perceived as continental objects; while the lack of general knowledge about the internal differentiations of those spaces in Europe could explain this perception. Then we can observe medium spaces that have a strong cultural identity or at least that are perceived as such by the ESPON community: Europe, the China-Japan region, Central America and Middle East. Finally, one can observe smaller regions formed by one or two territories (Greenland, Turkey, the Caucasian states). Those small regions are mainly located between Europe and other regions, illustrating on the one hand the hesitations about their possible inclusion in Europe, and their role as transition areas between Europe and the rest of the World on the other.

Map 16 : ESPON community dividing the World



3.2.2: The limits of the political division of the World

The division of the World into continents is not an objective scientific reality but a social and historical production, a tool of power established by Europe and for Europe during its period of World domination. This realisation thus leads to the question: what would an objective definition of continents based on a scientific criterion of refutability entail?[13]

3.2.2.1. Potential of land area and "geographical continents"

The word "continent" came from Latin *terra continens* which means continuous land and is usually defined as "*any of the World's main continuous expanses of land (Europe, Asia, Africa, North and South America, Australia, Antarctica)*[14]". In scientific terms, such a definition is clearly not sufficiently precise and cannot provide the basis for an objective delimitation of World regions based on the repartition of Land and Sea. The list of continents proposed by dictionaries or atlases cannot however be refuted by any experiment which means that we have moved beyond the field of science. Let us now consider then an alternative approach where what is measured is the potential of a land area located in a given spatial neighbourhood around each point of the earth's surface. We have of course different solutions for choosing the neighbourhood's function, once the parameters of this function have been defined. We believe, moreover, that it is possible to propose a mathematical objective measure of "continentality" associated with a cartographic representation of the main concentrations of land on the earth.

We have chosen a Gaussian neighbourhood span 1000 km (map 17) with which we obtain a representation of the World in 5 to 6 concentrations of land more or less according to the common list but with an important difference: it is impossible to define any such area as Europe! According to the famous quotation of P. Valery "*What is Europe? It is a kind of cap of the Old Continent, a western appendix of Asia*"[15]. We also notice here that the limit between the so-called continents of Asia and Africa is not clear and that the Mediterranean Sea appears to be a kind of "Gulf" between Asia and Africa. The idea that Europe is a kind of 'lost continent' located somewhere between Asia and Africa fits very well with the Hellenistic Myth which localises the wedding of Jupiter and Europe to Crete:

[13] For Popper, a theory is scientific only if it is refutable by a conceivable event. The existence of Europe as a continent is typically a proposal which cannot be scientifically demonstrated though different scientific experiments can be proposed in order to delineate objectively parts of the World. See K.R. Popper (1959). *The Logic of Scientific Discovery*. London: Hutchinson.

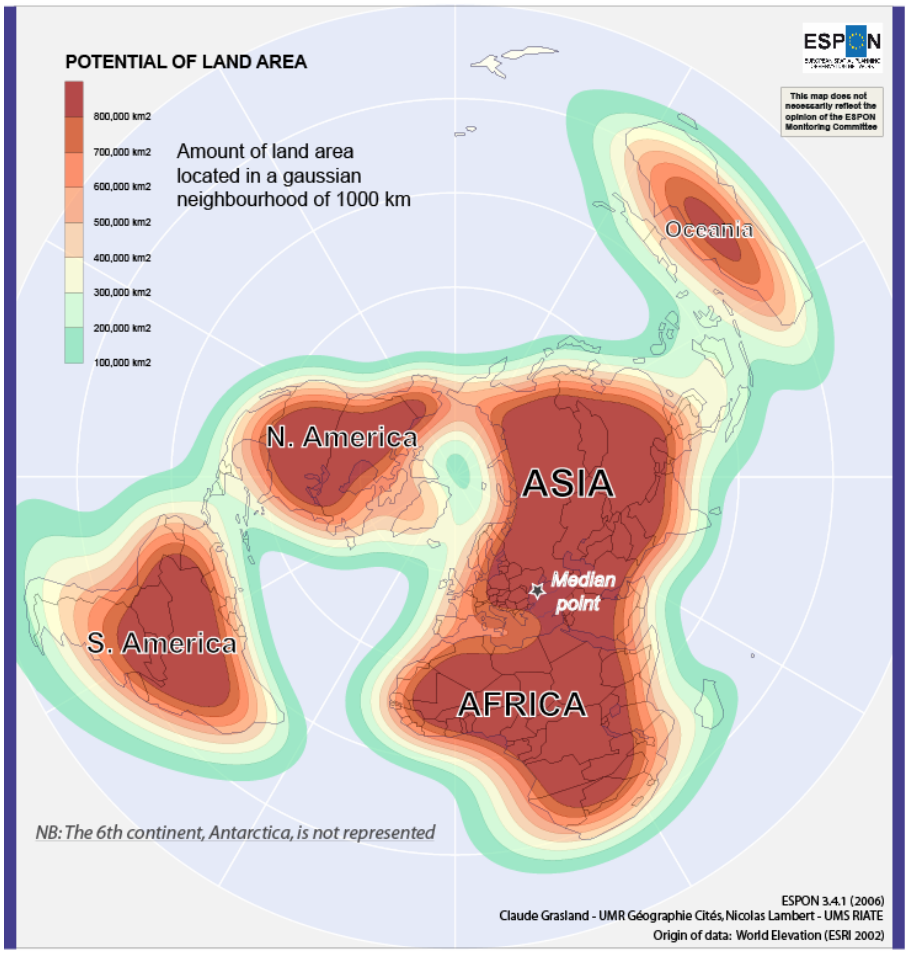
[14] Definition taken from the Compact Oxford English Dictionary (http://www.askoxford.com).

[15] **Valery P., 1919**, « La crise de l'esprit », reprinted in Valery P (1978), *Variété 1 et 2*, Gallimard, Paris, pp. 13-51.

"Europa was the beautiful daughter of the Phoenician king of Tyre, Agenor. Overwhelmed by love for Europa, Zeus, the king of the gods, transformed himself into the form of a magnificent white bull and appeared in the sea shore where Europa was just having fun. The great bull walked gently over to where Europa stood and knelt at her feet. His movements were so gentle that Europa spread flowers about his neck and dared to climb upon his back overcoming her natural fear of the great animal. But suddenly, the bull rushed over the sea abducting Europa. Only then the bull revealed its true identity and took Europa to the Mediterranean island of Crete. There, Zeus cast off the shape of the white bull, and back into his human form, made Europa his lover beneath a simple cypress tree."[16]

As such then, while history seems unable to provide a definitive answer to the eternal question of - "What is Europe?" - the answers provided by geography may not be that palatable either.

Map 17 : Europe as "Lost Continent"



[16] http://europaprojekt.ensign.de/

3.2.2.2. Potential of population and "demographic continents"

Having established that Europe certainly cannot be considered a "geographical continent" at World scale, we now propose to repeat the same type of analysis by considering the distribution of the World population in 1999.

The analysis of the *political distribution* of World population by states (Map 18) indicates firstly the exceptional demographic size of China and India which account respectively for 21% and 16% of the World population. These two demographic giants are followed by a group of large states representing between 2 to 5% of World population: namely, the United States, Indonesia, Brazil, Nigeria, Russia, Japan, Pakistan, and Bangladesh. None of the 29 ESPON states belong to the top 10 of the most important states from a demographic point of view, and the ESPON territory itself appears as a concentration of small and medium-sized demographic units.

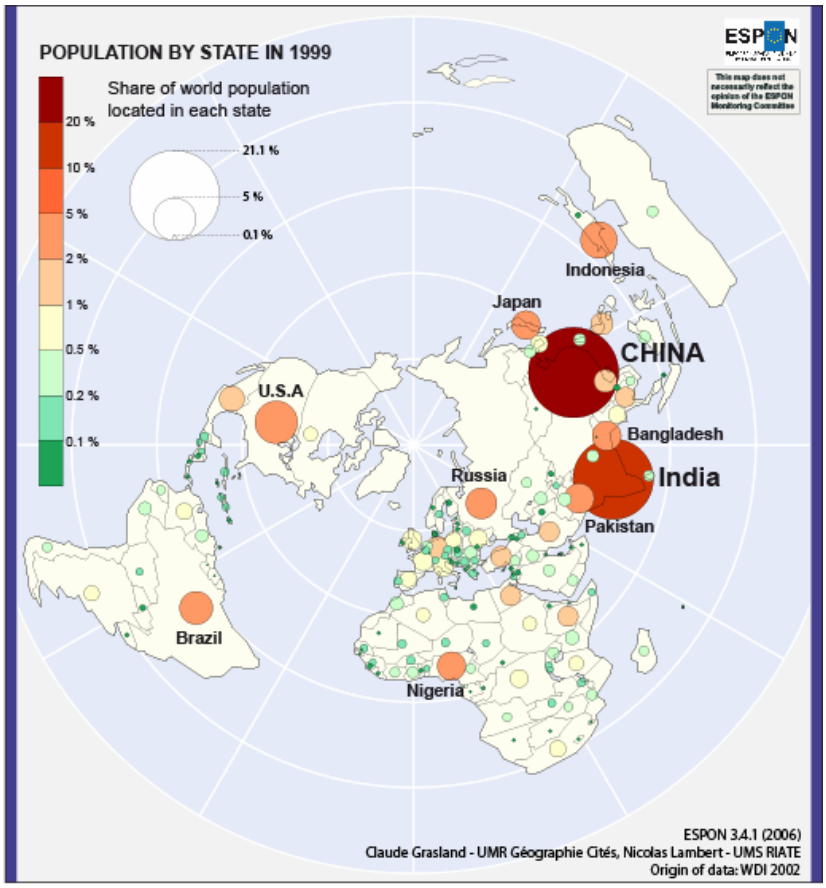
The situation appears completely different however if we analyse the *spatial distribution* of World population in terms of borderless potential[17]. Given the present context of globalisation with the increasing mobility of people and capital, we assume that it makes sense to examine the distribution of population or wealth without referring to the political borders between states. As shown in map 18, World population is most densely concentrated in the two main regions of South Asia and South-Eastern Asia where the peaks of population potential in 1000 km reach 10 to 15% of World population. What is really new, as compared to the state distribution, is the fact that the third peak of population concentration in the World is clearly centred on the territory of the enlarged European Union with a maximum of 6% of World population located in a neighbourhood of 1000 km around Prague. The other peaks of population located in America, Africa and Oceania are clearly less important than the European one.

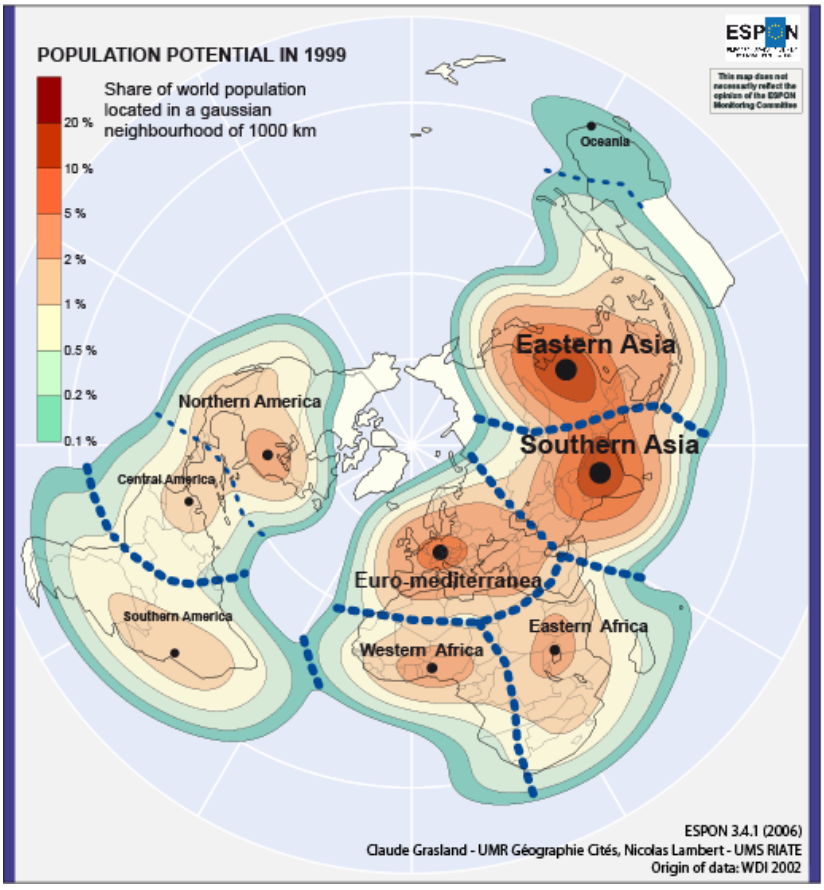
Using the methods of mathematical morphology developed by Matheron & Serra[18], it is possible to derive from the map of population potential a division of the World into regions corresponding to the "water basin" of each peak of population concentration. In the case of the peak of population located in Europe, the limits of the region clearly involve northern Africa, the Middle-East and Western Russia and define therefore a **Euro-Mediterranean continent** from a demographic point of view. This is the first important proof that, from a morphological point of view, the ESPON area is only the core of a wider World region.

[17] We use the Gaussian neighbourhood span of 1000 km applied to the borderless UNEP grid of population, following the methodology explained in **Grasland C., Madelin M., 2001**, The unequal distribution of population and wealth in the World, *Population & Sociétés*, *Mai 2001*, *n° 368*,

[18] **Serra J., 1988**, *Image Analysis and Mathematical Morphology*, London, Academic Press.

Map 18 : Spatial and political distribution of World population in 1999





3.2.2.3. Potential of GDP (pps) and "economic continents"

Following the same methodology as that used in previous sections, we propose now to examine the World distribution of economic resources from two points of view, from a political point of view, particularly as it relates to states) and from a borderless spatial point of view as it relates to potential. An important difference with previous analyses of this type[19] is the choice to use GDP pps here instead of GNP in $ and to use more recent statistics (1999 instead of 1990).

According to the *political division* of the World into states (map 19), the United States of America concentrates, in 1999, the most important share of the World economy according to the criteria of GDP pps (21.8%). They are followed by a second group of big states including China (10.7%), Japan (7.4%) and India (6.3%). But it is only in a third group of medium-sized states that Germany (4.7%), Italy (3.2%), the U.K. (3.1%) and France (3.1%) appear, followed by Brazil (2.8%) and Russia (2.2%). It is true that this classification of economic power would have been different with economic size measured by GNP in $ instead of GDP pps. But in every case the ESPON territory would appear a very fragmented area with national economies of smaller size than their chief competitors in the World.

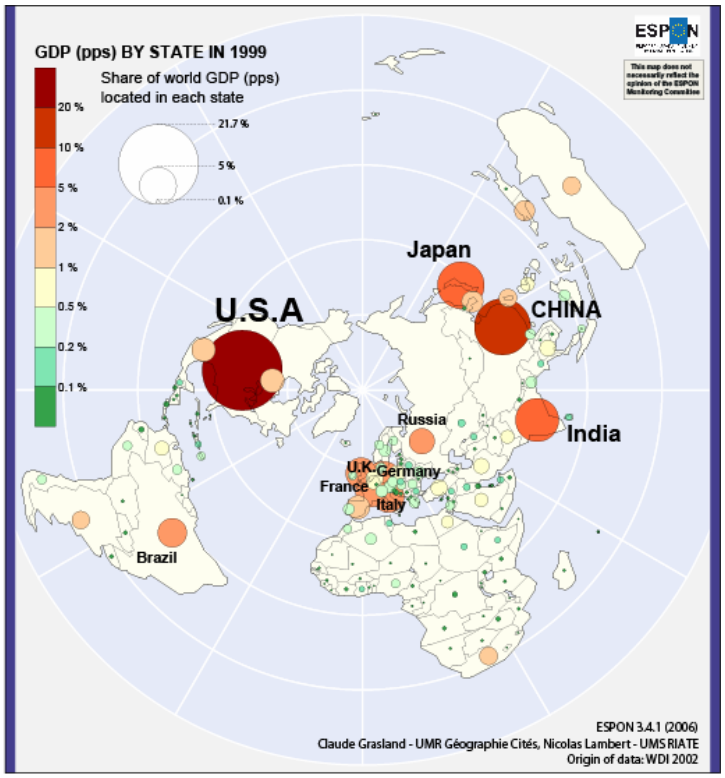
Interest in a *borderless spatial vision* of World economic poles is obvious in the case of ESPON member states (map 19) which are located in the neighbourhood of the greatest peak of economic concentration in the World. This map classically reveals the existence of 3 major economic poles in northern hemisphere (The "Great Triad") and symmetrically three minor poles in southern hemisphere (the "Little Triad"), but it also makes visible the existence of an emerging 7th pole located in Southern Asia, in India. From an economic point of view, these 7 peaks of economic potential are associated with 7 economic regions polarised by economic cores. In the case of the ESPON area, the economic core is clearly located in the western part of the region (which was not the case in demographic terms) while the peripheries are organised in concentric circles to the south and east. Much of Africa (except those states located in the south), the majority of the Middle East and more than half of Russia and the former soviet republics are clearly involved in the potential economic influence area of what can be called **the economic continent of Euro-Africa**.

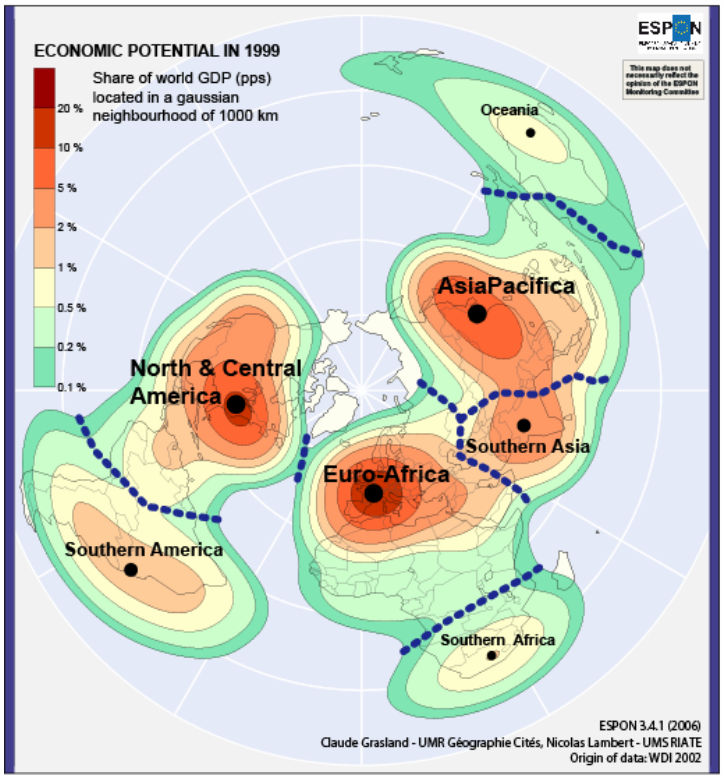
We have however to carefully interpret these delimitations based on accessibility and potential because they define only the existence of **opportunities** for social and economic relations. We have now to verify whether these opportunities are really exploited by flows whether the economic and demographic continents

[19] **Grasland C., Madelin M., 2000**, op. cit.

revealed by this mathematical morphological approach are also functional realities.

Map 19 : Spatial and political distribution of World GDP (pps) in 1999





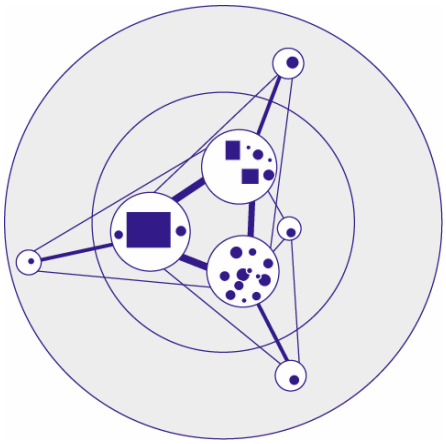
3.2.3: Functional division of the World based on economic and demographic flows

3.2.3.1. Bilateral trade flows 1996-2000: a triadic organisation?

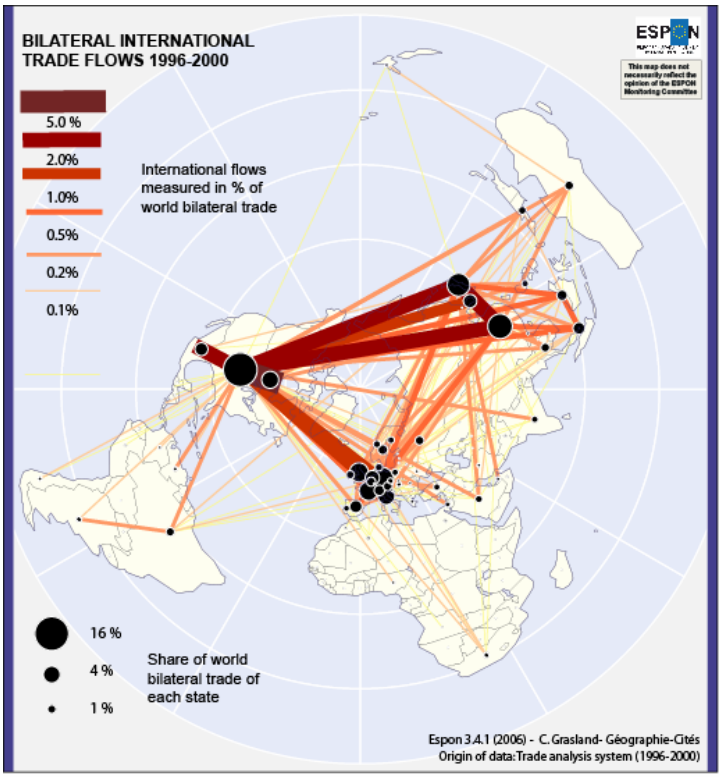
The distribution of major international trade flows (bilateral) between the states of the World during the period 1996-2000 (map 20) does not exactly provide the expected picture of a "triangle" of major flows between each node of the Triad. The major *international* trade flows are indeed influenced by the political division of the World into states. Moreover the different parts of the "Triad" are not equivalent in terms of political fragmentation: one dominant economy in Northern America (USA), two dominant economies in Eastern Asia (Japan and China), at less four dominant economies in Western Europe (Germany, the UK, France, and Italy). As a consequence, this first map indicates the clear domination of the USA which is embedded in 6 out of the 10 major bilateral international trade flows and accounts for 16.0 % of World trade, followed by Germany (8.6%), China (8.5%), Japan (7.2%), the UK (5.1%) and France (5.0%). The important shares of World trade held by Western European states is partly an illusion however reflecting as it does, in the majority of cases, internal EU trade.

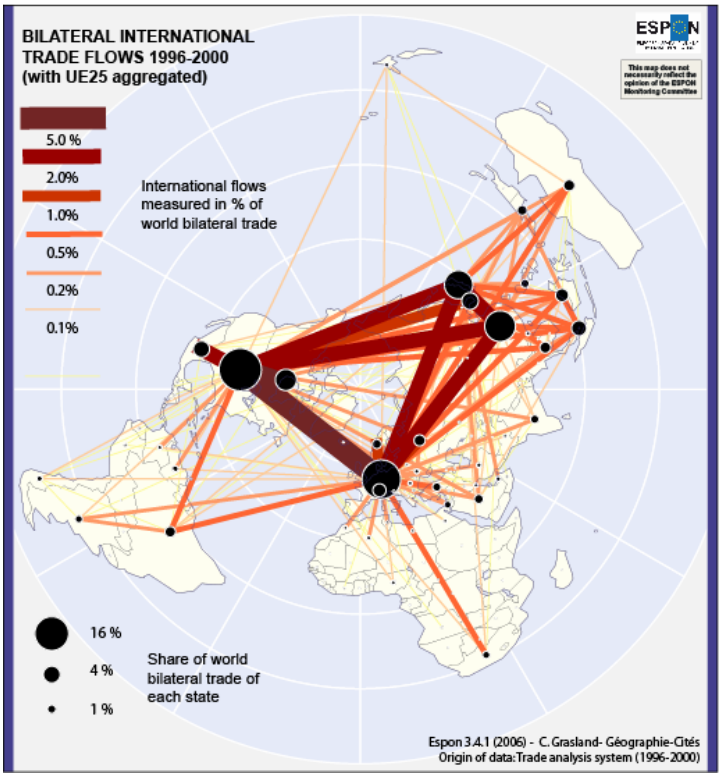
The aggregation of EU25 into a single territorial unit provides a much better view of the organisation of trade flows at World scale (map 20). Despite the fact that the internal trade flows within EU have been removed, the share of World trade of the EU25 (17%) is now comparable to that of the USA (20%) which is advantaged by the fact that its 'internal' trade in the context of NAFTA has not been removed. The duality of Eastern Asia is now clearly visible and the aggregation of China, Japan (and South Korea) into a single unit would produce a perfect "triangle" linking together the three poles of the Triad. Each pole of the Triad has a clear influence on its neighbouring states. In the case of the EU, all of the southern Mediterranean countries are clearly embedded in the EU's direct periphery. Russia is also clearly linked, even if is still strongly embedded in the former Soviet area.

In terms of regionalisation, the World is clearly divided into three areas of influence, each composed of a major northern centre and a minor southern centre. The internal political structure of the major nodes is however somewhat different: showing a Monocentric structure in the case of Northern America (USA), a duo-centric one for Eastern Asia (China and Japan), and a polycentric one in the case of Euro-Mediterranean (Germany, U.K., Italy, France,).



Map 20: Major bilateral trade flows between states of the World (1996-2000)





3.2.3.2 Barriers and regional preferences in trade 1996-2000

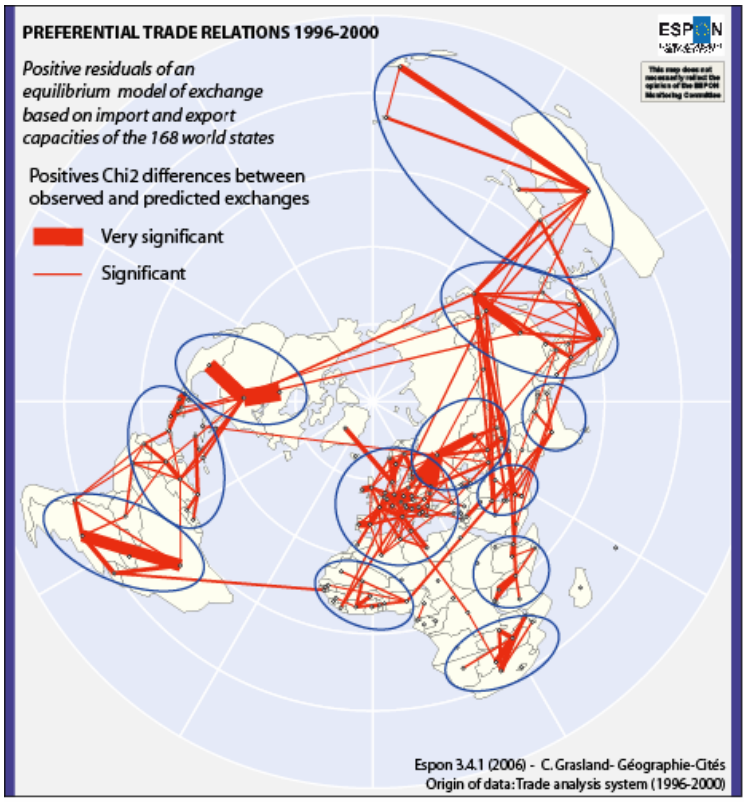
The economic division of the World into three major areas polarised by the centres of the Triad is without doubt a major structure to be taken into account in our proposal of a hierarchical division of the World, and will thus be used as the first level (WUTS1). We can however ask whether, behind this major structure it is not possible to discover regional organisations of a lower level, especially in the peripheral and semi-peripheral areas, which are not well represented on previous maps. We have therefore decided to apply an economic equilibrium model of interaction, which controls the capacity of each state to import and export but does not control geographical distance, in order to define the regional aggregate of states that has more commercial relations than expected thus defining what economists call "natural geographical regions"[20].

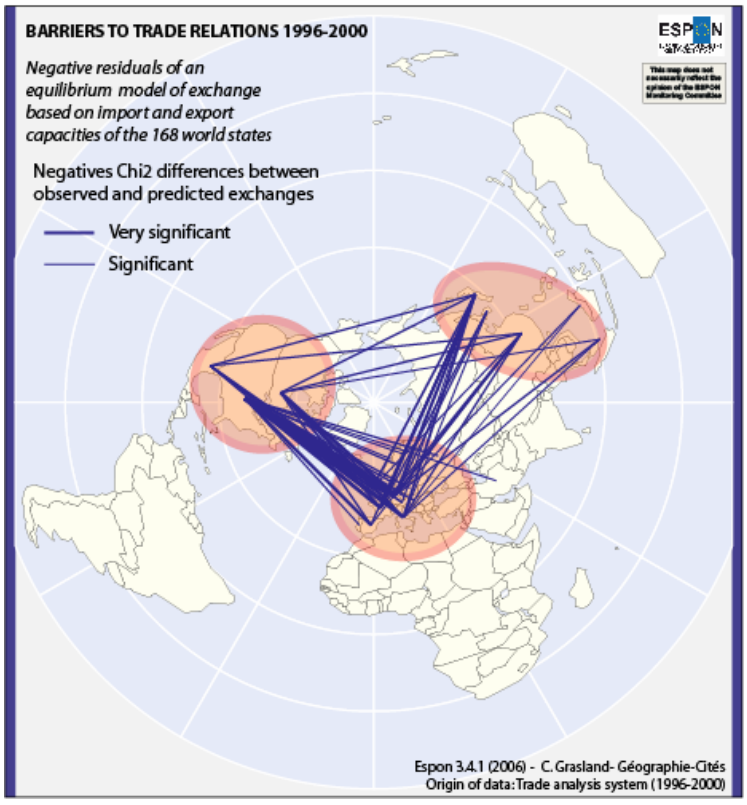
All things being equal in terms of economic size, some states develop clear regional preferences which are revealed by the map of positive residuals (Map 21). Omitting distance in this interaction model helps to reveal how the cost of transportation and other types of historical and cultural proximities influence trade relations between states. At less 12 integrated trade regions can be derived from this analysis, some with clear limits (e.g. Southern Africa) but the majority with overlaps, as in the case of the Euro-Mediterranean area, which in 1996-2000, clearly crossed the area of preferential relations with Russia in Eastern Europe. From these regional preferences, the map also reveals long distance preferential trade relations, especially in the case of relations between the USA and Eastern Asia but also between Eastern Asia and the Persian Gulf. Looking at the negative residuals, we can symmetrically define barrier effects between regions which have a lower level of trade relations than was expected, given their economic size (Map 21). This is obviously the case when we consider trade relations between the European Union, Northern America and Eastern Asia. The cost of transportation and the preferential trade agreement between EU members and associated neighbours is clearly revealed by this map which confirms that globalisation does not mean the "End of Geography" (transport costs) and the end of international regulation (political agreements). The negative residuals are less frequent between Northern America and Eastern Asia. They concern mainly Canada and Mexico which are strongly polarised by the USA and, accordingly, do not develop as important relations with the rest of the World. The USA then clearly has a preferential orientation towards

[20] Double constraint model on the form $\mathbf{F_{ij} = a_i O_i b_j D_j}$ with $\mathbf{F_{ij}}$ = trade flows between state i and state j, $\mathbf{O_i}$ = sum of export from state i, $\mathbf{D_j}$= sum of import from state j , $\mathbf{a_i}$ = constraint parameter for origins and $\mathbf{b_j}$ constraint parameter for destination.

Eastern Asia while barrier effects are clearly discernable in respect of the European Union.

Map 21 : Regionalisation of the World based on trade flows 1996-2000





3.2.4: Homogeneous regions and territorial discontinuities: the spatial dimension of the inequalities of development

We have established in previous sections that the World organisation is strongly defined by the existence of the Great Northern Triad (*Northern America, Western Europe, and Eastern Asia*) which defines a major system of three interlinked centres surrounded by semi-peripheral and peripheral areas. We have also established the existence of 8-10 minor centres which produce local regional integration at another scale (*Oceania, Southern Africa, Southern America, the Persian Gulf, the former Soviet Union, Southern Asia, and South-Eastern Asia*). This vision of the World was based on a borderless approach which analysed the economic and demographic flows in a global way, without considering the existence of national borders and without analysing in detail the spatial pattern of transition between major centres of the World and the peripheral or semi-peripheral areas located all around.

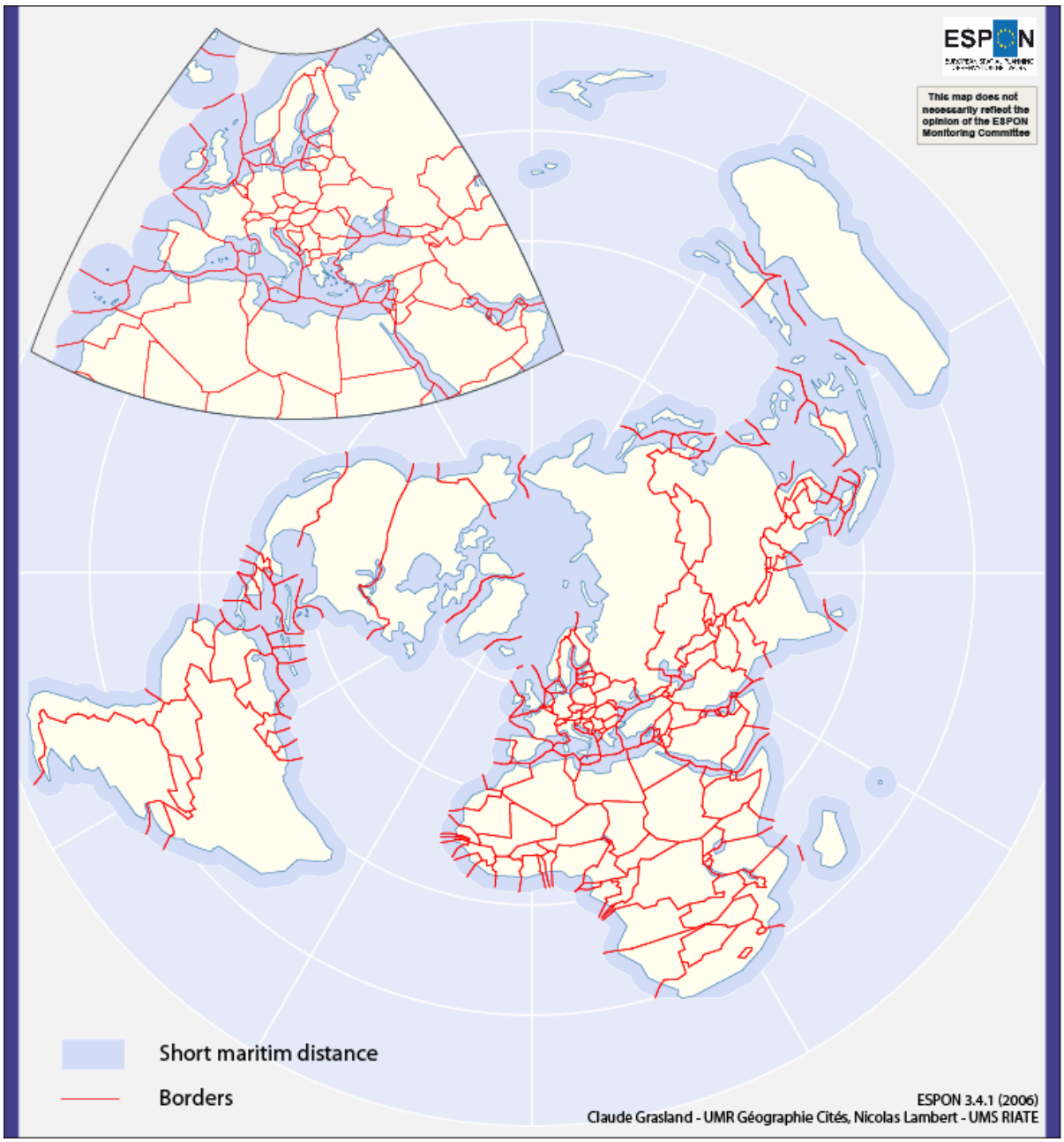
We will now focus on the practical consequence of this major centre-periphery structure in terms of the inequalities of development. In particular, we will analyse whether the spatial transition between more and less developed countries takes the form of a regular gradient (which would imply the existence of continuous spatial diffusion processes of development) or the form of an abrupt transition with spatial discontinuities (which would imply the existence of more conflictual contacts between homogeneous regions of different levels).

One crucial problem for this analysis of discontinuities was the choice of the borders to be taken into account. Indeed, the definition of contiguous states is not really simple (see. FIR and SIR) because some states are connected by a very small border (e.g. Morocco and Spain by Ceuta and Melila, or the UK and Spain by Gibraltar) while others are connected by areas which do not belong to the mainland (e.g. France has a border with Brazil through French Guyana). Moreover, some states exist in close proximity without actually having a common terrestrial border (e.g. Italy and Albania) while other states share a common terrestrial border though their economic and demographic centres are far and the border, which is located in a very lowly populated area (e.g. Algeria and Niger).

We have therefore decided to propose an extended definition of political contiguity through the construction of a buffer area of 450 km which allows us to define contiguity between states separated by short maritime distances (Map 22). On the other hand we have decided to ignore the contiguity between states that do not share a border of minimum 10 km. This theoretical choice has consequences of course for the elaboration of the maps and tables, particularly in respect of the

highest discontinuities of development between the states of the World presented in next sections.

Map 22 : Terrestrial borders extended to short maritime distances



3.2.4.1. Inequalities and discontinuities of Human Development in 2002

Map 23 presents the distribution of the Human Development Index (HDI) in 2002 thus helping to define the relative part of reality and illusion for the so-called North-South division of the World (see Introduction). It is first and foremost obvious that the "north-south" epithet is a poor and indeed largely false geographical description of the spatial pattern of inequalities of spatial development. The distribution is better summarised by a geographical opposition between 3 regions which are more or less distributed according to latitude: very highly developed countries in the temperate zone of the northern hemisphere, less developed countries in the inter-tropical area and relatively highly developed countries in the temperate zone of the southern hemisphere. This division of the World into 3 regions however remains a simplification of reality as there are many exceptions, and as transitions between each zone can often be smooth but are also on occasion quite abrupt.

Table 1 : Major differences of Human development between neighbouring states of the World in 2002

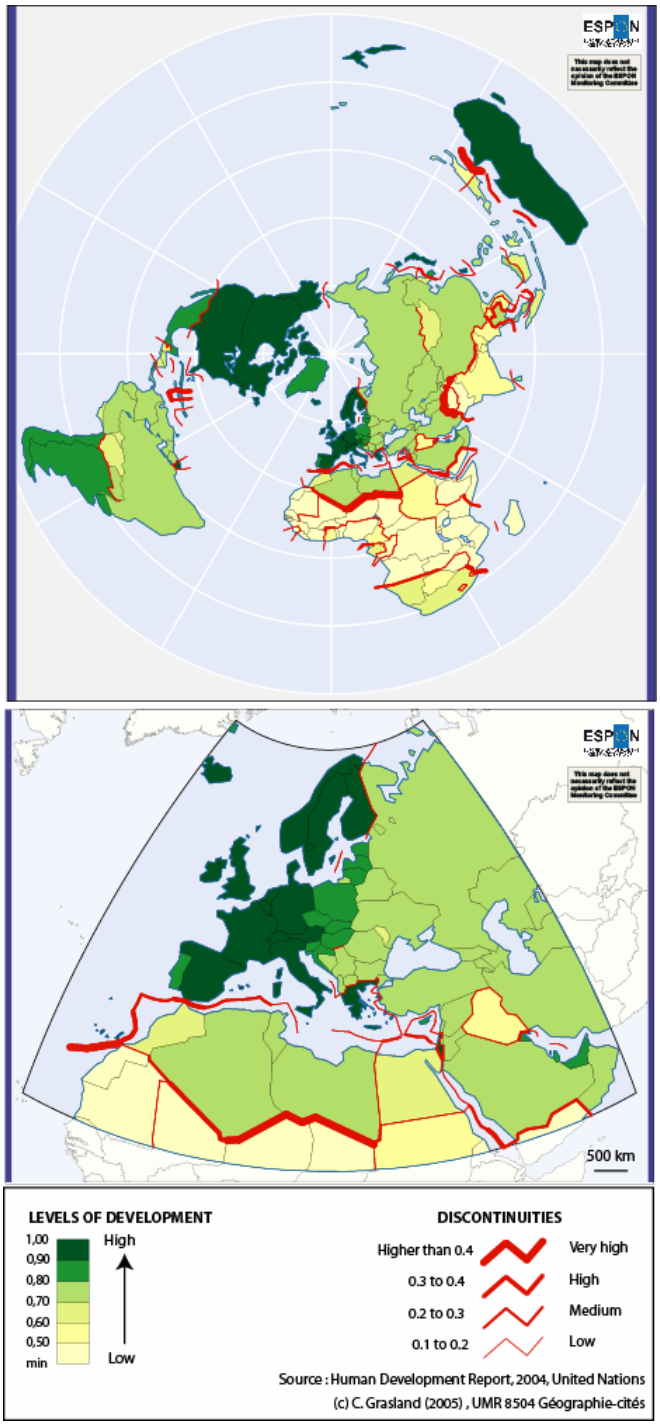
State	HDI	State	HDI	Difference	Rank
Libya	0.79	Niger	0.29	0.50	**1**
Libya	0.79	Chad	0.38	0.42	**2**
Algeria	0.70	Niger	0.29	0.41	**3**
Australia	0.95	Papua New Guinea	0.54	0.40	**4**
Algeria	0.70	Mali	0.33	0.38	**5**
Cuba	0.81	Haiti	0.46	0.35	**6**
Colombia	0.77	Haiti	0.46	0.31	**7**
Spain	0.92	Morocco	0.62	0.30	**8**
Libya	0.79	Sudan	0.51	0.29	**9**
Oman	0.77	Yemen	0.48	0.29	**10**
Saudi Arabia	0.77	Yemen	0.48	0.29	**11**
Dominican Republic	0.74	Haiti	0.46	0.28	**12**
Oman	0.77	Pakistan	0.50	0.27	**13**
Algeria	0.70	West Sahara*	0.44	0.27	**14**
Saudi Arabia	0.77	Sudan	0.51	0.26	**15**
Japan	0.94	North Korea*	0.68	0.26	**16**
Australia	0.95	Indonesia	0.69	0.25	**17**
China	0.75	Pakistan	0.50	0.25	**18**
China	0.75	Nepal	0.50	0.24	**19**
Algeria	0.70	Mauritania	0.47	0.24	**20**

* estimations

The analysis of discontinuities presented on map 23 and in table 1 clearly reveals that the most important differences in development terms do not generally take place between the Triad countries and their immediate neighbours which have generally benefited in developmental terms over the last 25 years. It is rather between this semi-peripheral countries and the less developed part of the World

that such discontinuities are at their most important. This situation is particularly obvious in the case of Europe where the major line of discontinuities in a southerly direction is not located on the southern shore of the Mediterranean Sea but rather on Sahara.

Map 23: Discontinuities of Human Development in the World in 2002

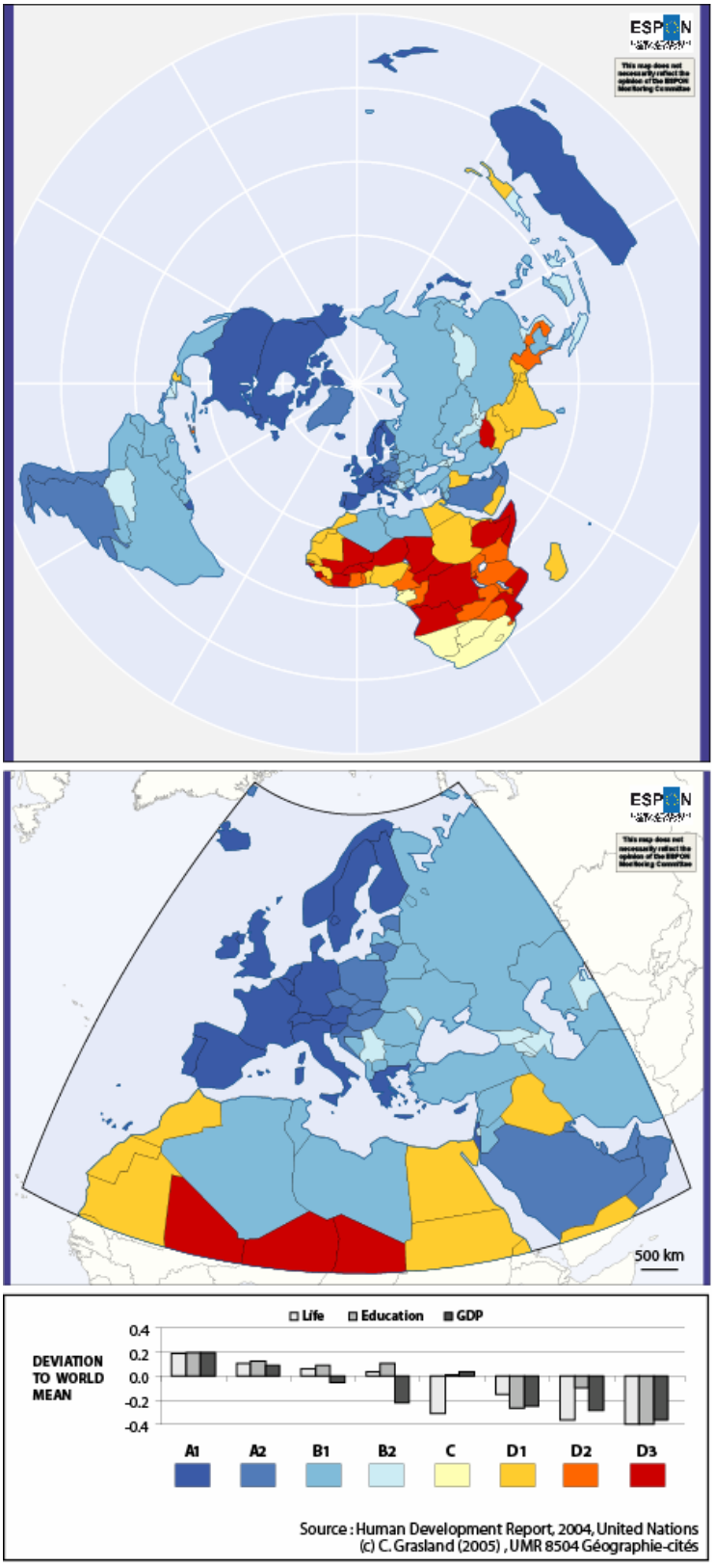


More precisely, we note the existence of a double line of discontinuities: a minor one between the north and south shores of the Mediterranean Sea and a major one between the north and south of the Sahara, with the World record of differences of HDI between Libya and Niger or Chad. In the rest of the World, major discontinuities are also observed between the northern and southern parts of Asia, between Australia and Indonesia or Papua, between Northern and Southern Korea, etc. In some cases, discontinuities are related to political crisis as in the case of Iraq or Haiti. As the HDI is a synthetic index which combines three different components of development (life expectancy, education level, economic level), we have decided to apply a cluster analysis on the 168 states of the World in order to delineate the factors of development and eventually revealing specific combinations (map 24). The resulting typology reveals the existence of 4 types of countries:

Very Highly and Highly developed countries (type A and B) actually cover the majority of the World, although it remains possible to observe differences between countries with very high levels in all criteria (A.1), countries with high levels in all criteria (A.2) and countries with a high level of education and life expectancy but medium economic levels (B.1). In Europe, these 3 types are clearly illustrated by EU15 (e.g. Germany), NMS (e.g. Hungary) and candidate countries (e.g. Romania, Turkey). This type B.1 is also represented in northern Africa (Algeria, Libya, and Tunisia) and is observed in most countries of Latin America and in China. The type B.2 is characterised by a very low economic level combined with relatively high levels of education and life expectancy. It can be especially observed in former socialist countries (Serbia, Moldova, Armenia, Vietnam, and Outer Mongolia) and some other countries subject to recent economic crises (Peru, Indonesia).

Medium and Less developed countries (type C and D) are mainly located in Africa and southern Asia, with the addition of some of the countries of Central America. The case of countries from type C with relatively high levels of education and economic development, but a dramatically low level of life expectancy due to the impact of AIDS since 1985 presents a very specific situation. Most countries of southern part of the African continent have experienced reductions in life expectancy of more than 10 years and are terribly hampered by the economic and social consequence of this tragedy. The countries with medium development are differentiated according to their relative advantages in education (type D.2, characteristic of eastern Africa) or life expectancy (type D.1 characteristic of India and some Muslims countries). The worse situation of a very low level of development for all criteria (type D.3) is characteristic of sub-Saharan African countries without access to the sea (e.g. Niger, Chad) or countries subject to recent political crisis or wars (Afghanistan, Liberia).

Map 24 : The components of Human Development in the World in 2002



3.2.4.2. Discontinuities of GDP per inhabitant (pps) in 1996–2000

The research developed in the context of ESPON on the measurement and the cartography of economic discontinuities between neighbouring regions (Cf. ESPON 3.1, FR) revealed that results can vary according to the criteria used between neighbouring regions. The same is of course true at World scale and table 2 indicates that the highest economic discontinuities are not the same in absolute or in relative terms. In the first case, major discontinuities take place between the cores of the Triad and their immediate neighbours (e.g. USA/Mexico or Norway/Russia). In the second case, discontinuities can also appear between less developed countries (e.g. Congo/Zaire or Malaysia/Cambodia).

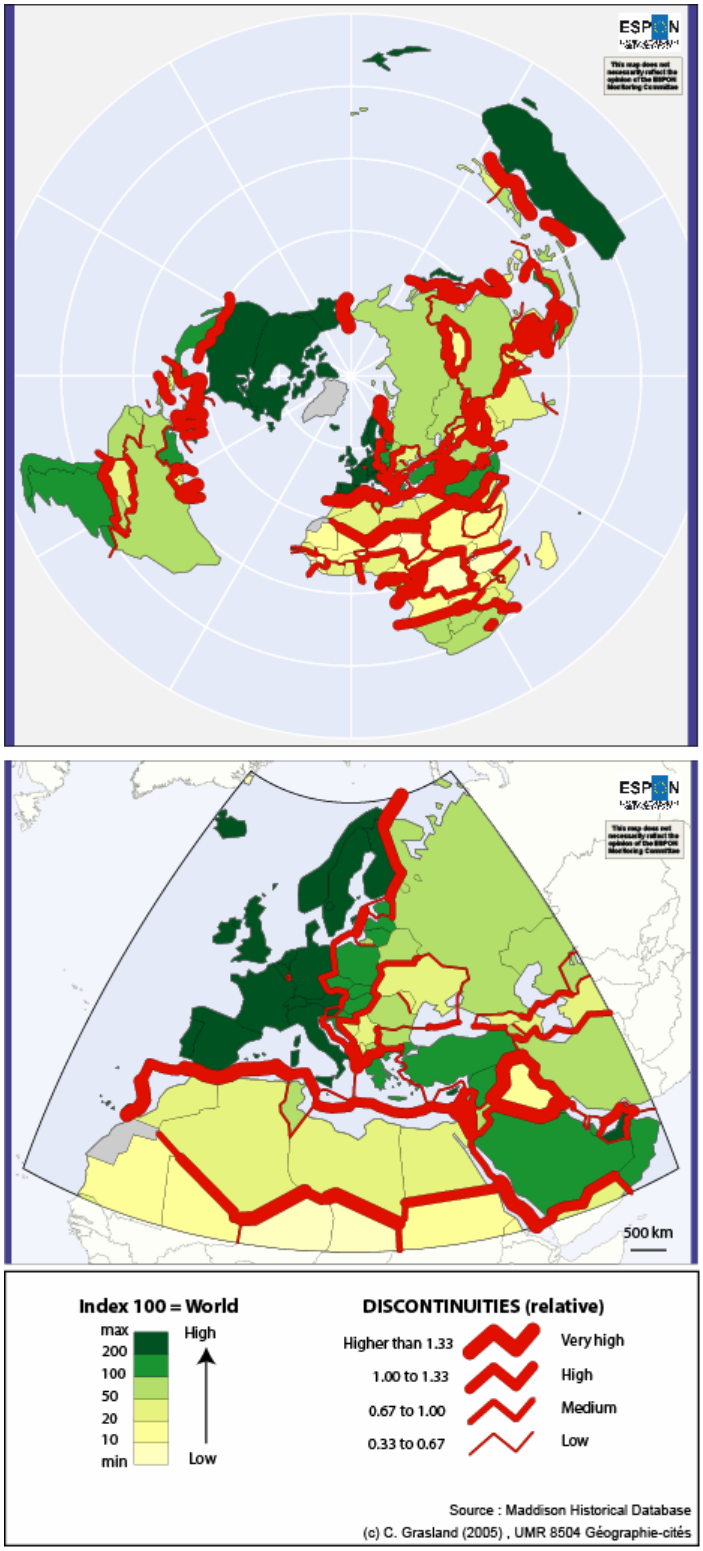
Table 2 : Major differences of GDP per capita pps 1996-2000 between neighbouring states of the World in 2002

rank	Highest absolute differences			Highest relative differences		
	State *i*	State *j*	X*i*-X*j*	State *i*	State *j*	X*i* / X*j*
1	U.S.A.	Cuba	24400	Japan	North Korea	17.4
2	U.S.A.	Russia	21900	U.S.A.	Cuba	12.0
3	U.S.A.	Mexico	19900	Australia	Papua N.G.	11.5
4	Japan	North Korea	19500	South Korea	North Korea	10.9
5	Norway	Russia	18900	Kuwait	Iraq	9.9
6	Australia	Papua N.G.	18500	Saudi Arabia	Sudan	9.2
7	Singapore	Indonesia	17500	Iran	Afghanistan	8.6
8	Australia	Indonesia	17000	Congo	Zaire	8.5
9	France	Suriname	16600	Saudi Arabia	Eritrea	8.2
10	Japan	Russia	16000	Saudi Arabia	Iraq	7.6
11	Italy	Albania	15600	Italy	Albania	7.4
12	Italy	Serbia/Mont.	15600	Italy	Serbia/Mont.	7.4
13	Italy	Bosnia	15300	Malaysia	Cambodia	7.3
14	Italy	Algeria	15300	France	Suriname	7.3
15	Luxembourg	Germany	14400	Bahamas	Cuba	7.2

The cartography of relative differences was preferred for map 25 which confirms and completes the previous analysis of the discontinuities of HDI. On the one hand, we observe that important economic discontinuities can be seen all over the World and not only between the richest countries and their neighbours. On the other hand, the map reveals that discontinuities are organised as "concentric lines" around the major peaks of wealth and define different aureoles which help to clarify the delimitation of semi-peripheral regions. It is very clear in the case of European Union, which is surrounded by a double line of discontinuities to the east and to the south. The same situation can be observed to the south of U.S.A. where Mexico is clearly in an intermediate position, lower than USA but much better off than the Central American countries. The same scheme could be observed in Eastern Asia if regional data was used in China in order to differentiate the coastal area (integrated

into World economy) and the inner continental regions which currently remain somewhat less developed.

Map 25 : Discontinuities of GDP / inh. in the World in 2002



3.2.4.3. Dynamics of economic and demographic growth (1950 –2000)

The analysis of social (HDI) and economic (GDP/inh pps) inequalities which has been presented in previous sections has revealed the existence of strong lines of discontinuities between the central and peripheral regions of the World. More precisely, it has demonstrated the existence of concentric lines of discontinuities around the poles of the Triad, defining intermediate zones of semi-periphery in terms of economic and social development. These inequalities are not static realities however and, as such, it is important to evaluate their dynamic in the medium term.??

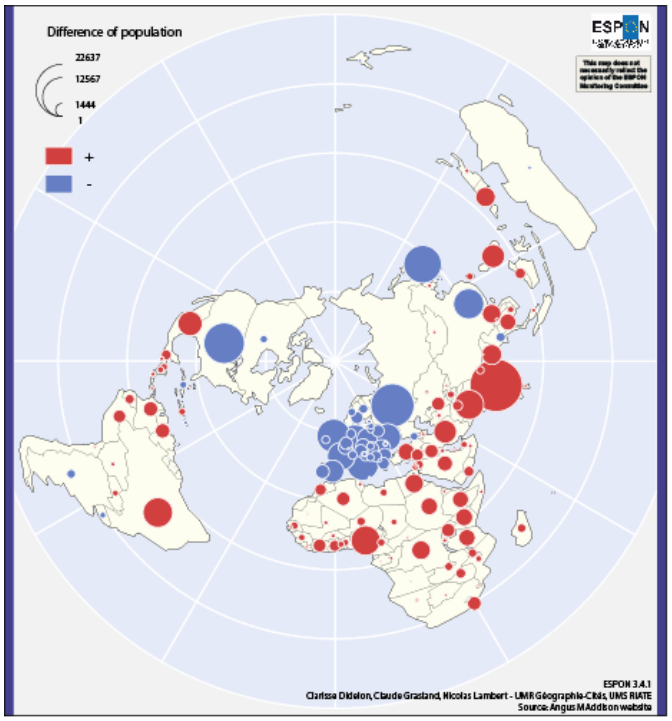
A detailed analysis of the evolution of population and GDP pps of the states of the World over the last 50 years (FR- Vol. II) reveals that the analysis of GDP *per capita* is not sufficient for a sound evaluation of the real comparative advantages of states in terms of World competition. For example, the stability of the level of GDP *per capita* of a given state (as compared to the World mean) can be associated either with (1) a joint stability of its share of population and GDP (2) a joint decline of both factors (3) a joint increase in both factors.

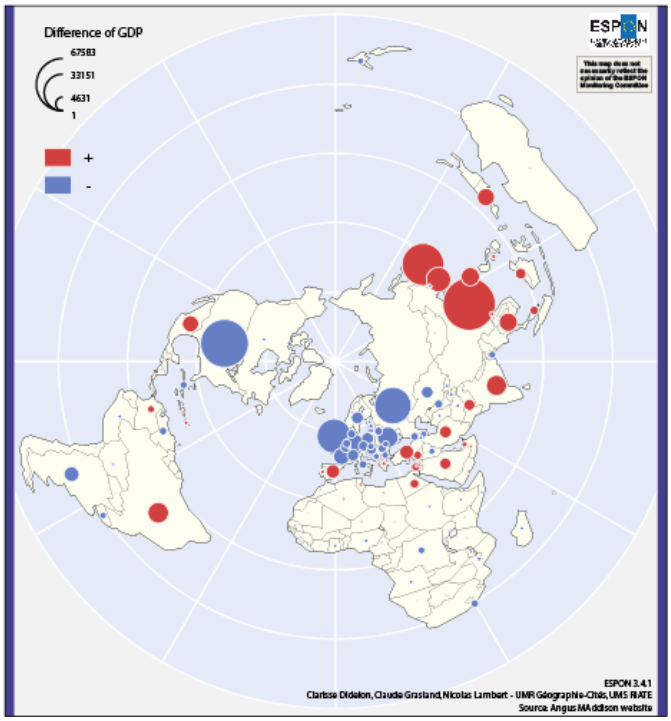
When we analyse the evolution of the share of World population and World GDP (pps) of each state of the World (Map 26), it is clear that very important changes have occurred over the last 50 years with a global transfer of population and economic production from the traditional centres of the Triad to their peripheries. The fact is that the USA, Canada, the European Union and the states of the former Soviet Union have experienced lower rates of increase in terms of their population and their GDP than the rest of the World. Their population and wealth did not decrease in absolute terms, but their share of the global World was strongly reduced in favour of other countries such as China (for GDP) or India (for population).

A synthetic typology of the evolution of the share of World population and GDP of the various states of the World reveals differentiated patterns (map 27). The centres of the Triad have generally experienced a joint decline in their shares of GDP and population. As the reduction was generally equivalent or higher for population than for GDP however, they maintained or indeed even increased their *relative* level of GDP per inhabitant (*type C and D*). The states located in their immediate periphery however experienced rather the opposite with a joint increase of their share of population and GDP in the World. Even if their GDP *per capita* did not necessary increase more quickly than the rest of the World, their economic and demographic size has clearly increased. The states in this situation (*type A and B*)

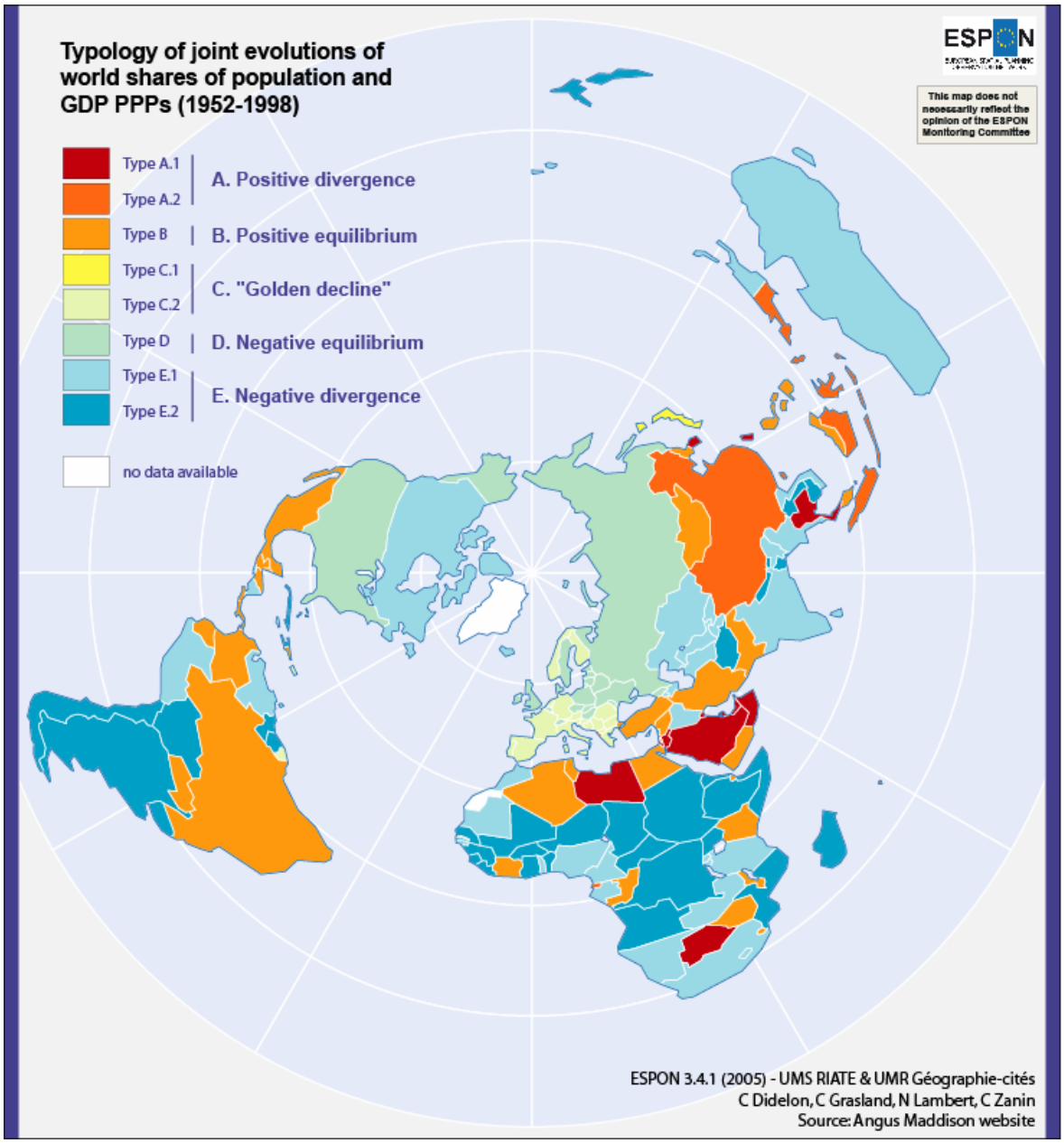
define a "Golden ring" of growth from Mexico to Brazil, Northern Africa, the Middle East and South-East Asia. It is generally only in the deep peripheries, located at longer distance from the Triad that the worse situation of an increase in the share of population associated with a decrease in the share of GDP was manifest (*type E*).

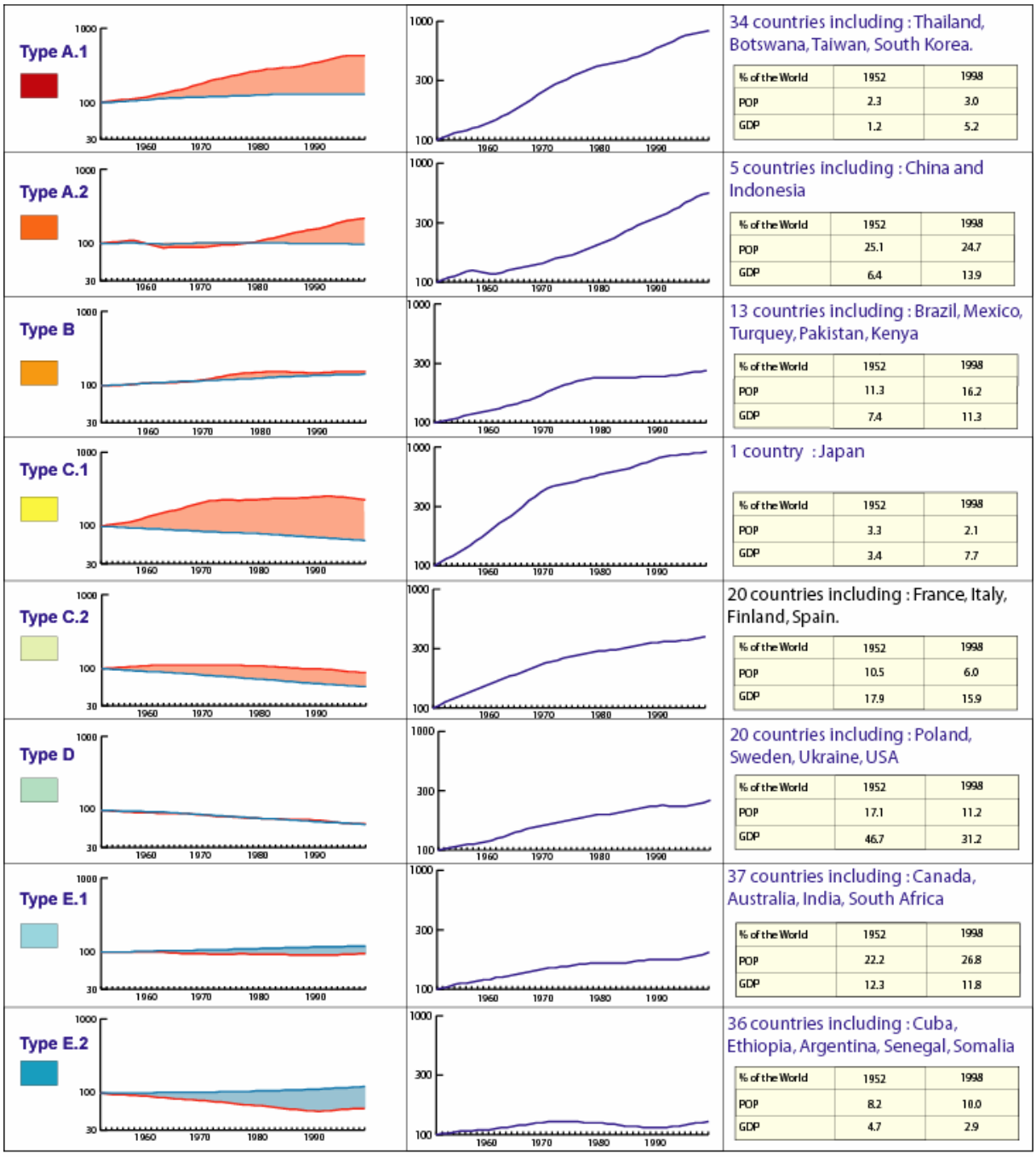
Map 26: Evolution of World share of population and GDP (1952-1998)





Map 27 : Joint evolution of the share of the World population and GDP PPS from 1950-54 to 1996-2000




Type A.1
34 countries including : Thailand, Botswana, Taiwan, South Korea.
% of the World 1952 1998
POP 2.3 3.0
GDP 1.2 5.2
Type A.2
5 countries including : China and Indonesia
% of the World 1952 1998
POP 25.1 24.7
GDP 6.4 13.9
Type B
13 countries including : Brazil, Mexico, Turquey, Pakistan, Kenya
% of the World 1952 1998
POP 11.3 16.2
GDP 7.4 11.3
Type C.1
1 country : Japan
% of the World 1952 1998
POP 3.3 2.1
GDP 3.4 7.7
Type C.2
20 countries including : France, Italy, Finland, Spain.
% of the World 1952 1998
POP 10.5 6.0
GDP 17.9 15.9
Type D
20 countries including : Poland, Sweden, Ukraine, USA
% of the World 1952 1998
POP 17.1 11.2
GDP 46.7 31.2
Type E.1
37 countries including : Canada, Australia, India, South Africa
% of the World 1952 1998
POP 22.2 26.8
GDP 12.3 11.8
Type E.2
36 countries including : Cuba, Ethiopia, Argentina, Senegal, Somalia
% of the World 1952 1998
POP 8.2 10.0
GDP 4.7 2.9
Evolution of population
Evolution of GDP PPPs
Relative decrease of GDP/inh.
Relative increase of GDP/inh.
Evolution of GDP/inh.

3.2.4.4. Demographic potentialities for the XXIth century

The analysis of *past* trends has revealed a relatively simple pattern of diffusion in terms of economic and demographic growth from the centres of the Triad to a "golden ring" of growth located in their immediate neighbourhood. What then of the *future*? It is always difficult to propose scenarios of future spatial trends at the World scale with recent history providing many cruel examples of predictions which proved to be erroneous. One of the best examples here is the famous report on the "Limits to Growth" published by the Club of Rome in 1972, which predicted a dramatic divergences of all factors (energy, population, economy, food) at World scale and proposed as the only solution a "halt to growth".[21] Benefiting from the work done in the context of the ESPON 3.2 project (TIR), we propose at least to analyse one crucial prospective parameter which is the Index of Sustainable Demographic Development (ISDD) defined as the combination of the median age and the life expectancy of a population. The ISDD is based on the assumption that population ageing is not necessary a problem if life expectancy is growing at the same rhythm. In this case, the "remaining life" of a population is maintained at the same level. It is also based on the assumption that "remaining life" is an important characteristic of states with higher opportunities for social and economic development.

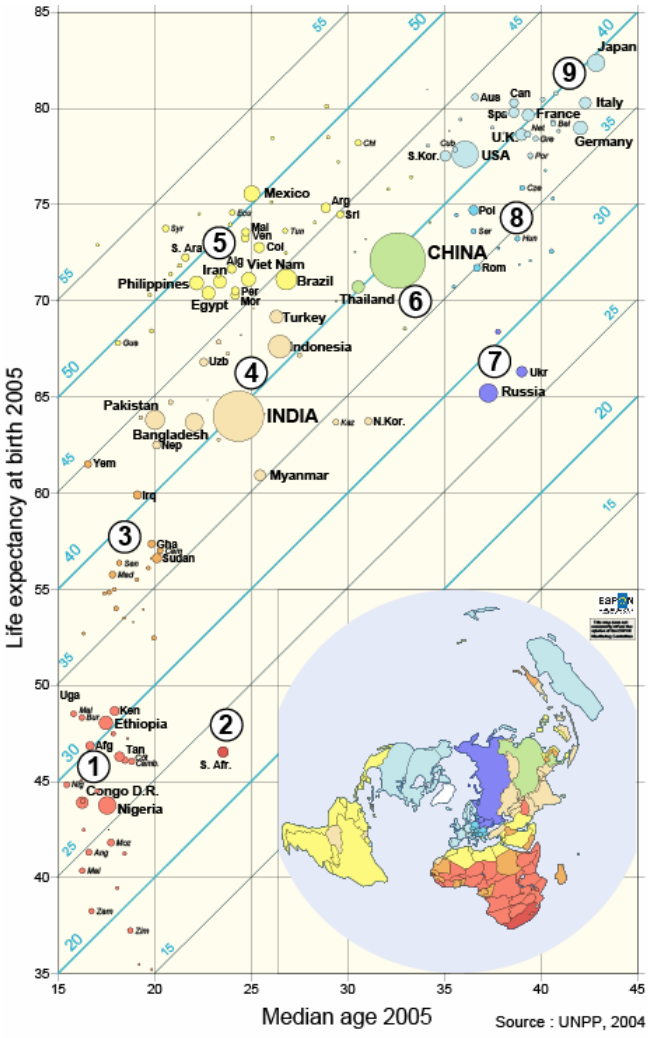
Looking at the typology presented in map 28, it is clear that the states located in the "Triad" (*type 9*) are actually characterized by a combination of important ageing and important life expectancy, thus producing a medium value of ISDD. The historical trajectories indicate that this situation will probably evolve negatively if migrations of the younger population are not developed in order to reduce ageing. Russia, the Ukraine and Belarus are characterized by an important trend towards ageing without important progress on life expectancy, which defines a very low level of ISDD (*type 7*). East central Europe presents something of an intermediate situation (*type 8*).

The states located in the periphery of the Triad actually present an excellent demographic situation with a very high level of ISDD due to the recent growth in life expectancy combined with a low level of ageing. This is particularly true for states located in Latin America, northern Africa and the Persian Gulf (*type 5*) where the difference between median age and life expectancy can be greater than 50 years.

[21] The irony of this example is that most authors criticized the pessimistic conclusion of this report in the 1990's when economic growth came back and when population increases appeared to have been much lower than expected. But actually, in the context of the potential risk of an oil crisis, many authors are now asking if, after all, there were not some truth in the Club de Rome's predictions after all. See **Matthew R. Simmons, 2000**, *Revisiting The Limits to Growth: Could The Club of Rome Have Been Correct, After All?* , http://www.energybulletin.net/1516.html

The situation is not so good in China or Thailand (*type 6*) where an intensive policy of birth control developed in the 1970's produced a significant reduction in birth rates and consequently saw an important ageing of population, but one which was not balanced by equivalent progress in terms of life expectancy. The rest of southern Asia (*type 4*) presents something of an intermediate situation here with lower ageing than in China but lower life expectancy than in America. The countries of Africa are actually characterized by low levels of ISDD because populations are young but with low (*type 3*) or very low (*type 1*) life expectancy. Southern Africa is a specific case related to the high incidence of AIDS (*type 2*). The situation is however evolving, and we can imagine that states actually in types 1-2-3 will evolve into type 4-5-6 which themselves will evolve towards types 8-9. Demographic factors evolve slowly but with powerful consequences in the long run.

Map 28: Demographic potentialities for the XXIth century



(c) Grasland C., UMS RIATE &UMR Géographie-cités, 2006

3.3: WORLD UNIFIED TERRITORIAL SYSTEM (WUTS)

3.3.1: Introduction: from NUTS to WUTS …

The analysis of the position of Europe in the World is realised through the compilation of statistics elaborated at the state level. But the definition of the state is not clear, and one of the biggest challenges that this ESPON project has had to face (See: the FIR, and the elaboration of a precise list of 168 states which represent a minimum of 1/10 000 of the population, GDP or area of the World). This list of 168 states provides a clear basis for data collection in a harmonised way, all states being identified by their 3-digit ISO code (like *HUN* for Hungary or *NZL* for New Zealand).

Having secured the collection of elementary data in an harmonised way, we then started to build a more ambitious tool with the elaboration of an harmonised hierarchical system of World division, entitle, **WUTS** (*World Unified Territorial System*) which is directly inspired by the **NUTS** (*Nomenclature of Territorial Units for Statistics*) created by Eurostat[22] more than 25 years ago in order to provide a single uniform breakdown of territorial units for the production of regional statistics for the European Union.

Many divisions of the World into "regions" (clusters of states) are actually used by international organisations, either private (transnational firms) or public (UN agencies) but the case study that we have developed on this topic clearly demonstrates the great variety of solutions which are actually proposed, making it impossible to use any of them as a reference point for ESPON work. Moreover, it is very clear that each proposal for the division of the World into regions implies the elaboration of a *"Weltanschauung"* (*vision of the World*) which is not neutral and has a strong influence on political decisions.

Benefiting from the fact that a preliminary elaboration of World regions had already been proposed in the context of project ESPON 3.1 Integrated Tools, we decided to further elaborate on this in ESPON 3.4.1. In particular, a revised version was produced and a more general proposal of WUTS organised into 5 hierarchical levels, from the level of States (WUTS 5) to the level of the World (WUTS 0), produced. The different approaches to researching such questions developed in the context of the ESPON 3.4.1 project on the regionalisation of the World (see. part A.1) convinced us that one level of regionalisation was not sufficient and that corrections

[22] http://europa.eu.int/comm/eurostat/ramon/nuts/introduction_regions_en.html

had to be undertaken in respect of the preliminary attempt to delimit regionalisation undertaken in the context of project ESPON 3.1.

The WUTS system which is presented in this final report is not intended to be a perfect, or indeed, definitive proposal of World regionalisation and as such it is clear that it suffers from certain limitations:

- **Many regionalisation criteria are possible,** from a thematic and conceptual point of view (see. A.1) while their results are sometimes contradictory. As a result, it is always necessary to make choices or compromises between alternative solutions.
- **The availability of data at the World scale** limits dramatically the choice of criteria in terms of regionalisation. For example, the fact that trade flows are more easily available and more complete than migratory flows has certainly influenced the results of the regionalisation proposed in this report and explains why the centre-periphery model plays a predominant role in the elaboration of the results.
- **The focus on *a*real division** rather than on networks and the archipelago of World cities is also a questionable choice which is explained by the domination of database elaborated at the national level. With a good database on cities of the World, we would certainly have proposed a different approach to the division of the World.
- **The lack of infra-national data** has also hampered our work as it obliged us to consider each state *as a whole* despite the existence of important regional differences. It is not a real problem for small states but it is an important issue in the case of continental states like Russia, the USA, Canada, China, Brazil, Australia or India. In the case of China, it is obvious that we should have split the territory into different regions from the very developed provinces of the pacific coast to the lagging regions of the interior.

Despite these limitations however, we hope that the WUTS system will prove in future to be a useful tool for European Union policymakers, and as such will be more useful than the usual delimitations of regions elaborated by the UN or other organisations. Indeed, **this division of the World has been elaborated from an ESPON perspective** which leads us to identify regions of interest for Europe which could be considered as not relevant in other part of the World.

3.3.2: the World in 3 Global Regions (WUTS1)

The level WUTS1 (map 29) proposes a division of the World into three "Global Regions" clearly based on the economic model of the Triad. At this level, we assume a vision of the World which is based on the classical "Centre-Periphery" model and where the delimitations are mainly based on economic criteria like trade flows or Foreign Direct Investment flows.

- **Euro-Africa (W1)** is the part of the World which is mainly polarised by Western Europe in economic terms and also in terms of accessibility. The preliminary results of project EIW produced in the context of ESPON 3.1 demonstrate clearly that in terms of trade flows (1996-2000) and in terms of air flows (2000), we can see that the influence area of Europe covers a wide area from Vladivostok (Russia) to Cape Town (Southern Africa).
- **The Americas (W2)** is the part of the World economically and politically dominated by the influence of United States or which, at least, is considered as such with the imposition of the "Monroe doctrine" (1823) and particularly by the end of the 19th century, by which time the United States became able to effectively enforce it..
- **Asia-Pacifica (W3)** is the remaining part of the World which cannot be considered as polarised by one centre but rather by an oligopoly of developed (Japan, Australia, Southern Korea) and developing (China, India) countries. This area fits with the new delimitation of ASEAN which is now actually enlarging towards India.

Table 3 : Size of the 3 World global regions (WUTS1)

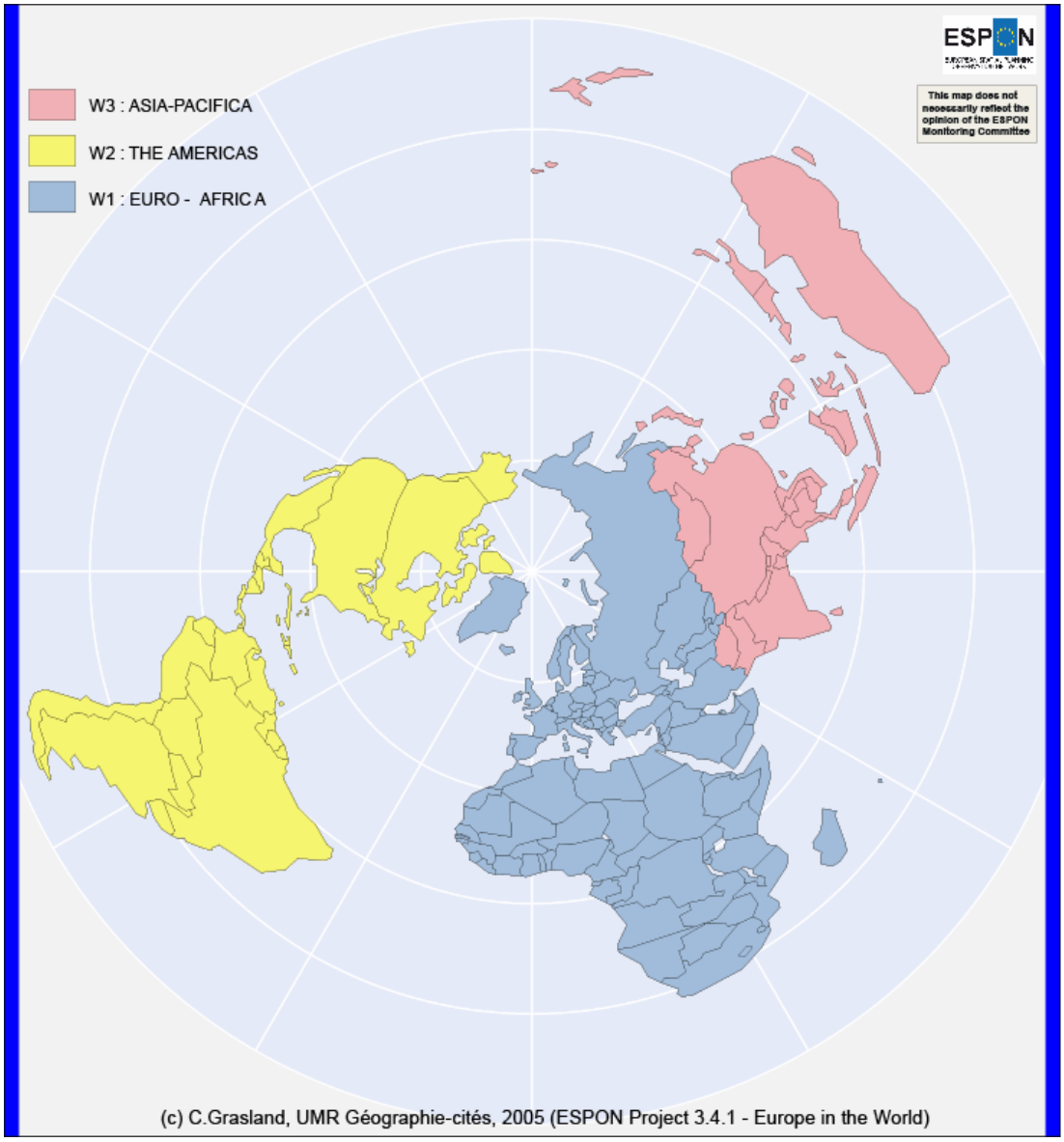
Code	Name		SUPTO	SUPAG	POPTO	POPUR	GDPPS	CARBO
W1	**Euro-Africa**	113	47.8	41.1	30.3	35.7	34.3	35.9
W2	**The Americas**	29	29.9	26.1	13.7	22.1	32.1	32.0
W3	**Asia-Pacifica**	26	22.3	32.8	56.0	42.2	33.6	32.1
W	**World**	168	100	100	100	100	100	100

Nbstate	Number of states of the ESPON database
SUPTO	Surface area (sq km), 1999, (AG.SRF.TOTL.K2)
SUPAG	Land use, arable land (sq km), 1999, (AG.LND.ARBL.HA)
POPTO	Population, total (inh.),1999, (SP.POP.TOTL)
POPUR	Population, urban (inh.), 1999, (SP.URB.TOTL)
GDPPS	GDP, PPP (current international $), 1999, (NY.GDP.MKTP.PP.CD)
CARBO	CO2 emissions (t), 1999, (EN.ATM.CO2E.KT)

Source: World Development Indicator 2002, 2003, + Estimations of Project ESPON 3.4.1.

This division of the World into global regions is certainly not perfect and can be further improved. But it has the great statistical advantage of proposing a simple view of the World into three main areas of equivalent economic size, each representing more or less one third of the World's GDP and of the World's emissions of Carbon Dioxide at the beginning of the 21st century. Differences are more important in geographical terms (larger area of Eurasia) or in demographic terms (larger population of Asia-Pacifica) but it is certainly the best compromise that can be achieved at this scale (table 3). An interesting characteristic of Euro-Africa is its significant political divisions (113 states) as compared to the Americas (29 states) and Asia-Pacifica (26 states).

Map 29: The World in 3 global regions (WUTS1)



3.3.3 The World in 7 Macro Regions (WUTS2)

The WUTS2 level (Map 30) proposes a division of the World into 7 macro regions which displays more homogeneous areas inside each of the previous global regions. The level of economic development is a major criteria for this second level of division (division of Asia-Pacifica in two parts) but other criteria are also taken into account such as language (Latin America), common history (Europe and Northern Asia, Southern Mediterranean and eastern Asia) or integration zone (Northern America). As it is impossible to combine all criteria without producing a multiplication of regions, the results must necessarily be seen as a compromise where many choices could be further discussed by the ESPON Monitoring Committee and improved by future researches developed in ESPON II.

Concerning the division of the global region of Euro-Africa (W1) into 3 macro regions, we took into account the results of the survey on the "*Weltanschauung* of the ESPON community" when we established the limits of "Europe and Northern Asia" (W11) reflecting that which is commonly accepted by the majority of ESPON members in their subjective delimitation of Europe. Russia and Turkey[23] were involved in this macro region because, historically, they have, perhaps since the Middle Ages, been strongly linked with the dynamic of European development. The elaboration of a specific area for Sub-Saharan Africa (W13) appears obvious according to all demographic, social and economic criteria. While the creation of a specific area for Western Asia and Northern Africa (W12) appeared rather more as a default choice than as an attempt to isolate a so-called 'cultural area', based on religious criteria like the "greater Middle East" in the United States. In our opinion, the identity of this area is not only cultural but also demographic, economic and social with intermediate levels between Europe and Sub-Saharan Africa.

In terms of size at World scale (Table 4), the 7 macro regions are relatively equal in terms of their surface area (more or less 10-20% of the World for each) which is interesting for cartographic reasons alone. They are however very different in terms of all other economic and demographic criteria. Once more then, we note the extraordinary political fragmentation of the macro regions located in Europe and its neighbourhood as compared to those of the rest of the World.

[23] We discussed an alternative solution which saw Turkey relocated into region W12, making possible the elaboration of a complete cluster of "South and East Mediterranean countries" at a lower level (W121). But doing this would have run contrary to the fact that Turkey is officially candidate for EU membership, which is not the case for the other Southern Mediterranean countries. This discussion proved very clearly that the elaboration of the WUTS system is not a purely technical question but a very deep *political* problem as it is linked to the political vision of the future of the EU. We have no doubt that a significant discussion would have to take place *at the political level* before the WUTS system was adopted by the European Commission as a prospective tool.

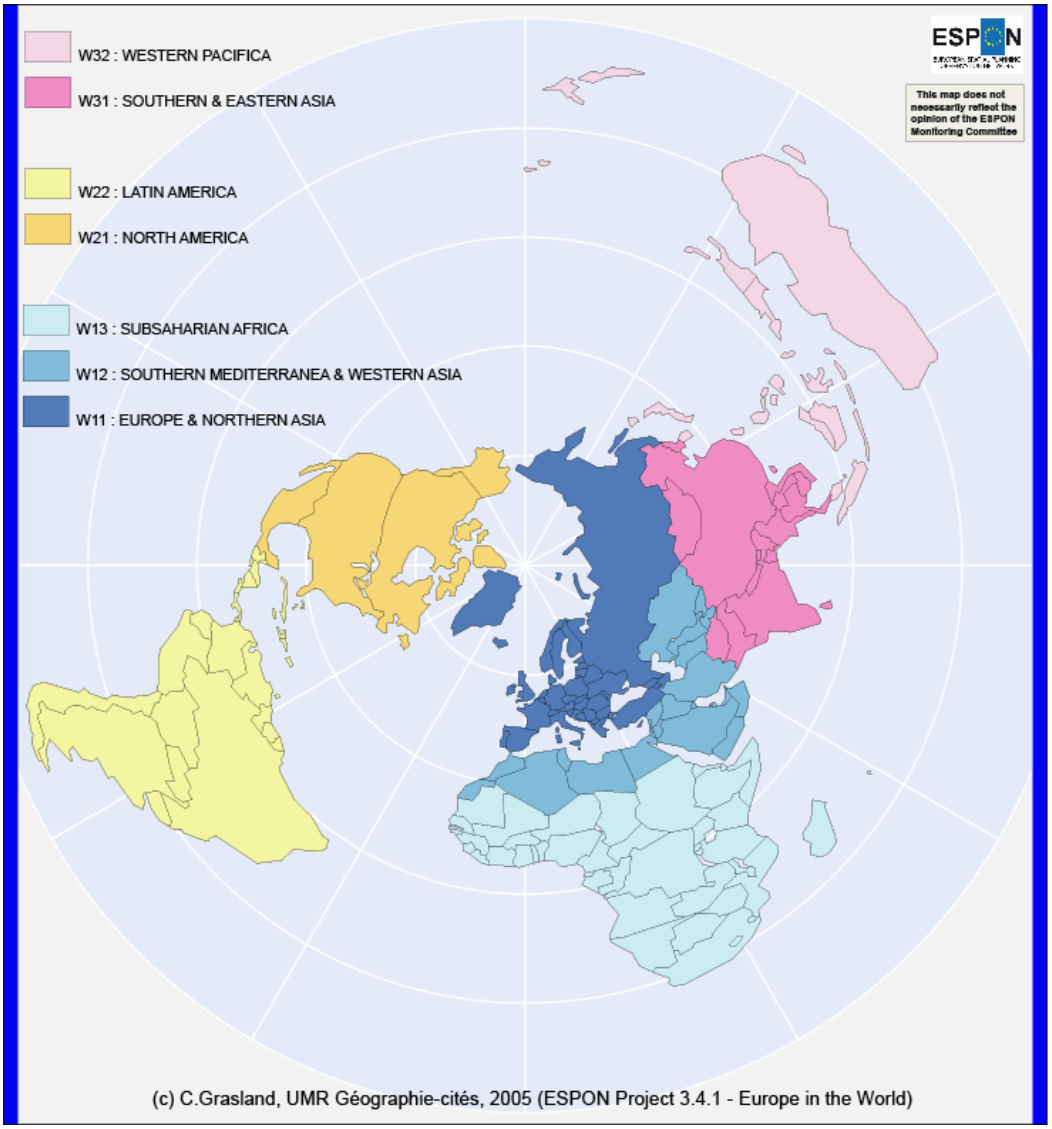
Table 4: Size of the 7 World macro regions (WUTS2)

Code	Name	Nbstate	SUPTO	SUPAG	POPTO	POPUR	GDPPS	CARBO
W11	**Europe & Northern Asia**	44	18.1	23.4	13.6	20.9	27.3	26.7
W12	**Wes. Asia & North. Africa**	25	11.6	6.3	6.0	7.1	4.2	7.0
W13	**Sub-Saharan Africa**	44	18.1	11.4	10.8	7.7	2.7	2.2
W21	**Northern America**	3	16.1	18.1	6.8	11.1	25.5	28.0
W22	**Latin America**	26	13.8	8.0	6.9	11.0	6.6	4.0
W31	**Southern and Eastern Asia**	15	13.7	26.3	47.2	30.9	19.7	20.4
W32	**Western Pacifica**	11	8.6	6.6	8.9	11.2	13.9	11.7
W	**World**	168	100	100	100	100	100	100

Legend: see. table A.3

Source: World Development Indicator 2002, 2003, + Estimations of Project ESPON 3.4.1.

Map 30: The World in 7 Macro regions (WUTS2)



3.3.4 The World in 17 Meso Regions (WUTS3)

The WUTS3 level (map 31) proposes a division of the World into 17 meso regions similar to the division elaborated in the preliminary study on EIW developed in the context of project ESPON 3.1. But it is partly modified in order to take into account the constraints of hierarchy (compatibility with WUTS1 and WUTS2) and in accordance with the advice of the experts embedded in project ESPON 3.4.1. This meso-regions level is crucial for statistical and cartographic analysis, especially in the case of flows where the previous WUTS1 and WUTS2 levels are too general and where the national level (WUTS5) is not relevant because of the heterogeneity of the economic and demographic sizes of states. We started typically from the largest states of the World (USA, China, and India,) in order to build an equivalent aggregate based on groups of states which are strongly related (European Union) or which are sufficiently homogeneous to keep the maximum aggregation in the aggregation procedure.

Table 5: Size of the 17 World meso regions (WUTS3)

Code	Name	Nbstate	SUPTO	SUPAG	POPTO	POPUR	GDPPS	CARBO
W111	**Western Europe**	21	3.0	5.6	6.5	11.0	21.1	13.9
W112	**East. Europe & North Asia**	23	15.1	17.8	7.1	9.9	6.2	12.8
W121	**SE Mediterranean**	11	4.7	2.2	2.8	3.3	1.9	2.0
W122	**Middle East & Central Asia**	14	6.9	4.2	3.1	3.8	2.4	5.0
W131	**Central Africa**	7	4.0	1.4	1.3	1.0	0.2	0.1
W132	**Eastern Africa**	11	4.4	3.1	3.1	1.5	0.5	0.1
W133	**Western Africa**	15	4.6	4.2	3.9	3.2	0.6	0.3
W134	**Southern Africa**	11	5.2	2.8	2.4	2.0	1.4	1.7
W210	**Northern America**	3	16.1	18.1	6.8	11.1	25.5	28.0
W221	**Central America & Carrib.**	21	4.4	1.8	3.1	4.4	2.3	1.8
W222	**Southern America**	5	9.5	6.1	3.8	6.7	4.3	2.3
W311	**Eastern Asia**	3	8.4	8.8	21.5	16.4	10.8	13.7
W312	**Southern Asia**	8	4.3	15.6	23.1	13.4	7.7	5.6
W313	**South-East Asia**	4	0.9	1.8	2.6	1.2	1.3	1.1
W321	**Western Pacifica**	3	0.4	0.9	3.3	5.4	9.9	7.9
W322	**South-Western Pacifica**	5	2.2	2.0	5.2	5.1	2.7	2.2
W323	**Oceania**	3	6.0	3.6	0.4	0.7	1.3	1.7
W	**World**	168	100	100	100	100	100	100

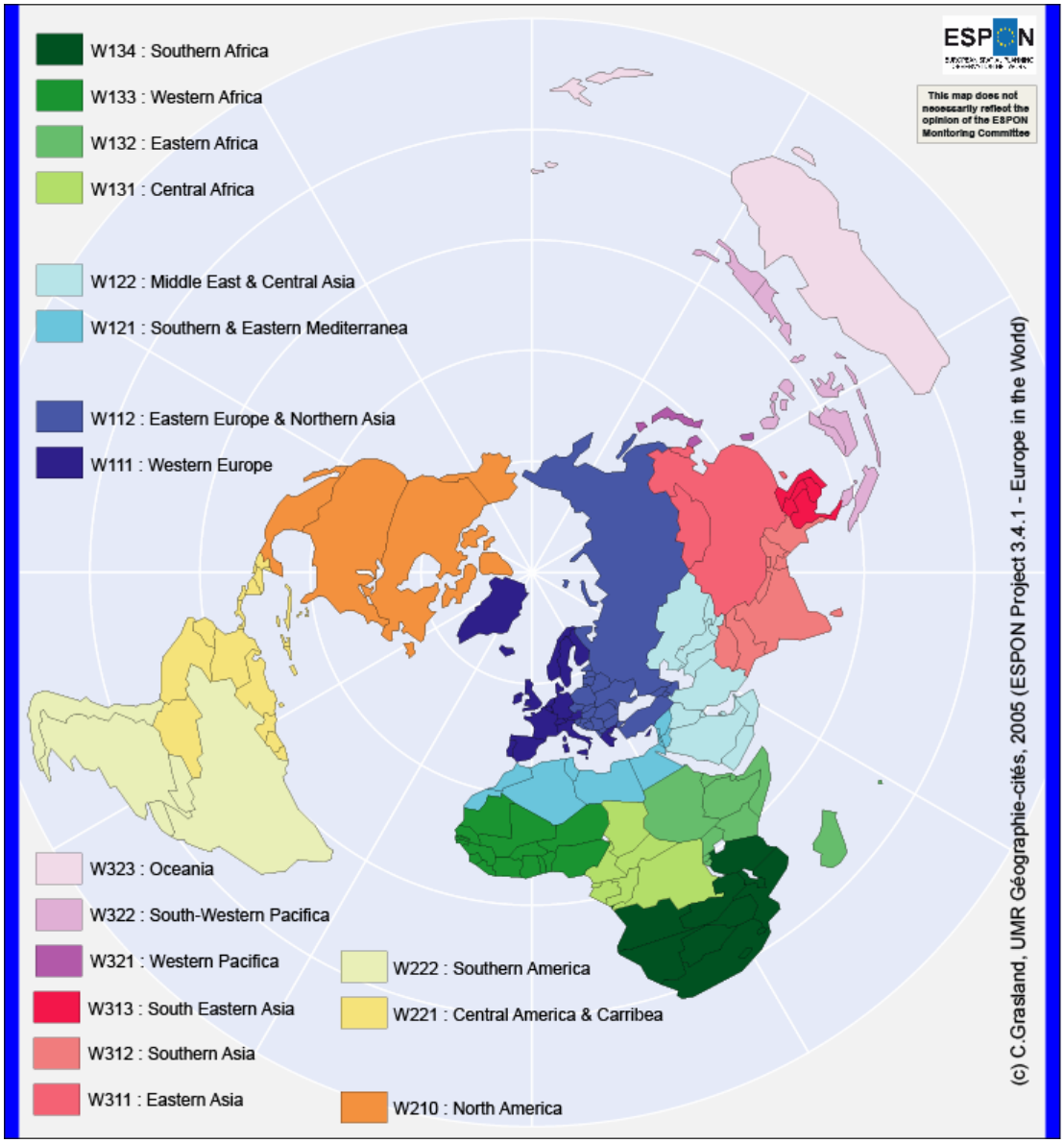
Legend: see. table A.3

Source: World Development Indicator 2002, 2003, + Estimations of Project ESPON 3.4.1

An important criterion here was the choice of aggregates, which could be relevant for the elaboration of European policy recommendations or for the development of strategic plans. The Southern and Eastern Mediterranean region (W121) is typically a region which makes sense from a European point of view as it is related to the Barcelona process. Concerning East- Central Europe and the Balkans, a difficult

choice was face in relation to the decision to split this area between the new Member States, Russia, Turkey and Balkans, at this level or to wait for the next level (WUTS4). We decided, ultimately, to let this aggregate as a whole at the WUTS3 level in order to make comparisons between Eastern Europe and SE Mediterranean region easier (Table 5).

Map 31: The World in 17 meso regions (WUTS3)



3.3.5 The ESPON space and its surrounding areas in 12 Micro Regions (WUTS4)

The WUTS4 level (Map 32) was elaborated only for the purposes of analysing in more detail the ESPON space in its wider geopolitical and socio-economic context and, more generally, in the context of what we termed the global region of Euro-Africa (W1). In the other parts of the World, this level is not particularly interesting because it is smaller than the size of the largest states and could not be properly realised without the desegregation of the largest countries (the USA, China, India, and Brazil) which is actually impossible, or at least very expensive, and of minimal interest for the ESPON Programme. Micro-regions are particularly useful for the analysis of this wider ESPON space because they introduce internal divisions both in the ESPON area and in its northern and southern peripheries. In terms of migrations, for example, it is interesting to distinguish two aspects: the various origins (Maghreb, Mashreq, the Balkans, and Central Asia) and the various destinations (Northern Europe, West Central Europe, and Southern Europe) and to establish matrixes at this level which is more homogeneous than the level of states. More generally, it is interesting to produce statistical tables where the reference is not the World but the wider ESPON space or the wider area of European 'influence' defined at the level of WUTS1 by the region of Euro-Africa (W1).

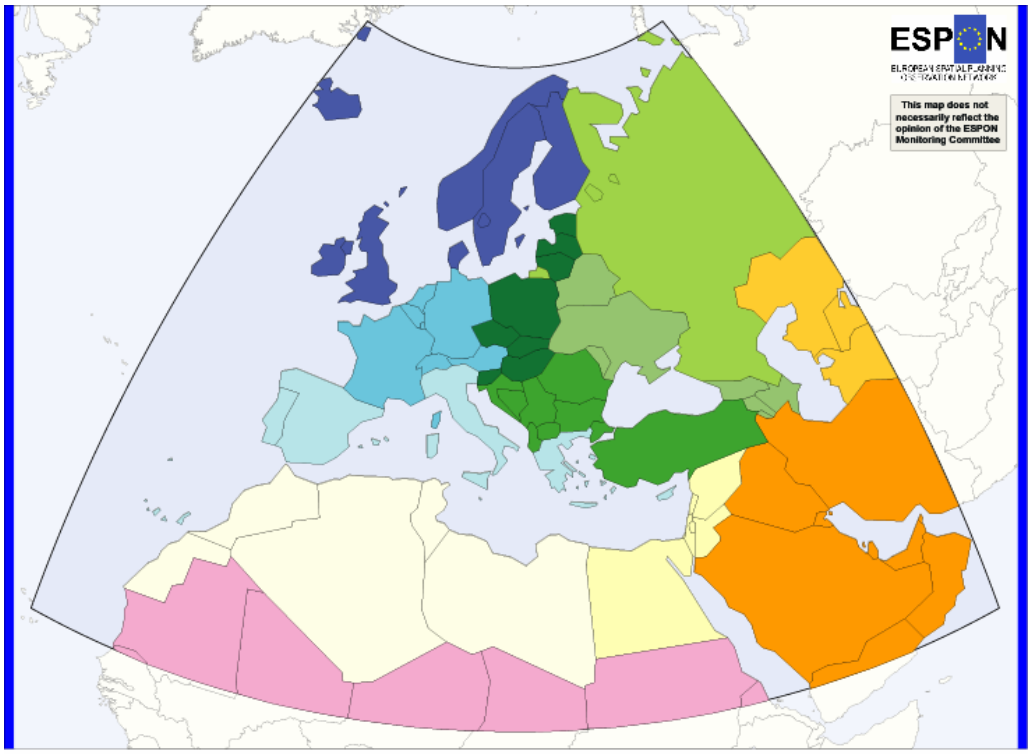
Table 6: Size of the 11 micro regions in the Wider ESPON space in Euro-Africa (WUTS4)

Code	Name	**Nbstate**	**SUPTO**	**SUPAG**	**POPTO**	**POPUR**	**GDPPS**	**CARBO**
W1111	Northern Europe	8	3.0	2.7	4.8	7.3	14.2	9.6
W1112	West Central Europe	7	1.7	6.0	10.1	15.1	30.5	18.6
W1113	Southern Europe	6	1.6	4.8	6.6	8.3	17.1	10.5
W1121	East Central Europe	8	1.2	5.3	4.1	4.7	5.1	7.0
W1122	Balkans & Turkey	8	2.2	8.0	6.7	7.2	4.5	4.9
W1123	Caucuses & Dnepr	6	1.6	7.8	4.5	5.2	2.1	5.9
W1124	Russia	1	26.6	22.3	8.1	10.7	6.3	17.8
W1211	Maghreb	5	7.8	3.8	4.0	4.3	2.5	2.3
W1212	Mashreq	6	2.0	1.5	5.3	4.9	2.9	3.3
W1221	Northern Middle East	5	6.2	5.4	3.1	2.3	1.1	3.4
W1222	Southern Middle East	9	8.1	4.8	7.2	8.4	5.8	10.6
W13	*Sub-Saharan Africa*	*44*	*37.9*	*27.7*	*35.5*	*21.5*	*7.9*	*6.0*
W1	Euro-Africa	168	100	100	100	100	100	100
Legend: see. table A.3								
Source: World Development Indicator 2002, 2003, + Estimations of Project ESPON 3.4.1.								

If we consider for example table 6 we can see very important differences in the size of each micro-region in respect of the different criteria. In geographical terms (surface area) the more important regions are typically the peripheral areas of

Russia (27%) and Sub-Saharan Africa (38%). In demographic terms, each micro-region has more or less the same size (5-10%) with the exception of Sub-Saharan Africa which accounts for one third (36%) but has not been divided into micro-regions. In economic terms, there is a clear concentration in West Central Europe (30%), Southern Europe (17%) and Northern Europe (14%) but it is interesting to observe that many other regions are important when they are considered as a whole and are not split into states. Finally, the table underlines the fact that the repartition of Carbon Dioxide emissions is very different from the distribution of economic or demographic sizes, especially in the case of Russia which produces as much as West Central Europe (18%).

Map 32: The Wider ESPON Space in 12 micro regions (WUTS4)



(c) C.Grasland, UMR Géographie-cités, 2005 (ESPON Project 3.4.1 - Europe in the World)

3.4 Conclusion: A tool for benchmarking between ESPON 29 and the rest of the world

In our answer to the tender, we defined the essence of this ESPON project as "grounding globalisation". The concept of globalisation is fundamental to a study of Europe in the World, but globalisation takes many forms and the concept can become very loose and descriptive. ESPON as a spatial planning observatory is primarily concerned with the spatial forms that globalisation takes and the spatial strategies that are being developed within and outside Europe to take advantage of the opportunities created by globalisation while also addressing its risks. In this project, perhaps more than in any of the others, ESPON has to address the trans-scalar dimension – the connections between global structures and flows and their replication, impacts and policy initiatives at the macro, meso and micro levels. It is important to recognise the complex nature of these trans-scalar relationships, and the multi-directional nature of the flows and actions. Globalisation is a dynamic, differentiated, contested process infused with risk, not a one-way, top-down, controlled and predictable agency imprinting change on maps.

In seeking to "ground globalisation", to survey its trans-scalar spatial dynamics and spatial policy implications, we need to combine quantitative analysis with qualitative concepts and investigations. For example, Swyngedouw (1997, p.140) argued that "different scalar narratives indicate different causal moments and highlight different power geometries […] Scale is consequently not politically or socially neutral, but embodies and expresses power relationships." Thus the way in which scale and global spatial relationships are conceptualised and discussed is an important dimension of research into Europe in the World.

Our most crucial task was therefore to propose new divisions of the World despite the fact that traditional modes of thinking remained strong in the collective perception of European policy-makers. The survey of the ESPON community undertaken in relation to their visions of the World was a milestone in attaining this objective as it helped the members of the ESPON community to gain awareness of the fact that what they considered "natural" (the division of the World into continents) was in fact a social and historical production, not necessarily relevant for the understanding of the contemporary World.

It was thereafter much easier to propose alternative divisions of the World into regions elaborated in a scientific framework according to accessibility, flows or dissimilarity, proposing different solutions for the regionalisation of the World, exactly as we do in the usual practice of the ESPON programme where each project

proposes different typologies of the ESPON territory in accordance with the specific criteria in question.

The major difficulty here was the elaboration of a synthesis of this result which took the form of a hierarchy of World divisions in regions of different sizes within the context of the WUTS system. As in the case of the internal division of the ESPON territory via the NUTS system, the WUTS system elaborated here is not perfect and should certainly be revised and further improved in the future. It is nevertheless a pragmatic tool with the specific advantage of having been elaborated precisely for the European context, as its use in respect of other contexts is not envisaged.

The example of the benchmarking of World regions presented in the final section of the chapter illustrates the potential of this tool and hopefully also the level of interest likely to be shown in it from the community of European Spatial Planners. In addition, it also provides, more generally, the basis for further research developed in the next chapters.

The 'added value generated by the WUTS system for ESPON 3.4.1 is the rendering of the multi-scalar analysis of the situation of Europe in the World at various scales of analysis and with harmonised territorial units which have been specifically elaborated in order to fit to European questions (which is not necessarily the case with the regions of the World elaborated by UN agencies), much easier. To illustrate this point, we propose two examples which indicate how the combination of the WUTS levels 0 to 3 can be used in order to produce synthetic tables which can easily be presented on a single page.

3.4.1: Human development in 2002

We propose firstly to summarise the World distribution of the Human Development Index in 2002 (**table 7**).

- **At the level of Global Regions (WUTS1),** Euro-Africa is the least developed part of the World with an HDI equal to 0.67 which is below the World mean (0.70), comparable to Asia-Pacifica (0.68) but much lower than the Americas (0.84). The detailed analysis of the three components indicates that the low level of Euro-Africa main relates to low life expectancy (0.63) as compared to the World level (0.70). For education and GDP, the situation of Euro-Africa is more or less equal to the World mean.
- **At the level of Macro Regions (WUTS2),** there appears to be a strong differentiation between the various parts of Euro-Africa, with a clear North-South gradient. Indeed, the HDI level is equal to 0.86 in Europe & Northern Asia (W11), 0.69 in Western Asia and Northern Africa (W12) and 0.44 in Sub-Saharan Africa (W13). This means that the global region of Euro-Africa is characterised by a high level of heterogeneity, which is not the case for the Americas or for Asia-Pacifica where internal differences are not so large.
- **At the level of Meso Regions (WUTS3)** we observe further spatial differentiation inside W11 between Western and Eastern Europe which have different levels of HDI (0.93 and 0.79). They are related to differences in life expectancy (0.89 and 0.75) and economic development (0.93 and 0.71) but are limited for education level (0.96 and 0.91). We do not observe such important differentiations inside the macro regions of Western Asia & Northern Africa (W12), nor inside Sub-Saharan Africa (W13) where the economic level is better in southern Africa but where AIDS produces a significant reduction in life expectancy.

What is interesting with such a table combining different WUTS levels is the opportunity to combine analysis at different levels, and to introduce various contexts into the evaluation of the situations. Completed by a map at the state level (WUTS5), this table provides a perfect synthesis of the phenomena of most interest for European policy-makers (and researchers).

Table 7: Distribution of Human Development with WUTS

World Unified Territorial System		Size		Human Development Index			
Code	Name	States	Pop	Life	Educ	GDP	TOT
W	**WORLD**	**168**	**6236**	**0.70**	**0.75**	**0.64**	**0.70**
W1	**EURO-AFRICA**	**113**	**1882**	**0.63**	**0.75**	**0.63**	**0.67**
W11	***Europe & Northern Asia***	***44***	***814***	***0.82***	***0.94***	***0.82***	***0.86***
W111	Western Europe	21	392	0.89	0.96	0.93	0.93
W112	Eastern Europe & Northern Asia	23	422	0.75	0.91	0.71	0.79
W12	***Western Asia & North Africa***	***25***	***385***	***0.73***	***0.70***	***0.64***	***0.69***
W121	SE Mediterranean	11	183	0.75	0.67	0.64	0.69
W122	Middle East & Central Asia	14	202	0.71	0.73	0.64	0.70
W13	***Sub-Saharan Africa***	***44***	***683***	***0.36***	***0.55***	***0.41***	***0.44***
W131	Central Africa	7	84	0.30	0.53	0.37	0.40
W132	East Africa	11	206	0.38	0.53	0.39	0.43
W133	West Africa	15	238	0.42	0.50	0.39	0.44
W134	Southern Africa	11	155	0.28	0.67	0.50	0.48
W2	**THE AMERICAS**	**29**	**856**	**0.80**	**0.90**	**0.81**	**0.84**
W21	***North America***	***3***	***424***	***0.86***	***0.94***	***0.92***	***0.91***
W210	North America	3	424	0.86	0.94	0.92	0.91
W22	***Latin America***	***26***	***431***	***0.75***	***0.86***	***0.70***	***0.77***
W221	Central America & the Caribbean	21	192	0.75	0.82	0.65	0.74
W222	Southern America	5	239	0.75	0.89	0.74	0.79
W3	**ASIA-PACIFICA**	**26**	**3499**	**0.70**	**0.72**	**0.60**	**0.68**
W31	***Southern and Eastern Asia***	***15***	***2948***	***0.69***	***0.70***	***0.58***	***0.66***
W311	Eastern Asia	3	1320	0.76	0.83	0.64	0.74
W312	Southern Asia	8	1466	0.62	0.56	0.53	0.57
W313	South-East Asia	4	162	0.71	0.82	0.59	0.70
W32	***Western Pacifica***	***11***	***551***	***0.79***	***0.87***	***0.73***	***0.80***
W321	Western Pacifica	3	197	0.91	0.95	0.91	0.92
W322	South-Western Pacifica	5	330	0.71	0.82	0.61	0.71
W323	Oceania	3	24	0.89	0.99	0.92	0.94

Legend

WUTS	Code of WUTS units
Name	Name of WUTS units
States	Number of states
Pop	Population in 2002 (thousands)
Life	Life component of Human Development Index in 2002
Educ	Education component of Human Development Index in 2002
GDP	Economic Component of Human Development Index in 2002
TOT	Human Development Index in 2002

Source: Human Development Report 2004; Missing values estimated by ESPON 3.4.1

3.4.2: Distribution and the evolution of GDP *per capita* (1980-2004)

Concerning the distribution of GDP *per capita*, in constant dollars (2000 prices), the hierarchy is not the same as for the HDI (table 8), with Euro-Africa performing better here. At the WUTS 1 level it is number one, exceeding the scores of both the Americas and Asia-Pacifica, despite the low GDP *per capita* in several parts of sub-Saharan Africa. This hierarchy has changed significantly since the 1980s when the Americas led the field in this respect. Each upper level WUTS (WUTS 1, 2 and 3) has seen a regular increase in its performance. At the lower level (WUTS 11, 12, etc.), there are however dramatic contrasts between clusters of states. As far as Euro-Africa and Asia-Pacifica are concerned, there are huge gaps between WUTS 11 and 13 and between WUTS 32 and 31. Such gaps also exist between Latin and North America though the average GDP *per capita* is higher in WUTS 22 than in WUTS 13 and 31. Comparing this third level WUTS, one also notices that North America tops the hierarchy, followed by Western Pacifica and then, only at the third rank, by Europe and Northern Asia burdened by the low performances of WUTS 112.

Within these hierarchies, the evolution of Euro-Africa's rank is somewhat different from that outlined above. Euro-Africa's performance has stagnated somewhat in the last 25 years for several economic and political reasons (from 6.239 to 6.394 with a significant decrease in the Middle East), while GDP *per capita* has dramatically increased in the Americas and Asia-Pacifica. At a lower level, Western Europe is not the richest region in the World, in term of production per inhabitant, coming in second after the Western Pacifica. In addition, the table also shows a growing gap between Western Europe and North America. This evolution is due to two main factors:

- The NAFTA (WUTS 210) includes a developing country with growing population (Mexico) which reduces the global level of GDP per capita. ,
- The rapid increase of the GDP *per capita* in Western Europe is largely due to what has been called the "golden decline" in previous interim reports of this project. The population has almost stagnated in Western Europe (from 368 to 392 million inhabitants) whereas it has increased from 327 to 420 in North America.

Inside Euro-Africa, the gap between Western Europe and other WUTS of the same level has also enlarged. Western Europe increasingly appears to be a wealthy island surrounded by poverty, especially in sub-Saharan Africa, which can be compared only to Southern and Eastern Asia in actual performance. These 25 year tendencies are not necessarily however complementary, as for instance, the positive evolution

of Western Pacifica (WUTS 31) has been much more rapid than the evolution of Subsaharian Africa (WUTS 13), as shown in table 8.

Table 8: GDP *per capita* ***Annual average GDP per capita (in constant US 2000 dollars) distributed in periods of five years***

World unified territorial system		Size					
Code	**Name**	**States**	**1980-84**	**1985-89**	**1990-94**	**1995-99**	**2000-04**
W 0	**WORLD**	**164**	**6657**	**6915**	**7340**	**8018**	**8900**
W 1	**EURO-AFRICA**	**108**	**6239**	**5462**	**5331**	**5898**	**6394**
W11	***Europe & Northern Asia***	**43**	***9083***	***10244***	***11010***	***12070***	***13809***
W111	Western Europe	19	15592	17575	19332	21482	24383
W112	Eastern Europe & Northern Asia	24	2574	2914	2689	2657	3235
W 12	***Western Asia & Northern Africa***	**22**	***8877***	***5404***	***4261***	***4855***	***4500***
W 121	South & East Mediterranean	10	3064	3077	3291	3644	4040
W 122	Middle East & Central Asia	12	14689	7731	5232	6065	4960
W 13	***Sub-Saharan Africa***	**43**	***759***	***738***	***720***	***771***	***873***
W 131	Central Africa	7	1225	1073	1001	1139	1337
W 132	Eastern Africa	10	437	534	578	599	676
W 133	Western Africa	15	353	324	287	292	309
W 134	Southern Africa	11	1023	1022	1016	1052	1170
W 2	**THE AMERICAS**	**28**	**9176**	**10056**	**10591**	**11690**	**12767**
W 21	***North America***	***3***	***14950***	***16720***	***17535***	***19268***	***21665***
W 210	Northern America	3	14950	16720	17535	19268	21665
W 22	***Latin America***	***25***	***3401***	***3392***	***3648***	***4111***	***3869***
W 221	Central America & Caribbean	20	3116	3127	3269	3529	3149
W 222	South America	5	3687	3657	4026	4694	4589
W 3	**ASIA-PACIFICA**	**25**	**4557**	**5227**	**6099**	**6744**	**7539**
W 31	***Southern & Eastern Asia***	***12***	***458***	***436***	***511***	***577***	***686***
W 311	Eastern Asia	2	322	458	480	551	706
W 312	Southern Asia	6	292	344	397	465	532
W 313	South-East Asia	4	761	505	655	727	819
W 32	***Western Pacifica***	***13***	***8655***	***10018***	***11687***	***13170***	***14393***
W 321	Western Pacifica	2	14234	17129	20903	23001	24863
W 322	South-Western Pacifica	5	2759	3229	4218	5272	5791
W 323	Oceania	3	8972	9696	9939	11237	12525

Source: World Bank

3.4.3: Financial flows

Regarding the geographical distribution of FDI inflows, the actual hierarchy is different (table 9). Euro-Africa is by far the top destination of FDI flows in the World, attracting far more (more than double) that of the Americas and more than five times more than Asia-Pacifica. Once again however dramatic contrasts within the Euro-Africa zone are easily discernable. This is particularly so in relation to parts of the Middle East and the majority of sub-Saharan Africa, both of which are highly unfavoured in this respect. Such contrasts should be a major subject of concern for Europe. Such regions need huge amounts of investment to support their social and economic development, where the current historical level of GDP increase is not enough to counteract and absorb the increases in their population. In other words, financial capital is stored up on the northern shore of the Mediterranean Sea while population levels and the labour force are growing without sufficient financial support on the southern shore.

As noted in respect of GDP, such contrasts do not exist in the Americas or in Asia-Pacifica, where the distribution of inflows is better balanced, especially at the WUTS 3 level, where the attractiveness of China (WUTS 311) makes it the primary destination of FDI flows with almost 50% of the total. The rest of Asia-Pacifica, mainly WUTS 321 and 322, however displays surprising figures with relatively low inflows. The countries of this region seem to be less engaged in financial globalization than Western Europe and North America. This conclusion is confirmed by the average level of openness of European economies, in terms of their share of external trade in relation to their GDP. As such, the economies of Western Europe are much more open that the other economies of the Triad such as Japan and the United States.

The evolution of Europe in the last 25 years has been spectacular. Trailing in a distant second position, far behind Northern America at the beginning of the 1980s, it now tops the hierarchy, attracting much more than 50% of the total FDI inflows in the years after 2000. This optimism must however be qualified. In fact, a large part (about two thirds) of FDI inflows to Western Europe come from other countries in Western Europe, which is obviously not the case in the United States for example. Nevertheless, this table confirms the notion that Europe is the most attractive place in the World for investors.

Table 9: FDI Inflows, Annual average inflows in millions of current US dollars, distributed in periods of five years (World Bank)

World unified territorial system Code	Name	Size States	1980-84	1985-89	1990-94	1995-99	2000-04
W 0	**WORLD**	**165**	**56 277**	**123 968**	**196 722**	**579 324**	**854 674**
W 1	**EURO-AFRICA**	**106**	**22 779**	**48 935**	**96 271**	**271 620**	**524 600**
W11	***Europe & Northern Asia***	***43***	***16 051***	***47 147***	***90 526***	***258 252***	***505 943***
W111	Western Europe	19	15 893	46 758	86 272	236 901	473 946
W112	Eastern Europe & Northern Asia	24	158	389	4 254	21 351	31 997
W 12	***Western Asia & North Africa***	***19***	***6 012***	***1 553***	***3 846***	***7 489***	***10 133***
W 121	South & East Mediterranean	8	1 062	1 578	1 928	4 540	7 988
W 122	Middle East & Central Asia	11	4 951	-25 494	1 918	2 948	2 145
W 13	***Sub-Saharan Africa***	***44***	***715***	***1 135***	***1 898***	***5 879***	***8 523***
W 131	Central Africa	7	227	181	63	245	1 779
W 132	Eastern Africa	11	51	76	100	612	1 227
W 133	Western Africa	15	324	826	1 402	2 329	2 060
W 134	Southern Africa	11	112	52	334	2 693	3 547
W 2	**THE AMERICAS**	**36**	**26 846**	**58 894**	**58 853**	**219 347**	**237 354**
W 21	***North America***	***3***	***22 789***	***55 061***	***48 848***	***170 694***	***197 620***
W 210	Northern America	3	22 789	54 089	48 848	170 694	197 620
W 22	***Latin America***	***33***	***4 056***	***3 833***	***10 005***	***48 653***	***39 734***
W 221	Central America & Caribbean	18	1 177	972	3 918	13 179	11 760
W 222	Southern America	15	2 879	2 861	6 087	35 474	27 974
W 3	**ASIA-PACIFICA**	**23**	**6 652**	**15 440**	**41 998**	**88 358**	**92 721**
W 31	***Southern & Eastern Asia***	***13***	***9 871***	***3 570***	***19 875***	***50 981***	***55 092***
W 311	Eastern Asia	2	529	2 487	16 066	40 574	46 440
W 312	Southern Asia	7	167	348	1 028	3 893	4 592
W 313	South-East Asia	4	291	735	2 781	6 514	4 060
W 32	***Western Pacifica***	***10***	***5 665***	***11 870***	***21 723***	***37 377***	***37 629***
W 321	Western Pacifica	2	333	789	2 189	8 143	12 042
W 322	South-Western Pacifica	5	2 867	4 182	11 971	19 957	13 528
W 323	Oceania	3	2 464	6 899	7 563	9 277	12 058

4. PART B: HOW IS ESPON EMBEDDED IN THE WORLD BY FLOWS?

4.1 Introduction

We have seen in the general introduction of this report that globalisation is not a new phenomenon; neither is the fact that regions are interacting in networks something new. During the first globalisation boom – the century prior to 1914 – trade, migration and capital flows in the Atlantic community played an important role in promoting economic prosperity. Such activities took place in networks and were a regional phenomenon rather than a national one (O'Rourke & Williamson 2000). This is not a new scientific finding – on the contrary. Several major works in economic history have stressed the importance of regions and how they interact through trade, migration and capital flows (Dillard 1967, Kenwood & Lougheed 1989, Pollard 1991, Veltz 1996, Castells 1996). Yet, in many current analyses the functionality of a network of relationships is rarely taken into account. There is much reluctance to take these insights on board, with institutional, methodological and ideological inertia still providing significant obstacles to the necessary need to rethink these issues.

In this part of the report we will try to balance the findings of the previous chapter on the "Divisions of the World", especially that part on the elaboration of a hierarchical territorial division into WUTS, which could have given the false impression that globalisation can be reduced to the simple emergence of a new level of territorial organisation between the level of states and the World level. In particular, we will try to show that, in the European territory which is currently in a new phase of rapid integration, particular attention should be paid to exchange and cooperation networks, inside ESPON 29 of course but also between ESPON 29 and the World. By viewing territories and networks of cities and regions in terms of the way they articulate one with another and in terms of functional relationships, rather than principally in terms of locality and distribution, this part of the report highlights possible future integration patterns for the European space in the emerging World economy.

The issue is not to set out a new normative model, or a new dominant theory. The objective of the analysis is to show why it is now relevant to read spatial dynamics in terms of interconnections and reticulations rather than being viewed in a polarised and pyramidal manner. The main objective of defining the place of ESPON 29 in the World is to provide a necessary counterweight to the dominant visions and perceptions of the research on the World and European networks and cities dynamics. Indeed, on the one hand, the description of European and World flows

leads many researchers to define, between countries or between several regional blocs, the main roads of international exchange (Dollfuss 1994). On the other hand, the great majority of existing research in this area seeks to produce knowledge on the cities or regions themselves, to evaluate their strengths and weaknesses, and to estimate their growth rates (Sassen 2002). Consequently, this means that a large majority of studies constantly produced and reproduced urban and regional typologies. Peter Taylor (2002) denounces the paradox of research on the World cities in the following way: "*Whereas the essence of World cities is their relations to each other, studies continue focusing on case studies and comparative studies evaluating patterns within cities and neglecting ipso facto intercity relations*".

During the scientific elaboration of this part of ESPON 3.4.1 "Europe in the World", heated internal discussion took place between a group of researchers who considered that the centre-periphery model (Figure 6) was the most relevant one of World organisation and that it was possible to define an influence area for Europe or any other group of countries which utilised the World archipelago model (Figure 7), which, they argued, better fits the new reality of a World where networks are more important than territories. It is clear however that the empirical analysis of flows ultimately presented in this chapter provides different answers to the question of the best model choice:

- The analysis of economic flows developed in B.1 clearly provides arguments in favour of the centre-periphery vision of the World.
- The analysis of air flows presented in B.2, on the contrary, clearly supports the network-archipelago vision of the World.
- The analysis of migration trends presented in B.3 in the main supports the centre-periphery vision of the World, but also demonstrates that the pattern of migration is different according the educational level of the migrants. Migrations of low-skilled workers follow the centre-periphery pattern while those of high-skilled workers are rather more closely aligned to the archipelago model.

Considering that both models are complementary, the final synthesis will propose two different approaches: (1) an "areal oriented approach" which tries to delimit, in a quantitative manner, a so-called 'ESPON Influence Area' in the World and (2) an "network oriented approach" which tries to elaborate, in a qualitative manner, a typology of connections between ESPON and the rest of the World

Figure 6: ***The Centre-Periphery vision of the World***

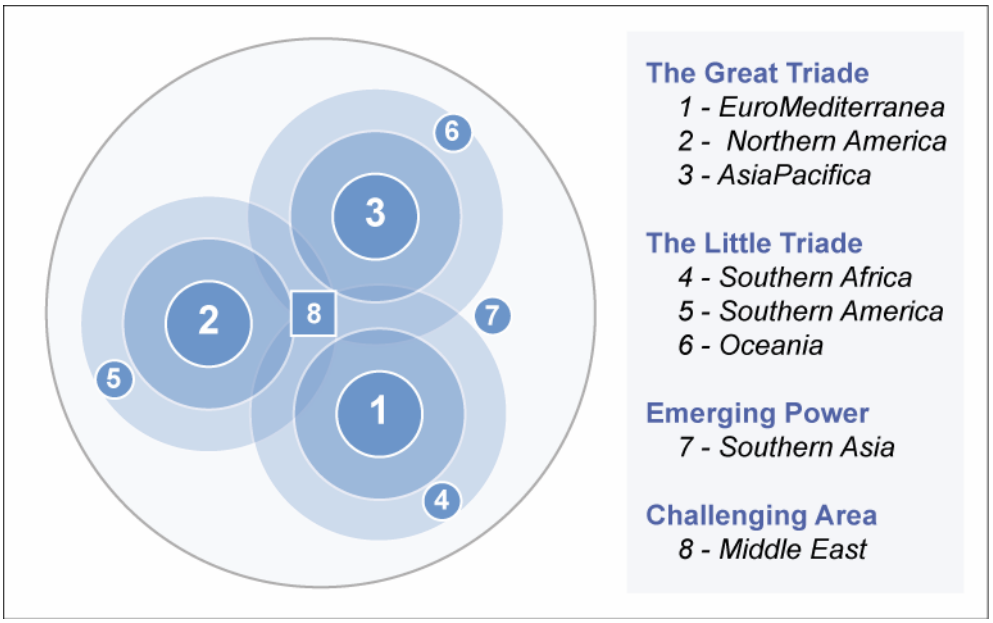
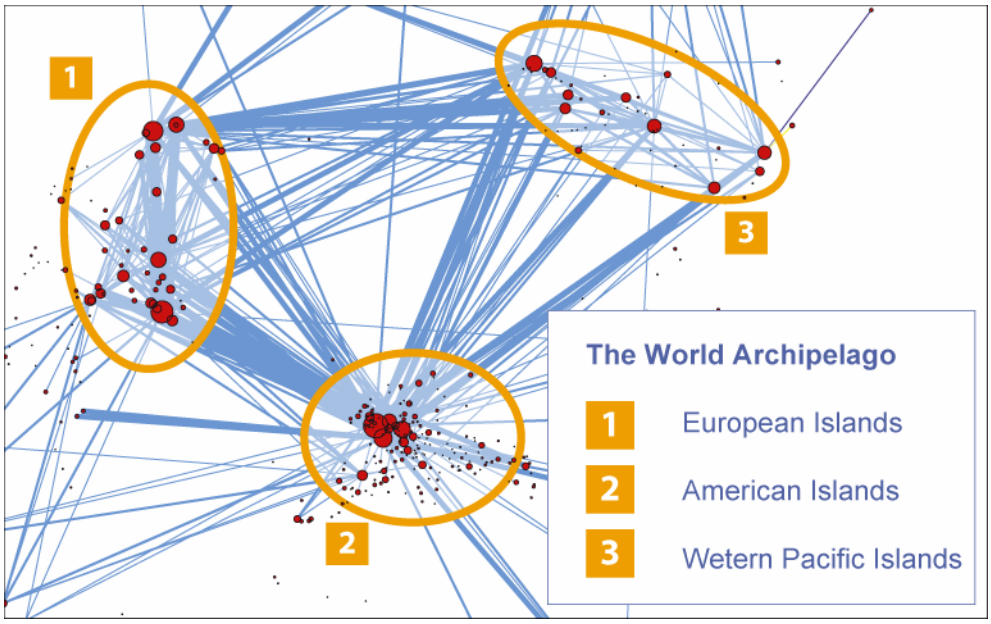


Figure 7: ***The Network-Archipelago Vision of the World***



4.2 A functional approach: The Triad and the centre-periphery division of the World

In opposition to some of the ideas circulated by, among others, major international institutions such as the OECD, who see in the development of globalization the expansion of major opportunities for all[24], we would like, on the one hand, to qualify the globalization process and, on the other, to insist on the hierarchies and imbalances provoked by this process at a moment where many doubts has recently emerged against the former "Washington consensus". [25]

4.2.1 ESPON's Place in the World Economy

It is first necessary to recall some of the major elements of the structure of the World economy and to evaluate the place occupied by ESPON in this context. From an historical point of view, let us remember that globalization is a process with a long heritage, in which Western Europe has played a major role (Wallerstein, 1980, 2002). Since the sixteenth century, the old continent has built the World in accordance with its own views and interests.

In this first part, we use only the centre-periphery vision of the world and we do not introduce the alternative vision of world as global cities or archipelago. We consider in fact several centres, that is to say, the three poles of the Triad (Western Europe, North America, and East Asia), and peripheries which, per definition, are very diverse in their structures and forms of dependence.

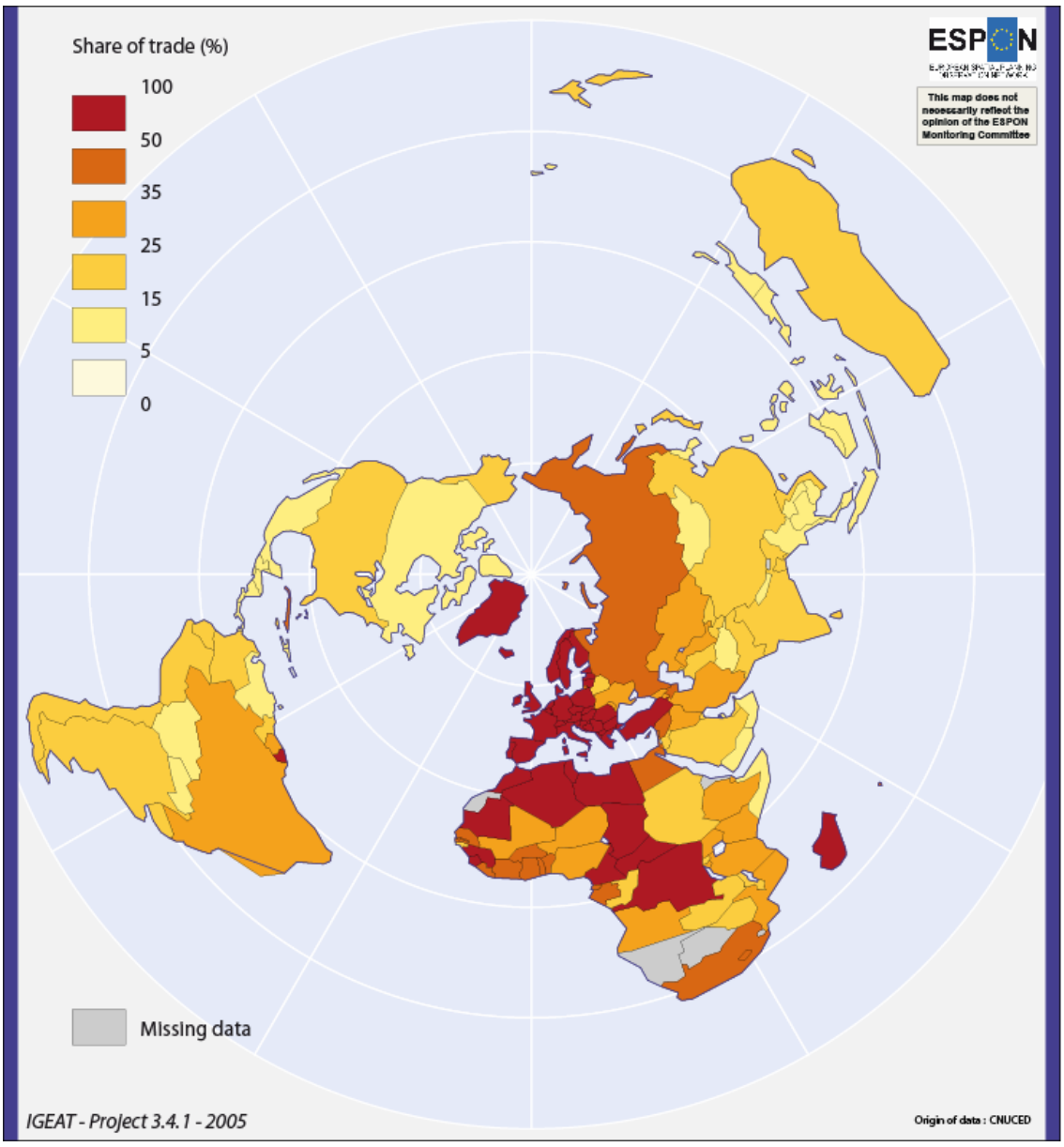
Centres are characterized by their weight in terms of global production and flows, and by their social and economic structures as well as their leading role in the World economy. This is illustrated for example by their position in the World economic institutions or the location of transnational headquarters.

The concept of centres however only assumes its meaning in the context of the dialectical relations which take place between the poles of the Triad and their peripheries: centres only exist through their dominant relation with their peripheries. These links are characterised, from the trade flows point of view, by a relation of dependence, on both quantitative and qualitative aspects.

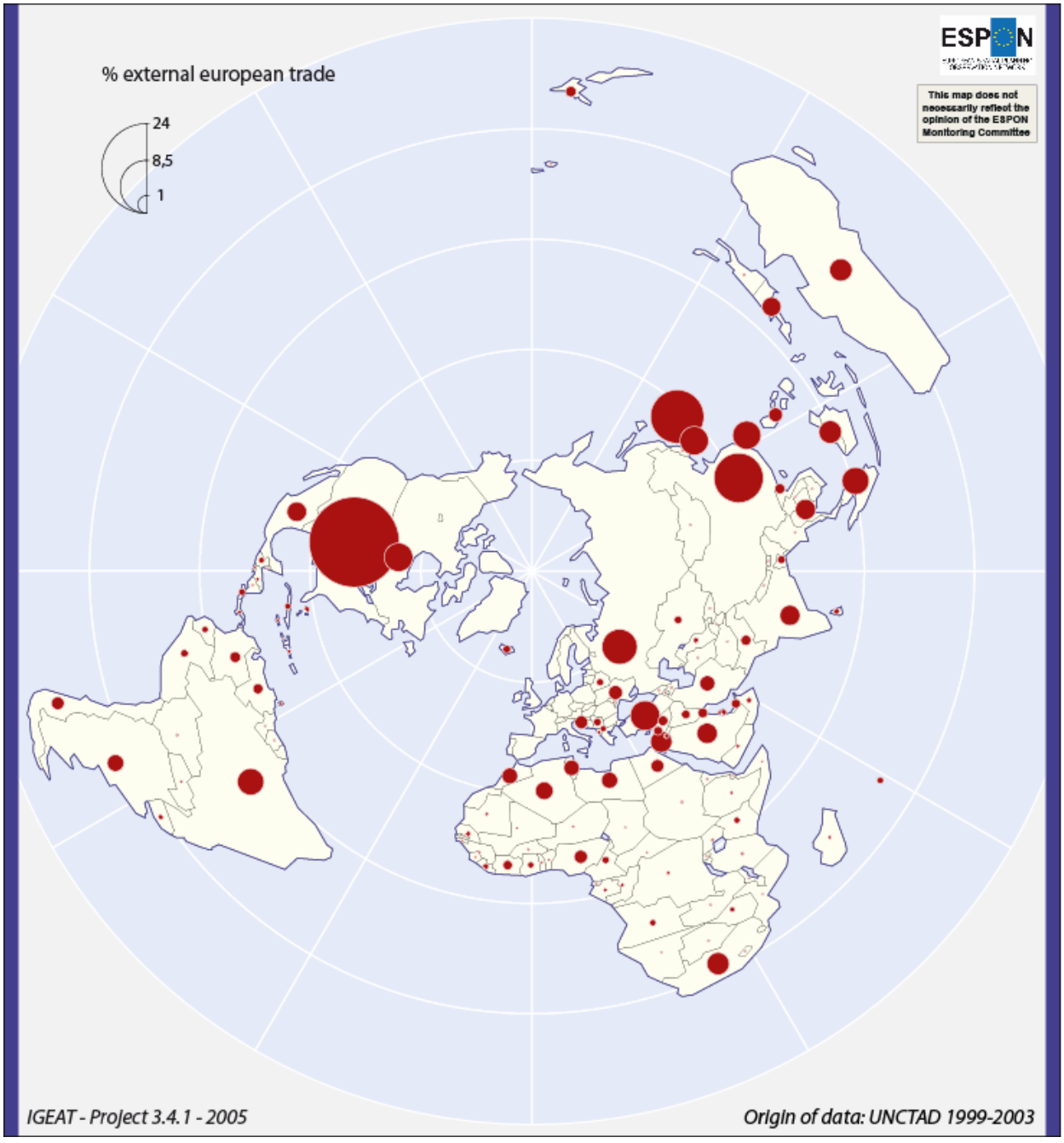
[24] As an example, we produce this extract from an OECD publication (OECD observer, Sept. 2001), "trade is not an end in itself [….] But it creates jobs. It fosters vital learning processes […] It increases foreign exchange earnings. Above all, it contributes to generating the resources for sustainable development and the alleviation of poverty."
[25] **Joseph Stiglitz (2002),** *Globalization and Its Discontents* (New York: Norton)

From the quantitative approach, these imbalances can be observed in terms of the exclusive relations of the peripheries with their centres, while centres mostly trade between themselves. This reality is well illustrated by maps 33 & 34: the first shows the commercial area of influence of ESPON 29, that is to say, the countries that count for ESPON, while the second shows the areas with which ESPON trades. The most caricatured example is the one relating to sub-Saharan Africa: while it is of negligible importance for European trade, the inverse is true for Sub-Saharan African countries as Europe is vital for the existence of this part of the World.

Map 33: Share of the trade with ESPON 29



Map 34: Share of each country in the External trade of ESPON 29

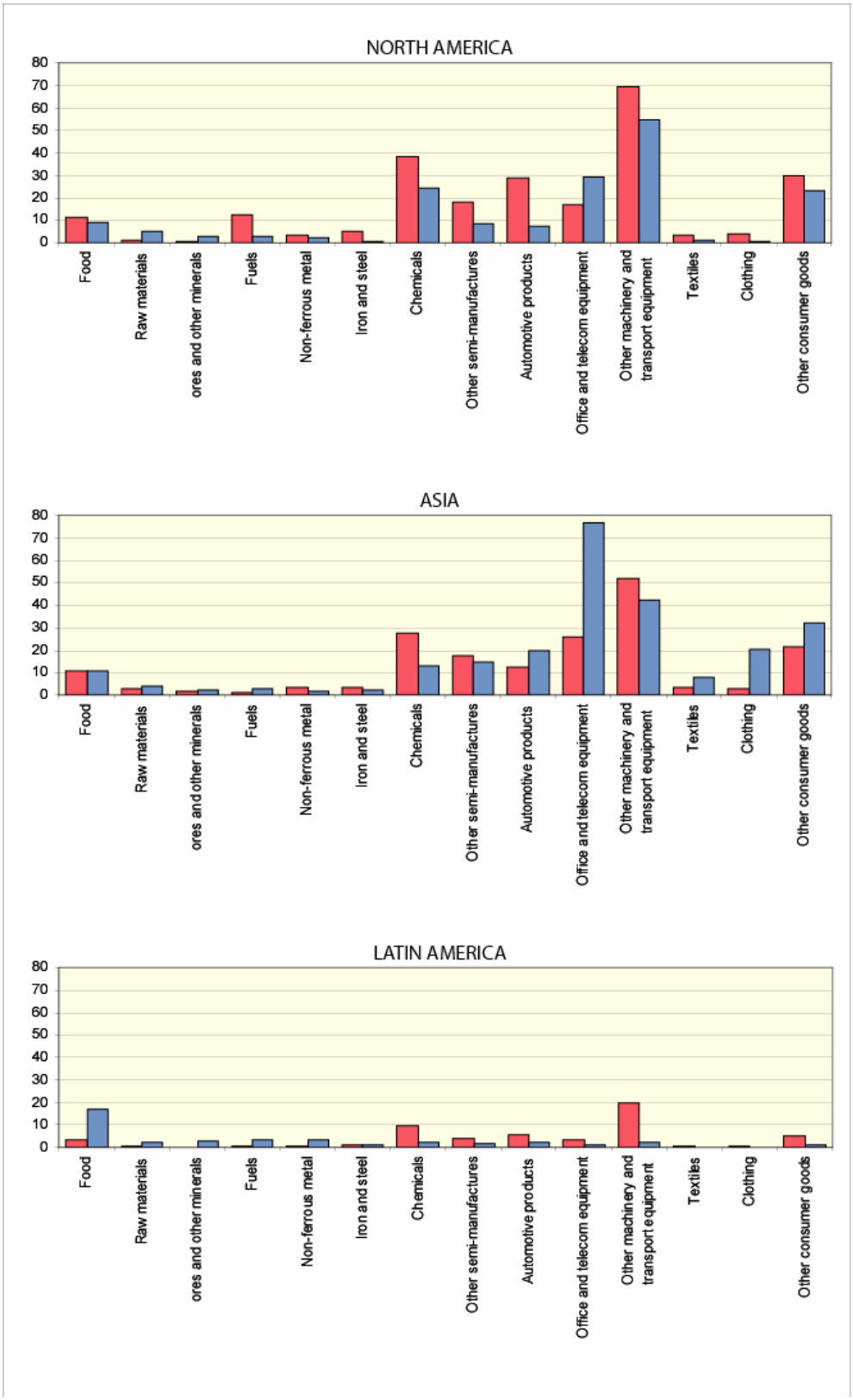


4.2.2: Trade and inequalities

From a qualitative point of view, the imbalance is shown by the types of products that are exchanged: while centres mostly sell products of high or average technologies or advanced services, peripheral countries sell low technological labour intensive products and services (textiles, call centres etc) or primary products. Figure 8 shows the exchanges between Europe, on the one hand, and North America, Asia and South America, on the other hand. While the trade with North America and Asia illustrates the specializations of the different poles of the Triad (for example chemistry for Europe, office equipment for North America, textiles for some Asian countries, and machinery for Japan), the trade relation with South America displays a classical centre-periphery trade pattern, with centres selling industrial products and the periphery, primary products.

We can draw the conclusion from these analyses that globalization is a very hierarchical process: while the poles of the Triad are involved in interdependent relations, the links between the centres and peripheries are marked by the dependence of the latter on the former. As we have already underlined however, this does not mean that the periphery as a whole is a vast homogeneous mass. On the contrary, some countries have been able, or will in future be able, to change their position in the World economy. Nevertheless, this does not affect the model in itself if we consider that the gap between developed and underdeveloped countries has generally been rather stable over the last fifty years. Moreover, some could argue that in each peripheral country, there are poles strongly connected to the rest of the World and with an emergent middle class, which in some ways can benefit from globalization process. As such then, rather than invalidating our model, this urban bourgeoisie plays an active role in the permanence of the domination of the centre.

Figure 8: External trade of Western Europe by type of product, with North America, Asia and Latin America (1998-2002), in billions of current $



Against some networking approaches, which insist for example on the consideration of realities such as the importance of the relations between the major poles of the peripheries (Sao Paulo, Johannesburg, Bangkok etc) and the centres, we would like to recall that:

- the importance of these links should not be overestimated if one compares them to the links between poles inside the centre ;
- the centre/periphery approach is a multi-scalar one, that is to say, that inside the centre and inside the periphery at the World scale, a geographical structure in centres and peripheries exists at a finer scale, which implies real processes of domination between poles which are the decisions and areas that are subject to these decisions.

Finally, we would like to strongly qualify the importance of the globalization process, particularly for the EU. We have thus made an evaluation of the openness rates[26] of the three poles of the Triad (for Asia, we only consider Japan). For each of the three areas, the openness rate is about 14 percent of GDP (table 10). This means that these economies depend mostly on themselves, since investment is for example a very regionally-oriented process. In other words, and despite the intense growth of trade in recent decades the major poles still have relatively closed economies.

Table 10: Openness rate of Europe, USA and Japan

	Openness rate 1996-2000 (%)	Share of the trade outside the commercial area (%), 1996-2000
EU 25	14,1	31,7
ESPON 29	14,3	31,6
NAFTA	13,5	69,4
Japan	17,5	100,0

[26] Openness rates are defined by the ratio between the sum of exports and imports and global GDP. This indicator overestimates the opening of the economies since it compares sales (imports and exports) to added values (GDP).

4.2.3: Trade flows and the Triad

Using a variant of the methodology proposed in the preliminary ESPON study on Europe in the World (ESPON 3.1, FR), we have tried to evaluate for each state the importance of its bilateral trade flows with each pole of the Triad and with the rest of the World. The practical problem of the delimitation of states who are members of the Triad has been empirically solved by using the WUTS level 3 delimitation for Western Europe (W111) and North America (W211), but not for Asia where Western Pacifica (W321) has been aggregated with China[27].

The distribution of the economic polarisation of the states of the World by the Triad reveals a very interesting spatial pattern (Map 35) which does not fit exactly with the simplistic view of concentric circles of decreasing influence around each centre of the Triad.

- The most important states located in the cores of the Triad are generally less polarised by their own region than the smaller states localised in their immediate neighbourhood. This is obvious in the cases of Japan and the USA and, to a less degree, in the cases of Germany or the United Kingdom. It is apparently a simple statistical effect (internal economic relations of these core-states are not taken into account) but it also reveals a real asymmetry between this core-states which are more likely to play a role as global economic actors than the smaller states that they polarised.

- The area of influence of Western Europe in terms of trade is spreads far to the south, but is clearly limited in an easterly direction (where Russia remains the major partner for most states created after the collapse of the Soviet Union) and to a lesser degree a the south-easterly direction, where the oil-rich states of the Persian Gulf are mainly oriented toward Eastern Asia. This specificity of oil trade is also visible in Africa where Gabon and Angola are more oriented toward North America than Western Europe.

- Very important and strategic parts of the contemporary World cannot be considered as polarised by one of the three poles of the Triad. The former Soviet Union (with the exception of the Baltic countries which joined the EU in 2004) clearly remains an integrated economic zone. Latin America is now also beginning to form an area of economic integration (MERCOSUR) and has

[27] Normally, we should have included only the coastal regions of eastern China in the definition of the Asiatic core of the Triad. This is not a major problem however as the majority of China's international trade is located in these costal regions.

equal trade relations with Western Europe (26%) and North America (24%). A similar situation can be observed in India where the equilibrium of influence of each pole of the Triad and the importance of flows with the rest of the World ensures a situation of strategic independence. The situation is however rather different in East Africa where Western Europe remains a major partner (40% of trade) but where trade flows with rest of the World are basically equivalent, due to a relatively high level of local regional trade between the Eastern and Southern African countries.

Map 35: Dominant trade orientations 1996-2000

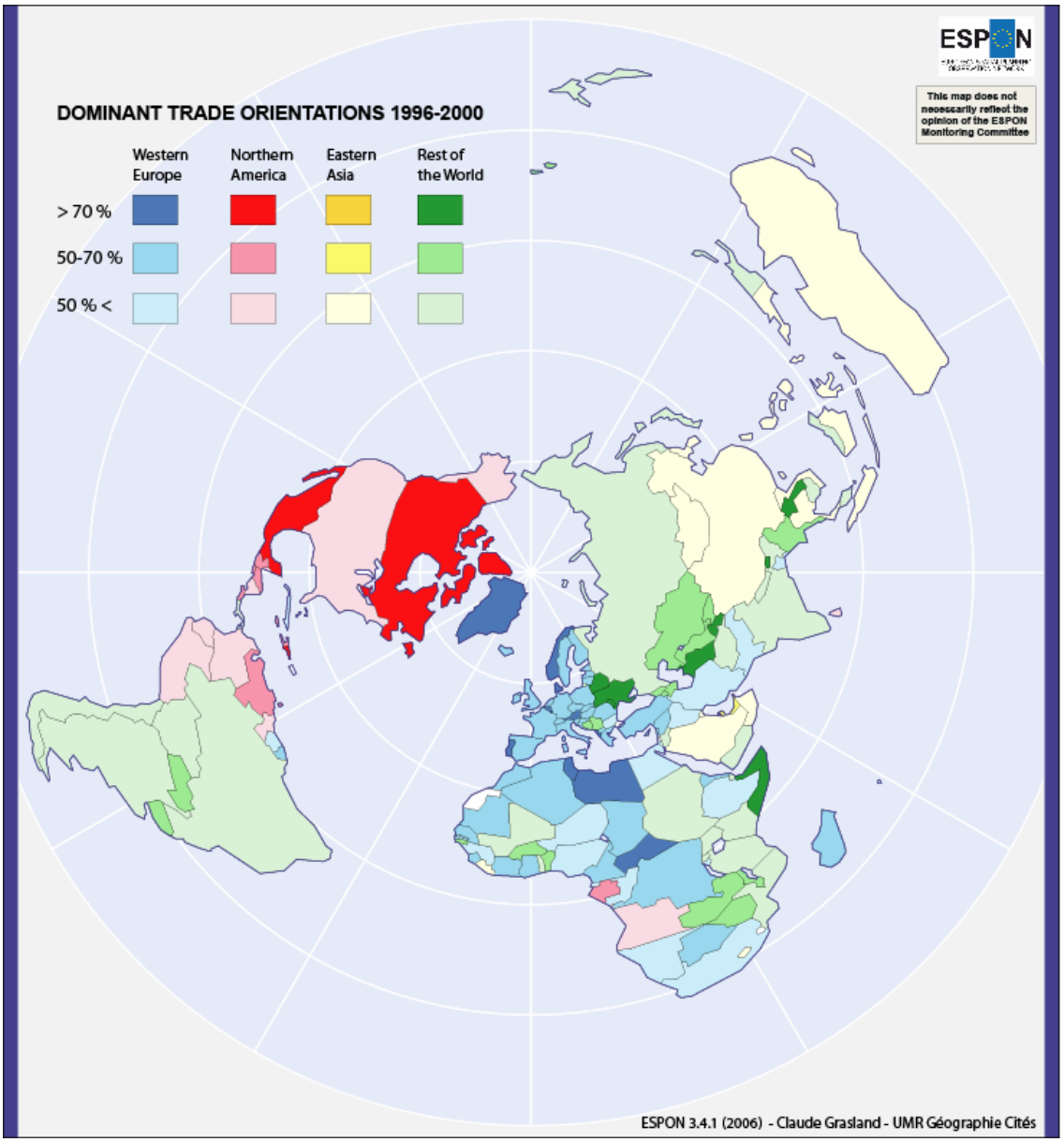


Table 11: Trade between WUTS3 regions and the Triad in 1996-2000

World Unified Territorial System		Size		Economic orientation			
Code	Name	Billions $	World%	W.Eu	N.Am	E.As	Rest
W	**WORLD**	**10668**	**100.0**	**37**	**23**	**18**	**22**
W1	**EURO-AFRICA**	**5003**	**46.9**	**60**	**11**	**9**	**20**
W11	***Europe & Northern Asia***	***4490***	***42.1***	***63***	***10***	***8***	***20***
W111	Western Europe	3979	37.3	64	11	8	18
W112	Eastern Europe & Northern Asia	512	4.8	52	6	6	36
W12	***Western Asia & Northern Africa***	***367***	***3.4***	***37***	***14***	***23***	***26***
W121	SE Mediterranean	152	1.4	56	17	7	19
W122	Middle East & Central Asia	216	2.0	23	12	34	31
W13	***Sub-Saharan Africa***	***145***	***1.4***	***41***	***17***	***15***	***27***
W131	Central Africa	12	0.1	47	26	12	15
W132	East Africa	16	0.1	41	7	13	40
W133	West Africa	47	0.4	41	20	11	27
W134	Southern Africa	70	0.7	39	16	18	26
W2	**AMERICAS**	**2765**	**25.9**	**18**	**43**	**19**	**20**
W21	***North America***	***2400***	***22.5***	***18***	***44***	***20***	***18***
W210	North America	2400	22.5	18	44	20	18
W22	***Latin America***	***365***	***3.4***	***22***	***36***	***11***	***32***
W221	Central America & Caribbean	159	1.5	16	51	7	25
W222	South America	206	1.9	26	24	13	38
W3	**ASIAPACIFICA**	**2900**	**27.2**	**16**	**23**	**34**	**27**
W31	***Southern and Eastern Asia***	***1156***	***10.8***	***17***	***21***	***41***	***21***
W311	East Asia	912	8.5	16	21	44	18
W312	Southern Asia	104	1.0	28	20	17	34
W313	South-East Asia	141	1.3	17	18	35	31
W32	***Western Pacifica***	***1744***	***16.3***	***16***	***25***	***29***	***30***
W321	Western Pacifica	1043	9.8	16	28	26	30
W322	South-Western Pacifica	550	5.2	15	21	33	32
W323	Oceania	151	1.4	19	18	35	29
NOTES							
Definition of Trade areas				**Specialisation index**			
W.Eur.	EU15, Switzerland, Norway				***> 1.5***		
N. Ame.	USA, Canada, Mexico				***1 to 1.5***		
E. Asia	Japan, S. Korea, China, Taiwan				***0.5 to 1***		
Rest	Rest of the World				***0.5<***		
Source: PC-TAS, Completed by ESPON Projects 3.1 & 3.4.1							

4.3 Networking ESPON 29 through air flows

4.3.1 Re-thinking hierarchies, areas of influence, borders and other concepts

Several studies underline the fact that today new forms of territorial organisation and spatial integration[28] are emerging as a result of the spectacular growth in mobility, rapidly changing transportation networks and the spread of communication and information technologies. Nevertheless this dynamic phenomenon does not produce the same effects at either a World level or at the level of ESPON territory. One cannot therefore understand the processes of territorial integration without first taking into account the complexity of the spatial integration schemes.

Indeed, World and ESPON territorial integration has often been reduced to two conventional models: the centre-periphery one, and the hierarchical model of urban networks. The World or the ESPON space are thereby depicted in one or other of these two ways: either in terms of strong centres to which peripheral territories manage to tie themselves to greater or lesser degrees, or of major metropolises in whose shadow secondary cities lie hidden.

Limiting territorial integration to these two schema means that such integration will be fragile and limited. The mode of organisation of the World and of the ESPON territory is in reality much more diversified. On the one hand, territorial organisation is supported by specialised networks of cities as defined by common patterns of either material or non-material production, while on the other, territorial organisation takes place through networks of cities that are either economic or political capitals. Intensified exchange between these types of city networks is currently the most dynamic force for territorial organisation operating across the World space and the ESPON territory. These forms of territorial organisation can be defined as Metropolitan polycentrism. Freed from the constraints of distance, urban hierarchies and political boundaries, the spatial integration processes tends to emphasise the interrelations among cities in a network, and in this way they are the vectors of a dynamic polycentric organisation of the World as well as the ESPON space (Cattan, Saint-Julien 1998).

In this section we focus on the analysis of networks and cities that connect ESPON to the rest of the World. It is a trans-scalar approach which does not work with an

[28] Note here that we are referring not to political integration in the context of the EU, but rather to the spatial integration of the wider ESPON 29 area. The two should not necessarily be conflated.

assumption of contiguity (continuous territoriality) but rather with an assumption of connectivity (discontinuous territoriality). A strong hypothesis is proposed in relation to the fact that many human activities are not present in all points of a territory but are concentrated in several specific areas strongly connected to each other. We do believe, for example, that the new "frontier" of the EU is to be found in several international gateways cities and not only on the external borders of the EU territory either at its Eastern limits or at its Southern ones. We also accept the common notion that the World metropolitan archipelago is not necessary connected to the states, regions or macro-regions where the metropolitan areas are located.

The analysis proposed here helps us to answer the following question: *Is ESPON a dynamic vector for a polycentric organisation of the World space?*

This study opens up a huge avenue into discovering the way in which the World and the ESPON space are organized *vis-à-vis* international air flows. Thanks to their relatively large capacity to adjust to the rigours of supply and demand, the air network is a very relevant indicator of globalization and is thus one of the best synthetic indexes of contemporary societal trends. As such, air flows highlight the way in which current integration processes shape the relations of society to space and reorganise the territorial structures at different scales.

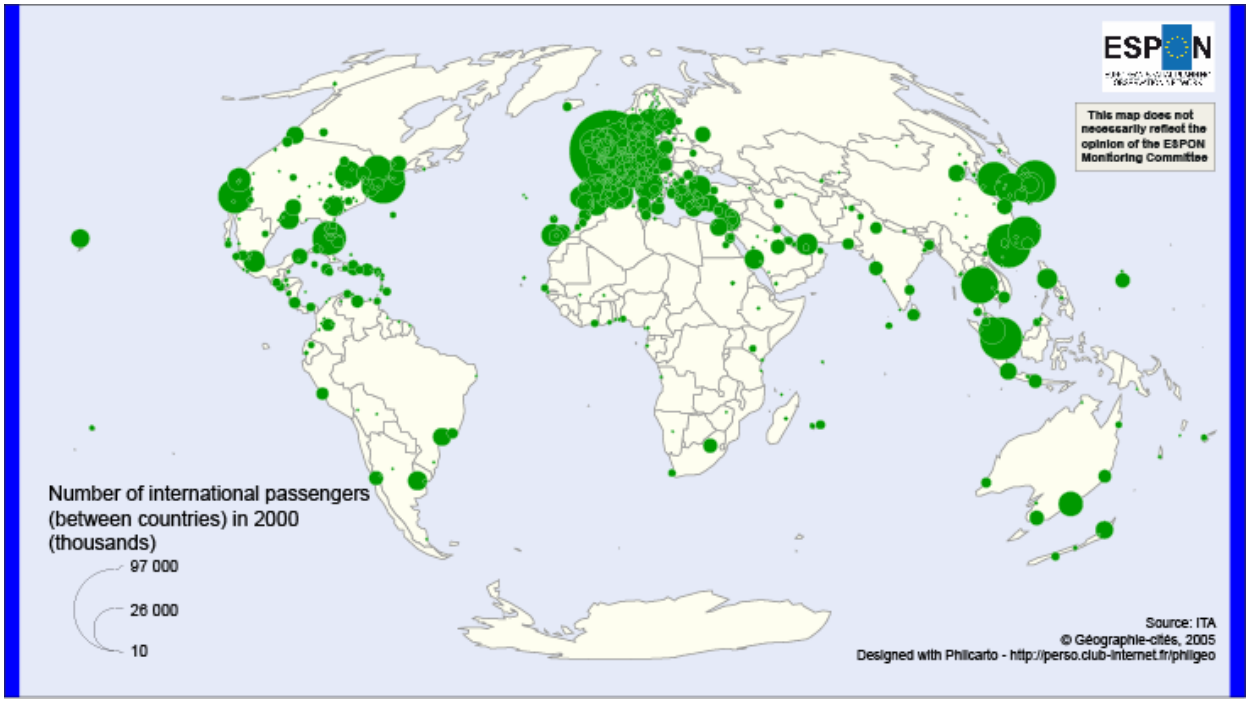
4.3.2: The conventional approach based on number passengers

In a first step we have tried to analyse air traffic between cities by using the simple number of passengers in 2000, according to ITA database (see Volume II for a precise description of the source)

EU: The centre of the international monocentric air network?

The image of the main nodes of international traffic shows the European cities to be the main supporters of this internationalization process (map 36). In this image, air traffic draws a World organisation rather monocentrically concentrated on Europe. The main reason for this is that intra-EU traffic, considered as international (=flows exchanged by two cities of two different countries), is included in the calculation whereas intra-US traffic, considered as national, is not. This figure highlights the fact that definitions of World cities rely very much on the interpretation of the word "international".

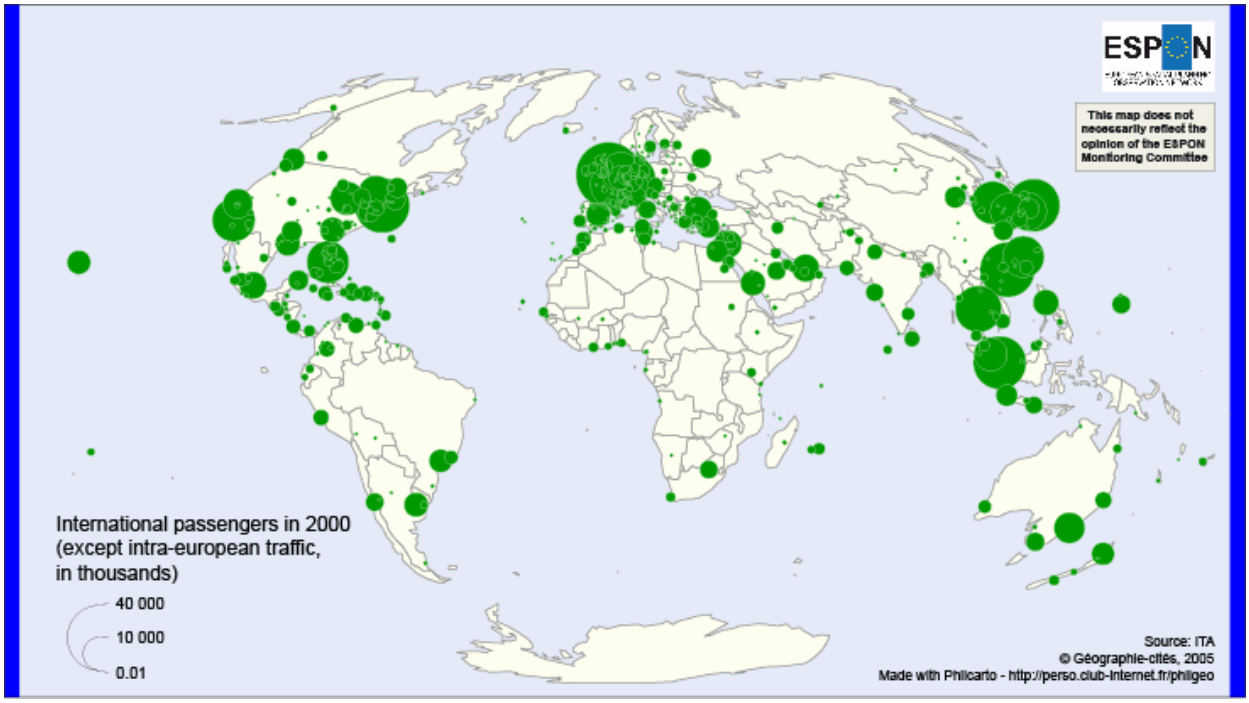
Map 36: International air traffic



The EU: At the centre of the international polycentric air network….

When excluding intra-EU traffic, the image is more equilibrious, providing a rather polycentric representation of the World through air traffic networks (Map 37). The three classical poles of internationalisation (the EU, the USA, and Japan-South Asia), namely the Triad, appear very clearly. One could again question here the weight of the JSA area: indeed if we consider for example the ASEAN countries as one entity as we have done for Europe what would the resulting image be?

Map 37: International air traffic, EU traffic excluded

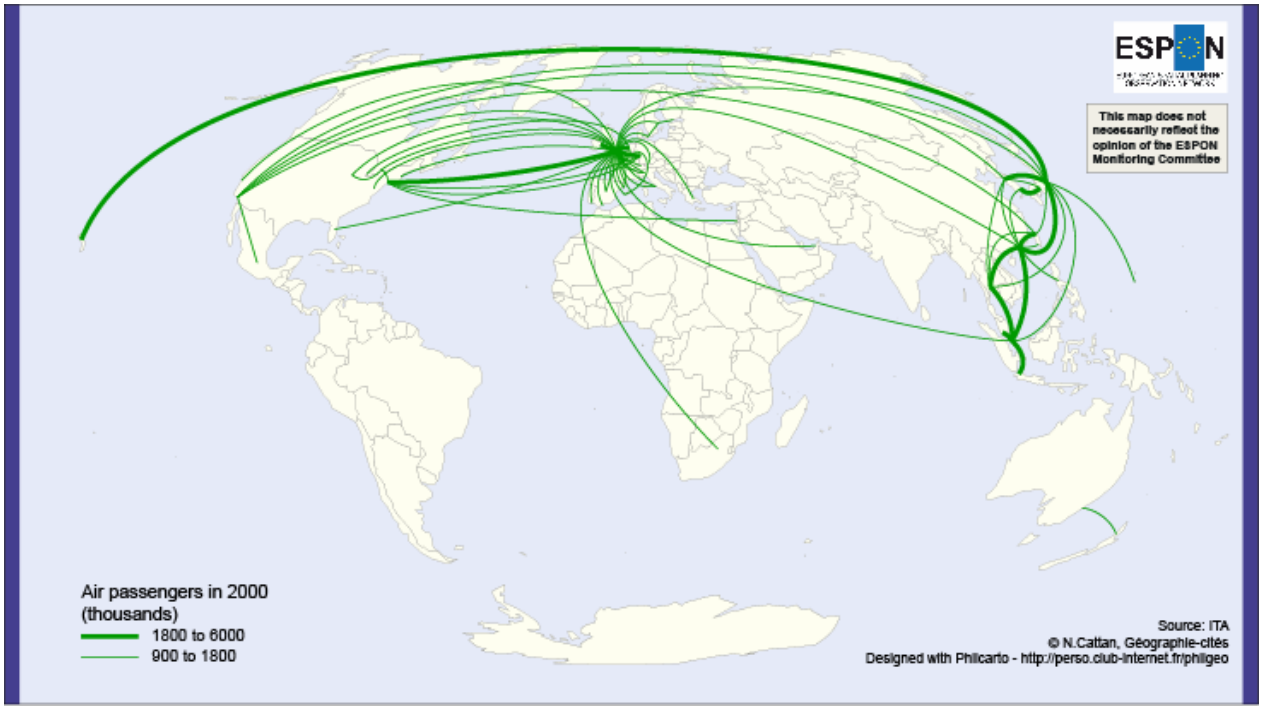


By focusing on flows in a relational approach to territories, following the concept of Manuel Castells' "space of flows" rather than "space of places", the following figures attempt to go further showing how Europe is connected to the World system.

EU traffic is the major contributor to the internationalisation of air flows

Charting the major air links on a World level makes it possible to highlight privileged associations between places. The World air traffic map shows that the majority of the largest international flows occur in the Northern hemisphere. Major flows go to - and return from - a few select poles, reinforcing the North-South contrast which is voluntarily reinforced by the specific cartographic projection chosen in this section. The main international inter-city flows show that four World interconnection systems summarize the major international air routes, namely EU inter-city connections (among the 15 highest flows, 5 are European), South-eastern Asia connections, EU-US transatlantic city linkages, and trans-pacific city links (Map 38). The World air crossroads can be identified to coincide with the main *metropoles*: national capitals, such as London and Tokyo, or prominent economic capitals such as New York.

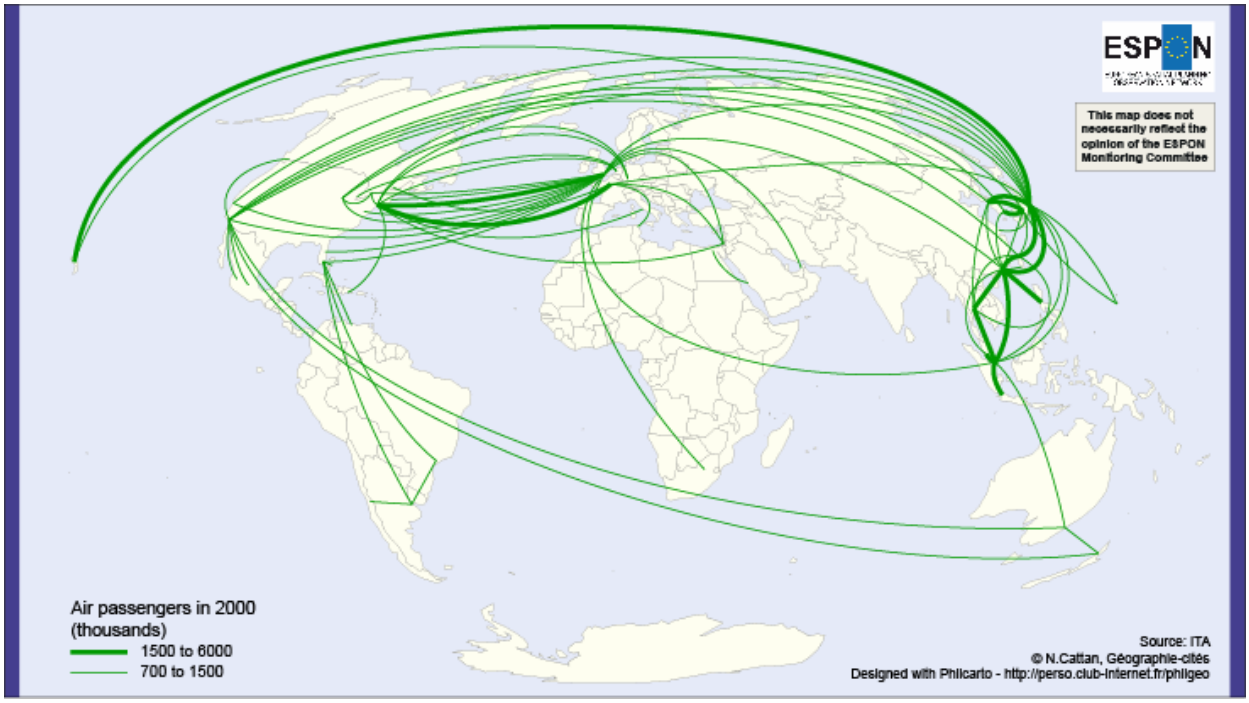
Map 38: Major international air flows (intra-EU flows included)



Some other regional patterns of globalisation

Focused on the connections between Europe and the rest of the World, and considering the EU as one entity (i.e. excluding intra-EU traffic), one can also point out that several regional connections emerge, as for example between Buenos Aires and Santiago and Sao Paulo on the one hand and between Mexican cities and Los Angeles on the other (Map 39). This means that several integration processes at the regional level are actively engaged in these territorial integration processes at the global level.

Map 39: Major International air flows (intra-EU flows excluded)



4.3.3 An alternative approach to the World global network derived from Tobler's work

We have seen in the previous sections that the measurement and cartography of global integration by air flows is highly dependant on the level of political aggregation. As such, retaining or eliminating internal traffic within the United States, the European Union or the Western Pacific coastal area introduces crucial differences in the resulting pattern of the World network of cities. From a theoretical point of view[29], the problem that we have to faced is then to distinguish between flows which are really global (i.e. connecting different global integration zones) and flows which can be better described as regional (i.e. connecting sub-parts of the World which are strongly integrated and are in practice already global integration zones). The paradox of the previous section is that (1) we analyse flows in order to define relevant GIZ but (2) we need to know what the limits of these GIZ'S are in order to properly analyse these flows. Breaking this vicious circle is possible if we use an alternative measure of flows as suggested by W. Tobler who argues that a good measure for the evaluation of flows is not the single traffic (number of passengers) indicator, but the traffic weighted by distance (number of passengers multiplied by km) indicator, which is in physical terms the "quantity of work" of the relation. This is correlated in economic terms with the "total cost" of the relation and in ecological terms with its "ecological impact".

The comparison of the top 25 air connections in the World according to the usual criteria of passengers (table 12) and the criteria of passengers/km (table 13) indicates that the second solution is probably better when the need is to measure the global connections established between World cities. For the classical criteria of passengers, the majority of the connections take place at short distances (less than 5000 km) and are connecting cities located in the same state (USA) or in the same pole of the Triad (Western Europe, Eastern Asia). On the other hand, for the criteria of passengers multiplied by distance, we obtain a majority of flows at long distance (around 10 000 km) which are precisely those that connect the three poles of the Triad or those which connect distinct parts of a global integration zone (e.g. the eastern and western coasts of the USA). This criterion is also sensitive to specific connections that can be established at long distance for historical and political reasons, as with the connections between the USA and Israel or the connection between France and its remote territories of the Antilles.

[29] The problem that we have to face here is very similar to that of "weak ties" in a sociological network. "Weak ties" are specific connections which establish "bridges" between clusters of strongly connected individuals. According to Granovetter, they play a major role in the diffusion of innovations as they do not suffer from redundancy as is the case for links observed inside a cluster that is highly connected.

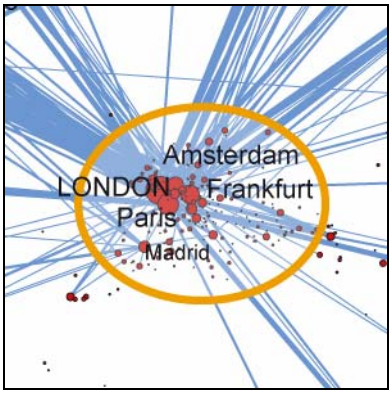
Table 12: Most important air flows in 2000 (millions of Passengers)

Rank	I	j	F	D	FD
1	SEOUL	PUSAN	**6.0**	337	2035
2	NEW YORK	FORT LAUDERDALE	**5.5**	1728	9545
3	TAIPEI	HONG KONG	**5.5**	805	4430
4	NEW YORK	CHICAGO	**5.3**	1145	6025
5	ORLANDO	NEW YORK	**5.1**	1514	7723
6	NEW YORK	LOS ANGELES	**5.1**	3953	20020
7	NEW YORK	BOSTON	**5.0**	306	1533
8	SEOUL	CHEJU	**4.9**	451	2200
9	NEW YORK	ATLANTA	**4.9**	1214	5919
10	WASHINGTON	NEW YORK	**4.4**	346	1528
11	NEW YORK	LONDON	**4.2**	5524	23337
12	LONDON	DUBLIN	**4.1**	438	1790
13	SAN FRANCISCO	NEW YORK	**3.9**	4130	16304
14	MADRID	BARCELONA	**3.9**	484	1885
15	LOS ANGELES	LAS VEGAS	**3.7**	379	1399
16	PARIS	NICE	**3.4**	674	2289
17	LONDON	AMSTERDAM	**3.2**	401	1288
18	OAKLAND	LOS ANGELES	**3.1**	543	1701
19	PARIS	MARSEILLE	**3.0**	628	1877
20	TOULOUSE	PARIS	**3.0**	574	1712
21	PARIS	LONDON	**2.9**	365	1067
22	NEW YORK	MIAMI	**2.9**	1760	5069
23	NEW YORK	LAS VEGAS	**2.9**	3590	10331
24	SAN FRANCISCO	LOS ANGELES	**2.8**	544	1517
25	LOS ANGELES **	CHICAGO **	**2.7**	2820	7659

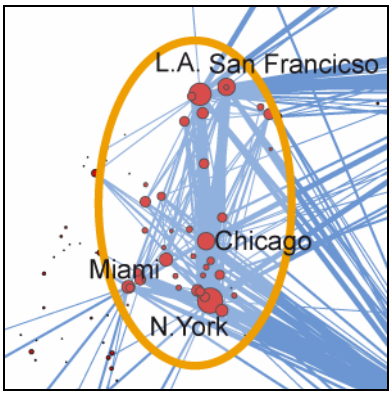
Table 13: Most important air connexions in 2000 (millions of Passengers.km)

Rank	I	j	F	D	FD
1	NEW YORK	LONDON	4.2	5524	**23337**
2	NEW YORK	LOS ANGELES	5.1	3953	**20020**
3	SAN FRANCISCO	NEW YORK	3.9	4130	**16304**
4	LONDON	LOS ANGELES	1.5	8748	**12799**
5	TOKYO	LOS ANGELES	1.4	8809	**12435**
6	TOKYO	HONOLULU	2.0	6187	**12364**
7	SINGAPORE	LONDON	1.0	10903	**10938**
8	TAIPEI	LOS ANGELES	1.0	10895	**10666**
9	NEW YORK	LAS VEGAS	2.9	3590	**10331**
10	TOKYO	LONDON	1.0	9614	**10043**
11	SYDNEY	LOS ANGELES	0.8	12053	**9772**
12	SAN FRANCISCO	LONDON	1.1	8608	**9739**
13	TOKYO	NEW YORK	0.9	10850	**9641**
14	LONDON	HONG KONG	1.0	9670	**9602**
15	NEW YORK	FORT LAUDERDALE	5.5	1728	**9545**
16	LONDON	CHICAGO	1.5	6318	**9298**
17	PARIS	NEW YORK	1.6	5837	**9225**
18	LONDON	SYDNEY	0.5	17038	**8984**
19	SEOUL	LOS ANGELES	0.9	9591	**8785**
20	TEL AVIV	NEW YORK	0.9	9120	**8600**
21	PUSAN	LOS ANGELES	0.9	9604	**8563**
22	LONDON	JOHANNESBURG	0.9	9072	**8421**
23	TOKYO	PARIS	0.9	9733	**8358**
24	TOKYO	CHICAGO	0.8	10141	**7857**
25	POINTE A PITRE	PARIS	1.2	6748	**7847**

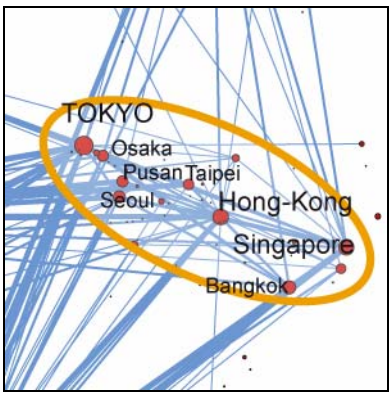
The map of global air connections in 2000 established by means of the passengers/km criteria (Map 40) provides an excellent illustration of the structure of the network of World cities which appears as an archipelago of cities linked to each other without consideration of national borders or continents (which have been voluntarily excluded from the map).



The Western European Archipelago is clearly **monocentric** and is dominated by London which is the most important international airport in the World. Amsterdam, Paris and Frankfurt are also major gateway cities but are in a sense part of the same cluster as London. Madrid is a secondary gateway but with specific connections to southern and central America.



The **North American Archipelago** is clearly organised into **two separate clusters** dominated, respectively, by New-York and Los Angeles. Chicago and San Francisco are alternative World gateways of the second level. Miami plays the same role as Madrid inside ESPON territory, with specific connections to Central and South America.



The East Asian Archipelago is organised in an axial pattern of gateway cities dominated by Tokyo, Hong-Kong and Singapore but with important World connexions also in Osaka, Pusan, Seoul, Taipei and Bangkok. If Tokyo and Hong-Kong are well connected to Europe and America, Taipei, Pusan and Seoul are clearly oriented to America while Singapore and Bangkok are more closely connected to Europe.

Map 40: Global air interactions in the World in 2000

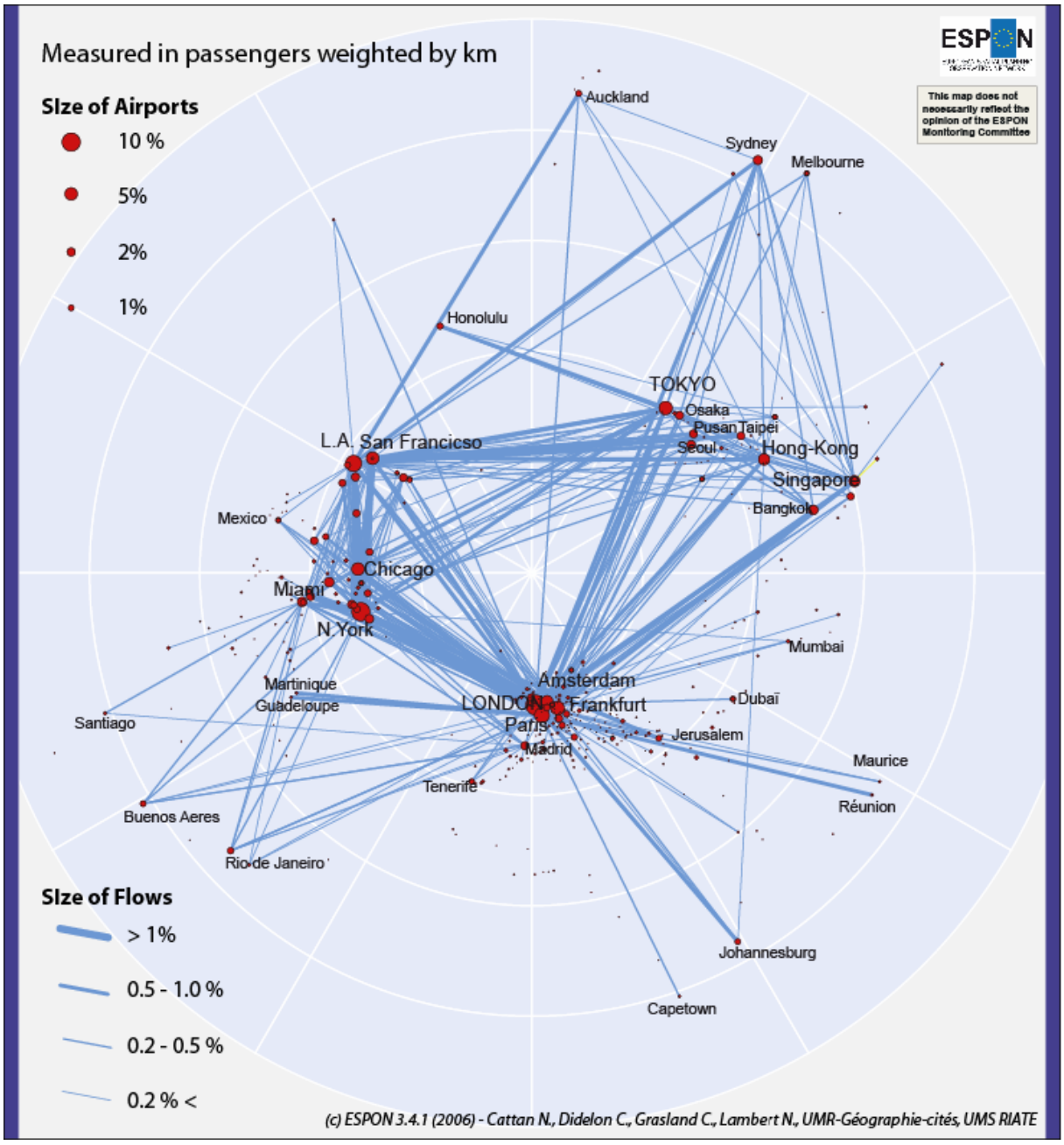


Table 14: Classification of the World Cities according to air connections in 2000

World Cities	National and International Flows				International Flows			
	Passengers/.km		Passengers		Passengers/.km		Passengers	
	rank	%	Rank	%	Rank	%	Rank	%
LONDON	**1**	**13.24**	**1**	**10.20**	**1**	**16.94**	**1**	**15.91**
NEW YORK	2	10.95	2	8.99	3	7.97	6	4.60
LOS ANGELES	3	8.53	5	5.60	6	6.77	13	2.85
PARIS	**4**	**7.37**	**3**	**6.45**	**2**	**9.16**	**2**	**8.71**
FRANKFURT	**5**	**6.02**	**6**	**4.65**	**4**	**7.68**	**3**	**6.60**
TOKYO	6	5.84	19	2.43	5	7.57	8	4.19
CHICAGO	7	5.23	4	6.08	14	3.00	30	1.73
SAN FRANCISC	8	5.22	9	3.54	12	3.26	35	1.38
AMSTERDAM	**9**	**4.50**	**8**	**3.78**	**7**	**5.84**	**4**	**6.47**
HONG KONG	10	4.21	10	3.24	8	5.46	5	5.58
SINGAPORE	11	4.03	18	2.52	9	5.23	7	4.34
BANGKOK	12	3.04	26	1.96	10	3.94	10	3.38
ATLANTA	13	3.00	7	4.03	27	1.58	48	0.94
MIAMI	14	2.89	17	2.55	18	2.67	17	2.50
SYDNEY	15	2.71	62	0.85	11	3.52	34	1.46
SEOUL	16	2.54	15	2.68	13	3.08	14	2.77
BOSTON	17	2.52	11	3.05	53	0.86	79	0.60
WASHINGTON	18	2.36	13	2.84	38	1.28	66	0.71
MADRID	**19**	**2.27**	**14**	**2.77**	**17**	**2.70**	**12**	**2.98**
PUSAN	20	2.20	28	1.93	15	2.73	22	2.01
LAS VEGAS	21	2.15	12	2.91	180	0.12	292	0.05
OSAKA	22	2.09	44	1.25	16	2.71	21	2.15
SEATTLE	23	2.08	25	2.02	69	0.62	135	0.26
ORLANDO	24	2.05	16	2.59	70	0.57	116	0.33
TAIPEI	25	1.92	38	1.58	19	2.49	15	2.71
ZURICH	**26**	**1.90**	**27**	**1.95**	**20**	**2.46**	**11**	**3.17**
HOUSTON	27	1.89	22	2.27	48	0.95	49	0.91
MANCHESTER	**28**	**1.66**	**36**	**1.71**	**21**	**2.12**	**16**	**2.56**
DENVER	29	1.63	21	2.28	155	0.15	203	0.13
KUALA LUMPUR	30	1.61	53	1.01	22	2.09	29	1.74

Whatever the criteria used for the evaluation of the size of cities in terms of air connections (national or international, measured in passengers or weighted by distance), the ESPON territory appears particularly well connected to the rest of the World via London (1st rank whatever the criteria), Paris (2nd to 4th rank), Frankfurt (3rd to 6th rank) and Amsterdam (4th to 9th rank) (table 145). But if ESPON clearly dominates the top of the list of World cities in respect of air connections, this is less so when considering the following ranks of cities where we find a majority of American and Asian cities and very few European ones, except for Madrid, Zurich and Manchester. This confirms the reality that ESPON World gateways are efficient but also very concentrated in the Pentagon area.

4.4 Demographic flows towards Europe

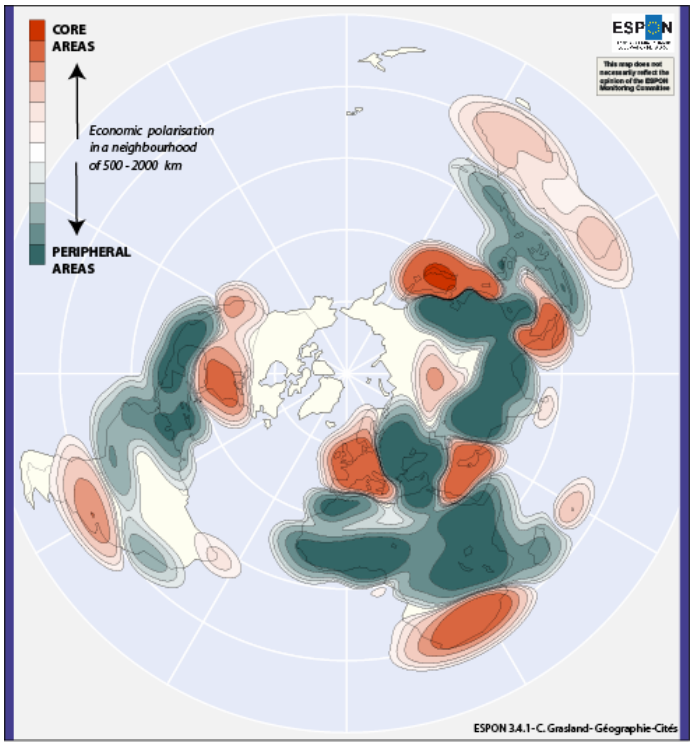
The main problem that we had to face with the analysis of demographic flows concerned the shortage of reliable data available in respect of the origin and destination of migrants. As a consequence, it is not possible to estimate gross flows and this then hampers the analysis of convergence and divergence, integration and disintegration, and symmetrical and asymmetrical migration patterns. It is then, also not possible to propose an equivalent picture of the World organisation of migrations as in other sections of this part of the report. We have therefore used a simulation model describing the potential flows of migration and investments which *could* be induced by the unequal repartition of population and wealth in the World (B.4.1). We then referred to the net-migration data to compare the potential of flows and the observed figures of migrants (B.4.2), and finally we used the most reliable, but very partial, source of data on migration flows, the OEDC database, in an attempt to draw a picture of the origin of migrants from the rest of the World flowing toward the ESPON space (B.4.3).

4.4.1 Potential demographic & economic complementarities and figures of net migration

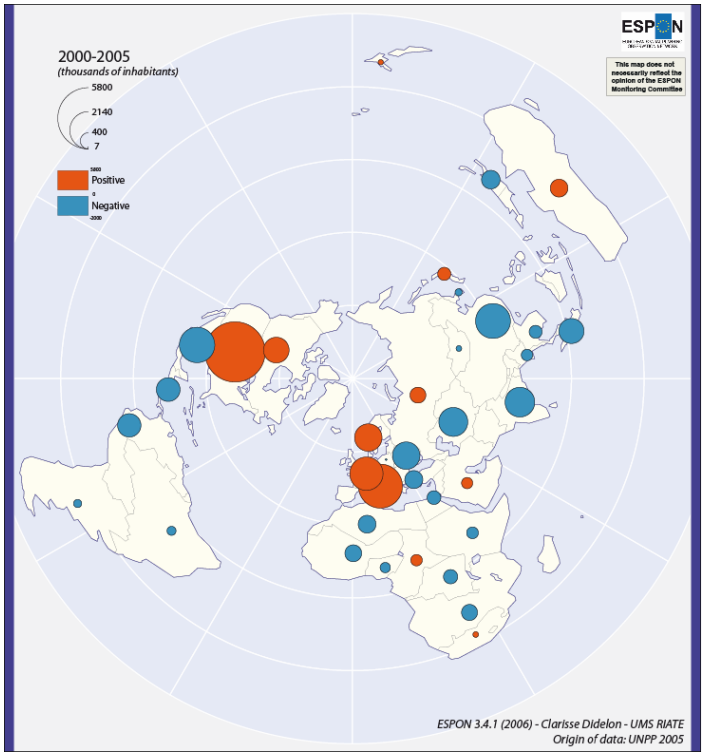
This model of potential demographic and economic complementarities proposed by C. Grasland (2001) is based on the research on local equilibrium between allocations of GDP and Population at various scales of spatial interaction. For a given scale, we define areas with relative accumulations of wealth as compared to their neighbours which are represented in red and regions with relative accumulations of population, which are in blue[30]. The main assumption of the model is that the contact between these two types of region can induce either flows of migration (from "blue" to "red") or flows of investments and activity relocations (from "red" to "blue"). According to traditional push-pull theories, these disparities should, in a free labour market, give rise to high migration from low wealth/high population growth countries (sub-Saharan countries) to high wealth/low population growth ones (such as the EU25). This implies that a labour surplus and low wages in the developing countries will be the determinant factors behind the migration decisions. In some cases however the mobility of capital can be *the* driving force with flows directed in the opposite direction.

[30] This model has also been applied to the analysis of internal economic and demographic polarisation inside the ESPON territory and is explained in the dictionary of tools proposed in the Final Report of ESPON Project 3.1.

Map 41: Push-Pull Factors in 1999



Map 42: Net number of migrants at WUTS4 level 2000-05



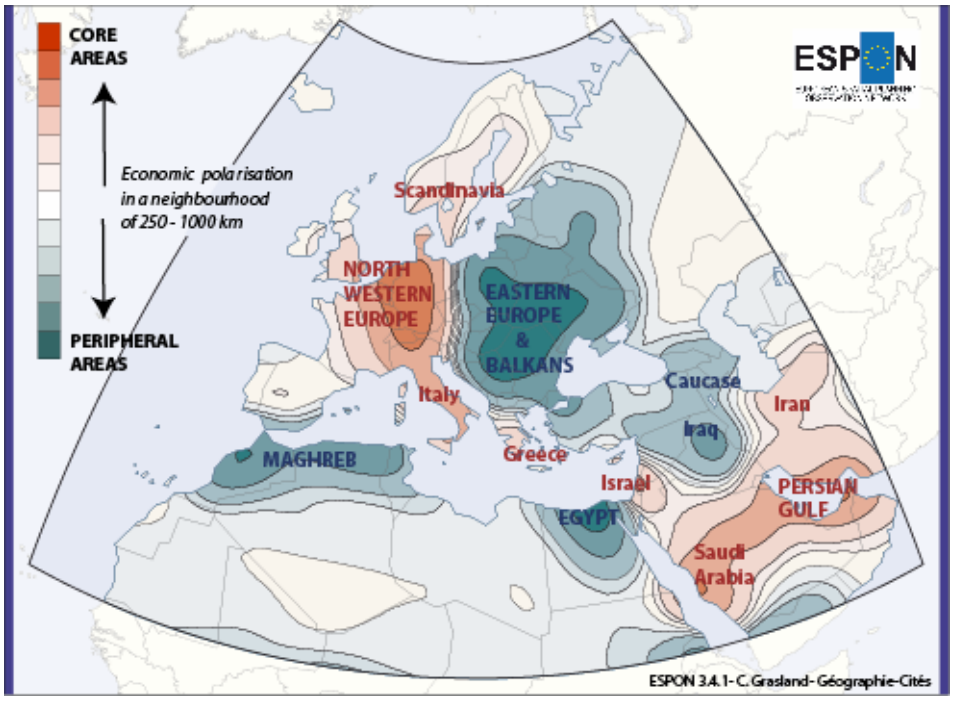
Considering **long distances of spatial interaction** (Map 41) (500-2000 km) provides a simple picture of the 'push- pull' factors at the World level which fit very well with the actual trends of migration and FDI. The three attractive poles of the great Triad are clearly visible (Japan, Europe and North America) as are their equivalents of the 'little Triad' in the southern hemisphere. Those poles appear as very attractive for migrants. One can also note the potentially highly attractive area formed by the Gulf's oil-rich countries. The net migrations (map 42) in 2000-05 at the WUTS 4 level confirm, to a certain extent, the model of potential migrations. Europe is, together with North America, the main immigration destination of the World. Some differences in intensity and some exceptions and particular cases have however to be underlined. The main pole of attraction, according to the model, should be Japan. However one can observe that the major net-migration poles are the USA and Southern, West-Central and Northern Europe. Japan seems to have relatively few migrants, due to migration laws and historical and geographical particularities of the region (high densities). The potential map is however confirmed in Japan by the fact that the country is a great exporter of FDI to China and to the other countries of Western Pacifica. What is striking too is that despite parts of South America, South East Asia and Africa (South Africa), appearing as potentially attractive, they are actually net senders of migrants, or receive few migrants. Moreover, a highly unlikely zone, from a migration potential point of view, namely, Central Africa appears to have a positive net number of migrants, probably as it borders m conflict zones such as those of the Democratic Republic of Congo (in the South), Rwanda (in the East) and the Sudan (in the North East).

Considering **interactions of a rather short distance** (250-1000 km) in the Euro-Mediterranean area, we can observe a relatively more complex picture of the complementarities in economic and demographic terms (Map 43). The two main (potentially attractive) poles for migrants (and emissive poles) for capital and investments) are North Western Europe and the Persian Gulf. The net migration map 44 confirms that they are indeed the main poles of net immigration observed in the region. The high number of net migrants in Southern European countries (Spain and Portugal) is striking as in the 1950's they were net-exporters to the rest of Europe.[31] Southern Mediterranean countries (Morocco, Algeria, Tunisia and Egypt) and the Eastern European ones shown as potential senders are effectively net emigration countries. For each space the possible impact of this migration is quite different. In the first case migration is related to the growing population and in particular to the many

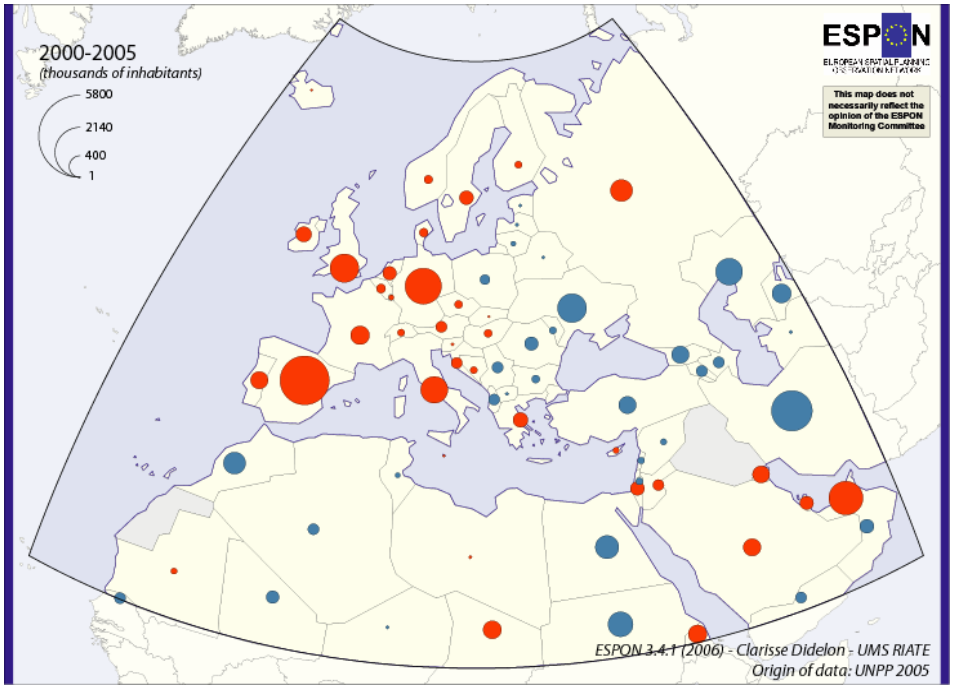
[31] We must note here that an important part of the migrant in those countries come from Latin America (long distance spatial interaction but short cultural distance). In addition, much of the immigration currently experienced by Spain via the Canary Islands is transitory, with migrants often aspiring to move on to other European countries. This is something that is specifically addressed in the Dublin Convention. (See: Official Journal C 274, 19.09.1996).

young people without work. In the second case, net emigration correlates more to the low fertility rate and even to decreasing population rates in the case of the Ukraine, which could worsen the demographic situation.

Map 43: Push-Pull Factors in 1999 in Euro-Med Area



Map 44: Net number of migrants in Euro-Med 2000-05



4.4.3 Migrations toward the ESPON space

4.4.3.1 Historical Migration pattern

The migration pattern within Europe and even the migratory flows towards Europe after Second World War can be divided into four phases. The first phase was characterised by "forced migration" as a consequence of the war. The second was more of a redistribution phase as a consequence of differing labour market conditions particularly in respect of the movement from the Southern to the North-western countries in Europe. The slow-down in the European economy also resulted in a slow-down in the demand for imported labour and the labour market related migratory movements began to decrease. As such, refugee migration subsequently increased in importance and, by the middle of the 1980s, labour market related immigration had almost disappeared even if family reunion migration continued to grow. The fourth period was characterised by the migratory effects of the collapse of the Soviet Bloc and the upheaval of the former Yugoslavia. Both cases resulted in significant migratory movements with an impact on the demographic development and the demographic structure in both the origin and the destination countries.

4.4.3.2 Origin of flows toward ESPON

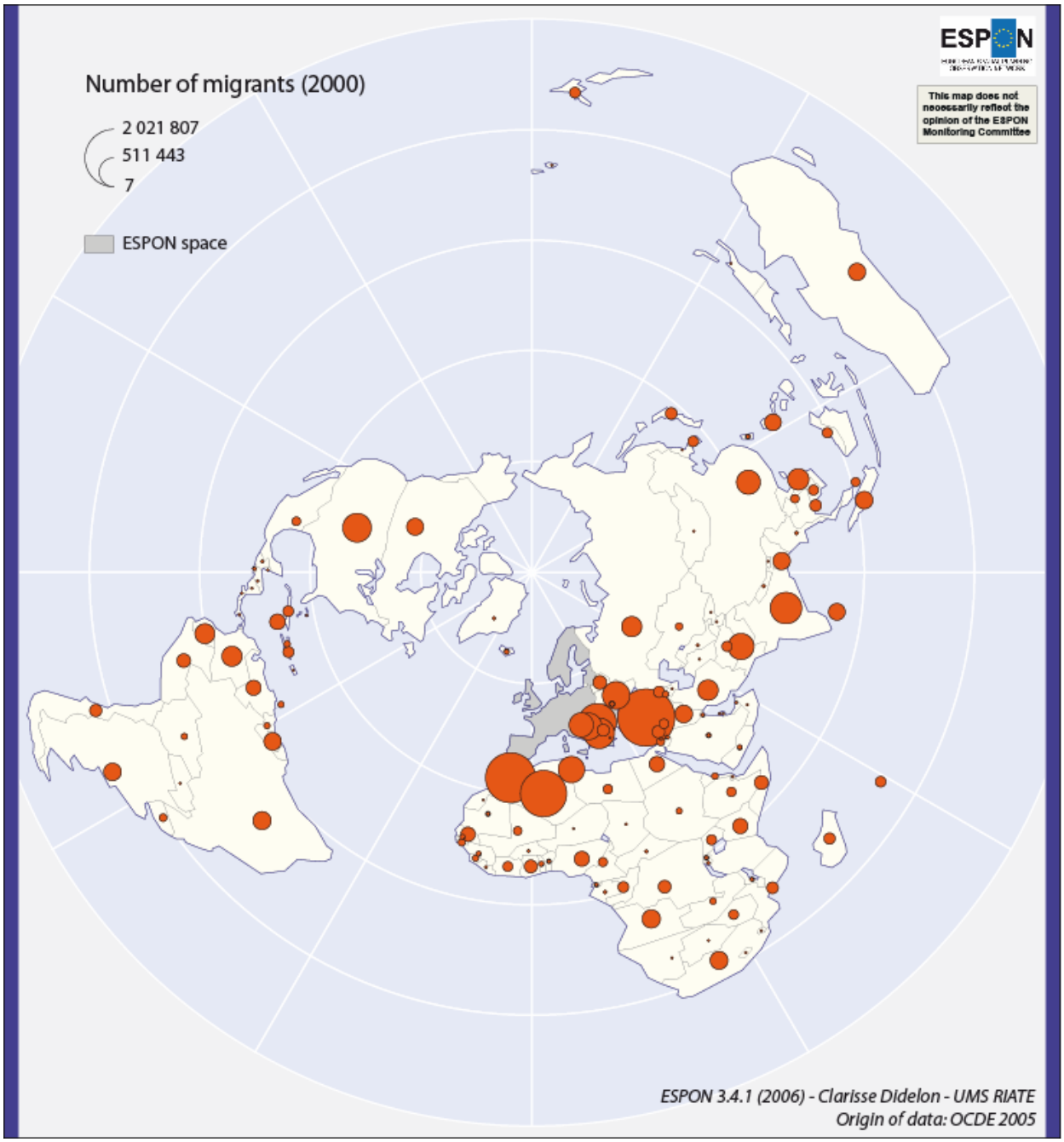
Map 45 shows the country of birth of migrants living in the ESPON countries at the end of the 1990s. Migrants have come to ESPON countries from nearly all parts of the World. Only the Central Asian and Central American countries have very low numbers of migrants in the ESPON space, not only because they are not highly populated, but also as the flows of migrants from those areas are probably attracted respectively by Russia and North America. Concerning the flows toward ESPON, two main spaces can be identified as source of migrants: the Maghreb countries (Morocco, Algeria and Tunisia) and Balkan countries plus Turkey, i.e. all countries in very close proximity to the European Union

It must, however, be kept in mind that the 1990s was an exceptional decade in respect of upheavals, wars and other catastrophic situations that had impact on these migratory movements. The collapse of the Soviet Bloc and the war and turmoil in the Balkans, which brought about the dissolution of Yugoslavia, were only some of the events that shook the World and resulted in both human catastrophes and increasing refugee migrations. It was, however, not only the turmoil in the former Yugoslavia and the breakdown of the Soviet Bloc that contributed to selective migratory movements.

Colonial ties continued to have an impact on the origin and destination of these migrants. This was not a new phenomenon but together with the new migration

patterns alluded to above it probably accentuated the choice of Western Europe as a destination and more, as *the* destination for many of the World's migrants Colonial ties explain the migration from South Asia (mainly towards the United Kingdom), from Southern America (towards Spain and Portugal), and from the Maghreb, Sub-Saharan Africa or the former Indochina toward France.

Map 45: Origin of migrants in ESPON according to their country of birth



4.4.4: What is at stake concerning the migration flows toward Europe?

4.4.4.1 Migration, the prime driver behind the population change

As a consequence of the slowdown in fertility rates – for most of the European countries below the reproduction rate today – migratory movements and then inflows of people have been even more important for population development than before. Many western European countries would have had a negative population development without the immigration surplus. Foreign-born people contribute to the population development in two broad ways – one by immigration and the other by natural population increase. The second can then be divided into two other parts – higher fertility rates among foreign-born women and a more positive age structure from a reproduction point of view. Without migratory flows towards Western Europe the "population crisis" would be even worse than it is today. The continuously rising share of females among migrants also ought to have positive effects on population development. There seems, however, to have been a change in the motives among the female migrants – from being "passive players" accompanying their husbands to a situation where they are now, more or less, migrants on their own account. Increased family reunions have also contributed to this rise in the female share among migrants in the developed countries and the social and economic situation for women with access to significant educational and employment opportunities has also stimulated female migration to Western Europe and Northern America in particular.[32] The higher share of female labour migrants may perhaps counteract the effects of family reunification but the rising female share ought to have positive effects on natural population change. So, in this case increased immigration may possibly result in higher fertility rates and a rising population.

4.4.4.2 Territorial polarisation

The most accentuated migration pattern is however the huge flows – and then redistribution of people – within Europe, which seems to have a huge impact on the population development and polarisation processes. From other studies it seems obvious that West Central Europe was the "winner" and the peripheral areas the "losers" here.[33] These migratory flows from the peripheral areas to the central ones were more often than not characterised by asymmetrical rather then symmetrical flows. This is valid both concerning the amount of people and the structure of the migrants. There are signs that many of the immigrants to ESPON from other parts of the World contributed to the polarisation process while also stripping many regions of highly qualified people.

[32] Zlotnik, 2005
[33] See e.g. ESPON 1.1.4, "Spatial effects of demographic trends and migration"

Box 3: Labour Mobility and educational levels

No common labour market currently exists at World scale – not even in Europe and its surrounding areas - and there is still a long way to go before this point is reached. This implies, therefore, that the following reasoning will be very hypothetical. According to traditional 'push-pull' theories, economic disparities should, in a free labour market, give rise to high migration from the low-income countries to high income ones. This implies that labour surplus and low wages in the developing countries determine migration decisions. Moreover, the high wages in the developed countries further stimulate this labour mobility process.

However, according to the segmented labour market theories, these workers are demanded neither in the private nor in the public sectors in the EU. The transformation of the European activity structure in a post-industrial direction has reduced demand for traditional blue-collar workers. Instead, there has been rapid employment growth in the service sectors, especially the upper segments related to the knowledge economy. One result of this transformation process is the looser connection between the business cycles and labour force migration from the second half of the 1970s and 1980s. During these years, migration was a function of political events in other parts of the World and, since the beginning of the 1970s the majority of immigrants have been refugees working in the lower segments of the economy where the educational level is low. The structural transformation of the European economy changed the employment opportunities for immigrants. Instead of blue-collar work in the goods-producing sector, immigrants are now predominantly employed in the lower segments of the service sector. As a consequence of the structural transformation of the European economy, the push factors are now stronger than the pull factors concerning these immigrants. This has also resulted in a change in the employment structure, with a large share of the immigrants working in jobs refused by the domestic labour force – the 3D jobs, "dirty, dangerous and degrading".

Looking at figures 9 & 10 provides evidence that the migratory fields are not homogeneous in terms of the qualifications of the labour force, both in respect of countries of origin and countries of destination.

- Concerning countries of destination (B.4) the highest levels of education are observed for migration toward northern Europe (Sweden, Norway, the UK, Ireland) and to a less degree toward central Europe (Germany, Switzerland, Luxembourg, Slovakia, and Hungary). The lowest levels of education are observed on the contrary for migrations toward south-western Europe (France, Spain, Italy, and Portugal).

- Concerning countries of origin (B.5) the highest levels of education are observed for migrants coming from Asia, the Middle East and Eastern Europe. The lowest level are observed for migrants coming from southern Europe, the Maghreb, the Balkans and Turkey.

This pattern suggests that immigration cannot have the same economic impact in all ESPON countries but that it is important to keep in mind the fact that immigrants does not necessarily stay in their country of arrival and that what is therefore at stake is the elaboration of a global migratory policy at the EU level.

Figure 9: Repartition of migrants according to their education level and their country of residence in 2000

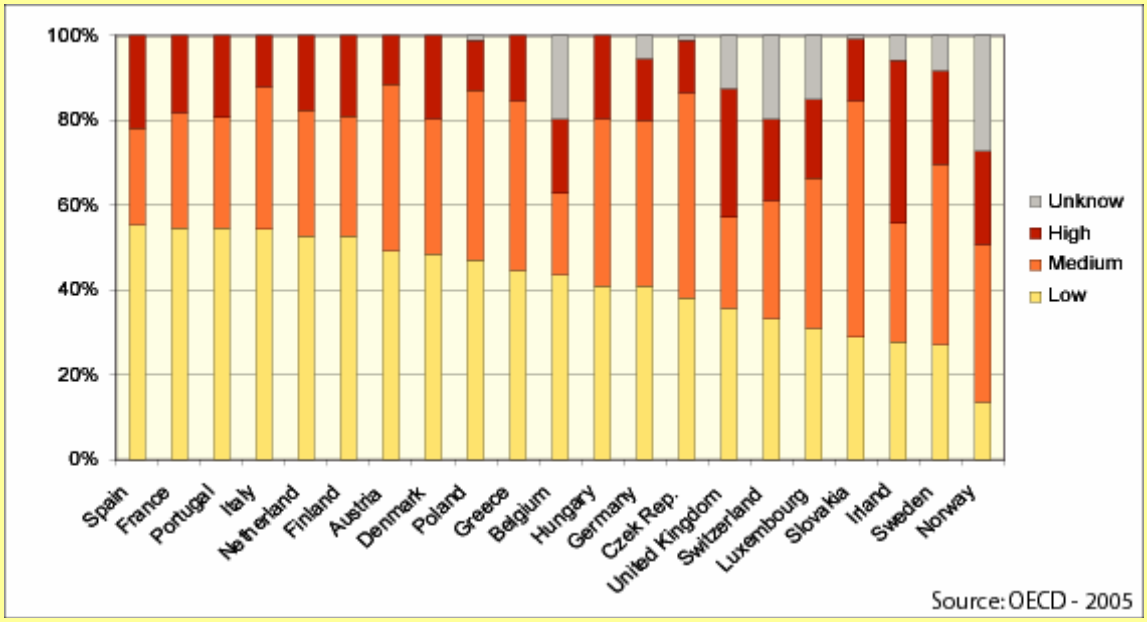
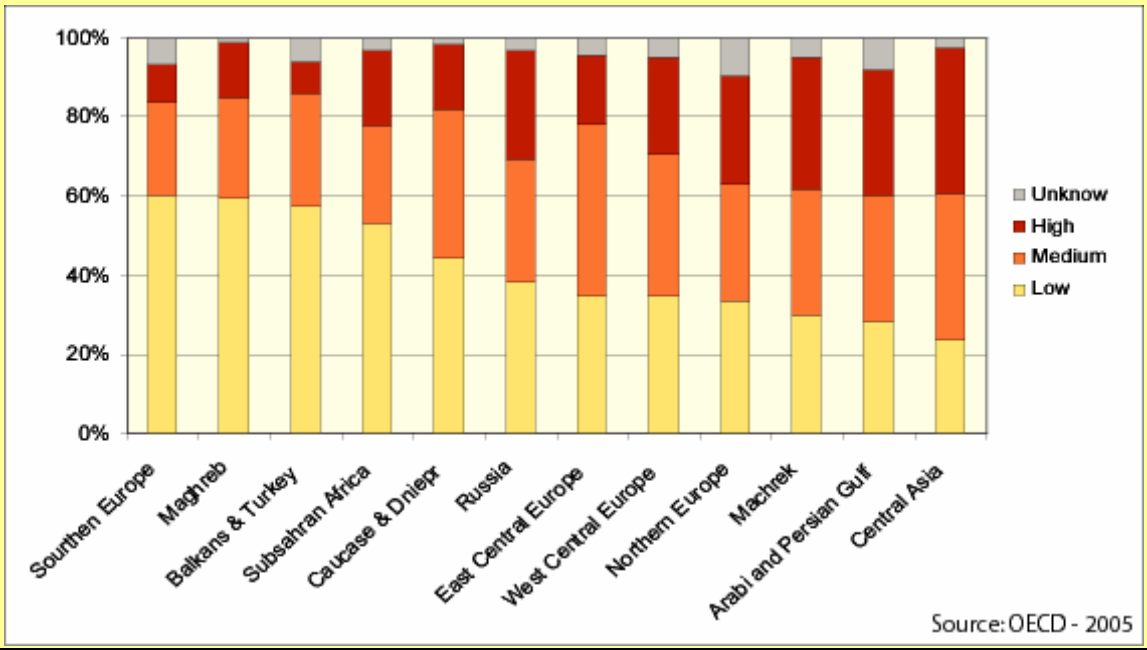


Figure 10: Repartition of migrants according to their education level and their WUTS of origin in 2000 (neighbouring countries).



4.5 An attempt to delimit the ESPON 29 "influence area" or "relational networks" in the World

The analysis of air, trade and migratory flows presented in previous sections suggests the possibility of identifying a so-called "area of influence" of ESPON 29 in the World as requested in the T.o.R. It also suggests that it is perhaps better to speak of the "relational network" of ESPON 29 in the World and to admit that the results should not necessary be a continuous area organised in concentric circles. This synthetic exercise is based on 4 groups of criteria which try to provide the most complete view in accordance with the statistics available (table 15)

4.5.1 The choice of criteria

- ***Accessibility*** is a basic condition for the development of relations of any type. But the size of places is also important in the development of such relations. An important population is more likely to spread itself across the World (e.g. the Chinese diaspora) than is a small human group while a large economy is more likely to develop networks of relation all over the World (e.g. Transnational Firms). We have therefore decided to propose three measures of potential influence in respect of ESPON 29 weighted by area, population and GDP in 1999. We have completed these measures of accessibility by the criteria of existence of a common land border or a short distance maritime border.
- ***Networks*** define another condition for the development of relations based on the existence of a common language (official or not) or a common history (ancient or recent). A common history is frequently associated with former colonial relations with countries which have been dominated by ESPON 29 states (e.g. France in Africa) or which have dominated ESPON 29 states (e.g. Turkey in Balkans) and is not necessary associated with friendship-type relations. But, even in the case of conflict, it is a form of knowledge that has been established between different parts of the World and can be used in current circumstances.
- ***Interactions*** are effective relations established in the present but also defining further relations in the future. In terms of "influence", the simplest way here is to evaluate the share of ESPON 29 in international air or trade flows of each country of the World. But an important share is not necessary associated with a high intensity of relations. It is therefore necessary also to measure the effective influence of flows with ESPON 29 in respect of the economy (Trade / GDP) or on society (Air flows / population).
- ***Complementarities*** are both the cause and consequence of flows. The differences in development measured by the three components of HDI (life expectancy, education and GDP) and by the level of population ageing (median age) have been introduced as factors defining different degrees of the structural asymmetry between ESPON 29 and the other states of the World. We assume that states which are less developed than Europe but with younger populations are likely to develop fruitful relations of complementarity with ESPON 29

in the future, which is not true in the case of states with equivalent levels of development and ageing.

Table 15: Delimitation criteria for the ESPON 29 Influence Area

	CODE	Definition	Source	Year
Weight factor				
	POPTO99	Population, total (inh.),1999, (SP.POP.TOTL)	WDI	1999
Accessibility Criteria				
	A_GDP	Contribution of ESPON29 to potential of GDP pps 1999	WDI+CEPII	1999
	A_POP	Contribution of ESPON29 to potential of Population 1999	WDI+CEPII	1999
	A_SUP	Contribution of ESPON29 to potential of Area	WDI+CEPII	1999
	A_BO1	Existence of a common land border with ESPON29	CEPII	2000
	A_BO2	Existence of a common maritime border with ESPON29	RIATE	2005
Network Criteria				
	N_LA1	Share with ESPON29 at less one common official or national languages and languages spoken by at least 20% of the population of the country	CEPII	2000
	N_LA2	Share with ESPON 29 at least one language (mother tongue, *lingua franca* or second languages), spoken by at least 20% of the population of the country.	CEPII	2000
	N_CO1	Colonizers or colonised by at less one ESPON29 country for a relatively long period of time and with a substantial participation in the governance of the colonized country.	CEPII	2000
	N_CO2	idem, but with colonial relations still active in 1945	CEPII	2000
Flows Criteria				
	F_EXP	Ratio between observed and expected exportations toward ESPON29 (under the assumption of random allocation of trade flows according to capacity of import and export of World states)	PC-TAS	1996-2000
	F_IMP	Ratio between observed and expected importations from ESPON29 (under the assumption of random allocation of trade flows according to capacity of import and export of World states)	PC-TAS	1996-2000
	F_AIR	Ratio between observed and expected air flows with ESPON29 (under the assumption of random allocation of air flows according to total sum of air relations of each state)	OACI	2000
	F_TRA	Intensity of trade flows with ESPON 29 measured by the ratio between bilateral trade flows 1996-2000 and GDP pps 1999 (normalised to 1)	PC-TAS+WDI	1996-2000
	F_AIR2	Intensity of air flows with ESPON 29 measured by the ratio between bilateral air flows 2000 and population 1999 (normalised to 1)	ITA+WDI	2000
Dissimilarity Criteria				
	S_LIF	Ratio between HDI life component of ESPON29 and HDI Life component of the state	HDR	2002
	S_EDU	Ratio between HDI Education component of ESPON29 and HDI Education component of the state	HDR	2002
	S_GDP	Ratio between HDI Economic component of ESPON29 and HDI Economic component of the state	HDR	2002
	S_AGE	Ratio between median age of population of ESPON29 and median age of population of the state	UNPP	2002

4.5.2. An index of the global influence of ESPON 29 in the World?

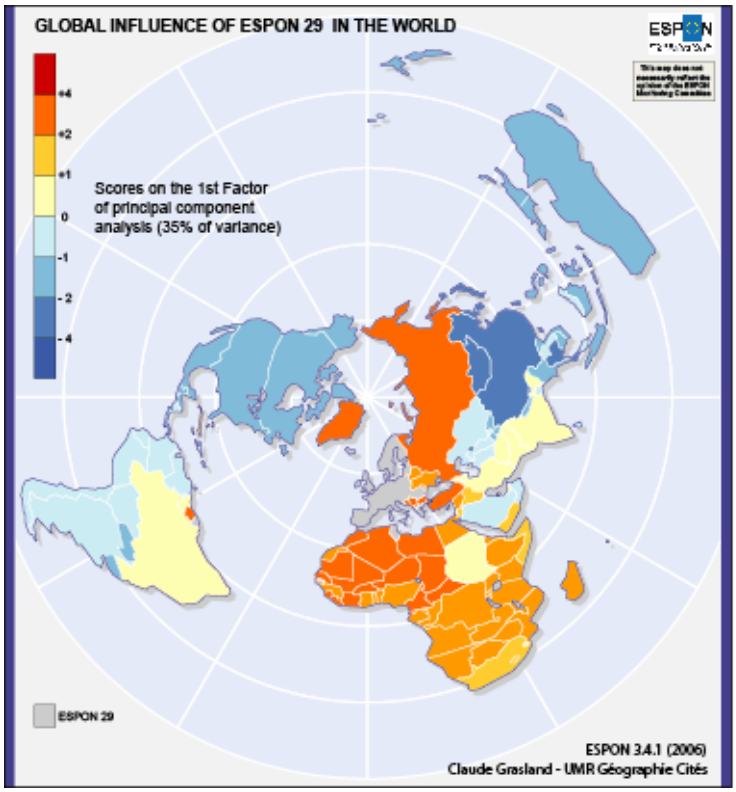
A Principal Component Analysis applied to the 18 criteria defined in previous sections has revealed the existence of a 1st Component which is correlated with all the criteria and with the expected sign. This first component thus defines an index of global influence of Europe which is positive for states which (1) have good accessibility to ESPON 29 (2) share a common language and a common history with ESPON 29 (3) are strongly dependant on ESPON 29 for trade and air flows, and (4) are less developed in economic and social terms than ESPON 29 but have younger populations (map 46). Of course, all of the criteria are not necessary fulfilled by any single state but a positive sign on this component indicates that a majority of the conditions are available while a negative sign indicates the contrary.

The influence level of the ESPON 29 space is clearly at its maximum value in the Balkans, Turkey, northern Africa and in the north Atlantic (Iceland and Greenland) (table 16). It remains very important in Western Africa and Russia and rather important in the rest of Africa and the Middle East (except for the Persian Gulf). In terms of the medium value of influence, we observe interesting developments in relation to states such as Brazil, India and Iran. In the rest of the World, the potential influence of ESPON 29 is low (South America, Central Asia, the Persian Gulf) or very low (North America, South -East Asia, and Oceania). The minimum level of influence is however reached in Eastern Asia for countries like Japan, China, Korea, Thailand and Mongolia.

The use of the word "influence" for the qualification of this index is a little ambiguous as it suggests a relationship of geopolitical domination where several distinctions can be made, for example between 'hard' and 'soft' power.[34] It is certainly true that the strong asymmetries which characterise the relationships between the ESPON countries and the neighbouring countries of Balkans, Turkey and Northern Africa can support this idea of power and domination. Asymmetries can however also be considered as vectors of complementarities and it seems to us better to use the word "functional integration" for the qualification of what is really measured by this index. It is moreover perhaps a little politically incorrect to speak of integration of these new countries into the EU, even if it is from a 'functional' rather than a political point of view. Nevertheless, our results clearly indicate the geographical direction that should be taken to further elaboration the Neighbourhood Policy and where those situations where the European Union could perhaps seek to develop stronger partnerships.

[34] For an interesting discussion of the similar situation in respect of the USA see J S Nye, *Bound to Lead –The Changing Nature of American Power*, New York, Basic Books 1991. In particular, note his apposite discussion of the difference between what he terms, 'hard' and 'soft' power. The former entails getting people to do what you want them to do, while the latter involves getting them simply to want what you want.

Map 46: Global influence area of ESPON 29 in the World



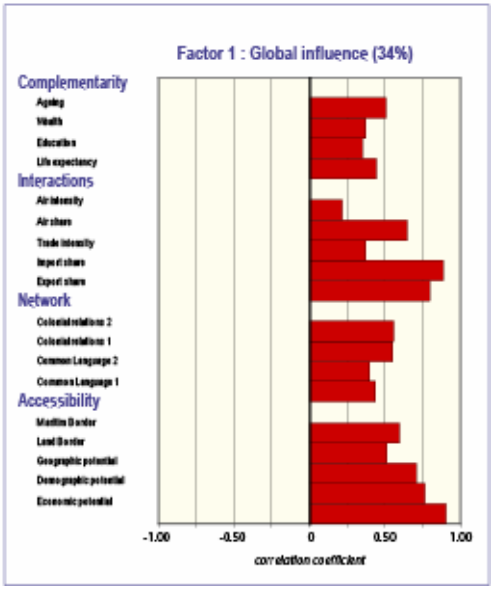


Table 16: Maximum and minimum values of ESPON 29 Influence

Maximum influence of ESPON 29			Minimum Influence of ESPON 29		
Rank	**Score**	**State**	**Rank**	**Score**	**State**
1	9.36	Croatia	1	-3.19	Japan
2	9.12	Iceland	2	-3.14	Taiwan
3	8.90	Tunisia	3	-3.01	North Korea
4	7.93	Serbia/Montenegro	4	-2.85	Korea, Rep. of
5	7.92	Albania	5	-2.46	China
6	7.46	Macedonia, TFYR	6	-2.31	Thailand
7	7.19	Morocco	7	-2.08	Bhutan
8	7.15	Turkey	8	-2.02	Mongolia
9	7.12	Algeria	9	-1.59	Myanmar
10	7.12	Greenland	10	-1.56	El Salvador
11	7.09	Libyan Arab Jamahiriya	11	-1.51	Uruguay
12	6.38	Liberia	12	-1.51	Mexico
13	6.00	Bosnia-Herzegovina	13	-1.46	Australia
14	5.62	Sierra Leone	14	-1.46	Philippines
15	5.06	Russian Federation	15	-1.44	Indonesia

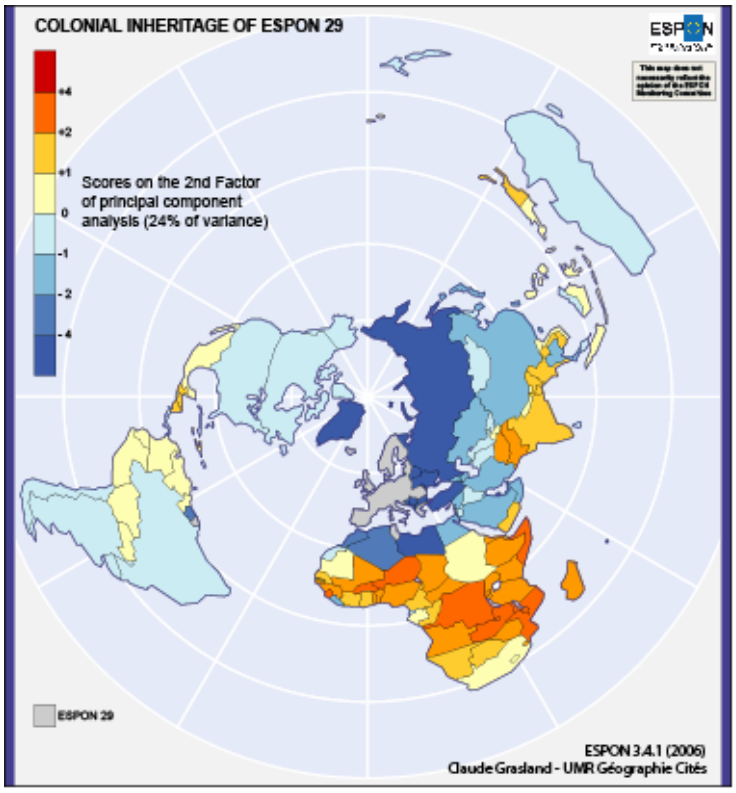
4.5.3 Heritage as a determinant factor of relations

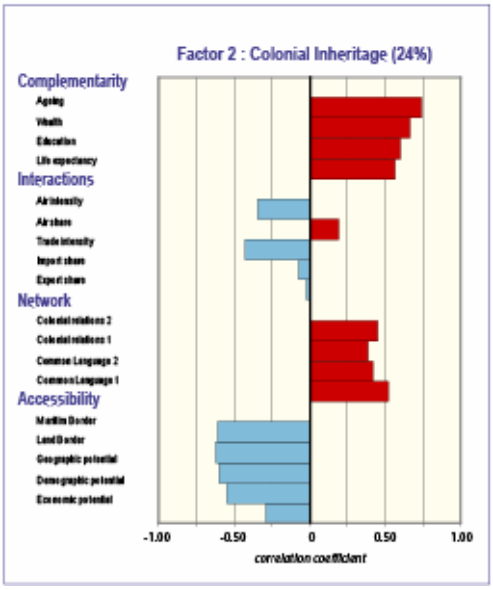
The index of global influence of ESPON 29 in the World was based on the 1st component of a Principal Component Analysis which summarise only 34% of the information on the 18 criteria. The detailed analysis of results revealed the existence of 2 others significant components which reveal different patterns of relation in respect of ESPON 29 with the World which are related to the issue of heritage.

- **The exploitation of the Third World countries by European colonial empires** clearly defines a second component of the analysis (24% of information) which is characteristic of countries with low or very low levels of development, young populations and common languages with Europe (French, English, Spanish, Portuguese etc) inherited from the colonial period (map 47). This situation is typically observed in sub-Saharan Africa where the official breakdown of colonial links took place very late, after the Second World War, and where the influence of Western European states remained strong even after independence. Indeed, official political domination was in many cases simply replaced by informal political and economic networks of influence which maintained the exploitation of these territories – often termed 'neo-colonialism'. This situation can also be observed, though to a less important degree, in Southern Asia and in Central and the northern part of South America. In terms of migration this countries are typically potential providers of low-skill labour to ESPON.

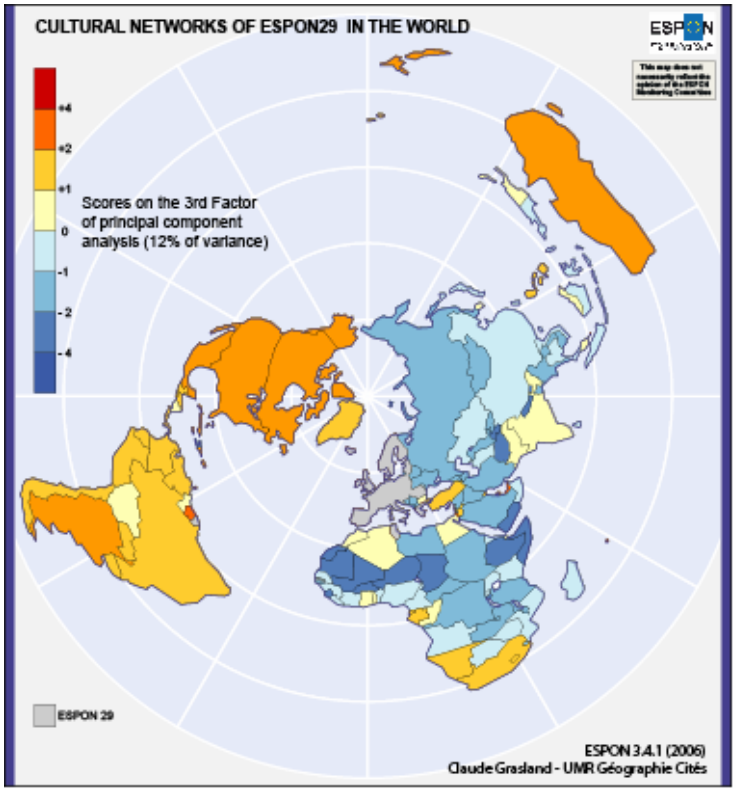
- **The existence of cultural networks linking Europe with territories of historical emigration** defines the third component of the analysis (12% of information) (map 48). It is characterised by countries which are generally at the same level of development as those of ESPON 29 (North America, Australia, New Zealand etc) or which have experienced important progress in human development and are located around or above the World mean (South America, Southern Africa etc). These countries are no longer 'dominated' by ESPON but nevertheless remain strongly connected by common language and common history defining what can be called "cultural networks". As a result, these countries are actually well connected to Europe by air flows, despite the fact that they are generally located far from the core ESPON 29 area. In terms of trade relations, they are not in the main oriented towards ESPON 29 but they are important partners, generally with a balance that favours the ESPON 29 countries. In migratory terms, these countries are characterised by the movement of a highly-skilled labour force in both directions, from or toward ESPON 29.

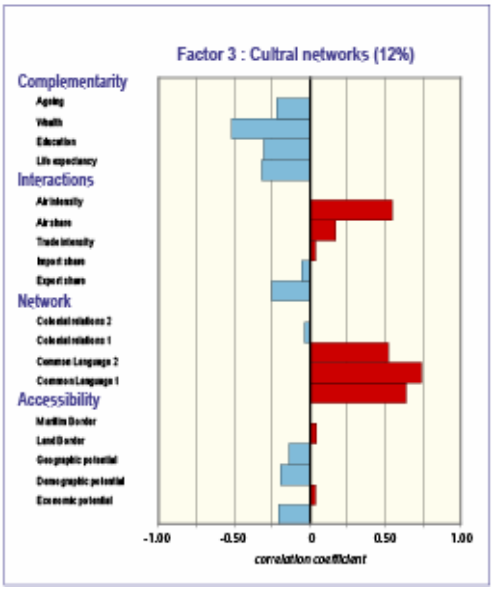
Map 47: The colonial heritage of ESPON 29





Map 48: Cultural Networks of ESPON 29





4.5.4 A strategic typology of ESPON 29 relations with the World

A cluster analysis was then finally applied to the 18 criteria of ESPON 29 relations with the World in order to define synthetic types combining all of the information revealed by the Principal Component Analysis. Seven clusters of states were identified were then rearranged into 4 strategic types for ESPON 29 external relations (map 49).

Type A: Functional Integration: This situation is characteristic of those states located in the immediate neighbourhood of ESPON 29 and which share a common terrestrial border (type A.1) or are separated by a very short maritime distance (type A.2). The eastern neighbours (*Russia, the Ukraine, Belarus, and Moldova*), the Balkan countries (*Croatia, Bosnia, Serbia, Macedonia, Montenegro, Albania, and Turkey*) and the southern Mediterranean countries (*Morocco, Algeria, Tunisia, Libya, Egypt, Syria, Lebanon*) are all characterised by a very strong polarisation of their trade and air relations toward Europe, despite the fact that they do not necessary share the same language or the same religion and that they have historically often been in conflict with ESPON 29 countries. According to Bopda (2003) the problem of functional integration is particularly crucial and a source of conflict in this situation where a discrepancy exists between physical proximity and mental distance between social groups. The asymmetry of relations between the European Union and its immediate neighbourhood is a source of conflict but, at the same time, these conflicts are a factor of functional integration in the long run according, for instance, to Simmel's analysis of the concept of the *Stranger*. The specific strategies utilised by ESPON 29 in respect of this area are further developed in following chapter.

Type B: Historical Responsibility: In the case of the sub-Saharan African countries (except those of the southern part of the continent, which belong to another type); ESPON 29 has a clear responsibility for the future development of this part of the World. In addition to their historical responsibility for colonisation and for the exploitation of the African countries, the ESPON 29 countries also have objective reasons to engage in a strong and voluntary policy of cooperation and development with this part of the World. With a very young population and an important rate of natural increase, the countries of sub-Saharan Africa will increasingly be the main sources of emigration towards the rich and ageing part of the World.

The European Union is currently active in developing a strategy of protection against these south-north migratory flows which cross the Sahara and try to reach Europe through the gateways of the Canaries, Ceuta & Mellila, Lampedusa, and Gibraltar. Indeed, this migratory pressure is generally considered a threat, and the northern African countries are more or less obliged to play the doubtful

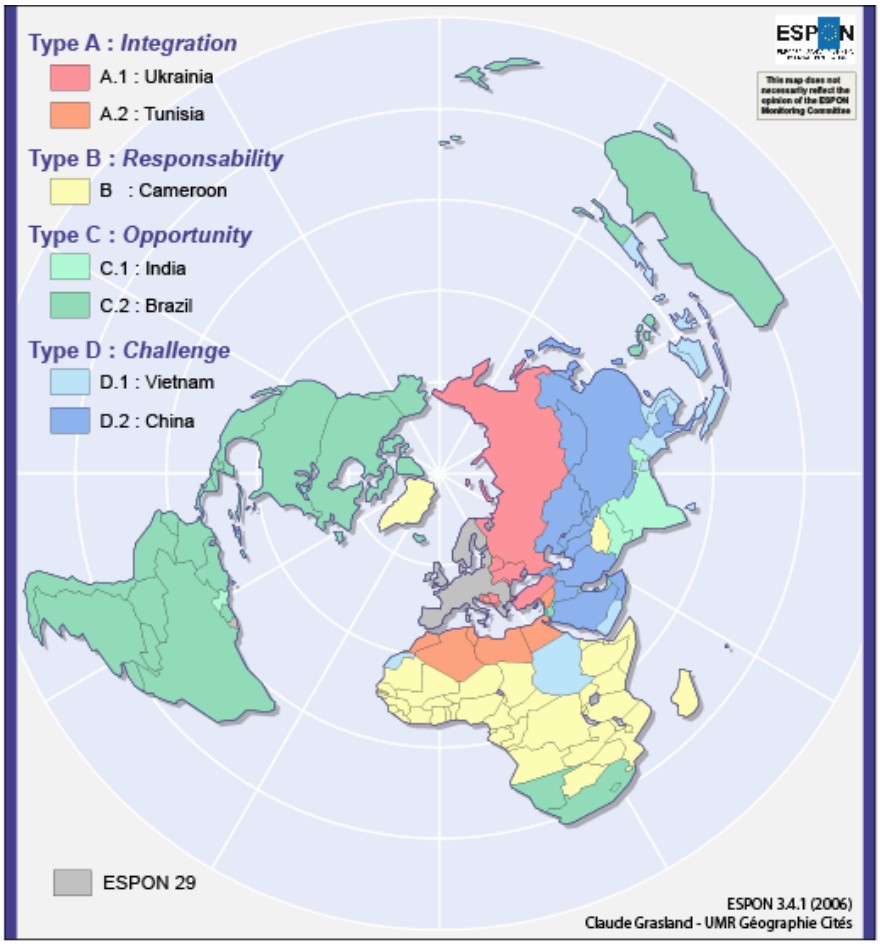
role as the border guards or gatekeepers of fortress Europe. In 20 or 30 years however, these countries will probably be engaged on the same path of development as that currently experienced by the countries of northern and southern Africa and, as such, could be among the most dynamic parts of the World. At this moment, where ageing will be generalised all over the World, Africa could become a major centre of World production and its young population will provide many an opportunity. The ESPON countries should not overestimate the strength of their actual influence in Africa and as such could find strategic advantage in the reinforcement of its historical relations with these in a more equilibrious, and fairer manner than was previously the case.

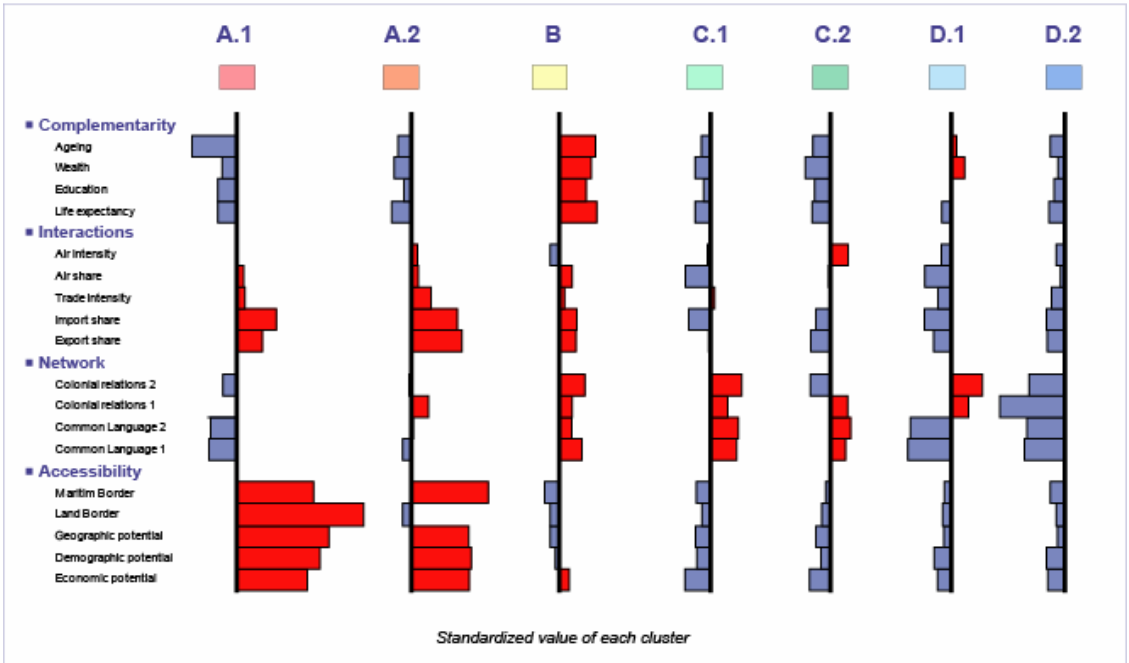
Type C. Opportunity: States located at long distances from ESPON but sharing a common language and a common history are particularly important in a global World where services represented the major part of 'added value' and where scientific and cultural innovation are a major factor in long term development. Such links are actually well developed with highly developed countries such as the USA, Canada, Australia and New Zealand. But they could certainly be more developed with Latin America (Brazil, Argentina, and Chile), Southern Asia (India, Pakistan, and Bangladesh) and Southern Africa, all of which are particularly dynamic from an economic, scientific and cultural point of view. These emerging states could thus become important partners for ESPON 29 in the World because they are actually relatively independent from the major poles of the Triad and are keen to develop autonomous strategies of development. The European Union is often seen as a model by these countries, in particular in terms of its political construction.

Type D. Challenge: States located on a great diagonal running from Sudan to Arabia, Iran, China and Japan define that part of the World where the ESPON 29 countries are significantly less able to have an influence or to easily develop relations because of differences in language, geographical distance, or the weakness of historical relations. But it is precisely this area in which the majority of the ESPON media and, by extension, the policy-makers actually focus most of their attention because of the location here of the most important energy resources (oil and gas in Persian Gulf and Central Asia) and the most dynamic economies (China, Korea, Taiwan, etc). In economic terms, this diagonal is globally in a stronger position than the European countries in respect of most criteria and has a regular positive balance in its trade exchange with ESPON. Both private and public actors from the ESPON countries regularly fight to be present in this part of the World and invest a significant amount to simply be "present". We have here a major subject of debate inside the European Union because, in the perspective of growing political integration, We can really legitimately ask whether this is really a rational strategy in the long term for European states and companies to invest economically so much in the part of the

world where they are politically so weak. It probably benefit some transnational firms and financial investors looking for higher profits in the short term, but it is probably not in the interests of ESPON societies to let their resources flow towards an area that will clearly remain outwith their area influence and one which in the main is, or in the future will become, organised and defined by the competition between the other global players (China, the USA, Russia, and Japan).

Map 49: Typology of ESPON 29 influence in the World





4.6 CONCLUSION

4.6.1 Towards a strategic vision of the ESPON 29 space in the World?

The elaboration of (1) a global index of proximity with ESPON 29 and (2) a typology of proximities linking ESPON 29 with the World will hopefully prove to be a major tool for the development of a strategic vision of the situation of ESPON 29 in the World, ultimately with the potential for it to be applied to many topics (education, trade, research and development etc). As a very simple example of the usefulness of this tool, we will analyse the asymmetry of the trade balance of ESPON29 with the rest of the World during the period 1996-2000.

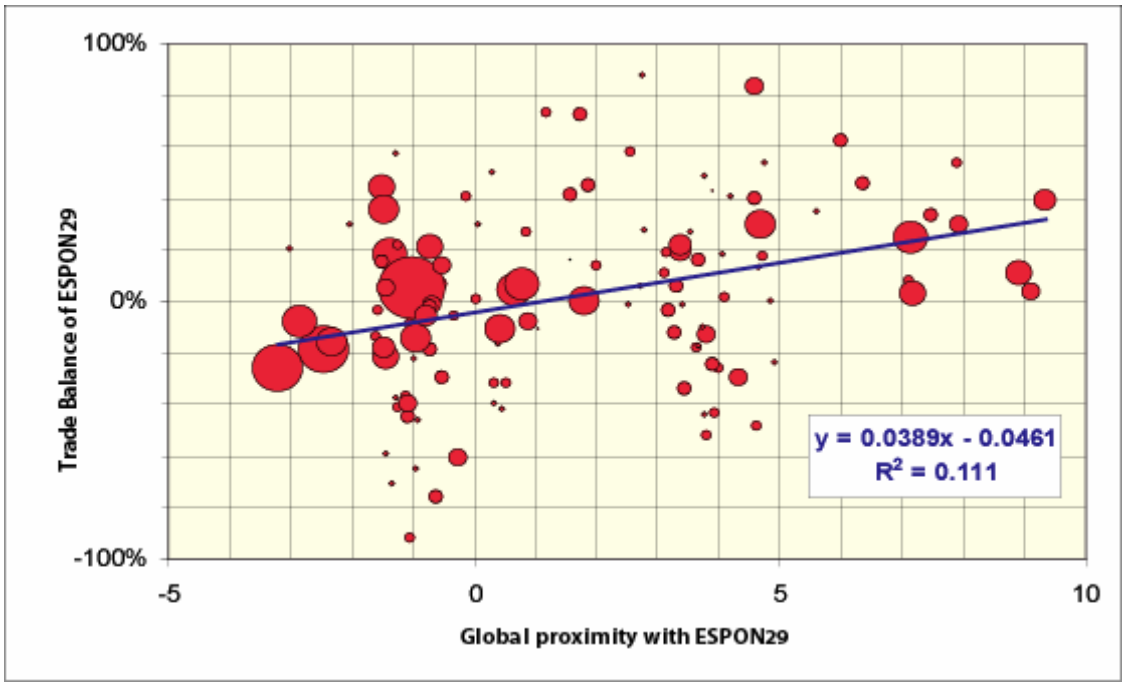
With an annual average of US $690 billions in exports and US $647 billions in imports, the 29 countries of the ESPON area experienced a global deficit of US $42 billions per year during the period 1996-2000. This deficit is primary related to oil and gas imports (which are paid for in US dollars), while ESPON also experiences a generally negative balance with other countries exporting energy such as *Russia* (US $22 billions), *Libya* (US $6 billion), Algeria (US$3 billion), *Saudi Arabia* (US$2 billion), *Iraq*[35] (US $2 billion), *Nigeria* (US $2 billion), *Iran* (US $1 billion) and *Cameroon* (US $1 billion). The importing of oil and gas are a major concern for European external policy and it is important to observe that the majority of sources of energy for Europe are located in its direct neighbourhood, with a major challenge related to the case of Russia. If we exclude this particular question of energy, we notice however that the balance of trade relations with the rest of the World is clearly influenced by the global factor of influence that we have already identified (Figure 11). A significant positive correlation can be identified between the level of influence of ESPON 29 and the positive or negative equilibrium of trade flows. Countries with high scores of proximity generally have a trade balance in favour of ESPON while the contrary situation is observed for remote countries without important links of any type with the ESPON 29 space, in particular in East Asia and Western Pacifica.

The aggregation of trade balances in accordance with the typology of proximities with ESPON 29 (table 17) indicates that the relations with integrated countries *(type A)* are globally in equilibrium (slightly negative) as the deficits in respect of energy are balanced by the export of other manufacturing goods. In the case of sub-Saharan countries *(type B)* we can also see a slightly negative equilibrium but with a very low volume of exchange. The countries described as 'opportunity based' because of historical links *(type C)* are the most favourable for ESPON

[35] Note, after a decision taken by Saddam Hussein in 2000, Iraq subsequently became the first country to sell its oil in Euros rather than dollars.

countries which obtains a positive balance with them, primarily related to the good performance in respect of exports to the Americas. The situation is clearly more difficult with countries such as India (type C.2) which currently export more than they import in their trade relations with ESPON 29. In the case of those countries described as 'challenging' because of weakness across all forms of proximities *(type D)* the balance of trade is strongly negative and ESPON 29 records major deficits which are generally not related to the energy market.

Figure 11: Correlation between trade balances and the global influence of ESPON 29



N.B. Countries that are mainly oil exporters are excluded

Table 17: ESPON 29 trade with the rest of the World by type of proximity

Type of proximity with ESPON 29	**Trade flows of ESPON 29 in 1996-2000** *(in billions of US $ / year)*				**Asymmetry**
	Import	Export	Volume	Balance	/Volume
A : Integration	**101**	**93**	**194**	**-7**	**-4%**
A1 : Ukraine	67	62	128	-5	-4%
A2 : Tunisia	34	32	66	-2	-4%
B Responsibility	**19**	**16**	**35**	**-3**	**-9%**
C : Opportunity	**310**	**364**	**674**	**55**	**8%**
C1 : India	16	13	29	-3	-9%
C2 : Brazil / USA	294	351	645	57	9%
D : Challenge	**260**	**174**	**433**	**-86**	**-20%**
D1 : Vietnam	31	20	51	-11	-22%
D2 : China / Japan	228	154	382	-75	-20%
Total	**690**	**647**	**1337**	**-42**	**-3%**

4.6.2 Policy recommendation: Aid Flows and Millennium Objectives

Europe has an important external role to play in the world. The Gothenburg European Council of 2001 recognized the external dimension of EU policy and practices as crucial in attaining sustainable development. As the countries of the European Union are included in the developed world, they have a special responsibility to support the further development of the least developed countries (LDCs). They also have a collective responsibility to uphold the principles of human dignity, equality and equity at the local level and in particular to ensure that "globalisation becomes a positive force for all the world's people"[36]

The Millennium Development Goals (MDG) (table 18) adopted by the countries of the United Nations in 2000 specifies eight ambitions goals. At present most of them are far from being achieved (UNFPA, 2003). The MDG #8 – "A global partnership for development" – is particularly focused on reforming aid and trade with special treatment for the LDCs and on reducing debt. Thus this final goal can be seen as a one of the means by which all other seven goals could be met.

Development aid flows are a pillar of MDG #8 and an area where the European Union has taken on a special role. The European Council agreed, on the basis of a Commission proposal, to double aid to developing countries between 2004 and 2010, and to allocate half of it to Africa. By making this commitment, the EU is likely to reach the UN target of allocating 0.7% of its GNI to development aid by 2015. The EU is well placed for such work as the largest donor of development aid (55% of global ODA), the largest trading partner for the developing countries and a major source of direct private investments.[37]

4.6.2.1 Making aid flows work

In light of the volume of aid flows from Europe to the developing world, international aid, while effective, is also seen as a potential weapon to fight poverty that is "underused, inefficiently targeted and in need of repair" (UNDP, 2005). In order for aid to be effective three conditions must be met:

1) Aid must be *adequate* enough to spark human development,
2) It must be *cost-effective* with low transaction costs,
3) Recipient countries must have primary responsibility for its use. Aid must be *untied*.

36 United Nations General Assembly resolution A/res/55/2

37 "Towards a global partnership for sustainable development (2002). COM (2002) 82 Final, Brussels 31.3.2002.

Table 18 : The Millennium Development Goals

Goal	Target
Eradicating extreme poverty and hunger	• Halve, between 1990 and 2015 the proportion of people whose income is less than one dollar a day • Halve, between 1990 and 2015 the proportion of people who suffer from hunger
Achieving universal primary education	• Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
Promoting gender quality and empowering women	• Eliminate gender disparity in primary and secondary education preferably before 2005 and in all levels of education no later than 2015
Reducing child mortality	• Reduce by two-thirds, between 1990 and 2015, the under-five mortality
Improving maternal health	• Reduce by three-quarters, between 1990-2015, the maternal mortality ratio
Combating HIV/AIDS, malaria and other infectious diseases	• Have halted by 2015 and begun to reverse the spread of HIV/AIDS • Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
Ensure environmental development	• Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources • Halve, by 2012, the proportion of people without sustainable access to safe drinking water and basic sanitation • By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers
Building a global partnership for development	• Develop further an open, rule-based, predictable, non-discriminatory trading and financial system • Address the special needs of the least developed countries • Address the special needs of landlocked countries and small island developing States • Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term • In co-operation with developing countries, develop and implement strategies for decent and productive work for youth • In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries • In co-operation with the private sector, make available the benefits of new technologies, especially information and communications

Source: UNFPA (2003) A*chieving the millennium development goals. Population and Development strategies n°10*. United Nations Population Fund

Providing sufficient aid to developing countries is obviously not enough. The goals of cost-effectiveness and the ownership of aid initiatives are crucial.

The EU, in the 2005 revision of the Cotonou Agreement from 2000 supports initiatives on the *untying of aid*; in particular in the framework of ACP (Africa, Caribbean and Pacific) cooperation. Tied aid is aid where the provision of supplies and services provided by the donor country is contingent upon the purchase of donor country products or services. Former European Commissioner for External Relations Chris Patten, in a public addressed reiterated: "Tying aid runs counter to the internal rules on the free movement of goods and services".[38] Untying aid would thus boost the effectiveness and impact of EU aid flows.

Achieving cost-effective aid with low transaction costs is an unwieldy task in light of the heavy bureaucracy that often characterises some of the governments of the LDCs as well as the donor aid agencies. Corruption within some of the developing country governments and 'unofficial' transfers of aid into the informal market is also a risk with poorly managed aid flows.

Private aid and remittances from abroad are sometimes seen as a good way to avoid the bureaucratic jungle that can characterise ODA. Many studies have shown that the transfer of money by immigrants from developing countries to Europe is generally higher and more efficient than the official transfer of money from rich to poor countries. The common conclusion is that opening European borders to people from Less Developed Countries may be a more efficient way in which to help them. Alas, this conclusion is misleading: development aid is generally used for investment in infrastructure and social overhead capital, while remittances from family members abroad are used for private consumption and investment in family property.

Although remittances are a very important source of capital for developing countries, foreign direct investment (FDI) is still the most important source of capital. Aid, investment, development programmes and remittances are not supplementary, but rather complementary. In practice however it may be difficult to distinguish between private remittances, whether from family members or private donors, and private investment, the fruits of which may not always be transparent in the recipient countries. While private investments certainly have a place in achieving the millennium goals and in encouraging development, it is important to be able to distinguish between investment, trade and aid in order to achieve cost-efficiency and evaluate the impacts of each.

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38 Address by Chris Patten, European Commissioner for External Relations. Europe in the World: CFSP & its relation to development. ODI, 7 Nov 2003, p.4

4.6.2.2 More impact for the money

On October 12th 2005, the European Commission adopted a new EU strategy for Africa with several elements focussed on achieving the cost-effectiveness of development aid and enhancing the European-African partnership. Initiatives focus on not only the targets of the Millennium goals, such as health, water and infrastructure, but also on security, peace and good governance. Fighting the "root causes" of the development gap between Europe and Africa stated President José Manuel Barroso, is the only way of addressing problems on the EU territory such as illegal immigration due to poverty.[39]

In terms of good governance, all aid and development programmes should be enriched with a capacity building element in order to work with local recipient communities in achieving their own Millennium goals. Such aspects of aid should focus on the recipient communities in a true spirit of partnership, with communities having ownership of aid implementation. However with capacity building measures such as increasing transparency of implementation of projects and increasing participation of civil society, perhaps corruption could be better tackled from the bottom up.

4.6.2.3 International migration and the MDG's

International migration is a sensitive subject. Many countries have not been able to agree on the convening of a UN conference to provide guidance to countries addressing the issue of international migration (UNFPA, 2005).

Migration is a fundamental dimension of the MDG without being defined as one and the MDG's, though goals 1, 3, 6, 7 and 8 are connected with it. If they are achieved international migration will be affected. However, the relationship between migration and the MDG's are complex and multifaceted; the impact of migration on development can both challenge and achieve the MDG's. Migration can either increase or decrease inequality and poverty depending on the circumstances; migration can also lead to brain drain or brain waste (Usher E., 2005).

There is a demand in the developed countries for cheap labour doing the "3D-jobs" (dirty, dangerous, degrading) natives refuse to do. At the same time there is a supply of labour willing to take these jobs, believing that this will lead to a better life. In addition to the fact that migrants end up in the "3D"-sector of the economy, they will also have lower labour force participation rates than natives

39 EurActive.com, http://www.euractiv.com/Article?tcmuri=tcm:29-145748-16&type=News. Accessed on 13 October 2005.

and face a higher risk of unemployment as they work in a sector which is very sensitive to short-term economic fluctuations (OECD, 2005; Taran P., 2003).

Keeping weak economic sectors afloat by using cheap imported labour will counteract a structural change in the economy, which has negative effects on economic and social sustainability (Gaspar et al., 2005). These negative effects hit both the country of immigration (structural change is counteracted) as well as in the sender countries (less remittances).

Some scholars in the field argue that there is a temptation to build barriers to migration with the purpose of slowing down or even reversing these population flows. Any such temptations must be resisted at any cost however since they slow the progress of narrowing the gap between the developed and developing countries (Skeldon R. 2005). This appears, however, to be a rather unbalanced picture of the situation; policies built on *laissez-faire* liberalism are unlikely to solve either the building of barriers or the economic problems of the developing countries.

The UNFPA's Expert Group suggests the following measures on migration and development (UNFPA, 2005).

1. **Policies must be formulated on migration and development** as very few countries (if any) have them. One consideration in this regard will be ensuring that national development strategies recognize the role of migration. Government must thus work to integrate migration into their poverty reduction strategies, encompassing a wide array of components including: the labour market, health services, and access to health, trade, etc.
2. On migration and the MDG's, **proposals for a set of "minimum common denominators" to measure the progress towards achieving the MDG's** were suggested. Even if the MDG's make no specific reference to migration, "migration impact statements" could be developed with different follow-up policies envisaged.
3. Despite the progress made in **incorporating non-State actors in the migration policy dialogue**, this dialogue should be institutionalized so as to occur on a more consistent basis and to ensure their interdependence as important actors in their own right.
4. **Young academics in major migration countries should be supported by assisting indigenous research centres**, which potentially deliver insights and perspectives that cannot be gained outside the country. Moreover, indigenous research and dissemination can have a positive impact on public opinion by helping to break down negative stereotypes as well as having an impact on policy through reform.

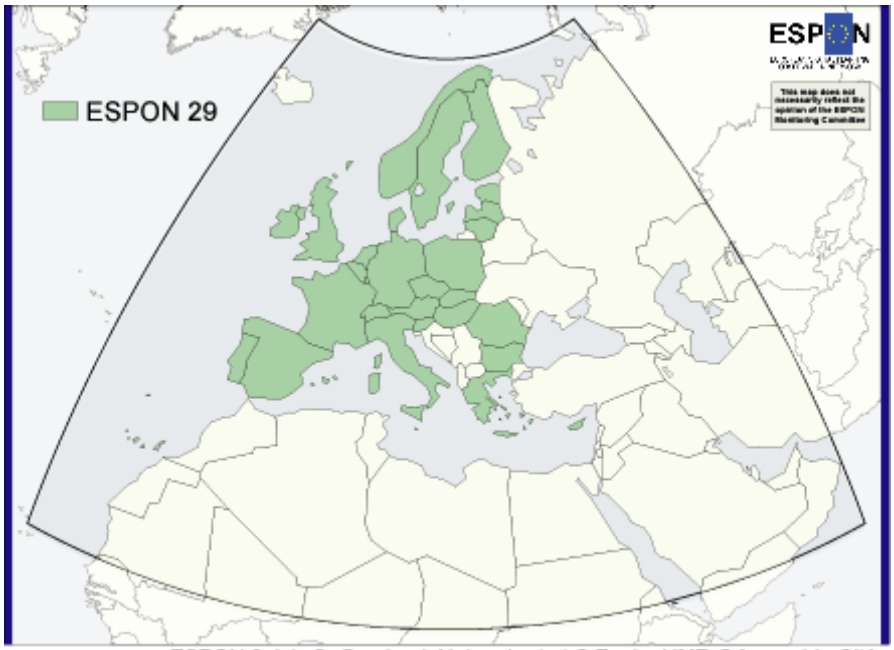
4.6.3. Promoting a new template for further researches (ESPON II?)

To limit the research conducted in the context of the ESPON programme to the EU 29 potentially generates misconceptions and induces mistakes in analysing the main trends shaping the European territory. In many cases, the perception of inequalities, potentialities, polarizations, etc. will be fully transformed according to the geographical shape and the basic territorial units used. It is obvious that the situation of the ESPON area would appear to be very different if the future scenarios included peripheral areas which are strongly related to Europe such as the S.E. Mediterranean countries, or Africa.

The strategic vision of the ESPON 29 territory must therefore be approached in a larger Europe. We have chosen a relatively broad definition of the wider ESPON area thus viewing ESPON in its wider context. This broadening eastwards and southwards is based on the analyses produced in this part of the report and therefore on objective criteria showing why taking the Southern and Eastern countries beyond the borders of the EU into account is so important for ESPON 29. One could argue that the Middle East and the Persian Gulf are not particularly well integrated with ESPON 29. In fact they form a second attractive pole in the region that could compete with it. Their integration into the further analysis to be developed here will thus help to promote a systemic point of view of the Euro-Mediterranean region.

In what follows, we will build a pan-European template using a special projection that shows all the features of Europe and its close neighbours (Map 50). The projection is centred on ESPON 29 and is enlarged to the South by the North African countries (some of the analyses show a special limit formed by the Sahara borders) and to the East by the Balkans countries plus Turkey, Russia, Azerbaijan and Kazakhstan. The southern and eastern limits are not actually precisely defined. This will depend on the subjects and research results. In addition, the preliminary study on Europe in the World developed in ESPON project 3.1 had shown that the ESPON view was certainly the most interesting one from a short term perspective. But the pan-European view and the global view should be taken into account when European policy-makers try to elaborate strategies in a long-term perspective. The next part of the report (Part C) will use this template to review the European neighbourhood relationship and its institutional instrument the European Neighbourhood Policy Instrument.

Map 50: The Euro-Mediterranean template



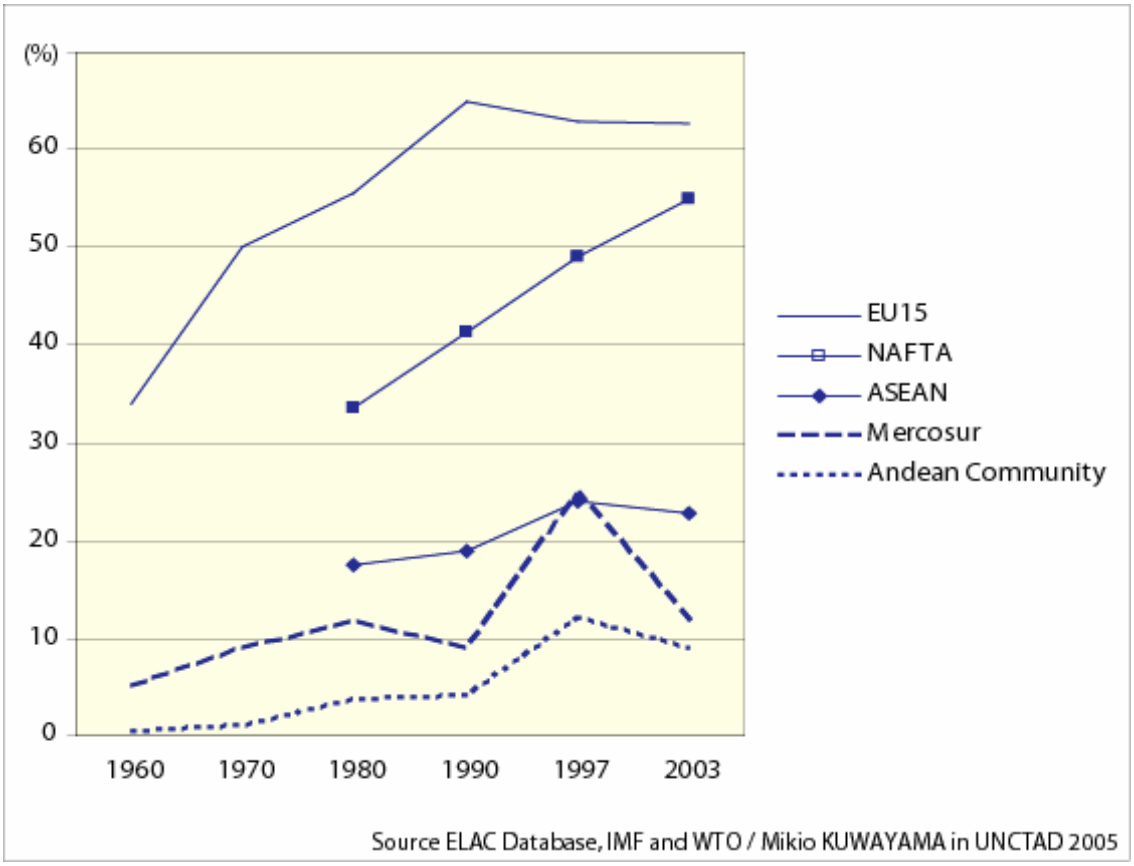
ESPON 3.4.1- C. Grasland, N. Lambert et C.Zanin- UMR Géographie-Cités

5. Part C: ESPON in its 'neighbourhood'

5.1 Introduction; two European regionalisms

Regionalisation is the dominant form of globalisation, for two reasons. Firstly, the enlargement of exchange scales provokes global flows but above all enhances all types of exchange between a nation-state and its bordering areas. Firms find many interests in locating in more remote but dynamic areas. They also find it very convenient to « near-shore » too. In this respect, the EU building process is one of the numerous regional processes that are being energised by globalisation (figure 12). The strategic advantages of proximity are growing as the oil price rises and travel and transportation costs thus rise also.

Figure 12: Share (%) of intra-regional trade in total trade of each grouping



Secondly, the need to re-balance or re-regulate the World economy is an important driving force here in response to the excesses of the era of borderless or 'footloose' capitalism. Of course some rules have been implemented at the global scale such as those on trade (WTO). However, the failure of the WTO's Cancun meeting concerning the Doha programme and the Millennium goals, the failure of the Kyoto's agenda, and the lack of common global legislation on

labour or public health shows how difficult it is to regulate the wide World. The regional scale however can be seen as more relevant for the introduction of new public policies, due to the complementarities between the national economies concerned, common environmental stakes (pollution of rivers, seas and air), shared cultural values – or at least an understanding of each other's cultural values, historical links, migratory flows, and any other assets important in creating win-win co-development. This is why regional trade agreements have multiplied worldwide in the last fifteen years, and why existing agreements have been re-invigorated with new environmental or social concerns, and why new ones are being formed to include developing countries. UNCTAD (2005) counts more than 200 such Regional Trade Agreements[40] and states that regionalism is becoming an active interface *vis-à-vis* the globalisation.

This regionalisation response occurs in two different ways. Type I is what could be called "convergence regionalism": it sees the gathering together of comparable countries, its main goal is convergence, and it is promoted mainly by States, through public policies. The European Union is the principal example of this type of regionalisation. In the developing World, MERCOSUR provides another example. Type II relates to "North/South regionalism". This type gathers together uneven countries, its main goal is economic development it is mostly promoted by private firms, with ALENA being the main example here. The growing association between ASEAN and North-Eastern Asia ("ASEAN Plus Three": Japan, Korea, China) is another relevant example. The December 2005 Kuala Lumpur Summit enhanced the notion of an "East Asian Region" or "ASEAN Plus Five" since Australia and New Zeeland attended the Summit and discussed their participation. This 'type II' form of regionalisation presents much better results than traditional 'type I' regionalisation when it comes to employment and the economy. The reason being that it is based on the complementarity between rich countries with a great deal of capital, technology and 'know-how' on the one hand, and developing countries with rapidly growing markets and large – increasingly educated – labour forces (dramatically lacking in Japan or Europe) on the other. For instance, since the beginning of the NAFTA agreement, Mexico has significantly increased its exports to the USA (and even to Canada), and now benefits from a positive trade balance. The country is now regarded as a "Northern country" by investors and it thus now benefits from a significant inflow of FDI. There is, moreover, no need to provide any proof about the economic dynamism of Eastern Asia, while it is undoubtedly the case that the Japanese recovery since the beginning of the 2000 is partly due to its increasing North-South integration.

[40] Unctad, Mina Mashayekhi & Taisuke Ito, ed. 2005, "Multilateralism and Regionalism. The New Interface", Unctad, New York and Geneva.

The goal for European Union then is to take this North-South regionalism step. The European Union has plainly already derived most of the advantages it is likely to make from type I regionalisation. It has taken advantage of its enlarged territory, by extending market forces eastwards. But (i) it is well known that the main opportunities for new workers and markets are located beyond the New Member States and in particular on the Southern shore of the Mediterranean. (ii) These neighbours already have many links with the EU, they interact economically, politically, socially, and demographically, there is however a strong need to regulate such links.

This is the reason why it is of utmost importance to distinguish between the two notions of "Europe":

- The first notion is the *institutional* one. "Europe" means the EU (ESPON, in a wider sense). Its borders are established, not necessarily forever (Romania, Bulgaria and Croatia should enter in 2007, perhaps the rest of the Western Balkans and Turkey later on), but at any time they are precisely defined.
- The second one is that of what we may call the *functional* "Europe." This means the Euro-Mediterranean (Euro-Africa in a wider sense) which is the socio-economic region in which ESPON is embedded. We have seen in the conclusion of part B of this report that its geography is unclear; its borders vary according to the index one uses (very large when it comes to commercial trade, closer when it comes to sea pollution). But in any case its dimension is broader than the institutional definition of the EU and ESPON. The geographical difference between the two definitions is the "neighbourhood" which covers the integrated area defined as type A (integration) on map 49.

The questions this chapter addresses then relate to how these two definitions of Europe deal with one another. Should the EU seek to increasingly integrate its neighbourhood, or will cultural differences mean that we are likely to experience a growing divide? Is the answer the same on the eastern and on the southern borders of the EU? How does this regional relationship impact EU territory? Does the European Neighbourhood Policy (ENP) adequately cope with these high territorial stakes? What about future Interreg programmes?

This chapter assumes a definition of the Euro-Mediterranean which covers WUTS11 (*Europe and Northern Asia*) and WUTS12 (*Southern Mediterranean and Western Asia*) with eventually the northern margins of WUTS13 (*Sub-Saharan Africa*). It shows how the neighbourhood impacts European territory (case studies illustrate the cross-border integration issue), while outlining what the main territorial stakes of regional integration are (C.1). It raises the issue of the form of the territorial contact (smooth transition or brutal discontinuity) between

the ESPON space and its neighbourhood (C.2). It argues that while there is not yet in place a common regional production system beyond the ESPON countries, nevertheless, many flows associate the ESPON space with its surrounding countries (C.3). Our policy orientations (Conclusions) highlight the way in which the ENP could help the European Union to achieve North-South regionalism, highlighting the role that DG Regio's regional policy has to play in this process.

5.2. How the neighbours impact ESPON territory

5.2.1. Neighbours' weight

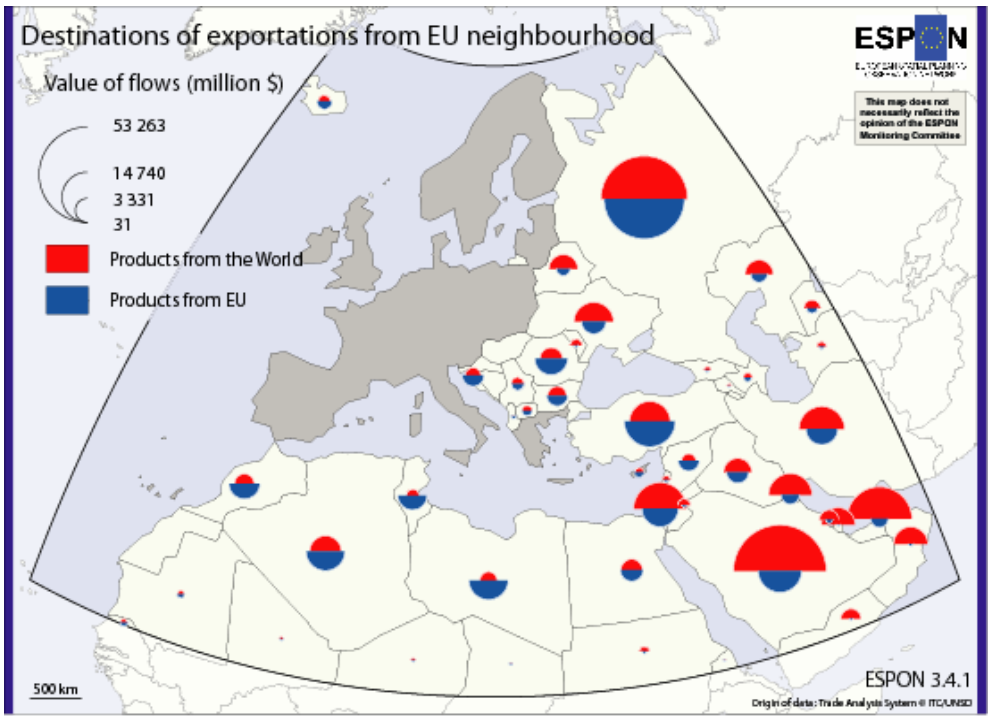
The oil and gas stake tells us how much Russia impacts the European economy and territory. The Ukrainian desire for European membership is backed by Poland. What is less known, is the importance of our southern neighbours. They are reported to have weak economies, significant labour forces but limited since they entered into a period of demographic transition. Indeed it is often perceived that they are likely to provide Europe with more trouble than with resources. The available statistics however do not agree. From now until 2025, their population will rise from 240 to 340 millions when it comes to Mediterranean partners and from 380 to 540 millions when it comes to the whole Middle East and North African (MENA) area (Morocco to Iran, Afghanistan excluded). Meanwhile the whole "European" population (ESPON + the Balkans) will only increase from 513 to 515 millions. Europe's (ESPON + the Balkans) current share of World GDP (PPP) is a little more than 20%, the MENA region weighs almost 5%, which is not inconsequential in global terms. The aggregated economy of the Southern Mediterranean countries, from Morocco to Israel and Turkey, is thus much larger than that of the ten New Member States (NMS's), and almost as large as that of Russia and Ukraine altogether. The economic annual growth of the MEDA[41] countries reaches 4 or 5%: this is not enough for their employment needs but it is much more than ESPON (map 27). Last but not least, the Euro-Mediterranean area (ESPON + Eastern and Southern neighbours) is certainly the most complementary and historically the most inter-linked among all of the major regions of the World (see map 46).

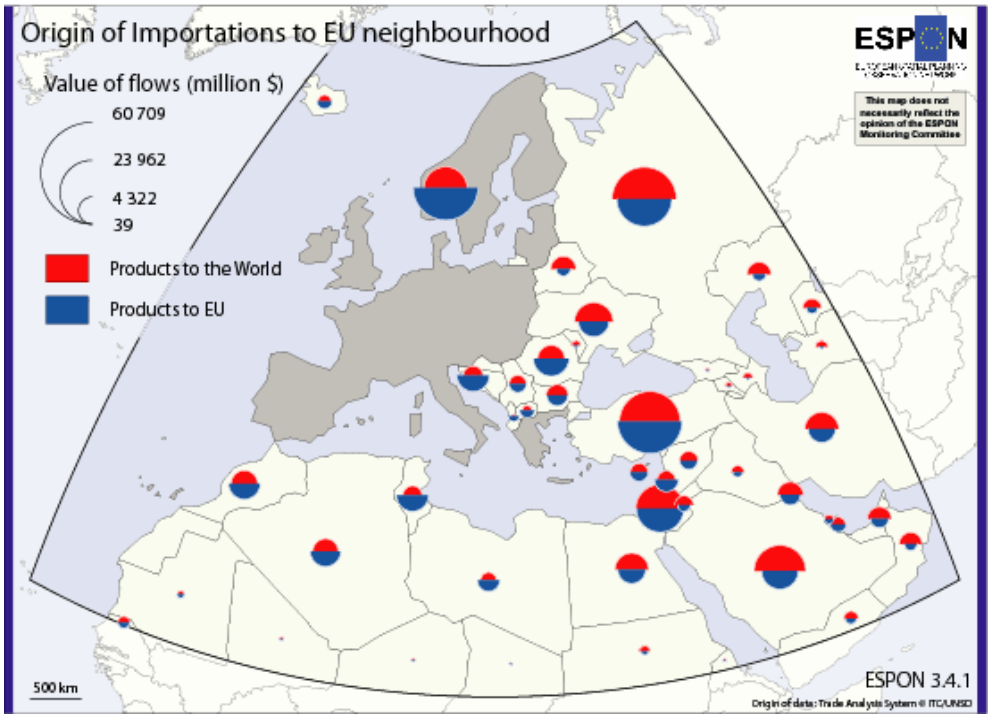
The bilateral intensity of the trade exchanges of each neighbour defines a region polarized by the ESPON space. The Commonwealth of Independent States (CIS) countries have a high intensity of exchanges with other CIS countries and secondarily with Central Eastern Europe countries (CEE). The Maghreb countries have a high intensity of exchange with the EU (map 51). The East Mediterranean countries have a lower intensity of exchanges with Western Europe and a higher

[41] Morocco, Algeria, Tunisia, Egypt, Jordan, Palestine, Lebanon, Syria, Turkey

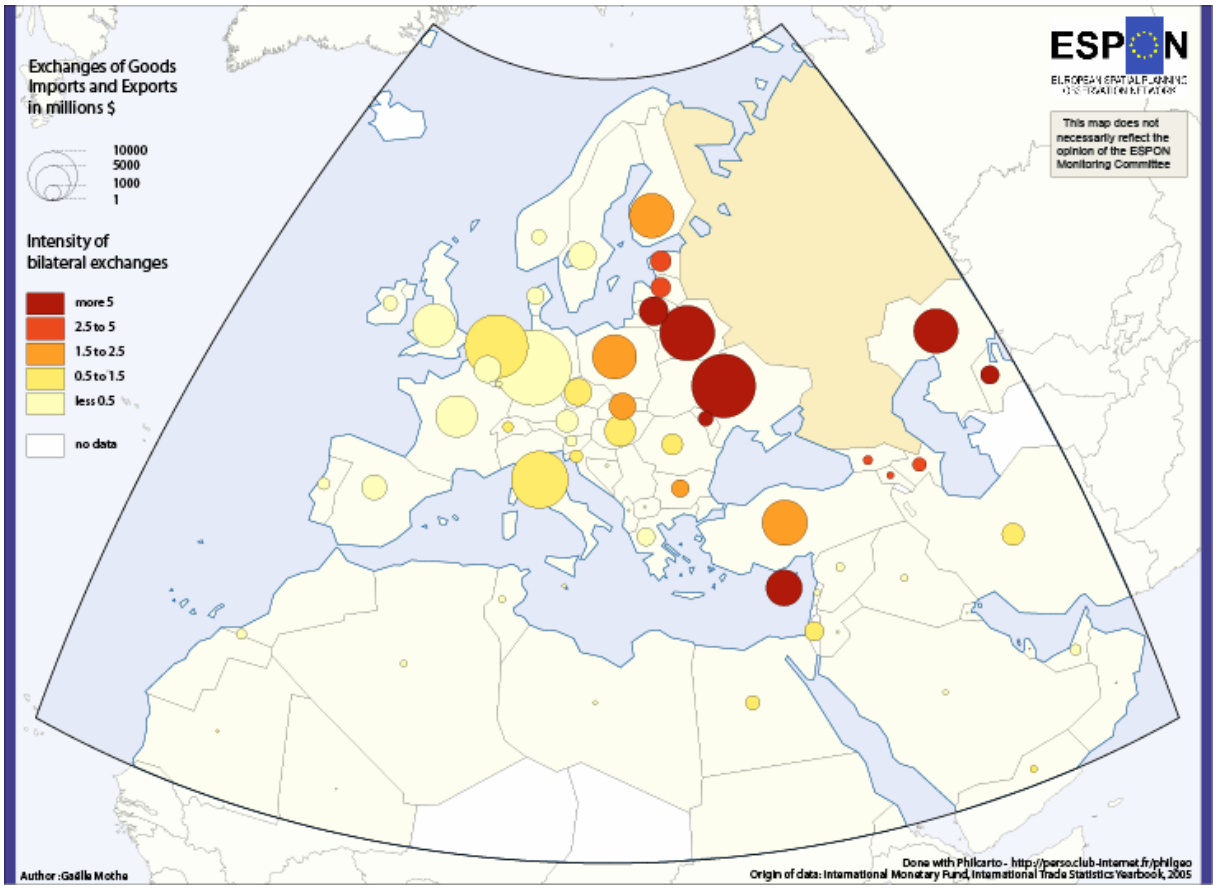
one with the Near and the Middle East. The role of the ESPON space comes from the fact that, contrary to what occurs inside the CIS, the Mediterranean neighbours show a low intensity of exchanges between themselves, especially between the West and the East of the Mediterranean Sea. Inside the ESPON space, interfaces with the neighbours appear clearly: European Mediterranean countries have a high intensity of exchanges with their Mediterranean neighbours; CEE countries and Finland with one or several CIS countries.

Map 51: Imports and exports of EU's neighbours.





Map 52: Bilateral intensity of the Russian trade



5.2.2 Territorial stakes and recent impacts on ESPON territory

Unemployment (how to attract eastern and southern elites without provoking a 'brain drain'), the regionalisation of production process (how to develop a 'win-win' regional division of labour that would benefit from the North-South regionalism pattern), energy (how to secure the European oil and gas procurement from the Arab countries and Russia), environment (how to reduce the pollution of rivers, common seas and air in the region), and security (how a common border management regime can ensure stabilisation for both the EU and its neighbours) - these are some of the major issue in the Euro-Mediterranean region

The way in which these issues are dealt with or resolved will have a major impact on the ESPON space. Paradoxically, since the collapse of the socialist block the Russian Federation has tried to entertain direct relations with Western Europe, without passing through its neighbours' territory (Box 4). For its part, during this period Romania faced a complicated situation relating to its 'in-between status due to the delay in its accession to the EU (Box 5). The situation in the Balkans provides another example of the impact of neighbouring political contexts on the ESPON territory (Box 6).

Actual or potential impacts are even larger to the south. Almost all of the Mediterranean neighbours face high rates of structural unemployment, due to their economic structures, their lack of economic reform, the need to modernise their agricultural systems which will have severe effects on employment, and the persistence of numerous internal and external conflicts. In addition, they also face growing competition from other developing countries (e.g. the entrance of China into the WTO, and the dismantling of import quotas in the textile industry, etc).

The EU has a vital role to play here however. Firstly, the EU must help its neighbours to create a reliable legal background for investments in order to help in the creation of the thousands jobs urgently needed. Otherwise, a continuing flow of undocumented immigrants will turn ESPON's borders into ramparts. Secondly, the EU will increasingly need labour force recruits in order to compensate for its demographic decline and labour force shortage. This labour force could in large part be taken from the neighbouring countries. As noted previously however, the need to avoid a 'brain drain' that deprives the EU's neighbours of their local development base is fundamental here. The lack of a common policy framework, particularly in respect of teacher training, prevents the southern neighbours from tackling the huge increase in new students that confronts with. Trans-Mediterranean cooperation in training is developing, especially in Spain, France, Italy and Greece, and could become a significant industry in these areas. The political path is important, though the institutions designed to deal with it, namely, the 'Barcelona process' regime has faced significant difficulty in engineering a consensus.

The issue of a regional production process is central to ALENA[42] and East Asia[43]. As section C.3 shows, a genuine division of labour is developing between the western and the eastern parts of the European continent, and this is extending to the eastern new member states. What is lacking however is a trans-Mediterranean division of labour, which would locate some of the activities of European firms, and a higher part of the value chain, on the southern shore of the Mediterranean. Of course this would provoke problems on the northern shore because of the loss of unskilled jobs. In any case however these types of jobs are already leaving Europe. Building a coherent region would however alleviate the shortcomings of such a delocalisation.

[42] See Martine Azuelos, Maria Eugenia Cosio-Zavala & Jean-Michel Lacroix ed, 2004, *Intégration dans les Amériques, dix ans d'Alen*a, Presses Sorbonne Nouvelle.
[43] See Heribert Dieter, ed., 2006, « Report on East Asian Integration », Studies & Research n°47, Notre Europe.

One of the most relevant examples of this 'win-win' need for a regional production process is agriculture and the food industry. The current situation is suboptimal. Some typically southern products such as citrus fruits or olive trees are also produced along the northern shore, while some typically northern products such as wheat are produced on the southern shore. In Morocco, 1.3 out of the 1.4 million agricultural farms produce wheat, most with incredibly low productivity and small profit margins. The inescapable downsizing of agricultural subsidies, on both shores of the Mediterranean Sea, will moreover see this situation progressively worsen. The winner however will be neither the Northern nor the Southern shore of the Mediterranean, but rather Chile, Australia or California all of which are currently industrializing their food production industries. What has to be done then is a rational re-location of production within the Euro-Mediterranean area, the development of the food industry related to these products along the Southern shore, and the common promotion of regional Mediterranean products. Actual trends as well as possible common responses to the challenging nature of international competition will have an increasing impact on the rural areas of *both* shores of the Mediterranean. Highlighting the necessity of an overall regional view would help in the modernization of the Common Agricultural Policy, especially its second pillar (rural development) in the framework of the ENP.

Several environment issues also have a regional dimension. These include, the pollution of common seas (Black and Mediterranean Seas, for which, pollution was one of the main issues of the November 2005 Barcelona Euromed Summit); air pollution, nuclear risks (relating to the upkeep of the antiquated power-plant stock in the East and the potential building of new plants in the Mediterranean (potentially in Turkey after 2010). Many actions already link the two shores of the Mediterranean. When it comes to pollution for example, the UNEP Map (Mediterranean Action Plan) has its headquarters located in Athens and is networking with the main Mediterranean cities on both shores. Moreover, the professional and intellectual bases for a regional partnership on the environmental issue already exist; what is at stake is the need to achieve the final operational step. European Mediterranean actors such as local firms, local authorities in the context of decentralised cooperation, and NGOs, have a lot to do in this regard.

5.3. Continuity and discontinuity, eastward and southward

5.3.1: A methodology for discontinuity and border analysis

The research developed on the measurement and cartography of territorial cohesion in the ESPON programme (ESPON 3.1 Final Report, ESPON 3.2 Second Interim Report) has established that the **spatial organisation of**

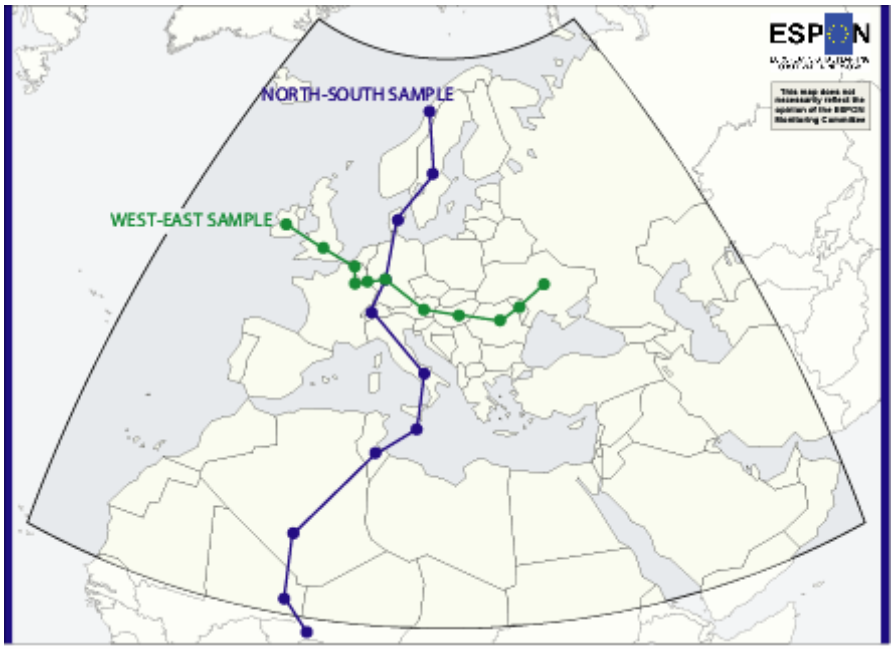
heterogeneity is a crucial output for territorial planning. The global measures of regional inequality derived from statistical parameters (coefficient of variation) or economic models of equilibrium (*Gini* coefficient) do not take into account this spatial dimension of heterogeneity and are therefore blind to the potential consequence of proximity between regions of different levels of development which can define either **regular gradients** (if the transition between different levels is smoothed) **or a homogeneous area separated by territorial discontinuities** (if the transition is abrupt between groups of regions of different levels). This regional pattern raises the question of integration: is the ESPON space and its neighbours truly integrating, are they converging or diverging? It also provides some input into the (false)[44] problem of the limits of Europe: is it possible to identify precise limits where economic and social criteria are characterised by abrupt changes? Or rather can we detect a kind of "smoothed" transition between the core of Europe and its margins?

Our answer to this question is firstly based on a benchmarking of the contact between ESPON 29 and its neighbours to the East and the South based on the evolution of GDP/inh and life expectancy at birth between 1950 and 2000. As we do not want to predefine in any way the limits of Europe, we have built "cut-lines" which cross ESPON 29 territory in West-East and North-South directions and which define samples of states linked by relations of contiguity (land border or short maritime distance) (map 53).

- The WEST-EAST sample goes from Ireland to the Ukraine through the UK, France, Belgium, Luxembourg, Germany, Austria, Hungary, Romania and Moldova.
- The NORTH-SOUTH sample goes from Norway to Niger through Sweden, Denmark, Germany, Switzerland, Italy, Malta, Tunisia, Algeria and Mali.

Map 53: North-South and East–West samples of states used for the visualisation of discontinuities

[44] In a speech entitled, "A Wider Europe – A Proximity Policy as the key to stability", given in Brussels on 5th December 2002, then Commission President Romano Prodi first publicly expressed his notion of 'sharing everything but institutions'. This seemed to offer a kind of 'functional' integration to the countries on the borders of the EU while, at the same time heading off the question of further enlargement. As such, the notion emerges that 'political enlargement' alone, in the traditional institutional sense, may not be the only future option being considered in context of the rather vexed question over the 'limits' of Europe.



The "cut-lines" presented below are useful tools in the visualisation of territorial discontinuities because they provide a very intuitive picture of spatial homogeneity, gradient or discontinuities. The reader should however bear in mind that these samples are not necessarily fully representative of all of the possible forms of contact between ESPON 29 and its eastern and western neighbours and that they should rather be considered as *archetypes* in Max Weber's sense.

A complete spatial vision of discontinuities can be obtained through maps of discontinuities. This spatial vision has to be combined with a dynamic vision (evolution of discontinuities through time) and a cross-thematic approach (discontinuities for different criteria) developed in volume II of this FR. Last but not least, the analysis of discontinuities should not remain an abstract mathematical exercise but should rather be grounded on concrete examples of the effects of discontinuities in terms of induced flows. Several case studies on the border regions of ESPON 29 have thus been elaborated which are presented in volume III of this FR and are summarised here in short boxes.

5.3.2. the West-East "stair gradient"

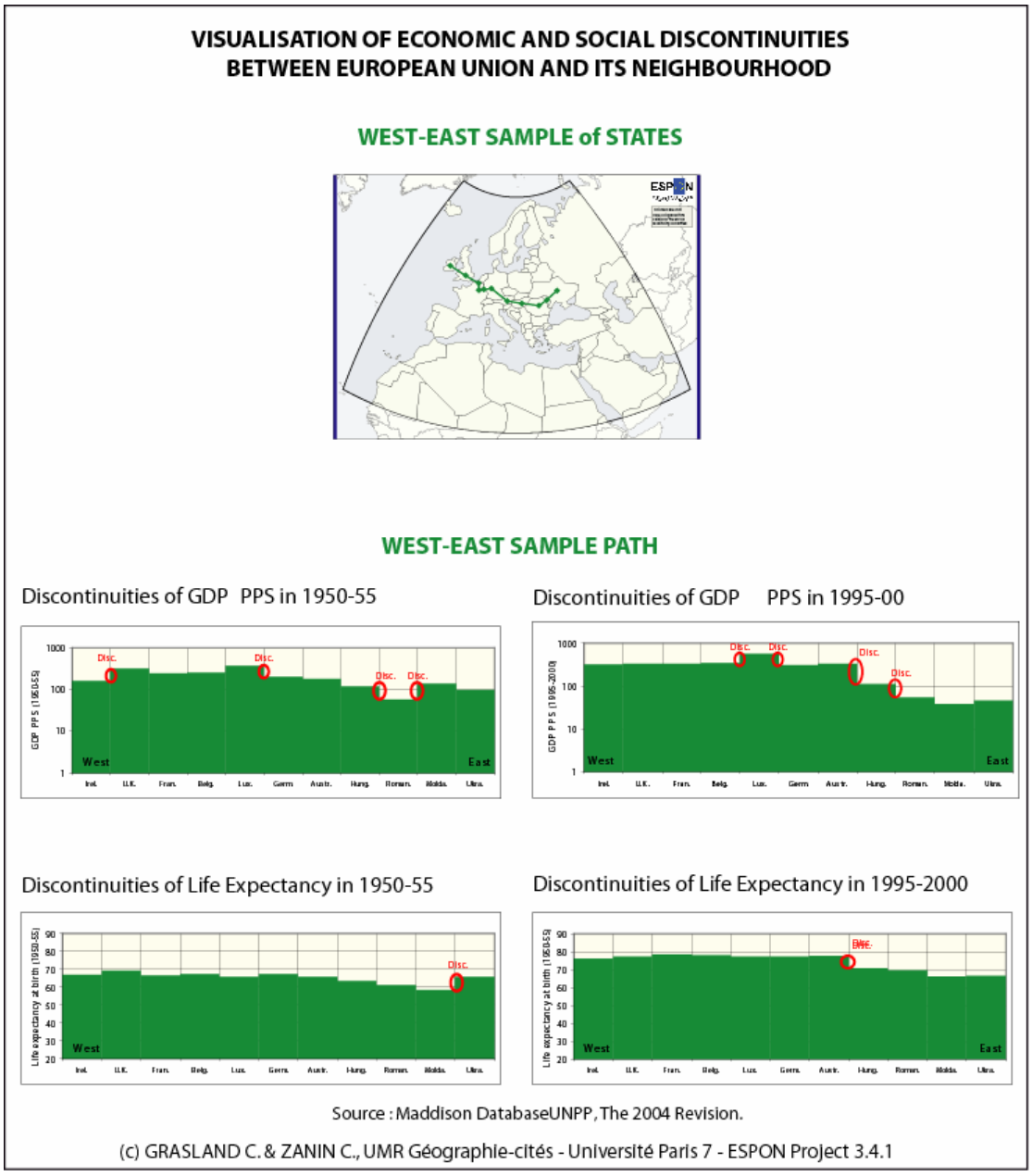
Thanks to German reunification and the recent enlargement of European Union in an easterly direction, the differences between countries and regions are relatively smooth and gradual in term of most criteria when going from Western Europe to Central Europe, Eastern Europe and Central Asia (figure 13). Of course, very abrupt differences remain along some borders in respect of some criteria (particularly in terms of economics). Discontinuities are not however observed

for all criteria and the spatial transition between high and low levels of development is generally sufficiently gradual to limit the formation of global territorial discontinuities. The main trend then appears to be a "stair gradient" with 3 of 4 levels of decrease, which means that each group of states located in the intermediate levels is at the same time attracted to their western neighbouring upper level and attractive for their immediate eastern neighbouring level. For example, Hungary is attracted by Austria but is attractive to Romania which is attractive for Ukraine and Moldova.

The potential flows induced by the "stair gradient" organisation are potential vectors for a diffusion of prosperity and development from West to East. This potentiality will not necessarily be realised easily while political and economic conflicts are likely to develop if this diffusion of prosperity is only realised by market forces beyond political control (migration of people from east to west, relocation of industrial plants from west to east). Gradients can indeed be used by criminal organisations (the trade in people-trafficking, money laundering and sex slaves, as well as human organ-donor traffic) or cynical policymakers and private companies (transfer of environmental damage to the poorest countries). The European Union clearly has a very important responsibility in the organisation of this "stair gradient" and can use many political instruments for this purpose:

- Extension of cooperation areas of the Interreg Programme in a West-East direction in order to efficiently cover the most important axes of the "stair gradient".
- Clever regulation of flows induced by discontinuities in order to limit the negative effects of asymmetric relations without limiting the positive effects of social and economic convergence induced by their development.
- Strong control of criminal activities or other undesirable speculation that can be induced by the opening of borders in areas affected by discontinuities.

Figure 13: Discontinuities between ESPON 29 and its eastern neighbours



The three case studies presented in the following pages help to clarify some of the concrete effects of this particular spatial organisation of the eastern gradient.

Box 4: The new EU border in Hungary. Asymmetric relations with Romania and Serbia

The post socialist reforms have affected the cooperation of Hungary and Romania at all levels. These relations are mainly based on an asymmetric pattern. For instance, since the middle of the 1990s, Romania has been one of the favourite destinations of Hungarian direct investments, particularly in regions inhabited by ethnic Hungarians and in Bucharest. But the contrary is not true. Besides, in spite of the improvement in relations between the two countries, the Eastern regions of Hungary are often bypassed. They do not take advantage of the proximity of Romania. This low level of attractiveness of eastern border regions, except for some illegal seasonal workers employed in agriculture, is not likely to change in the near future. Migration flows from Romania to Hungary are strong whereas the contrary is not true. Most of the Romanians primarily choose to settle either in Budapest or in Western Hungary. At the local level, a special effort has been made by the governments and local authorities to improve the legal framework of the cross border cooperation, to establish Euro-regions, small organisations and even the twinning of cities.

The recent accession of Hungary to the EU had unwanted effects. Taking advantage of the very low cost of labour in Romania, many foreign investors who had previously settled in Hungary decided to relocate some of their manufacturing plants to Romania. These investors are also interested in Romania as a growing market. This process is enhanced by the legal context in Romania where FDI is more secure thanks to Romania's EU accession strategy.

Relations with Serbia-Montenegro, namely with Voivodina, are different. The close relations that had been established in the 1970s and 1980s between Yugoslavia and Hungary were disrupted by the war. Southern Hungary directly faced up to the consequences of the civil war in former Yugoslavia, with a massive inflow of refugees coming mainly from Serbia during 1993, with dramatic economic consequences. The gap between levels of development on both sides of the southern Hungarian border is more dramatic than along the Hungarian-Romanian border. But the accession of Hungary to the EU has had a favourable impact on relations between the two countries. (i) Many issues of common interest have been approached with a higher degree of responsibility and with a European consciousness. (ii) Because of accession, Hungary has been obliged to introduce a strict regime for entering its territory and has adopted the Schengen border regulations, while trying to make its migration policy go along well with the necessity of maintaining the network of relations with Hungarians living abroad. (iii) Cross border cooperation programmes have been launched in various fields (migration, environmental cooperation etc). Other projects have not yet been successful, though the regional political context is more favourable than previously.

In spite of the dramatic improvement in relations with Serbia, bilateral exchanges have not increased as rapidly as they could, while the cross border cooperation suffers from the absence of a relevant regional-local level in the public administration on the Yugoslavian side. Although there is an obvious readiness to carry out real cooperation projects, large scale concrete achievements remain elusive.

Box 5: Russia and the Baltic states: the various scales of a difficult relationship

Since the 1990s, the relationship between Russia and the European Union has developed apace, particularly in terms of trade relations (not only because of oil and gas). Russia is becoming increasingly integrated into the European economic region, but remains reluctant to receive too high a level of foreign direct investments. The FDI flows represent a low percentage of the Gross Fixed Capital Formation. At a lower level, the evolution is not the same. Almost all of the CEE countries still have a high bilateral intensity of trade with Russia but their trade relations (mainly their exports) with the Federation have dramatically decreased since the 1990s for various political or economic reasons.

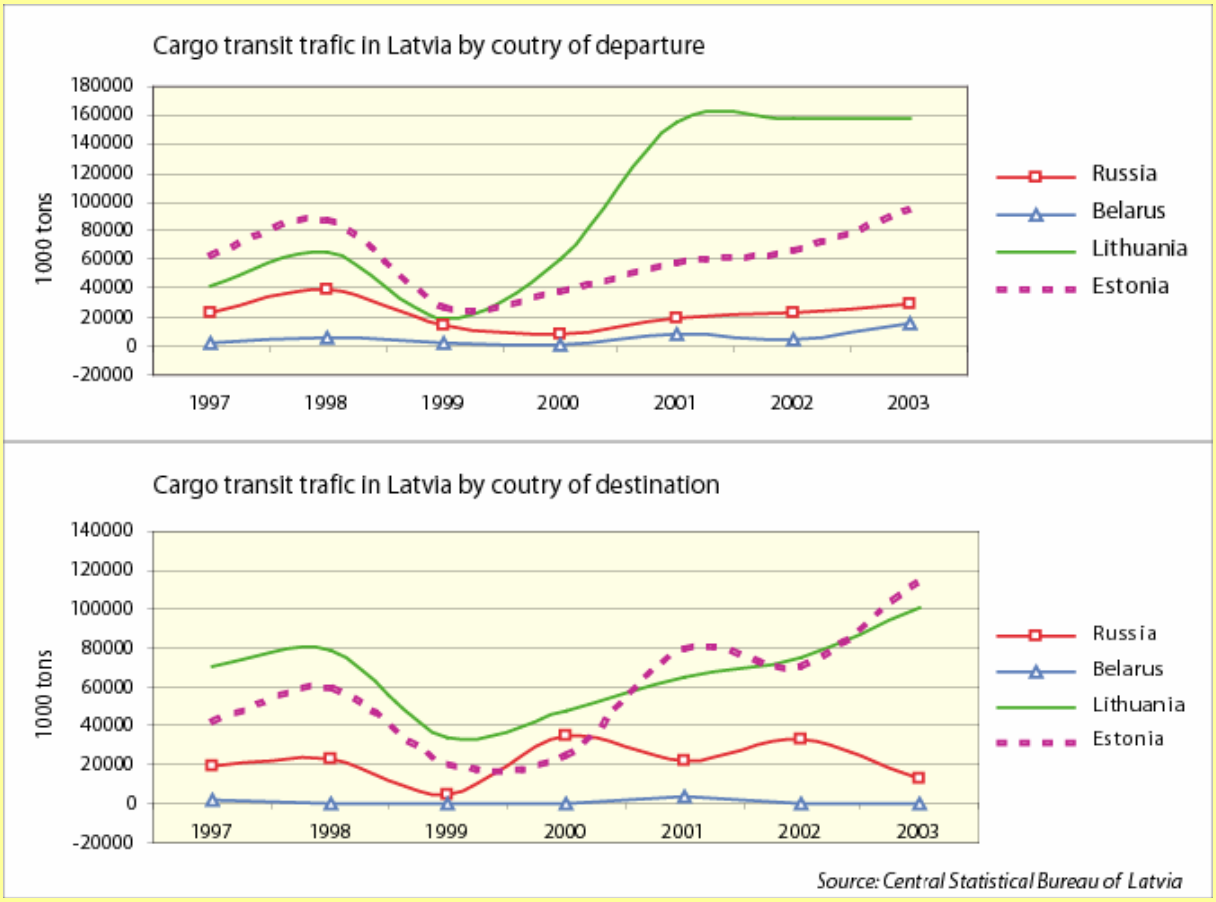
In the case of the relationship between Russia and the Baltic states, with the exception of Lithuania a strong barrier effect exists. The most striking evolution has taken place between Russia and Latvia whose external trade has steadily grown with all its European partners while decreasing with Russia. The evolution is roughly the same for Estonia. The inward stocks and flows of FDI have increased significantly in Estonia and Latvia while the Russian share has remained very low. Estonia and Latvia have totally shifted the orientation of their economic relations to the West, namely to the Baltic region (Finland, Sweden, Germany). The decreasing flow of exports to Russia is a consequence of the great changes that have taken place in the economic structure of the Baltic States and poor political relations with Russia. The Baltic States no longer play their traditional role of providing an interface between Russia and the rest of Europe. To a certain extent, they have been bypassed.

At the local level, cross border cooperation between Latvia and Estonia on the one hand, and Russia and Belarus on the other, has not made significant progress since the end of the 1990s, although administrative procedures were significantly improved in 2001 and 2004. Russia's central government is reluctant to encourage such cooperation projects. Cross border relations roughly follow the same evolution with Belarus. Such economic and political evolutions have consequences on the Baltic States' territory. The lack of permeability across the border contributes to the poor social and economic performances of some regions in Estonia and Latvia, especially those located along the EU's external border.

The inauguration of ports such as Primorsk and the construction of a gas pipeline through the Baltic Sea illustrate well the policy followed by the Russian administration. In 2002, Transneft (Russian pipeline monopoly) decided to stop the crude oil transit coming from northern Russia to the port of Ventspils through Latvian territory. This decision had serious consequences for the energy supply in Latvia, and caused a major economic loss for the port of Ventspils which lost one third of its traffic in 2003. Latvia has a declining relationship with Russia, Belarus and the rest of the World (see Figure 14); Belarus has imported almost nothing through Latvian territory since the second part of the 1990s. Meanwhile, the cargo Latvian transit traffic from and to the other Baltic States has regularly increased since 1999, which suggests a rapid Baltic sub-regional integration.

By the end of the 1990s, economic crisis in Russia had had an impact on Eastern Europe. Combined with the implementation of tariff barriers, the abrupt fall in Russian demand caused losses for many firms located in Central and Eastern Europe. This had a negative impact on regions whose trade is mainly oriented towards Russia, among which for example was the region of Narva in North Eastern Estonia. All social and economic indicators in this county are now far below the national average; North Eastern Estonia reports the lowest GDP per inhabitant since 1998 and the highest unemployment rate (Unemployment rate of Estonia's counties, 1997 to 2004).

Figure 14 : Evolution of transit traffic in Latvia.



The economic situation of the border regions located in neighbouring countries can burden the performances of the EU's peripheral regions. The impoverishment of Russian and Belarusian regions such as Pskov or Vitebsk *oblasts*, hampers the development of their counterparts located in Eastern Latvia and Estonia, except those where there is an important urban centre (Tartu). While the capital regions of the Baltic States are now increasingly EU oriented, the Eastern regions are left without any opportunity to cooperate with bordering regions. Furthermore, Russia and Belarus have undergone a strong process of re-centralization since the mid-1990s. This further hampers cross border cooperation because Russian and Belarusian border regions do not have any autonomy in the field of external relations.

Box 6: The case of Romania: an "*entre-deux*" space

Romania, which will achieve full membership in 2007, is an "*entre deux*" space, in which the external forces, generally in competition, have always counted for more than internal ones and have reinforced or created ancient regional internal cleavages. Romania is a relatively new State based on a recent territorial settlement; it displays many of the features of a certain type of modernity based on European concepts and values, temporarily displaced by the values of the communist model. This "*entre deux*" situation may finally however have positive effects, helping Romania to find efficient and original solutions to problems such as inter-ethnic relationships, the regulation of migration flows, rural-urban and regional-national-international relations. Romania is now in the core of the potential relational field between East and West.

This "*entre deux*" situation has territorial consequences, as can be illustrated in what follows. (i) As far as migration flows are concerned, the central and east European space shows dual features (dual gradient of development for example at the national and infra-national level from West to East). Such a space functions (simultaneously) in a similar manner to that of a periphery and as a core area: Western regions attract people coming from Eastern ones. (ii) The diffusion of innovations in space is shaped by this East-West pattern. The western regions of Romania have more rapidly responded to the economic stimuli which came from abroad (together with the region of Bucharest). (iii) The investments made by foreign actors reveal different spatial strategies, based on the search for absolute or comparative advantages offered by some regions. These foreign investment flows strengthen regional disparities. Most of the foreign firms are concentrated in the Western part of Romania, in Bucharest and its region and in the region of Constanţa. The southern and north-eastern parts of Romania do not attract such amounts of FDI because their nearest neighbourhood is composed of the poor regions of Moldova and Bulgaria. (iv) The pre-accession process has enhanced the attractiveness of Romania as an FDI target and increased the presence of EU investors, while investment from the USA has declined. Asia, too, is a growing factor in these FDI flows. Middle-Eastern investors supply only a minor part of the FDI stock but their share in the total number of firms, totally or partially based on foreign capital, is quite high, revealing strong relationships between Romania and the Middle-Eastern countries. (v) The dynamics of external trade also shows a strong East-West pattern revealed by huge regional differences in the customs' organisation. The western part of Romanian border has five regional custom divisions while the eastern part, where trade flows are negligible, has only one.

Figure 15 : The territorial organization scheme in Central-east Europe

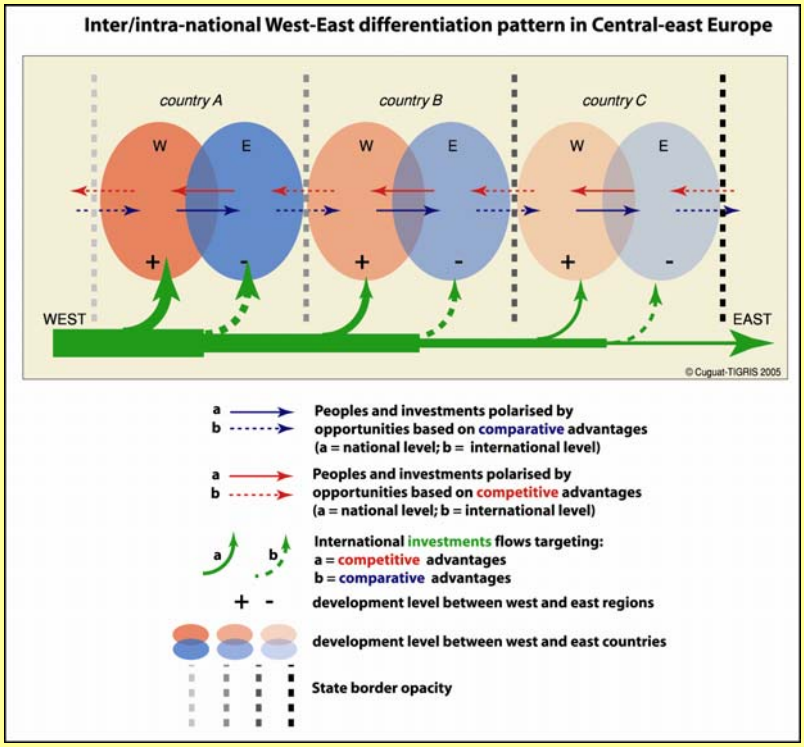
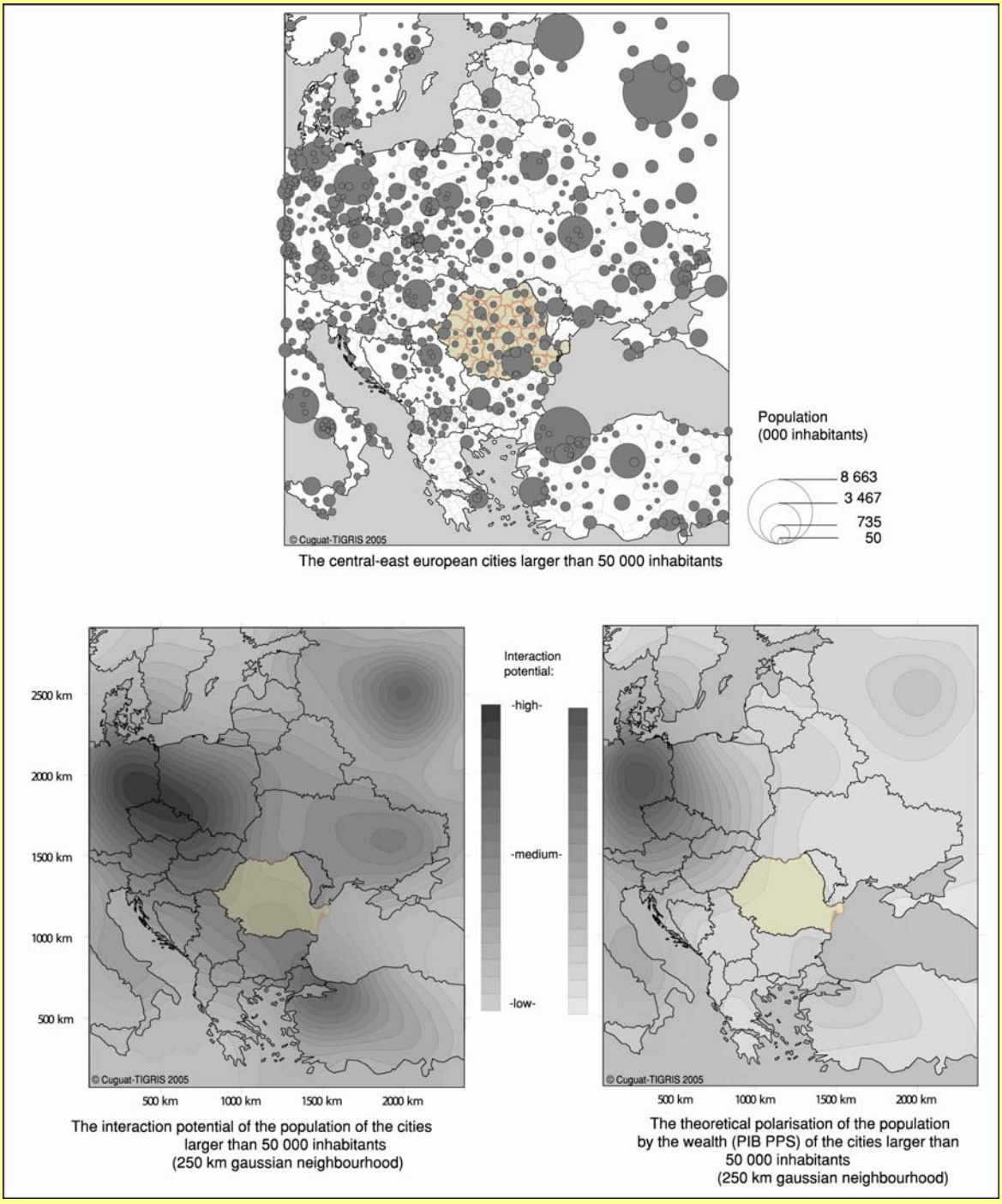


Figure 16 : Romania at the core of the Euro-Asian peripheries



From a demographic point of view, Romania stands at the crossing point of forces generated by the great assembly of population from the Central Europe, Turkey and that of Moscow/ Sankt Petersburg, and the western Ukraine. Described by the interaction potential between the populations localized in the cities with over 50,000 inhabitants from the given space, these fields of forces represent, in fact, potential waves established between the three great demographic assemblies/clusters.

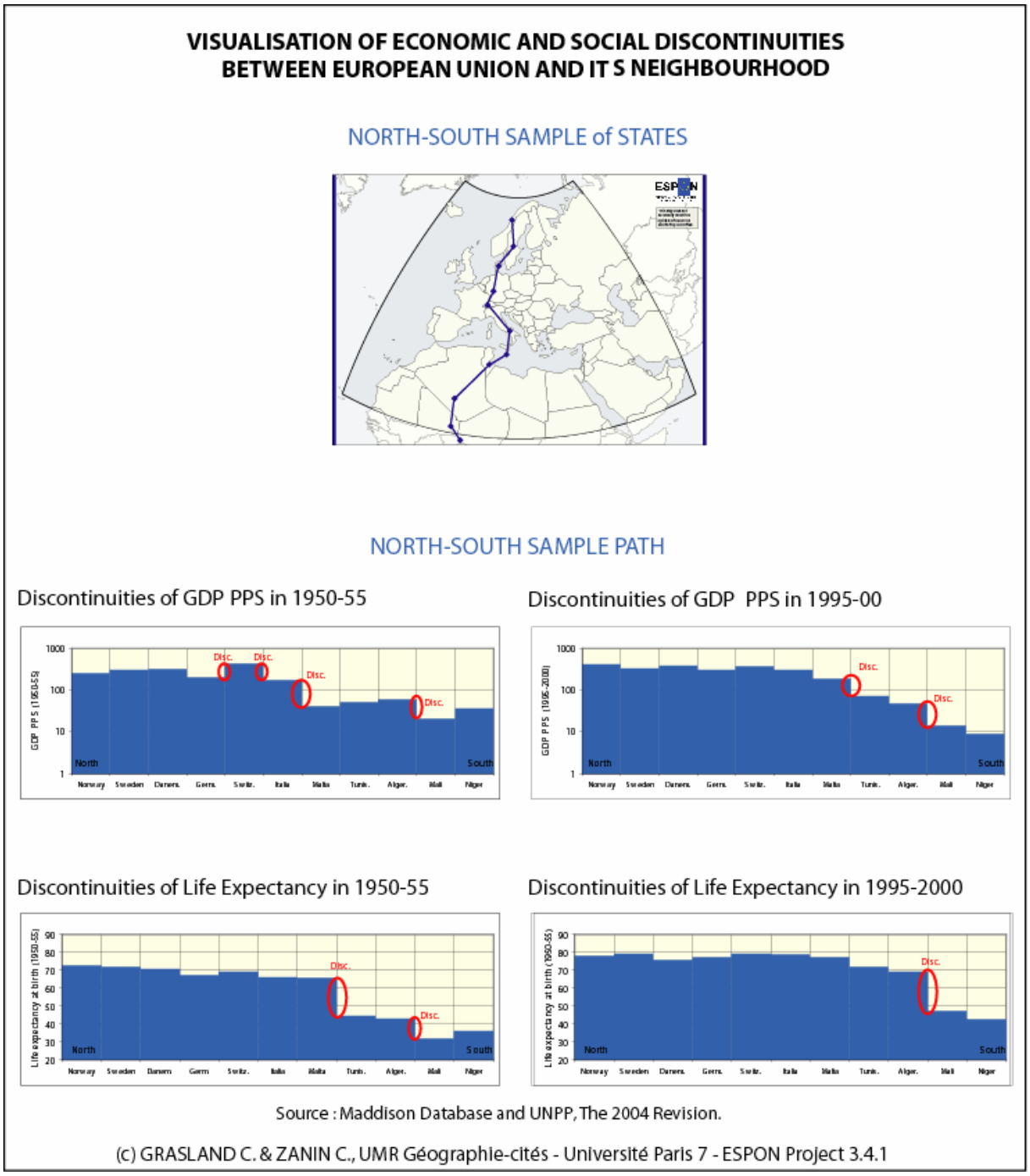
5.3.3 The double North-South discontinuity

The spatial organisation of north-south discontinuities is different and it is based on different criteria not perceived in the same way by the majority of European policymakers (figure 17). Contrary to the opinion of the majority of ESPON members (see the results of the survey on the ESPON vision of the World) the Mediterranean Sea does not represent a line of abrupt discontinuity for all criteria. If we consider for example the social criteria of life expectancy at birth in 1995-2000, we observe a relatively gradual transition between countries located on a north-south axis from Italy (78 years) to Malta (77) Tunisia (72) and Algeria (69). It is only when we arrived at the sub-Saharan countries that an abrupt line of discontinuity appears with Mali (47) and Niger (43). This is a rather new situation as compared to that of the 1950's where the Mediterranean Sea did indeed act as the borderline for such extreme differences - Italy (66), Malta (66), Tunisia (45), Algeria (43) - and where sub-Saharan countries where not so different from northern ones – Mali (32), Niger (36).

The situation in respect of discontinuities is a little different in relation to other criteria such as education levels or GDP *per capita* but, in every case, we can observe a spatial configuration of double lines of discontinuities: the first located on the Mediterranean Sea and a second one on the Sahara desert. This spatial configuration of double discontinuities means that the North African countries actually function as a "*buffer zone*" or "*shatter-belt*", which is in a sense comparable to the situation of new member states at the end of the cold war and which is similar to the actual situation of Bulgaria and Romania (See Box 6)

The great difference between the semi-peripheral regions of the Southern Mediterranean states and those of Eastern and Central Europe is however, in part, to be found in the globally negative perception – or lack of perception – of the potentialities of this area by the majority of European policymakers. The demographic situation and also potential for economic dynamism of those countries located on the southern shore of the Mediterranean Sea may actually provide a major development opportunity for both the European Union and the countries of the Southern Mediterranean. Moreover, some kind of long-term 'engagement' here is probably the only possible way for the EU to maintain its situation as a global actor at World scale.

Figure 17: Discontinuities between ESPON 29 and its southern neighbours



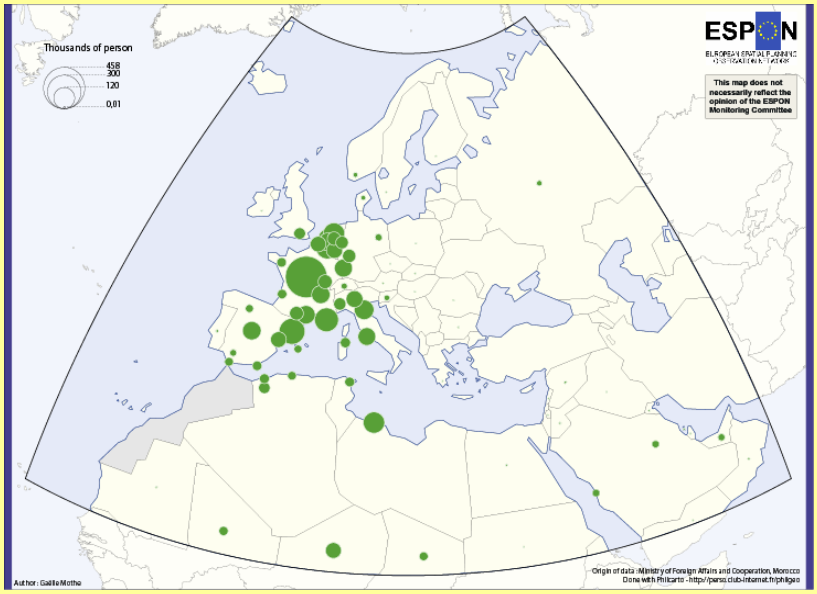
The consequences of this double discontinuity to the south are crucial for many topics. The case study on Morocco presents the effects of this particular structural situation on migratory channels and paths toward Europe (Box 7). But the challenge of north-south relations is much wider and can be illustrated by the Lisbon Strategy policy recommendations presented in the conclusion.

Box 7: Mobility between Morocco and Europe: a common subject of concern.

About 7 million migrants came from Africa to the OECD countries in 2003 and 3.2 million from Northern Africa. A large majority of them migrate in order to find work. These migrants are traditionally highly concentrated, with 94% residing in 10 countries, especially in Western Europe.

This is the case for Morocco. In the 1990s, more than 80% of the Moroccans registered in Moroccan consulates abroad lived in Europe, 12 % in Arab countries, 5 % in North and Latin America…

Map 54: Number of Moroccan citizens listed in consular services abroad in 2004 – (in Euro-med region).

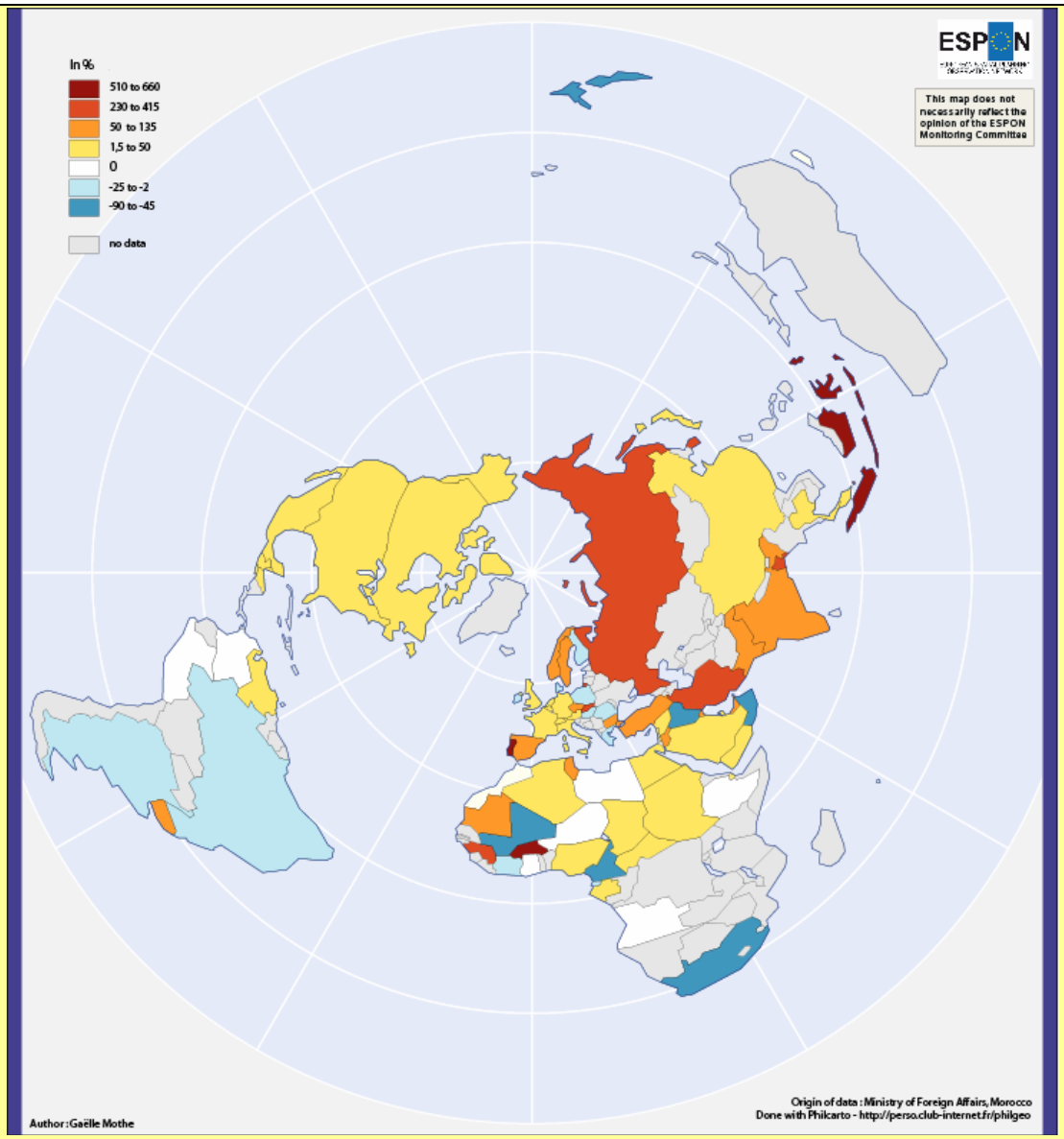


However migration flows from Morocco are becoming increasingly globalized. Europe continues to be the main destination because Spain, Italy and Portugal are becoming increasingly attractive. But the relative importance of traditional destinations such as France, Belgium, Germany, the Netherlands and even other Arab countries is decreasing. More and more migrants choose Northern America, especially highly educated ones.

In addition, the migration flows from Morocco are increasingly diversified, while the numbers of students, highly educated workers and women are increasing. Of the total number of foreigners studying in the European Union, Moroccans are the most numerous.

In addition, although authorized migration is more difficult, flows have actually increased because of the development of illegal migration. According to various estimates, 100 000 Moroccan illegal migrants leave the country each year.

Map 55: Variation in the number of Moroccan citizens listed in consular services abroad, by country, from 2002 to 2004.



Morocco is not only a country of origin for international migrants. It is increasingly also a country of transit. It has become an interface between Europe and Africa. Indeed, migration flows from Moroccan have stagnated since 2002, while the migration of sub-Saharan people trying to reach Europe has increased significantly since the middle of the 1990s.

Migration flows are a major subject of concern for both the Moroccan authorities and the European Union. Efficient cooperation between Morocco and its European counterparts in this area has emerged only recently. Morocco has made significant progress and has dramatically improved its obsolete legislation (bill n° 02-03 passed in 2003). Its laws are now more in line with various international conventions. But to fight efficiently against illegal migration is expensive and up to now, the Moroccan government has lacked sufficient financial support.

5.3.4 Internal discontinuity: the case of Switzerland and Norway

Discontinuities are not only localised at the periphery of the ESPON territories. As such, it is important to mention the cases of Switzerland and Norway which are not members of the European Union and, despite significant integration in the context of the EEA agreement (Norway) and the EU-Switzerland bilateral agreements, remain relatively different in terms of regional development.

Box 8: The European policy of the Swiss federal council

In 2001, the Federal Council reaffirmed the key elements of its European policy after the rejection of the popular initiative "Yes to Europe!", which was intended to oblige the Federal Council to open immediate negotiations on EU entry:

- in the short term, the implementation of the seven bilateral agreements, their extension to the ten new EU Member States and the conclusion of the second series of negotiations are the top priority.
- in the medium term, priority will be given to obtaining approval of the second series of agreements by the Federal Assembly and the Swiss people and their subsequent implementation.
- the longer-term aim of the Federal Council's European policy is to take Switzerland into the European Union. The Federal Council is convinced that in the long-term Switzerland can better safeguard its interests within the EU than outside it. Today, many problems can no longer be resolved through the lone actions of individual states, but only in acting together at European level.

The continuation of the existing pragmatic policy of small steps with all its known advantages and drawbacks is less an integration policy option as far as the Federal Council is concerned, than the expression of a reality which remains valid until the policy change, which the Council seeks, finally comes about. Accession of Switzerland to the European Union would be compatible with the Federal Constitution. (Article 89 of the Federal Constitution, which requires a popular and cantonal majority for such a decision, was revised in 1977 precisely with a view to EU accession). If Switzerland became part of the EU, the Swiss people and possibly also the cantons could continue to exercise the people's rights embodied in the Federal Constitution (referendum, initiative). However, the outcome of a referendum must not be allowed to influence obligations arising under the treaties establishing the Communities. Studies by various Swiss universities have shown that, had Switzerland already been an EU Member since 1993, the number of concrete conflicts between Community law and referendum proposals at either Federal level or voting procedures at cantonal level would have been very small. In prosperity terms, the following summary conclusions can be put forward:

· thanks to EU accession, future economic growth of Switzerland would tend to be higher although this growth would also depend significantly on other factors such as internal reforms;
· EU accession would exceed the benefits of an EEA solution, even if the net transfer to the EU in the event of accession must be taken into account in this comparison;
· the loss of monetary policy independence means that monetary policy can no longer build on a different economic development; other mechanisms of adaptation, such as flexible prices and wages, would also be needed;
· the adaptation requirements – adjustment to the real interest rates prevailing in Europe or agricultural measures – must not be underestimated;

In the welfare sector, the Federal Council would make a further study of the following internal measures in event of accession:

· Action already existing in the draft stage to prevent social and wage dumping.
· In the area of agricultural policy, measures must also be verified to compensate the inevitable structural adaptations
· The conversion of the Swiss tax system, including social insurance, would be a matter for consideration by the political system in Switzerland in the next few years.

To support the enlargement of the European Union, which is also in Switzerland's interest, the Federal Council has decided to make a contribution to the economic and social cohesion of the enlarged EU. The Swiss contribution amounts to CHF 1 billion over a period of five years.

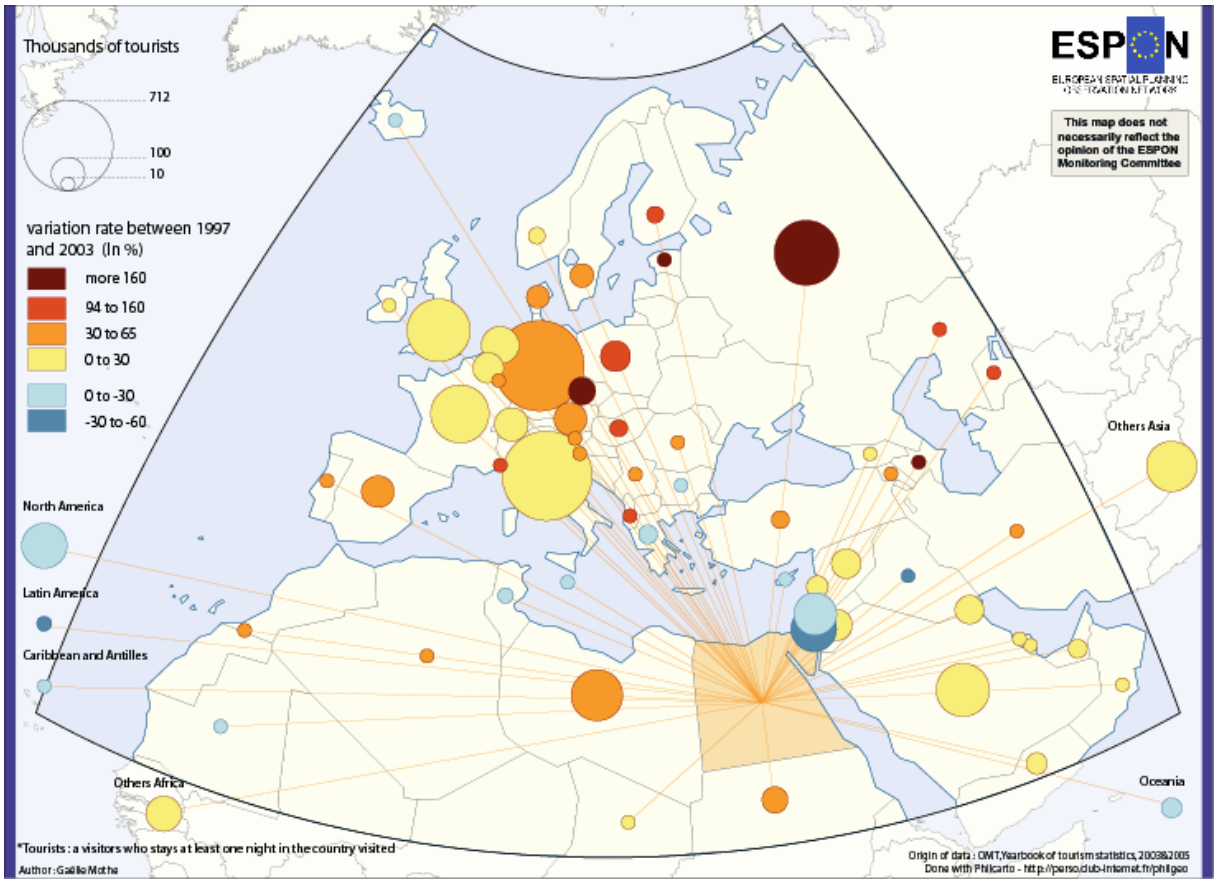
5.4 Networking Euro-med: flows in the European region

The study of the flows between the ESPON space and its neighbours potentially provides another answer to the integration issue. Here we draw on the picture for migrations and their related remittances, then for trade and finally for financial flows. The conclusion that North-South regionalisation is much deeper than one usually thinks, except for firms and particularly in relation to the lack of North-South FDI, is by far the major shortcoming for the region.

5.4.1 People

Tourism flows to or from one of the countries of the European region show an incredible level of integration. For instance, almost 90 out of 100 tourists who go to visit Egypt (map 56) come from the European region: 52 from the ESPON space, 4 from Central and East European Countries (CEEC), 9 from the CIS, 13 from the MEDA countries and Turkey, and 10 from the Middle East. The numbers for Northern America (3) or Asia (4) are very low indeed, and decreasing. Flows of German tourists tell the same story, the bulk of whom visit a country belonging to the region.

Map 56: Egypt tourism annual average (2001-2003)



When it comes to migrations, and despite the geographical diversification of the flows, the ESPON neighbourhood has up to now been a major point of origin (roughly 45%) of the migration flows coming to the European Union. The traditional relations between the two shores of the Mediterranean Sea were even reinforced in the 1980s when Italy and Spain became major destination countries. The importance of 'neighbour' countries is also high in the stock of foreign population: 20 million foreigners lived in the EU25 countries before its enlargement in 2004; of this total only 5 million came from other EU countries, and 6 million from the Southern and Eastern Mediterranean countries.[45] Besides, there is no doubt that a majority of the migrants who leave Eastern neighbours are residing in the EU25 territory. Russia traditionally attracts the majority of migrants who leave CIS countries but even this is changing: in 2003 Germany attracted 40% of the outflow leaving the Federation.

A few ESPON countries are not as concerned by migrations coming from the neighbourhood as we have defined it, namely the United Kingdom, Luxembourg, and Portugal. In all other countries however such migratory inflows represent a significant proportion of the foreign residents. For instance former Yugoslavian and Turkish migrants represent 70 % of the foreign population residing in Austria. Countries such as France, Belgium and the Netherlands are strongly related to the Southern Mediterranean countries. In Spain, Switzerland and Italy the foreign residents mainly come from Mediterranean countries and from South Eastern Europe (Balkans). In Hungary and the Czech Republic, the majority come from the former USSR, former Yugoslavia, Romania and Bulgaria. As a whole, migrations draw a clear picture of growing regional integration.

This increased regional integration is however jeopardized by two important features. The first relates to skilled migrants: the main result of the Carim study is that skilled migrants are increasingly being attracted to North America. The second relates to other regional processes. In particular, North America hosts many more Latin Americans than the ESPON space hosts migrants coming from its Eastern and Southern 'neighbourhoods'. 15% of the US population are foreigners (of which 4% are undocumented); the sole share of Mexican is almost 10%. By comparison, at most 7% of the EU15's population are foreigners (of which less than 1% are undocumented), the share from South Mediterranean is less than 4%.

[45] The Euro-med Consortium for Applied Research on International Migrations estimates that 10 to 15 million international migrants (first generation) come from the Southern and Eastern Mediterranean countries, of which 5 to 6.4 million live in the EU 15. See Fargues Ph., ed, 2005, "Mediterranean Migration, 2005 Report", Carim, European Commission.

Remittance flows provide another view of the intense demographic and economic integration ongoing within the region. The region has 13 of the first 15 issuing countries (mostly European plus Saudi Arabia and Kuwait), and several of the largest beneficiaries of these flows in the World: Jordan, Morocco, Egypt, then Tunisia, and the Lebanon[46]. Georges Corm (2005[47]) demonstrates that during the 1990s the MEDA countries received much more money from remittances than from all the other kinds of financial flows accumulated (aid, loans & repayment, FDI). In other words, the region is integrated by means of a North-South dependency. Only Turkey shows a virtuous path. The share of remittances in its GDP total has been declining since the end of the 1990s, thanks to the level of overall economic development (growth of GDP), to the rise in FDI and to the creation of a true productive system, generating profits rather than rent incomes.

5.4.2 Trade and financial flows

During the last fifteen years the potential for economic integration across the region have increased considerably. In particular, the end of communism and the demise of the former Soviet Union, recovery after the end of the Yugoslavian war, the continuing Barcelona Process and Association Agreements, and the generalisation of economic strategies across the region based on international exchanges rather than on autarchy (even in Syria), have all contributed to this.

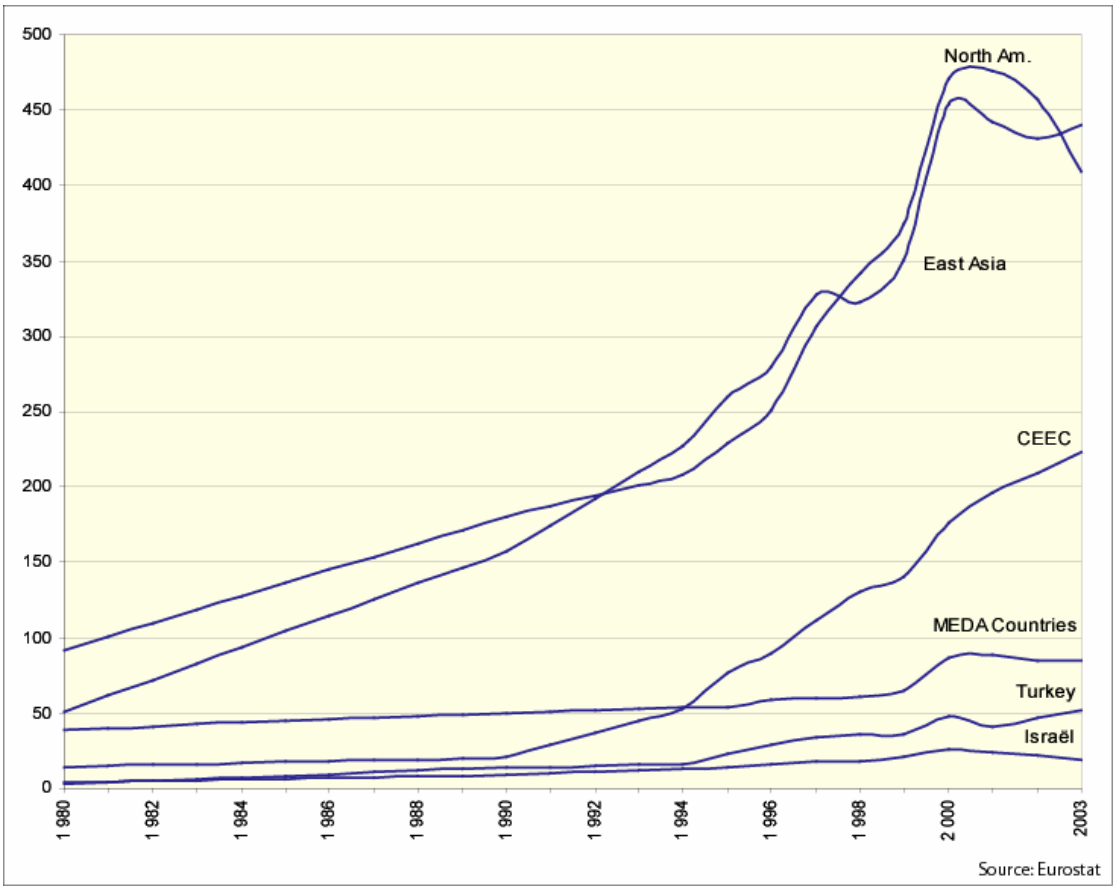
The question remains however whether the EU is becoming more involved, commercially, with its closest neighbours, or whether it is becoming increasingly bound into 'globalised' trading relationships with remote industrial and emerging countries? As such then, can we really expect the consolidation of a Euro-Mediterranean Region from Morocco to Russia polarised by Western Europe? Or will a commercial geography emerge led by remote networks connecting the poles of the Triad?

The answer is both. Almost a half of the consolidated EU15's external trade is made with "neighbours" that include Central and Eastern European Countries (CEEC). Those countries and the EU are increasingly linked as they represented 3% of its trade in the 1980s, and more than 11% today. Should we add Switzerland, Norway and Russia (commercial partnership between the EU and Russia has risen during the last decade), what could be termed a process of European continental integration is clearly on the way. Southern neighbours do not show such integration. Taken altogether (the MEDA countries, the Middle East and the Arab peninsula, Turkey and Israel), they represent 12% of the

[46] World Bank, 2005, "Technical Meeting on Measuring Migrant Remittances".
[47] Corm, G., 2005, « Coopération et mobilisation des ressources financières pour le développement durable en Méditerranée », Plan Bleu.

EU15's trade today, which is not insignificant, but their relative weight was twice as large 25 years ago. Figure 18 shows that Europe is increasingly connected to the major poles of the Triad, and less and less to the developing countries – *even with those that belong to its close Mediterranean neighbourhood*. Moreover, the position of the US in terms of Mediterranean trade is low, but growing.

Figure 18: EU15's goods trade 1980-2003 (imports + exports, in Euros)

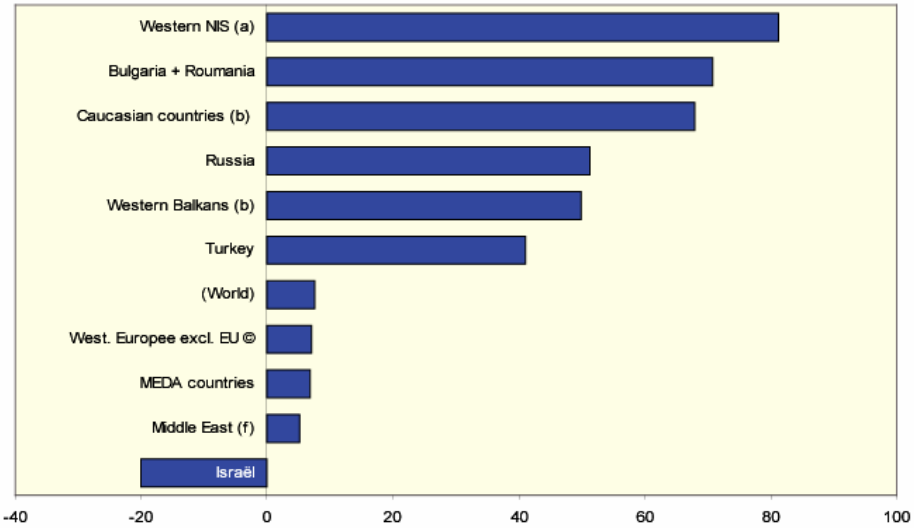


Economic flows between Europe and its neighbourhood show one major shortcoming however, for firms Europe still ends at the shore of the Mediterranean. At the beginning of the 21st century European FDI stocks per inhabitant in the MEDA countries were eight times smaller than in Central and Eastern Europe (figure 19). This illustrates rather well that there is as yet no North-South regional productive system. Generally speaking, over the last 15 years the region has experienced only weak progression in terms of economic flows through the Mediterranean. Regional integration is however ongoing eastward, for instance through the rapid delocalisation of the western automotive industry. The divide however still exists southward. The MEDA countries are highly dependent upon western European markets and investors (figure 20), though they are not significant partners for European exports and investments as is demonstrated by the case study on the internationalisation of Italian enterprises (Box 9)

Nevertheless, the last two years (2004-2005) show the growing attraction of Egypt, Turkey and Morocco, while annual FDI to the MEDA countries has jumped

from 10 to 40 billions Euros[48]. The main increase however comes from the Gulf States and not from ESPON countries, and as such, on its own, this rise is not sufficient to change the general statement about the low attractiveness of the Mediterranean. Many criteria (e.g. the role of EU markets for the Mediterranean economies, migrations of workers, students or tourists, cultural links through TV programmes, and common environmental threats) show the strong integration of the two shores of the Mediterranean, though, ultimately, the key figure concerning FDI hampers this positive view.

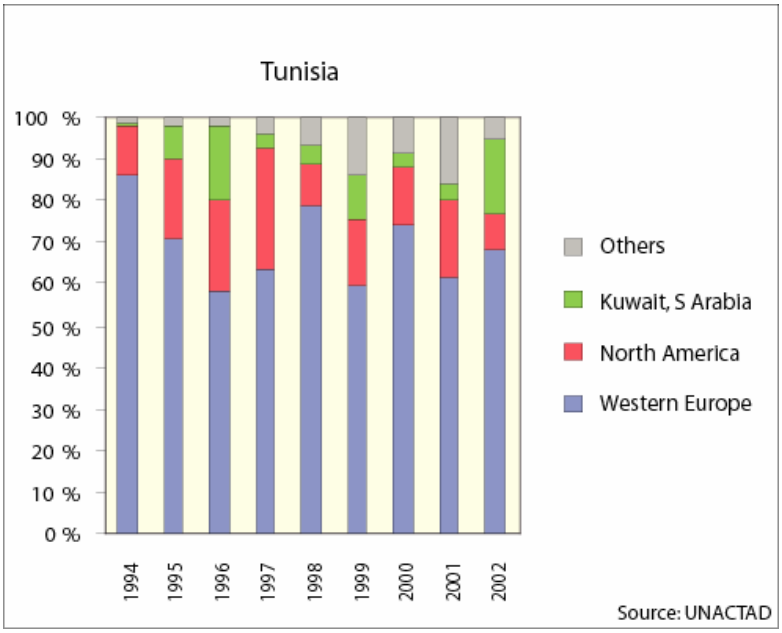
Figure 19: 2000-04 evolution (%, value) of EU 25 goods trade with various neighbours



(a) Belarus, Ukraine, Moldavia. "Caucasian": Georgia, Armenia, Azerbaijan. (b) Albania and former Yugoslavian countries except Slovenia. (c) Switzerland, Norway, Island. (d) Mediterranean countries form Morocco to Syria. (e) Here : Iran, Iraq, Saudi Arabia, Kuwait. « Trade » : exports + imports. Source : Eurostat.

[48] Saint Laurent B., Saint Martin C., Jaffrin S., 2006, « Les IDE dans la région MEDA en 2005 », Notes & Documents n°20, AFII, Anim

Figure 20: ESPON countries are the main pole for the neighbours' economy: The case of Tunisian inflows of FDI, breakdown by geographical origin



Box9 : The geography of Italian internationalisation: relations with Central Eastern European and South and Eastern Mediterranean countries

The current economic scenario is becoming increasingly globalized, and every enterprise, regardless of its dimension, has to face international competition. Assuming a rather oversimplified theoretical framework, there are basically two ways in which a firm can deal with internationalization: exporting goods or services, or becoming international. The analysis refers to Italian flows directed towards Central and Eastern European countries and the Southern and Eastern Mediterranean rim.

Internationalization towards Central and Eastern Europe. Central and Eastern Europe represents an important destination for Italian investors: it attracted 2,725 firms in 2004. Investments towards this area are impressive considering that, before the 1990s, they were almost completely absent, as in 1986 they represented only 0.6% of Italian investments. By 2004 they had surpassed 27%. Concerning destinations, Romania, Russia and Poland are by far the most relevant markets, followed by Hungary, the Czech Republic and Bulgaria. However, it has to be noted that such investments are strongly polarized by a few metropolitan areas, basically the capital regions. At the same time, trade between Italy and the Central-Eastern European countries has grown in recent years. This is probably due to the delocalisation of Italian industries in the region.

Internationalization towards the Southern and Eastern Mediterranean countries. In 2003, the weight of Italian investments directed towards this area was a mere 1.9%. Moreover, Italian investments are polarized by a few countries, with Turkey and the Lebanon receiving 63% of Italian investments, while the figure surpasses 70% when Tunisia is included. The situation is rather different in the case of commercial flows. The Southern and Eastern Mediterranean countries represent important destinations for Italian commerce. First of all, it has to be noted that the Mediterranean area in general represents, for Italy, the pivot of trade flows, absorbing in 2003 more than 30% of exports and providing 25% of imports. Currently, the most important Italian partners are Tunisia and the Lebanon – absorbing more than half of the commercial flows directed towards Mediterranean Africa – while, in the East, Turkey and Israel are important. Concerning imports, the most important areas are the Lebanon and Algeria, their oil and methane providing 80% of the value of the imports from the South Mediterranean countries.

Conclusions

There is however a differentiation in the patterns of Italian internationalization in the considered areas. The Central and Eastern European countries confirm their nature as transition economies. They show a strong ability to attract investments. Even if the investments are concentrated on a few sectors, the investment profile varies more than in the Southern and Eastern Mediterranean case. The economic relations between Italy and this rim assume the classical form of those between developed and developing areas, concerning the mere acquisition of inputs and the delocalization of low value added and low technology industries. The Central and Eastern Europe countries are becoming increasingly active in terms of globalization. On the other hand, the Southern and Eastern Mediterranean countries' role is more passive and functionally dependent.

The construction of a free trade area between the European Union and Southern and Eastern Mediterranean Countries is now being discussed. The enlarging of the local market will support an expansion of the investments directed toward this area. Considering the progressive integration of the European Union and Central and Eastern European the future for the Southern and Eastern Mediterranean Countries presents both opportunities and risks.

5.4.3. Public funds

Launched by the Commission in 2003, the European Neighbourhood Policy (ENP) unifies various previous policies and budgets: MEDA, Phare, Tacis etc. The new European and Neighbourhood Partnership Instrument concerns

- nine Mediterranean countries: those of the former Barcelona process, minus Turkey (that will benefit from a specific budget), Cyprus and Malta, plus Libya
- the three Caucasian countries
- the three eastern countries that are located between the EU and Russia (Moldova, the Ukraine, Belarus - though the latter is still not included for well known political reasons).

The Balkan countries are not included because they have been given an 'entry perspective' and are such potential candidates. Nor is Russia party to the ENP, though it has a specific strategic agreement with the EU the general goals of which are nevertheless quite similar to the ENP's: create a common space for trade, finance, migrations, training, culture and security.[49]

The assets of the ENP initially appear quite strong. For the first time, the EU has a comprehensive view of its regional range. This view is however hampered somewhat by events to both the east and to the south. In the East, the Ukrainian call for membership during the December 2004 presidential elections raises a tough political issue with Russia. In the South, the recent Barcelona Summit in November 2005 (for the tenth anniversary of the first Agreements), which was supposed to enhance the Mediterranean partnership through this ambitious ENP, was a complete failure. While all EU states where represented by the heads of government, only two Mediterranean partners sent theirs. The reasons for this failure relate to the inherent limits of the Barcelona process. This is perhaps best reflected in the statistic that during the past decade, European's subsidies reached 27€ per inhabitant in the CEE countries but less than 2€ in the MEDA countries.

Figures 21 and 22 show, the rising share of the CEE countries in the geographical breakdown of EU's public aid. As such, the fear among the EU's southern neighbours that the Mediterranean would not be a strategic priority is understandable. European geographical priorities are often described as pyramidal with the Balkan and CIS at the pinnacle followed by Africa (with the exception of the Maghreb); then Latin America; and only then the MENA region – where US subsidies are also important, particularly in Jordan and Egypt – with Central & South Asia being least important. Indeed, as the EU concentrated on the East throughout the 1990s, the partnership with the South – particularly in

[49] The 1999 EU-Partnership Agreement is about to run out, negotiations to renew it are ongoing but have proved to be difficult to conclude. Few details have emerged as to the key points at issue.

relation to the problems that have arisen in the context of the Barcelona process – stalled. Rising tensions in the Middle East, specifically relating to the War in Iraq and the conflict in the Lebanon have moreover masked the emergence of a new partnership between the USA and the Arab World (Broader Middle East initiative, free trade zones with Jordan and Morocco, etc).

One final strategic feature has also to be taken into account. Compared to the official aid disbursed by the EU states (many of which maintain their relationships with their former colonial remote areas), that of the European Commission is much more focused on the CEE countries, Turkey, the Palestinian Territories and, generally speaking, on the 'neighbourhood' as we have defined it. In absolute terms, EU members give larger subsidies than the Commission to the neighbourhood. However, the Commission follows a clear political line in making specifically targeted efforts towards the neighbourhood.

Map 57: shows that the European (Commission + member states) share in terms of total assistance given to the CEE countries is high, (they are now of course full members), as they are to the Balkans and to the Maghreb countries. They are however significantly lower in the Near and Middle East, where the USA's share is higher. Furthermore, since the 1990s, the EU's share has stabilized in the Western Balkans where reconstruction is largely supported by the EU, though it has declined in North Africa, in the Near and Middle East and in the CIS countries. Obviously, regionalisation is still not considered as a strategic priority by all European member states.

Map 57: Net official development assistance to the neighbourhood and the EU share (members and Commission) from 2001 to 2004 (annual average)

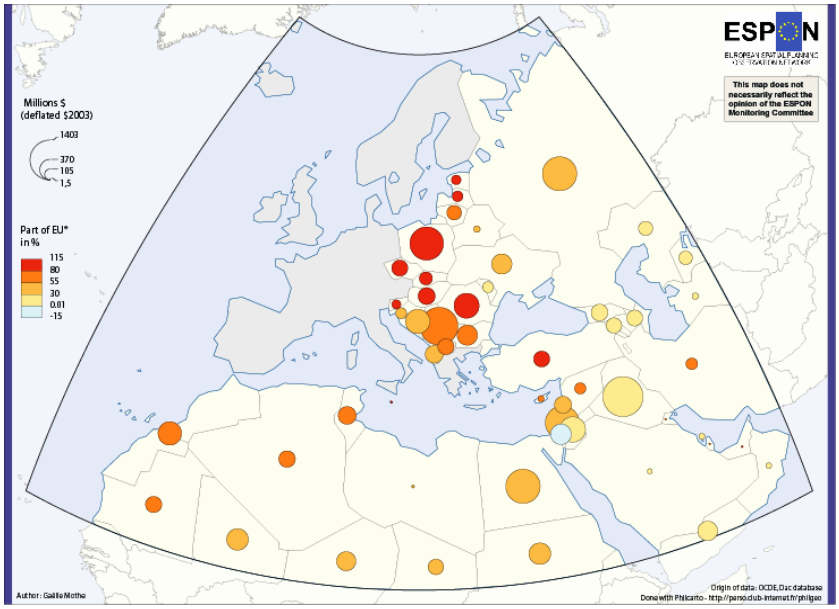


Figure 21: European aid subsidies, by region, 1991-2003

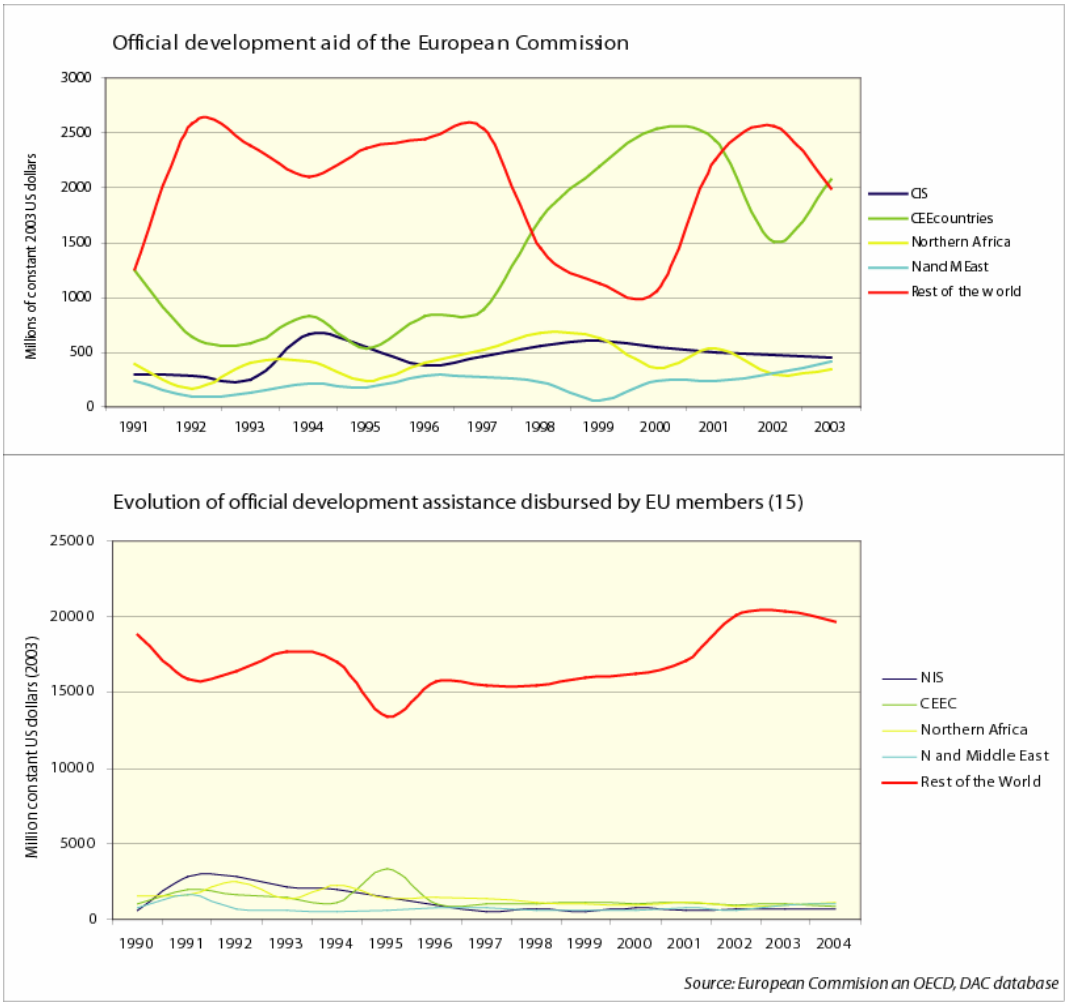
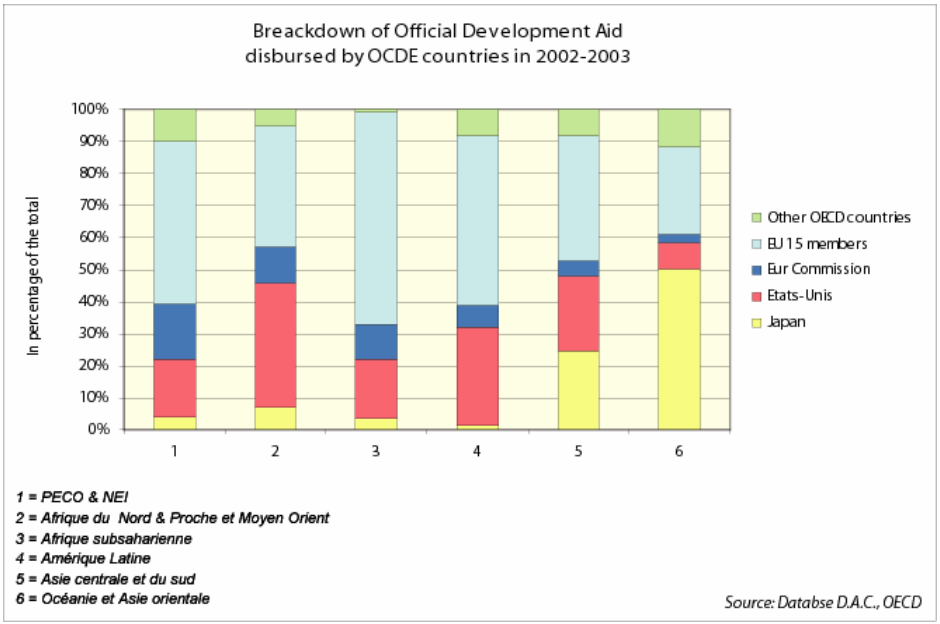


Figure 22: OECD Countries' public aid in 2003 and 2004: Breakdown by donors and beneficiaries



5.4.4 Air flows

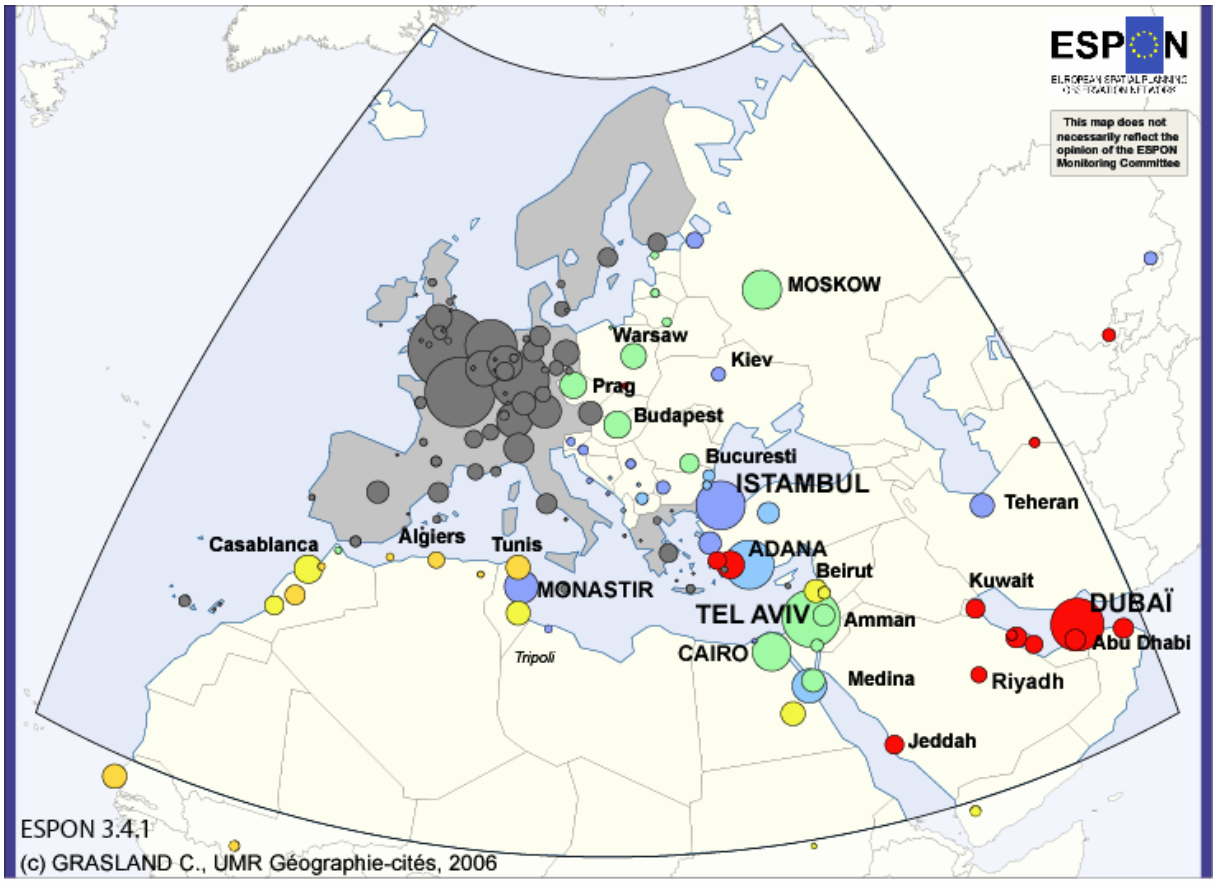
The analysis of air flows between ESPON 29 and the neighbouring countries is particularly interesting as it reveals how these countries are generally more connected to the core of north-western Europe than to their immediate neighbours with which they share common borders. In order to clarify this "tunnel effect", we have decided to analyse more precisely the flows between Western Europe (EU15 + Switzerland & Norway) and the rest of the Euro-Mediterranean area defined in the usual manner. The most important structural relations in terms of air connections are measured in flows of passengers weighted by distance in order to eliminate short distance flows which do not contribute to the global organisation of the Euro-Mediterranean region

The first obvious result of the analysis is the fact that the major regional West European gateways are fully concentrated along the "blue banana" from Manchester to Milan and with the domination of Paris and London clearly visible. The European towns located in the northern and southern peripheries clearly play a smaller role in the connections of the neighbourhood, even if some cities are able to build specific links (*Madrid*, *Barcelona*, *Athens*, *Stockholm*, *and Helsinki*). Looking at the neighbourhood, the pattern appears more polycentric and many cities have important connections with Western Europe, in particular in an eastern and south-eastern direction with the major nodes of *Moscow*, *Tel Aviv*, *Dubai*, *Cairo* and *Istanbul* which act as stepping stones on the route to Asia. Medium nodes of connection with Western Europe take place both in east central Europe (*Warsaw*, *Prague*, *Budapest*, *and Bucharest*) and in North Africa (*Dakar*,

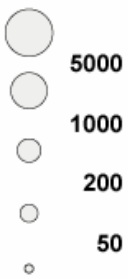
Agadir, Casablanca, Tunis, Monastir, Djerba, and Charm-el-Cheik). Some states were however clearly very poorly connected by air to Europe in 2000, generally for political reasons, as is the case with Algeria, Libya, the Ukraine or Belarus though, by 2006, the situation is likely to be rather different.

We have also tried to examine whether airports located in the neighbourhood are specifically connected to some states or airports in Western Europe or whether the distribution pattern is consistent across all of the core areas of north-western Europe (map 58).

Map 58: Major air connections between Western Europe and its neighbourhood



Air Traffic weighted by distance
(millions of of passengers . km)



Preferential air connexions

	1	2	3	4	5	6	Tot
British Islands	58	13	12	20	4	18	23
France	9	78	40	15	3	12	18
Southern Europe	3	6	8	23	1	5	10
Northern Europe	1	0	1	5	6	2	3
Benelux	10	6	13	13	14	14	12
Central Europe	19	6	26	25	72	49	33
total	100	100	100	100	100	100	100

The analysis reveals clear specialisation in the distribution of connections between Europe and its neighbourhood. The Persian Gulf (*type 1*) is clearly oriented towards the UK and London's airports while the Maghreb (*type 2 and 3*) is logically connected to France and Paris. Airports from central Europe (Germany, Austria, and Switzerland) see specific connections with Turkey and the Balkans as well as the specific destination of Tunisia (*type 5 and 6*). Multiple connection-type situations (*type 4)* characteristic of *Tel Aviv*, *Cairo*, *Moscow*, and the capitals of the new member states (*Prague*, *Budapest*, *Warsaw*, *and Bucharest*) also exist, where these cities are equally related to all major nodes of the "Blue Banana".

The analysis of connections between Western Europe and its Euro-Mediterranean neighbourhood could however give the false impression that the entire neighbouring region is strongly polarised by the major airports of the Pentagon. This is not however the case, as can be clearly demonstrated by the analysis of major flows linking the cities of the neighbourhood of Western Europe.

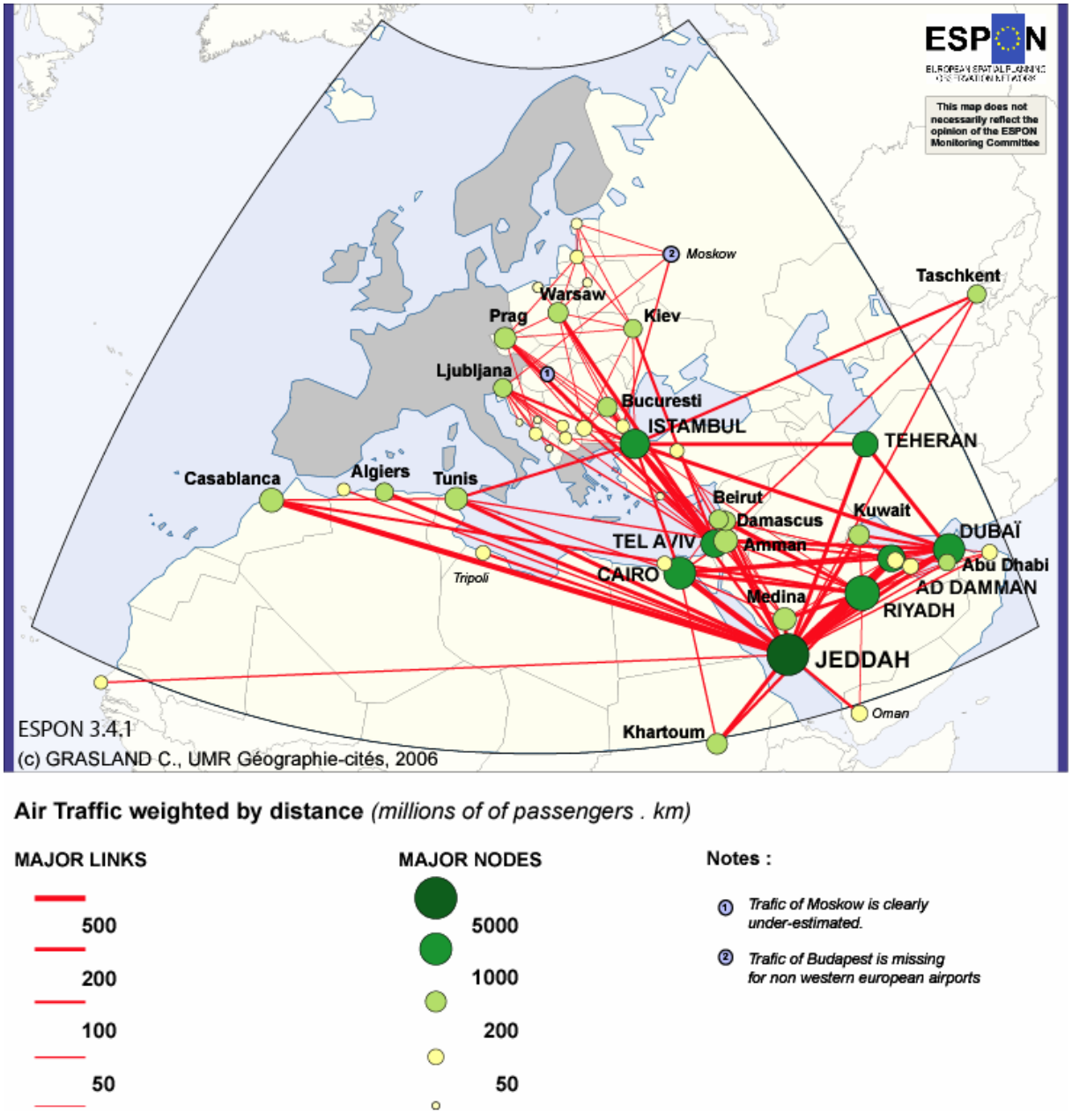
Looking at map 59, it appears that the Middle-East and the Persian Gulf forms an area of strong inter-relations organised by a polycentric cluster of major airports: *Jeddah*, *Istanbul*, *Tel-Aviv*, *Cairo*, *Dubai*, *Riyadh*, *Ad Damman and Teheran*. This part of the European neighbourhood defines, in reality, a relatively independent network which can compete with Western Europe in terms of attraction and one which has several comparative advantages.

It is obvious that the attraction of the major airports of Saudi Arabia mainly relates to the religious factor with pilgrims from all of the Muslim countries travelling to Mecca on the "*Hajj*" which is one of the five pillars of Islam. The religious factor is not the only explanation of this convergence of flows which is also clearly related to the economic prosperity of the oil monarchies from the Persian Gulf and their need for labour force imported from all of their neighbouring countries, in particular Egypt and Jordan.

The situation of *Istanbul* is particularly interesting as this airport appears to act as a bridge between the Middle-East network of strong air connections and another network centred on east-central Europe. Istanbul is also able to develop strong connections with Central Asia (*Tashkent*) and with the Maghreb (*Tunis*). If and when Turkey joins the European Union, Istanbul would, without doubt, be a major gateway for the European territory, fulfilling the same role as Madrid does vis-à-vis Latin America.

Another interesting situation is that of *Ljubljana* which remains strongly connected with most airports across the former Yugoslavia and can be considered as a specific gateway for the Western Balkans.

Map 59: Internal connections in the neighbourhood of Western Europe



The data used for the creation of this map was unfortunately relatively old (2000) and probably not complete as it can be deduced from the lack of connections between Budapest and the rest of neighbourhood or by the fact that connections between Moscow and the airports of Russia are not registered. There is no doubt however that the ESPON 29 members should regularly monitor all air

connections at this level to regularly check on a situation which is evolving quickly.

5.5 Conclusion: The whole, better than the sum of the parts: *in varietate concordia*[50]

In this conclusion, we begin by presenting some of the prospective results concerning the future situation of the ESPON 29 in 2030 or 2050. This result has been elaborated in common with the ESPON projects 3.4.1 *Europe in the World* and 3.2 *Scenarios.* We then discuss some of the policy orientations related to the Neighbourhood Policy and the Lisbon Strategy.

5.5.1 Redistribution of population in Euro-Mediterranean (1950-2050)

The distribution of population by states in the Euro-Mediterranean area (WUTS11 & WUTS12) has completely changed over the last 50 years and this process will continue during the next 50 years. The population of the ESPON 29 countries is declining as compared to that of the neighbouring states (Table 19). Using the actual political division for a better comparison, we can see that 10 of the 15 most populated states of Euro-the Mediterranean area were ESPON countries in 1950, but this had fallen to only 6 in 2000 and will likely fall to 5 by 2050. At this time, Germany with 79 million inhabitants will be only in 5th position after Egypt, Iran and Turkey which will all have reached a population size greater than 100 million. Russia will only be in 2nd position as its population would have decreased from 147 to 112 million between 2000 and 2050.

The expected variation in population over the period 2000-2030 (map 60) indicates the existence of a strong regional variation with decreasing populations in East and Central Europe, stability or moderate growth in Northern and Western Europe, medium growth in North Africa, Turkey and Central Asia, and a very important growth in Sub-Saharan Africa and the Arabian peninsula. This diversity in the demographic situation is sometimes considered to be a threat by some segments of public opinion and by policy-makers in the European Union countries who talk of a so-called "European demographic decline", or more prosaically, of the "danger of invasion by southern migrants". We can neatly reverse this common proposal when we analyse the situation at the World scale. The existence of a growing demographic area in the immediate neighbourhood of the ESPON 29 countries is at the same time an economic opportunity and a political challenge.

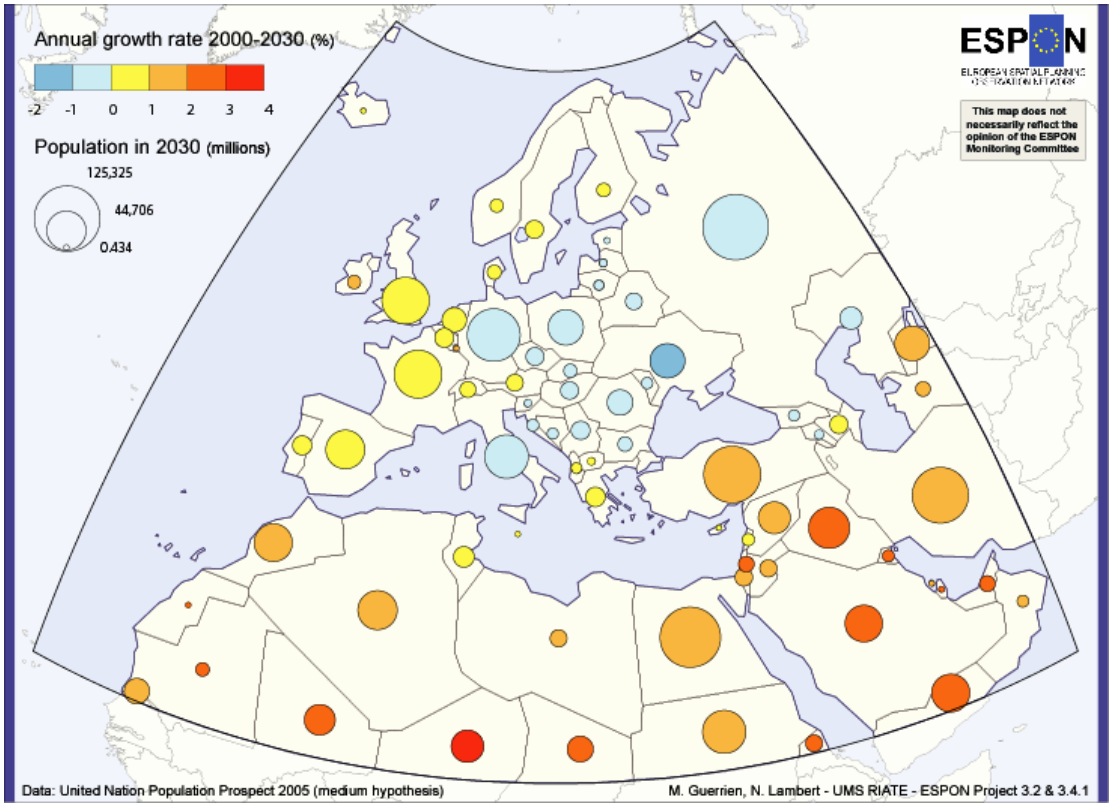
[50] The European motto "Unity in diversity" (*In varietate concordia*) was officially proclaimed on 4th May 2000 in the European Parliament.

Table 19: The evolution of population by state in the Euro-Mediterranean area (1950-2050)

	1950		2000		2050*	
Rank	Name	Pop.	Name	Pop.	Name	Pop.
1	Russian Fe.	103	Russian F.	147	Egypt	126
2	**Germany**	68	**Germany**	82	Russian F.	112
3	**U.K.**	50	Turkey	68	Iran	102
4	**Italy**	47	Egypt	67	Turkey	101
5	**France**	43	Iran	66	**Germany**	79
6	Ukraine	37	**France**	61	**U.K.**	67
7	**Spain**	28	**U.K.**	59	**France**	65
8	**Poland**	25	**Italy**	58	Iraq	64
9	Egypt	22	Ukraine	49	Yemen	59
10	Turkey	21	**Spain**	41	**Italy**	51
11	**Romania**	16	**Poland**	39	Niger	50
12	**Netherlands**	10	Algeria	30	Algeria	50
13	**Hungary**	9	Morocco	29	Saudi Arabia	49
14	Morocco	9	Iraq	25	Morocco	46
15	**Czech Rep.**	9	Uzbekistan	25	**Spain**	43

Source: UNPP, 2004 – Estimation for 2050 based on medium variant

Map 60: Population in Europe and its Neighbourhood in 2030



5.5.2 Ageing and sustainable demographic development

The demographic question cannot be reduced to the quantitative problem of the size of the ESPON 29 population and that of its neighbours. It is more generally related to the qualitative problem of the evolution of the age structure of the population and the related problems of the dependency ratio (see ESPON Project 1.1.4) which has strong economic and political consequences. The index of sustainable demographic development (ISDD) which has been proposed in the ESPON project 3.2 Scenarios for the analysis of trends of territorial cohesion inside ESPON 29 can be transposed at the Euro-Mediterranean scale in order to evaluate the possible complementarities in the context of the development of North-South regionalism.

When the demographic evolution of ESPON 29 is compared to that of its major competitors in the World (*Figure 23*) the situations appears much better than that of Japan, where the ageing process is very strong and is not balanced by an equivalent increase of life expectancy. We can also forecast that the situation will soon be better than that of China where a very important ageing process has been developing since 1975 and where the progress in life expectancy remains limited to a limited segment of the population. The situation is however clearly less favourable than that of the United States where important immigration flows ensure a strict parallel increase of ageing and life expectancy which is not the case for the ESPON 29 countries.

If we consider that an important difference between life expectancy and median age is a condition of demographic sustainability (see ESPON 3.2, TIR), the evolution of the Euro-Mediterranean in the near future reveals four very different patterns of evolution (figure 24) with (1) important progress in sub-Saharan Africa, (2) stability at a high level in northern Africa and the Middle-East, (3) high level but progressive degradation of the situation in Western Europe, (4) low level without progress in Eastern Europe. But what is perhaps most important is the fact that, when considered as a whole, the Euro-Mediterranean area presents a perfect stability of demographic sustainability at a high level (40 years of difference between life expectancy and median age) which is exactly comparable to the trajectory of the USA over the same period.

In systemic terms, we can say that each part of the Euro-Mediterranean Region would face strong demographic problems in isolation - too many young active people on the southern shore, and; too many old people on the northern shore The "whole is better than the sum of the parts" and considered together the area as a whole displays a nice pattern of demographic equilibrium and sustainability.

Figure 23: A Comparison of the sustainable demographic development of ESPON, the USA, Japan and China (1980-2030)

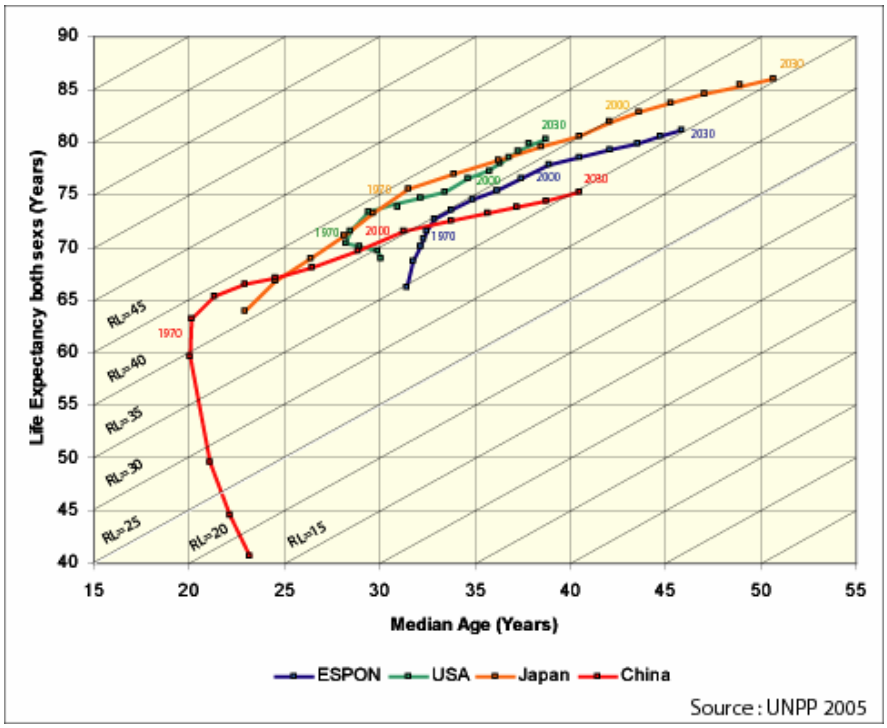
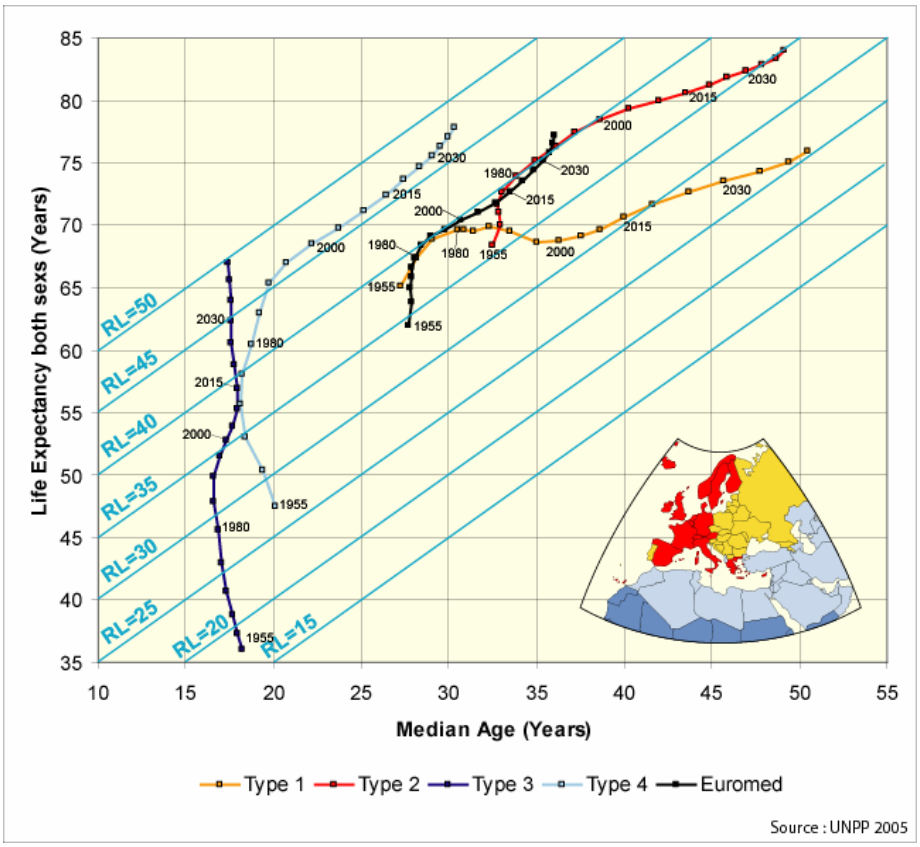


Figure 24: Sustainable demographic development in the Euro-Mediterranean (1955-2045)



5.5.3 Human development as a diffusion process with barriers effects?

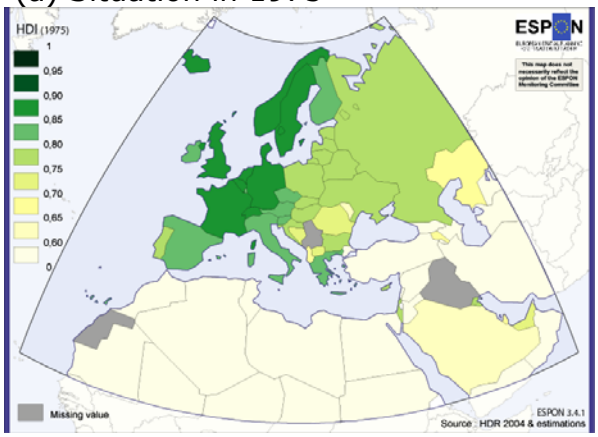
The comparison of the distributions of the Human Development Index (HDI) in 1975 and 2002 strongly suggest the existence of a diffusion process of prosperity and development around the core of north-western Europe. But this diffusion process appears to be irregular in space and time and seems to be directly related to the degree of the opening or closure of borders. A regression model applied to the evolution of HDI between 1975 and 2002 helps to clarify this assumption and reveals which countries have experienced the most important progress of their level of human development during the period 1975-2002 and which have experienced a slower increase or stagnation (map 61).

The countries of North Africa and the Middle-East represent the most positive evolution with an increase of HDI which is greater than the general trend observed across the Euro-Mediterranean area. This positive situation highlights those states with open economies that have developed strong economic relations with the European Union either through trade or migration. On the other hand, the countries of Eastern Europe experienced a negative evolution which can be related to the demise of the socialist system and the existence of a strong barrier with Western Europe until 1989. The situation is less negative in East Central Europe which had maintained contact with European Union before 1989 (Hungary, Poland) and which, quickly benefited from aid flows after the fall of the iron curtain and in the context of EU enlargement. Another negative evolution of HDI can be observed in countries located to the south of the Sahara which were not involved in the globalisation process and which have sent, until quite recently, relatively few migrants to the European Union.

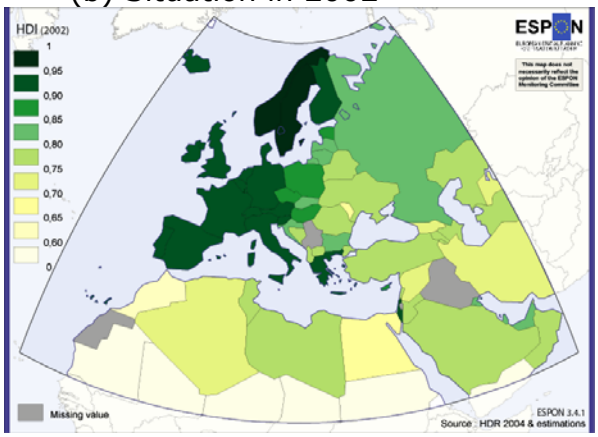
The clear message delivered by such historical analysis of HDI is the fact that the best way for the European Union to ensure the development of its neighbours is through the encouragement of some level of legitimate migration (South-North) combined with significant investments (North-South). If the assumptions of the diffusion process are correct, the analysis also suggests that, in the near future, the development process will depend on new partnerships between East and Central Europe on the one hand, and the Northern African and sub-Saharan countries on the other. The European Union should take the initiative in encouraging such movements in both directions.

Map 61: Diffusion of human development in the Euro- Mediterranean countries between 1975 and 2002

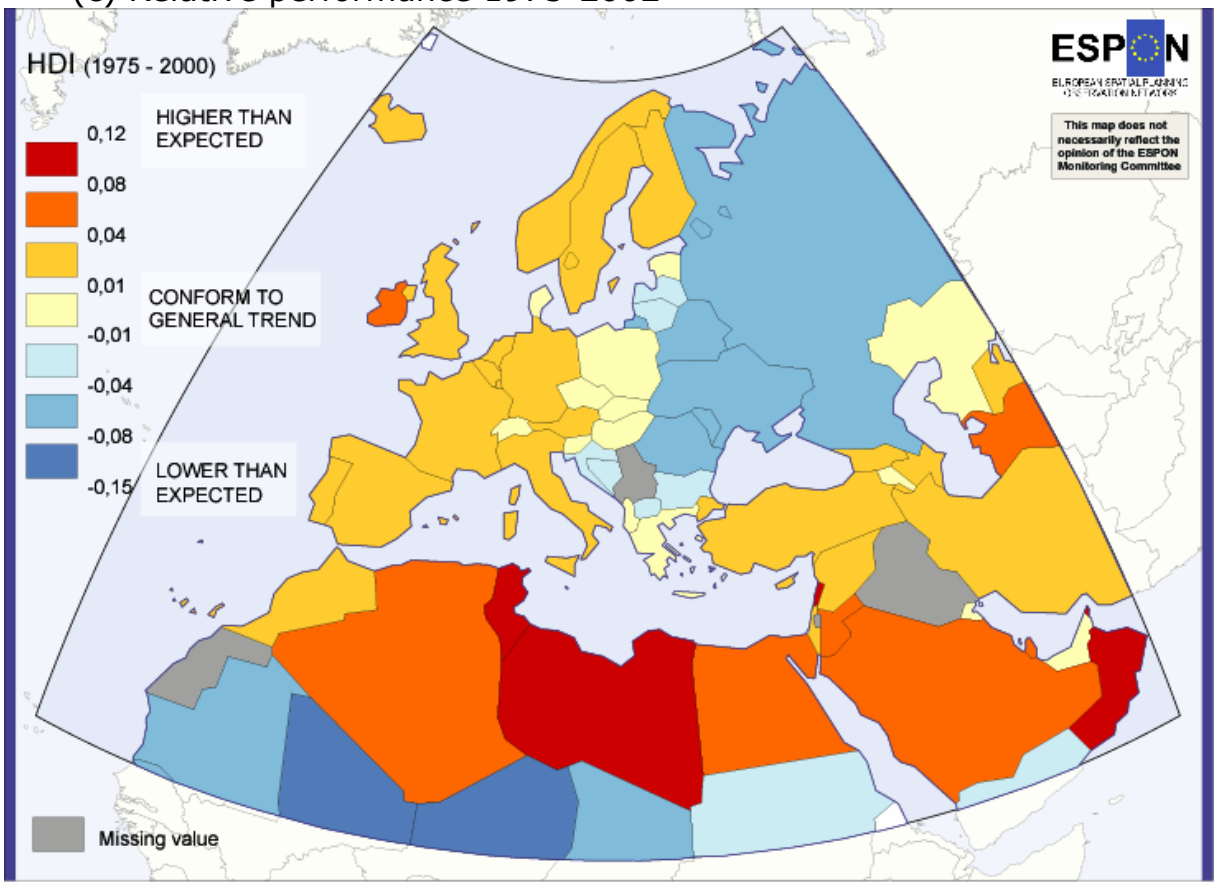
(a) Situation in 1975



(b) Situation in 2002



(c) Relative performance 1975-2002



Residuals of the model $HDI_{2002} = 0.75*HDI_{1975} + 0.27$ (r2 = 89%)

5.5.4 The past and future evolution of the political weight of the European Union in the World

As we demonstrated in the FIR the evolution of the population or the GDP level of the European Union between 1950 and 2004 provides a fascinating example of what may have been an ***implicit political strategy.*** This strategy – if that is what it was – was designed to maintain Europe's place in the world, as for the period as a whole we can observed a distinct structural trend of demographic and economic decline (*Figures 25 & 26*) which is only balanced by means of a reliance on the political dynamic of enlargement to 'balance the books'.

- The population of EU6 in 1950 was more or less equal to 6% of the World total but would have declined to 3% in 2000 without enlargement. On the contrary, the share of World population located in the European Union has remained very stable around 6% when the EU enlarged to 9, 10, 12 and 15 members. With enlargement to 25 members in 2004, the share of World population located in the EU reached a historical high of 7% and could jump to 8% with the accession of Romania, Bulgaria and Turkey between 2007 and 2015. In other words, demographic decline need not be fatal for the European Union from a political point of view.

- The GDP (pps) of EU6 in 1950 was more or less equal to 15% but would have declined to 10% in 2010 without further enlargement. The membership of the United Kingdom in 1973 produced a decisive increase in this share which reached 20% and remained very stable around this level when Europe enlarged to 10, 12, 15 and 25 members. The trend towards the economic decline of the area remains important and it is only with further enlargement to countries like Turkey, perhaps in the period after 2015, that the European Union could eventually maintain this 20% share in future.

What is important to underline here however is the fact that the controversy over further political enlargement is a false one when considered form a strategic perspective. There may indeed be many political solutions to creating and maintaining strong linkages between the European Union and its neighbouring countries, and while political enlargement is not the only solution, what is not questionable is the fact that the European Union will be obliged to develop the mechanisms to manage these linkages and as such must choose a positive policy of socio-economic engagement over a negative one based solely on securitisation.

Figure 25: Evolution of the share of World population of the European Union (1950-2020)

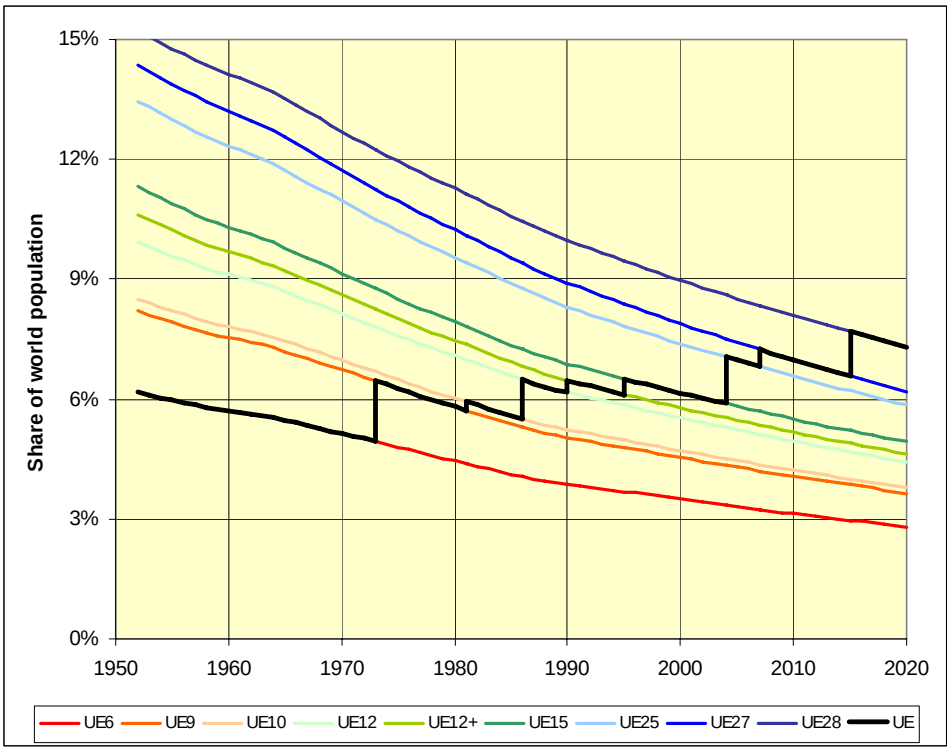
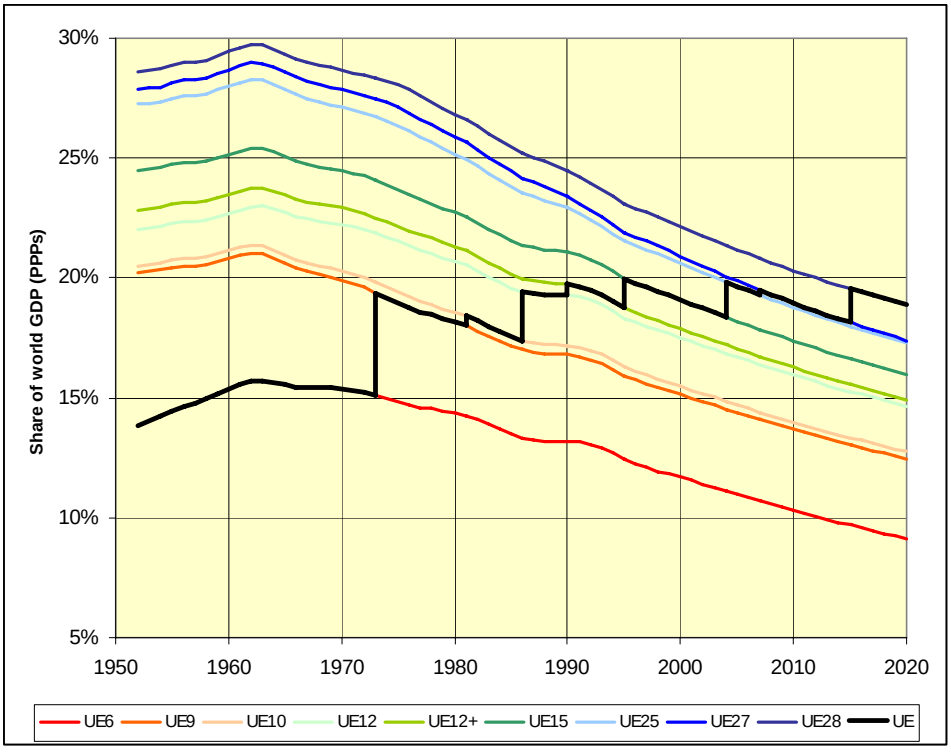


Figure 26 : Evolution of the share of World GDP (pps) of the European Union (1950-2020)



5.5.5 Policy orientations

5.5.5.1 North-South Regionalism

The results presented here show that the only way in which Europe can compete with the other large economic regions of the World is to further in its own regional integration process, not only through the traditional approach to *political integration* but also at a North-South regional scale – *functional integration* [51]. In this respect then it is irrelevant to restrict the neighbourhood issue to a concern over free-trade or immigration control. The countries neighbouring the ESPON area to its East and South should instead be functionally integrated in a global regional programme including labour force and training issues, investment issues, energy issues, and environmental issues. To complete this integrated space the EU will need a strong and sustainable, mutually beneficial, strategy towards both its Eastern and Southern neighbours.

First, it is necessary to maintain and develop a *regional and sub-regional territorial base* for the implementation of the neighbourhood policy, while currently its Action Plans are designed from a purely bilateral perspective (Commission / each neighbour country). As far as the energy issue, the environmental issue or the migration and training issues are concerned, the regional scale is surely the correct one.

Second, the ENP Action Plans should enhance the *local dimension of projects*, with a strong commitment from local public and private actors. The EU could more easily monitor the implementation of such projects, and make regular evaluations, using a similar system to that used in the context of European regional policy. The promotion of territorial local projects is one way in which to encourage decentralisation in neighbouring countries, which happens to be poorly developed in both Russia and across the Mediterranean region more generally. Although, realistically, expectations of immediate changes on the political organisation of these countries regional and or sub-regional structures is not realistic. Nevertheless, the initiation of such a reform process could, ultimately, improve the efficiency of cross border cooperation programmes even in the short to medium term. Many currently do succeed because local authorities remain too dependent on the central authorities. In addition, the funding of cross border (Interreg III A) and transnational cooperation (Interreg III B) projects through different budgets (INTERREG, TACIS and MEDA), hampers their implementation, with the Commission even referring to this as an 'inherent design fault'. As such, future cross-border cooperation should be

[51] See for instance IFRI, 2003, *Le commerce mondial au 21ème siècle*, Paris.

backed up by one common budget for territories located on both sides of the EU external border.

The new regional arrangements, and in particular, the future European and Neighbourhood Partnership Instrument, must have a significant amount of funds dedicated to cross border cooperation. Furthermore, questions have arisen as to whether the ENPI will be efficiently handled by the DG Relex. This DG has no experience in the field of local development or in cross border cooperation. The European Commission should define more clearly the future connections between the DG Regio and the DG Relex for the efficient implementation of ENPI funds.[52]

5.5.5.2 Lisbon Strategy

In accordance with the results obtained in this project, "Europe in the World", we can assert that one of the main challenges for the European Union over the next 20 years will be the decisions to integrate or to ignore the neighbourhood in general and the Southern Bank of Mediterranean Sea in particular in its wider economic and political strategy. Many consequences for the future of Europe in both a territorial and a societal sense depend on this crucial choice which defines an alternative between two very different futures.

(a) The European Bunker

This first policy option fits with the actual baseline scenario of the European Union (see ESPON 3.2). The Euro-med strategy launched in Barcelona in 1995 has been definitively closed by the disaster of the ministerial conference of December 2005 where, with the absence of most of the Southern leaders, the only important questions discussed were those between the Northern Mediterranean countries such as how to limit migratory flows induced by the growing economic and demographic gradient on both side of Mediterranean Sea. Moreover, security issues and the fear of terrorism have come to preoccupy the cooperation partnership process which was initially based on a much wider vision of join economic, social, ecological and cultural development on both sides of the Mediterranean. In the short term, and out of any moral consideration, this "bunker strategy" appears pragmatic and realistic for an economically declining and demographically ageing Europe. In reality, this construction of an island of prosperity surrounded by oceans of poverty would almost certainly have tragic consequences.

[52] At the current time of writing, October 2006, the Commission had still not concluded its internal consultation process on how exactly the ENPI would be run. INTERACT meetings had taken place in Helsinki and Rome in February, and in Brussels in April, with a final meeting scheduled for 'October/November' 2006, with the adoption of the regulation scheduled to take place at this time.

(1) Migrations have never been stopped by borders when wealth differentials are greater than 1 to 5 or 1 to 10. In such a scenario, the European Union will be obliged to invest more and more in the military control of its southern border and will be therefore be obliged to limit EU budget allocations to other objectives like social cohesion, sustainable development or R& D.
(2) The developing states of the southern bank of the Mediterranean will probably never agree to the proposal of being simple "gatekeepers" for the European Union against the poorest societies of Sub-Saharan Africa. They will therefore develop economic and political partnerships with other parts of the World like United States (its Great Middle East project) or China, instead of being allied to Europe and will develop as a direct competitor in its immediate neighbourhood.
(3) The integration of immigrants from the southern shore of the Mediterranean will be profoundly affected by the limitation on travel and family reunification, multiplying the problems Europe's inner cities and suburban 'ghettos'. Conversely, tourism flows and the retirement of European people to southern countries will be dramatically affected by the degradation of political relations, producing increasing economic and ecological pressure on the coastal areas of the northern shore of the Mediterranean.
(4) Last but not least, the psychological climate of the European Union will be deeply affected by the climate of fear and guilt produced by Europe's isolation from the poorest people of Africa. The universal dimension of the European project will be seen as hypocrisy. Moreover, this global degradation of the international image of Europe could have significant negative consequences from an economic and political point of view.

(b) A Marshall Plan for Southern Countries

An alternative to the 'bunker' of traditional fortress Europe conceptions is a political option which seems at first glance to be based on pure utopia but on deeper consideration is in fact probably the only realistic path to achieving the goals of the Lisbon Strategy. The crucial point, presented in Figures 25 & 26, is that the European Union will not be able to remain a major actor in the new globalised economy if the EU is not able to maintain its economic and demographic size at World scale. Over the last 40 years, the European Union has consistently represented, more or less, 6% of the World population and 20% of World GDP, thus ensuring that it ahs a decisive capacity to influence developments despite its low military capacity as compared to United States or to the former Soviet Union during the cold war. But this "6/20" level of power has only been maintained by successive enlargements of the EU from 6 to 9, 12 15 and 25. (see. C.4.4.) without this successive political enlargement, the

influence of Europe would have been halved demographically and economically, and its capacity to influence would have been dramatically reduced in political, economic and cultural terms. Moreover, the ability to maintain a separate "social model" or to propose an "ecological dimension", (e.g. the Kyoto protocol) despite the international tendency towards deregulation, would have been impossible without the power that is provided by the economic size of the EU at World scale. The difficult debates around the candidature of Turkey and the problems of political integration revealed by the European Constitution Treaty referenda failures in France and The Netherlands in 2005 proves that political enlargement is probably not the easiest solution to maintaining Europe's capacity to influence the World, at least in the short term. There are other paths worthy of exploration and perhaps one of the most promising would be the development of a kind of Marshall Plan directed toward the European neighbourhood and especially to the Southern Mediterranean countries. What would be the advantages of such a policy option?

(1) The Southern Mediterranean countries are actually in the most favourable demographic situation for economic development, with a good proportion of young adults with relatively high life expectancy and a stable fertility rate. This moment in history where a state has its maximum proportion of active population provides a unique opportunity both for these countries and for the EU.
(2) The development of higher education in the Southern Mediterranean countries is of common interest for the countries concerned and the EU. Increasing the flow of educated workers into the ESPON space would help Europe to balance its negative brain-drain with North America while at the same time helping to nurture the growth and development of technical and scientific elites in the Southern Mediterranean countries. Such positive outcomes could be expected by enlargement of the territorial scope of the Erasmus or 7th Framework Programmes with a related increase in funding. (3) European economic investments in the Southern Mediterranean countries will not necessary stop immigration to Europe though such policies will better ensure some kind of equilibrium in the flows across the Mediterranean where, for instance, tourism and the migration of old European people of pensionable age are included to balance the South-North flow of young workers.
(4) As a hedge against the collapse of globalisation (due perhaps to increasing energy prices or a financial crisis), the development of integrated relations with the immediate neighbourhood of Europe will contribute to limiting the effects of such external turmoil on the European economy. Conversely, Europe will be better able to balance the influence of new economic powers like China if it can rely on a wider integrated area of common prosperity.
(5) Last but not least, the psychological effect of the opening of a new frontier linking the development of Europe and the development of its neighbouring countries could produce a mental revolution in Europe and help to develop a

more optimistic view of the future with important economic, political and social consequences.

6. Part D Internal differentiation of European territory regarding its the relations with the rest of the world

6.1: Introduction

The aim of this final part of the report is to provide a general overview of the relationship between the regions and cities of Europe and the rest of the world. This is one of the key questions of the whole study, because it is an attempt to evaluate the consequences of the relationship Europe has with the rest of the world within the ESPON space. This is not an easy challenge however because, on the regional level, direct indicators are either scarce or missing completely. For example, trade is mainly measured at the national scale while airflows are measured at the city level.

Since we have no direct and comparable indicator on this theme, we will work with indirect indicators. Two main hypothesises will guide our approach:

- Hypothesis 1: the level of the internationalization of territories is *a priori* an advantage in terms of global economic competition.
- Hypothesis 2: Weaknesses and strengths *vis-à-vis* global economic competition are dependant on the economic structure at the regional level. This general hypothesis implies at least four sub hypothesises:
  H2a: a high share of light industry is a weakness because these low technological industries are submitted to higher international competition
  H2b: a high share of financial services is an advantage as it is a good indicator of the level of economic command and, consequently, economic independence
  H2c: a high technological level is a strength in the global competition since it gives the region the ability to produce innovations, which are a source of economic growth
  H2d: a high share of market and non market personal services (education retail trade etc) is an indicator of an economy more indifferent or at least less endangered by globalization.

The first hypothesis is based on the fact that the regions which are most integrated into the world economy already have the assets needed to effectively face up to international competition, especially if they have a leading role in the world economy. This point is related to the concept of metropolisation, which supposes among other things that the largest most commanding towns are the most advantaged in the new globalized World (Veltz, 1996; Sassen S., 1998; Marissal P., Vandermotten C., 2004). Many of the empirical statements of ESPON have supported this hypothesis by showing that the largest towns and metropolitan regions had higher economic growth rates than their national or

regional environments; even if their insertion into the world economy is not the main cause of the metropolisation process (see p. 68 of the 3.4.2. FIR)
However, this assertion raises many questions and needs at least to be qualified. Firstly, the level of internationalization could also be a weakness if the economic structures are not adapted to global competition. Secondly, the 'globalization effect' should not to be overestimated since we have already insisted on the long term tendency of the "Europeanization of Europe" (p. 229-232 of the SIR). Such an observation could mean that most of the competition is intra-European ("regional") and that the global competition concerns only a limited share of the economy. Consequently, while some regions may be concerned by the rise in global competition (metropolises, textile regions etc), many others will remain, relatively speaking, indifferent to global competition. The share of services to households, including non-market services, could thus be a useful indicator of this relative indifference to globalization (see hypothesis H2d). This leads us to conclude that the level of internationalization should not be used as a single indicator but should rather be combined with the other parameters defining the regional structure.

6.2 Internationalization of regions and nations in Europe

The objective of this part of the report is to measure the level of internationalization at the regional level in Europe. The level of internationalization will be evaluated by a set of indicators such as trade flows (only at national level), airflows, migration flows, transnational headquarters, and the existence of stock exchanges.

6.2.1 Trade flows

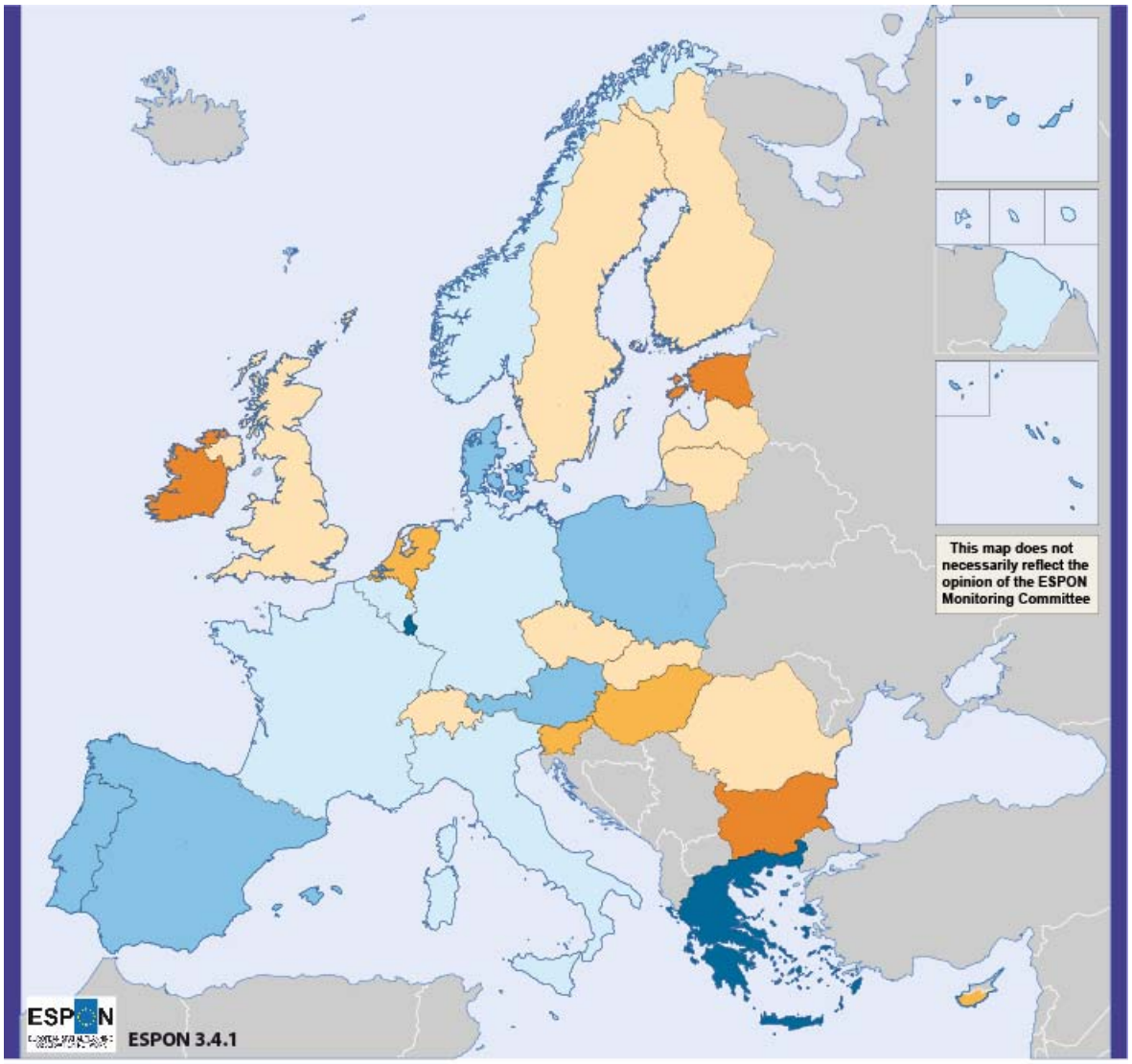
As we already noted, trade flows are only considered at the national scale as European-wide regional trade statistics do not exist. Some countries do publish regional trade statistics but this data is currently neither comparable nor exhaustive at the ESPON level.

6.2.1.1: The openness rate of ESPON countries

The openness rate has been defined as the ratio between the sum of exports and imports with non ESPON countries divided by global GDP. This could be interpreted as an indicator of "how important the relationship with the rest of the World is for the different ESPON countries". We already noted that this opening is relatively weak for Europe as a whole, though it is interesting to compare the

geography of this relative openness to that of the rest of the World (map 62). In so doing, we can observe here the higher openness to the rest of the World of Ireland and the United Kingdom: this again confirms the very high degree of globalization of their economies. Some Eastern European countries such as the Baltic States or Bulgaria are also much more open to the rest of the world. This can be clearly explained by the persistence of traditional commercial relations with the Community of independent States (CIS), and in particular by a continuing energy relationship with Russia. On the other hand, the Mediterranean countries, Poland and a number of the smaller economies such as Denmark and Austria register as least open to the rest of the world, since most of their trade is Europe-oriented.

Map 62: Openness rate of the trade of European countries with non ESPON countries, 1996-2000 (ex map 43)



Opening rate with non ESPON countries

49.4
26.7
19.4
14.3
11.3
8
5.1

ESPON average : 14.3

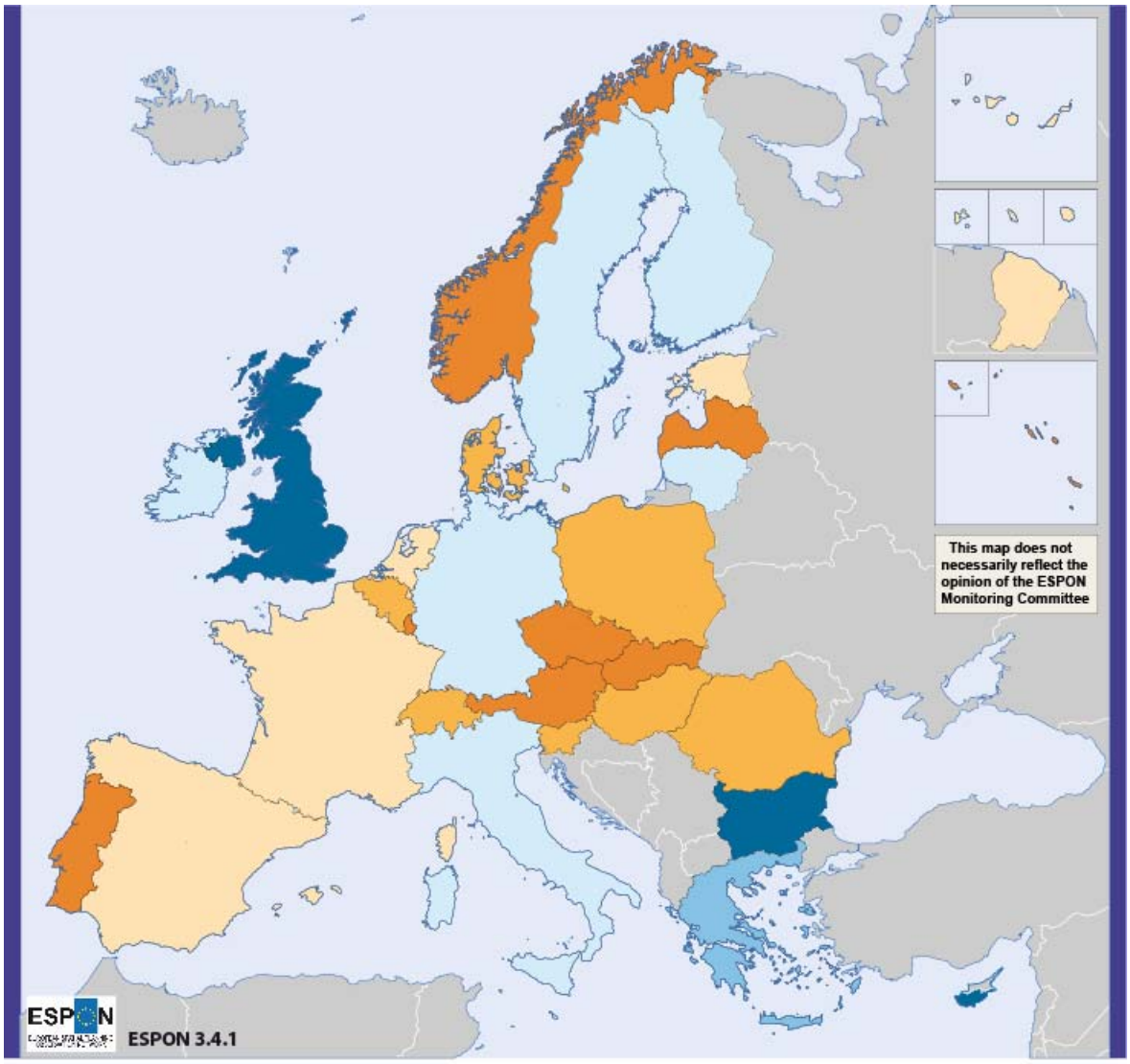
Regional level: NUTS 0
Origin of data: PC TAS

6.2.1.2 The geography of trade of the ESPON countries

The intra or extra-ESPON trade pattern seems to be influenced by several factors (map 63). The geographical position of the country seems to play a role, since for instance Bulgaria, Cyprus or Malta have a relatively weak share of their trade with ESPON countries because of their peripheral position in Europe. Several Western European countries, such as Germany, the United Kingdom, Ireland or Italy, have a high share of their trade outside the ESPON area (comparative to the rest of ESPON countries) because of their traditional commercial relations with other world regions. Inversely, despite their very recent integration into the European Union, the Central European countries have a clearly ESPON-oriented trade pattern. Note should also be made of the basic 'European orientation' of the trade patterns of the small countries, even those that are not members of the EU25, such as Norway and Switzerland.

More generally, this figure clearly raises the question of 'globalization versus regionalization', that is to say that the global growth in trade is partially due to regional integration and not necessarily to intercontinental trade (Siroën J.M., 2000). Figure 27 shows that the 'globalization process' in recent decades has been, in part, a statistical illusion. Indeed, the growing level of international trade is mainly intra-regional in nature, as indeed we can also observe from the growing share of intra-regional trade between the NAFTA or East Asian countries. For the EU 25 as a whole the share of trade carried out within the customs union has grown from 52% around 1960 to 66% around 1990, and has hovered around this level throughout the last 15 years. This has been the case for some of the less integrated countries in the EU 25 economy, such as the United Kingdom whose European trade share has grown during the same period from 32% to 58%. However, in the last decade there has been a clear decline of the relative share of Europe in UK trade, probably linked to the growing internationalization of the UK economy, and the specific role of the London metropolis. Greece, after growing integration with EU 25, also now shows a decline in its relative share of EU 25 trade, mainly because of the growing trade with its neighbouring countries. Growing intra-regional flows can also be demonstrated by the integration of the Central and Eastern European countries inside the ESPON area (see map 63), since we can observe that the rising orientation of their trade within Europe has clearly preceded their recent political integration inside the EU 25.

Map 63: Share of ESPON-based trade in each ESPON country's external trade in goods (1996-2000)

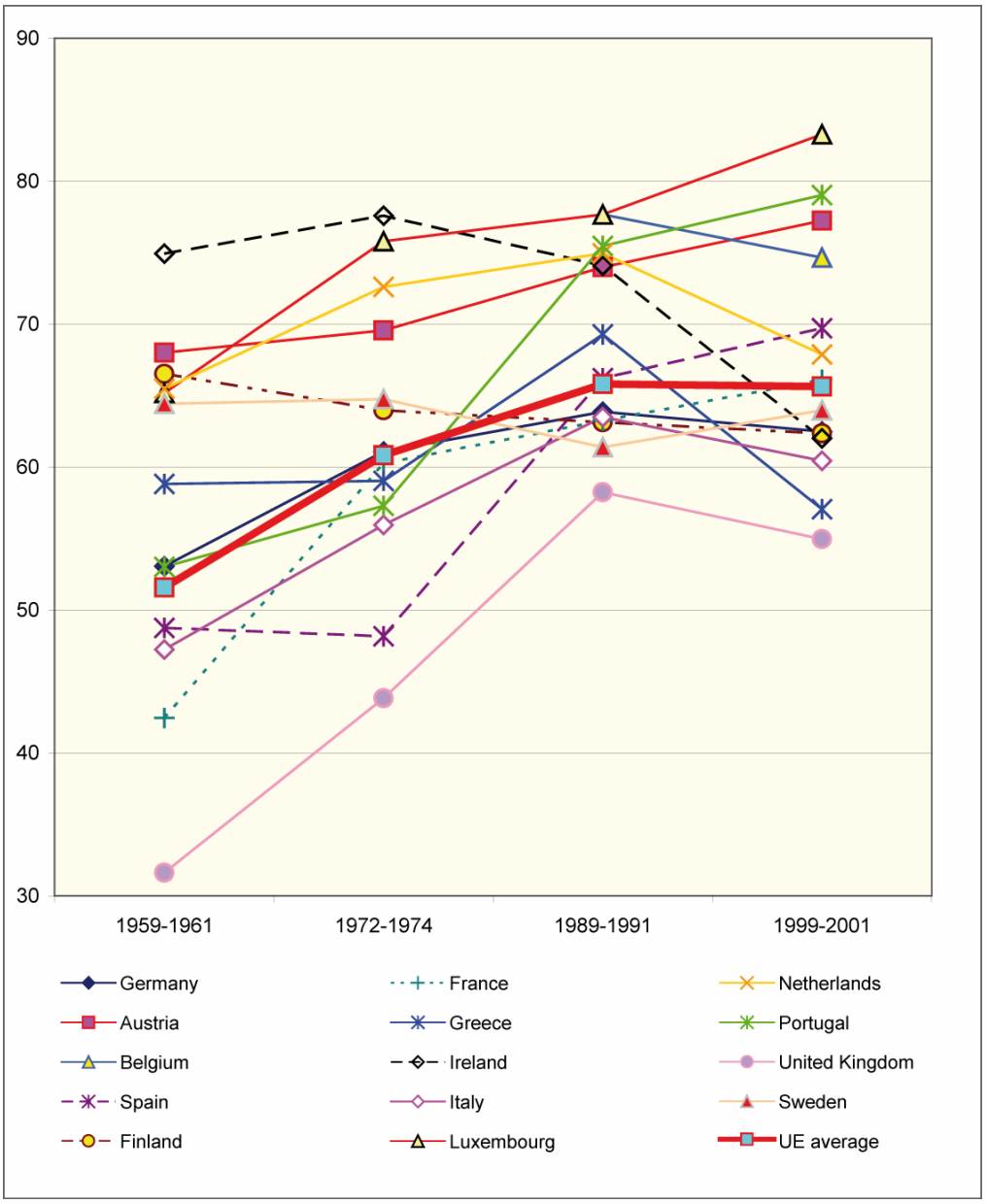


Share of trade with EU 25 (%)

83.3
75
70
65.54
60
55
45.5

Regional level: NUTS 0
Origin of data: PC TAS

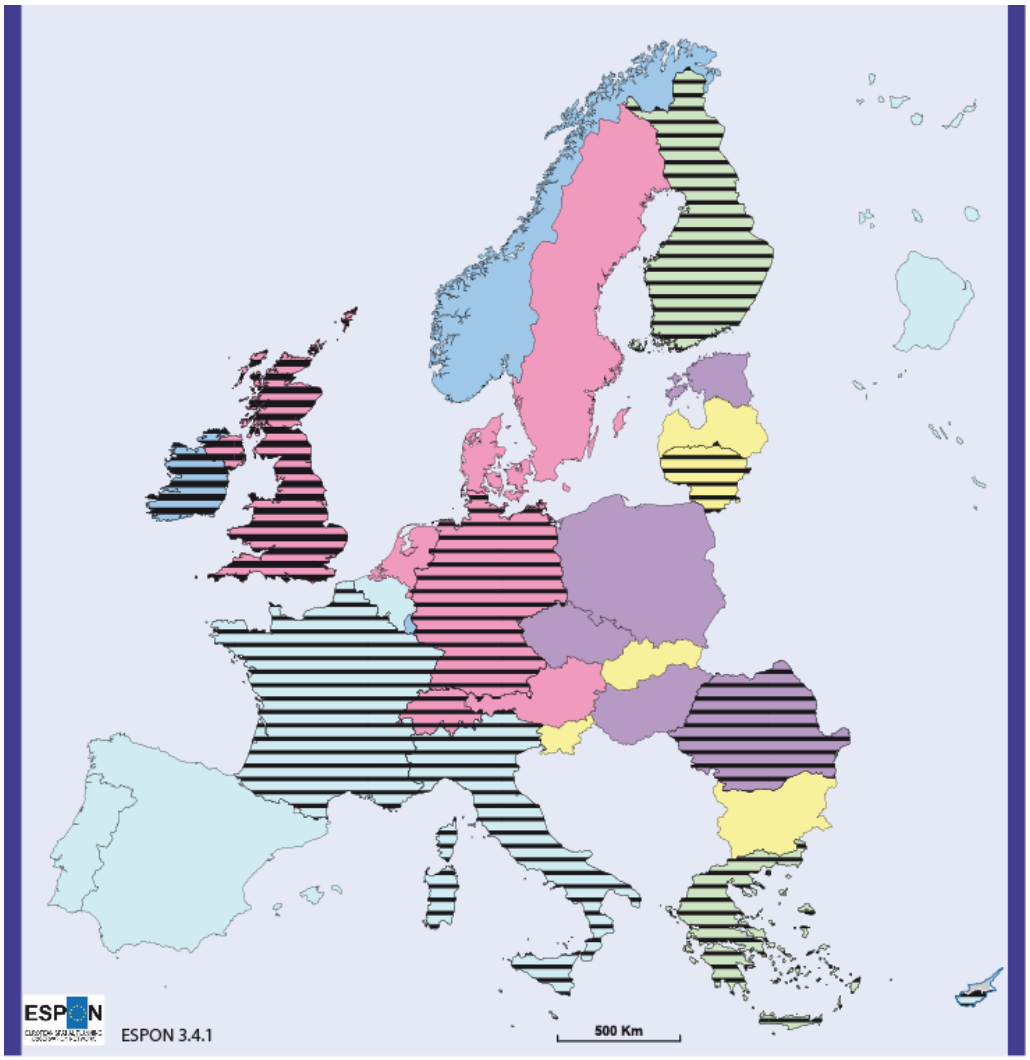
Figure 27: Evolution of the EU 25 share of the trade of European countries, 1960-2000 (ex figure 49)



Map 64 is an attempt to synthesise the geographical orientation of trade of the ESPON countries (see methodological details in volume 2). This typology is based on the share of each of the 29 ESPON countries with the WUTS3 level, excluding ESPON trade. It provides information on the geographical orientation of the trade of each ESPON country with the rest of the world. The map also shows the share of extra-ESPON trade because the meaning of the geographical trade structure with extra-European countries is not the same for all countries, according to whether they have a European-oriented trade structure or not. Map 63 and Figure 27 illustrates the trade structure of each type.

Type 1 (the United Kingdom, the Netherlands, Germany, Sweden, Switzerland, and Austria) is the most American-oriented one, if we exclude the very marginal type 3, which groups only Ireland, Norway and Luxemburg. Trade with East Asia is also specific to type 1. Type 4 includes Belgium and the South-West European countries. We find here a strong tendency for trade with Africa, the Middle-East and South America. Types 5 and 6 include most of the new member states, whose share of trade with Eastern European countries (non ESPON, which means mainly Russia) is very high, mainly for the type 6 (Bulgaria, Slovakia, Lithuania, and Latvia which are still linked to the ex-USSR, and Slovenia, still in trade relations with ex-Yugoslavia). The type 2 includes only Greece and Finland, whose share of trade with Eastern Europe is still above the 20% mark.

Map 64: Classification of countries in respect of the geographical orientation of their extra-European trade, 1996-2000



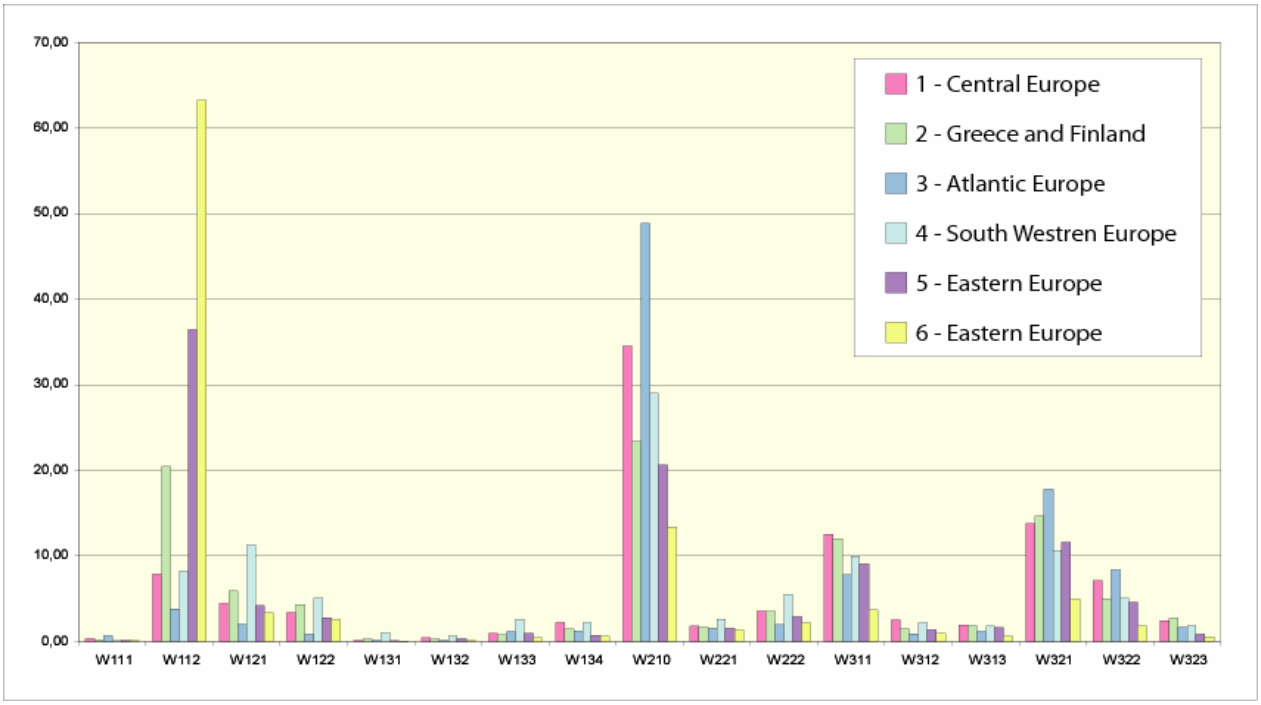
1 - Central Europe
2 - Greece and Finland
3 - Atlantic Europe
4 - South Westren Europe
5 - Eastern Europe
6 - Eastern Europe

Regional level: NUTS 0
Origin of data: ESPON databse

Share of extra-ESPON trade (%)

35 - 45.9
30 - 35
14.3 - 30

Figure 28: Geographical structure of the trade of the different types, by WUTS3, 1996-2000



6.2.1.3: The areas of influence of the major ESPON countries or groups of countries

This approach reverses that of the previous one by indicating which ESPON country is most important for the different parts of the world. The maps below allow us to provide an initial definition of the economic areas of influence of the various ESPON countries, based on the share of the trade of each country with the European country in question. We will focus on the five largest ESPON countries (France, the UK with Ireland, Germany with Austria, the Iberian Peninsula countries, and Italy) as well as some other significant regional aggregates of smaller countries (Benelux, the Nordic EU countries, and the New Member States from Central Europe).

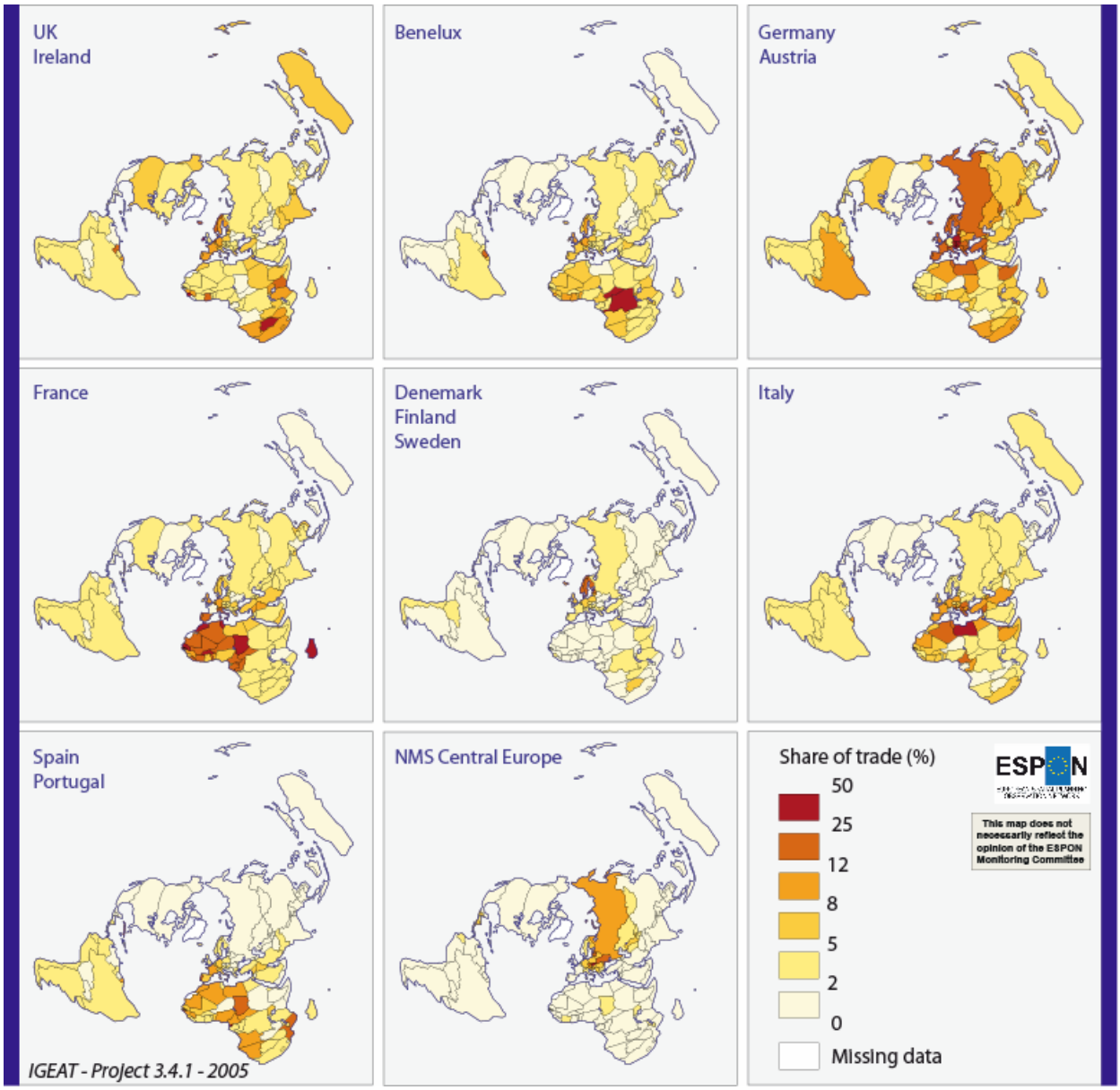
Firstly, we can immediately note the large area of commercial influence of each ESPON country (or group of countries). The importance of the area of influence of each country seems mainly linked to its size (the most important areas are the ones relating to Germany, the UK and France), but also to its openness rate, to historical factors and to technological development levels (Italy, Spain, and Portugal have less important areas of influence than Germany, the UK or France). Secondly, one can easily see the differences in the configuration of the different area of influence. These geographical differences seem to be influenced by various factors:

- historical and political relations ;
- geographical proximity, even if this aspect is not easy to differentiate from the preceding ones ;
- type of exported and imported goods. This can be related to economic structures, for example, German technology gives it a higher weighting in some developing countries of the Third World.

France is linked to the Maghreb and to former French colonial West-Africa whereas the British area of influence is more important with the USA and the Commonwealth. Spain and Portugal have special links with Africa and Latin America. The Benelux, apart from its strong trade with the Congo, has a European-oriented trade pattern. Italy's trade is important with Europe, and notably with the Central Europe countries, but also with the Mediterranean area and Africa. The largest area of influence is however that of Germany (with Austria) since most of the world's countries have at least 5 % of their trade with this country. We can however still distinguish a clear geographical pattern in German trade. The influence of Germany is comparatively more important in Central and Eastern Europe countries, in some parts of Africa, in Brazil and in some Asian countries. The extent of this area is related to the role of Germany in world trade, it is the third largest world exporter and its exports are of a high technological level.

The global trade area of ESPON in terms of world trade is then actually the result of a simple addition of the various national trade areas which clearly cover different parts of the World through a kind of geographical specialisation. The idea that the "whole is better than the sum of the parts" is particularly interesting but it is important to use an important distinction here between EU 25 and ESPON 29 as countries which are not members of the EU 25 have developed original strategies of their own. This is particularly obvious in the cases of Norway and Switzerland (box 10).

Map 65: Share of trade of each country with the different ESPON countries (or groups of ESPON countries)



Box 10: Switzerland and the European Union

The EU is the most important trade partner for Switzerland - politically, culturally and economically. The EU and Switzerland are founded on common fundamental values such as democracy, a regard for human rights and the constitutional state. The EU is by far the most important trading partner of Switzerland: three-fifths of Switzerland's exports are sent to EU countries, while four-fifths of Switzerland's imports originate from the EU.

Switzerland also has close contractual ties with the European Union. 1972 saw the conclusion of the Free Trade Agreement (for industrial products), while seven bilateral agreements were signed in 1999 in the areas of free movement of persons, overland transport, air transport, agriculture, research, and technical barriers to trade and public procurement. These bilateral agreements (Bilaterals I) came into force on 1 June 2002. Further negotiations in nine new areas (Bilaterals II) were concluded on the political level on 19 May 2004.

From Switzerland's point of view, globalisation possibly finds its greatest expression in the momentum of European integration. The consequences of globalisation and the progressive enlargement and consolidation of the European integration process are already evident in Switzerland today and it can be assumed that they will continue to intensify. Considerations of Swiss trends and future challenges are, therefore, inseparably linked to assumptions regarding overall international conditions.

The central foreign policy questions and problems that Switzerland will have to confront in the coming decade have to some extent been part of the fields of Swiss foreign policy activities for many years. Swiss foreign policy is characterised by continuity and calculability. Switzerland will concern itself with most of the existing and future international challenges. It too will be required to reach political decisions and undertake social adjustments as a result. Switzerland has the strength and vitality to respond to these challenges independently. In so far as these challenges are of significance for foreign policy, it certainly cannot claim to have ready answers to every question. But one essential observation surely emerges: these global issues far exceed the capacity of an individual state to respond and find solutions. If Switzerland wishes to make any contribution to the realisation of global responses, it will only be able to do so in close collaboration with other states.

In an era of ever tougher international competition in terms of location and market share, Switzerland appears to be in a good position judging from cross-sectional data, but judging from longitudinal data (development trends of productivity, investments, income, taxes, etc.) its position is less favourable. Unrestricted access to the EU market is vital for Switzerland's economic development. Swiss exports obtained easier access to the European single market when the bilateral agreements came into force in June 2002, which provides some compensation.
The traditional leading sectors of the Swiss economy (the chemical industry, precision instruments and watches, banking and insurance) are expected to maintain their competitive edge. They are the linchpins of economic prosperity. Rationalisation and restructuring will continue further, service industries such as banks, insurance and management consultancies will be affected. Certain traditional industries such as mechanical engineering and metal processing could experience a renaissance. Others are on the threshold of technological innovations (IT, communications). In the future there is likely to be increased demand in the health sector. It is anticipated that jobs are more likely to be created in sectors catering to the domestic market, which are less exposed to the pressures of international competition.

International competition in the tourism sector between the different holiday destinations in response to the globalisation processes will remain and the changed security situation will have an influence on visitor figures. In the medium term, further restructuring and adjustment processes in this sector can be expected.

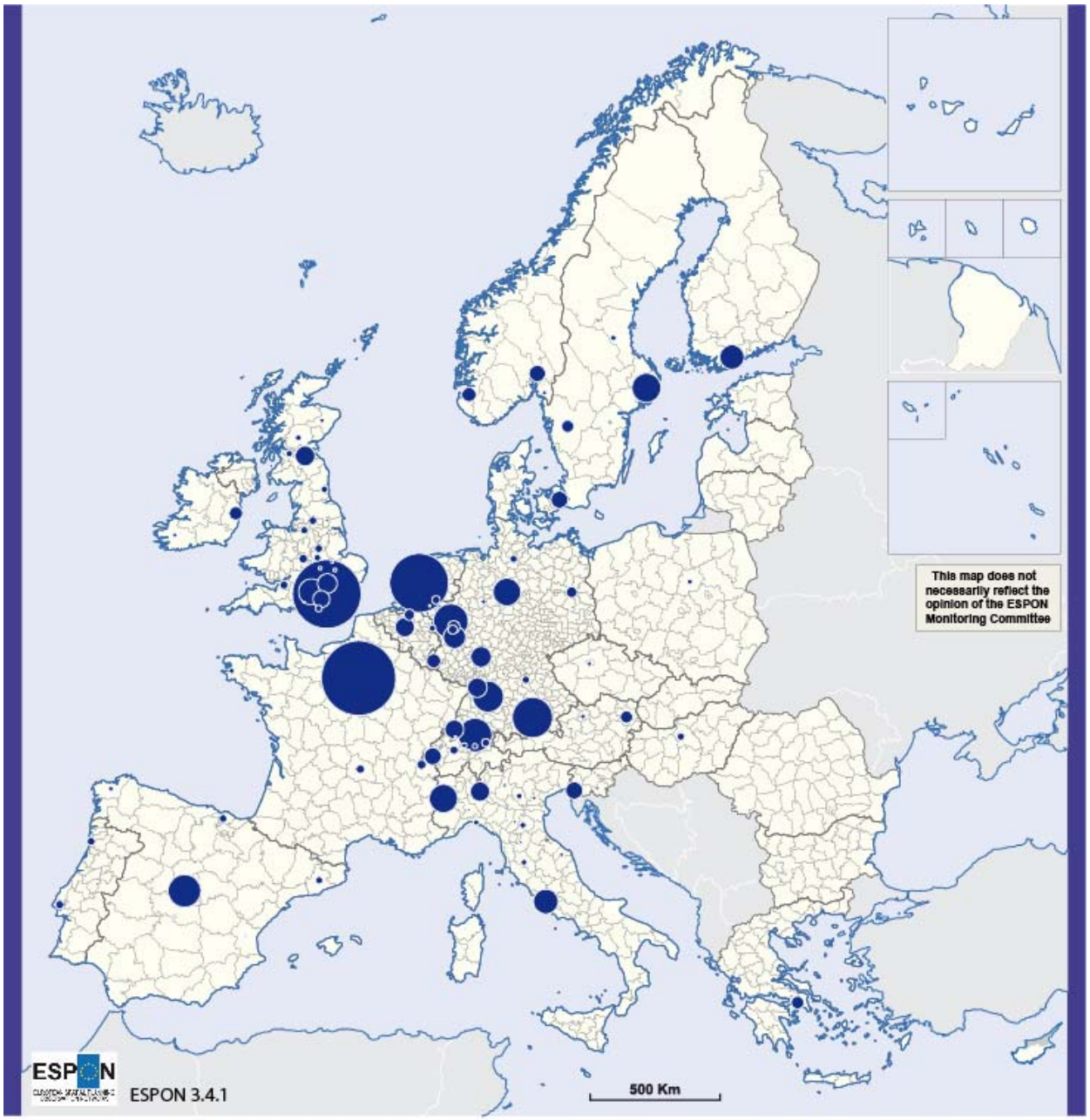
6.2.2 Regional hierarchy in the world and European economies

The level of economic "**command**" is an indicator of strong and solid immersion in the world economy. The dominant metropolises are those that command European and, to a certain point, the world economy.

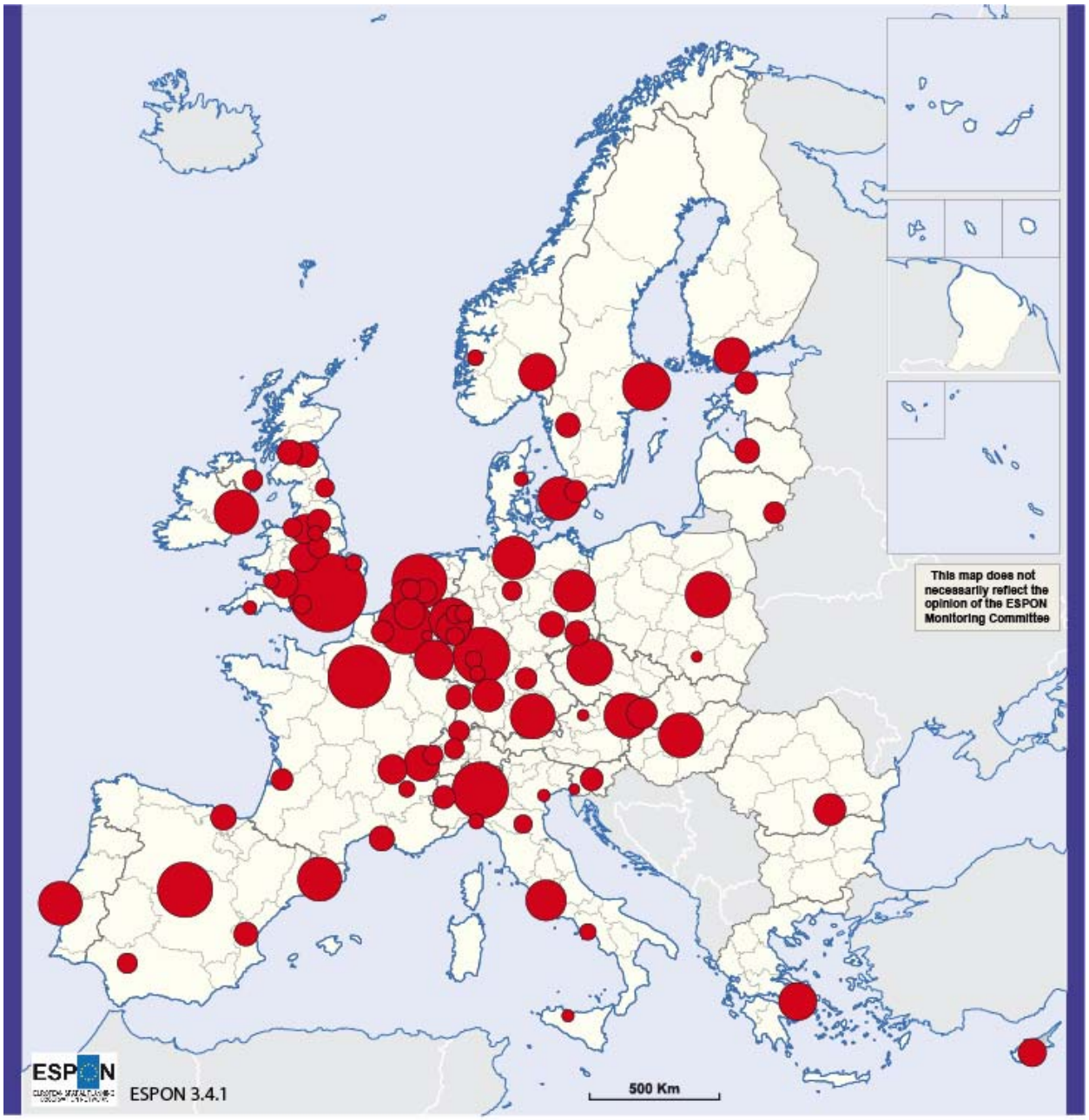
We present here two indicators of the economic level of "**command**". The first is the location of transnational headquarters; the second is the location of advanced market firms' offices. The former is a direct indicator of the leading role of the cities at the world and European level. Paris and London are clearly the largest world cities. Their position can be explained in a historical and geographical way. They are the capitals of very centralized states, which built major empires in the eighteenth and nineteenth centuries. London retains this imperial inheritance more than Paris, as the importance of the city in the world financial system remains strong. Randstad Holland appears to be the third European pole, which may initially appear to be surprising for a small European country. This is however obviously linked to its historical role in the development of European capitalism. The decentralization of the German structure appears very clearly on the map, since we observe at least five towns with a high number of major transnational headquarters: Frankfurt and Munich but also Stuttgart, Köln and Wolfsburg. Compared to the three other major European countries, Italy has a weak leading role in the world economy, which could be partially explained by the importance of small and medium-sized local enterprises in the Italian economy. The tri-polarity of the urban structure also appears clearly here with Turin, Milan and Rome the three leading cities. Outside central Europe, we can only observe some medium poles, namely, the Nordic capitals and Madrid, which functions as the centre of the fifth European economy.

The second indicator concerns advanced market services firms, that is to say large international business services firms (see map 66), which are the key to the metropolisation process. Compared to the first indicator, this one brings much more easily into view all of the national and local sub-centres of the commanding networks of the European and world economy. Thus, in addition to all of the major leading towns, with London clearly ahead of Paris, we can also observe a large number of medium towns in Central Europe, as well as the capitals of peripheral countries, including those of the Eastern European countries.

Map 66: Location of the transnational headquarters, 2005



Map 67: Location of the offices of advanced services firms



Note: Advanced services firms are large international firms in the business services sector (for example consultancy firms)

The fact that metropolitan areas are structural poles in terms of economic power is both the cause and the consequence of the fact that they are at the same time major nodes in terms of communications and networking. This can be demonstrated by the following analysis of air flows.

6.2.3 Air flows and gateway cities: differentiating or re-balancing the ESPON territory?

Cities are the points at which the internationalization processes of a territory begin and materialize. The new "frontier" of the EU then can be conceptualised as several international gateway cities and not only traditionally as external borders of EU territory either at its Eastern or Southern limits. Moreover, the World metropolitan archipelago is not necessary connected to the states, regions or macro-regions where the metropolitan areas are located. Consequently, inter-city air flows help us to identify the main European gateway cities and to determine whether they have developed preferential linkages with other specific world cities or world regional areas, or on the contrary, whether they are involved in various multi-directional world networks. This study will show how a Gateway emerges and how a polycentric development could be consolidated that contributes to the differentiation or to re-balancing of ESPON territory.

Air traffic is a synthetic indicator of various societal trends (tourism, business trips etc). It thus provides an indication as to the spatial integration of Europe in wider world networks as well as being a major indicator of European territorial dynamics. Many internal differentiations in the European space are related to the air flows that occur inside Europe on the one hand and between Europe and the rest of the world on the other. We propose here to integrate both dimensions in a synthetic typology of European Airports which is based on the volume of interactions between each airport of the ESPON 29 area with the rest of the World measured in passengers weighted by kilometres. As previously discussed (see Part B.2), weighting air flows by distance provides a better evaluation of global connections than the usual non weighted measure of passengers.

The synthetic typology of global airports proposed in map 68 combines quantitative and qualitative information:

- **The global importance of airports** is described by the total number of passengers weighted by kilometres as was done previously in part B.2. Taking into account the huge differences between airports for this criterion we have decided to use a double square root transformation on the map in order to keep visible all airports which would not have been possible with the usual single square root transformation. The reader should therefore

bear in mind that differences in size between airports are in fact much larger than they appear on the map.

- **The geographical specialisation of connections** established by each airport is determined by a cluster analysis applied to a division of the World into 16 destinations which are a mixture of WUTS2 (for remote territories in the Americas and the Asia Pacific regions) and WUTS4 (for ESPON 29 and its direct neighbourhood). Specialisations are defined as over- and under-representations of destinations as compared to the general profile of ESPON 29 presented in table 20.

Table 20: Main connections of ESPON 29 airports according to air traffic weighted by distance in 2000.

Territorial divisions		Air flows weighted by distance	
Code	**Name**	**billions of km**	**%**
Western Europe		**734.0**	**43.8%**
W1111	*Northern Europe*	196.1	11.7%
W1112	*West Central Europe*	263.0	15.7%
W1113	*Southern Europe*	274.9	16.4%
Rest of Euro-Africa		**197.9**	**11.8%**
W1121	*East Central Europe*	11.0	0.7%
W1122	*Balkans & Turkey*	35.6	2.1%
W1123	*Caucuses & Dnieper*	0.9	0.1%
W1124	*Russia*	7.9	0.5%
W1211	*Maghreb*	18.8	1.1%
W1212	*Mashreq*	37.1	2.2%
W1221	*Northern Middle East*	1.9	0.1%
W1222	*Southern Middle East*	26.1	1.6%
W13	*Sub-Saharan Africa*	58.5	3.5%
Rest of the World		**745.0**	**44.4%**
W21	*North America*	408.2	24.3%
W22	*Latin America*	85.2	5.1%
W31	*South and East Asia*	98.7	5.9%
W32	*Western Pacifica*	153.0	9.1%
Total		**1676.9**	**100.0%**

The proposed analysis helps to answer the following question: *How do European gateway cities participate in the world metropolitan archipelago and contribute to differentiating or re-balancing the ESPON territory?* A second crucial topic can also be added here, namely: *Is the degree of international connection always*

related to the size of cities or is it possible to find specialised connections in cities of a smaller size?

The cluster analysis undertaken in respect of the geographical orientation of the air traffic of ESPON 29 airports reveals the existence of 3 major types (A,B,C) which can be further divided in 10 sub-types.

Type A: global gateways define cities creating global links between ESPON 29 and the rest of the World at long and very long distances, particularly toward s the Americas and Asia-Pacifica. Not surprisingly we find in this category the 6 major gateway cities previously identified in our SIR on the basis of the volume of international air flows and the ratio of international extra European traffic*: London, Frankfurt, Paris, Amsterdam, Madrid and Zurich.* But the new analysis provided in the final report helps us to clarify their respective international orientation and to suggest that it is possible to add other cities to the list of global gateways connecting ESPON with the rest of the World, including cities or airports of a relatively small size.

- ***The subtype "London" A.1*** is characteristic of global cities with preferential relations with all long distance destinations, especially in North America, Asia, the Middle East and sub-Saharan Africa. This subtype can be found in the major airports of the Pentagon like *London, Frankfurt, Amsterdam* and *Zurich* but also in smaller airports like: *Shannon* and *Krakow* which display specific long-distance relations, mainly with North America.
- ***The subtype "Paris" A.2*** is also characteristic of global cities but less so than the previous one because it introduces specialisations not only at long distance but also at medium distance with countries from the ESPON 29 'neighbourhood', especially in the Southern and Eastern Mediterranean countries or in Sub-Saharan Africa. In addition to Paris, this situation can also be observed in Roma and Vienna.
- ***The subtype "Brussels" A.3*** is clearly less global than the previous subtypes as long distance specialisations are limited to North America but do not appear for Asia or the Middle East. It does however remain highly specialised for connections with the ESPON 29 neighbourhood, especially for the Balkans, Turkey and the Eastern Mediterranean region. In addition to Brussels this type can also be observed in Munich, Milan, Warsaw, Cork and Dublin.
- ***The subtype "Madrid" A.4*** provides a very good example of a specialised gateway, as its only specialisation is toward Latin America (but with an exceptional intensity more than 7 times the European average). Connections are also relatively important with North America and the Mashreq, but less so than for other gateways.

Type B: central nodes, is characteristic of the majority of airports in the northern and central part of the ESPON area and also from some of the major cities of Southern Europe (Athens, Lisbon, Barcelona, and Naples). Their main characteristic is to develop important connections with Southern Europe or the Southern and Eastern Mediterranean countries but to be relatively sparingly connected to the rest of the World. They thus have a major role in the internal organisation of the Euro-Mediterranean region where they enable north-south connections to be exploited by tourist flows or by immigrant populations moving to and from their countries of origin.

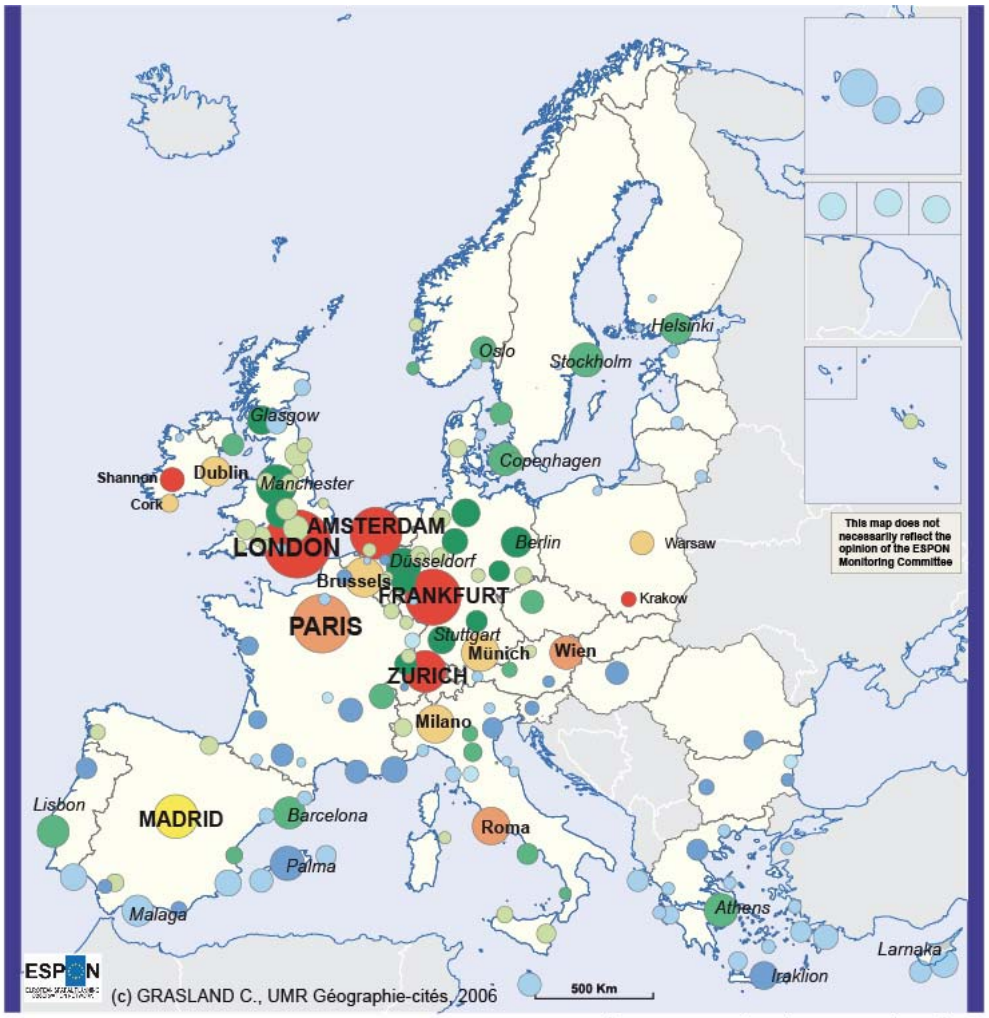
- ***The subtype B.1 "Düsseldorf"*** is characteristic of German cities with important connections to Turkey and Balkans related to the presence of important immigrant populations from these countries. It can also be observed in the major industrial cities of the UK (Glasgow and Manchester) but rather in relation to tourist flows towards the Eastern Mediterranean region or to immigrant populations from the Middle East.
- ***The subtype B.2 "Stockholm"*** is similar to the previous one in terms of north-south connections related to tourism, but with specific flows more oriented towards Eastern and East Central Europe rather than the Balkans.
- ***The subtype B.3 "Newcastle"*** is observed in smaller airports which develop strong connections with Southern Europe but very few connections with the rest of the World (except Maghreb, Turkey and the Balkans). Tourism is the most important factor and the function of the regional integration of the Euro-Mediterranean area is clearly less important than in the previous cases of type B.1. and B.2.

Type C: Peripheral nodes is clearly the reverse of type B as it is characteristic of airports from the Southern part of the ESPON territory, including ultra peripheral regions such as the Azores, the Canaries, the Antilles and Reunion. These airports are characterised by their strong connections with Northern and Western Europe and by the global lack of international connections with the rest of the World, except in very specific situations. The cities associated with this type of airport are very often characterised by an important level of tourist activity and the importance of air connections is often simply the consequence of the huge movement of people from north to south during the holiday periods.

- **The subtype C.1 "Palma de Majorca"** is more connected to continental Europe than to the British islands or Scandinavia while also being somewhat connected to North Africa and East Central Europe. Paris, Frankfurt and Amsterdam as such play the role of major hubs for the connection of these cities to the Pentagon.
- **The subtype C.2 "Larnaka"** is mainly concentrated on the tourist cities of the Mediterranean coast which are strongly connected to Northern Europe via the major hub of London or by the airports of Scandinavia.

- **The subtype C.3 “Antilles”** is specific to French ultra-peripheral regions which are mainly connected to the core of Europe by the national airport of Paris and which do not develop any other important relations with the rest of Europe or the rest of the World.

Map 68: ESPON 29 Global Airports in 2000



© EuroGeographics Association for administrative boundaries

Source: ITA Databse

GLOBAL INTERACTIONS
(in billions of passengers.km)

200
50
12
4
1

Specialisation index	Type A Global gateways A1	A2	A3	A4	Type B Central nodes B1	B2	B3	Type C Peripheral nodes C1	C2	C3
Northern Europe	0.4	0.3	0.9	0.5	0.5	1.7	0.7	2.1	5.1	0.1
West Central Europe	0.2	1.3	0.7	0.7	0.8	1.4	0.9	3.4	1.8	6.1
Southern Europe	0.6	0.4	1.3	1.2	2.5	1.6	4.4	0.6	0.6	0.1
East Central Europe	1.1	0.8	1.0	0.8	0.5	1.9	0.0	1.5	1.0	0.0
Balkans & Turkey	0.8	0.6	1.5	0.2	4.2	0.6	1.5	0.4	0.0	0.1
Caucase & Dniepr	1.4	1.5	0.6	0.0	0.2	1.2	0.0	0.3	0.3	0.0
Russia	0.9	1.0	1.3	0.5	1.0	1.9	0.0	0.9	1.0	0.0
Maghreb	0.4	2.1	1.5	0.4	2.1	0.6	0.8	3.1	0.1	0.2
Mashreq	1.0	1.5	2.2	0.8	1.0	0.9	0.1	0.5	0.2	0.0
Northern Middle East	2.0	0.3	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Southern Middle East	1.9	0.9	0.3	0.0	0.5	0.4	0.0	0.1	0.0	0.0
Subsaharian Africa	1.6	1.6	1.1	0.3	0.2	0.3	0.0	0.1	0.0	0.1
Northern America	1.5	1.1	1.3	0.8	0.6	0.5	0.1	0.2	0.0	0.0
Latin America	1.0	1.2	0.5	7.4	1.0	0.5	0.0	0.1	0.0	0.0
Southern and Eastern Asia	1.6	1.3	0.5	0.2	0.4	0.8	0.0	0.1	0.0	0.0
Western Pacifica	1.8	1.4	0.4	0.0	0.2	0.3	0.0	0.0	0.0	0.0

6.3 Strengths and weaknesses of ESPON regions confronted by globalization

The structural strength or weakness of ESPON's regions will, in the main, be evaluated on the basis of their sectoral economic structure as well as on indicators of their technological level (productivity and technological patents).

We have already presented the main hypothesises that will guide our work, particularly in respect of the structural features that could be seen as strengths or weakness in terms of economic competition. We will here use three main indicators.

The first is the share of low-tech light industry. This segment of the manufacturing sector is that most subject to international competition from low labour cost countries. This is particularly true of the textiles industry, which has seen a significant decline in recent years. However, more refined analysis at the regional level clearly show that the decline of textile employment does not necessarily lead to a regional crisis, since some textile regions have a diversified industrial and economic structure based on a dynamic network of small and medium-sized enterprises (the "Marshallian districts"), for example the third Italy, or Western Flanders in Belgium. For Eastern Europe, the share of light industry should not lead to economic decline as Eastern countries currently benefit from the de-localisation of Western European textile enterprises.

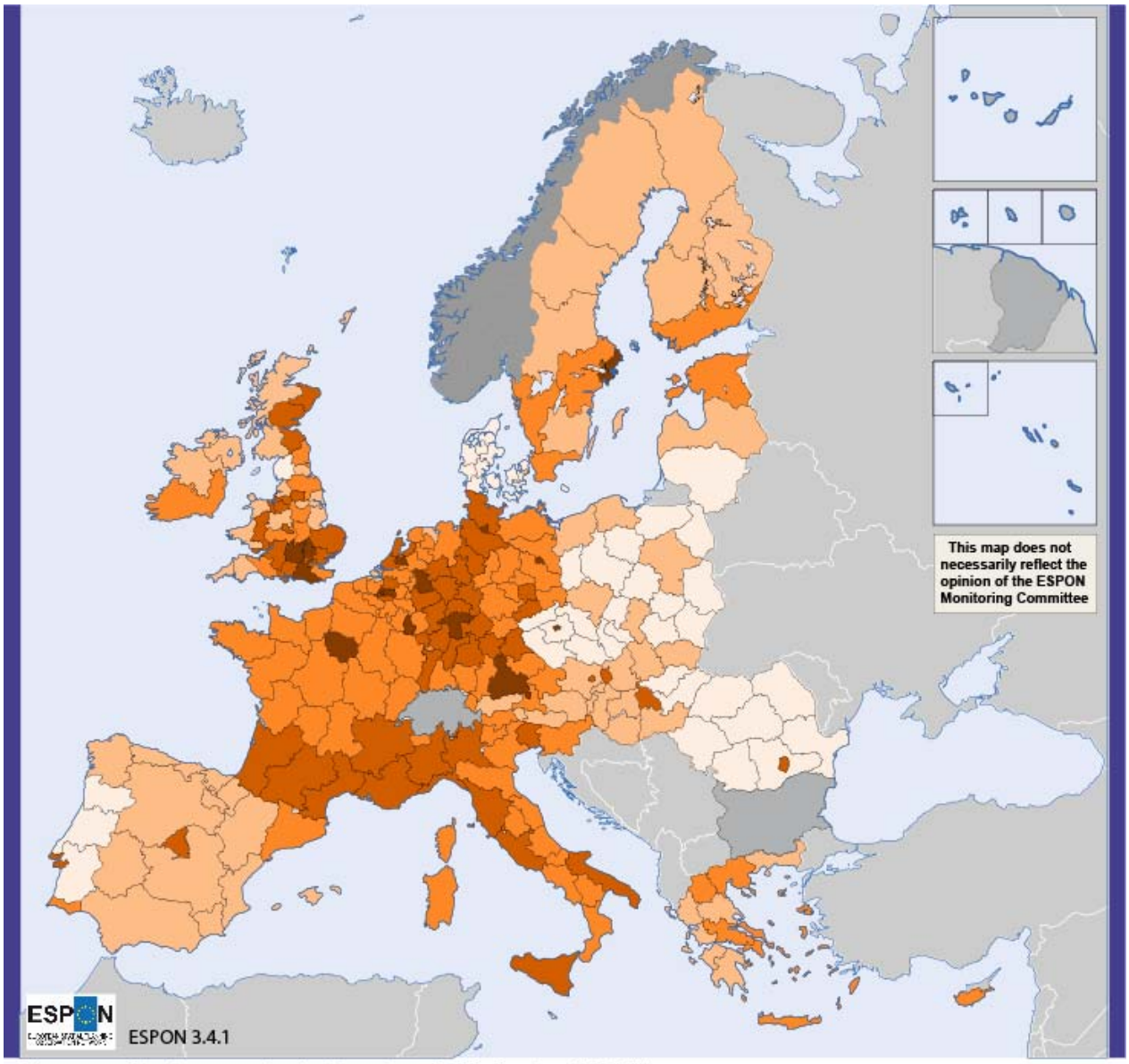
The second hypothesis is the share of financial and business services in the regional economy (total GDP). This is a clear indicator of regions with a leading and autonomous role in the global economy in which these types of services play a major role. Indeed, there is a correlation between this share and the level of internationalization, as it is illustrated by map 69 for example.

The third hypothesis is the share of services dedicated to the local population, which includes non-market and market services, such as trade, and transportation etc. A high share of this type of service indicates a less open economy, an economy which is less related to the rest of the world. However, a part of these services could concern relations with the rest of the world, relating in particular to ports, airports, and international institutions. Moreover, this high share does not mean that globalization has no impact on these specific regions, but rather that they are less exposed to external shocks. In spite of these problems, it is the best available indicator of regional 'protection' from the globalization process.

Finally, we tried to measure the technological level of regions by means of different indicators, particularly the number of patents and the share of high-tech

manufacturing industries. We have already underlined (Hypothesis H2c) the importance of the technological level, since it gives the region a decisive advantage in terms of economic competition. For example, innovations and high productivity largely compensate for the higher cost of labour, at least in non labour intensive sectors.

Map 69: Finance and business services in the regional added value, 2002



Finance and business services in the regional added value, 2002 (%)

Source - Eurostat

9.3
15
19.9
25.6
32.6
53.4
no data

6.4 Synthesis

Finally, we propose to make an attempt at a qualitative typology of regions by crossing the different aspects of the strengths and weaknesses of the regions in relation to the globalization.

Three main aspects have been considered, in accordance with the main hypothesises: internationalization, structural strengths and weaknesses, and technological levels. For the first and the third aspects, we produced a single synthetic indicator with the different indicators of each of these two aspects. For internationalization, we considered airflows, transnational headquarters, exterior immigration and offices of advanced services firms. The technological level was synthesized on the basis of three indicators: number of patents per inhabitant, productivity (added value per worker), and the share of high-tech manufacturing industry.

To produce synthetic indicators, we conducted two principal component analyses (PCA), one for each theme. For internationalization, the first principal component takes into account 62% of the total information, while for technologies, it takes only 51% of the information into consideration mainly because productivity is not well correlated to the two others indicators and is thus taken into account more by the second component of the analysis. The first components of these two analyses were used as synthetic indicators of these two aspects.

Tables 21 and 22 show the correlation between the different initial variables and the first component: the internationalization indicator (component 1 of the first analysis, see table 21) is very well correlated with the air connections to the cities of the rest of the world, the number of advanced service firms and the location of headquarters, while the migratory balance is taken less into account by the first component; the technological synthetic indicator (component 1 of the second analysis, see table 22) is mainly correlated with the number of patents per inhabitant and with the share of high-tech manufacturing industry, and only weakly with the rough measure of productivity we used.

On our synthetic map, we use the "internationalization indicator" to distinguish those cities that are highly connected to the rest of the world, and the "technological indicator" to differentiate all regions on their technological capacities. In addition to this information, we added the structural features that could have strong impacts at the regional level, regarding the regions' possible reactions *vis-à-vis* the globalization process. The share of business and financial services has not been added since it is fundamentally correlated to our "internationalization indicator". On the contrary, the share of light low-tech

industry, highly subject to world competition, and services dedicated to the local population are superimposed on the other pieces of information.

Table 21: Correlation between internationalization indicators and the component 1 of the PCA analysis

	Component 1
Exterior air flows/inhab	0,892
Exterior migratory balance	0,477
Number of offices of advanced services firms /inhab	0,807
Number of headquarters of transnationals/inhab.	0,904

Table 22: Correlation between technological indicators and the component 1 of the PCA analysis

	Component1
Patents/inhab.	0,881
Added value/ employment	0,243
Share of high technological manufacturing industry	0,859

The resulting synthesis allows us to isolate four major types of regions, according to their relations with the rest of the world:

1 – **The highly internationalized metropolitan regions.** This includes most of the major ESPON cities which are distinguished by a high level of internationalization, a high share of financial and business services and a leading role in the European and world economies. Our indicator allows us to distinguish between the metropolises in terms of the function of their level of internationalization. At the first level, we can distinguish the largest world metropolises of London and Paris and some very internationalized less important cities. These cities are the gateways between Europe and the rest of the world.

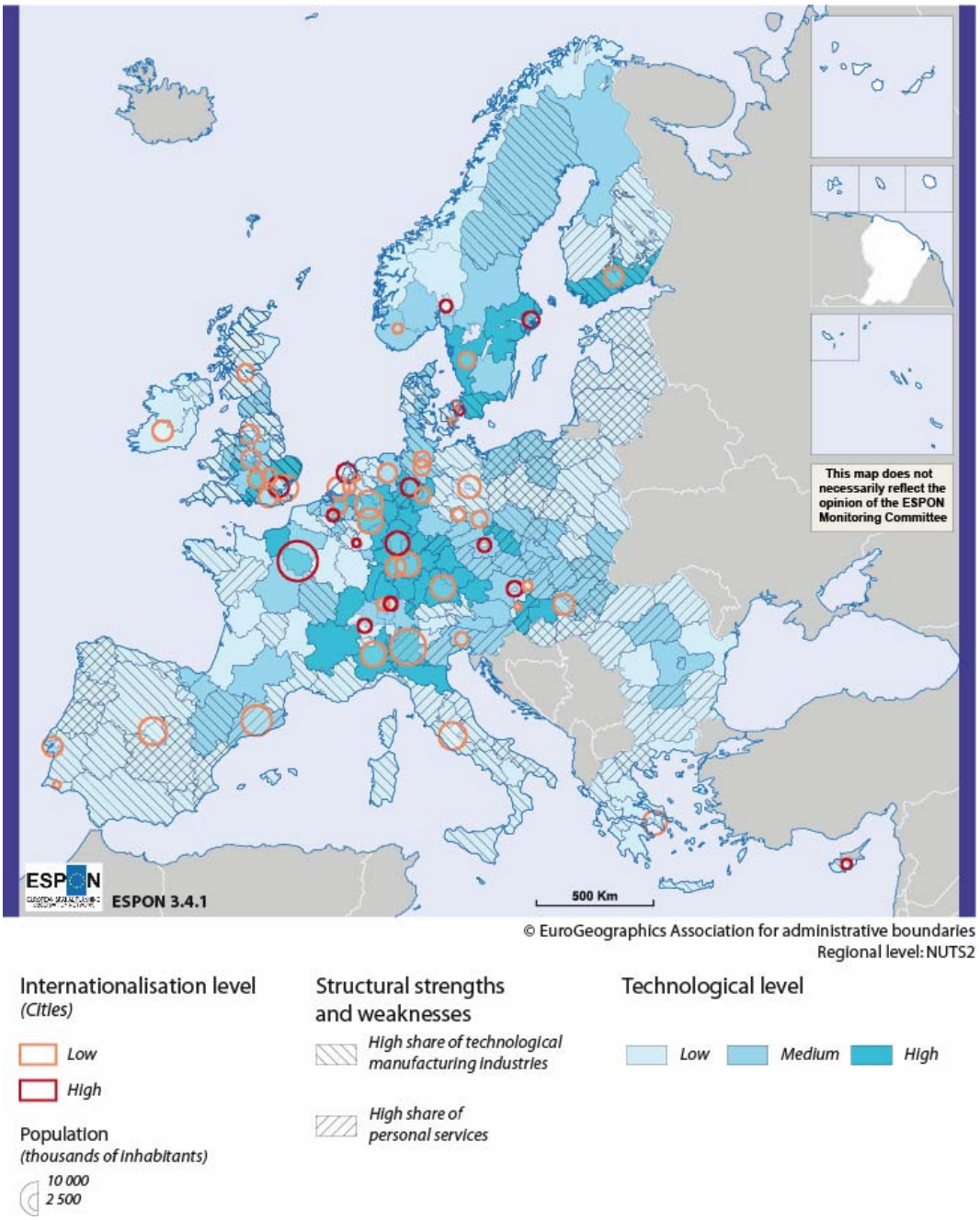
2 – **Central regions of Europe, the "blue banana", without large international metropolises**. Most of these areas are characterized by a solid economic structure with a relatively high share of business and financial services, as well as a high technology level. This type also includes southern Sweden.

3 – **Peripheral and intermediary regions with a high share of personal services**. These regions have low average technological and internationalization levels. These regions are mainly specialized in services dedicated to the local population, which means, to a certain extent, a relative indifference to the rest of

the world. These regions are often more dependant on national or European transfers

4 - **Peripheral and intermediary regions with a high share of low-tech manufacturing industries**. Compared to the previous categories these regions are more subject to the vagaries of international competition, notably in the textile sector in relation to low cost labour countries. However, in Eastern Europe, these regions mostly benefit from the ongoing spatial reorganization of this sector.

Map 70: Synthesis of the regional insertion in the world economy



Box 11: The impact of re-localisation on the position of ESPON regions in value chains: The example of the textile value chain in three Marshallian districts.

Globalization is supposed to have important impacts on Europe and, as a hypothesis, on its internal differentiation. The general idea is that the growing economic openness of Europe will have differential impacts at the regional level in respect of the vulnerability or strength of a region as it relates to the nature of international competition. The textile industry is a perfect example in trying to link ESPON regions to the rest of the world. General agreements on trade have increasingly diminished the economic protection of European textiles, and this sector is subject to intense competition from the low labour cost countries. The reactions of the textile regions to this growing competition are very interesting because they clearly illustrate the ability of some, the so-called Marshallian districts, to progress despite their structural weaknesses.

Marshallian districts are very dynamic territorial systems characterized by a dense network of interconnected and very specialized small and medium-sized enterprises, generally oriented to light industry (Colli, A., 1998). They emerged in very specific historical contexts. Firstly, most of these districts have a long tradition in the textile industry, clearly pre-dating the industrial revolution. Regions like the interior of Flanders, Cholet, and Central Italy had an important 'cottage' industry from at least the eighteen century. Secondly, as we noted previously, these regions have constructed a dense network of small and medium-sized interconnected enterprises using subcontracting etc, and are often based on strong informal relations. These enterprises are thus fully engaged in a complex dialectical process of cooperation and competition. This very flexible organization is able to quickly answer changing levels of demand in the market. Thirdly, these districts have been able to strengthen their initial success thanks to a long-term strategy of seeking to rise in the technological value chain of the textile industry, with innovations that could be dispersed through the entire regional industrial network (Scherrer F., Vanier M., 1995). Finally, we observe that in most of these areas specific social features, notably what we could call an inter-class "common agreement" have become rooted. In concrete terms this means that worker and manager share the same social and ideological framework.

These areas display a relatively weak level of economic performance (Prato district in the third Italy, the areas around Kortrijk in Belgium, the Herning-Ikast district in Denmark), slightly below the national average, except for the Herning-Ikast district. This relative slowing down is interesting as these areas have shown strong economic performance for much of the previous decades, as indicated by their high level of GDP/inhab. It seems that, all things being equal, these specific districts are coming to the limit of their performance. But, this should not be exaggerated: firstly, economic performance is barely below the national level (it is thus more a relative decline than a real crisis); secondly, unemployment remains very low; finally, this tells us nothing about the causes of the process and it seems that economic performance remains relatively good if one considers the structural weakness of these districts because of the high share of declining industrial employment. In conclusion, it appears that most of the Marshallian districts still display a relatively decent level of performance in the actual context of the crisis of their specialization.

Table 23: Economic performance of some regions including industrial districts, 1995-2002 **(National level is between brackets)**

	Average annual growth 1995-2002	Level of GDP/inhab in 2002 in % of European level	Unemployment
South of Western Flanders	4,54 (4,66)	119,5	4,5 (8,4)
Prato	3,57 (3,93)	128	5,6 (8,0)
Ringkoebing	5,19 (4,94)	123	4,7 (5,5)

Source : Eurostat

Box 12: Pattern of migration in Europe

Migratory movements have occurred since pre-historic times. Distances, origins and destinations may have changed and the same is true for the numbers of migrants and the motives behind the decision to move.] International migration is part of a trans-national revolution, which is reshaping societies and politics around the globe. Over the last few decades, four major areas of immigration have emerged: North America, Australia, Western Europe and the Arab oil countries. Historically, countries like the USA, Canada, Australia, New Zealand and Argentina have been the target for large scale immigration. Over the past 20 years the USA, Canada and Australia have experienced new large scale immigration, particularly from Asia and Latin America. Northern and Western Europe experienced a large scale labour migration between 1945 and 1970. Today this area attracts mainly immigrants from Africa, Asia, Latin America and the Caribbean Islands. The oil-rich Gulf countries, particularly Saudi Arabia and Kuwait, have become major magnets for immigrants from the Arab world, Africa and Asia since the rocketing oil prices in the 1970's (Castles & Miller 1994).

When comparing these global migration movements, Castles and Miller (1994) identify four general tendencies, which are likely to play a major role in the coming 20 years. The development discussed by Castles & Miller (1994) is to large extent confirmed by the OECD (2004). (*i*) *Globalisation of migration*: the tendency is that more and more countries are affected by these migratory movements. The immigrants come from countries further away from the host country and the immigration countries host entrants from a broad spectrum of cultural, economic and social backgrounds. (*ii*) *Acceleration of migration*: migrations are growing so rapidly in volume in all major regions at the present time, which only increases the difficulty for and the urgency of workable government policies. (*iii*) *Differentiation of migration*: most countries do not have one type of immigration – e.g. labour immigration, refugee immigration, family reunion immigration, student exchange programmes or permanent settlements – but a whole range of them. This differentiation presents a major obstacle to national and international policy measures. (*iv*) The *Feminisation of migration*: historically, labour migration and refugee migration was dominated by males, and family reunion migration by females. Since the 1960's this has begun to change. Today women constitute a majority of the world labour migrants and the share of women amongst refugee migrants is increasing.

Migration flows tend to follow previous migration flows. Countries with former colonies, e.g. France, the U.K. and Portugal, attract migrants from their former colonies, and countries with a former demand for labour immigrants, e.g. Germany, attracts immigrants from the former sender countries of labour migrants. Ethnic minorities in neighbouring countries also try to migrate to their country of origin, e.g. ethnic Hungarian migration to Hungary and ethnic Russians migrating to Russia.

Just as there are positive aspects of labour immigration, there are also negative aspects: it can counteract the structural transformation of the economy, as stagnating trades and sectors can be kept afloat through access to cheaper labour, something which ultimately hampers their productivity and their international competitiveness.

The existence of dual labour markets in combination with irregular migratory movements stimulate results in a situation where the migrants fill the "three D" jobs – jobs that are dirty, dangerous and degrading. These are jobs that natives are not willing to take and despite unemployment in the destination country – at least in developed countries – it seems to be relatively easy for migrants to find jobs in the "three-D" labour segments (Taran, 2005). On the other hand, foreigners in these sectors are more vulnerable to economic fluctuations and unemployment than nationals. This seems, however, to be not merely a business cycle phenomenon – instead there has been a long-term rise in the share of unemployed foreigners compared to nationals over the past decades. It also seems that it is more difficult for foreigners to find a new job when better times come along. Low-skilled, manual workers – often males – in declining sectors and branches seem to have little chance of being re-employed (OECD 1997, 2004).

Recent research indicates that these European immigration flows are headed for the "heptagon" London-Hamburg-Munich-Milan-Paris-London, while peripheral parts of the European Union face population decline and depopulation (ESPON 1.1.4, 2005). The immigration flows aim, in general, towards the metropolitan areas (Vandermotten et al. 2004). Many of the European Union's new member countries are considered to be potential senders of labour. The effects of ageing are so marked in these countries that a majority of the immigration to the European Union must be directed to the new member countries (Gaspar et al. 2005).

6.5. CONCLUSIONS

The synthesis of the regional insertion of the ESPON region into the world economy and the typology of gateway cities that we have elaborated in this final section of the report cannot be considered as definitive results as their elaboration was based on a limited number of criteria. Better results could be obtained in the future if, for example, international trade statistics can be obtain for the regional level or if coherent time series could be analysed concerning the evolution of air traffic linking European cities to the rest of the World. The current set of results does however uncover some important findings in accordance with the objectives of the ESDP.

- **Globalisation tends to increase the economic inequalities between European regions**. The metropolitan regions of the Pentagon where the major gateway cities are localised are actually the most likely to benefit from the opening up of ESPON territory to internationalisation. Their structure of activity is not vulnerable to globalisation, on the contrary, it benefits from it.

- **Globalisation does not necessarily have negative effects on all peripheral regions.** Depending on their economic specialisation, some peripheral regions can benefit from the development of tourist flows or from the relocation of traditional industrial activities for which they display comparative advantages in terms of their labour force. The problem is of course to evaluate the time period for which this advantage will be maintained as there is a clear delocalisation toward towards more and more peripheral locations.

Taking into account the actual bottlenecks which limit the ability to propose a precise statistical picture of the strengths and weaknesses of the ESPON territory in light of globalisation, we have tried to complete our research by means of more detailed case studies on specific industrial sectors such as textiles (Box 11), on specific countries like Switzerland (Box 8) or on specific flows, like the regional impact of international migrations which cannot be evaluated for the whole of the ESPON region but which can be presented in specific situations. The same is true for regions located along the eastern border of ESPON territory which suffer from specific problems and for which we have elaborated specific analysis summarised in Part C. with the examples of the Baltic countries (Box 5), Romania (Box 6) and Hungary (Box 4). The reader is therefore invited to pay particular attention to volume C of the report where the complete results of this case study are presented in more detail.

7. CONCLUSION

Is this the Region, this the Soil, the Clime,
Said then the lost Arch Angel, this the seat
That we must change for Heav'n […]
Hail horrours, hail
Infernal world, and thou profoundest Hell
Receive thy new Possessor: One who brings
A mind not to be chang'd by Place and Time
J. Milton (1674), *Paradise Lost*, I, 242-254

After 18 months of intensive work on this unexpected[53] ESPON project 3.4.1 "Europe in the World", what have we learned and what are the main recommendations that we can propose to the community of policy-makers concerned by spatial planning in the European Union and in its neighbouring countries? Looking back to the initial ambitions of this project as they were described in the introduction of our first interim report (FIR, pp. 16-35) we are obliged to admit that there remains a lot to be done for those who will follow in our footsteps in the context of ESPON II, and that this pioneering work thus represents, to paraphrase Winston Churchill, 'the end of the beginning rather more than the beginning of the end' as far as the broad themes covered in this report are concerned.

Without trying here to summarise the different conclusions obtained on each key-question and the related policy recommendations (see. conclusion of Parts A, B, C and D of the present volume) we would prefer to focus this conclusion on a specific problem that we have voluntary excluded throughout the previous discussion and which is related to the **definition of "Europe".**

Looking back at the different chapters of our final report, the reader has probably noticed that, each time that it was possible, we have excluded the fuzzy word **"Europe"** from our vocabulary and used terms like "*European Union (15 or 25)*" or "*ESPON 29*" which are more precise from a geographical point of view and are based on a legal or institutional reality. Of course, we were on occasion obliged to use the term "Europe" for the description of geographical subset of states ("Northern Europe", "East-central Europe", etc.) or when we discussed the common sense perceptions shared by a majority of people in our research on mental maps. We tried assiduously however to avoid any usage of this term "Europe" on our own part.

[53] The topic "*Europe in the world*" was not present in the initial work plan of the ESPON project launched in 1999. It is only following internal discussion at various ESPON meetings that the idea for such a project was progressively accepted, tested (in the framework of ESPON project 3.1) and finally launched in a tender in 2004.

Like Georges Perec who produced a novel without the vowel "e" (*La Disparition, 1969*) and then another with only the one vowel - "e" - excluding all the others, "a", "i", "o", "u", "y" (*Les revenentes, 1972*) we will try in this final conclusion to completely change our previous approach and accept the task of saying something about 'Europe' rather than just ESPON 29 or the European Union.

7.1 The false problem of the boundaries of Europe …

> BOUNDARY, *n*. In political geography, an imaginary line between two nations, separating the imaginary rights of one from the imaginary rights of the other.
> *Bierce, A., Devil's Dictionary, 1911*

In the 1970's and 1980's, many people located in the little cap off the western extremity of the continent of Asia used the term *"Europe"* in order to describe a territory which was certainly not a continent in the usual geographical sense (see. A.2) but was simply a political and economic union between old nations linked by a common history, evolving progressively from6 to 15 states. Other people, located also in this western extremity of Asia – but not so far west - complained at the same time that their western neighbours did not have a monopoly on the usage (and heritage) of "Europe" and requested also for themselves this belonging in the perspective of a future "return to Europe" (*Kundera M., 1984*). They were of course under the domination of a large country located in what H. Mackinder had called, in 1904, the Heartland of the World while claiming nonetheless another future oriented to the Rimland of the oceanic countries. Their western neighbours tried to satisfy this request by calling them "*Eastern Europe*" but the eastern neighbours preferred to be called "*Central Europe*" in order to avoid confusion with this famous Heartland which had obtained a belonging of sorts to this mysterious "Europe" in the 18th century. The conventional eastern border of Europe accepted now as "natural" is indeed a very recent construction. The thorny problem was formally solved by Vasily Tatischev, the geographer of Peter the Great. In 1730, he suggested the Ural mountain range as the physical representation of the continental border. The fact that this eastern delimitation was established for purely political reasons (the will of Peter the Great to develop the western relations of Russia with the foundation of Saint Petersburg) has been apparently forgotten by many actual policymakers who still speak of "natural borders" to the East (the Urals) and to the South (the Mediterranean Sea). Neither of these are "natural" borders, indeed the Mediterranean Sea has been a channel of communication between civilisation rather than a border for millennia (Braudel F., 1984).

Once admitted the fact that neither geography nor history or any other "cultural" criteria can provide any objective and relevant delimitation of Europe, it is easy to conclude that the delimitation of borders of Europe is a false scientific problem. But at the same time, it remains a real political challenge because territorial belonging to "Europe" is used as a condition for countries wanting to join the European Union[54]. Article I.58 of the constitutional treaty state indeed stated that "*The Union shall be open to all **European States** which respect the values referred to in Article I-2, and are committed to promoting them together*" but nowhere is it explained what a "European state" is or could be.[55]

The reader can probably appreciate now how important it was that the ESPON 29 programme provided us with an initial geographical definition of "something that could be Europe without being Europe". Working on a project funded by the 29 states of ESPON, we did not have to start our work by coming to any precise definition of Europe and thus we could simply work on the basis that the real name of the project was in fact "**ESPON in the World**". Was it really a problem?

As in the case of the functional delimitation of cities, it was necessary of course to start from an arbitrary core area which could be either too small or too large but would be further redesigned according to our analysis of flows, similarities, and networks, etc. The choice of the initial core area was ultimately not very important in the framework of the systems analysis that we had chosen. Furthermore, it was clear that our target was not to establish precise limits when trying to delineate a European functional area which would necessarily need to be fuzzy and organised on various levels of integration as explained in Box13.

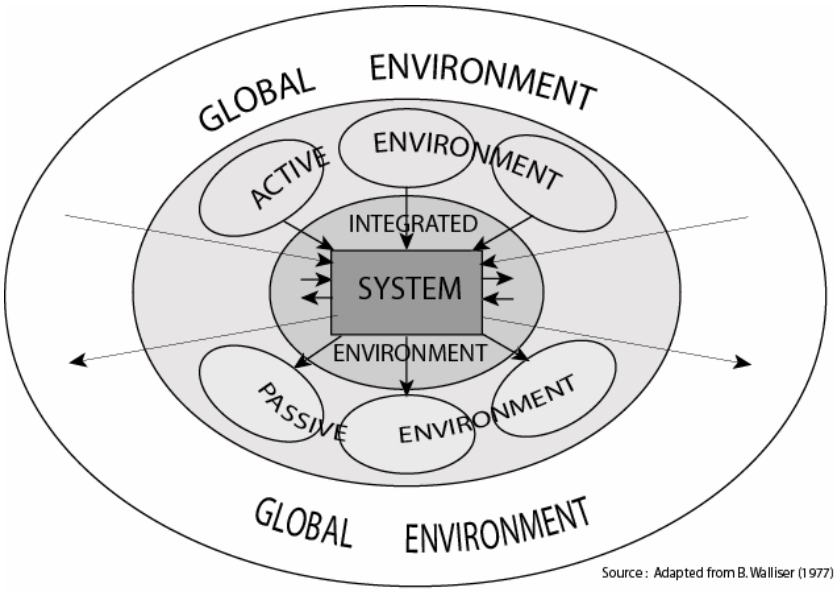
The results obtained, especially in parts B and C, prove that the various theoretical concepts of the environment proposed by Wallisser (1977) fit perfectly into the central problem of the project of 'Europe in the World' which was the definition of the influence of globalisation on the spatial organisation and future trends of the European territory. We have indeed demonstrated that the economic core of ESPON territory is smaller than ESPON 29. Western Europe (the former EU 15 plus Switzerland and Norway) is surrounded to the East and South by a ring of strongly integrated (on the basis of multiple criteria) states which is larger than ESPON 29. It is true that political and economic integration has taken place in the main in an easterly direction (with the enlargement from 15 to 25)

[54] Or the ESPON Programme. It is after all very strange that Turkey has not been invited to join the ESPON Programme as it is now an official candidate country.

[55] This is perhaps the crux of this most contentious issue. This situation in respect of future accession was however basically resolved in 1993 with the adoption of what later came to be known as the 'Copenhagen Criteria' for EU entry, which basically stated that prospective entrants must be liberal democracies in which the rule of law is respected; have functioning market economies that can cope with the competitive pressures of the market forces of the Union; be capable of implementing the *acquis communitaire*; and be willing and full participants in the EMU and CFSP. As such, entry was now, ostensibly at least, to be based on rational/functional rather than cultural/identity-based criteria.

but in functional terms very strong links, effective or potential, also exist with *North Africa, the Balkans, Turkey* and probably also *Russia*.

Box 13: Definition of the environment of a system



The environment of a system is that part of the universe that is in communication with the system, but is not part of the system. According to the existence of input and output flows between a given system and various areas of its environment, it is possible to distinguish between three different situations (Figure 5).

- The integrated environment of a system is a part of the rest of the universe which is at the same time influenced by and an influence on, the system.
- The active environment of a system is a part of the rest of the universe which exerts an influence on the system but is not influenced by it.
- The passive environment of a system is a part of the rest of the universe which is influenced by the system but has no influence on it

Another important distinction here has to be made according to the level of input-output flows which connect a system to its environment:

- The specific environment is the part of the rest of the universe which can be considered as important for the analysis of a system, according to a given threshold of input and outputs.
- The global environment is all that which can be theoretically connected to the system by input-output flows but which can be practically neglected according to a given threshold.

Beyond this **integrated environment** of Europe, the situation is more complex and our analysis has helped to establish an important distinction between an **active environment** which deeply influences European territory but is not, itself, really influenced by it (*Japan, China, the United States, and the Persian Gulf*) and a **passive environment** which is strongly influenced by Europe

without being able to influence it (*Sub-Saharan Africa*). Notwithstanding this extreme situation, many of the territories of the world define a more **global environment** for Europe in this context, existing in an intermediate situation of medium level relations with Europe, without the clear domination of one partner by another. This is the case for major emerging states like *Brazil, Argentina, India or Iran* which are potential partners for Europe in the future.

Europe has then to develop a global strategy towards the rest of the World but, to do so Europe must firstly reinforce its links with its local 'neighbourhood'. The main challenge for the near future is therefore the development of an integrated Euro-Mediterranean or Euro-African World region (*Beckouche P., Richard Y., 2005*), in the framework of a "North-South" regionalism which would benefit from the obvious complementarities that exist between both shores of Mediterranean Sea. Looking at what is actually happening in North America (*Azuelos & al, 2004*) or in East Asia (*Dieter H., 2006*) we consider that the future of Europe would be fundamentally undercut if such a strategy were not to be strongly developed in the near future. It is probably the only solution to realistically achieving the goals of the Lisbon Strategy while also ensuring the future rank of Europe as global actor.

The development of north-south regionalism does not necessary mean that Europe should enlarge politically toward the south and fix a new border on Sahara[56]. Political enlargement is but one tool among others. The political and institutional question is secondary and what is really at stake is the elaboration of a kind of "*Marshall Plan*" for the Southern and Eastern neighbours on the one hand, and for sub- Saharan Africa on the other. As in the case of the original "*Marshall plan*" such action would not necessarily be based on charity but rather on pragmatic consideration in the common interest of both partners (*Hogan M., 1987*).

7.2 The real problem of a multilevel approach

> Car enfin qu'est-ce que l'homme dans la nature ? Un néant à l'égard de l'infini, un tout à l'égard du néant, un milieu entre rien et tout.
> *B. Pascal, Les pensées.*

The final contribution of systems theory to the theoretical framework of the "Europe in the world" project relates to the concepts of sub-systems and levels of hierarchical organisation. If we consider the European Union (or the ESPON area) to be a system, we can define the level of this system by a certain number of

[56] Even if it would not be very different from what happened in the 18th century with the movement of the eastern border toward the Urals.

quantitative parameters (population, GDP, diplomatic influence) or qualitative parameters (international organisation of states, economic zones of integration, cultural areas etc,) which can be summarised in the general category of "World region".

According to various possible criteria available at world scale (mental maps, political alliances, air and trade flows, economic demographic and social structure, dynamics etc) we have tried to check the consistency of these "world regions of Europe" and to propose a benchmarking exercise with equivalent World regions. Looking at economic criteria we clearly identified two other "World regions" on the same level as Europe, namely, North America and East Asia. These three areas define the "Great Triad" which is a major factor in the organisation of the contemporary World and which supports the idea of a centre-periphery organisation (Vandermotten C., Marrisal P., 1998). We also demonstrated that the contemporary world cannot however be reduced to this model which is relevant but not complete for several reasons.

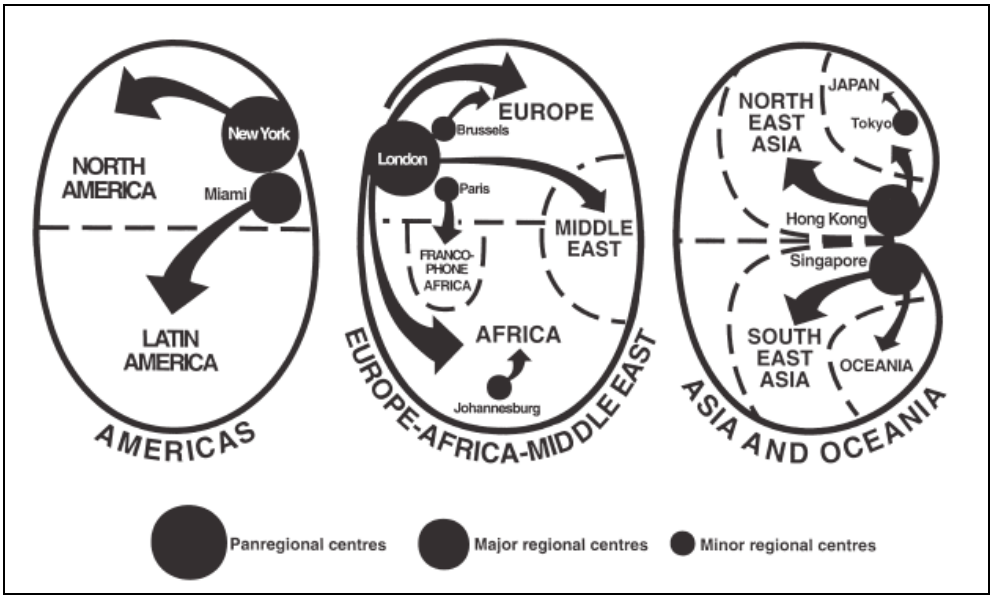
Firstly, it appears than many parts of the World are becoming increasingly independent of the "Great Triad" of the Northern hemisphere. The "Little Triad" of the Southern hemisphere (Mercosur, Southern Africa, and Oceania) is not a simple relay or symmetric replication of the Great Northern Triad but rather the place where new world regions are actually emerging. The same is true for India which will be without doubt the core of a powerful world region in the near future. Moreover, the Middle East and Central Asia are also future potential cores of the world economy even if it they are currently the major geo-strategic battlegrounds in our contemporary world.

Secondly, the "territorial vision" of the world which is implicit in the classical view of the centre-periphery model has to be balanced by an alternative "network vision" which is based on the existence of "global cities" (*Sassen, 1991*) or the "world metropolitan archipelago" (*Brunet, Dollfus, 1992*) which are more connected to each other than to the states or places where they are located. For some authors like P.J. Taylor (*2000, 2005*), the internal organisation of the "global city" reproduces in fact the classical division of the world into three areas of influence which are not very different from the classical paradigm of the Triad (Figure 29). But other authors like N. Cattan (*2004*) or P. Veltz (*1996*) argue that the network is more important than the nodes and that what does really matter is not to measure the "size" of world cities but rather the degree of inter-connection that they provide between different parts of the world and at different scales. Following this approach, we have established that European territory is certainly well connected to the rest of the World by six major gateway cities (*London, Paris, Amsterdam, Frankfurt, Zurich and Madrid*) but that it can also rely on external gateways which enable more specific connections with the

neighbouring countries, in particular, *Istanbul*, *Tel Aviv*, *Dubai or Moscow*. Moreover, it appears that the internal integration of the European territory is based on major "north-south" relations which are serviced by many airports of very different size and which connect northern Europe to both shores of Mediterranean Sea.

This means that between the global level and the national level, it is also possible to identify an intermediate situation of regional networks which are specifically able to organise subparts of the world and contribute to the development of North-South regionalism. Miami obviously plays this role of north-south connector in America but the situation is less clear in Europe where the pattern is more complicated: Madrid enables preferential connections with Latin America, Paris with North and West Africa, London with the Persian Gulf, Frankfurt with Central Asia, and Ljubljana with the former Yugoslavia, etc.

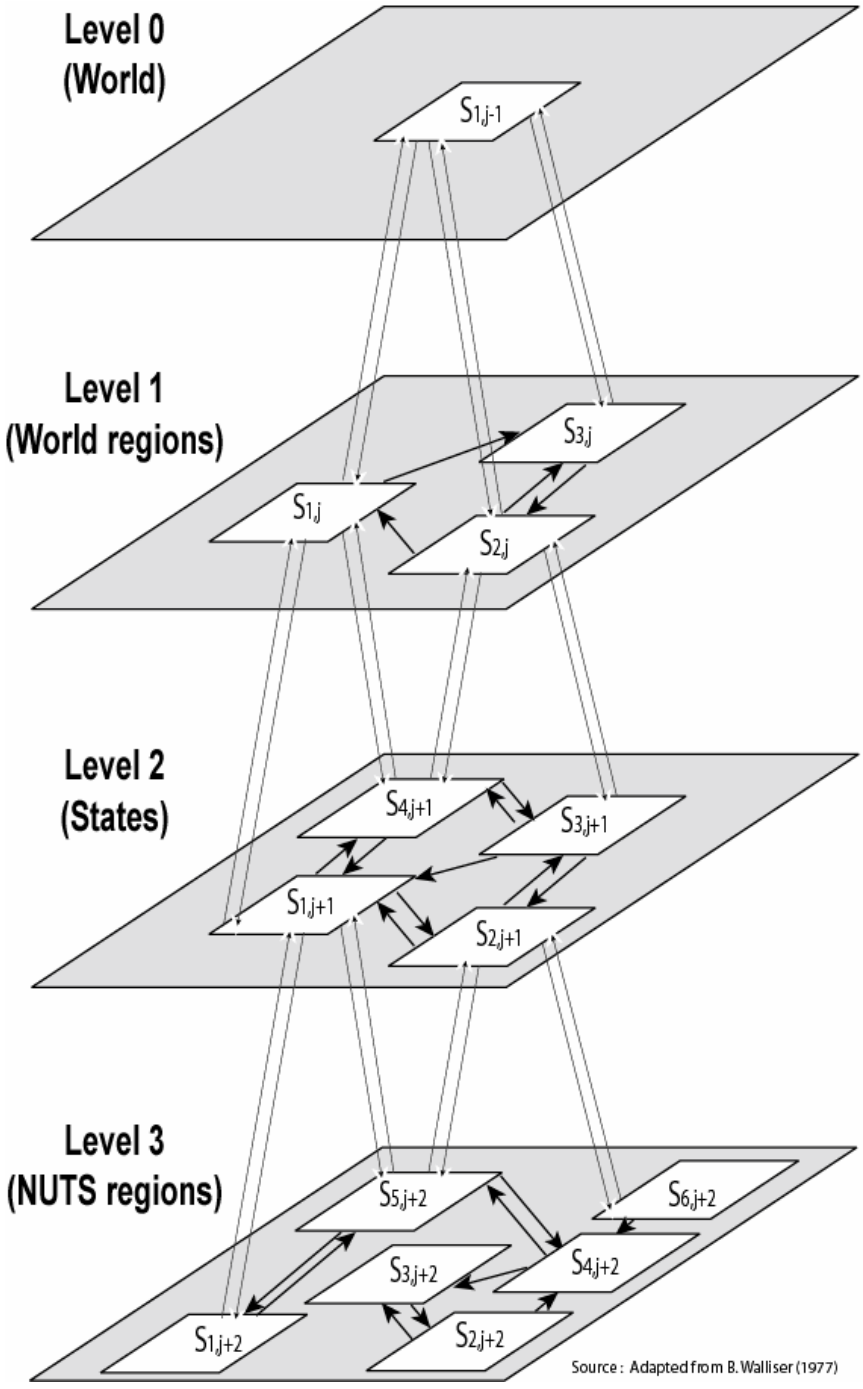
Figure 29: Regional world cities and their spheres of influence



Source: P.J. Taylor (2000)

A major output of our research for the practice of ESPON policy-makers and researchers is the introduction of a supplementary level in the actual "3-level approach" which has been elaborated by ESPON. Europe, whatever its delimitation, is indeed *not* an isolated system and the global level should always be taken into account in order to obtain a complete view of the nested relations which take place at all scales (Figure 30)

Figure 30: Hierarchical organisation of the system and sub-systems



7.3 One World, millions of places

> All the world's a stage,
> And all the men and women merely players:
> They have their exits and their entrances;
> And one man in his time plays many parts.
> *W. Shakespeare, As you Like It, 2-7*

In a famous paper entitled "*One World, Millions of places: the end of History and the ascendancy of Geography*", the British geographer R.J. Johnston (1994) suggests that Fukuyama's concept of a relatively homogeneous world does not mean a parallel end to Geography as predicted by O'Brien (1992). On the contrary, it suggests that the importance of space and place is increasing in the structuring of the contemporary world, thereby providing a challenge for political geographers. Johnston's conclusion is that "*Space is both an opportunity and a constraint to capitalism's operations; political geographers, in appreciating this, could build a much more convincing case for the ascendancy of Geography than Fukuyama has for the end of History*."

The analysis realised in the framework of this ESPON Project 3.4.1. has clearly confirmed that, whatever the time-space compression and the reduction of transportation costs, distance in the narrow sense of physical proximity and territorial contiguity remains a major factor in the organisation of flows in the contemporary world. According to Krugman (2004), "*what seems to have emerged from the empirical work of the past dozen years is a compromise vision. Distance matters a lot, though possibly less than it did before modern telecommunications. Borders also matter a lot, though possibly less than they did before free trade agreements. The spaceless, borderless world is still a Platonic ideal, a long way from coming into existence*". The idea of the abolition of distance and "end of geography" is a dangerous illusion for European policymakers but also for those European firms actually investing funds in remote the territories of Eastern and Southern Asia. Our analysis of the so-called "European influence area" suggested clearly that it investing in remote countries (like the those along the diagonal between the Persian Gulf and East Asia) represents a very great challenge for Europe as this is the area where Europe's influence is at its lowest ebb in the World. Globalisation does not mean the abolition of borders but rather the reallocation of national borders to an upper scale which is that of the world region. The globalisation and regionalisation of the world have been parallel processes (*GEMDEV, 1992*) and are as such clearly interlinked. According to Mashayekhi M. & Ito T. (*2005*) regionalisation, and more precisely North-South regionalisation is crucial as (i) it produces more

trade creation than trade diversion and (ii) it is the best way to help the development of those countries from the South (if certain conditions are fulfilled, in particular limiting the asymmetry of relations) as it helps them to open their economies and to thus further stimulate South-South relations through further 'virtuous loops' connected to the development of intra-regional trade associations.

There is, finally, a curious dialectical relationship between the progression of knowledge about the European territory realised within the context of ESPON and progress on our knowledge of the actual progress of globalisation. On the one hand, European Spatial planners who generally focus on the local and regional scales cannot ignore the fact that world trends have a direct impact on the smallest territorial units and thus that they can no longer seek to develop projects or policies without considering regional, national, European and now also world structures and networks. On the other hand, DG Relex or DG Trade, theoretically concerned in the main with the analysis of the situation of Europe *in* the World probably has something interesting to learn from DG Regio and ESPON, because the tools and concepts which have been elaborated for the analysis of the internal integration and cohesion of the European territory can be useful for their own practice if they are transposed upwards to the world scale and/or 'neighbourhood' scales.

As a very simple example, the reader should look again at the transposition at world scale of the analysis of regional discontinuities which was initially applied to the internal differentiation of the European territory in ESPON project 3.1. Instead of mapping the differences of GDP/inh. between NUTS 2 regions, we have produced here maps of the differences in the Human Development Index in 2002 across 168 states of the world. The criteria and the scale are clearly different, but interest in respect of the tool remains obvious as the location of the main developmental discontinuities at world scale relates very much to active international borders in terms of economic and demographic flows. Focusing on the European 'neighbourhood' we have observed that the spatial transitions between Western Europe and its Eastern and Southern peripheries are completely different with a regular gradient in the Easterly direction and double lines of discontinuity to the South (one on the Mediterranean Sea and the other on the Sahara) which define a clear "buffer area" corresponding to the Maghreb countries.

We propose therefore to conclude this research by restating the parallel between the growing importance of the *regional level* at both the world and the European scales. As demonstrated by the French economist J.M. Siroën (2000), the debate over the economic benefits of multilateralism and regionalisation at world scale is a false one because both forms of global integration are in fact complementary.

What is really important is not the liberalisation of trade (which is not an objective in itself) but rather "*the question of defining the scale where public goods and services can be produced the most efficiently according to the cost and the preferences of societies for certain specific characteristics which are often associated with geographical territories*." The European reader will easily recognize the principle of *subsidiarity* here which is the basis for the political organisation of the European Union.

If the European Union and regional authorities across Europe want to be recognised by European citizen as new, and meaningful, levels of social and political organisation, they will have to prove that they are better able to ensure the efficient and equitous allocation of public goods and services than national states. In this respect, the development of spatial planning at both the European and local scales could certainly be a major factor in the legitimisation of the European project if it focuses on territorial cohesion and the development of public services and not only on economic competitiveness as is basically the case with the current interpretation of the Lisbon Strategy. Taking into account the ESPON 'neighbourhood' then in the context of ESPON II and developing better spatial analysis approaches are clearly fundamental conditions for further progress.

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ANNEX 01: REPORT ON NETWORKING

Internal Networking: The ESPON project 3.4.1. involved since the beginning a very important number of research teams of different countries with two leading partners (RIATE & Géographie-cités), 4 core partners (LADYSS, IGEAT, ITPS, Herriott-Wyatt University) and 5 expert teams (CRH-HAS, TIGRIS, ETH, Gruppo SOGES, CASA). This diversity was indeed necessary, due to complexity of the subject and the choice to combine global quantitative analysis with more qualitative case studies on selected subjects.

Two problems occur, both with British partners.

- In the case of Herriot-Wyatt University, the departure of Cliff Hague from his university, introduced the removal of a core-partner and the contract was broken as Herriot Wyatt University was not able to propose researcher able to replace Cliff Hague. The budget was therefore reallocated to other research teams which realised the work initially supposed to be done by Cliff Hague (dictionary of concepts, analysis of environmental questions, global integration zone…).

- In the case of CASA, the expert was not present at any meeting and they did not sent any scientific results, out of a preliminary version of their case study which did not fit with the expectations. One more time, the contract was broken and the money reallocated to other project partners.

The removal of our both British partners implies that the project had no researcher which was native English speaker which was a crucial problem for the rewriting of the report. But a solution was hopefully found (see. next section).

Dynamic enlargement of the research group

A new research team was involved in the project after the beginning with ORMES, a research team from Morocco which provide an expert case study on southern external border of ESPON. This was a very difficult problem to involve this team from administrative point of view, but it was a very precious input for the project (especially about neighbourhood), and a precious symbol for ESPON project in general and ESPON 3.4.1. in particular. On the final map of research teams having contributed to ESPON program, a small dot will appear in Agadir, saying that European Union is not always turned to its internal problems and can also have a look at what is around!

We are very grateful to our project officer and to ESPON CU to have agreed to this extension of the network after the beginning of the project.

External networking with other ESPON project

- A structural link exist with project **ESPON 3.1** which had initiated the first research on Europe in the World with a first small atlas of 12 maps and an evaluation of the interest and feasibility of the project.

- A very strong link was established between project 3.4.1 "Europe in the World" and **project 3.2 "Scenarios"**, because it appears quickly obvious that projection or prediction of future trends are necessary based on an enlargement of the area of investigation. The more you want to go far in the future, the more you are obliged to enlarge the geographical scope. In this partnership, project 3.4.1. provided many material to project 3.2 but received also precious advices, especially in the field of enlargement and neighbourhood policy. **Chris Smith (Nordregio)** which was specialist from political topics in 3.2 was invited in the meeting of project 3.4.1 and provided many crucial inputs and critical comments. Finally, Chris Smith was involved as expert in project 3.4.1 for the final reviewing of language (as he was native English speaker) and for a general comment of political topics (as the project had no specialists from this question). Reversely, Claude Grasland who was leader of project 3.4.1. but partner of project 3.2 provided many materials to scenarios, especially in the field of demographic trends and north-south regionalism.

- Other links was established with different projects (for example polycentrism or demography) but rather in the form of reading the reports and not by direct face-to-face contact, except during the lead partner meetings or ESPON seminars.

Networking with ESPON CU

As mentioned above, excellent relations with ESPON CU during all the project. Our project officer (S. Di Biaggio) was invited to internal meeting of the project and the financial questions was very efficiently solved by direct face to face contact between S. Ferrara (ESPON CU) and I. Salmon (RIATE) which met several time in Paris or during ESPON seminars.

ANNEX 02: SCIENTIFIC SUMMARY

A) Methodologies used

Thematic synthesis on a particular field has been based on the use of models who integrates flows and structure in a systemic way.

A.1. Structural synthesis

Multivariate analyses have been either applied to a homogeneous table of economic variables or to a table combining social, economical, demographical and environmental data.

A.2. Flows synthesis

The various types of flows are not independent from each other and correlation or causal relation can be established between various types of flows. Problems appeared in the case of introduction of a historical dimension in the analysis of a given type of flow. As limits of states are changing through time, it is not possible to introduce any historical dimension in the analysis of flows without geographical aggregation of territorial units. In many cases, due to lack of information and difficulty to harmonise various types of criteria, will we limited our synthesis to the comparison of qualitative variables indicating if flows are, for example "High", "Medium" or "Low". Those typologies introduce a dramatic reduction of initial information but are probably the most efficient solution for cross-thematic synthesis of flows in the context of our project.

B) Indicators & typologies

Number of spatial indicators used

- in total: 24
- covering the EU territory: 5
- covering more than the EU territory : 19

Number of spatial typologies applied:

- in total: 14
- covering the EU territory: 5
- covering more than the EU territory : 9

C) Concepts

No specific concept has been developed in the ESPON project 3.4.1. "Europe in the World". About 12 concepts have been used: Integration Zones, Centre / Periphery, Regionalisation, Polycentrism, Gateway (cities), Area of influence, Barrier Effect, Neighbourhood, Territorial cooperation/competition, Territorial Cohesion, International Division of Labour, Territorial / Spatial differentiation. To allow partners to have a homogeneous use of those concepts a dictionary of concept has been developed in the volume two of this report. Definitions are based on scientific papers and other reports of the ESPON program.

D) Maps

228 maps have been made for the ESPON project 3.4.1. "Europe in the World". The following table gives the reparation according the space covered:

	ESPON	**Euromed**	**World**	**Other**	*Total*
Volume 1	9	21	58	0	*88*
Volume 2	2	42	44	0	*88*
Volume 3	0	11	12	29	*52*
Total	*11*	*74*	*114*	*29*	***228***

E) ESDP policy option

15 policy options have been addressed in the 3.4.1. final report. They can be grouped in 3 thematic fields, development assistance, relations between regional development and external relations and cross border cooperation.

Development assistance.

- In order to make the development assistance more effective, EU should support the following conditions: (1) Aid must be cost effective with low transaction costs, (2) recipient countries must have primary responsibility for its use, (3) aid must be untied.

- In terms of good governance, all aid and development programmes should be enriched with a capacity building element in order to work with local recipient communities in achieving their own Millennium goals.

- EU should support the setting up of a Marshall plan directed to ESPON's neighbours, primarily to the south, which would have many advantages for both Europe and its neighbouring countries.

- EU should not restrict the neighbourhood issue to a concern over free-trade or immigration control. The countries neighbouring the ESPON area to its East and South should instead be functionally integrated in a global regional programme including labour force and training, investment, energy and environmental issues.

Relations between regional development and external relations.

- The concept of territorial cohesion elaborated by European Union through the ESDP and actually applied inside the ESPON 29 territory should be reformulated in the wider context of an enlarged space towards both east and south. The spatial structure of heterogeneity (gradient or discontinuity) is not the same in each direction and different strategies thus need to be elaborated, in particular through a new shaping of INTERREG cooperation areas.

- Strategies for regional development elaborated inside ESPON territory could be transposed to neighbouring countries, in particular in the border regions.

- It is necessary to maintain and develop a regional and sub-regional territorial base for the implementation of the neighbourhood policy, while currently its Action Plans are designed from a purely bilateral perspective (Commission / each neighbour country). As far as the energy issue, the environmental issue or the migration and training issues are concerned, the regional scale is surely the correct one.

- The ENP Action Plans should enhance more obviously the local dimension of projects, with a strong commitment of local public and private actors. The EU could more easily monitor the implementation of such projects, and make regular evaluations, using a system similar to the one used in the European regional policy.

- Furthermore, questions have arisen as to whether the ENPI will be efficiently handled by the DG Relex. The European Commission should define more clearly the connections between the DG Regio and the DG Relex in order to make the goals of the European regional policy and those of the Neighbourhood policy meet, in the field of regional development. A higher level of coordination is necessary to support the successful implementation of cross border and transnational cooperation, because of strong interactions between what happens

in the territory of third countries and what happens inside the territory of EU members.

- To convince the Russian government to lift the non tariff barriers which still hamper the growth of external trade in that part of the neighbourhood. This would have a positive effect on regions whose economy is still much oriented towards the Russian market.

Cross border cooperation.

- The new regional arrangements, and in particular, the future European and Neighbourhood Partnership Instrument, must have a significant amount of funds dedicated to cross border cooperation.

- EU should make an effort for the training of local authorities on both sides of the border. Local governments usually suffer from a lack of administrative capability for the conception, implementation and financing of joint cross border projects in the frame of Neighbourhood Programs.

- EU should determine very clearly the rules of the game about cross border cooperation. It is necessary to define more clearly each part's task. For instance, Baltic authorities want to negotiate only the contents of the projects with Russia and Russian regions. All the rest must be left to European Commission.

- EU should continue the dialog with Russian authorities, at the highest level, in order to conceive genuinely joint projects in the domain of transports. A dialog at the highest level would be a relevant way to by pass the bad relations between Russia and the Baltic States. Such a dialog should exist also with Ukraine, Belarus and Moldova.

F. Further research issues

Four main research issues have been identified that would be very relevant to deepened.

More case studies should be launched on neighbourhood countries on cross border and transnational relations. Case studies should cover all the ESPON frontiers and especially the southern ones.

Transnational environmental issues between ESPON and neighbours countries; for example Black Sea and Mediterranean Sea should be more taken into account.

The comparison between ESPON and comparable macro regions and Global Integration Zones should be developed.

More in-depth studies on interactions between ESPON and the rest of the world at different level in Europe should be launched. In the perspective of an ESPON two, it would be relevant to launch different project on "Europe in the World" in one hand and "The world in Europe" in the other one. For the later, as globalisation is mainly linked to urban places, that kind of project should be associated to work on polycentricism and gateway and implies a database on cities.

G. Data gap to overcome

Before starting a work on the database building it would be very relevant to develop links with other DGs that are implied in the same field, namely DG trade and DG relex.
The main data gaps to overcome that have been identified are the following ones:

- Long term databases
- Foreign Direct Investments
- Migrations flow (especially o the point of view of origin countries)
- Environment flows and structure.