ESPON

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Integrated Territorial Analysis of the Neighbourhoods

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C. SCIENTIFIC REPORT

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List of abbreviations

ACAP	Arctic contaminants action program
ACIA	Arctic climate impact assessment
ADB	Asian development bank
AMAP	Arctic monitoring and assessment program
AMBO	Albania Macedonia Bulgaria oil
ANFLO	Anaptixiaki florinas, regional development agency of Florina
ANIMA	Association of investment Mediterranean agencies
AO	autonomous Okrug (Russia)
ARIJ	Applied research institute Jerusalem
ASEAN	Association of Southeast Asian Nations
ASK	Statistical office of Kosovo (*Agjencia e Statistikave të Kosovës*)
BAHS	Agency for statistics of Bosnia and Herzegovina
Black SR	Black Sea region
BSC / Black SC	Black Sea country
BSR	Baltic Sea region
CAP	Common agricultural policy
CAPMAS	Central agency for public mobilisation and statistics
CARDS	Community assistance for reconstruction, development and stabilisation
CAS	Central administration of statistics
CBC	Cross border cooperation
CBS	Central bureau of statistics
CBSS	Council of the Baltic Sea states
CC	Candidate country
CCR	*Commission consultative de la régionalisation*
CEFTA	Central European free trade agreement
CEPII	*Centre d'études prospectives et d'informations internationales*
CETMO	*Centre d'études des transports pour la Méditerranée occidentale*
CHELEM	*Comptes harmonisés sur les échanges et l'économie mondiale*
CIM	Centre for integration in the Mediterranean
CIST	*Collège international des sciences du territoire*
CIS	Community of independent states
cs	conservative scenario
DAT	Data assessment table
DB	Database
DCFTA	Deep and comprehensive free trade area
DHS	Demography and health survey
DOS	Department of statistics
EBRD	European bank for reconstruction and development
EDRB	Economic development revenue bond
EEA	European economic area
EFTA	European free trade association
EFZ	Export free zone
EGTC	European grouping of territorial cooperation
EIB	European investment bank
ENC	European Neighbourhood country
ENP	European Neighbourhood policy
ENPI	European Neighbourhood and partnership instrument
ENR	European neighbour region
EPPR	Emergency prevention, preparedness and response working group
EPT	Territorial planning areas' master plans (*Espace de programmation territoriale*)
ESPON	European observation network, territorial development and cohesion
ESPON CU	ESPON coordination unit
EU	European Union
EULEX	European Union rule of low mission in Kosovo
EUSBSR	European Union strategy for the Baltic Sea region
EUSDR	European Union strategy for the Danube region
EVS	*Environnement, ville, société*
FDI	Foreign direct investment
FEMISE	*Forum européen des instituts de sciences économiques*
FYROM	the Former Yugoslav republic of Macedonia

FZS	Institute for statistics of Federation of Bosnia and Herzegovina (*Federalni zavod za statistiku*)
GAFTA	Greater Arab free trade agreement
GAP	*Güneydogu Anadolu projesi* (South-eastern Anatolia project)
GDP	Gross domestic product
GHG	Greenhouse gas
GIS	Geographic information system
GPP	Gaza Strip power plant
GVA	Gross added value
HCP	*Haut-commissariat au plan*
HDI	Human development index
HELCOM	Helsinki commission, Baltic marine environment protection commission
ICPRD	International commission for the protection of the River Danube
IDP	Internally displaced person
IEBL	Inter-entity boundary line
IGEAT	*Institut de gestion de l'environnement et d'aménagement du territoire*
IMC	Inter-Mediterranean commission
IMF	International monetary fund
INALCO	*Institut national des langues et civilisations orientales*
INS	National institute of statistics (Tunisia) (*Institut national de la statistique*)
INStat	Institute of statistics (Albania) (*Instituti i statistikave*)
IPA	Instrument for pre-accession assistance
IPCC	Intergovernmental panel on climate change
ISCED	International standard classification of education
ITAN	Integrated territorial analysis of the Neighbourhoods
JDP	Justice and development party (Turkey)
LAU	Local administrative units
LNG	Liquefied natural gas
LP	Lead partner
M4D	Multi-dimensional database design and development
MAD	Morrocan Dirham
MCRIT	Multicriteria S.L.
MEDA	*Mesures d'accompagnement*
MENA	Middle East and North Africa
MRE	Moroccan diaspora (*Marocains résidants à l'étranger*)
MSP	Mediterranean solar plan
NAFTA	North American free trade agreement
NAT	Net aid transfer
NATO	North Atlantic treaty organisation
NCC	North calotte council
NCM	Nordic council of Ministers
NGO	Non-governmental organisation
NTA	Neighbourhood territorial agenda
NUTS	Nomenclature of territorial units for statistics
OAG	Official airline guide
ODA	Official development assistance
OECD	Organisation for economic co-operation and development
OME	*Observatoire méditerranéen de l'énergie*
ONCF	National railways office (Morocco) (*Office national des chemins de fer*)
ONS	National statistic office (Algeria) (*Office national des statistiques*)
OPT	Occupied Palestinian territories
OTE	*Office des Tunisiens à l'étranger*
PCA	Principal components analysis
PCBS	Palestinian central bureau of statistics
PCC	Potential candidate country
PNA	Palestinian national authority
PPP	Public-private partnership
PPS	Purchasing power standard
PREDA	Pelagonia regional development agency
PUF	Public use file
PTM	Pridnestrovian Moldovian republic
PTM	Professional, Technical and Managerial workers
RE	Renewable energy
RIATE	*Réseau interdisciplinaire pour l'aménagement du territoire européen*
RTAP	Regional transport action plan

RZSRS	Institute of statistics of the Republika of Srpska (*Republički zavod za statistiku Republika Srpska*)
SAA	Stabilisation and association agreements
SEMC	South and East Mediterranean countries
SDWG	Sustainable development working group
SEZ	Special economic zone
SNAT	National territorial planning master plan (*Schéma national d'aménagement du territoire*)
SNUTS	Similar nomenclature of territorial units for statistics
SPP	Society for the protection of Prespa
TANGO	Territorial approaches for new governance
TAP	Trans-Adriatic gas pipeline
TEN	Trans-European networks
TEN-T	Trans-European transport network
TERCO	European territorial cooperation as a factor of growth, jobs and quality of life
TEU	Twenty foot equivalent unit
TFR	Total fertility rate
TIGER	Territorial impact of globalisation for Europe and its regions
TMR	Transniestrian Moldavian republic
TPG	Transnational project group
UfM	Union for the Mediterranean
UN	United Nations
UNCTAD	United Nations conference on trade and development
UNDP	United Nations development programme
UNECA	United Nations economic commission for Africa
UNEP	United Nations environment programme
UNHCR	United Nations high commissioner for refugees
UNMIK	United Nations administration mission in Kosovo
UNRWA	United Nations relief and works agency for Palestine refugees in the Near East
USA	United States of America
USSR	Union of Soviet socialist republics
VASAB	Vision and strategies around the Baltic Sea
VMRO	Internal Macedonian revolutionary organisation
WP	Work package
WTO	World trade organisation
WUTS	World unified territorial system
WWF	World Wide Fund for Nature

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Introduction

Notwithstanding the European observation network, territorial development and cohesion (ESPON) projects dedicated to some territories of the neighbourhoods, this European Neighbour Regions (ENRs) project is the first one dedicated to the European neighbourhoods as such. This is of utmost important, given the rising importance of the neighbourhoods not only for Europe but also in the other main regions of the world namely the two leading ones: North America – that is, including Mexico since the North American free trade agreement (NAFTA) – and East Asia. The first chapter of this ITAN[1] report reminds the scientific and political issues of the "regionalisation" of the world's spatial organisation, and the importance of geographical proximity (there is neither any "end of geography" nor "end of history") were it for environmental purposes, economic competitiveness or cultural exchanges.

The chapters 3 to 6 present the Neighbourhoods on overall, and country by country: Northern Neighbourhood, Eastern Neighbourhood that is basically the European part of the former Union of Soviet Socialist Republics (USSR), South-Eastern Neighbourhood that is Western Balkans, and Southern Neighbourhood that is Mediterranean. The report sums up the main characteristics of their statistics system, territorial administration, spatial organisation with regard to the recent changes in the fields of demography, social and economic issues – not so much of environmental issue, except for the Northern Neighbourhood.

We could not analyse the wide range of the territorial stakes for all the countries of all these Neighbourhoods because the task showed immense. The chapter 2 on the ITAN methodology is certainly the most important in the perspective of further works on the ENRs. It raises – in collaboration with the M4D[2] project – the question of geometries, which is highly sensitive because any territorial division has an immediate political impact. It explains all the barriers the Transnational Project Group (TPG) met to fulfil its goals of giving a comprehensive view of these territories and assessing the territorial integration/or de-integration between Europe and its neighbours. It shows the methods the TPG used for harmonising data that happened to be very heterogeneous in their definition, reliability and time series. It sets up composite indicators on Local human development, on Territorial dynamic, on Local international openness and on Territorial potential of the ENRs. Let us say it in a word: the data collection, database constitution and indicators harmonisation has been managed by the ITAN TPG but at the end of the project, is it obvious for any of its members that such a tremendous mission should have been given to an international institution such as Eurostat, not less. Indeed, the TPG made the job in a humble manner and perfectly acknowledges that it only laid the first stone to a building that, with time, will count thousands. We hope and believe that ours is sustaining and sustainable.

The last chapter makes an overall synthesis and policy recommendations. It deals with territorial policies but also with sectoral policies which have strong territorial impact, such as agricultural and rural policy, water and environment, energy policy (the big neighbourhoods' issue), migration – one should rather say *mobility* – policy and of course networks and namely transports. The report proposes two overarching recommendations. The first is the need for a comprehensive Neighbourhoods Territorial Agenda 2020, justified by the need of gathering a large amount of policies, tools, figures and analyses financed by the European Union or its member states on such and such neighbouring area but without any clear overall vision thus strategy. In practice, the European neighbourhoods are rather viewed as the juxtaposition of many financial instruments and scattered issues than as a strategic territory for the European future. As an aside, in spite of the public money they put there, this is certainly the reason why the Europeans are progressively losing on these rapidly emerging markets.

The second recommendation is the absolute necessity for the European stakeholders to keep on investing in the knowledge on the neighbour regions, and not only at the NUST 2 level at which the ITAN project worked. Thanks to the on-going collaboration between the neighbours' national statistics

[1] Integrated territorial analysis of the Neighbourhoods
[2] Multi-dimensional database design and development

offices and the international bodies in particular Eurostat, norms and methods are converging between us and them. But an enormous work remains to be done to improve it and to extend it at the local data, at the fine scale if one hopes dealing with the key urban issue. If the European stakeholders want to develop the collaboration with their neighbouring counterparts, to monitor common projects and policies dealing with territories (the list is long: access to the Arctic resources and environmental preservation, common adaptation to the climate change, energy transition, de-pollution of the Mediterranean and its surrounding lands, water supply, urban design and management so as to avoid an uncontrolled car-oriented urban sprawl, solar electricity and energy pipes, rural development…), they need good database, collaborative methods and mapping tools. They are indispensable means for a shared vision of our common region.

The ITAN project has been conducted throughout a genuine and deep cooperation, not only between teams of the ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland) of course, but also with scholars, experts and teams of the neighbour countries. Along with the database provided by ITAN, it is certainly the major output of the project. It gives a common basement for further collaborative research and action in order to make the European region, that is to say the territory encompassing Europe and its neighbours, a leading region in tomorrow's world.

1. CONCEPTUAL AND METHODOLOGICAL FRAMEWORK

1.1. Scientific and political background; ITAN key notions and hypothesis

1.1.1. The rise of the neighbourhoods in the regionalisation context…

Three factors explain the rise of the regionalisation – thus the neighbourhood – issue, as a complementary major pattern, along with the "globalisation" pattern, of the internationalisation of human activities particularly since the mid-1980s. The first factor is economic: in a knowledge economy, an increasing part of the resources are less and less *withdrawn to* other players but rather *produced with* other players. The more significant interactions with other players, the larger the new resources. The neighbouring countries become strategic potential partners (thus the importance of neighbourhoods for investment and production rather than for consumption, cf. [Hirata 2013]). The "neighbour" gets a new status: it less and less depicts the historical military enemy and more and more becomes the necessary economic partner – see the new East Asian policy of China, which has turned in the 1990s its regional strategy from confrontation to partnership [Beeson & Li 2012].

The second factor is environmental: the rise of the climate and natural resources' concerns has of course a global dimension (see the IPCC[3] reports), but it also has a regional dimension because dissemination of air or water pollution happens in neighbouring territories. Environment is the most convincing domain that proves that proximity has not been dissolved in globalisation and matters more and more. Moreover, the perspective of costlier long distance transports because of energy increase, could promote shorter supply chains, hence growing economic interaction with neighbours.

The third factor is political: the collapse of purely national regulation since the 1980s did not give way to an alternative regulation at global scale. The recent failures of global regulation in the financial area (2008 international crisis), in the environment area (2009 Copenhagen climate change conference), and in the trade area (Doha round's successive adjournments) have shed light on a necessary international regulation at regional scale, of which the European Union gave a first instance.

The consequences of this rising interaction between regionalisation and globalisation are threefold:

(i) The rise of *regionalism*, that is to say the multiplication since the mid-1990s of Regional trade agreements – which go much further than trade since they can also deal with migration or environment. As reflected in the positions adopted by the FAO [Matthews 2003] and the United Nations conference on trade and development (UNCTAD) favouring regional agreements [Mashayekhi et al. 2005], the regionalisation of efforts to regulate environment, food security, new North-South relations and international economic relations is increasingly viewed as a positive complement to global regulation.

(ii) the confirmation of *de facto regionalisation* of cultural and economic international exchanges. For decades the international trade has more increased at the scale of large international regions than at the scale of the world. The assets of the regional cooperation are particularly high when it associates neighbours of different levels of development, due to the economic complementarities: know-how and technology in the developed countries, rising markets and labour forces and low economic costs in their developing neighbours; the stake is to manage going from a classic international division of labour to an intra-industry cooperation and trade, as the East Asian countries managed (fig. 1-2, [Dupuch 2004, Kawai 2005, Ando 2006, Dieter 2006]). Figure 1-3 shows that despite the globalisation of routs, foreigners still mostly come from the neighbourhoods. In the Americas, contrarily to what is often said due to the rapid growth of Asian incomers, the bigger changes over the last half century has been the replacement of European in-migrants by *American* in-migrants.

[3] Intergovernmental panel on climate change

Figure 1-1 - Long-run trend of regional integration. The case of trade

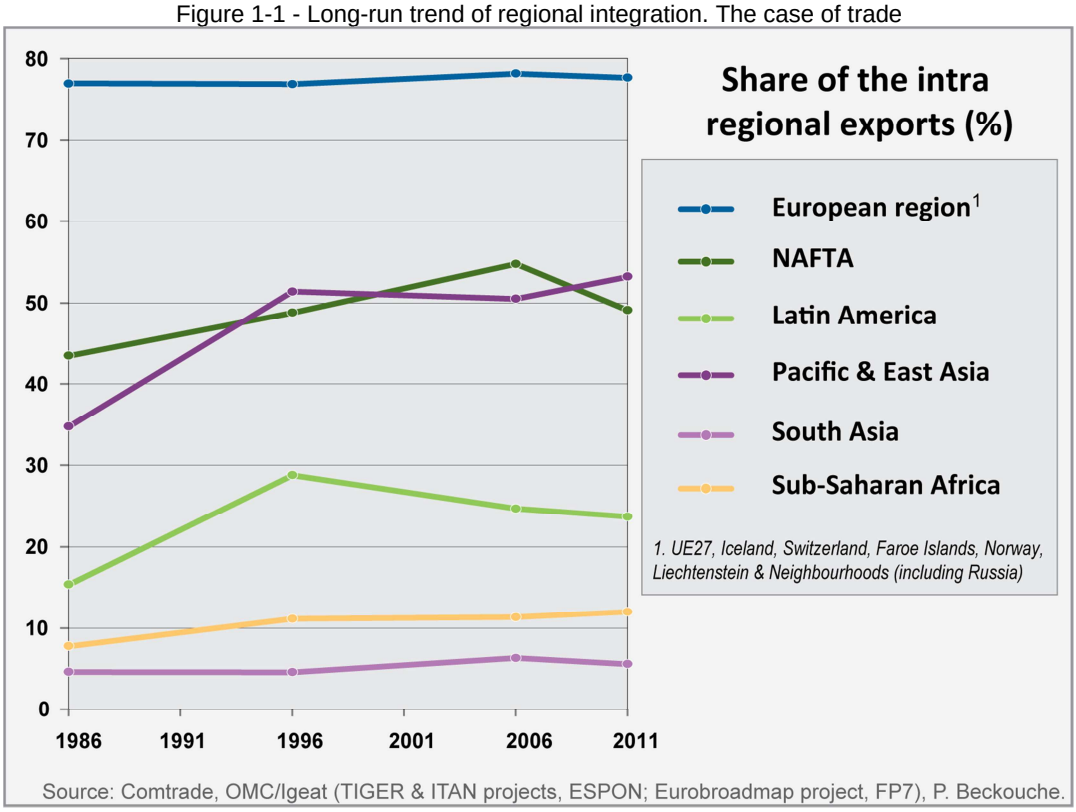


Figure 1-2 – Trade: the impressive rise of the East Asian region's integration

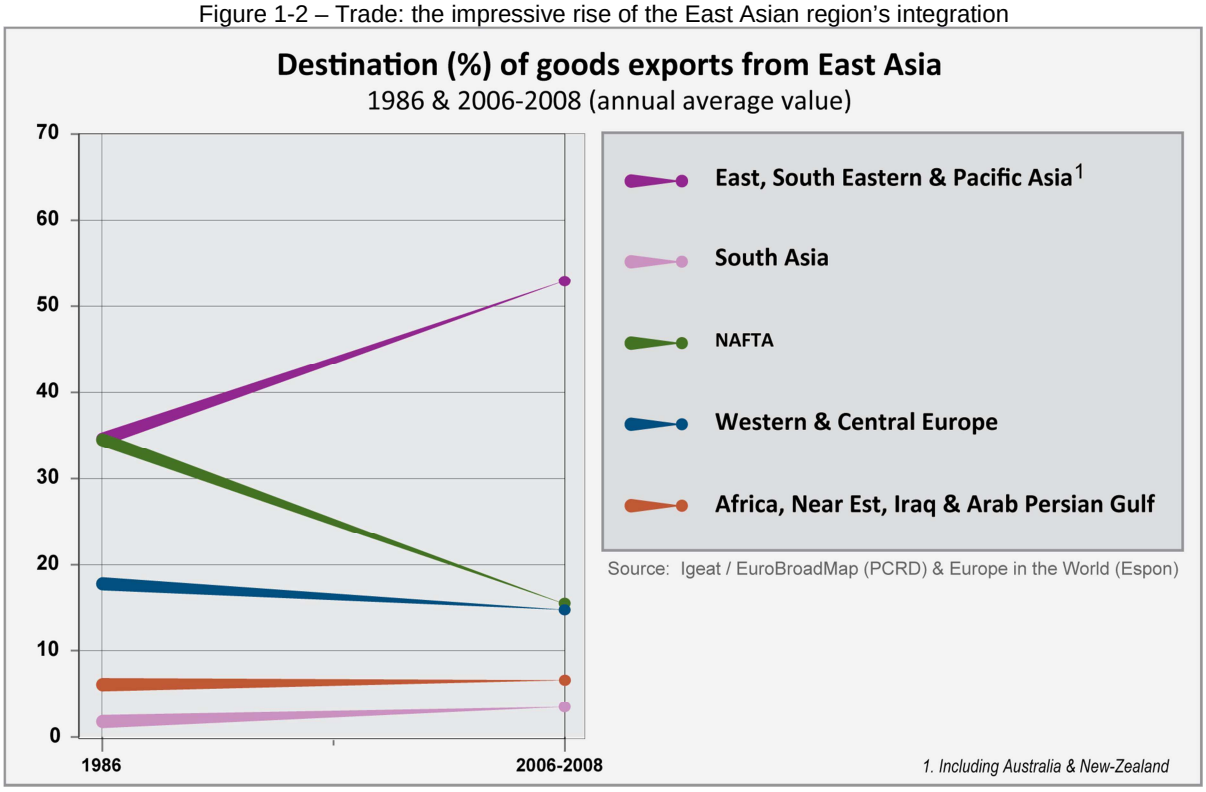
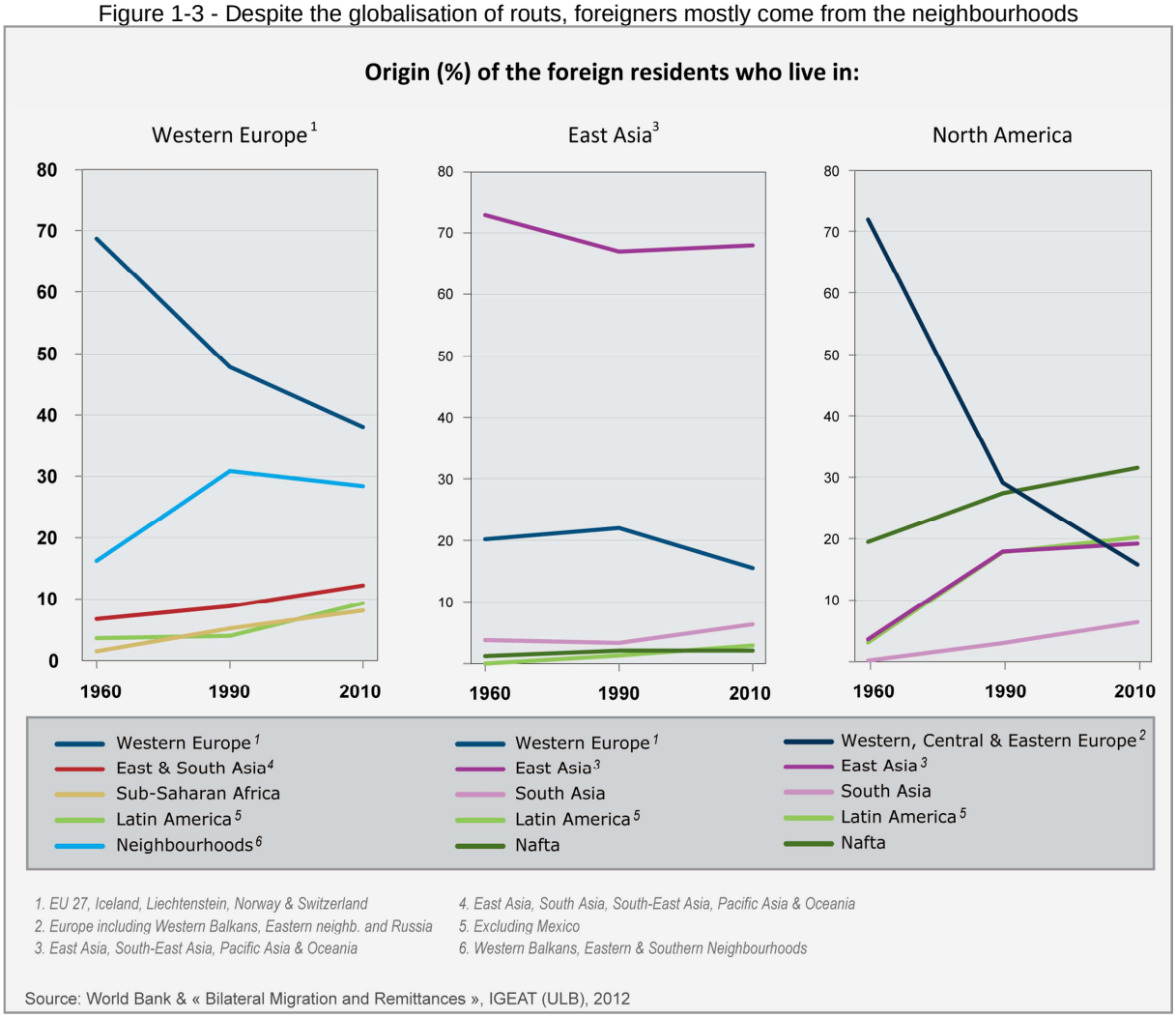


Figure 1-3 - Despite the globalisation of routs, foreigners mostly come from the neighbourhoods



(iii) What could be called the *regionalisation of minds*, that is to say the on-going use of international institutions and think tanks to figure out the internationalisation through the regional pattern? The World Bank works more and more at a (macro) regional scale: many studies and publications deal with “East Asia and the Pacific”, “Latin America”, “Middle East and North Africa” (MENA region) etc., see as an example its book with the Islamic development bank on the Arab countries’ integration [CMI, WB and IDB 2012]. The Asian development bank has published in 2011 a report which significant title is “Institutions for Regional Integration – Towards an Asian Economic Community” [ADB 2011]; regional integration is one of the three axes of the Asian development bank’s (ADB) strategy along with inclusive growth and sustainable growth. Likewise, the strategy of the African development bank is now designed in a regional framework, as expressed in the “ADB Group Regional Integration Strategy” [AfDB 2009]; in 2012 the bank has published a book very much in favour of a North African integration [Santi, Ben Romdhane & Shaw 2012]; since 2004 it is associated with the United Nations economic commission for Africa (UNECA) in publishing a set of reports on African regional integration [UNECA 2012].

The United Nations development programme (UNDP) and the World trade organisation (WTO) also see the world in regions (see for example [UNPD 2011], [Hartzenberg 2011]). The Institute for the integration of Latin America and the Caribbean (INTAL) of the Inter-American development bank publishes comparisons with other large world regions such as “Global and Regional Economic Integration: a View from Asia” [Kawai & Wignaraja 2009]. The Organisation for economic co-operation and development (OECD) publishes studies of the various regional integrations (see [OECD 2011] on South-East Asia for instance).

Indeed the regional bodies such as the regional development banks have plaid a leader role in this awareness. Still more significantly, whereas it had come down against any East Asian financial cooperation during the 1997-1998 financial crises and advocated for a sole global monetary fund, the International monetary fund (IMF) henceforward regards the regional issue much more positively: its *Finance & Development* review recognises that "*Done right, regional integration helps connect developing countries to world markets"* [Deichmann and Indermit 2008]. Liberal economists as well as liberal world institutions such as the World Bank (in their famous 2009 World Development Report on "Spatial disparities and Development Policy") clearly plead now in favour of regional integration.

The key reason of the new vision is that, in contrast to fears expressed during the nineties, globalisation and regionalisation are more and more seen as two faces of the same coin [Van Hamme et al. 2012; Poon 1997; Poon et al. 2000; Richard, Zanin 2009]. In the last two decades, internal flows in large coherent economic ensembles such as the EU or NAFTA have developed at very high rates, as well as between them. For example in the EU, the ratio between domestic trade and GDP raises from 27% to 42% from 1986 to 2007, while the openness rate (ratio between external trade of the EU and GDP) increases from 15% to 21%. Overall, the share of internal trade remains dominant around two third of the EU trade but with increasing domestic and external exchanges. Looking to other types of flows (air connections, human mobility, flows of capital, etc.) leads to the same conclusion: regional integration – that is to say growing flows within large regional areas – and global exchanges develop simultaneously. This regionalisation should probably be understood as one important aspect – though generally ignored – of globalisation. It is very important to notice the decisive role of political decisions in both processes: the liberalisation of trade and capital at global level went hand in hand with the creation of integrated regional markets where goods, capital and people can circulate freely.

1.1.2. … and in the European Union (EU) political framework

Cooperation with the neighbouring countries has long been an important issue for the European Union. Undoubtedly, there has been an increasing consciousness of the importance of neighbourhoods by EU institutions leading to the implementation of an official Neighbourhood policy. The rise of the regional integration in America (NAFTA) and eastern Asia (ASEAN[4] Plus Three), the Arab spring and the European need for new markets since the beginning of the financial crisis, have made this issue still more relevant. A large set of EU policies draw a favourable context for a renewal of the European actions dedicated to the European Neighbour countries (ENC), especially in territorial terms:

The *European Neighbourhood Policy* (plus the Strategic partnership with Russia) brings the general framework for cooperation, security and common development with the Neighbourhood, and provides a transversal financial instrument (European Neighbourhood and partnership instrument, ENPI) for a large set of actions. The European Neighbourhood policy (ENP) was first outlined in March 2003 in the "Commission communication on wider Europe" [European Commission 2003] with a major objective: building with the European Neighbours a common space for free circulation of goods, services, capital and people. It was officially launched in January 2007 when the ENPI came into force in the framework of EU's 2007-2013 budget. The changes in the neighbouring countries and especially the Arab spring have led to a recent renewal of the ENP [European Commission 2011] with higher involvement of the EU in the Neighbourhood strategy.

Europe 2020 Strategy advocating smart, inclusive and sustainable growth, gives a role to enlargement and regional integration with neighbouring countries: "*The Europe 2020 strategy (…) can also offer considerable potential to candidate countries and our neighbourhood and better help anchor their own reform efforts. Expanding the area where EU rules are applied will create new opportunities for both the EU and its neighbours*" ([European Commission 2010a], p.23). In the Europe 2020 Strategy, the neighbourhood dimension is present in both the "Agenda for new skills and job" and "An Integrated Industrial Policy for the Globalisation Era" which speaks of EU's "*particular interest in seeking closer economic integration with neighbouring countries through the European Neighbourhood Policy*" [European Commission 2010b, p 17].

[4] Association of Southeast Asian Nations

The *Cohesion Policy* promotes cross-border and transnational cooperation and macro-regions including neighbouring countries since it encourages economic activity and territorial development across internal and external EU borders. The "Fifth report on Economic, Social and Territorial Cohesion" (2010) highlights the need for peripheral EU regions to enhance transport infrastructures, cross-border links and communication. It insists on the political instability of the external borders of the EU space due to problems of unemployment and low level of development, which could hamper the development of these European peripheral areas. The report says that "*cross-border cooperation can enhance welfare, but it may involve relatively high transaction costs due to different institutional systems, cultures and languages. EU support can help overcome such obstacles to bring untapped resources into use*" (summary p. XIV). According to the "Territorial State and Perspective of the EU*"* (which was the background document for the Territorial Agenda) "*the success of the EU 2020 strategy will depend not only on integration between Europe's regions but also on their integration with neighbours*" [European Union 2011a p.16].

Nevertheless, the tools for a better cooperation with neighbouring territories are to be improved. As the Territorial State and Perspective of the EU states, "*the current territorial cooperation system is composed of three loosely co-ordinated blocks: territorial cooperation within the EU, territorial cooperation with neighbouring, candidate and potential candidate countries, and cooperation with other countries*" [European Union 2011a p.25]. This means that a comprehensive vision of this large region that encompasses Europe and the neighbouring countries is lacking. We rather have a juxtaposition of status, of tools, programmes and visions. The Barcelona process itself is divided in an enormous amount of programmes – much closer to an impressionist painting than to a coherent strategy [Lannon 2009].

The Territorial Agenda put further stresses on the needed policy coordination. In its section on "Territorial integration in cross-border and transnational functional regions", it says: *"Attention shall be paid to areas along external borders of the EU. Territorial integration and cooperation can create a critical mass for development (…). Cross-border and transnational functional region may require proper policy coordination between different countries*" [European Union 2011b p8].

In its "*Elements for a Common Strategic Framework 2014 to 2020*", the European Commission [2013] paves the way for a better combination of its financial funds for cohesion, social, regional, rural and maritime policies. It maintains the main EU's goals related to the neighbourhoods, were it in the field of the European territorial cooperation or in the field of the external action. A European Neighbourhood Instrument has replaced the ENPI since January 2014 and will continue to provide the bulk of funding to the European neighbour countries through bilateral, regional, and cross border co-operation programmes – where Russia's eligibility is retained. The ENI benefits from a significant increase when compared to the budget of the previous ENPI instrument, with €15 billion for the period 2014-2020. Better coordination and efficiency of the financial tools are among the main objectives of the ENI: reducing the complexity of the programming process, focussing cooperation on key policy objectives (namely, human rights and fundamental freedoms, stronger and more inclusive growth, economic integration into the EU internal market, prevention of conflicts, sectorial cooperation such as in energy and climate change, support to civil society exchanges), and promoting closer links with EU internal instruments and policies so as to avoid the border effect in European policies implementation when neighbourhoods' actors are involved. An innovation is the creation of a Partnership Instrument (€1,1 billion) specifically designed for supporting the external dimension of internal policies (e.g. competiveness, research and innovation, migration) and to address commonly major global challenges (e.g. energy security, climate change and environment); this could show of great interest for a more integrated vision and action between the EU and its neighbours.

Given the potential role of territorial cooperation, it is of utmost importance for the success of the EU policies dedicated to the neighbourhoods to begin to fill the gap of territorial knowledge on the external European border's area. The reform process of the Cohesion policy and the new Partnership Instrument provide an opportunity to improve EU policies' performance in the post-2013 period. The ITAN project drives at bringing a contribution to promote the territorial approach for a consolidated picture of all the policies and programmes launched by the EU in the region, taking into account the neighbouring territories in a comprehensive way.

1.1.3. The territorial approach of the neighbourhoods is crucial but data are lacking

ITAN has to be considered as a first and humble attempt to give such a comprehensive representation of the neighbouring territories. What is at stake is to build the foundation of a reliable database, in compliance with the ESPON database specification so as to favour integrated analysis of the ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland) and its neighbourhoods in the long run. Nevertheless the local data of the European Neighbour Countries (ENCs) are particularly lacking or difficult to collect, hardly comparable (the national statistical systems are very different from Russia to Morocco), and often questionable (underground economy, informal employment, poor national cooperation between the bodies in charge with statistics…).

European knowledge about neighbouring territories remains highly insufficient and in many cases can absolutely not be compared to that of ESPON territories. A diversity of local territorial analyses of the neighbouring countries exists but they are scattered throughout many reports and documents of varied EU's Directorates General. For the moment the bulk of the existing information about neighbouring territories is analysed at national scale; this provides an overall profile of what our neighbours are but hampers in-depth sustainable cooperation with them because the monitoring of the on-the-ground projects and the mobilisation of local partners would imply the real knowledge of their local territories.

A first attempt of a possible integrated vision of Europe and its surrounding countries had been made in the Study Programme of European Spatial Planning at the origin of ESPON. An overall approach of territorial stakes in the neighbourhoods has been initiated in the ESPON project Europe in the World [Grasland & Didelon 2007]. The green paper on Territorial cohesion has made a very interesting attempt to show an analysis consolidating European and bordering territories at local scale (NUTS[5] 2 and equivalent); however (i) the geographical frame of this mapping was too narrow since it only covered the littoral strip of northern Africa and did not cover the Caucasian countries; and more importantly the question of metadata, thus of how durable the database was, remained open. ESPON DB1 and DB2 (M4D) projects have attempted to go further in data collection and integration in the neighbourhoods. In ESPON DB1 a first attempt of integration of data on Western Balkans and Turkey has been realised, but the data remain largely lacking and lowly comparable, and the DB1 Balkans Technical report shows these shortcomings, which ITAN tried to overpass.

1.1.4. Many notions related to the neighbourhoods remain to be clarified – The ITAN glossary

ITAN has detailed its key notions in a glossary because the reader (who certainly knows much more about EU 27, Iceland, Liechtenstein, Norway and Switzerland than about Morocco's or Ukraine's space) may not be familiar with conceptual notions such as "regionalisation", "regionalism", "Oblast" or "Wilaya". ITAN glossary defines the following notions:

- *Region*: the geographical notion should be distinguished from "regionalism" (institutional approach of the issue), and from the terms or "regionalisation" and "regional integration". The latter should distinguish between "shallow integration" (free trade) and "deep integration" (convergence of norms and standards, sharing of the value chains…, see the Annex 2 for the definition of these notions).

- *Neighbourhoods*, in the sense of the European Neighbourhood Policy and of other institutional contexts, and in the sense of the ITAN project. The other geographical categories of the European policies have to be defined (Northern Dimension...) as well as the usual geographic categories (Near East, Middle East, Balkans…). The objective is to highlight the overall notion of the wider European region, that is, Europe plus its neighbourhoods.

The glossary also defines notions within several main categories: *ITAN Local territories*, *ITAN Indicators*, *Cooperation* (inter-governmental, local, private or professional), *Regional strategies*, and *EU policies and instruments with territorial impact on the Neighbourhoods*.

[5] Nomenclature of territorial units for statistics

1.1.5. How the Neighbourhoods issue is addressed in the international scientific literature

1°) Neighbourhoods and regionalisation issues in the academic literature

Alike international institutions' publications, the regional issue has been the target of a huge rise of academic publishing since the beginning of the 2000s. Things began as early as the 1960s when the European Community came into force. The debate among economists dealt namely with the opportunity of this community to fulfil the five stages of any regional integration according to the theory of Bela Balassa [1961]. At that time, the approach would be prominently economic, namely monetary (e.g. theory of Optimal Currency Region [Mundell 1961]). Later on, the Euro zone was studied as the primary and major case study of this theory, the debate being about how to achieve a monetary union i.e. the last-but-one stage of Balassa's theory.

The main impetus for academic publishing was the rise of Regional trade agreements (RTAs) worldwide in the 1990s and what Hettne & Soderbaum called the "new regionalism". Contrarily to the old regionalism that took place in the 1950s and 1960s, this new regionalism is open to new membership and to globalisation, has multidimensional objectives (politics, security, culture but above all economics [Baldwin 1997], and involves state but also market and civil society actors in many institutional forms. In a recent book, De Lombaerde and Soderbaum [2014] make a comprehensive analysis of the regionalisation process in the six last decades.

However, the territorial issue remains hardly taken into account. Hettne & Soderbaum [2004] allude to it when they discuss how public goods (common resources such as air and water, preferred social conditions such as health and welfare, common rules and policies to pursue shared goals) can be produced at the global and at the regional level. Academic literature on the regional integration is dominated by economics and political science, with opponents to the idea that international regulation should firstly be regional, and proponents.

The former (opponents) argue that too active regional agreements ("regionalism") could jeopardise the liberalisation of trade at global scale and prepare future conflicts between large regional blocks. Bhagwati [1995] criticises the proliferation of the Regional Trade Agreements as "spaghetti bowls" and Baldwin [2006] sees "Spaghetti Bowls as Building Blocks on the Path to Global Free Trade". In the case of Europe, Tannock & Obiols [2007] explain the cultural and political reasons why the ENP with the eastern neighbourhood is so difficult.

The latter (proponents) are less numerous. Deblock & Regnault [2006] state that integrated regions can be a way for developing countries to liberalise and open their economy to the world, with better cooperation with their developed neighbours than they could gain from remote major developed players. Besides, regulating international flows shows easier between twenty or thirty neighbours than it is at the wide scale of the World Trade Organisation, Abis & Blanc [2010] argue in the case of food security. As the Espon TIGER report states "*if the final aim is economic integration at a world scale, notably for so-called "third world" countries, regional integration is now widely perceived as a good way to achieve this objective. This is because regional integration can reinforce economic development by promoting higher agglomeration economies and also because liberalisation is better accepted politically in a limited regional framework. In brief, regional integration is now generally perceived as a positive process because it favours trade and globalisation, and favouring trade is expected to boost territorial economic development*" [Van Hamme 2012 p.11]. This being said, even promoters of the Euro-Mediterranean regional integration such as Galal & Reiffers [2010] acknowledge that this integraton has rather diminished since the Barcelona Process was launched in 1995. And Deblock [2010] acknowledges that NAFTA has showed disappointing for the Mexican economy because it was rather a trap than a springboard for economic development.

In any case, were it pro or cons, the literature on the regional issue is on the rise. The strong East Asian regional integration is more and more analysed. In "Asia alone", the well-known Singaporean scholar Simon Tay stresses the risk of a development path that could disconnect East Asia from America: "*Since the early days of the crisis, some have started to believe, and want to believe, that China and the wider Asian production base can return to growth without the United States. The numbers in China and other larger Asian markets, especially from the second half of 2009 and into*

2010, back up that belief. More and more, Asians are beginning to consider whether their region can grow on its own, and go its own way. (…) Anti-Americanism grew, even in societies that were once staunchly pro-American. An Asian regional identity —separate if not antagonistic— has grown" [Tay 2010].

What is striking anyway is that in this literature territorial scientists are a small minority. Geographers have entered the process, generally in interdisciplinary works (e.g. [Taillard 2004] or [Azuelos 2004]). But as a whole, the scientific work hardly combines economic, institutional and territorial approaches, thus hardly shows helpful for policy makers on the neighbourhood issue for on-the-field projects. Philippe De Lombaerde, Giulia Pietrangeli and Chatrini Weeratunge [2008] make a systematic comparison of the different indicator systems used in varied research on regional integration. The theoretical question underpinned by the debate is that of "deep" vs. "shallow" regional integration. The latter restrict to trade facilitation; the former includes harmonisation of technical and economic standards, prudential requirements, market integration, industrial cooperation and sharing of the value chains, technology transfer, transnational infrastructures and environmental cooperation. It is easy to understand how important this shallow vs. deep integration issue is for the interaction between ESPON and ENCs territories. In almost every case nonetheless, the measure of regional integration remains based on country * country flows analysis (trade, investment, migration, inter-governmental agreements…). A very small number of authors combine inter-national and intra-national analysis. Mario Arturo Ruiz Estrada [2012] has proposed a multi-level investment flows' monitoring model (MIF-model) to assess the attractiveness of territories in the framework of a regional integration. This type of multi-level approach of the regional issue remains rare.

Another striking thing about works on regional integration is that the bulk of them, if not the totality, consider Europe in its institutional dimension, that is to say EU, and not in its functional dimension that is to say including its neighbourhoods. In the most recent synthetic analysis of the regionalisation vs. globalisation issue, Hirata et al. [2013] continue to choose a very classic delineation of regions, namely the sole European Union in the case of Europe.

In the last decade, the European neighbourhoods territorial issue has interested a rising number of authors, but few authors working on the regionalisation issue in its interaction with globalisation (as the ESPON TIGER[6] project strives to do, cf. [Van Hamme 2012]). On what can be called the wider European region (Europe + Neighbourhoods), we either have:

- analyses of the Association Agreements between the EU and the ENCs according to the shallow vs. deep integration issue (e.g. [Hoekman & Konan 2001]), but not taking into account the territorial side of the question: environment, transports networks, local impact of Foreign Direct Investments (FDI) …;
- researches on the territorial impact of the ENP or on the neighbourhoods as a whole, but at a large scale (national scale all too often [Faludi 2008, Gaubert & Richard 2010]);
- local scale territorial fine analysis of some neighbourhoods and their cross-border links to Europe, but throughout local monographs, that is to say with little heuristic value;
- analyses of larger parts of some neighbourhoods (e.g. Balanche's Atlas of the Near East [2012]) or studies of national territories (e.g. Ababsa's Atlas of Jordan [2013]) but with scarce analysis of the interaction with the European space.

2°) What do other ESPON projects tell us about the Neighbourhoods?

The ESPON programme has provided valuable input to the knowledge of the European neighbourhoods and their interaction with Europe. Several of the considered projects are of great interest for ITAN. They show that the territorial approach is relevant to cope with the neighbourhood issue, and provide a lot to this "globalisation vs. regionalisation" debate.

ET 2050 (Territorial scenarios and visions for Europe) formulates a long-term vision for the development of the EU territory, including the interaction (migration, access to and investment in new markets…) between the EU territory and the neighbouring countries as well as other parts of the

[6] Territorial impact of globalisation for Europe and its regions

world. It analyses the future of the EU foreign policy and neighbourhood policy with a focus on its territorial dimension as well.

TIGER (Territorial impact of globalisation for Europe and its regions) has led to several meaningful conclusions for the ITAN project. First, functional relations of Europe largely go beyond the EU borders to include European Union non-members (Iceland, Norway, Switzerland, and Western Balkans) but also the eastern, south-eastern and southern neighbourhoods. All these areas have intense functional relations – though dissymmetrical – with the EU in terms of human flows, air connections, FDI, trade of goods (namely energy of course) and services. Second, within the EU, relations with the neighbours are geographically unequal. Third, analyses of the political cooperation between the EU and the rest of the world highlight the growing importance of neighbourhood (though above all with Norway, Switzerland and Iceland) in the number and proportion of agreements signed between the EU and countries around the world; agreements with eastern and southern neighbours largely restrict to energy and immigration. Fourth, the report underlines that despite the official discourse on the importance of the ENRs, EU has been rather unilateralist, without any shared development strategy.

ARTS (Assessment of regional and territorial sensitivity) analyses regional exposure and sensitivity to EU directives and policies. Taking into account such impacts of EU legislation on the EU neighbourhood could be considered in the ENP.

TERCO (European territorial cooperation as a factor of growth, jobs and quality of life) assesses the territorial co-operation in transnational areas and across European internal/external borders for the specific purpose of territorial development, with case studies relating to Russia, Ukraine, Turkey and Morocco. A lot of data have been gathered and new indicators created. Transnational and transcontinental co-operation have also been studied and are of great interest for the ITAN project especially for macro regional co-operation in the Mediterranean and the Baltic Sea region, because project showed that territorial cooperation had the greatest influence on the quality of life, rather than economic growth and job creation. The findings from the project show useful to ITAN for drawing policy messages for the Neighbourhoods.

BSR-TeMo (Territorial monitoring for the Baltic Sea region) has developed an indicator based tool for monitoring the territorial development in the region, namely the relations growing between the EU territory and the neighbouring countries. Some of the statistical data and maps already available from BSR-TeMo are directly useful to produce the maps for the Eastern and Northern Neighbourhoods: BSR-TeMo project was particularly relevant for monitoring the territorial development in the Eastern Neighbourhood, as the project covered the northwest Russia and Belarus. It provided evidence and supported the understanding of the regional diversity and the main territorial divides in the Baltic Sea Region.

ESaTDOR (European seas territorial development opportunity and risks) promotes a more collaborative integrative approach of these fragmented maritime territories, in the vein of the Blue Book on an Integrated maritime policy (IMP). The project analyses challenges and opportunities of crucial areas for ITAN: the Mediterranean Sea, the Baltic Sea and Black Sea regions.

FP7 European projects bring important information on the neighbourhoods too. *ENVIROGRIDS* assesses the sustainability and environmental vulnerability of the Black Sea catchment through a large timescale and a Geographic information system (GIS) based methodology. *EU4SEAS* project is an international study conducted by a large scale consortium of EU and non-EU research centres, analysing the development of the sub-regional cooperation held in four seas basins: Mediterranean, Baltic, Black and Caspian Seas. *EUROBROADMAP* project provides the searchers with the main representations of Europe seen from outside, namely by students of a large number of countries – some of them being ENCs – which contribute to the work on representation that ITAN has carried out through the media data analysis (see section 2.3).

1.1.6. ITAN territorial range

1°) According to a functional definition

A previous ESPON project, “Europe in the world” [Grasland & Didelon 2007], has proposed a regional breakdown of the world thanks to a wide range of economic, cultural and historical indicators. In the European case, it designed a region encompassing Europe and its neighbouring countries. Indeed the precise span of the “European region” varies according to the chosen indicators but as a whole, this geographical figure confirmed the belonging of the surrounding countries of Europe to the same large region. In the project, the issue remained unclear about the Arabic peninsula and the Persian Gulf, which are in the area of influence of several world poles. But indeed the scientific results rather matched with the Neighbourhood policy launched by the European Union at that time.

Note that some American territories neighbour European territories, such as French Guyana for example. The ESPON European Neighbour Regions (ENR) project alludes to American neighbour territories, but the ITAN project does not take them into account, with the agreement of the ESPON Coordination Unit (ESPON CU); yet, the relations with non-European Russia and Canada are taken into account in the ITAN Arctic case study.

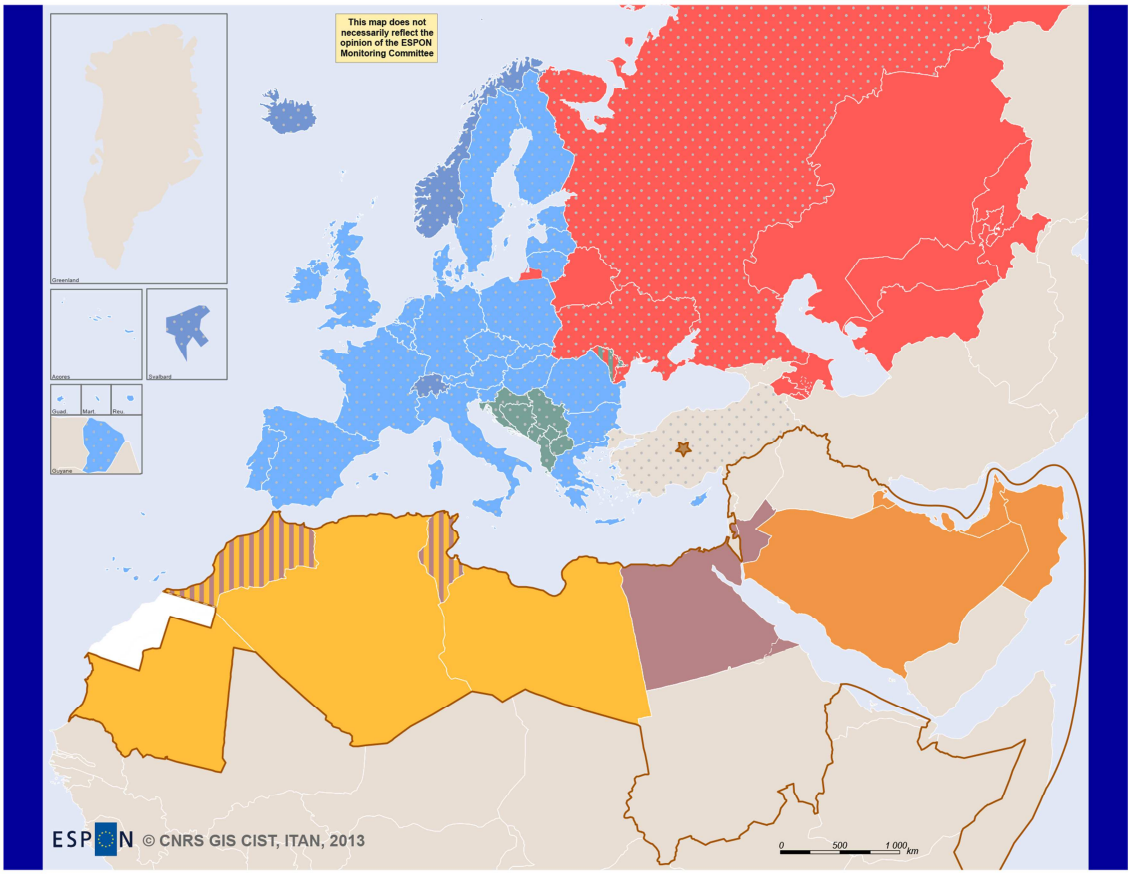
2°) According to an institutional definition

The ENRs project is based on the official list of the neighbour countries according to the ENP, however with some differences: (i) formally Turkey was but is no more a “neighbour” country since it has become a “candidate” country. The same for the candidate countries of the Western Balkans: the Former Yugoslav Republic of Macedonia, Serbia and Montenegro, which are even though included in the list of the ITAN project. (ii) The Caucasian countries (Georgia, Armenia and Azerbaijan) were not included in the first definition of the project; they have been added in the life time of ITAN so as to avoid having no data on these neighbour countries, but the TPG agreed with the ESPON CU that only national data would be mapped. (iii) the project encompasses Faroe Islands and Greenland as neighbouring countries of the Northern Periphery Programme and the Northern Dimension.

The ITAN choice of considering actual and recent European neighbour countries, should not make us forget that other grouping exist in the area. The least of these grouping is not the Community of independent states (CIS) which is being re-enforced by a custom union driven by Russia in which Ukraine recently decided to enter in a very contentious context which provoked a political unrest since the beginning of 2014. In the Mediterranean also, in line with the background of rising South-South trade and investment flows, other alternatives are offered to the Arab countries, at the scale of the Arab Maghreb Union or at the scale of a pan-Arab free trade agreement (Greater Arab free trade agreement – GAFTA). For Europe the situation is all the less granted that some neighbour countries have not yet negotiated any Association agreement or Action plan (see Syria, Libya and Belarus on

Map 1-2). Turkey considers the Union for the Mediterranean as a diversion of the membership issue, and develops its own sub-regional strategy with the Middle-East and the countries with Turkish-speaking populations of central Asia (a “five seas strategy” from Caspian to Black, Aegean, Mediterranean and Red Seas).

Map 1-1 - A proliferation of sub-regional organisations in the wider European region



EUROPEAN UNION
Part-financed by the European Regional Development Fund
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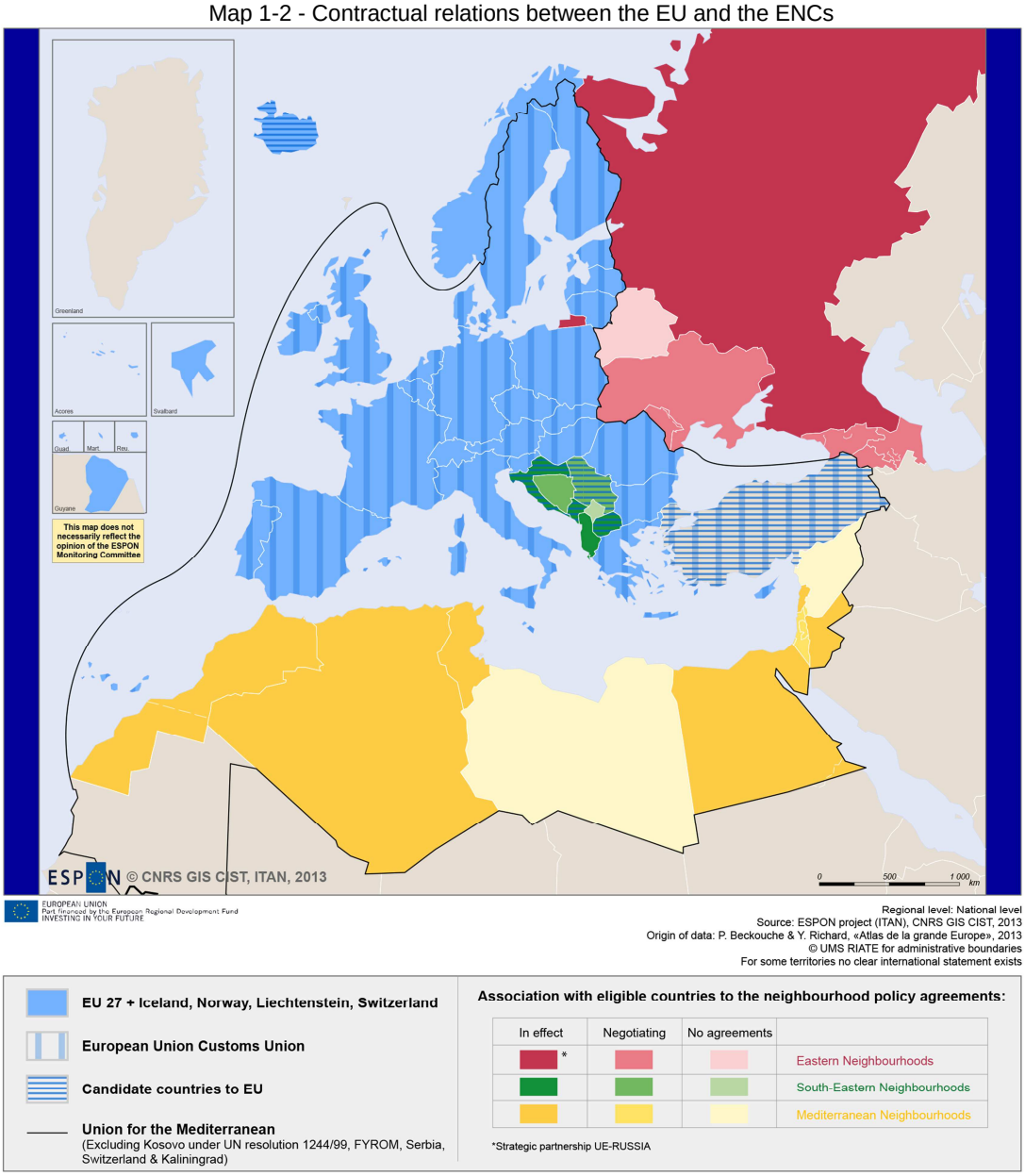
Regional level: National level
Source: ITAN, CNRS GIS CIST.
Origin of data: P. Beckouche & Y. Richard, «Atlas de la grande Europe», 2013

For some territories no clear international statement exists

- European Union
- European Free Trade Association (EFTA)
- Council of Europe
- Central European Free Trade Agreement (CEFTA)
- Commonwealth of Independent States (CIS)*
- Arab League**
- Observer country of Arab league***
- Agadir Agreement
- Arab Maghreb Union
- Cooperation Council for the Arab States of the Gulf
- No data

*Including the associated countries, participants and observers.
**Including Comoros
***Other observer countries : Brazil, Venezuela, India & Eritrea

Map 1-2 - Contractual relations between the EU and the ENCs



1.1.7. ITAN leading hypotheses

ENRs call's terms of reference raised two key questions: (i) what are the territorial structures, and what are the economic, social and environmental stakes and dynamics of regions neighbouring the ESPON territory? (ii) What are the flows, interaction and cooperation between ESPON and neighbouring territories? The ITAN project addresses these questions throughout two leading scientific hypotheses.

1°) The ESPON territory and its neighbourhoods constitute one "region"

ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland) and the ENCs constitute one "region". Its validation is twofold:

(i) *Regionalism*: the project has to show the number and relevance of cooperation agreements (we stick to territorial agreements) at the intergovernmental scale down to the local cross-border local scale. Our starting point stems from ESPON TIGER result: such agreements are

numerous but unequally according to the related ENC and much less effective than what the EU's discourse on the ENP would let expect. Other researchers have shown how scattered was the action taken by the Commission in the framework of the Barcelona process for overall very limited financial means – not to speak of the almost inexistent neighbourhood strategy of each EU member state.

(ii) *Regionalisation*, that is to say the issue of convergence vs. divergence between ENRs and the ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland). We originally assumed that territorial structures and flows with the ESPON space (EU27, Iceland, Liechtenstein, Norway, and Switzerland) analysis would show an increasing convergence in the northern neighbourhood, whereas it would show an increasing divergence in the southern neighbourhood – which drives to very different policy recommendations. In the case of the Western Balkans the dominant trend should be convergence rather than divergence, but the results of the research show a variety of degrees according to the considered country. The result of the eastern neighbourhood was highly difficult to predict, because Russia might have resisted, in the last decade, the reorientation of this neighbourhood's economic geography toward Europe that occurred in the 1990s.

2°) This region shows bigger opportunities than threats

The second hypothesis assumes that the neighbourhoods show **more opportunities than threats** for Europe, be they economic, social, environmental or political. European neighbourhoods are all too often regarded through a simplified view: great natural resources on the one hand, especially energy; migration pressure and political unrest on the other hand. We assume that ITAN's territorial analysis can drive to a much more nuanced view of both opportunities and threats, at national and at local scale (access to markets, investment scarcity and potential, climate change and water shortage but also opportunities for cooperation, cross-border trafficking control but also cooperation, etc.). We acknowledge that our assessment of threats is underestimated because ITAN does not deal with geopolitical issues.

1.2. ITAN key objectives and policy questions

1.2.1. Bringing to European stakeholders a comprehensive view

The first objective is **bringing to European stakeholders a comprehensive view of the ENRs**. It is a preliminary step for any regional view of the wider European region. Otherwise stakeholders would remain in today's situation: a fragmented representation of the various neighbourhoods, with large loopholes in the territorial knowledge of these strategic territories for Europe. A multi neighbourhoods (Northern, Eastern, South-Eastern and Mediterranean), multi-level approach addresses this need. Moreover, the goal is to give an insight of the large array of European policies, tools and programmes which have a direct impact on these territories. Such a comprehensive view is necessary, given the general lack of political integrated strategy in the Neighbourhoods.

1.2.2. Assessing the territorial integration (relations ENRs / ESPON territory)

The second objective is **assessing the regional integration between the ESPON space (EU27, Iceland, Liechtenstein, Norway, and Switzerland) and the ENCs, through a territorial analysis**. Can we more and more speak of "one region"? Do trends rather show convergence or divergence? There are varied answers according to the related Neighbourhoods. ITAN analyses discontinuities between ESPON territory and the ENRs (structural analysis), and flows between them. The project's results help qualifying the regional integration: on-going integration or de-integration, shallow or deep integration.

The report answers to three questions:

(i) Do the flows between ENRs and ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland) show a trend toward integration, or rather de-integration? The general figure shows a general diminution of relative flows between the ENCs and Europe in the last fifteen years; what is the figure at a geographical more precise scale?

(ii) Is this diminution of the links with Europe balanced by an increase of flows between ENCs and cross-border exchanges? The difficulty here is to analyse the local impact of international flows, given the available data.

(iii) A great deal of the numerous conventions, partnerships and cooperation agreements between the EU and the ENCs have not really come into force or have had a low impact on the ground. It is necessary but also difficult to measure the territorial impact of all these cooperation agreements, whether they deal with transport, energy (gas and oil pipes, electricity grid), and decentralised cooperation.

1.2.3. In order to fulfil these two objectives, ITAN aims at building a sustainable database (DB)

In order to fulfil these objectives, ITAN aims at building a database that should show sustainable, so as to feed long term research programmes and scientific partnerships between European and ENCs' researchers. Hence, the importance of metadata, and our choice for a small number of consistent data ("core data") rather than for an extensive collection. The third objective of ITAN is **building the first stage of a long-run process.**

1.2.4. Key policy questions and policy orientations

The fourth objective is **to spport policy orientations in order to reduce risks and foster opportunities**. That means: promoting a prominent role of territorial approaches in political recommendation on the neighbourhood issue; highlighting what the territorial cooperation could be through the ENP and the sectorial EU policies (CAP[7], cohesion policy, environment, TEN[8]…); proposing a new vision of territorial strategy and planning for the ENRs – which is a key issue for many of these countries especially in the Mediterranean area as the Arab spring has shown – and for the neighbourhoods as a whole and dealing not only with energy supply but also with transports, rural development, urban planning, thrifty use of natural resources etc. We assume that such a territorial vision could bring a lot for a deep regional integration.

1.3. ITAN database and methodological challenges

The ITAN database building process had to deal with geometries for the targeted countries that do not have the same system of territorial divisions, and with data collection for these territorial divisions. The ITAN TPG closely worked with the ESPON M4D TPG when building the ITAN geometries and nomenclature.

1.3.1. What we call "ITAN Neighbourhoods" (Northern, Eastern, South-Eastern, Southern)

Notwithstanding the neighbouring Arctic areas of Canada, the ITAN neighbourhoods go from the Arctic zone to the Saharan desert. They cover a surface of 25 million square kilometres, at a national scale that is to say including the most eastern part of Russia which proves hardly possible to map. Sticking to a stricter definition of the "neighbourhood", the ITAN project, with the agreement of the ESPON CU, does not cover the central and eastern parts of Russia. The ITAN Neighbourhoods (with a capital N) are:

- *Northern Neighbourhood*: Faroe Islands and Greenland (to Denmark), and not Iceland because this country is an ESPON member. Faroe Islands and Greenland are self-governing

[7] Common agricultural policy
[8] Trans-European networks

overseas administrative divisions of the Kingdom of Denmark, but unlike Denmark they are not members of the European Union or ESPON and thus included in ITAN project

- *Eastern Neighbourhood* : Ukraine, Belarus, Moldova, and Russia (every oblast from the western boundaries to the Ural Mountains which is the conventional limit of the "European Russia")
- *South-Eastern Neighbourhood*: Croatia (because it joined the EU after the beginning of the project[9]), Bosnia and Herzegovina, Serbia, Montenegro, Kosovo (under the United Nations (UN) Security Council resolution 1244/99), The Former Yugoslav Republic of Macedonia, and Albania
- *Mediterranean Neighbourhood*: Morocco, Algeria, Tunisia, Libya, Egypt, Jordan, the Occupied Palestinian territories (OPT), Israel, Lebanon, Syria and Turkey.

Indeed one could have considered Turkey as part of the South-Eastern Neighbourhood, but we chose to respect the former country definition of the EU's MEDA policy which long encompassed Turkey until the beginning of the membership negotiation in 2005. In order to take into account the interaction between Turkey, south-eastern Europe, Ukraine and south-western Russia, the ITAN project chose among its case studies that of the Black Sea.

1.3.2. The choice of the case studies (why, what key questions, what specific data used)

The case studies have been chosen on a territorial base (so as to shed light on the Neighbourhoods territories), and not according to the governance issue because this issue rather deals with by the TERCO and TANGO (Territorial approaches for new governance) projects.

The choice avoids case studies already taken in charge in the TERCO project: Finland–Russian Federation, Poland–Slovakia–Ukraine, Greece–Bulgaria–Turkey. We acknowledge that TERCO deals with Spain–Morocco, but the Gibraltar case tries to be much more complementary than redundant.

- The Gibraltar case study is directly devoted to the convergence vs. divergence issue, because it reaches here a paroxysmal height: huge economic discontinuity between the two shores of the Mediterranean, terrible barrier for migration, growing competition in tourism and between Tanger-Med and the port of Algeciras; on the other hand this competition means possible synergies, a growing number of Spanish firms settling in northern Morocco, an envisaged tunnel along with a possible common vision of Gibraltar as a global node for transport and logistics. The analysis of the convergence issue is made on the long run (back to the second half of the 20th century because mainly trends occurring in Morocco today resemble those of Spain in the 1960s or 1970s, and with 2025 prospects), according to a multi-level approach: Spain vs. Morocco, Andalusia vs. northern Morocco, Tangier vs. Algeciras.

- The Western Balkans case study gives to ITAN the opportunity to analyse in depth cross-border cooperation at a very local scale, and raise awareness on the impact in the long-run of the cross-border cooperation programmes on a border with changing status due to the candidacy to membership.

- The Black Sea region case study is designed as "methodological", given the complexity of the case and given the scale of this territory: the Black Sea transnational area encompasses eight countries of varied status, and implies a complex data collection on territorial structures and flows. For the consortium, it represents an interesting link between South-Eastern, Eastern and even Mediterranean Neighbourhoods to be addressed collectively. It provides the opportunity to develop a quite recent approach of the decentralised cooperation, and a brand new approach on the diplomatic direct and indirect ties between the countries bordering the Black Sea. The overarching goal is understanding up to what point a territorial study can shed

[9] In the ITAN Project Croatia is considered as a country of the European Neighbourhoods. The ESPON Monitoring Committee took its decision on the Project Specification on 'European Neighbourhood Regions' by 23-24 June 2011 at a time when the final date for Croatia accession had not been set. Thus Croatia is included in the South-Eastern Neighbourhood in all analysis and maps.

light on major trends generated largely further the region, such as geopolitical balance of power exerted by the EU and Russia (and maybe tomorrow Turkey?) on the Black Sea countries, especially Ukraine.

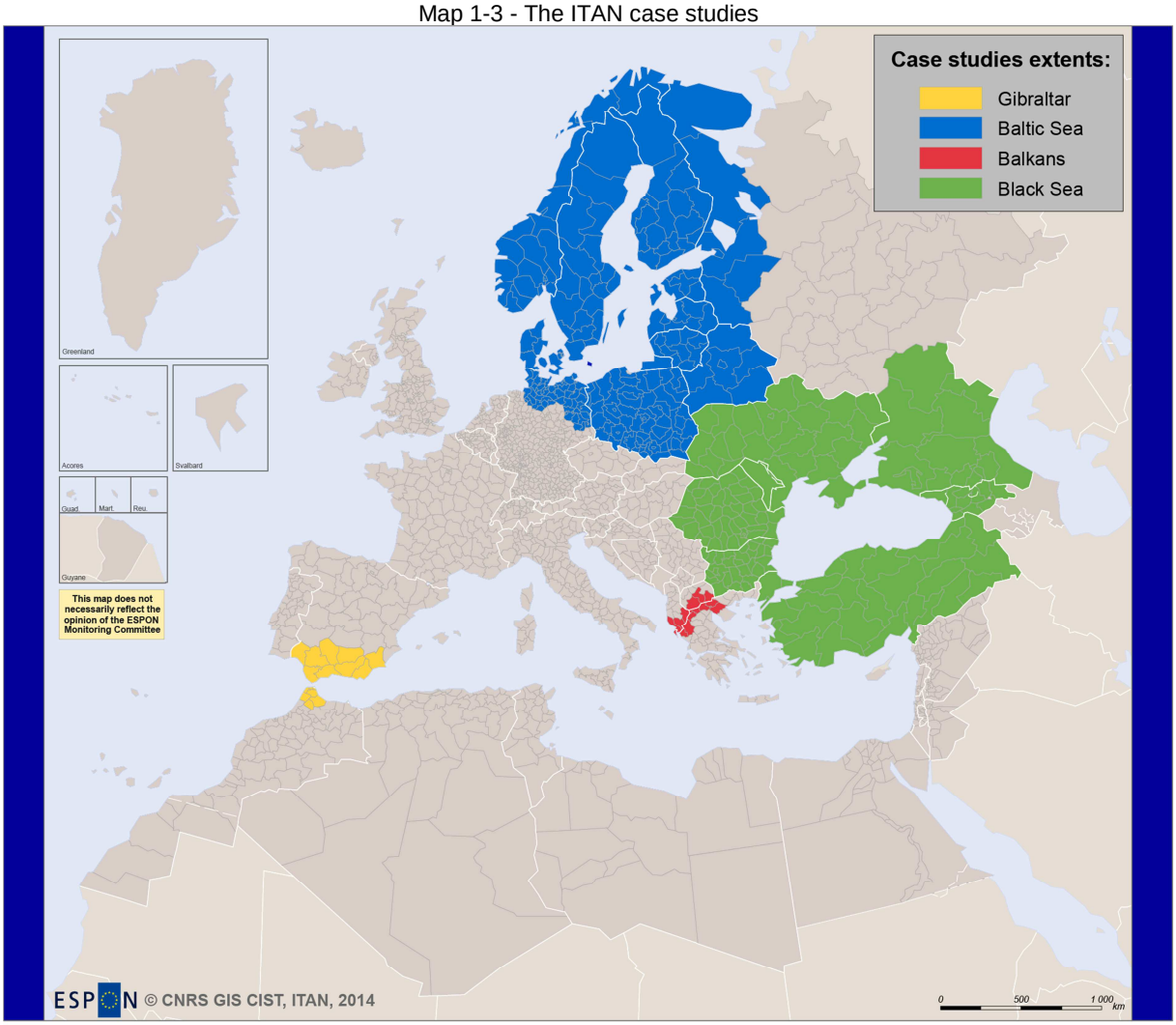
- The European Arctic case study focuses on climate change related to future challenges and opportunities (what will happen when the ice melts), and on the use of natural resources. It is a way to highlight the environment issue in the neighbourhoods, and also to raise an emerging geopolitical and geo-economical issue in the European region. A third motivation is to take into account Canada, which is a European neighbour but is not studied in the rest of ITAN since we agreed on not considering America as a priority in this first project dedicated to the neighbourhoods.

- The Baltic case study is a way of analysing more in depth the relationship between ESPON space (EU27, Iceland, Liechtenstein, Norway, and Switzerland) and Russian territories. The case study is an opportunity to address the main stakes of this area (sustainability, prosperity, attractiveness, security…) on a European point of view and on a Russian point of view namely focused on the Kaliningrad enclave. The Baltic region could be a possible "territorial laboratory" for better relationship between EU and Russia.

Table 1-1 - Profile of ITAN five case studies

	specific question raised	EU/ENRs differences in/decreasing	cooperation policies implemented	Real impact of EU/ENRs cooperation	Available data to assess EU/ENRs interaction	Possible observatory / follow-up structure
Gibraltar	Rather structural convergence or divergence? Rather North-South economic competition or cooperation?	✓	✓	✓	✓	✓
West. Balkans	How can cross-border programmes take into account on the ground reality, and what impact on the long term?	✓	✓	✓	✓	
Black Sea	Can local interaction among bordering territories loosen the stranglehold of mega (environment, geopolitics) constraints?	✓	✓	✓	✓	✓
Baltic Sea	Can a regional cooperation be a laboratory for positive interaction between the EU countries and Russia?	✓	✓	✓	✓	
Arctic	How can Europe tackle an emerging issue that combines potential resources, environmental threats and competition with mega neighbours and global players (Russia, North America, China)?		✓	✓	✓	

Map 1-3 - The ITAN case studies



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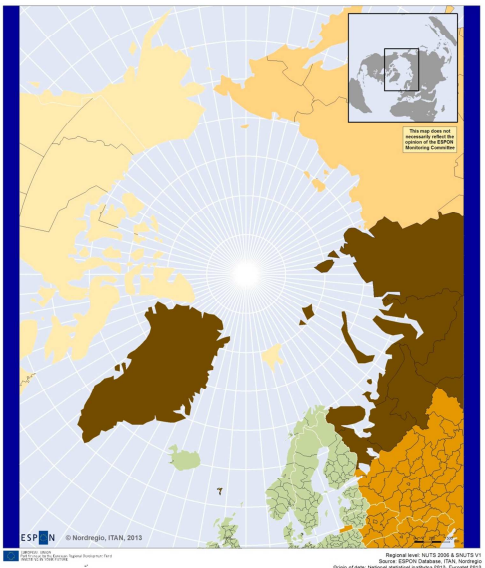
Regional level: NUTS 3 & SNUTS2/3
Source: ESPON project (ITAN), CNRS GIS CIST, 2013
Origin of data: CNRS GIS CIST, 2013
© UMS RIATE for administrative boundaries
For some territories no clear international statement exists



The arctic case study

1.3.3. Main features about the statistical cooperation between Europe and its neighbours

In each of the ENCs a national statistics office coordinates the production of data. Sometimes, like in Algeria for instance, the bodies which produce data are poorly coordinated especially when it comes to territorial data. The various sets of data providers by country are described by the "Medstat" programme launched by Eurostat in 1996. This multi-country programme is the principal vehicle by which the EU currently provides the necessary assistance to ENP Mediterranean partner countries in statistics. The main objective of Medstat I was a standardised collection and exchange of reliable, harmonised and up-to-date statistics, which in turn would allow the European Union to monitor the development of a free trade area in the whole Mediterranean basin, according to the 1995 Barcelona agreements. Medstat II (2006-2009) intended to improve the quality of the statistical services, and Medstat III (2010-2013) to promote evidence-based decision-making and to stimulate democratic development by improving the availability of statistical data in ENP countries, namely throughout six priority thematic sectors (agriculture, energy, migration, social statistics, transport and trade, balance of payments statistics)[10]. It is important to highlight the fact that this Medstat programme was dedicated to the harmonisation and quality of data at national scale, and not at local scale, whereas local data raise very specific challenges; for instance the definition of Gross domestic product (GDP) at the national scale is one thing, but its definition at infra-national scale is highly complex because the spatial breakdown of the different components of the GDP has to be harmonised from one statistical system to another. That kind of issue is addressed for national comparisons by the international recommendations of the UN or the IMF in the field of financial statistics; still, much remains to be done to reach harmonised data at infra-national scale.

The issue is roughly the same as for the Eastern ENCs. The development of the European Statistical System vis-à-vis eastern neighbour country has been implemented in the framework of the Eastern Partnership. One of its goals is to go towards harmonisation with European Statistical System. An international conference has been dedicated to this issue in October 2011 in Krakow, during the Polish presidency. Other initiatives launched by the EU in the field of statistics cooperation imply eastern neighbours, such as the Inogate (EU countries, eastern neighbour countries, Turkey and Central Asian countries) Energy Statistics Network, a forum between energy statisticians and policy makers on energy statistics. But again, these programmes have been implemented for data at *national scale*.

1.3.4. Geometries

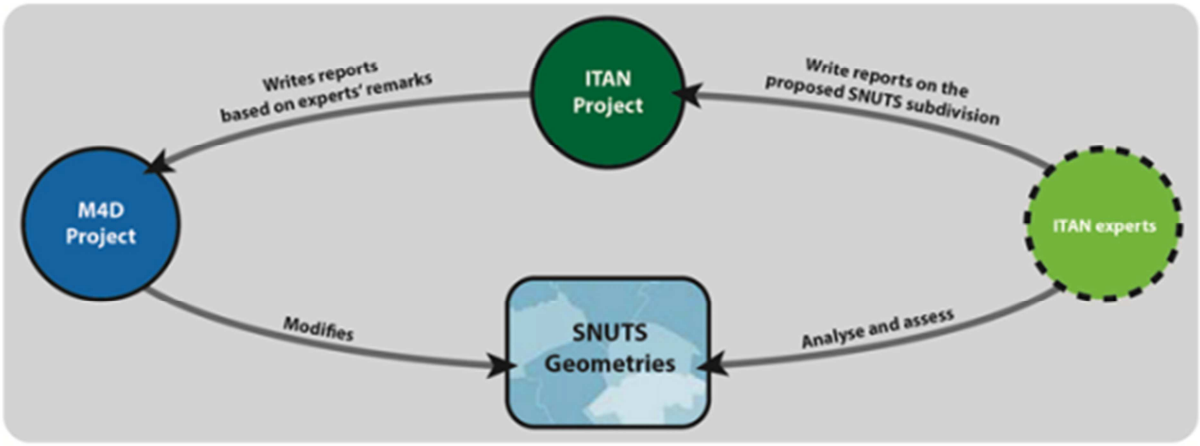
1°) ITAN scales of analyses and the "SNUTS" nomenclature

To be properly analysed, all the targeted territories had to be subdivided following the same methodology so as to perform comparable analyses of these territories. This methodology is called "SNUTS", for "Similar to NUTS". In the framework of the M4D project, a territorial division has been created for the ENCs. It uses the same classification criteria than the NUTS, the Nomenclature of Territorial Units for Statistics, the Eurostat hierarchical system for dividing up the EU space. This territorial division "SNUTS" allows the comparison between the EU space and the ENCs, and between the ENCs.

These seamless all-embracing geometries referred to as SNUTS has been built on *existing administrative levels* in the targeted countries. This choice ensures further updating phases of the database and therefore the long-term sustainability the ITAN project is aiming for. However, the ITAN project has tried to improve the SNUTS nomenclature. That is why the first duty of external experts hired within the project was to assess the territorial subdivision. In addition to collecting data, they had a mission to tag errors and suggest changes so that the SNUTS would be more relevant for the country. The SNUTS nomenclature has been validated by each expert so as to be not only based on statistical criteria but it also take into account historical, geographical analysis and latest changes in the administrative division.

[10] "MEDSTAT III - Statistical cooperation" strengthens the capacity of the relevant authorities in the Mediterranean Partner Countries to collect updated, timely and relevant statistics, which ensure reliability and coherence. See http://www.enpi-info.eu/mainmed.php?id=305&id_type=10

Figure 1-4 - Improving the SNUTS nomenclature



The ITAN project analyses the targeted territories on the SNUTS 2 or/and SNUTS 3 scale (what we call "SNUTS 2/3"), due to the large range of countries' sizes. In a small country such as Lebanon, we use the SNUTS 3 level which is the only one available below the country level (that always equals the SNUTS 0 level). In a larger country such as Russia, we use the SNUTS 2 level: it is the only existing level that complies with both the feasibility of the ITAN partner to collect data and the readability of the ITAN maps of this very large country (the covered area of the country in the ENR macro-regional map-kit counts 65 SNUTS 2 units); moreover, the lower administrative and statistical level, the raion, is too small (similar to LAU[11] 1).

The delineation of such SNUTS is an iterative complex process. As an example, for Tunisia, ESPON M4D had firstly proposed a SNUTS 2 delineation which would fit with the classical Tunisian zoning. Then, the ITAN national expert suggested, in compliance with recent experts and public administration's work in the country, the creation of a new SNUTS 2 as "district of Tunis"[12] which would fit with the Tunis urban area, in order to replace the first delineation that encompassed Bizerte and Nabeul. Despite this new territorial subdivision makes difficulties for data reading, it actually matches the reality of the urban regions of Tunis, Nabeul and Bizerte.

[11] Local administrative units
[12] http://www.augt.gov.tn/index.php?option=com_content&view=article&id=59&Itemid=88&lang=fr

Figure 1-5 - SNUTS delineation's complex process. The case of north-eastern Tunisia

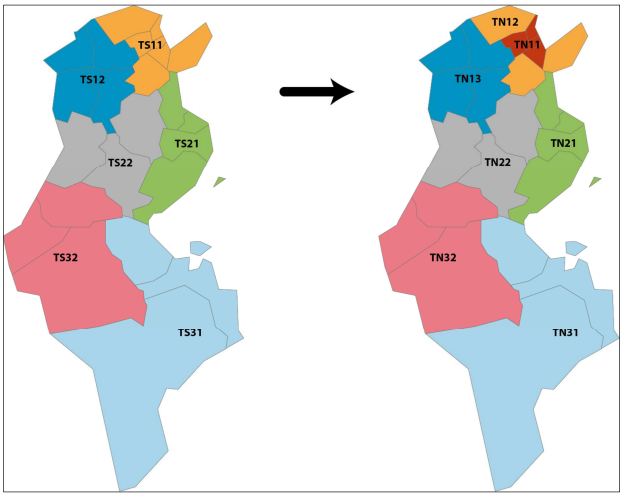
First subdivision (M4D)

TN11	Nord-Est
TN111	Tunis
TN112	Ariana
TN113	Ben Arous (Tunis Sud)
TN114	Manubah
TN115	Nabeul
TN116	Zaghouan
TN117	Bizerte

New subdivision proposed by ITAN

TN11	Tunis district
TN111	Tunis
TN112	Ariana
TN113	Ben Arous (Tunis Sud)
TN114	Manubah

TN12	Nord-Est
TN121	Nabeul
TN122	Zaghouan
TN123	Bizerte



Source: CIST

Some of ITAN analyse were made at a larger SNUTS level (SNUTS 0 or 1) than expected when the data for SNUTS 2 or 3 levels were not available. Some analysis were performed at the SNUTS 0 scale when the national scale was relevant for specific analyses. Each ITAN partner also worked at a more local scale in the case study analyses.

The ITAN geometries have been created by the M4D team at two levels of generalisation: one is designed for mapping purposes, the other one for GIS calculations (but only at SNUTS 2 or 3 levels).

2°) ENCs Geometries' inventory

The SNUTS delineation corresponds to different geographical and institutional realities from country to country. It does not make much difference on the maps, but it makes a big difference when it comes to interpret the maps for operational matters. The table below gives an insight[13] of the institutional nature and competences of the territorial units in each ENC, and, basically, it gives the name of those divisions in the framework of the SNUTS nomenclature.

[13] A more detailed presentation is made for the contries of the Baltic Sea region in section 4.3.3.

Table 1-2 - ENCs geometries inventory and local competencies, first step

Neighbourhood	*Country*	*Subdivision*	*Number of entities*	*SNUTS level*	*Codification*	*Date of present dividing*	*Self-government*	*Self-government estimation /10*
South-East	Albania	Country	1	0	AL			
South-East	Albania	Country	1	1	AL0			
South-East	Albania	Country	1	2	AL00			
South-East	Albania	Prefecture	12	3	AL00x	1938	decentralisation raising since 1995	5
Mediterranean	Algeria	Country	1	0	DZ			
Mediterranean	Algeria	EPT[14]	9	1	DZx	1988		
Mediterranean	Algeria	EPT	9	2	DZx0	1988		
Mediterranean	Algeria	Wilaya	48	3	DZx0x	1984	very weak	0
East	Armenia	Country	1	0	AM			
East	Azerbaijan	Country	1	0	AZ			
East	Belarus	Country	1	0	BY			
East	Belarus	Country	1	1	BY0			
East	Belarus	Voblast	7	2	BY0x	1960	weak : centralized state	2-3
South-East	BH*	Country	1	0	BA			
South-East	BH*	Country	1	1	BA0			
South-East	BH*	District	1	2	BA0x		effectively self-governing	10
South-East	BH*	Political entity	2	2	BA0x			
South-East	BH*	Region	7	3	BA03x	1996		
South-East	BH*	Canton	11	3	BA0xx	1995	strong	10
South-East	Croatia	Country	1	0	HR			
South-East	Croatia	Country	1	1	HR0			
South-East	Croatia	Region	3	2	HR0x	1995		
South-East	Croatia	County	21	3	HR0xx	1995	strong	7
Mediterranean	Egypt	Country	1	0	EG			
Mediterranean	Egypt	Region	4	1	EGx			0
Mediterranean	Egypt	Governorate	27	2	EGxx	2011		0
North	Faroe Islands	Autonomous region	1	0	FO			
South-East	FYROM**	Country	1	0	MK			
South-East	FYROM**	Country	1	1	MK0			
South-East	FYROM**	Country	1	2	MK00			
South-East	FYROM**	Statistical region	8	3	MK00x			
East	Georgia	Country	1	0	GE			
North	Greenland	Autonomous region	1	0	GL			
Mediterranean	Israel	Country	1	0	IL			
Mediterranean	Israel	Country	1	1	IL0			
Mediterranean	Israel	District	6	2	IL0x		strong	5-7
Mediterranean	Israel	Sub-district	15	3	IL0xx		strong	5-7
Mediterranean	Israel	Settlements	1	3	ILXXX		strong	5-7
Mediterranean	Jordan	Country	1	0	JO			
Mediterranean	Jordan	Country	1	1	JO0			

[14] *Espace de programmation territoriale*

Neighbourhood	*Country*	*Subdivision*	*Number of entities*	*SNUTS level*	*Codification*	*Date of present dividing*	*Self-government*	*Self-government estimation /10*
Mediterranean	Jordan	Region	3	2	JO0x			
Mediterranean	Jordan	Governorate	12	3	JO00x		very weak	0
South-East	Kosovo***	Country	1	0	XK	2000		
South-East	Kosovo***	Country	1	1	XK0			
South-East	Kosovo***	Country	1	2	XK00			
South-East	Kosovo***	Region	7	3	XK00x			
Mediterranean	Lebanon	Country	1	0	LB			
Mediterranean	Lebanon	Country	1	1	LB0			
Mediterranean	Lebanon	Country	1	2	LB00			
Mediterranean	Lebanon	Governorate	6	3	LB00x		mean	5?
Mediterranean	Libya	Country	1	0	LY			
Mediterranean	Libya	Country	1	1	LY0			
Mediterranean	Libya	No official existence	3	2	LY0x		strong trends toward decentralisation	
Mediterranean	Libya	Shabiyat	22	3	LY00x	2010		
East	Moldavia	Country	1	0	MD			
East	Moldavia	Country	1	1	MD0			
East	Moldavia	Country	1	2	MD00			
East	Moldavia	Republic	2	3	MD00x		Transnistria is de facto independent	10
South-East	Montenegro	Country	1	0	ME			
East	Montenegro	Country	1	1	ME0			
East	Montenegro	Country	1	2	ME00			
East	Montenegro	Country	1	3	ME000			
Mediterranean	Morocco	Country	1	0	MA			
Mediterranean	Morocco	No official existence	3	1	MAx			
Mediterranean	Morocco	Region	16	2	MAxx	2009	weak	2
Mediterranean	Morocco	Province	75	3	MAxxx	2009	very weak	0
Mediterranean	OPT****	Country	1	0	PS			
Mediterranean	OPT****	Country	1	1	PS0			
Mediterranean	OPT****	Region	2	2	PS0x		Gaza is de facto independent from the Palestinian authority	10
Mediterranean	OPT****	Governorate	16	3	PS0xx		weak	?
East	Russia	Country	1	0	RU			
East	Russia	Federal okrug	8	1	RUx	2008		5
East	Russia	Avtonomnyy oblast	1	2	RUxx	2008		5
East	Russia	Avtonomnyy okrug	2	2	RUxx	2008		5
East	Russia	Federal city	2	2	RUxx	2008		5
East	Russia	Kray	9	2	RUxx	2008		5
East	Russia	Oblast	46	2	RUxx	2008		5
East	Russia	Respublica	21	2	RUxx	2008		5
East	Russia	other	3	2	Ruxx	2008		5
South-East	Serbia	Country	1	0	RS			
South-East	Serbia	Statistical Functional Territorial	2	1	RSx			

Neighbourhood	*Country*	*Subdivision*	*Number of entities*	*SNUTS level*	*Codification*	*Date of present dividing*	*Self-government*	*Self-government estimation /10*
		Unit						
South-East	Serbia	Statistical region	4	2	RSxx	2009		
South-East	Serbia	Statistical area (admin. District)	24	3	RSxxx	2009	none	0
Mediterranean	Syria	Country	1	0	SY			
Mediterranean	Syria	Country	1	1	SY0			
Mediterranean	Syria	Governorate	14	2	SY0x		weak, centralized state	0
Mediterranean	Syria	District	63	3	SY0xx			
Mediterranean	Tunisia	Country	1	0	TN			
Mediterranean	Tunisia	No official existence	3	1	TNx			
Mediterranean	Tunisia	Planning region	7	2	TNxx			
Mediterranean	Tunisia	Governorate	24	3	TNxxx		weak (raising?)	2
Mediterranean	Turkey	Country	1	0	TR			
Mediterranean	Turkey	Economical region	10	1	TRx	2002		
Mediterranean	Turkey	Economical sub-region	26	2	TRxx	2002		
Mediterranean	Turkey	Province	81	3	TRxxx	2000	weak	2-3
East	Ukraine	Country	1	0	UA			
East	Ukraine	Country	1	1	UA0			
East	Ukraine	Oblast	24	2	UA0x			2-3
East	Ukraine	City of national significance	2	2	UA0x			2-3
East	Ukraine	Autonomous Republic	1	2	UA0x		Autonomous Republic of Crimea have its own parliament and government	2-3

Source : IGEAT 2014

(*) Bosnia and Herzegovina
(**) The Former Yugoslav Republic of Macedonia
(***) under UNSCR 1244/99
(***) Occupied Palestinian territory

1.3.5. Data collection: choice of the collected data, availability and database structure

The first step of the project was to identify the statistical data to collect at the local level. It has been divided in two categories: “core data” (the project’s priority), and “other desired data” (the further data we hoped collecting once the core data collected, see Annex 3). We describe the process quite in detail because it could show useful for any further project dedicated to data collection in that kind of countries. The ITAN TPG hopes that what it learnt by trial and error will be relevant for other teams.

1°) Assessing data availability

To collect relevant and reliable data in the targeted countries for the three *core data* sections Demography, Society and Economy, we worked in close collaboration with the external experts we hired to help us finding the data and get a better overall understanding of it. In the first phase of the project, we identified the data available online or through statistical yearbooks. Not all the targeted data for every country was available at the desired scale (SNUTS 2/3). In the process of finding the experts to work with, we created a document entitled Data assessment table (DAT). It was shaped to assess data availability and reliability, as well as the available scales, sources and time period coverage. It was both filled in by the ITAN team in charge of the country and by the external expert.

Figure 1-6 - Extract of the Occupied Palestinian Territory Data assessment table (DAT)

				TO BE FILLED BY THE EXPERT					*NOT* TO BE FILLED BY THE EXPERT
Topic	Dataset name	Included data	Definition	Availbility	Time period coverage	Scale	Sources	Observations	What we (CIST) found on the data producers' websites
cf.subcontract proposal project			*for the dataset's objectives*	*yes or no*	*years*	*regions, provinces,...*	*institution, reliability ...*	*comment on the dataset, the methodology, ...*	*comment on the dataset*
Demography	Population	sex, age, urban vs. non-urban	Total population, by sex, age; urban and rural population	Yes	1997 and 2007 and also the projected data are available	locality ,Governorate and national	PCBS		Total population, by sex and age group in 1997 in 2 Regions. By sex and governorate in 1997. By localities within the 16 governorates, in 1997 and 2007 (localities, Jerusalem is missing). Natives, and foreign-born Palestinians in 2007 in Regions. Characteristics of Urban and Rural Areas in the Palestinian Territory (July 2003, Khalil Motaw'e Amro, Dr. Othman Sharkas, published by the Palestinian Central Bureau of Statistics).
	Large cities population		population in cities > 1 million inhabitants	no				there is no cities in the oPt with this number of population	Not found
	Deaths	sex, age	Total deaths, if possible by sex and age	yes	yearly Based	Governorate	Ministry of Health and Arij		Not found
	Life expectancy	sex	Number of years an individual is expected to live at birth, if possible by sex	yes	yearly Based	Governorate	Ministry of Healt and Arij		Not found
	Births		Total number of births	Yes	yearly Based	Governorate	Ministry of Health and Arij		Only found for births in 12 months preceding the 2007 census, in 2 Regions.

1 — Same contents for each country

3 — The expert assesses the data availability

2 — Data availability identification

1 – The targeted data was specifically explained so the expected indicators to collect would be fully understood by everyone. For instance the "population" dataset gathered data for total population, population by sex and age (age pyramids) as well as urban and rural populations.
2 – The ITAN team had to fill the last column of the document: it summarised the information on the data we could find in English (in this specific situation we found data in Arabic but its quality could not be assessed by us, so we did not mention this data in the column filled with our comments).
3 – The expert then had to fill in the five remaining columns (availability, time period coverage, scales, sources and observations) to detail which data s/he had access to within the time frame of the ITAN project. This document allowed us to evaluate the opportunity of working with the identified expert, and to make sure we all agreed on the specific data to find and collect.

2°) Shaping the ITAN database

We gathered a large number of datasets from different sources, with a wide variety of data and data types entered by a large number of people. To ease the building process of the ITAN database and deliver data to the ESPON database, we organised the whole data collection process by carefully defining each of its steps. That is why we designed technical documents to make sure the data and the metadata would be entered properly. The following documents have been delivered to all the ITAN teams and external experts: the Data Collection Manual, ten prefilled data files for each ITAN country, the predefined data codes (ITAN_DAT_Codes), the Metadata Specifications (document created by the M4D team).

The data collection manual

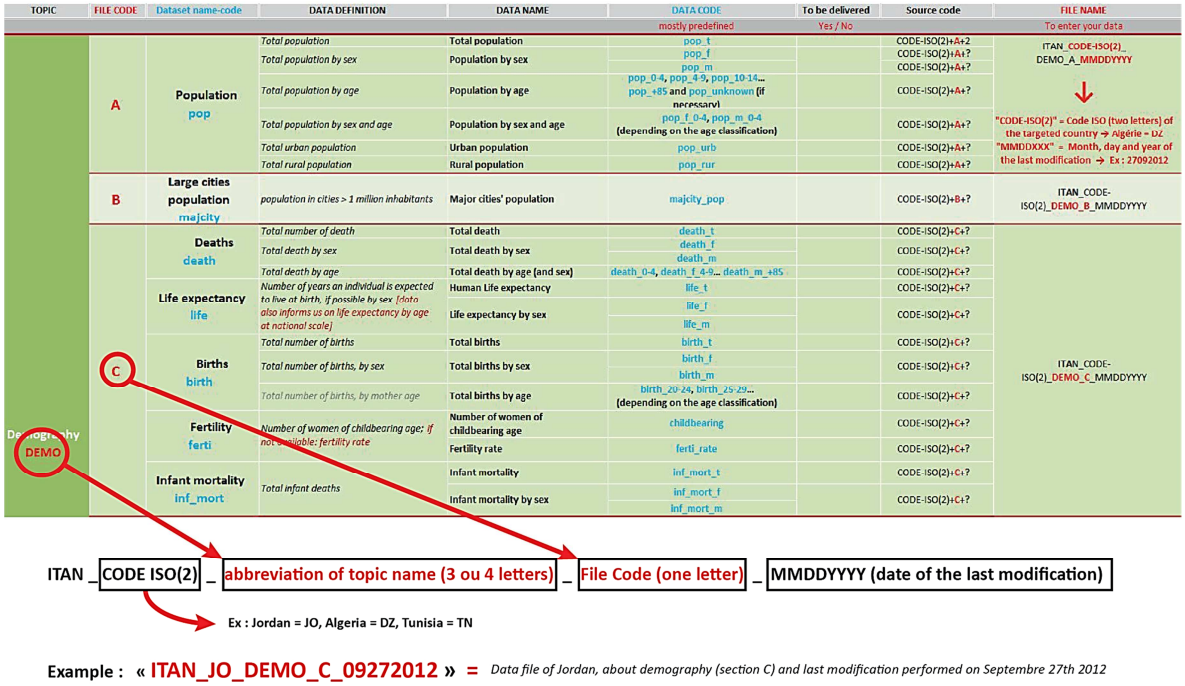
It explains how to enter the data and the associated metadata. The manual is organised in four sections: The main rules to follow; Explanation of the predefined data codes ("ITAN_DAT_Codes" document); Presentation of the data files to fill; List of supports and documents to deliver.

Ten prefilled data files for each ITAN country

To organise the data collection, all the core data have been subdivided in ten sections. One section of data has to be entered in one data file. We built ten prefilled data files for each ITAN country using the SNUTS nomenclature (unit codes, name, and version) and the ESPON data file template. By shaping these files, we made sure all the files would follow the same rules and therefore (i) we could know where to find a specific data – for instance total population of Jordan would be found in the file entitled ITAN_JO_DEMO_A_XXXXXXXX; (ii) we would facilitate the further gathering process of the data files.

Figure 1-7 - Which data has to be entered in which file?

Codification structure of each data file



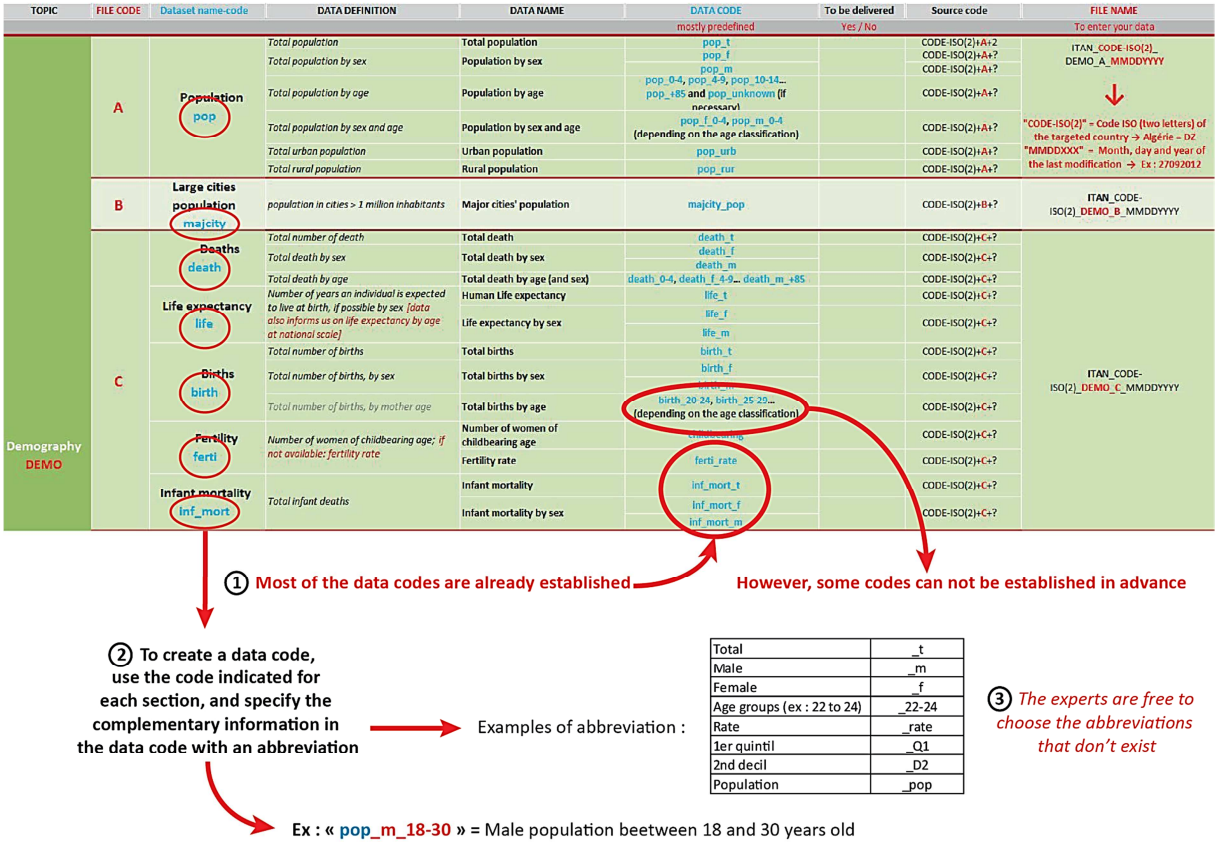
TOPIC	FILE CODE	Dataset name-code	DATA DEFINITION	DATA NAME	DATA CODE	To be delivered	Source code	FILE NAME
					mostly predefined	Yes / No		To enter your data
Demography DEMO	A	Population pop	Total population	Total population	pop_t		CODE-ISO(2)+A+2	ITAN_CODE-ISO(2)_ DEMO_A_MMDDYYYY
			Total population by sex	Population by sex	pop_f		CODE-ISO(2)+A+?	
					pop_m		CODE-ISO(2)+A+?	
			Total population by age	Population by age	pop_0-4, pop_4-9, pop_10-14... pop_+85 and pop_unknown (if necessary)		CODE-ISO(2)+A+?	
			Total population by sex and age	Population by sex and age	pop_f_0-4, pop_m_0-4 (depending on the age classification)		CODE-ISO(2)+A+?	"CODE-ISO(2)" = Code ISO (two letters) of the targeted country → Algérie = DZ "MMDDXXX" = Month, day and year of the last modification → Ex : 27092012
			Total urban population	Urban population	pop_urb		CODE-ISO(2)+A+?	
			Total rural population	Rural population	pop_rur		CODE-ISO(2)+A+?	
	B	Large cities population majcity	population in cities > 1 million inhabitants	Major cities' population	majcity_pop		CODE-ISO(2)+B+?	ITAN_CODE-ISO(2)_DEMO_B_MMDDYYYY
	C	Deaths death	Total number of death	Total death	death_t		CODE-ISO(2)+C+?	ITAN_CODE-ISO(2)_DEMO_C_MMDDYYYY
			Total death by sex	Total death by sex	death_f		CODE-ISO(2)+C+?	
					death_m		CODE-ISO(2)+C+?	
			Total death by age	Total death by age (and sex)	death_0-4, death_f_4-9... death_m_+85		CODE-ISO(2)+C+?	
		Life expectancy life	Number of years an individual is expected to live at birth, if possible by sex (data also informs us on life expectancy by age at national scale)	Human Life expectancy	life_t		CODE-ISO(2)+C+?	
				Life expectancy by sex	life_f		CODE-ISO(2)+C+?	
					life_m		CODE-ISO(2)+C+?	
		Births birth	Total number of births	Total births	birth_t		CODE-ISO(2)+C+?	
			Total number of births, by sex	Total births by sex	birth_f		CODE-ISO(2)+C+?	
					birth_m		CODE-ISO(2)+C+?	
			Total number of births, by mother age	Total births by age	birth_20-24, birth_25-29... (depending on the age classification)		CODE-ISO(2)+C+?	
		Fertility ferti	Number of women of childbearing age; if not available: fertility rate	Number of women of childbearing age	childbearing		CODE-ISO(2)+C+?	
				Fertility rate	ferti_rate		CODE-ISO(2)+C+?	
		Infant mortality inf_mort	Total infant deaths	Infant mortality	inf_mort_t		CODE-ISO(2)+C+?	
				Infant mortality by sex	inf_mort_f		CODE-ISO(2)+C+?	
					inf_mort_m			

The predefined data codes

At the end of the data collection, the ITAN teams were in possession of hundreds of data files. To facilitate the database management, all the data codes (names of the variables in the database), the source labels (codes which bind each data with a source in the ESPON database) and the name of each data files have been predefined in the ITAN_DAT_codes document. This document looked like the "DAT" document, but we added information to shape the data and source label codes the experts had to use. This step was of utmost importance to make sure: (i) we would minimise the potential number of errors; (ii) we would not encounter redundancy in the numerous files we would gather; (iii) we would facilitate the harmonisation process that was performed after we got all the filled data files back. Let's make the (ii) well understood: (10 data files)*(24 countries) = 240 data files; we got 24 times the data entitled "total population"; its code would always be "pop_t" and the associated source label would always include the ISO code for the country, the letter A (referring to the section of the demographic data dealing with total population) and a letter or number. This was the only way to make sure we would not have to deal with same source labels for different sources, and different data codes for the same data once we would gather all the filled in data files.

Figure 1-8 - How to name a data code

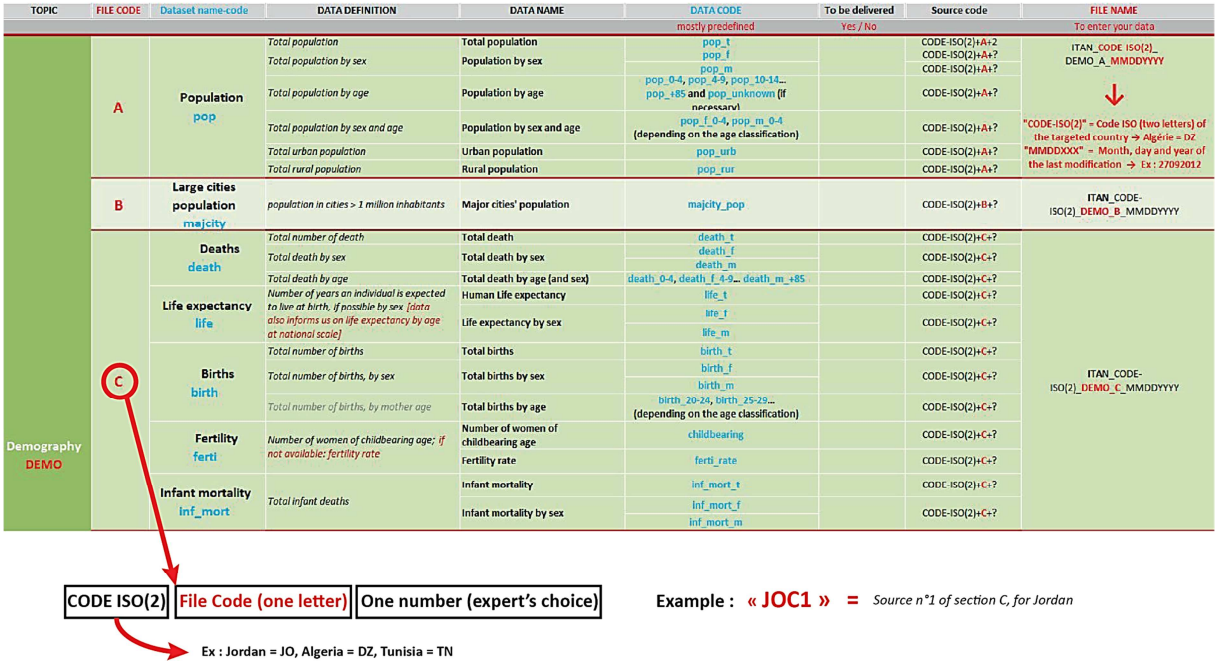
Codification structure of each data code



To create a data code, we had to use the dataset code and specify the complementary information with an abbreviation. Ex: **pop_m_18-30** = Male population between 18 and 30 years old.

Figure 1-9 - How to name a source label

Codification structure of each source label



The Metadata Specifications

Even if they were well described in the Data collection manual, the ESPON metadata could be difficult to understand and to fill in because a lot of information had to be detailed. That is why we also used the Metadata Specifications document that is the reference document for the ESPON DB designed in the ESPON M4D project.

3°) Which data?

Core data

The core data are key information to build an integrated analysis of the ENRs. Collected with detailed metadata, they helped to shape comparable and basic indicators for every country. These data were gathered in three main themes of territorial analysis: demography, society and economy.

The “other desired data” cover the topics of environment, health, economy (such as investments at local scale but also R&D or the use of Internet and computers) and local flows (domestic and international). The crucial ones are those on flows, because today’s territories are more and more understandable according to the link they have with other territories. The problem is that this kind of data is hardly available, even in European countries. We acknowledge that environment is a key issue, nevertheless (i) in the ENCs these data are hardly available and comparable from one country to another, and (ii) the fundamental task of ITAN was to collect basic socio-demographic data as the first step of what the TPG hopes will be long run research series on the neighbourhoods’ territories.

Regarding all these issues, the priority was given to collecting the data identified as core data to build the first DB for the ENCs at the SNUTS 2/3 level, which allowed comparative analyses between ENCs and between them and the ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland). The other desired data were only collected and processed once we fulfilled our expectations regarding the core data.

Flow data

The flow national data were taken from diverse world institutions databases (as indicated in Table **1-3**) and processed to be analysed. Not all the databases foreseen in the ITAN Inception Report could be used for some were incomplete (tourism – especially in South Mediterranean countries, or migratory flows), or redundantly based on others (like the remittances data that is actually inferred from the migration stocks).

All the databases listed below have a basic structure of the type: "origin * destination * time * value", and have been harmonised so as to have the same country codification everywhere. In addition, three information have been added in each data file to code (i) the membership to the EU, (ii) the identification of the ENC, (iii) the world region of the country according to the WUTS-3[15] classification.

The following main treatments have been achieved for the different types of flows:

1) the database on the trade of goods is based on the IMF data. It has been standardised with Cepii's "Chelem" DB because the latter, although covering less countries, fluctuates less through the years. Chelem data were also used to estimate missing data, especially trade between old communist countries before 1990
2) the Chelem DB is a very detailed DB providing values for 147 categories of goods. We have used it for the different energy products (Coals, Coke, Crude oil, Refined petroleum products, Natural gas, and Electricity). All the countries of the ITAN project are present in the DB but not all of them are energy sellers of course
3) Foreign Direct Investments data comes from UNCTAD. Data have been completed by national sources for several countries missing in the database. When this is the case, we always kept the total FDI from the UNCTAD database. Because FDI have important variations from one year to another, our data are averages for 5- or 3-years period of time
4) Development Aid is a combination of different transfer accounting (loan cancellation, direct aid…), and we have used the Net aid transfer (NAT) which is a net result. Because of this, some annual values of NAT are negative and we simply set them to zero
5) the Official airline guide (OAG) DB provides all the Air traffic connection (i.e. offer) between the airports planned in January for the year. Air traffic is very sensitive to the demand and hence we could consider the offer as a significant indicator of real flows. We have summed all the seats offered on any airport connection at the country level
6) the World Bank provides on migratory stocks for all countries between 1960 and 2010 on a decennial base.

[15] "World unified territorial system": derived from the ESPON Europe in the World project, WUTS is a nomenclature for grouping the countries in a hierarchic structure. On one end WUTS-0 stands for the world and on the other end WUTS-5's stand for the countries; intermediate levels represent regional groupings.

Table 1-3 - Data sources used in the flow study

Flow	*Provider*	*Time covering*	*Geographical covering*	*Note*
Goods trade	IMF	Yearly, 1967 - 2011	Country level, 213 x 218	Standardised with Chelem
Energy trade	Chelem (Cepii)	Yearly, 1967 - 2010	Country level, 100 x 100	6 types of energy
Migration stocks	World Bank	1960, 1970, 1980, 1990, 2000, 2010	Country level, 238 x 237	Stocks instead of flows, for better geographical covering
FDI	UNCTAD + IGEAT[16]	Periodically, 1998 - 2008	Country level, 230 x 121	Only 2 periods : 1998/2002 and 2006/2008
Development aid	OECD + CGD	Yearly, 1960 - 2010	Country level, 165 x 44	Net Aid Transfer
Air traffic	OAG	Yearly, 1991 - 2012	Airport level, countries : 234 x 234	Based on seats number in January

The choice of migratory stocks provided by the World Bank is motivated by the difficulty to get data on actual flows. This can be easily understood in the case of Tunisian data. Indeed the Tunisian statistics system has taken into account the key importance of migratory data at the era of globalisation. A specific module on “international migration” has been introduced for the first time in the 2004 census, documenting the departures abroad between 1999 and 2004 and counting the presence of family members abroad. In recent years, the Office of Tunisians abroad (OTE: *Office des Tunisiens à l’Étranger*), in collaboration with the ministry for Foreign affairs, has carried out on annual basis the update of a database covering Tunisians living abroad. Nonetheless, the statistical data available in this database are deemed to be defective due the wide development of non-migratory movements (tourism, pilgrim, business...). These data would be even more doubtful insofar as the illegal migration outflows which are visibly increasing and fast-growing still not captured.

Data on migration give significance to the rising remittances phenomenon in several ENC’s economy. Those countries are among the most important countries in the world for the importance of remittances. This is particularly the case for Bosnia, Serbia, Moldova, Morocco, Jordan and Lebanon; in Egypt, informal transfers could be more than twice as big as the documented figures in

[16] *Institut de gestion de l'environnement et d'aménagement du territoire*

Table **1-4**. Remittances are, in the same time, a very valuable financial resource for local development, and a component of economies driven by rent (along with international aid or tourism) and not by production.

Table 1-4 - Inflows of remittances, chosen countries, 1980-2011

	US$ million 1980	*US$ million 2011e*	*% of the GDP 2010*
Bosnia Herzegovina	..	2 021	12,9%
Serbia	..	3 719	10,4%
Moldova	..	1 562	23,2%
Ukraine	..	6 619	3,9%
Russia	..	5 615	0,4%
Morocco	1 054	7 081	6,8%
Algeria	406	1 942	1,3%
Tunisia	319	1 955	4,4%
Egypt	2 696	14 213	3,0%
Jordan	794	3 554	12,8%
OPT	..	1 106	..
Lebanon	..	7 558	19,6%
Syria	774	1 988	2,6%
Turkey	2 071	1 235	0,1%
Senegal	77	1 442	11,0%
Mexico	1 039	23 610	2,1%
El Salvador	49	3 636	15,7%
Nicaragua	..	920	11,7%

China	..	62 497	0,8%
Malaysia	..	1 235	0,5%
Thailand	383	3 994	0,9%
Vietnam	..	8 600	5,1%
Philippines	626	22 974	10,7%

Source : World Bank

When it comes to the infra-national scale, flow data are of utmost importance to understand the organisation of the ENCs' national territory. Yet, such data are very poorly documented. This can be seen in today's attempt to reshape the regional administrative organisation of Tunisia: the inter-censal migrations are the only data available to understand the interaction between territories (see below section 6.2.3). When infra-national data was available the ITAN TPG collected it; all too often the data was limited to the migratory balance, sometimes we had the absolute numbers of out- and in-migrants, but almost never the matrix origin * destination.

When it comes to international flows, data at local scale are the most difficult to provide, although they would be of great interest to understand international links between territories. Data on ports and airports approach it; ITAN modelled data on accessibility based on territorial access thanks to the transport system including major airports and ports.

The TPG used another very interesting database at local scale, on FDI, a database set up by Anima[17]. The individual data belong to Anima and are not releasable, but it still allows a striking view of the economic links of each local territory – at least for the Mediterranean ENCs since Anima is dedicated to this sole Neighbouring area. The TPG had to make a heavy work of verification of the database (which is documented sometimes with the corresponding number of employment and sometimes with the amount of the investment) and of geographical correspondence between the location of each FDI (with many ways of writing a place!) and our SNUTS definition. As it is this very valuable database gives information on the geographical origin of each investment, its type (brownfield, greenfield, acquisition, privatisation, joint venture, licenses and PPP[18]…), and its sector including corporate services or high tech industry which is very relevant for the analysis of the international links of local territories. The database exists for more than a decade but is really reliable only since 2008.

Media data

Geographical research has shown that the press is not a simple recorder of international events, but a player who selects information on a specific basis ([Grasland et al. 2012] give the example of the situation in the Middle East between 2006 and 2011). The theory of "agenda setting", at the crossroads between political science and media psycho-sociology, indicates that the power of the press consists of concentrating the public's attention on several key themes and, by doing this, turning its awareness away from other subjects [McCombs & Shaw 1993, 2002]. Voluntarily or involuntarily, "*news is first of all made for those who share the same social imagination*", Jean-Pierre Esquenazi [2002] points out, and the chosen events have to do with the daily life of the public [Koopmans & Vliegenthart 2011]. Newspaper articles are therefore territorial markers of a spatial perception and connection between the location of a fact and its media publication location. Our objective here is to concentrate on European media flows, defined as press articles published in a European country on the subject of one of the twenty-seven countries of the European Neighbourhood. The objective is to determine how the information circulating between the EU and its Neighbourhood is affected by media regionalisation.

To carry out this work, we considered Factiva, the press aggregator[19]. Factiva is a professional tool from Dow Jones & Company, a database of press and financial information with international

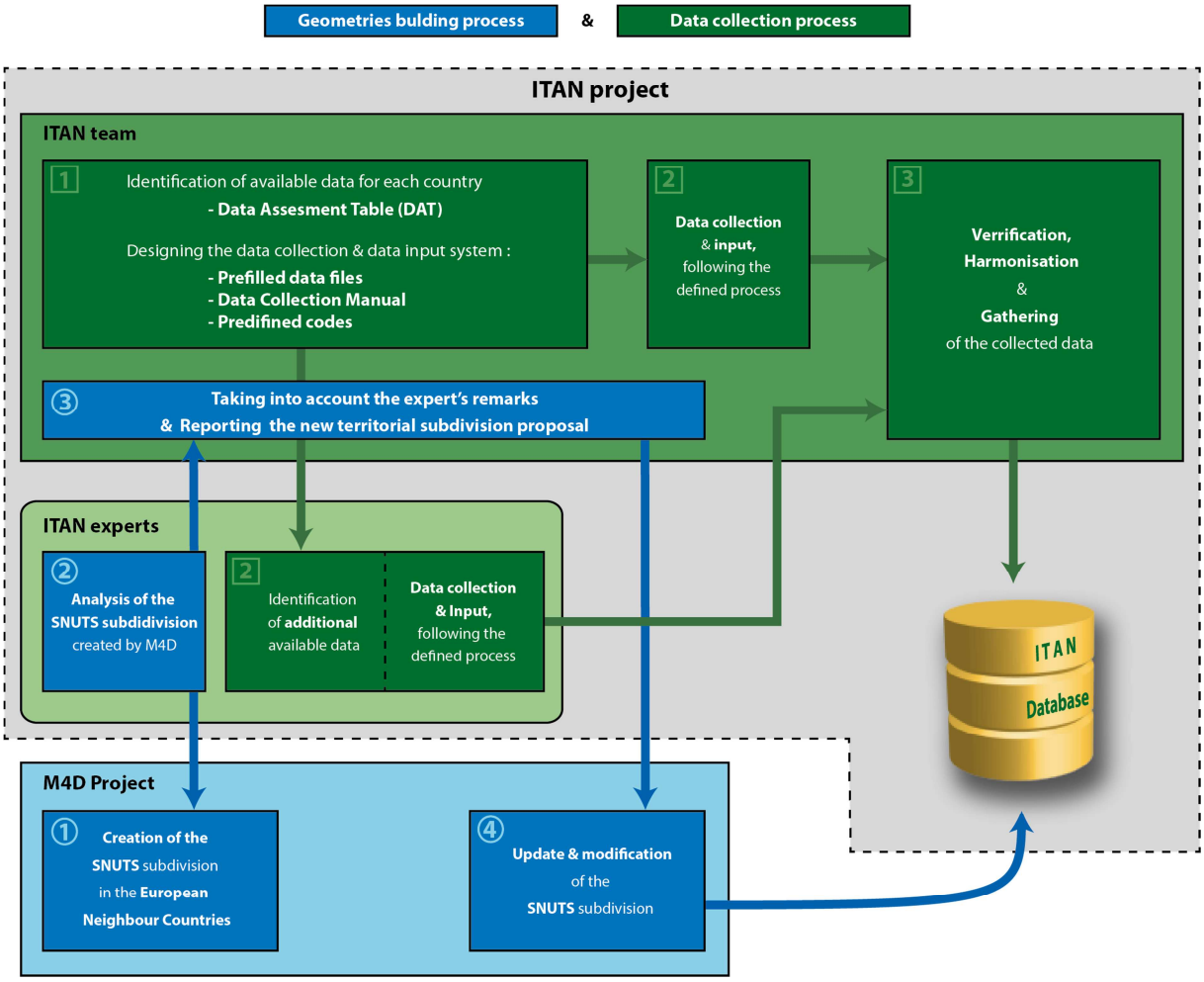
[17] ANIMA Investment Network (http://www.animaweb.org/) is a multi-country cooperation platform for economic development in the Mediterranean. The targeted sectors and themes are: promotion of the territories, new sectorial environment, innovation and entrepreneurship, responsible investment.
[18] Public-private partnership
[19] www.factiva.com . In ITAN we excluded from the database items related to financial markets and sports.

coverage. It provides access to more than 10 000 sources from more than 150 countries, in 22 languages: 2 100 international, national and regional newspapers through either daily editions or archives; 3 500 magazines which are either general or more specialised publications; press agencies and media programmes (transcriptions of television programmes). Factiva offers functions for research, broadcasting, and management of media information. It provides the possibility of researching, reading and using press articles, employing thematic, geographical and even linguistic keywords. Numerous scientific studies that need the consultation of a corpus of press articles nowadays use this successful tool. In the context of ITAN TPG, this aggregator provides access to a wide panel of European press, despite some limitations.

Grid data

ITAN processed continuous grid data of population density to generate a complete map of Europe and the neighbourhoods. The data was already available for many countries, but for some it derives from regional population data. Land cover was also provided as a continuous grid map for all the ITAN space, based on CORINE and other sources. Some computed variables such as connexity are presented too in a continuous grid form. All grids are at least with a resolution of 5x5 km.

Figure 1-10 - The ITAN DB process



1.3.6. Mapping: ENR coverage, projections, map-kits

1°) The ITAN map-kits

The ITAN project needed a macro-regional map-kit displaying Europe and its ENRs as well as specific map-kits for each of the Neighbourhood and for the case studies (Table **1-5**).

Working with the RIATE[20] team in charge of map-kit building within the ESPON Programme, we chose to centre ITAN macro-regional map-kit on the ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland) using the EPSG projection 3035[21], so the map will be easily readable for any European stakeholder. The other map-kits have been built with the same projection; we acknowledge that it makes the Eastern Neighbourhood layout not very common to read, but we wanted the reader to be used to this Neighbourhoods geography centred on the ESPON space (EU27, Iceland, Liechtenstein, Norway, Switzerland). Due to its Arctic location, the Northern Neighbourhood's map-kit has been built using a polar projection so the territories, including extra-European, can be displayed. Each map-kit's scale has been adjusted to improve the readability of the covered space.

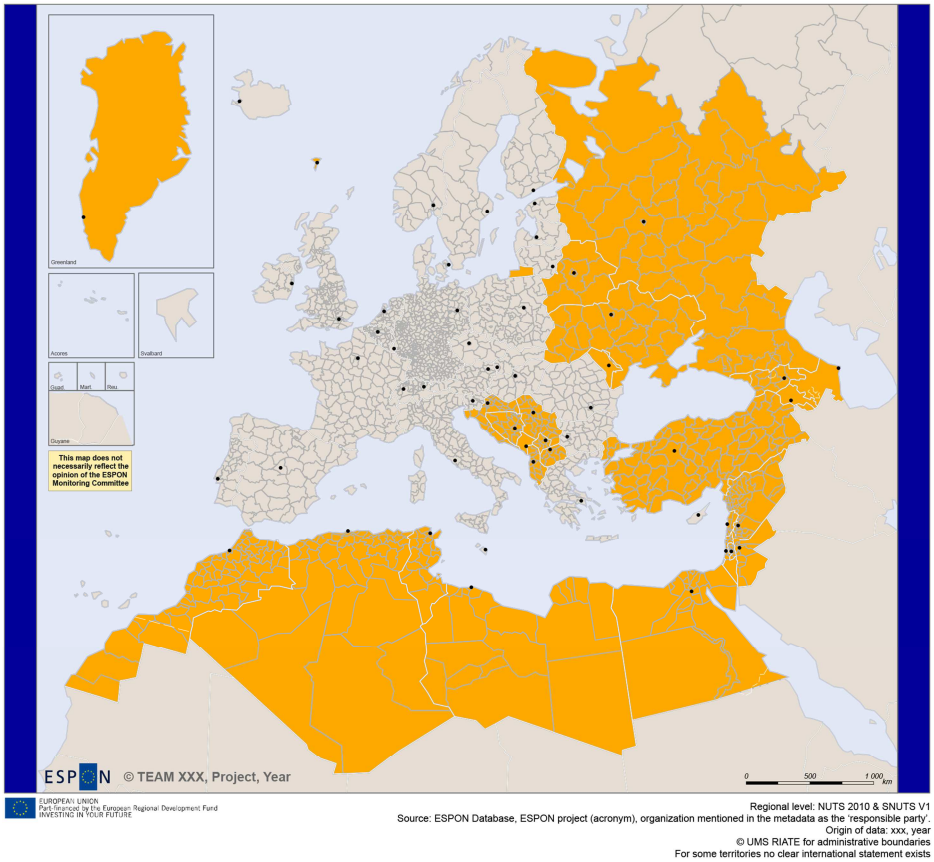
Table 1-5 - Presentation of ITAN map-kits

[20] *Réseau interdisciplinaire pour l'aménagement du territoire européen*
[21] Using the European Terrestrial Reference System 1989 - ETRS89 Lambert Azimuthal Equal Area projection with parameters: latitude of origin 52° N, longitude of origin 10° E, false northing 3 210 000.0 m, false easting 4 321 000.0 m.

Map-kit type	*Map-kit name*	*W.P.*	*Projection*
Macro-regional	ENRs	All	ESPG3035
Regional	Eastern Neighbourhood	W.P.3	ESPG3035
Regional	Northern Neighbourhood	W.P.4	Polar equal area
Regional	South-Eastern Neighbourhood	W.P.5	ESPG3035
Regional	Mediterranean Neighbourhood	W.P.6	ESPG3035
Case study	The Baltic Sea	W.P.3	TBD
Case study	The European Arctic	W.P.4	n/r
Case study	Western Balkans	W.P.5	n/r
Case study	The Black Sea	W.P.5	XX
Case study	Gibraltar	W.P.6	XX

The macro-regional map-kit – The ENRs

Map 1-4 - The macro-regional map-kit



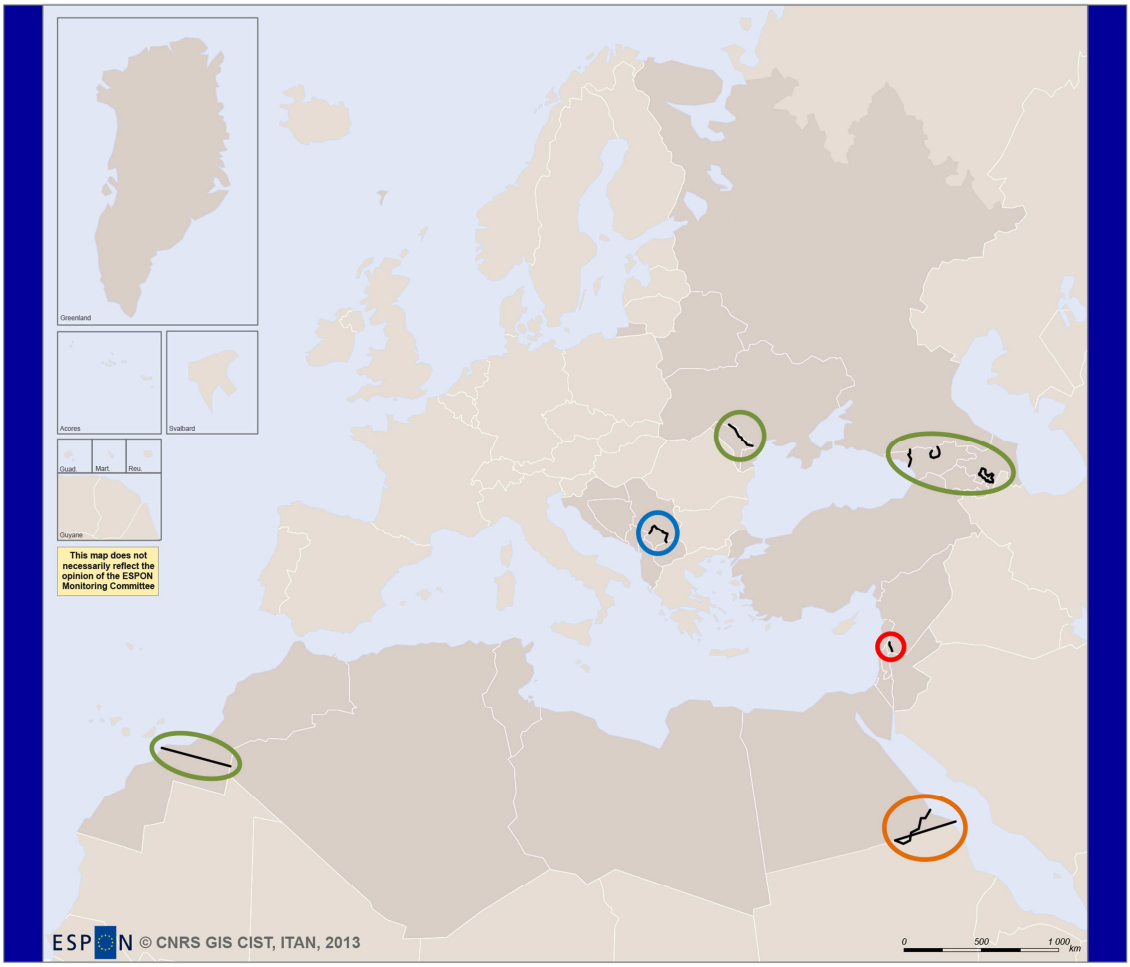
The ITAN project's area covers territories that are politically disputed (see a detailed analysis in the 2.2.3 section), hence the choices made, with the agreement of the ESPON CU, regarding how these territories are displayed on maps:

- the Occupied Palestinian Territory mapping follows the international cartographic norm of the United Nations.
- The Western Sahara issue was difficult to address: the UN cartography does not encompass it within the Moroccan national territory, which would make the dissemination of ITAN results towards the Moroccan partners impossible – whereas Morocco is certainly the Mediterranean

country the most thoroughly involved in the partnership with the EU; mapping the Western Sahara within Morocco national territory risks to make difficult the dissemination of ITAN's results towards the Algerian partners. The solution was to delineate both, when SNUTS 2 analysis was made, so as to have, at minimum, the Moroccan regions' delineation on the map – delineation highly acceptable for the Moroccan of course.

- The TPG had also to deal with Abkhazia (vis-à-vis Georgia); South Ossetia (vis-à-vis Georgia); Transnistria (vis-à-vis the Republic of Moldova); the Golan Heights (between Israel and Syria); the Hala'ib triangle (between Egypt and Sudan). We followed the EU statements to be able to properly display these territories on maps, even though there is no statement on the Hala'ib Triangle.
- As for this Hala'ib Triangle in particular, given the fact that Egypt is one of the ITAN ENCs and that our data at the Egyptian SNUTS scale encompass this area, we followed the Egyptian view but with a specific representation of the limits of this Hala'ib triangle as a fuzzy border.
- The cartographic representation of Cyprus followed the ESPON Programme recommendations.

Map 1-5 - Contested territories in ITAN Neighbourhoods were a specific decision for mapping had to be made



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Regional level: NUTS 0 & SNUTS 0
Source: ESPON project (ITAN), CNRS GIS CIST, 2013
Origin of data: The World Factbook 2013-14. Washington, DC: Central Intelligence Agency, 2013
© UMS RIATE for administrative boundaries
For some territories no clear international statement exists

Fuzzy Border	Territory controled by ...	Claim by...	Type of issue	International position :		Representation in ITAN maps		
Kosovo under UNSCR 1244/99		Serbia	Secession	Kosovo	ICJ	ESPON Rule	_____	0,15 pts
Abkhazia	Republic of Abkhazia	Georgia	Secession	Georgia	EU	White dotted line (long dash)	_ _ _ _ _	0,30 pts
Nagorno-Karabakh	Nagorno-Karabakh	Azerbaijan	Secession	Azerbaijan	EU	White dotted line (long dash)	_ _ _ _ _	0,30 pts
South Ossetia	Republic of South Ossetia	Georgia	Secession	Georgia	EU	White dotted line (long dash)	_ _ _ _ _	0,30 pts
Transnistria	Pridnestrovian Moldovian Rep.	Moldova	Secession	Moldova	EU	White dotted line (long dash)	_ _ _ _ _	0,30 pts
Western Sahara	Morocco	Sahrawi Arab Democratic Rep.	Secession claimed	"undetermined"		White dotted line (long dash)	_ _ _ _ _	0,30 pts
Golan Heights	Israel	Syria	Occupied territory	Syria	UNO	White, Thin, dotted line (dot)	.....	0,20 pts
Bir Tawil	Not claimed	Not claimed	Countries conflict	"undetermined"		White dotted line (long dash, two dots...)	_ ·· _ ·· _ ··	0,30 pts
Hala'ib Triangle	Egypt	Sudan	Countries conflict	"undetermined"		White dotted line (long dash, two dots...)	_ ·· _ ·· _ ··	0,30 pts

2°) The ITAN Mapping Guide

To make sure the maps of each Neighbourhood would be comparable, the ITAN TPG has agreed upon mapping rules for shared analyses (e.g. the same phenomenon had to be displayed with a same colour for the four Neighbourhoods). The ITAN Mapping Guide is provided in Annex 6.

1.3.7. Barriers for ITAN implementation – Territorial impact of the recent wars in the ENCs

Some ENCs have very recently experienced major unrest and even wars on their territory, which additionally deeply interact with their own neighbours, such as: the Lebanon civil war (1975-1990), the two *Intifadas* (1987 and 2000, the current situation being close to a permanent guerrilla between Israel and the Palestinians), the burst of the former USSR in 1991 and the various unrests which followed it:

- The war of Transnistria in 1992;
- the Chechnya wars (from 1994 to 2000, at least 100 000 deaths and maybe 200 000);
- the armed conflict in August 2008 between Georgia on one side, and Russia and the separatist South Ossetia and Abkhazia on the other;
- the Ukrainian crisis, which followed the Eastern Partnership Summit at the end of November 2013. The Annex 14 gives a territorial analysis of this crisis, and shows how important for the European decision-makers to be provided with territorial information on the neighbour countries.

The former Yugoslavia wars lasted from 1991 to 2001, and caused between 200 000 and 300 000 deaths and one million displaced people.

Since January 2011 the Arab spring has affected all the Mediterranean ENCs, in particular:

- Tunisia;
- Egypt, where the revolution made at least 500 deaths and where a civil war is not at stake but is not completely impossible;
- Libya where the civil war from February to October 2011 made around 30 000 deaths and provoked the outmigration of hundreds of thousands in the neighbouring countries (Egypt and Tunisia in particular). Libyan now faces a strong violent period that reminds the violence of its history. The Italian Fascist occupation is still in the memories: the occupation meant large population transfers and the corresponding plagues. Afterwards, Libyan people faced at the same time urbanisation and rentier-revenues till the war in 2011. The country has not had the time to establish a long-term capacity building process. Since the 2011 war, Libyan society is still featured by “reversibility”: everything is done and undone; everything is built and then fall in ruins. Everything reflects the Bedouin tent: quickly installed for a short moment in a space that never becomes a place. In the highly difficult context described in the Annex 8, the ITAN TPG managed collecting some local Libyan data, all the more valuable that we have demographic data before and after the war, which provides interesting insights on the territorial impact of the war.
- Syria, where the civil war is on-going since March 2011. In this report the analysis of the Syrian territory is made out of data and information that were prior to the civil war. The crisis that has overwhelmed the country since 2011 has seen more than 2,1 million Syrians flee to neighbouring states of Iraq (0,2 million), Turkey, and mostly Lebanon and Jordan (in each of those two countries the last figures of the UN-HCR are around 900 000), and more than 6 million within Syria in search of a safe refuge. Prior to the conflict, Syria was considered a transitional country in terms of health achievement in recent decades, with significant improvements in life expectancy and child mortality rates. As the Arab Reform Initiative states[22], the conflict has not only caused many casualties (perhaps 200 000 to-day), but also disrupted health systems that are essential for the nation’s future, with childhood diseases such as polio resurfacing, a number of hospitals being turned into refugee shelters, and knocked the economy down. Hence, the ITAN analysis should be understood as a statement of the pre-civil war territory, which will be helpful to measure the – very likely – disruption of the social and economic organisation of the Syrian space when compared to what the national territory will look like when the war is over.

[22] http://www.arab-reform.net/

Map 1-6 - Syrian' territories hold by the civil war's stakeholders

Cities controlled by the Syrian government Cities controlled by opposition forces
Cities controlled by Kurdish forces On-going conflict/unclear situation
Source: http://en.wikipedia.org/wiki/Syrian_Civil_War, Accessed on February 1st, 2014

1.3.8. Barriers for ITAN implementation – Geometries changes in a contentious recent history

Many countries of the European neighbourhoods have experienced huge changes in their territorial geometries over the last decades and sometimes the last century. The attempt to draw a delineation of territories similar to Europe's is all the more challenging that several ENCs do not benefit from a steady and well admitted territorial division. As an example, Lebanon territorial organisation, both at national and at local scale, was profoundly shaped in 1920 when France annexed the peripheral coastal area, the Beqaa Valley, the northern region, and Jabal Amil (southern Lebanon) to the *mutasarrifiyah* of Mount Lebanon to create Greater Lebanon. Before that, Lebanon had been politically and socially fragmented among the various Ottoman *vilayets* (provinces). Morocco still counts European enclaves, Ceuta and Melilla, which conquest dates back to the 15th century. When it became independent, in 1963, Algeria had to drastically reduce the number of communes (from 1 577 to 676) to tackle the lack of competent managers because of the leaving of the Europeans. This skill shortage has to be kept in mind to understand why the Mediterranean ENCs are so centralised; this is of course only one among other explanations but, for instance in the case of Tunisia, the choice of centralised public national bodies and delivery for water supply or electricity, was partly due to the need to concentrate the few competent managers left in the country at the ending of the French protectorate. Indeed, poor national governance explains also a lot of the geometries changes: the section 6.2.4 gives the example of the continuous changes which occurred in Libya, either during the colonial era, under Kadhafi's rule and since the 2011 war. The Annex 8 shows that one of the characteristics of the regional history of Libya is the instability of the internal boundaries.

In the former Yugoslavia, the territory, its delimitation and settlements have been largely modified during the wars. From 1991 (secession of Slovenia from the federation) to 2001 and even 2008, these territories went through combats, ethnic cleansing, massive migration, finally the multiplication of new republics replacing the former confederation with in-depth internal territorial reorganisation. The key dates of these wars are 1991–95 for the Croatian war of independence, 1992–95 for the Bosnian war (ended in December 1995 with the Dayton agreement), 1998–99 for the Kosovo war, 2001 for the insurgency in the Former Yugoslav Republic of Macedonia. In 2006 the Montenegrins voted for independence from the State Union of Serbia and Montenegro, and in 2008 Kosovo under UNSCR 1244/99 declared independence from Serbia and was recognised by 107 UN member states including 4 of the former Yugoslav states. As a result, the former Socialist Federal Republic of Yugoslavia has been divided into six countries which have all carried out territorial reforms in the framework of their state-building. For instance in Bosnia and Herzegovina, after 1995, the territorial structure was reformed according to the "Inter-Entity Boundary Line" with no continuity with the previous situation, assigning municipalities or part of municipalities to one of the two entities (Federation of Bosnia and

Herzegovina on the one hand and Republika Srpska on the other) in accordance with their ethnic composition.

Last, the end of the socialist system and the crises of the transition period have provoked political instability also in Albania. Everywhere in the Western Balkans the wars and unrest have led to administrative reforms thus deep changes in the nature and delineation of the statistical units.

As a result, the SNUTS nomenclature underwent by the TAN TPG revealed a complex process. This nomenclature had to be created for all the countries except for Croatia, the Former Yugoslav Republic of Macedonia, Montenegro and Turkey that were granted with official NUTS divisions as acceding and candidate countries to the EU.

In almost every country of the Neighbourhoods, changes continue to occur in the national territorial division: on 21 countries analysed at infra-national scale by ITAN, 5 were impacted by geometries changes since 1990, and 9 more since 2000. The ITAN project uses only the last version of the territorial division. Indeed, making the collected data from 1990s to 2010s fit in the current territorial units has been a difficult task.

Table 1-6 - The administrative geometries change in the ITAN ENCs

Geometries changes	*Eastern Neighb.*	*South-Eastern Neighbourhood*						*Mediterranean Neighbourhood*						
	RU	*AL*	*BA*	*HR*	*MK*	*RS*	*XK*	*EG*	*IL*	*LY*	*MA*	*PS*	*TN*	*TR*
Since 1990	x	x	x	x	x	x	x		x	x		x	x	x
Since 2000	x		x	x			x	x	x	x	x	x	x	

There are many examples of the difficulty to set up good time series due to these delineation changes. In Moldova, the number of *rayons* has varied between 60 and 18 during the Soviet period; at the time of independence there were 40 rayons, then during the first years of independence three administrative-territorial reforms took place. Approaching European standards, Moldova returned to the pre-Soviet administrative-territorial structure of 12 counties in 1998; but in 2003 the country returned to the rayon administrative system. Moreover, one of the two main regions of the country, Transnistria, is a breakaway state located on a strip of land between the River Dniester and the eastern Moldovan border with Ukraine. Since its declaration of independence in 1990, and especially after the War of Transnistria in 1992, it is governed as the Pridnestrovian Moldavian Republic (PMR), a state with limited recognition. Because of the Russian military contingent there, the European Court of Human Rights considers Transnistria “under the effective authority or at least decisive influence of Russia”. The territory's political status remains unresolved: it is an unrecognized but independent presidential republic with its own government, parliament, military, police, postal system, and currency.

The number and boundaries of Turkish provinces and districts have undergone radical changes. The number of districts increased from 636 in 1960 to 957 in 2011. These changes do not seem to follow a clear pattern, and it is hardly possible to track the changes. TurkStat has not published any data to allow comparisons with previous borders. These local changes affect the districts composition of the provinces which are the basic delineation for ITAN analysis of the Turkish territory.

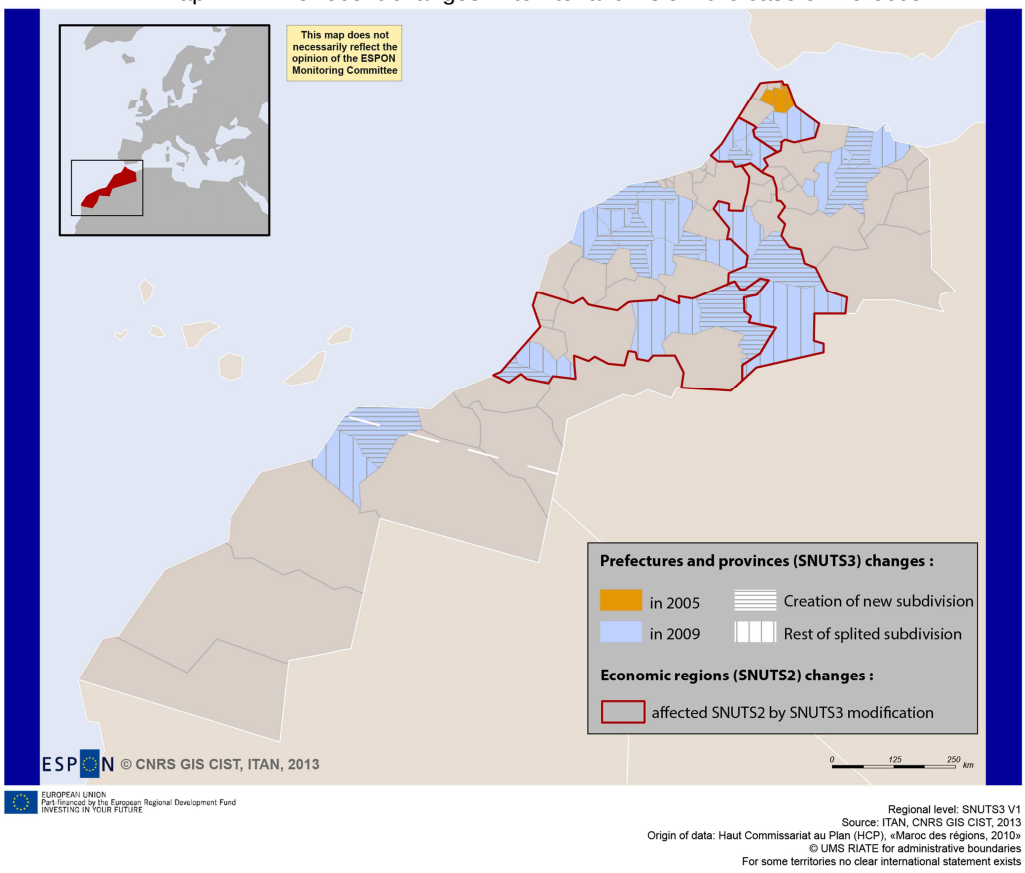
Likewise, the Moroccan territorial reform in the 2000s introduced new provinces to the previous organisation. More precisely, one prefecture (urban SNUTS 3) and thirteen provinces (rural SNUTS 3) were created respectively in 2005 and 2009. Some of the new provinces were created by a split of previous provinces or by re-arrangement. As a consequence, four SNUTS 2 (economic regions) have been impacted by this territorial restructuring. This implied for the TPG’s work a lot of time spent to check data, given that the same subdivisions’ names are used even though their geographical composition (in SNUTS 3) has changed; and inability to compare demographic and socio-economic data at infra-national scale (SNUTS 2 or 3) in time series. Due to the quality of Moroccan local data, it could be partially possible to rebuild the data corresponding to the previous provinces delimitations by aggregating municipal data (i.e. SNUTS 4 or 5); but it happens that most of the provinces kept their name even if their geographical limits changed, which shows very deceiving. Such a work was impossible within the ITAN timeframe but this demonstrates (i) the importance of on-the-ground works

in order to deeply understand the nature of the delineation changes even when official names and codes remain unchanged, and (ii) the need for further research on the ENCs at a finer scale than that of SNUTS 2/3.

Table 1-7 - Example of modification of territorial subdivision in Morocco

LEVEL	*Old M4D code*	*NAME*	*Detected problem*	*Status*	*New ITAN code*	*New Name*
SNUTS3	MA121	Al Jadida			MA121	Al Jadida
SNUTS3	MA122	Safi			MA122	Safi
			Province created in 2009	Split of E Al Jadida?	MA123	Sidi Bennour
			Province created in 2009	Split of Safi ?	MA124	Youssoufia

Map 1-7 - The recent changes in territorial division: the case of Morocco



In Russia there has been a change in boundary between Moscow city and Moscow oblast, etc. That kind of geometries changes is countless in the Neighbourhoods since 1990. Therefore we often had to deal with two sets of data for two censuses; to compare these data, we had to build specific methods in each country according to the types of geometries change. The SNUTS entities that have been set up were partially updated thanks to the ITAN national experts' remarks. The entire work was made in interaction with the M4D team to update the geometries as well as the map-kits.

Lebanon shows another case. In 2003, its parliament approved to establish two new governorates by splitting the governorates of the North into two, and that of Beqaa into two as well. But the corresponding application decrees were never developed and the political will to implement the

administrative division is lacking. But one can fear that further researches will have to cope with this coming new geometry change....

1.3.9. Barriers for ITAN implementation – Data difficulties, overall

Collecting a large number of data and data types is complex, especially to ensure the further harmonisation process. Encountered difficulties are many: access to data, quality and reliability of data and sources, heterogeneity in indicators definition and in basic territorial categories such as “urban” and “rural”.

1°) Access to data

In the ENCs which have been going through a major unrest in the recent years or still confront such situation especially in Libya and Syria, the TPG has encountered great difficulties to access to data. Even accessing to pre-crisis data proved to be a hard task, because in these countries the national statistics bodies are upset and the minimum safety of the working conditions not guaranteed.

Sometimes data simply does not exist. In the case of Lebanon, political reasons about the actual proportion of the various communities in the national population explain the absence of any recent census or comprehensive demographic surveys, with the last census held in… 1932. As the Lebanese political structure and institutions depend on a subtle balance between communities, namely Christians and Muslims, conducting a census has long been a very sensitive issue. Sample surveys provide the only option for estimating the number of residents in Lebanon, as well as to identify their demographic, health, immigration and other characteristics. But (i) surveys do not have the same level of reliability than a general census; (ii) as these samples’ size is not the same, some can drive to fine geographical analysis at the districts scale while others can only provide significant information at the governorate level or at the national scale; moreover (iii), they are not periodic and depend each time on international funds.

In the case of Bosnia and Herzegovina, the Agency for statistics of Bosnia and Herzegovina (BHAS), as a state level institution, is responsible for the harmonisation of the data collection system and for its production and dissemination, with the exception of any local data. It means that SNUTS 3 data are to be found at the “Entity” statistical offices: the Institute for Statistics of the “Federation of Bosnia and Herzegovina” and the Institute for Statistics of the “Republika Srpska”, but neither publish local or regional data on a regular basis. The 2013 census is expected to bridge this gap, but for the moment databases at SNUTS 3 level are very incomplete, especially for the Brčko district (a small Entity directly monitored, when it comes to statistical issues, by the Institute for Statistics of the Federation of Bosnia and Herzegovina) and the Republika Srpska.

2°) Change in quality of data

The quality of data is uneven according to the ENCs and to the considered year. For instance the Moroccan 2004 census is much better than the 1994 census because the Haut Commissariat au Plan in charge with Moroccan statistics – like many other national bodies dedicated to the statistics in the Arab world – has launched huge reforms in the last decade in order to update the methodology and the organisation of the data collection process. In several countries, the definition of employment, unemployment and active population were put in line with the ILO recommendations as late as in the 2000s; this explains why the latest census’ data are not comparable with those of the previous census. This change occurred in 2003 in Algeria. In Tunisia, at the time of the census of 2004 the Tunisian statistics national body decided to revise the methodology of the household’s employment surveys in order to ensure a better compliance with international standards and the ILO’s concepts of employment and unemployment; this good decision created a bad effect: data are not comparable with those of the previous census.

Likewise, the Annex 8 explains why Turkish pre-2000 censuses can be criticized; in the 2000s, TurkStat underwent a radical restructuring in line with European Union harmonisation process and

changed its system of data collection, in particular concerning the way in which censuses were carried out – a much bigger reliability but also a much smaller number of indicators collected, with more limited geographical resolution.

3°) Data reliability: the issue of the informal activity

The main problem of data reliability stands in the informal issue. The huge dimension of the informal activity, income and employment is a major characteristic of the ENCs economy and thus statistics. It ranges from 20 to 50% in the non-agricultural sectors in Arab countries [Aita 2011]. In Egypt one can estimate that informal economy accounts for 40% of the economy; informal jobs have incredibly increased during the liberal 2000s decade, with more than 9 million informal jobs today. In Morocco, the informal economy employs 30 % of the workforce. In Jordan the figure is about 20% for jobs and over 20% for the economy[23]. Before the uprising in Syria broke out, 25% of the workforce was unregulated. The few Arab countries that have gathered data on the informal economy – including Jordan, the occupied Palestinian territory and Yemen – have done so inconsistently, especially when it comes to local data.

The figures are quite alike in the Western Balkans. Over the 1990s, the ratio of the informal economy to registered GDP in the Federal Republic of Yugoslavia was approximately one-third. Before they split in two countries, the size of the shadow economy in Serbia and Montenegro was estimated at more than a third of the GDP [Krstić & Sanfey 2010].

According to the estimate of the Russian federal state statistics service (Goskomstat), the share of the informal economy out of total GDP increased from 13 % in 1993 to 23 % in 1996 and 25 % in 2000s. However, Goskomstat's method has been strongly criticized by national and international experts; their estimation is that during the transition, the informal economy reached 23% when the USSR collapsed, 42% in 1995 [Kim 2010] to almost 50% in the first part of the 2000 decade [Timofeyev 2013]. A half of the Russian population is employed informally as a partial or total part of their activity. In Ukraine, the share of employment in informal activity outside of agriculture in the mid-2000s was 17%, but at the largest account, that is, including individuals involved in agricultural production on a secondary basis or for their own use, the figure was 66 [Commander et al. 2013]. It seems that the informal activity accounted for around 16% of the Ukrainian GDP in 1990, rising to 47% in the mid-1990s and over 50% in the mid-2000s. Formerly, the informal economy accounted for between 35-44% of GDP in the countries of the former Soviet Union.

4°) Sources reliability

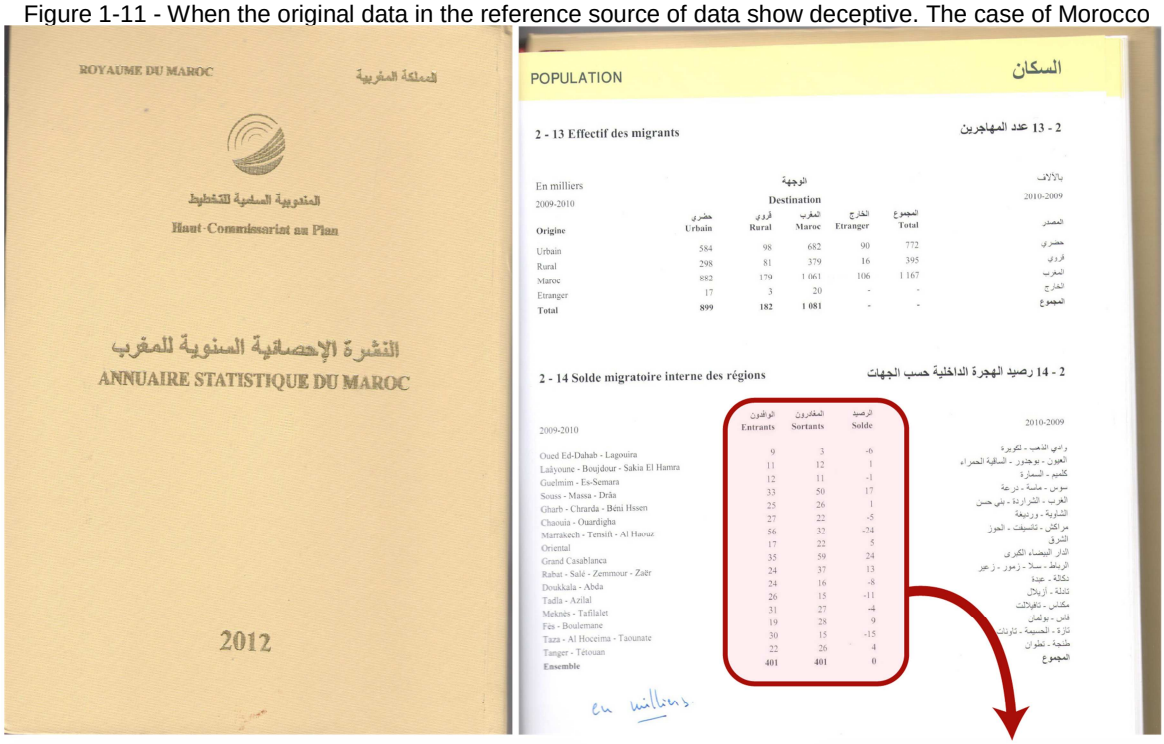
To ensure the long-term sustainability of the database, the ITAN TPG needed to collect data as well as the data sources. So if the data has to be updated in ten years from now, the person in charge will be in possession of the whole history of the database that will also be a quality assessment tool. Without this crucial information, a data would be useless and could not be uploaded in the ESPON DB. Indeed, filling up the metadata information in the ITAN database proved difficult for many ITAN national experts, because information about the data production's methodology or even about the data source is not always clearly explained in the national statistics. The diversity of statistical systems in all the ENCs also increased the difficulties due to the according number of methodologies used to collect and publish the data.

Furthermore, although Morocco happens to have one of the best statistics system of all the Arab Neighbour countries, the original source of data can show deceptive. Figure 1-11 proves that data on migration by region *were* available in the key statistics book of the country, and the ITAN expert duly collected it in the ITAN database. And then, the process continued: the data was checked, used for the country analysis and put into the complex ITAN data harmonisation task (see 1.3.12 section). It

[23] Statement of Ibrahim Saif, former director of the Centre for Strategic Studies at the University of Jordan, resident scholar at the Carnegie Endowment for International Peace Middle East Center and consultant to numerous international organisations

took some time to understand that whenever the ITAN expert had made a proper work, the *original* data was mislabelled! So we had to re-start the whole process…

Figure 1-11 - When the original data in the reference source of data show deceptive. The case of Morocco



Incoming migrants	Outcoming migrants	Good calcul=	GOOD Net migration
9	3	9-3	6
11	12	11 - 12	-1
12	11	12 - 11	1
33	50	33 - 50	-17
25	26	25 - 26	-1
27	22	27 - 22	5
56	32	56 - 32	24
17	22	17 - 22	-5
35	59	35 - 59	-24
24	37	24 - 37	-13
24	16	24 - 16	8
26	15	26 - 15	11
31	27	31 - 27	4
19	28	19 - 28	-9
30	15	30 - 15	15
22	26	22 - 26	-4
401	401	401 - 401	0

Incoming migrants	Outcoming migrants	FALSE Net migration
9	3	-6
11	12	1
12	11	-1
33	50	17
25	26	1
27	22	-5
56	32	-24
17	22	5
35	59	24
24	37	13
24	16	-8
26	15	-11
31	27	-4
19	28	9
30	15	-15
22	26	4
401	401	0

A solution could be the recourse to international database such as UN, US Census database or the World Bank: they would give the “good” national numbers, and stemming from them we would apply the geographic breakdown derived from the ITAN local data. Besides, this is partly what we did in the harmonisation process described below (1.3.12). But it has to be said that sometimes the reverse way showed relevant: in particular in the Western Balkans, the demographic international database have proven to be dubious even at national scale; the very good knowledge of ITAN experts of on-the-ground realities drove to demographic figures different from those of the international database, namely due to the migration complex issue; the chapter 5 dedicated to the South-Eastern Neighbourhood explains why.

5°) Definition of territories: the urban space issue

The urban issue is a key issue for territorial development and policies. However it is also particularly tricky because each country has its definition of what is “urban” – and sometimes the challenge lies also within a country. Defining a valuable and steady definition of the “urban space” for all the ENCs would need and entire ESPON project *per se*, despite the attempts to normalise such a definition throughout the world (see the research of François Moriconi [1993] stemming from a morphological definition of the urban agglomerated space). Yet, the ITAN report does analyse the urban space of some of the ENCs but it has to be understood that it relies on the national official definition of what is “urban”.

To some extends, all the ENCs show a peculiar problem in urban space’s definition, either referred to an administrative definition of what is “urban”, either referred to a more functional definition (e.g. demographic size) – all too often to a mix. See Turkey. “Municipalities” (i) do not overlap necessarily with the Turkish administrative delineation of provinces and districts; (ii) are supposed to correspond to settlements over 5 000 inhabitants whereas 70% of them count… less than that; it has to be noticed that in earlier periods, “urban” referred to settlements with a population larger than 10 000 and in some instances 20 000. Besides the “urban”-“rural” definition does not refer to a specific population threshold but is in terms of administrative divisions since it refers to province and district centres designated as “urban”. In addition, an awkwardly undefined “*belde”* municipality is an administrative division that does not have a clear definition in legal documents, and usually refers to villages “with a municipal organisation”.

Another good example comes from the Palestinian statistics system. It considers as urban any locality whose population amounts to at least 10 000 persons, *plus* all governorates or districts centres regardless of their size, *plus* all localities whose populations vary from 4 000 to 9 999 persons provided they have, at least, four of the following elements: public electricity network, public water network, post office, health centre with a full-time physician and a school offering a general secondary education certificate! Besides, the oPt does not only distinguish “urban” and “rural” areas but comprises also “camps”, that is any localities referred to as a refugee camp and administered by the United Nations Refugees and Work Agency in the Near East (UNRWA). Indeed, in particular in the Gaza strip or in Jordan (especially in the Amman region) many refugee camps progressively turned into urban areas, so as to make the distinction between “camps” and “city” very sensitive, for both statistical and political reasons.

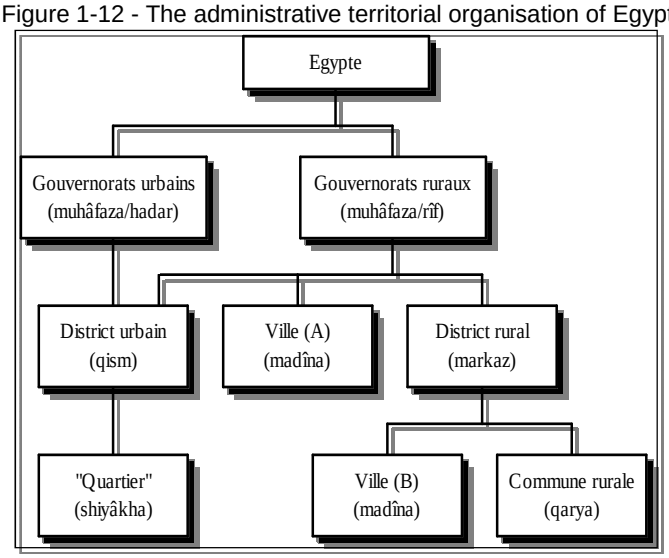
Israel counts “cities” and rural localities called “*kibbutzim*” or “*moshavim”*. The term “village” is reserved for Palestinian localities, where thousands and in some cases tens of thousands now populate “villages” that had a few hundred inhabitants in 1949. Hundreds of new Jewish localities have been developed since 1949, most of them being neither “villages” nor “cities” but “communal localities” which are, in fact, suburbs.

This issue does not limits to Israel or the occupied Palestinian territory; as a matter of fact, almost all the ENCs show peculiarities – up to Greenland were one distinguishes “villages”, “sheep farms”, “stations” and “cities” but the division is political and has nothing to do with the size of the settlement, some of the minor cities being smaller than some villages. See also the countries of the South-Eastern Neighbourhood: at the time of the Former Yugoslav times, the status of city was rather a political privilege than a strict statistical definition based on the number of inhabitants, the spatial morphology or the types of functions; the 5.1.2 section gives a detailed analysis on that topic.

If one stays within the administrative definition of what is “urban”, the best example of the complexity is Egypt. Its public administration distinguishes “urban” and “rural” governorates; but within the latter one finds “urban” and “rural” districts; and within the latter one finds “urban” and “rural” communes – with no correspondence with the administrative organisation of the urban governorates! In other words, there is not a unique institutional definition of the urban space that would need to be compared with a functional definition: there are at least four definition of the urban space in the administrative organisation of the Egyptian territory. And the issue is still trickier, because the Egyptians make the distinction between the urban space (*hadar*), referred to order, beauty, cleanliness – in a word civilisation which root word is the same (*hadâra*) – and rural space (*rîf*), referred to agriculture and under-development. As a consequence, the only territories regarded as “cities” by the Egyptian people

are the capital cities of governorates and of district (*markaz*). Last but not least, to become “urban” a locality has to have the agreement of the state; as the latter is not keen on promoting territories as “urban” because it would imply the delivery of larger services, a number of localities experience a huge demographic growth without being named “urban”, which hampers the signification of the official statistics on Egyptian cities. This is the reason why the statistics continue to consider as “rural” former villages largely encompassed in the urban sprawl of the great cities.

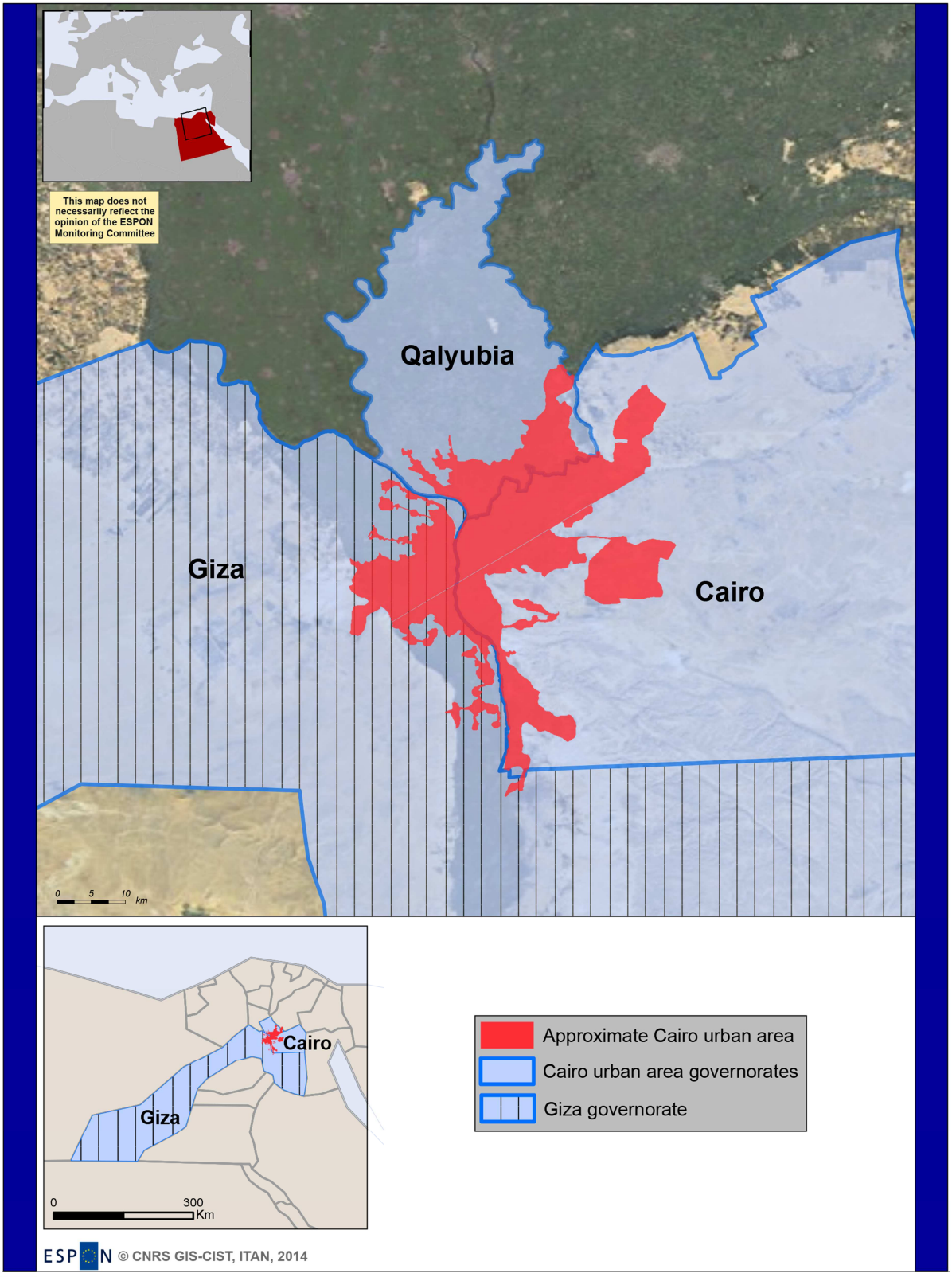
Figure 1-12 - The administrative territorial organisation of Egypt



Source : Pagès-El Karoui, from Moriconi-Ebrard, 1994

The absence of good correspondence between the urban functional areas and the administrative delineation of the territory is particularly clear in the case of Cairo. Map 1-8 depicts the Cairo urban area divided into three governorates, of which two (that of Giza and that of Cairo) go further the Cairo agglomeration by hundreds of kilometres.

Map 1-8 - The urban area does not correspond at all with the Governorates' delineation



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Regional level: SNUTS2 V1
Source: ESPON Database, ITAN, CNRS GIS-CIST 2014
Origin of data: Aerogrid, AEX, Esri, DigitalGlobe, GeoEye, Getmapping, Google Earth, IGN, i-cubed, swisstopo, the GIS User Community, USDA, USGS 2014
© CNRS GIS CIST, UMS Riate for administrative boundaries

Moreover, the chapter on the Mediterranean Neighbourhood shows that the SNUTS 2/3 scale of the ITAN project is particularly not accurate in those countries where desert is widely spread: in Egypt or in Libya, the large spatial extension of the SNUTS 2/3 are misleading because in reality population and activities are highly concentrated in cities. In Egypt, the governorates' delineation seems highly related to political and military control of the national territory.

The other Neighbourhoods give further instances. In the Faroe Islands case (48 000 inhabitants a whole), a "settlement" in administrative terms is defined as 'any populated place', the size of the settlements varies: the largest settlement has 12 000 inhabitants whereas four settlements have only… one inhabitant. Also, division between urban and rural settlements is neither relevant nor done. In Russia, "City municipalities" can comprise only one town or urban settlement but may also embrace neighbouring rural settlements. There are numbers of other examples.

Several other thematic statistical issues show very tricky, such as migration. The below 3.1.1. section gives the example of the migrants who live in Russia but are not registered: they can be estimated to be 4 to 5 million, with some sources counting even as high as 10 million people!

6°) The hardly possible standardisation of collected data

This has been one of the major difficulties – thus one of the main scientific and operational interests – of the ITAN project. The unexpected amount of barriers is detailed in the following lines, and also the way we have (tried to) overcome these.

1.3.10. Barriers for ITAN implementation – Data difficulties for transport and energy networks

With respect to transport networks, Transtools allows to easily have information for Europe, the Balkans and most of the Eastern Neighbourhood. However the network for Russia is not very detailed and the analysis made with it are of lesser quality. The Mediterranean has no single comprehensive database of transport network.

Available data for energy networks is quite comprehensive, but fragmented by sectors (oil, gas, electricity) and by regions. The level of detail varies depending on the source, thus an effort has been made to integrate all this data for the ITAN database. Concerning solar energy, there is no official database on solar radiation; only some commercial layers can be purchased. Raw NASA satellite data has been used to derive a raster of solar radiation for ITAN.

1.3.11. Barriers for ITAN implementation – Data difficulties, country examples

Here we give a first and short insight of what is detailed in the country analyses of the chapter dedicated to each Neighbourhood (3 to 6).

Albania

During the 1990s, the capacity of Albanian statistical institute was limited due to unrest and successive socio-economic crises.

The Former Yugoslav Republic of Macedonia

Due to the deep instability of the territorial division at the local level which hinders the aggregation of data at the NUTS 3 level, the time series for the period from 1991 onwards was not ensured. The state statistical office has just recently published the 1994 and 2002 census data according to the NUTS 3 level.

Kosovo under UNSCR 1244/99

Due to the instability of the municipal territorial division and the conflicts in the end of the 1990s, discontinuities in time series and lack of data occurred. According to the statistical office of Kosovo under UNSCR 1244/99 (ASK), after the war the under-registration of deaths was around 25%. The 2001 census was cancelled, and vital statistics were interrupted between 1997 and 2005. The period 1990-1997 had been covered by the Serbian statistical office, and since 2005, the ASK publishes the vital statistics. There are at present no reliable statistics on migration in Kosovo under UNSCR 1244/99. Demographic data are rather of low reliability. Socio-economic data according to international standards are available for the last few years, mostly 2011. Another problem is that both 1991 and 2011 censuses were boycotted, the former by the ethnic Albanians and the latter by the ethnic Serbs.

Libya

The proceeding of the 2012 Census shows many shortcomings. Regions have not been investigated in the same condition as usual. Some of the places have been destroyed almost completely and in some case, all the population was compelled to flee abroad or to other part of Libya. The militia devastated Cities as Tawargha, Mazdah or Syrte. Some of their district disappeared in the Census and were aggregated in bigger zones. Tawargha had more than 40 000 inhabitants before the uprising in 2011; this city does not exist anymore, physically and from a demographic point of view. Its population was sent off and the city is now integrated to it neighbour Misratha which has been also largely destroyed. Several areas were out of bound for the investigators. For example, the districts of Gwaresch and Laïthi in Benghazi were not visited because of the refusal of Islamist factions that control these areas.

One of the usual habits in the Libyan Census is the overstatement of figures concerning the number of inhabitants in some districts. The tribes inflate numbers in order to obtain as much benefit as possible. The tribe mentality allows all kind of excesses in the name of the best interests (or what it is considered as the best interests): one may lie especially with figures concerning its own tribe. One may even deny the very existence of the next tribe. The tribes know perfectly how to manipulate the figures and statistics as it has become one of the justifications means in order to get benefit from the distribution of resources. One of the oddities of the 2012 Census was to have employed investigators who belonged to the region they were investigating.

Montenegro

Data on migrations remain problematic due to the difficulty in enumerating and defining emigrant/immigrant after the break-up of the Union state between Serbia and Montenegro.

Serbia

Data availability can be considered as good, because the country has inherited the know-how of the former Yugoslavia and kept an operational statistical office. However, all data issued during the 1990s until the end of the Kosovo under UNSCR 1244/99 war are of low reliability due to the unrest in the region.

Moldova

Many indicators are not available for the national level and Transnistria. Most of the data are pretty discontinuously collected or for a limited number of years; data on employment indicators present many discontinuities.

Morocco

The TPG witnessed changes in the published results for total population in the country and in its regions. The ESPON M4D project collected this data in 2010, ITAN TPG collected it in 2012-2013 and the figures were different. We asked why to the statistical institute (Haut Commissariat au Plan) and got a reply, but no one could explain why the figures had changed. A suggestion is that the two different results do not both deal with the nomad population.

Tunisia

The statistical data concerning life expectancy and infant mortality are absolutely unavailable at regional scale. Under the governorate, demographic statistical information at the delegation's level is scarcely available out of the two censuses of 1994 and 2004 and limited to the population overall and by sex. When it comes to school enrolment comparisons over time are difficult because surveys did not keep the same age brackets. As in many other ENCs, GDP data is lacking at local level because of methodological reasons since the spatial breakdown of activities such as large enterprise or public administration is highly complex. In the harmonisation methodology section the report explains that in Tunisia the energy consumption by voltage, followed on year-on-year basis, is deemed to be a good proxy of industrial activity. On the other hand the Tunisian statistics system provides with data rarely available in the other Mediterranean ENCs: a well-documented set of data on enterprises according to their size (Micro-enterprises: less than 6 workers, Small and middle enterprises: 6-199 workers, and Big enterprises: more than 200) which is a good proxy of the capacities of each governorate in terms of self-sustained development process.

Israel and Palestinian population and territory

Until the 1995 census, all Israeli information was collected from households, whereas the 2008 census combined administrative data with information obtained by traditional methods. The Israeli Central Bureau of Statistics provides data and surveys considered to be professionally run and of high quality. However, the coverage of Bedouins living in small communities in the South is partial.

Until 1996, Israel collected and published some information on the Palestinian population under occupation, a practice that was stopped following the Oslo agreements and the establishment of the Palestinian Authority. Data on the West Bank are split into two parts (i) the one dealt with by the Israeli CBS, that is that of the Israeli settlers beyond the "Green Line", and (ii) the one dealt with by the Palestinian authority, that is that of the rest of the West Bank. But on the ground things are not that clear. The Israeli CBS does not provide (namely in English) a full methodology on how the population is recorded in the country. On the administrative divisions' maps, the West Bank is entirely covered as part of an Israeli "region" called Judea and Samaria. All the Israeli districts are divided into sub-districts, except for "Judea and Samaria" which is only identified as one "area". Statistics are published for this area, but without any explanation on who is counted there: only the Israelis? Are the Palestinian working in Israeli territories included in the work statistics? The thing remains unclear and would need further investigation. When it comes to the Palestinian Central Bureau of Statistics, it also publishes data for the West Bank, but with its own definition of population and the territory and the population taken into account.

The Gaza Strip is another case. It is left aside by the Israeli CBS since only Palestinian live there, but the fact that the Israeli left the Gaza strip in 2005 has to be taken into account when one calculates the recent evolution: at the end of the 1990s there were 6 100 Israeli settlers in Gaza Strip, and in most tables issued by the Israeli CBS they were *gathered* with the settlers of the West Bank at that time; this is no more the case since 2005.

Lebanon

As no general census has been conducted since 1932, all the published population data have been estimated using diverse methodologies. The Lebanon ITAN expert found two different sets of figures

for population in 2004. The reason is that both the Central Bureau of Statistics and the Ministry of Social Affairs conducted surveys to estimate the population; both institutions are reliable, but they drove to two different results.

1.3.12. Data harmonisation as a way to cope with these barriers

1°) The ITAN data harmonisation process

A shortcoming of the ENCs' statistics system is that in some of these countries, the national body in charge is very recent – the Palestinian Central Bureau of Statistics was created in 1994. These bodies follow the international prescriptions in terms of statistical definition and methods, but to varying degrees and since different years. Definitions of categories remain different from one country to another and even when they are alike, the available data at local scale vary from one ENC to another. As an example incomes are documented in a great set of manners: in the Near East we could only find net incomes in Israel, daily wages in the occupied Palestinian territory, and households' income in Jordan. In order to cope with it and to make comparable series and maps, the ITAN TPG harmonised the data by keeping the regional distribution of the provided data for a given country and applying it to the national value stemming from international database and chosen to be the same for all ENCs – Gross National Income in that case. We assume that the final result is an approximation, but such approximation allows comparison throughout the space of all the Neighbourhoods.

Sometimes the approximation is necessarily very rough. Many ENCs do not provide any local data on life expectancy nor infant mortality. For the former we had to calculate a standardised mortality, which is an acceptable proxy for life expectancy: we compare (i) the theoretical number of deaths according to the regional age structure multiplied by the deaths number by age provided by international database for the concerned country, and (ii) the actual local number of deaths provided by ITAN experts in the TPG's database. But such standardisation is difficult when the local age data does not provide the same brackets (0-20 year old in some cases, 0-15 in others…); and it is impossible when no local data exist for the number of deaths. In Tunisia, births registration is deemed to be exhaustive (coverage rate is estimated at 100% since 1975) whereas the coverage is only 85% for the death registration, in spite of the obligatory character of the marital status statement since the independence.

As the

Table **1-8** shows, the ITAN TPG had to make a number of harmonisation upon key indicators. But indeed, it has to be clearly stated that we remain dependent upon official data on production and income, whereas we know the high level of informal jobs. Besides, official indicators of actual income are all too often poorly documented. In Jordan for example, salaries only count for half of actual income on average; the rest consists of undeclared income (self-employment), income from rents (13%) and transfers (remittances from family members living abroad, pensions, state benefits and charitable donations), that is to say of local figures that would be very difficult to collect.

Furthermore, the data collection in the Neighbouring countries was delegated to experts in each country and it had been required from them to fill the standard Microsoft Excel files created by ESPON for the collection of data and metadata by the regular teams in all the projects. But unfortunately these files proved to be pretty inappropriate for such a huge harmonisation task. All together we had about a hundred files with several data sheet *each*, covering more than nine thousand combinations of country, label, sex, age-class, and other parameters, for which the metadata should have been tediously provided. As the metadata and the data were in separate sheets, there were quite a lot (approximately 1 500) discrepancies between the first and the latter, like misspelling or change of label from one sheet to another, that had to be addressed individually. This led the TPG to accomplish an enormous work, without which it was not possible to use the database and therefore which delayed many tasks in the project, by months. This difficulty was increased by the important variability among the data that are not standardised as they could be when prepared by an institution like Eurostat. We consider that it was quite illusive to expect a neat data collection with such forms; more professional tools or a more efficient data /metadata connection are required for the future.

Table 1-8 - Total population, a simple indicator, but a complex ENCs set of thirty sources to harmonise

Country	*Source(s)*
Albania	INSTAT (Albanian Institute of Statistics) , 2013
Armenia	US Census, 2013
Azerbaijan	US Census, 2013
Bosnia Herzegovina	DEMOBALK, 2013 / FEDERAL OFFICE OF STATISTICS, 2001
Croatia	DZS - The Croatian Bureau of Statistics, 2013
Belarus	National Statistical Committee of the Republic of Belarus, 2012
Algeria	ONS - Office national des statistiques Algeria, 2012
Egypt	CAPMAS - Central Agency for Mobilisation and Statistics, 2013
Faroe island	Hagstova Føroya (Statistics Faroe Islands), 2013
Georgia	US Census, 2013
Greenland	Naatsorsueqqissaartarfik (Statistics Greenland), 2013
Israel	Central bureau of Statistics - Israel, 1997-2012
Jordan	DOS Jordan - Myriam Ababsa (General Census of Population and Housing of Jordan 1994) / DOS Jordan - Statistical Yearbook 2011
Lebanon	MoSA/UNFPA - Ministry of Social Affairs Lebanon, 2011 / CAS&UNDP & MoSA - Central Administration for Statistics, 2007
Libya	Bureau of statistics & Census, 2010
Morocco	Haut Commissariat au Plan (HCP), 2004-2012
Moldova	Biroul National de Statisticã al Republicii Moldova, 2001
Moldova	Бурла М.П., Гушан В.А., Казмалы И.М., ИПЦ "Шериф"
Moldova	Государственная служба статистики Министерства экономики ПМР
Montenegro	MONSTAT - Federal Statistical Office of the Federal Republic of Yugoslavia, 2011
Former Yugoslav Republic of Macedonia	State Statistical Office of the Republic of Macedonia, 2012
OPT	Palestinian Central Bureau of Statistics (PCBS), 1999-2010
Serbia	Republički zavod za statistiku, 2010
Russia	Federal State Statistics Service, 2001-2012
Syria	CBS - Central bureau of statistics, 2004 / Mamdouh Al Mobayed, 2013
Tunisia	Tunisie Statistiques, 2001-2011
Turkey	Turkish Statistical Institute (TURKSTAT), 2000-2011
Ukraine	Ukrainian State Statistics Service (UKRSTAT), 2001-2012
Kosovo under UNSCR 1244/99	Federal Statistical Office of the Federal Republic of Yugoslavia, 2011 / ASK (Kosovo Agency of statistics), 2013
European Union	Eurostat, 2013

2°) Time series harmonisation

Another harmonisation has been conducted for time series. The main sources of national data, that is, the censuses, approximately cover the same type of data: demographic, education, employment and unemployment, households' equipment and dwellings. But censuses have been conducted at different years according to the country. Indeed the ENCs tend to comply with international recommendation on the decennial range of censuses, but (i) this is not always the case and (ii) when it is, the documented year varies. As a result, the ITAN TPG had to make an estimation of data at common years, i.e. circa 2000 and circa 2010.

Table 1-9 - Last censuses years in ENCs (examples): no time concordance

Country	*Penultimate date*		*Last date*	
Algeria	1998		2008	
Armenia	1989	USSR era	2001	
Azerbaijan	1999		2009	
Belarus	1999		2009	
Croatia	2001		2011	
Egypt	1996		2006	
Georgia	1989	USSR era	2002	
Israel	1995		2008	
Jordan	1994		2004	
Kosovo under UNSCR 1244/99	2001		2011	
Lebanon			1932	
Libya	2006		2012	
Moldova	1989		2004	
Morocco	1994		2004	
Occupied Palestinian territory	1997		2007	
Russia	2002		2010	postponed for 2013
Syria	2000		2004	
Tunisia	1994		2004	
Turkey	2000		2011	
Ukraine	2001		2010	postponed for 2016

1.3.13. ITAN composite indicators as a way to answer the project's key questions

ITAN composite indicators address our two needs: a better knowledge of the ENRs *per se*, and a better knowledge of their interaction with the ESPON territories. These basic needs implied to have comparable data for the key indicators of all the Neighbour countries. Given the large heterogeneity of sources and collection methods, the ITAN project was put into the necessity to build, downstream, a data harmonisation it could not find at the upstream moment of data collection. Given the high challenge of the collected data's heterogeneity, we consider these composite indicators as a major asset of the integrated territorial analysis of the Neighbourhoods.

1°) Indicators needed to answer ITAN key question

Toward a better knowledge of the ENRs: assessing territorial disparities

The ITAN multilevel approach addresses the structures and dynamics of ENRs. Here the driving questions are: is the development of each ENC territorially balanced, can we speak of an inclusive growth? In terms of policy recommendations: what are the needs for territorial planning (national and local), urban services, and rural development?

(i) Structures. Their study implies the use of *demographic and basic territorial data* (demographic density, transport network connectivity…); *social* level indicators (school enrolment when possible with a distinction between male et female because the gender issue is of utmost importance in some of the ENCs, level of qualification of the population, level of income when available); *economic* level indicators (share of young adults in population to show the attractive territories, local production indicator when possible, when available Internet use). Among these data, we have picked those which were the most frequently available in the ENCs to build a synthetic common "local human development index", inspired of the Human Development Index, according to a methodology explained below.

(ii) Dynamics. Data on demographic growth income and production evolution drove to a composite indicator, the "territorial dynamics". A typology of the ENRs derives from the crossing of these two composite indicators (socio-economic structure / dynamics), so as to show the importance and trends of the territorial disparities in each Neighbourhood.

Toward a better knowledge of the interactions between the ENRs and ESPON territories

Here the driving questions are: what are the actual links to Europe vs. to other world regions (in other words what polarisation is exerted by Europe upon its Neighbourhoods)? Do the ENCs experience a "Mexico" pattern characterised by the dualisation of their territory (internationalised poles more and more disconnected from the rest of the country)? ITAN has answered it in different manners and at different scales:

(i) Country * country data, in order to understand the role of ENCs in Europe's international integration: share of European and of ENC's citizens in the foreign population; geography of the ENCs' economic flows (FDI, trade…); share of Europe in the public aid to the ENCs. The results are presented in the second chapter of the report (section 2.1).

(ii) Local scale: overall links with foreign space are studied thanks to the presence of international transport facilities (ports, airports) and local FDI. These data allowed us to create a common composite indicator on "international openness index". This indicator has been enriched by an analysis of the borders' openness, critical to understand the links between the ENCs and the EU's territory as well as the links between the ENCs – think of the closure of the Morocco-Algeria border since 1994 for instance, which hampers both the Maghreb development and the North-South integration in the Mediterranean because the Maghreb countries remain to small markets for European enterprises. However, this borders' openness is difficult to document; this report makes a qualitative and incomprehensive analysis of the phenomenon.

(iii) Local scale: data on flows and links with foreign space exploiting origin * destination database, in order to address the geography of foreign influence in the ENCs (are these territories rather connected to ESPON / or to other world regions?): foreigners who live in the country at local scale are hardly available; FDI's origin, available for the Mediterranean Neighbourhood and for some of the Eastern Neighbourhood; ports and airports international connections. As these data are unequally available in the various ENCs, it was not be possible to use them for the international openness index.

(iv) Territorial connectivity: maps have been produced using an indicator of the accessing time from any point on the territory to the main transportation network. This indicator is called ICON (Indicator of Spatial Connection to Transport Networks) and has been used in several ESPON projects. Its general formulation is as follows:

ICON Formulation

The ICON indicator can be formulated as follows:

Given a set of networks (i=1,...,N) with modes (j=1,...,M) having a set of services (Sij), the connectivity of a given point in the region is as follows:

$$ICON = \sum_{i=1}^{N} P_i \cdot ICON_i$$

being $ICON_i$ evaluated for each transport network as follows:

$$ICON_i = [t_{aim} + p_{wi} \cdot \delta_i (t_{xi} - t_{aim})]$$

where

$$\delta_i = \frac{1}{1 + a \cdot e^{-b\frac{S_x - U_i}{S_x - S_o}}} \quad \textbf{and} \quad U_i = \sum_{j=1}^{M} S_{ji} \cdot e^{-\beta(t_{aji} - t_{aim})}$$

According to this formulation, for any point (any location in a city, any city in a region), ICON provides the measure of its connectivity to the transportation networks, basically considering the relative economic weight of each mode (P_i) and the minimum time (or cost) required to reach the closest node in each network (taim) increased by the additional generalised waiting times in each node ($\delta_i (t_{xi} - t_{ai})$) to get a pre-determined utility (U_{ix}).

For ITAN we have specifically calculated ICON by measuring the time needed to get to the main transport network (main roads, railway stations and airports), using the relative passenger traffic as weight (high passenger traffic tends to imply better transport performance). Thus as a location is much

nearer to a road, station or airport with high passenger counts, its connectivity measured in time is much better. The ICON indicator is calculated for each one of the 5x5km cells of the grid with the main assumption that the territory has a constant travel speed where there is no network on the GIS.

(v) Local scale: international cooperation. Data on cross-border agreements was only provided and exploited in the case studies. A specific methodology on twin cities is detailed in the chapter 7 of the Black Sea case study (TERCO provided ITAN with the methodology).

2°) The composite indicators methodology

Here are the main lines of the process stemming from data harmonisation to ITAN composite indicators (see Annex 4).

Step 1: harmonisation

As said above, the data needed for the ITAN composite indicators have been harmonized against the national values provided by international database. For a given indicator, one same database had to be used for all the countries because even between the different international sources providing data at the national level there are sometimes strong disparities; US Census Bureau and the World Bank were the providers used because of their wide geographical coverage, although some essential data were missing for the Faroe Islands, which explains the absence of this country in the composite indicators. When the national values were collected from these databases, a cross-multiplication was then used to apply the observed figure at the regional scale, according to the regional breakdown provided by the ITAN national experts for each ENC.

Step 2: scaling

The harmonized values have then been scaled, which means that they each were reduced and centred so that their mean is 0 and their standard deviation is 1, in order to make them comparable.

Step 3: aggregation

The scaled values were then aggregated to form the composite indicators (see Table 1-15).

The ***Territorial dynamics*** is based on the demographic and the economic evolutions during the 2000 decade. It roughly says if a territory is dynamic or not, and rather demographically and/or economically. This indicator is a typology based on the combined standard deviation classes ranging from 'below -1' to 'above 1', each class of size 1. This gives for each component the four classes: below -1, from -1 to 0, from 0 to 1, above 1, the SNUTS-2 values being allocated to one of the 16 combined classes. We acknowledge that 16 classes are certainly a (too) big number for such an information, based itself sometimes on proxies and not accurate enough to be considered as very steady, but it gives an overall idea of the territorial dynamics.

The ***Local Human Development Index (HDI)*** is compliant with the meaning of the national HDI calculated by the United Nations, which derives from economic values (income per capita), educational values (mean years of schooling), and standard of living (life expectancy at birth). The available data in the ENRs drove to the following choice: *income* for the first indicator (as we said, with data stemming from a vast array of definitions of "income" which we harmonised), *tertiary education* for the second indicator (because it showed much steadier in the various ENCs than the school enrolment which have very different meanings according to the considered neighbour country), *life expectancy* (or, rather, standardised mortality as we explained) for the third indicator.

The ***International openness*** addresses the key issue for countries which were recently highly protected from international exchanges in particular with Western countries. It constitutes one of the

main outputs of the ITAN project. Resulting from a deep collaboration of the TPG's teams, the index is based on three indicators of participation to international networks:

- the number of *air seats available in international flights* from airport to airport. All airports have been allocated to a SNUTS 2 area;
- the volume of *international maritime flows* by port. All ports have been allocated to a SNUTS 2 area;
- the *FDI* in dollars for all SNUTS 2 regions. Basic data of FDI coming from different sources have been calibrated to the national FDI values of the World Bank. Final values are the annual average investment in dollar between 2008 and 2012, which is the period of highest reliability of the Mediterranean data from Anima; for the Neighbourhoods out of Mediterranean, when data were not available for the whole period we kept the annual average value for the available period (only in Bosnia, there are two missing years).

We also computed *weighted* indicators of maritime and air connections by considering the *time-distance* between any SNUTS 2/3 to port or airport infrastructures and taking into account the infrastructures located within the EU space. For the time-distance, *real networks speeds* have been considered as well as border delays. A normal distribution has been used to weight the seats/tons by distance/time, with a standard deviation of 0,3 for passengers and 0,7 for freight, because the time distance should not be calculated the same way when it comes to reach international transport facilities for freight / and for passengers; this results in a reduction of 80% of the value of seats at 500 km, and a reduction of 50% of the tons at 500 km.

Table 1-10 - Index of international openness at regional level in neighbouring countries

	Indicator	*Source*	*year*
Air connections	Number of seats available in international flights	OAG	2012
Maritime connections	Volume of international traffic	Lloyds	2011
Foreign Direct Investments	Annual average investments	Anima, National sources for regional data; World Bank for national data	2008-2012

We propose two different international openness indexes:

(i) the first uses rough data, without considering the time-distance to major infrastructures. Hence, only the area where airports and ports are located benefit from these infrastructures as a motor to participate in the macro-regional/global economy;

(ii) the second one uses weighted data, considering that territories can benefit from large infrastructures if they have a short time-distance access to it.

It is important to notice that both methods are justified from a theoretical point of view and give a coherent index of international openness. In the first method, it is considered that ports and airports are not mainly transport infrastructures but indicators of internationalisation in trade or human flows which generate agglomeration effects to the benefit of cities. In the second method, we consider that large transport infrastructures give a potential access to the global economy, as long as you can access to these infrastructures.

To produce the index, all values were calibrated to the maximum value for each of the three indicators. In a second step, we calculated the average of the three indicators.

As an alternative, we produced a principal component analysis. As shown in Table 1-11, the first component is the only one which as an Eigen value higher than 1; and the variance it takes into account is more than double of the second component. This means that the score of each region on the first component can be considered an indicator of international openness. However, Table 1-12 indicates that the first component only poorly takes into account maritime nodes, meaning that they have a very different spatial pattern while FDI and air connections are well correlated to each other. Our two indicators of international openness are well correlated (weighted R^2 equals to 0.94).

However, we prefer using the simple average of the three indicators since there is no reason not taking into account port areas as a major source of openness.

Table 1-11 - Variance of the components on the PCA[24] (non-weighted indicators)

	Eigen value	*% of Variance*	*Cumulative variance %*
1	1,98	65,92	65.92
2	0,82	27.38	93,30
3	0,20	6,70	100,00

Table 1-12 - Component matrix (non-weighted indicators)

	1	*2*	*3*
FDI 2008-2012	0,903	-0,297	0,311
Air links2012	0,923	-0,210	-0,322
Maritime links 2011	0,557	0,830	0,030

We reproduce the same analyses considering the weighted index by time distance. The PCA gives the following results. They are similar in terms of the variance taken into account by the first component. However, when looking at the component matrix, we observe that FDI is less related to the first component and port infrastructures a bit more, while the second component clearly opposes FDI and port as having different spatial patterns.

Table 1-13 - Variance of the components on the PCA (weighted indicators)

	Eigen value	*% of Variance*	*Cumulative variance %*
1	1,88	62,76	62,76
2	0,86	28,65	91,41
3	0,26	8,59	100,00

Table 1-14 - Component matrix (weighted indicators)

	1	*2*	*3*
FDI 2008-2012	0,744	-0,615	0,262
Weighted Air links2012	0,927	-0,019	-0,374
Weighted Maritime links 2011	0,686	0,693	0,222

The ***Territorial potential*** is based on the social capital, the physical capital, and the economic capital of each ENR. We of course acknowledge that even national numbers of such capital values would be highly challenging, and one can imagine how difficult it is to calculate local values in these countries! Yet, we believed that ITAN should provide with a first proxy of these values, so as to propose a first estimation of territorial potential in the Neighbourhoods. The proxies used have been:

[24] Principal components analysis

- for the social capital, the *tertiary education*, which proved to be very well correlated to general socio-economic performance in the ENCs;

- for the physical capital, the *transport accessibility*. The accessibility in ITAN is defined as the population that can be reached in a certain amount of time from each location in the EU and the Neighbourhoods. This indicator measures both how the population is distributed geographically and the quality of the transport networks that link the regions.

  The indicator is calculated by measuring all the population that can be reached from each SNUTS3 capital at less than *x* hours by using road and rail transport as represented on the GIS developed in the ITAN project. A 3 hour limit is privileged in ITAN because this is a length of time allowing making the return trip on the same day leaving enough time to conduct business at the destination.

  Calculations take into account the existence of delays in some border crossings due to administrative issues, by increasing the travel time from few up to several hours depending on the specific conditions of each border. The GIS also has some currently closed borders that effectively behave as missing links not allowing the pass of passengers nor freight.

- for the economic capital the *international openness*. We acknowledge that the economic development is correlated to many other factors than international openness, but in the framework of the ITAN project dedicated to the interaction between Europe and its Neighbours we wanted to stress on the international stake. And we also acknowledge that accessibility and international openness are partially redundant because both of them are based on access to ports and airports. This gives avenues for further researches that would go beyond these first propositions.

All these composite indicators have been computed at the SNUTS 2 level whenever possible, at the national level otherwise.

Figure 1-13 – Data concerned by ITAN composite indicators and composition of those

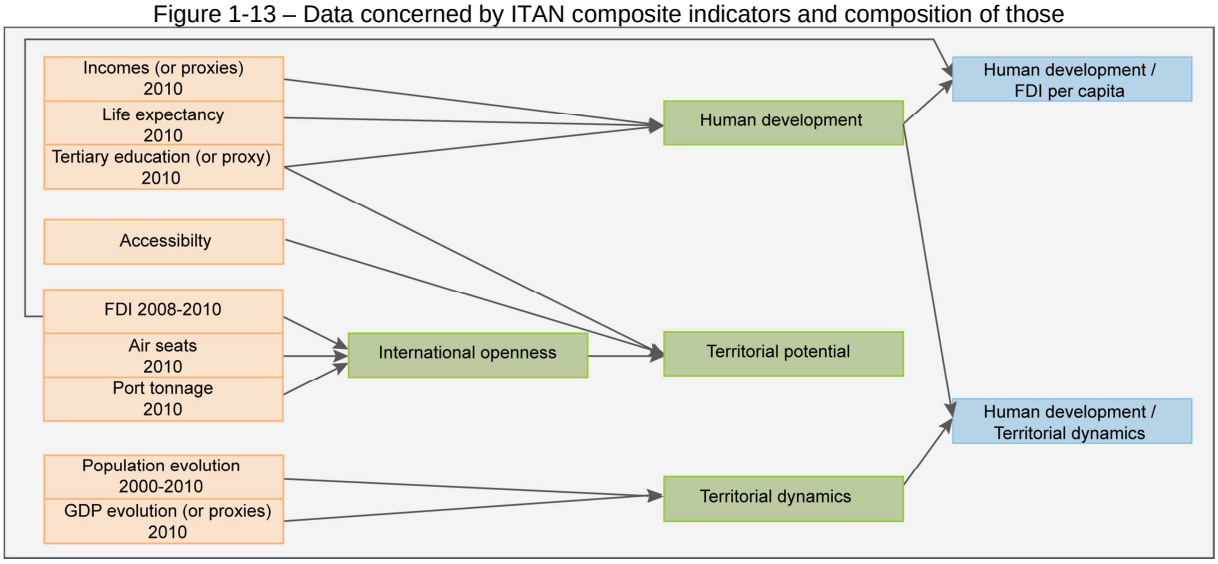

Table 1-15 synthesises the sources and adjustments that were made on the raw data to produce these indicators.

Table 1-15 - Raw data sources

Indicator	*Ref. year*	*Adjustment*	*Description*
Life expectancy	2010	US Census	Regional data
POP_beginning	2000	-	Regional data and years adjusted according to availability in DB to keep a 10 years span.
POP_end	2010	-	
pop2000_uscensus	2000	US Census	POP_beginning and POP_end adjusted to US Census national figures
pop2010_uscensus	2010	US Census	
Evolution_00-10	2000 - 2010	-	Based on POP_beginning and POP_end
pop_0-5_2010_uscensus	2010	US Census	
pop_15-60_2010_uscensus	2010	US Census	From age classes in regional data
pop_above_60_2010_uscens	2010	US Census	
Somtot_age_uscensus	2010	US Census	Total population from total of age classes
Income/inhab	2010	World Bank	From regional data, adjusted in current $ PPS[25] from World Bank. If no Income data, proxies were used, by availability order : • Income • Salaries • GDP • cars/inhabitants • electricity consumption
Men/Women employment	2010	-	Ratio, all sectors
Share of women employed in the non-agricultural sector	2010	World Bank	Regional % of total employment in non-agricultural sectors, based on Men/Women employment adjusted to the World Bank national data
GDP_00_10	2000 - 2010	World Bank	Average annual growth of GDP between 2000 and 2010. The data are based on regional growth of jobs which have been calibrated to national economic growth in constant $ published by the World Bank.
Tert_2010	2010	World Bank UNCTAD	The level of education is calculated as the proportion of tertiary educated in the active population. Regional data are calibrated to national averages published by the World Bank and UNCTAD.

The reference years are provided in Annex 4.

[25] Purchasing power standard

Table 1-16 - Adjustments for the composite indicators

Indicator	*Mean*	*Standard*	*Data type*
Economic evolution	4,70	1,43	annual increase rate
Demographic evolution	4,49	1,59	annual increase rate
Openness	3,78	9,63	index
Accessibility	2,46	2,17	index
Income	1,18	7,74	
Life expectancy	7,16	3,54	years
Tertiary education	2,86	1,99	index

The – very relevant – geographical results are given in the section 2.1.

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2. PRESENTATION OF THE EUROPEAN NEIGHBOUR REGIONS

2.1. Overall presentation of the Neighbourhoods

2.1.1. Main figures

The climatic conditions constitute a major component of the Neighbouring regions, when it comes to transport issue in the North or to solar electricity potential in the South. The settlement is largely explained by the climatic constraint, with low density in the northernmost and in the southernmost. In Russia the severe continental climate contributes to explain an overall low density even at what is usually called “temperate” latitudes. In the Near-East and in North Africa the littoral band gathers the vast majority of the population, yet the desert comes up to the littoral in Libya between Tripolitania and Cyrenaic, and between the latter and the Nile delta. Huge demographic concentration can be seen on the Near-East littoral from Gaza, Israel, Lebanon, western Syria up to southern Turkey around Iskenderun; and of course in the very large cities of the ENCs: Moscow, Istanbul and its Marmara’s urban region, at a much lower extend the Maghreb large cities. But no place in the Neighbourhoods displays a bigger demographic concentration than the Nile valley, from Luxor to the Mediterranean coast.

These ENCs gather 508 million inhabitants (2011, national scale i.e. including eastern Russia here), with a rapid growth in the Mediterranean Neighbourhood and a decrease of the population in the other Neighbourhoods. As a whole the ENCs’ share in the world population is decreasing but its share in the world GDP has been rising in the last fifteen years, thanks to the recovery of the former Soviet countries after the difficult phase of transition, and to the quite strong economic growth in the Mediterranean Neighbourhood especially in Turkey. As the overall GDP per capita of the ENCs has increased from US$ 2 000 in 1994 to 8 000 in 2011, Europe is surrounded by regions which represent important market opportunities and rapidly developing economies – not sufficiently rapidly, the section dedicated to the Mediterranean Neighbourhood will show. As the demographic transition is deeply advanced in all these ENCs including the Arab countries, the social structures and issues (“oldies boom” namely) are converging with that of the EU.

In terms of environment, the issues are very important (climate change, pollution, energy resources and transition…) and diversified in such a vast area. This can be seen with the greenhouse gas figures, which range from 0,5 tons per capita in the occupied Palestinian territory to more than 15 tons in Russia. Generally speaking the poorest of these ENCs have the lowest figures but they rise rapidly which makes environment a stake common to Europe and its Neighbours.

The land cover (Map 2-3) shows the different typologies of vegetation cover in EU and the Neighbourhoods and also where this vegetation is not present either as urban areas or bare ground. Due to the large geographic coverage there are many types of land areas present, from harsh climatic regions in the North and South extremes with tundra and desert to temperate areas with croplands and forests. In fact the desert is the biggest feature of all the area with about 30% of the entire surface, whereas croplands come second being 20%. These croplands are concentrated in between the 43-55º of latitude and extend eastward but with a decreasing gradient. This highlights the potential of the Neighbourhoods for primary sectors such as agriculture and energy generation. It becomes clear from this map that the EU borders separate continuous biotopes, even if the vegetal cover decreases rapidly southward.

Table 2-1 – Main figures of the Neighbourhoods

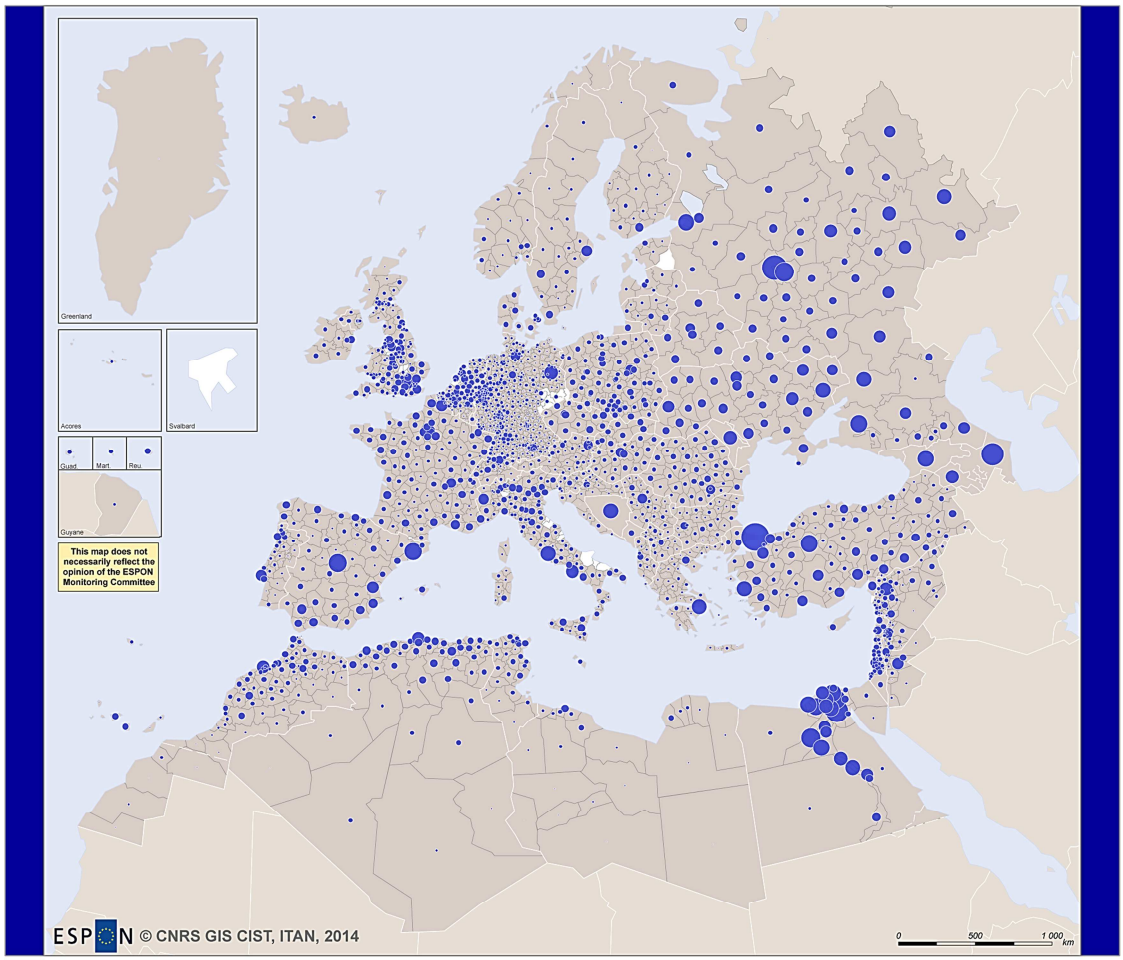
Coverage:	24 countries i.e.: • Faroe Islands and Greenland (to Denmark) (**Northern Neighbourhood**); • Russia, Ukraine, Belarus, Moldova (**Eastern Neighbourhood**); • Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Kosovo (under the UN Security Council resolution 1244/99), FYROM and Albania (**South-Eastern Neighbourhood**); • Morocco, Algeria, Tunisia, Libya, Egypt, Jordan, the Occupied Palestinian territories (OPT), Israel, Lebanon, Syria and Turkey (**Mediterranean Neighbourhood**). • *NB*: the three **ENP Caucasian countries** (Armenia, Azerbaijan and Georgia) are covered separately in this table.
Total territory:	25 million km^2 (neighbouring Arctic areas of Canada not included), ranging from 1 400 km^2 in Faroe Islands to 17 million km^2 in Russia (but the sole western part of Russia is covered by ITAN)
Share of world GDP at current prices	3.4% in 1994 → 5.8% in 2011. • **Northern Neighbourhood** = 0,008% → 0.005% • **Eastern N.** = 1.7% → 3.0% • **South-Eastern N.** = 0.2% → 0.2% • **Mediterranean N**. = 1.5% → 2.5% • *NB*: ENP Caucasian countries = 0.03% → 0.13%
GDP per capita:	2 017 US$/hab. in 1994 → 7 919 US$/hab. in 2011 (ranging from < 1 000 US$ in Palestinian Territory to 45 000 in the Faroe) • **Northern Neighbourhood** = 21 217 → 32 818 US$ • **Eastern N**. = 2 168 → 10 391 US$ • **South-Eastern N.** = 1 923 → 6,966 US$ • **Mediterranean N.** = 1 869 → 6,244 US$ • *NB*: ENP Caucasian countries = 454 → 5 253 US$
Average annual development of GDP per capita:	8.4% between 1994 and 2011 (ranging from -1,0% in OPT to 16,4% in Bosnia and Herzegovina) • **Northern Neighbourhood** = 2.6% • **Eastern N.** = 9.7% • **South-Eastern N.** = 7.9% • **Mediterranean N.** = 7.4% • *NB*: ENP Caucasian countries = 15.5%
Share of world population:	8.1% in 1994 → 7.3% in 2011 • **Northern Neighbourhood** = 0,002 → 0,002% • **Eastern N.** =3.8 → 2.9% • **South-Eastern N.** = 0.4 → 0.3% • **Mediterranean N.** = 3.9 → 4.1% • *NB*: ENP Caucasian countries = 0.3 → 0.2%
Total population:	454 million in 1994 → 508 million in 2011 (ranging from 0.04 million in Faroe to 142 million in Russia) • **Northern Neighbourhood** = 0,1 million (2011) • **Eastern N.** = 200,6 million (2011) • **South-Eastern N.** = 23,1 million (2011) • **Mediterranean N.** = 284,6 million (2011) • *NB*: ENP Caucasian countries = 16,8 million (2011)
Population development (annual growth):	+0.7 % between 1994 and 2011 (ranging from -0.7 % in Ukraine to +2.5 % in Cyprus) • **Northern Neighbourhood** = 0.3% • **Eastern N.** = **-** 0.4% • **South-Eastern N.** = **-** 0.1% • **Mediterranean N.** = 1.6% • *NB*: ENP Caucasian countries = 0.4%

Proportion of population aged 0-14 years and 65 years and more:	0-14 year old: 29,3% (1994) → 22,9% (2011) 65 and more: 8,2% (1994) → 8,9% (2011) • **Northern Neighbourhood** = n.a. • **Eastern N.** = 21,6% → 15,1%; and 12,2% → 13,4% • **South-Eastern N.** = 21,4% → 15,8%; and 9,1% → 12,9% • **Mediterranean N.** = 37,9% → 29,0%; and 4,2% → 5,5% • *NB*: ENP Caucasian countries = 30,3% → 19,6%; 7,2% → 9,4%
Population density:	21 inhabitants per km^2 in 2011 (ranging from 0.1 in Greenland to 668 in Occupied Palestinian Territory) • **Northern Neighbourhood** = 0,3 hab. per km^2 • **Eastern N.** = 12 hab. per km^2 • **South-Eastern N.** = 85 hab. per km^2 • **Mediterranean N.** = 42 hab. per km^2 • *NB*: ENP Caucasian countries = 93 hab. per km^2
Investment (Gross capital formation) as % of GDP:	Approx. 25 % in 2011 (ranging from 15% Israel to 41 % in Algeria)
Greenhouse Gas emissions per capita:	7,9 tons CO_2 equivalent in 2010 [CO_2, Methane, and Nitrous oxide, that is 98% of the world greenhouse gas emissions] (ranging from 0.5 tons in OPT to 15.3 tons in Russia) • **Northern Neighbourhood** = 12,2 t. per capita • **Eastern N.** = 13,1 t. per capita • **South-Eastern N.** = 6,4 t. per capita • **Mediterranean N.** = 4,4 t. per capita • *NB*: ENP Caucasian countries = 5,5 t. per capita
Greenhouse Gas emissions per GDP in Millions of Euro:	1 000 tons CO_2 equivalent in 2010 (ranging from 298 tons in Israel to 2186 tons in Ukraine) • **Northern Neighbourhood** = 370 t. • **Eastern N.** = 1 262 t. • **South-Eastern N.** = 913 t. • **Mediterranean N.** = 702 t. • *NB*: ENP Caucasian countries = 1 044 t.
Human Development index:	0.717 in 2011 [non demographically weighted average] (ranging from 0.582 for Morocco to 0.888 for Israel) • **Northern Neighbourhood** = na • **Eastern N.** = 0.722 (2011) • **South-Eastern N.** = 0.756 (2011) • **Mediterranean N.** = 0.565 (1990) → 0.698 (2011) • *NB*: ENP Caucasian countries = 0.717 (2011)

Notes:

- "GDP 1994": 1998 for Faroe, 2000 for Kosovo (under the UN resolution 1244/99) and Montenegro, 1997 for Serbia.
- "GDP 2011": 2009 for Faroe, Greenland and Libya, 2010 for Ukraine, 2005 for the Occupied Palestinian Territory
- "Greenhouse gas emissions": CO_2 2009, Nitrous oxide 2010, Methane 2010; HFC, PFC, SF6 are excluded (but they only represent 2% for the total at world scale); only CO_2 available for Faroe, Greenland, Montenegro and the Occupied Palestinian Territory (but Methane and Nitrous oxide represent small emissions compared to CO_2); Kosovo (under the UN resolution 1244/99): no data at all.
- All data: source World Bank.

Map 2-1 - Population at (S)NUTS 3, 2010



EUROPEAN UNION
Part-financed by the European Regional Development Fund
INVESTING IN YOUR FUTURE

Regional level: NUTS 2 & SNUTS 1- 2-3
Source: ESPON project (ITAN), CNRS GIS CIST. Data standardised by IGEAT, 2013
Origin of data: Eurostat, national statistics institutes & US Census, 2013
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For some territories no clear international statement exists

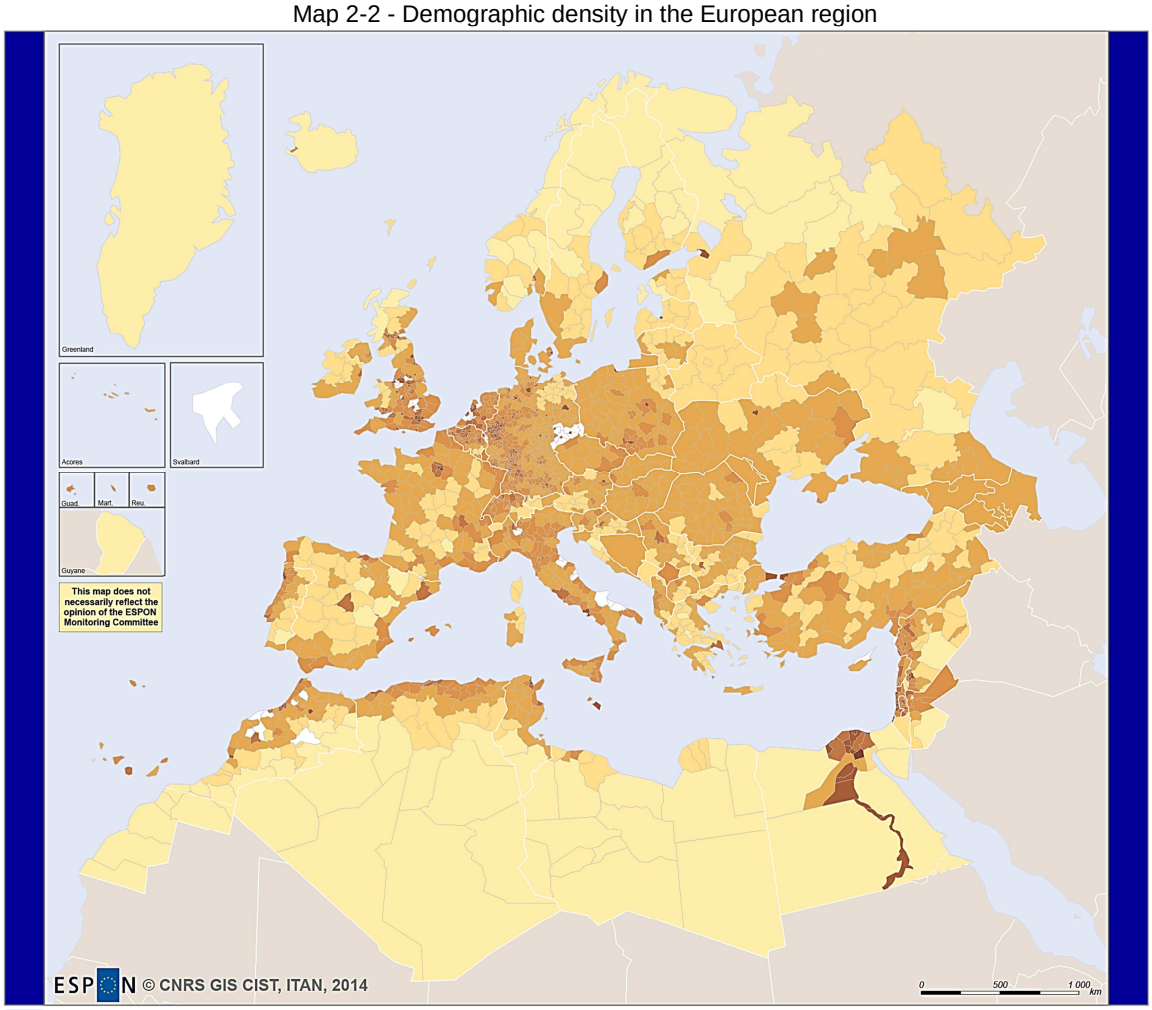
Total population in 2010* (million)

no data

0,1 0,5 1 2,5 5 7,5 10

Statistical data for Cyprus refer only to the areas under effective control of the Government of the Republic of Cyprus.
** Population data at the latest available year of 2010. The collected data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Therefore, data are harmonised against the national values provided by the US Census. A cross-multiplication is used to apply the observed ratio at the regional scale. These are computed at the SNUTS 3 level whenever possible, at the SNUTS1/2 level otherwise.*

Map 2-2 - Demographic density in the European region



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Regional level: NUTS 2 & SNUTS 1- 2-3
Source: ESPON project (ITAN), CNRS GIS CIST. Data standardised by IGEAT, 2013
Origin of data: Eurostat, national statistics institutes & US Census, 2013
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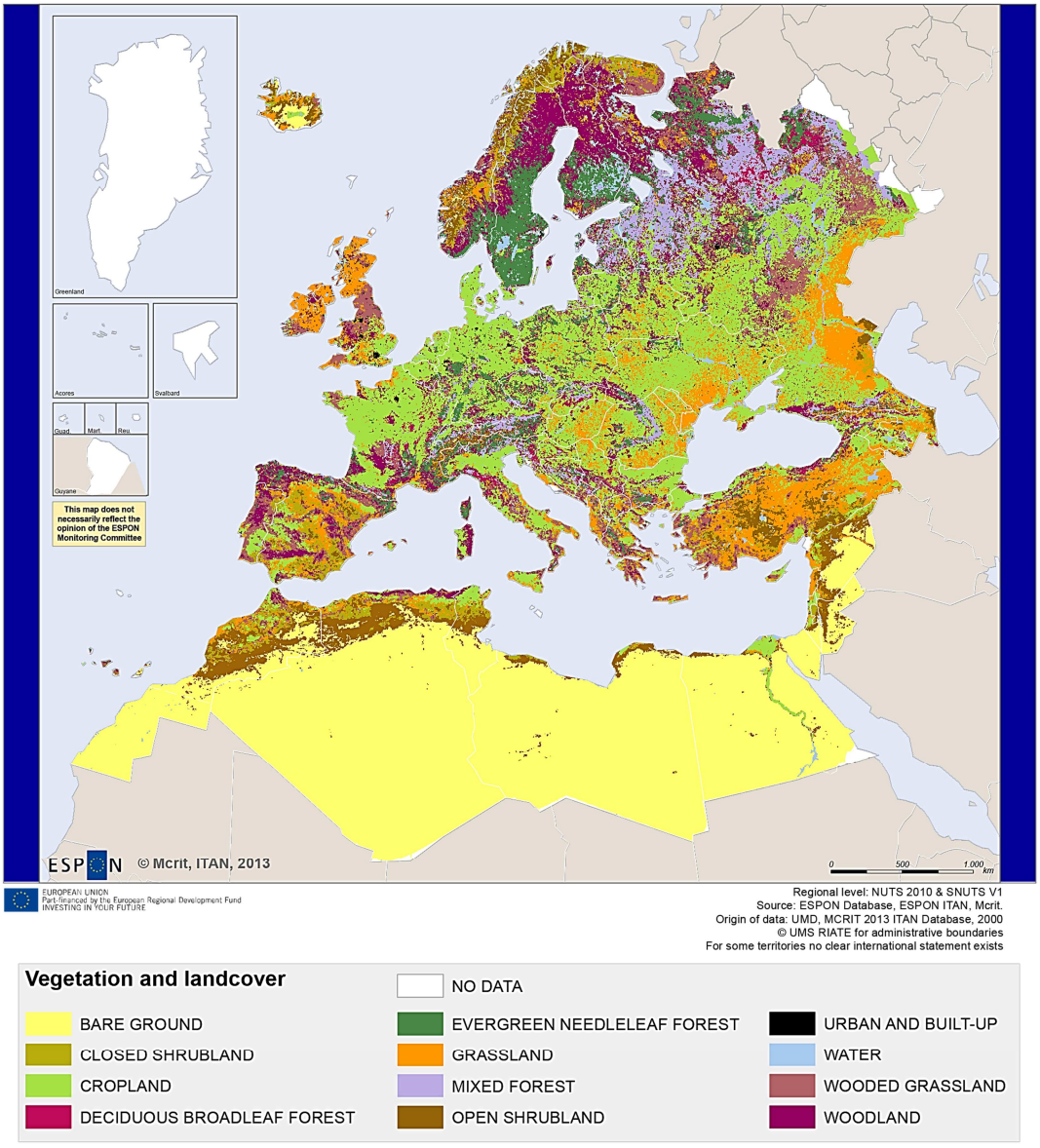
Inhabitants per km², 2010*

0	15	50	150	500	1 500	5 500	40 498	no data

** Population data at the latest available year of 2010. The collected data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Because of this variability, data are harmonised against the national values provided by the US Census databases. A cross-multiplication is used to apply the observed ratio at the regional scale. These are computed at the SNUTS 3 level whenever possible, at the SNUTS1/2 level otherwise.*

Map 2-3 - Land cover, 2000



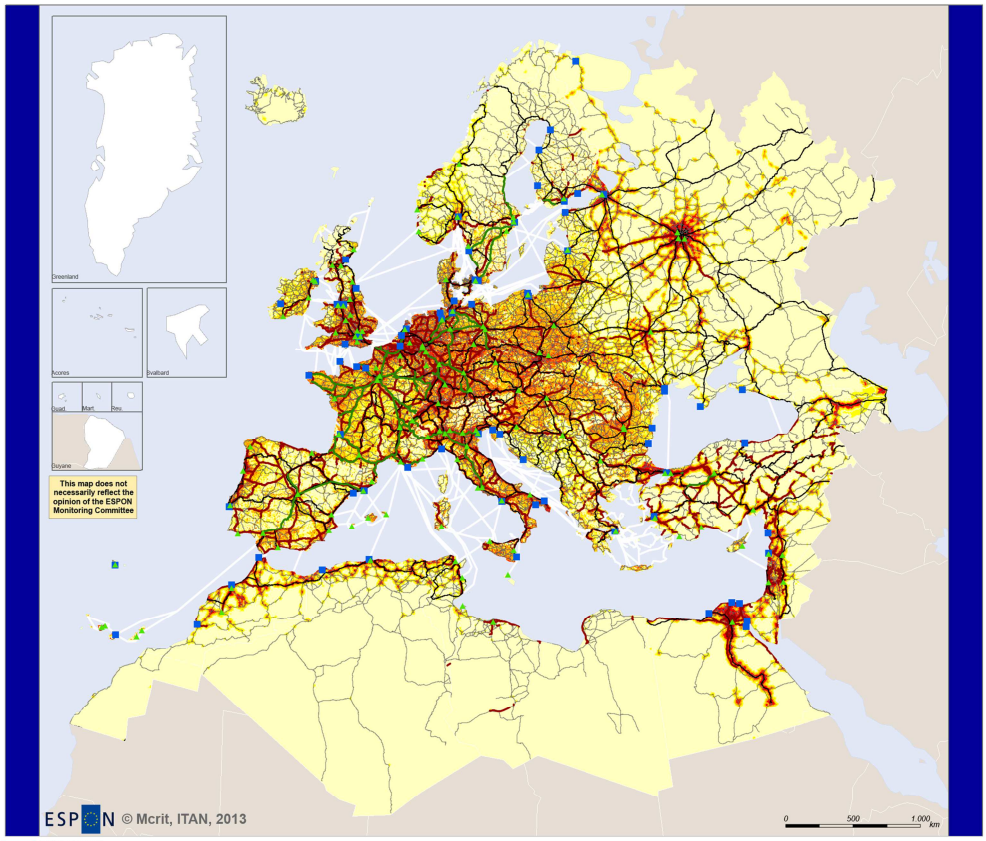
2.1.2. Transport and energy networks in the wider region

This section presents the mapped results of the work on the transport and energy network data. We now have at our disposal a thorough cartography and network database of the transport network of the wider European region (EU + Neighbourhoods), ca 2010. This provides with (i) a comprehensive view of this wider region today and tomorrow given the role of transport network in territorial development, (ii) new possibilities for researchers to integrate social, economic and environmental data to these wide network data, so as to compute indicators of connectivity, accessibility and any other socio-economic potential at this wider scale; (iii) in-depth analyses at a sub-regional scale, since this database is compliant with the overall ITAN database at SNUTS scale, which allows specific treatments for any territory of the area; (iv) further cooperation between the European stakeholders and their Neighbour counterparts, in particular in the field of energy which is one of the major stakes of the region, but also in the field of investment in transport infrastructure with regard to the needs of the ENCs.

1°) Transport network

The first maps provided here display two types of opposition. The first is about demographic density, and reflects the above analysis (2.1.1 section). The second is about the network density: all the European territory is meshed, at various degrees but anyhow meshed, including eastern Europe up to Moscow and including Turkey on its European territory up to central Anatolia. In the Arab Neighbour countries, the network is much more limited, for geo-climatic reasons as well as economic reasons.

Map 2-4 - Demographic density and main transport network in the wider European region, ca 2010



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Regional level: NUTS 2010 & SNUTS V1
Source: ESPON Database, ESPON ITAN, Mcrit.
Origin of data: ESRI, WPI-NGA, MCRIT 2013 ITAN Database, EEA, National Statistical Agencies and own work
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For some territories no clear international statement exists

Legend

- Larger airports (over 2 million passengers/year)
- Larger sea ports (World Port Index classification)
- High speed rail
- Main railways
- Motorways
- Main roads
- Ferries

Population density
inhabitants/km2

- <= 6
- 7 - 10
- 11 - 20
- 21 - 50
- 51 - 100
- 101 - 200
- 201 - 500
- 501 - 1.000
- 1.001 - 2.000
- 2.001 - 5.000
- >5.000
- NO DATA

Raster cell information at 5x5km, based on EEA, complemented with national sources in the ESPON Space
In Neighbouring countries total population is distributed according to accessibility to transport networks and validated against NASA satellite images and UMZ

Road network in the Neighbourhoods is less dense than in the ESPON area. This is especially true for most remote Russian regions and for the desert areas in North Africa and eastern Mediterranean. The network is dense in the Eastern Mediterranean coast but becomes rapidly sparse when moving away from the coast, except in the Nile valley where it is fairly good up to Aswan. A similar pattern exists in the Maghreb, with good road endowment near the coast that worsens when moving far away from it. Between Tunisia and the Nile delta, the road network is much sparser, effectively creating a gap between Maghreb and the Eastern Mediterranean. The *quality* of the networks is also quite different, as the number of high capacity roads with lane separation is much smaller in all the Neighbourhoods; they only are significant in Turkey, part of the Eastern Mediterranean coast and part of the Maghreb. Also the condition of conventional roads does not follow the same standards as in most of ESPON area. However, Israel and some surrounding areas have a road endowment and quality similar to that of western Europe.

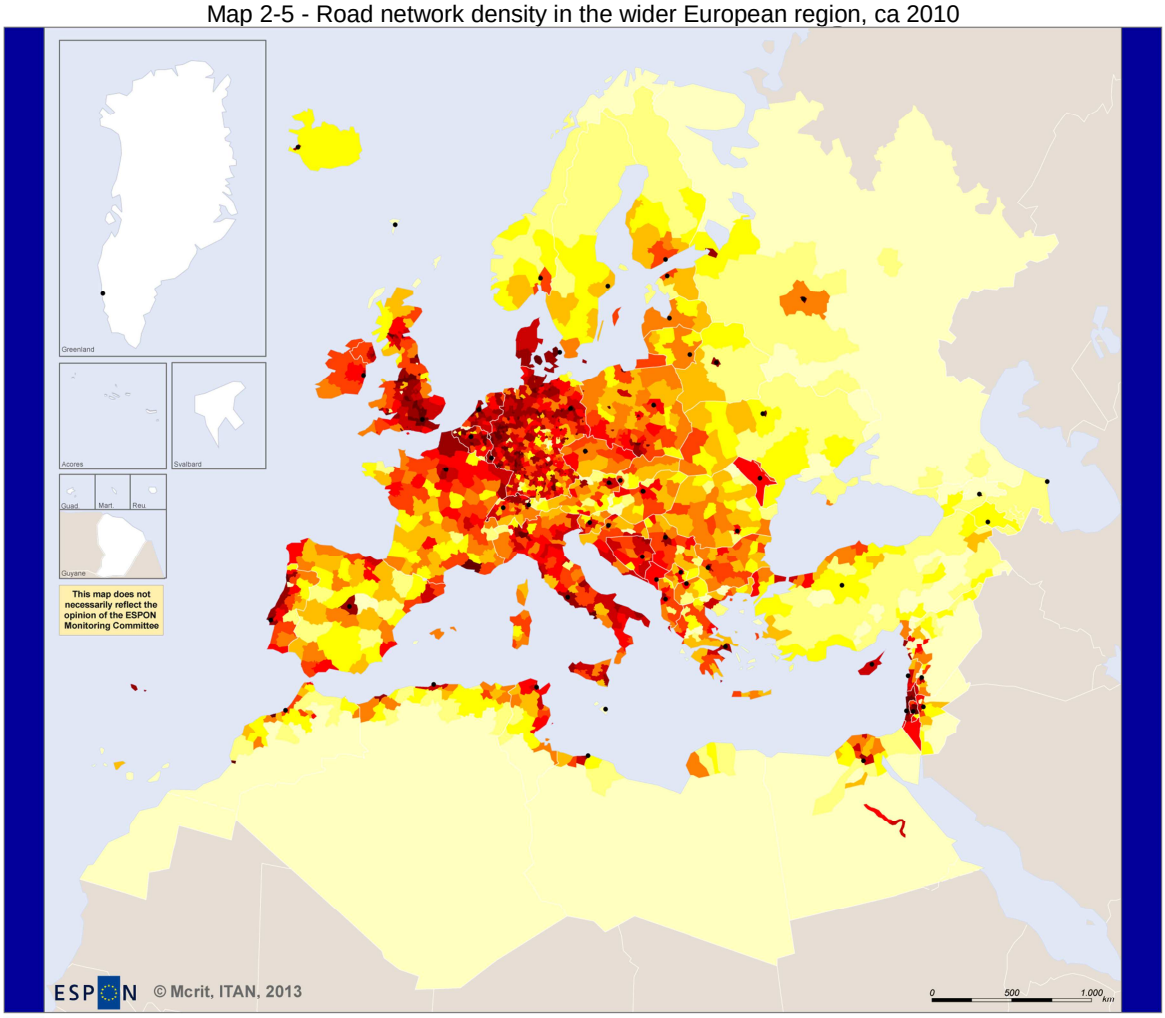
There is continuity between road networks including with Neighbourhoods: eastward, and with Turkey. But some borders are closed and crossing others implies long administrative delays; this happens mainly in the southern (in particular between Morocco and Algeria) and eastern Mediterranean countries (due to the political unrest in the Near East), but also, to minor extent, between Russia and Ukraine.

In the Neighbourhoods, rail network is more sparse and patchy than the road network, and of worse quality than in ESPON area. Similarly to the road network, the density decreases when moving away from the EU, with a very limited network in the Maghreb, the Eastern Mediterranean and Turkey. Especially noticeable is the absence of rail network in most of Libya. The Eastern neighbourhood however, especially Russia and Ukraine, has a relatively good endowment. There are important discontinuities between countries due to missing links and closed borders. High speed rail is right now non-existent throughout all the Neighbourhoods, although several projects are designed. Morocco intends to create 1 500 km of high-speed rail in the two coming decades, to thoroughly modernise its old inter-city network. A first line will follow the Atlantic coast from Tangier to Agadir, with a first section in service in 2015 between Tangier and Casablanca; a second line will cross inner northern Morocco from Casablanca to Oujda and, when financially and politically possible, Algeria..

As a whole, an important difference between networks in the EU and the ENCs is the transnational continuity. While there are almost no barriers for crossing countries in the EU, many ENCs have borders difficult to cross or even completely shut, such as those between Morocco and Algeria or occupied Palestinian territory and Israel. In some cases links are missing making it impossible to move between neighbouring regions, as for example in the Turkey/Syria or Israel/Jordan borders. The rail network has some extra continuity problems across the neighbourhood as there are incompatibilities between systems in terms of gauge and electrification.

Apart from national and regional planning of new and improved transport infrastructures in the different ENCs, there are some transnational projects aiming to give continuity to the networks thus increasing the relations between countries. One of those is a high level transport infrastructure (high-speed rail and motorway) linking the Maghreb coast from Casablanca to Tripoli in Libya.

Map 2-5 - Road network density in the wider European region, ca 2010



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Regional level: NUTS 2010 & SNUTS V1
Source: ESPON Database, ESPON ITAN, Mcrit.
Origin of data: ESRI, WPI-NGA, MCRIT 2013 ITAN Database
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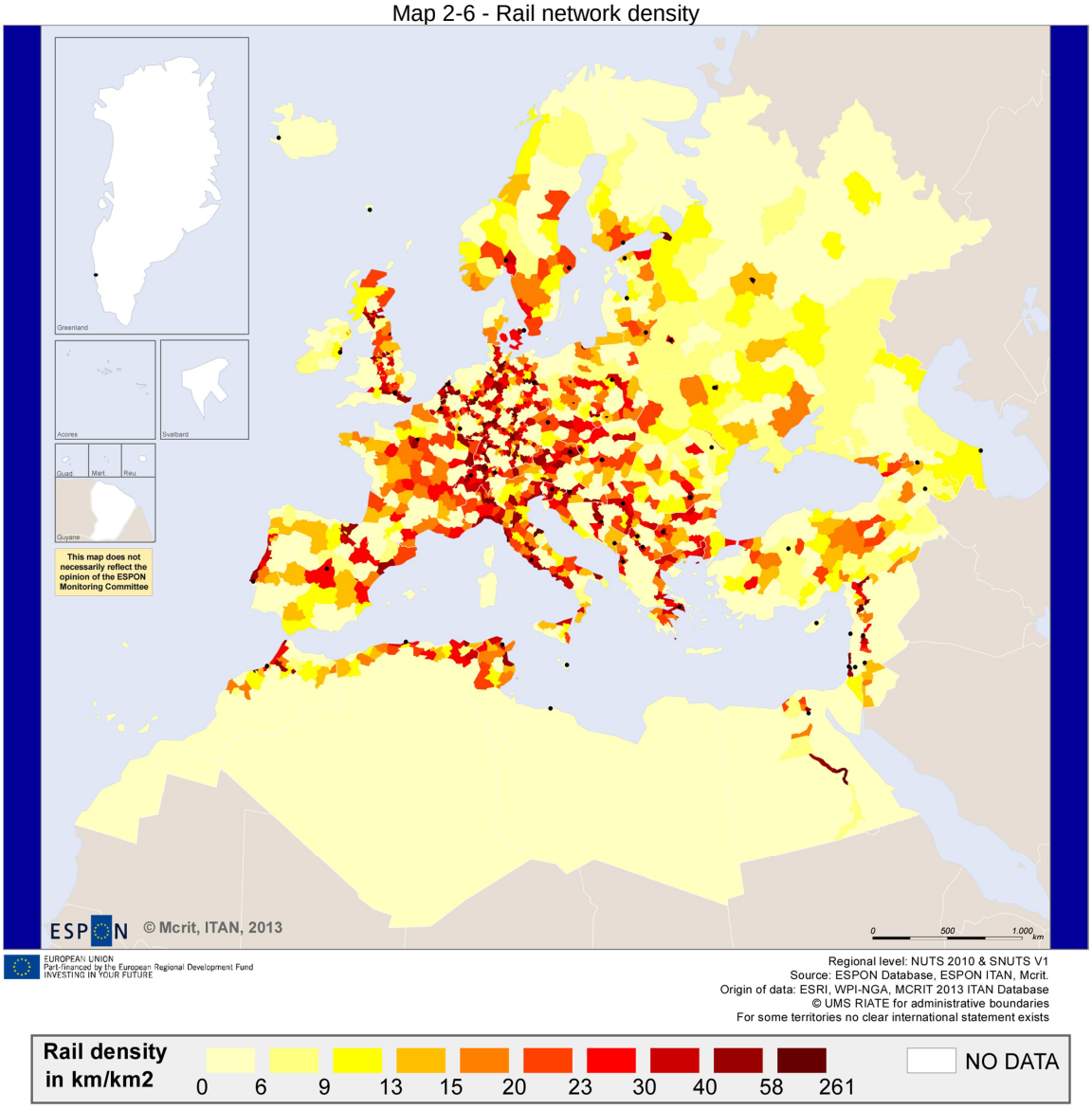
For some territories no clear international statement exists

Legend

Road density in km/km2

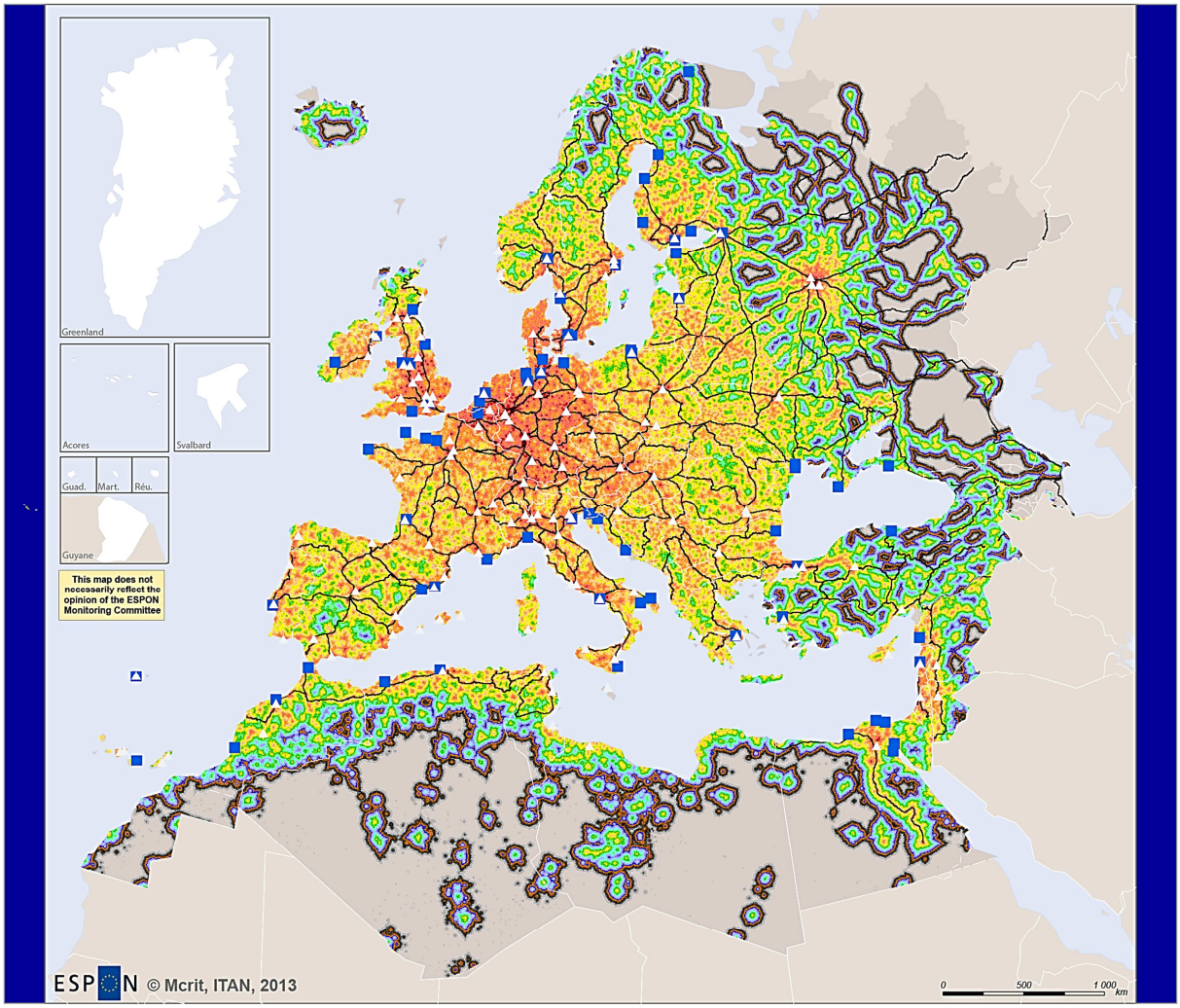
- 0 - 24
- 25 - 38
- 39 - 49
- 50 - 58
- 59 - 69
- 70 - 80
- 81 - 98
- 99 - 126
- 127 - 186
- 187 - 718
- NO DATA

Map 2-6 - Rail network density



The last maps give the resulting connectivity and accessibility in the wider European region. The number of accessible persons in a span of time of three hours displays a harsh opposition between western Europe and its outskirts. A striking feature is that the northern part of Maghreb is linked to the European territory in terms of accessibility. At the other extremity of the Mediterranean Neighbourhood, the connection is also strong in Turkey. Another area of important demographic accessibility is the Nile valley but due to local high demographic density and without any connection to Europe. Eastern Neighbourhoods but also, more surprisingly, Western Balkans, display medium to quite low accessibility areas, due to local limited density and/or access to western Europe. The three hours indicator seems relevant: it is sufficiently large to avoid any bias due to the very uneven size of the territories ((S)NUTS 2/3) on the basis of which the map was made; it is sufficiently small to correspond to a possible return trip in the day that is a proxy of business needs for interaction.

Map 2-7 - Connectivity



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Regional level: NUTS0 2010 & SNUTS V1
Source: ESPON Database, ESPON ITAN, Mcrit
Origin of data: ESRI, WPI-NGA, Mcrit, 2013
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For some territories no clear statement exists

Connectivity (in minutes)

0 11 21 31 41 51 61 71 81 91

91 101 111 121 131 141 151 161 180

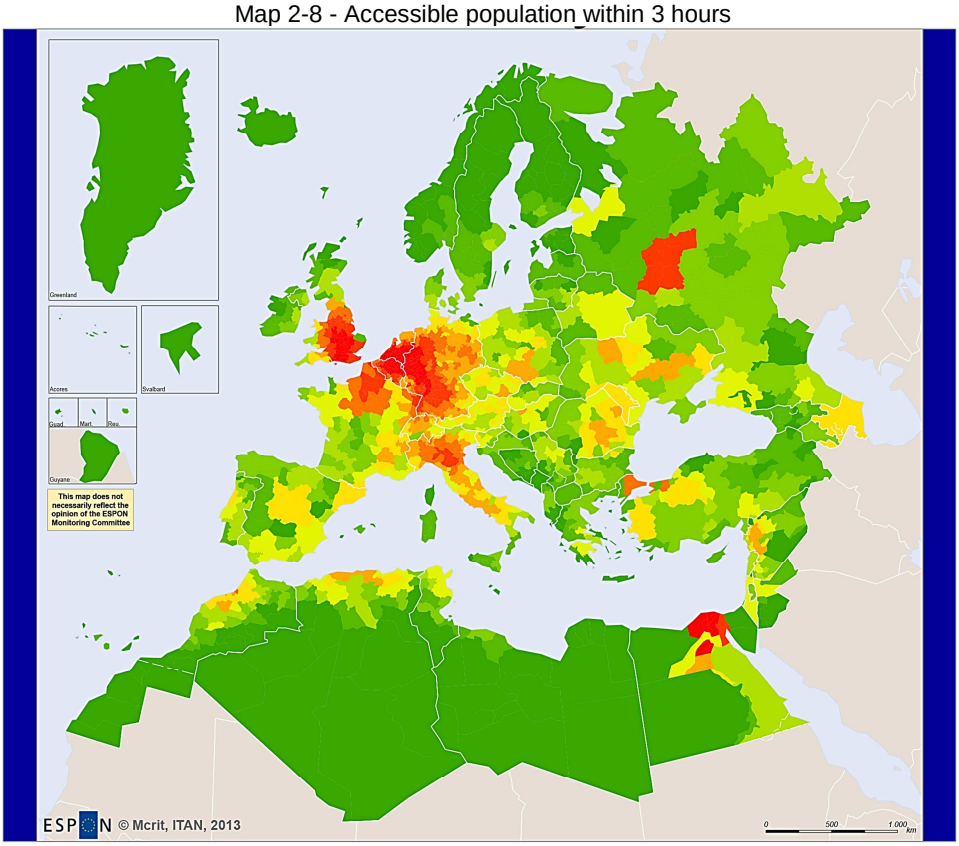
Main railways

Larger airports
(+ 2 million passengers/year)

Larger ports
(World Port index classification)

Raster cell information at 5x5km, complemented with national sources in the ESPON Space. In Neighbouring countries connectivity is calculated according to ICON indicator (distance to closer airports, railway stations and roads weighted by their relative passenger traffic)

Map 2-8 - Accessible population within 3 hours



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Regional level: NUTS 2010 & SNUTS V1
Source: ESPON Database, ESPON ITAN, Mcrit.
Origin of data: MCRIT 2013 ITAN Database
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For some territories no clear international statement exists

Legend

Accessible population

- 2.642 - 775.000
- 775.001 - 2.090.400
- 2.090.401 - 3.485.300
- 3.485.301 - 5.190.300
- 5.190.301 - 7.034.700
- 7.034.701 - 9.700.752
- 9.700.753 - 13.281.913
- 13.281.914 - 18.228.800
- 18.228.801 - 24.471.500
- 24.471.501 - 138.705.488

Sum of all population that can be reached in a given time limit using land transport

2°) Energy

The contrast between Europe and its Mediterranean Neighbours is particularly spectacular in the field of energy, including with those countries which are important energy providers such as Algeria and Libya. This shows that their role, at the wider region's scale, remains basically that of raw material suppliers with locally low territorial development. The contrast is striking on the map of the electricity network, although the 2.2.2 below section shows its importance for the wider region's future.

Natural gas network map[26]

The considered networks are:

- Natural gas pipelines, existing or projected
- Liquefied natural gas (LNG) import and export terminals, existing or projected
- Gas fields, major and small.

The main features of the map are:

- The high density of the networks in central Europe, the North Sea, and the eastern Europe.
- The presence of LNG export terminals in the Maghreb, which is related to the growing "sop market" strategy of these countries, at the expenses of long-term deliveries thanks to long-term contracts on which the European Commission is more and more reluctant.
- The big gas pipelines from Russia, with a diameter of 36" and over.
- The significant presence of major gas fields in the North Sea, eastern Europe and Maghreb, with recent discoveries in eastern Mediterranean which have revived the disputes about maritime boundaries in the area (Israel-Lebanon-Cyprus), and the potential important gas fields in front of the Nile Delta.
- The numerous projects of natural gas pipelines in the Balkans, as in interface between Russia and western Europe.
- The Trans-Saharan gas pipeline project linking Algeria with gas fields in the Gulf of Guinea.

[26] The main references used for the realisation of the map are: (i) European Natural Gas network map (2009), Gas Transmission Europe (GTE, a subdivision of Gas Infrastructure Europe which represents the Transmission System Operators). GIE is a representative organisation towards the European Institutions, the European bodies of regulators and other stakeholders. The map is available on the website of the European Commission, in the energy sector; link: http://ec.europa.eu/energy/international/russia/russia_en.htm. (ii) System Development Map (2011), Gas Infrastructure Europe (GIE); link:
http://www.gie.eu.com/download/maps/ENTSOG_SYSDEV_MAP2011.pdf.
Complementary references are (i) The Current Export Infrastructure from South Mediterranean and Iraq to Europe map (2010), "Supplying the EU Natural Gas Market" Report, Mott MacDonald, 2010, p. 20.; link: http://ec.europa.eu/energy/international/studies/doc/2010_11_supplying_eu_gas_market.pdf. (ii) Oil pipelines and pipeline projects in the Western Balkan region map (2008), "Energy in the Western Balkans" Report, International Energy Agency (IEA)/ OECD, 2008, p. 76; link:
http://www.iea.org/publications/freepublications/publication/Balkans2008.pdf

Oil network map[27]

The considered networks are:

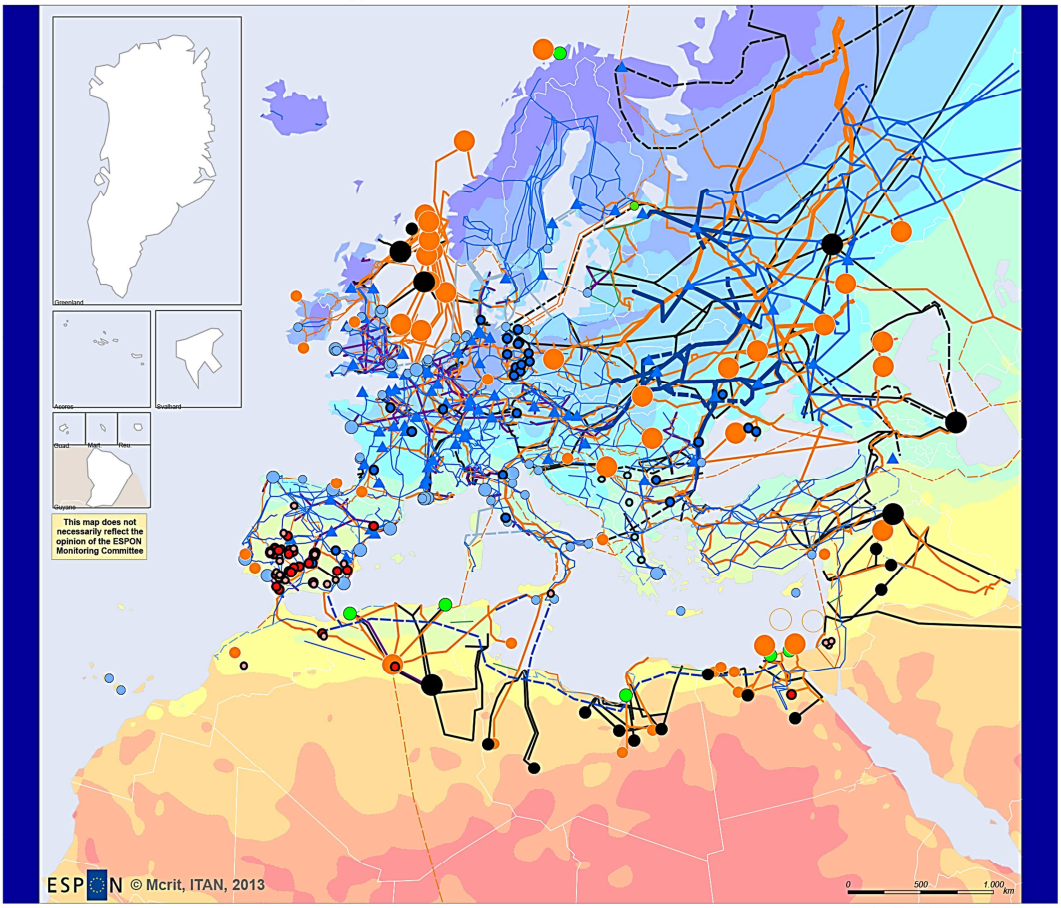
- Crude oil pipelines, existing/under construction or projected.
- Oil products pipelines, existing/under construction or projected.
- Oil fields, major and small.

The main features of the map are:

- The presence of crude oil pipelines in the Neighbouring countries (Russia, Maghreb, Near East, Caucasus).
- The high density of oil products pipelines in the EU, especially in the European metropolitan areas.
- Again, the numerous projects of crude oil pipelines in the Balkans.
- The significant presence of oil fields in the Neighbourhood countries, except for the North Sea.

[27] The main references used for the realisation of the map are (i) For the EU territory: Refineries and oil pipelines in Europe map (2006), "Performance of European cross-country oil pipelines" Report, Concawe, 2006, p. 18. Concawe is a non-profit making scientific association, composed by companies that own crude oil refining capacity within the European Union, Iceland, Norway, Switzerland and Turkey. Its main mission is to carry out research on environmental issues relevant to the oil industry; link: http://www.nifv.nl/upload/176974_668_1254304852686-performance_of_Eurpean_cross_country_oil_pipeline.pdf. (ii) For the Maghreb region: Oil and gas pipelines in the North Africa map (2008), available on the website theodora.com, link: http://www.theodora.com/pipelines/north_africa_oil_gas_products_pipelines_map.html. (iii) For the Russian pipelines: Primary russian oil and gas pipelines to Europe map (2007), available on the website hermes-press.com. The map is made by the US Energy Information Administration (EIA), which is the statistical and analytical agency within the U.S. Department of Energy; link: http://www.hermes-press.com/EU_russia.htm. (iv) For the eastern Europe territory: Political and economic alliances map (2007), Philippe Recacewicz, "Balkan vital graphics" Report, The United Nations environment programme (UNEP) and GRID-Arendal, 2007, p. 19. GRID-Arendal is a center collaborating with the UNEP, established in 1989 by the Government of Norway. The Foundation´s mission is to communicate environmental information to policy-makers and facilitate environmental decision-making; link: http://www.grida.no/files/publications/balkan-vital-graphics/balkans-vital-graphic-full.pdf. (v) For the Balkans territory: Oil pipelines and pipeline projects in the Western Balkan region map (2008), "Energy in the Western Balkans" Report, International Energy Agency (IEA) and OECD, 2008, p. 76; link: http://www.iea.org/publications/freepublications/publication/Balkans2008.pdf. (vi) For the northern Europe : Oil infrastructure in NWE map (2009), "Survey of the competitive aspects of oil and oil products markets in the EU", Pöyry Energy Consulting, 2009, p. 190; link: http://ec.europa.eu/energy/oil/studies/doc/2009_oil_market_survey.pdf. (vii) For the major oil fields: Oil in Europe map (2010), "Oil and gas delivery to Europe" Report, Susanne Nies, IFRI, 2011, p. 32.
Complementary references are: (i) Map of Turkey´s oil infrastructure (2008), Turkey Review, IEA, 2009, p. 55; link: http://www.iea.org/publications/freepublications/publication/turkey2009.pdf. (ii) Current flows in central and eastern Europe´s oil pipeline network map (2010), Study on the Technical Aspects of Variable Use of Oil Pipelines, ILF CONSULTING ENGINEERS/ PURVIN & GERTZ, 2010, p. 17; link: http://ec.europa.eu/energy/oil/studies/doc/2010_reporting_technical_aspects.pdf.

Map 2-9 - Energy networks in the wider European region, ca 2010



EUROPEAN UNION
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Regional level: NUTS 2010 & SNUTS V1
Source: ESPON Database, ESPON ITAN, Mcrit.
Origin of data: ENTSO-E, Concawe, GIE, NASA SSE, MCRIT 2013 ITAN Database
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For some territories no clear international statement exists

Oil fields
Size
- Major
- Small

Oil pipelines
State, Type
- Existing, Crude oil
- Existing, Oil products
- Project, Crude oil

Gas fields
Size
- In study
- Major
- Small

Gas pipelines
State, Size
- Existing, 36" and over
- Existing, 24" to 36"
- Existing, under 24"
- Project

LNG facilities
State, LNG
- Existing, Export
- Project, Export
- Existing, Import
- Project, Import

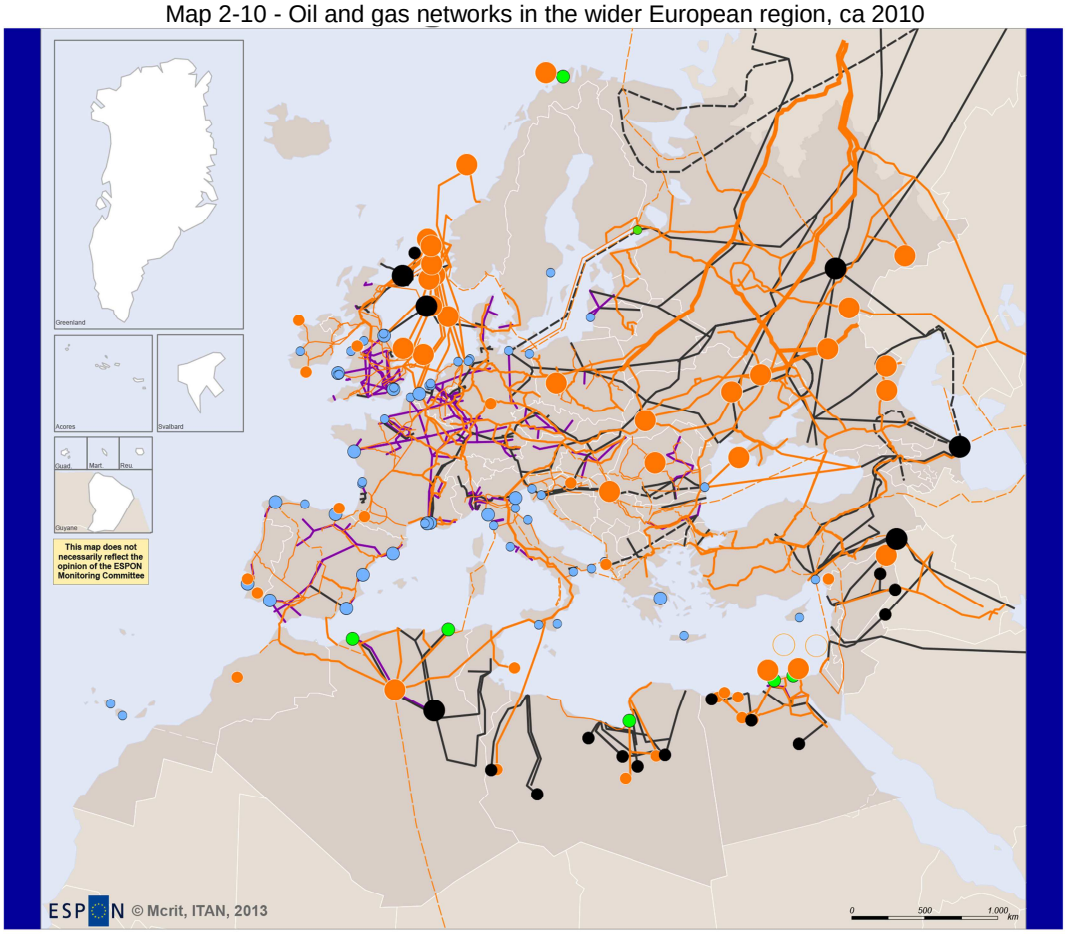
Average solar horizontal radiation
kW/m2/day
- 1,7 - 2,4
- 2,5 - 2,8
- 2,9 - 3,1
- 3,2 - 3,6
- 3,7 - 4,2
- 4,3 - 4,8
- 4,9 - 5,4
- 5,5 - 5,8
- 5,9 - 6,2
- 6,3 - 6,8

Solar installations
- Photovoltaic, UC
- Photovoltaic, existing
- Thermosolar, UC
- Thermosolar, existing

- Nuclear power plants
- NO DATA

High voltage network
Type, State, Capacity
- DC line, Existing
- DC line, UC
- Transmission line, Existing, 750 kv
- Transmission line, UC, 750 kv
- Transmission line, Existing, 500 kv
- Transmission line, UC, 500 kv
- Transmission line, Existing, 380-400 kv
- Transmission line, UC, 380-400 kv
- Transmission line, Existing, 220 kv

Map 2-10 - Oil and gas networks in the wider European region, ca 2010



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Regional level: NUTS 2010 & SNUTS V1
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For some territories no clear international statement exists

Oil fields
Size
- Major
- Small

Oil pipelines
State, Type
- Existing, Crude oil
- Existing, Oil products
- Project, Crude oil

Gas fields
Size
- In study
- Major
- Small

Gas pipelines
State, Size
- Existing, 36" and over
- Existing, 24" to 36"
- Existing, under 24"
- Project

LNG facilities
State, LNG
- Existing, Export
- Project, Export
- Existing, Import
- Project, Import

NO DATA

Electricity[28]

The considered networks are:

- High-voltage transmission lines, with voltages between 380 and 750 kv, existing or under construction (UC).
- Nuclear power plants.
- DC lines.
- Low voltage interconnections in the Mediterranean Neighbourhood.

The main features of the map are:

- The high density in the centre of the EU, losing importance away from the European metropolitan areas.
- The very high voltage network in Russia, only region which has transmission lines of 500 and 750 kv.
- The absence of network in the Baltic States, due to the existence of a high tension network, but with 300-330 kv transmission lines.
- The numerous nuclear power plants in the European large urban areas, especially Germany, France and Belgium.
- The Medring project, which aims at connecting the North African countries between them and with European countries (Spain, Italy) using high voltage lines. A connection already exists between Maghreb and western Europe, but at a lower voltage than what is mapped here.

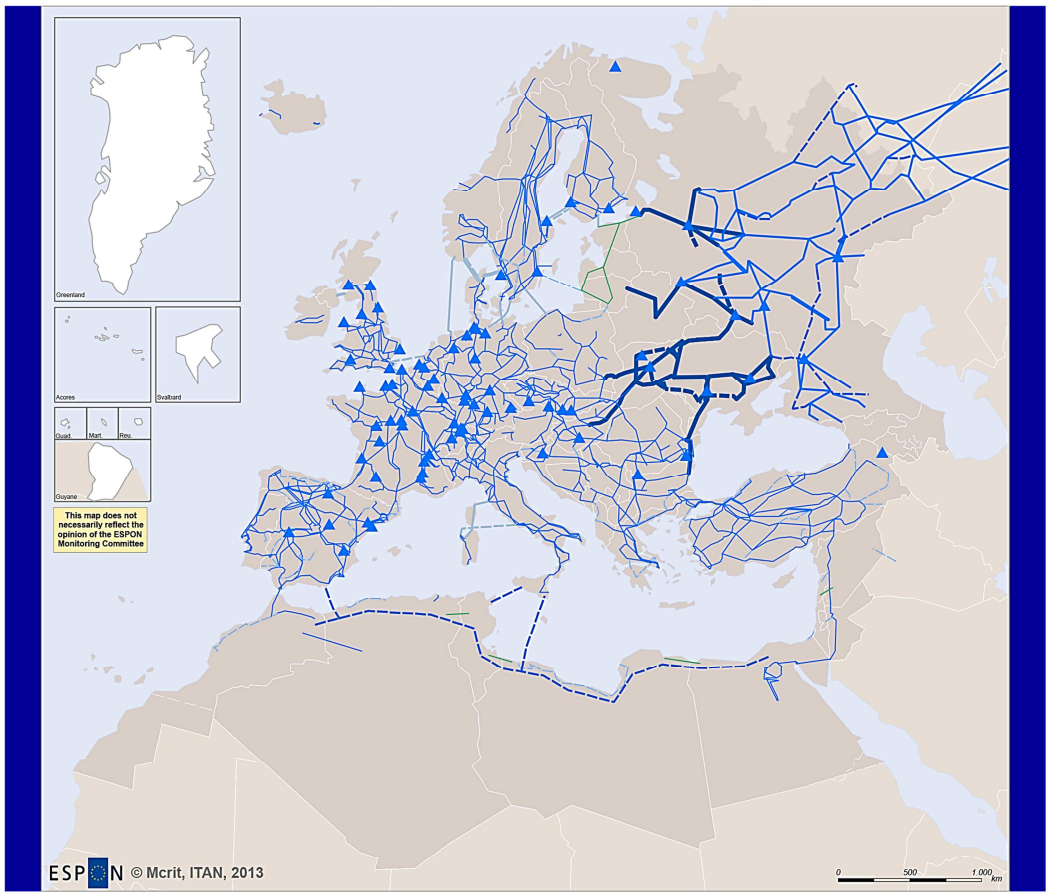
Solar electricity: the potential solar horizontal radiation

The map of potential solar horizontal radiation is derived from NASA SSE data. Satellite observations produce a table of average values in a grid of 1x1 degree. These values are interpolated into a raster using a spline function. The result is a map with the average solar radiation measured in kW/m2/day giving an idea of the enormous differences in potential solar power across the regions. Radiation in the Sahara desert is in average 3,5 times superior to that of the northernmost areas.

Concentrated solar power stations (of more than 50MW) are a relatively new technology that is not yet widespread. Most thermo solar power plants are concentrated in the South of Spain, while photovoltaic installations can be found in several places but are mainly concentrated in eastern Germany. As an example the Solúcar platform is the largest solar platform in Europe and is situated in the vicinity of Sanlúcar la Mayor, Seville. In this complex plant Abengoa Solar commercially operates 183 MW. Currently, the platform annually produces energy equivalent to 94 000 households and avoids the emission of over 114 000 tons of CO_2. The solar electricity issue is addressed in the 2.2.2 section dedicated to the energy stake of the wider European region.

[28] The main references used for the realisation of the map are: Interactive map of European interconnected electricity grids map (2009), European network transmission system operators for electricity (ENTSO-E), available on the website of Raw & Refined Commodities, a group of companies which entered the European electricity market in 2007, founded in Macedonia; link: http://rrc-energy.com/electricitymap. Complementary references are: Interactive map of the world nuclear reactors (2012), available on the website of New scientist. The map is based on the World Nuclear Association's Reactor Database; link: http://www.newscientist.com/embedded/nuclear-reactor-map

Map 2-11 - Electricity network in the wider European region, ca 2010



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Origin of data: ENTSO-E, MCRIT 2013 ITAN Database
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For some territories no clear international statement exists

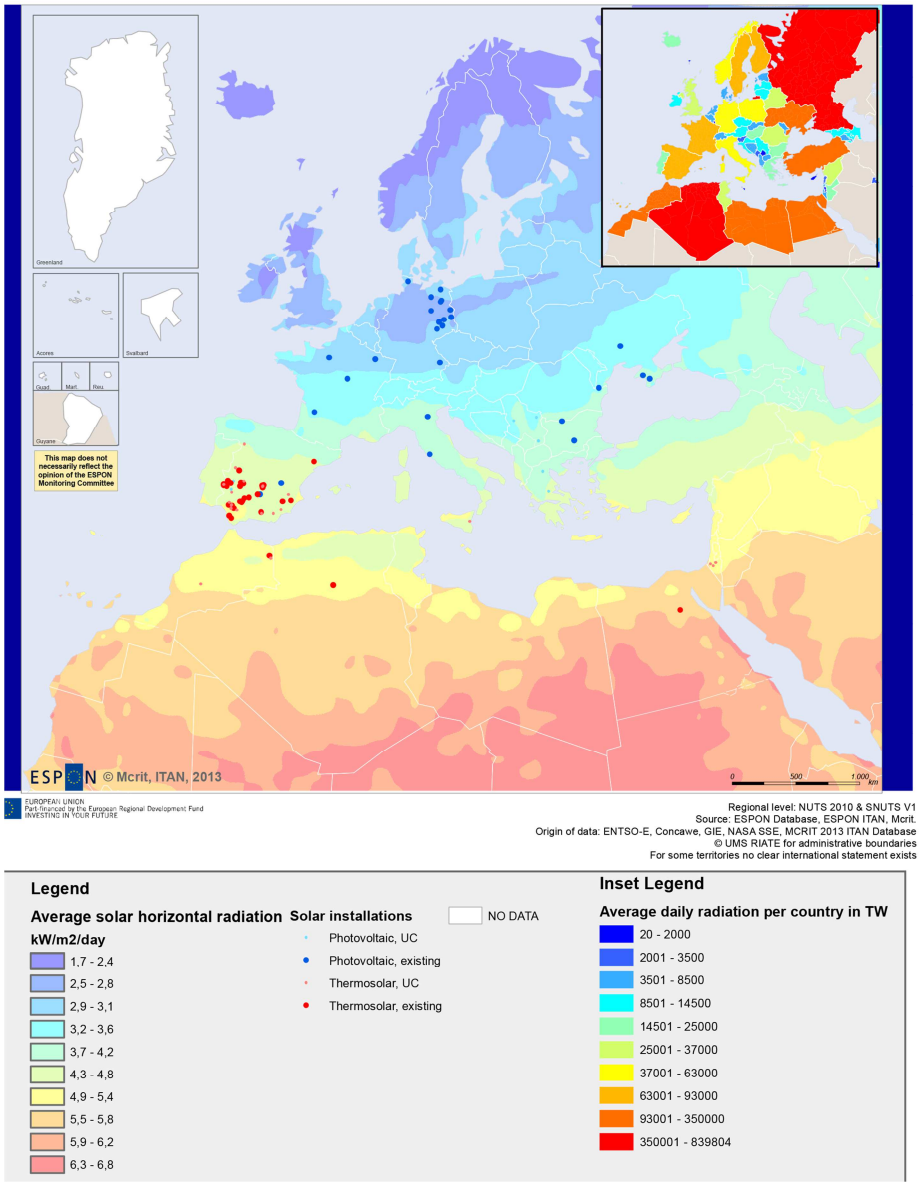
- Nuclear power plants

High voltage network

Type, State, Capacity

- DC line, Existing
- DC line, UC
- Transmission line, Existing, 750 kv
- Transmission line, UC, 750 kv
- Transmission line, Existing, 500 kv
- Transmission line, UC, 500 kv
- Transmission line, Existing, 380-400 kv
- Transmission line, UC, 380-400 kv
- Transmission line, Existing, 220 kv
- NO DATA

Map 2-12 - Solar energy in the wider European region



2.1.3. Place of the ENCs in the flows between Europe and the rest of the world, an overview

In the first section of this report, we referred to the politically-driven process of regional integration as “regionalism”, as opposed to “regionalisation” which describes the emergence of large integrated areas in which flows of different nature are intense, that is functional regions. As we said, these processes mutually reinforce each other. However, they do not necessarily fit geographically. While politically-driven regional integration has relatively clear boundaries, corresponding to free trade areas, the functionally integrated regional areas have in general more fuzzy limits.

In the case of Europe, there is no doubt that the limits of the functional region goes beyond the limits of the politically-driven integrated area (EU). Moreover, the functional region has fuzzy limits, with the level of integration decreasing with the distance to Europe, all other things equal, but also depending on the types of flows and exchanges we look at. Briefly said, we can consider the Neighbourhood as this part of functional Europe which does not make part of the EU process of integration, including the quasi members of the EU such as Norway or Switzerland. In concrete terms, it includes most of former

USSR, northern Africa, Former Yugoslavian republics, Turkey and the Near East which all have intense and deep exchange with the EU/European territories [Grasland & Didelon 2007].

In this section, we describe this process of regional integration between the EU/European territory and its Neighbourhoods in order fulfil one of the main objectives of ITAN: assessing the regional integration between the ESPON space (EU27, Iceland, Liechtenstein, Norway, and Switzerland) and the ENCs. The driving question is to know if the flows between ENRs and ESPON space (EU27, Iceland, Liechtenstein, Norway, and Switzerland) show a trend toward integration or rather de-integration. Our answer is threefold:

1. starting from the EU perspective, we first assess the importance of Neighbourhoods for the EU, in comparison to other world regions;
2. taking the reverse perspective, we assess whether the EU (and close associates: Switzerland, Norway, Iceland etc.) is important for neighbouring countries and, moreover, how this importance has evolved across time;
3. finally, changing the scale of analysis to the country level, we assess the geographical diversity of relations between European and neighbouring countries, showing that neighbouring countries have privileged relations with *specific* European countries rather than with the European space as a whole.

1°) The (relative) importance of Neighbourhood(s) for Europe

As demonstrated in other studies, Europe's influence around the world has dramatically declined over the years [Van Hamme 2012]. As a result, European influence is more and more limited to its immediate neighbourhood. However, it does not mean that the Neighbourhood(s) are the most important partners for the EU. In this section, we assess the importance of Neighbourhood(s) in global EU relations: economic flows, human and migratory flows, energy supply.

From the economic point view, we first assess the growth potential for the EU in the next decade (2010-20) on the base of a simple model. In a first step, we extend the average growth rate of the years 2000-2010 to the next decade, both in current US $ and PPS. As a result, we have the share of each part of the world in the global economic growth (columns 1 and 3 of
Table 2-2). Not surprisingly, the EU, northern America and China account for most of the growth. Despite the limited growth in the last decade for the EU and the US, their growth potential remains important at global level because of their weight in the global economy. However, there is a deep contrast between the potential market growth in current $ and in PPS for the EU, notably due to the strength of the Euro. In contrast the low cost of the Yuan results in much higher figures in PPS than in current $ in the case of China.

In a second step, we assess what it means for the EU, considering the current geography of its trade. The basic idea is that EU will benefit more from growth in areas where the EU currently has more market shares. The result is given in columns 2 and 4 respectively in current $ and PPS. The main point is that by far, that the EU is the major source of potential growth for itself in the next decade. Following the internal market growth, we have three major market growth potentials: the US, around 11% of the growth potential of the EU, China, with 9% in current $ and 19% in PPS, and finally, the Neighbourhoods, with shares very similar to the US. However, more than half of this potential growth is toward the East (Russia, plus Belarus, the Ukraine, and Moldavia); Turkey also plays a significant role, while the other Neighbourhoods remain marginal for the EU growth potential, because of their marginal economic weight as well as their limited economic growth. Hence, two important conclusions can be drawn:

- on the one hand, considering the high market share of the EU, the Neighbourhoods represent a significant share of the potential market growth for the EU;
- on the other hand, this potential is spread geographically.

In Table 2-3, we show the importance of the different parts of the world in different kinds of flows. In Table 2-4, we focus on the evolution of the importance of the EU and the different Neighbourhoods in the EU relations to the world.

In trade and FDI, the importance of Neighbourhood(s) is limited. The reason is that most trade and FDI are internal in Europe, resulting in intense transnational flows within Europe. When these internal flows are excluded, the Neighbourhood(s) appear as the main trade partner of the EU, though they remain very marginal in investment flows. Indeed, 7,5% of EU trade takes place with the Neighbourhoods, while the US only accounts for 6,2 and China for 2,2% of the European trade. On the long run, from 1968 to 2011, the importance of Neighbourhood(s) has been remarkably stable (Table 2-5). Half of the trade toward the Neighbourhoods is with Russia and other European former Soviet Republics, while the rest is quite dispersed among the different Neighbourhoods.

Human flows can be tackled in two different perspectives: airflows, which mainly take into account short-term mobility for medium and long distances, and migrations toward Europe. Short-term mobility (airflows) is mainly intra-European, since 80% of all movements are within European countries. Flows with Neighbourhoods, equally toward Turkey, former Soviet republics and Maghreb, account for more than 7% of the flows, more than any other part of the world. It indicates a distance effect, related to touristic, migratory and other types of air flows. Regarding migrations, Neighbourhoods account for 30% of the stocks of migrants in Europe, while European themselves only account for about 38%. Hence, Europe and its Neighbourhoods account for most of the migrants which are present in Europe.

Finally, Neighbourhoods also play a major role for energy supply in Europe. Europe provides 42% of its energy while Neighbourhoods provide 32,5%, two thirds from Russia and the rest from Maghreb, mostly Algeria and Libya. Oil and gas producers of the Middle East play a limited role in comparison, with 9% of energy supply of Europe.

If we look to the evolutions, we see no clear trend: Neighbours remain small partners for the EU, despite a general increase in air flows, and a significant increase of the importance of the Eastern Neighbours in trade, mainly related to the importance of Russia as an energy supplier.

What results from the figures is that Neighbourhoods play an important role in two domains: migrations and energy supply. As the TIGER project clearly highlighted, the Neighbourhood policy tends to focus on these aspects as well as in security matters [Richard 2012]. In contrast, Neighbourhoods are not considered as strategic *economic* partners, as well as in many other domains, such as scientific cooperation.

Map 2-13 - Growth markets potential for the EU, 2010-2020

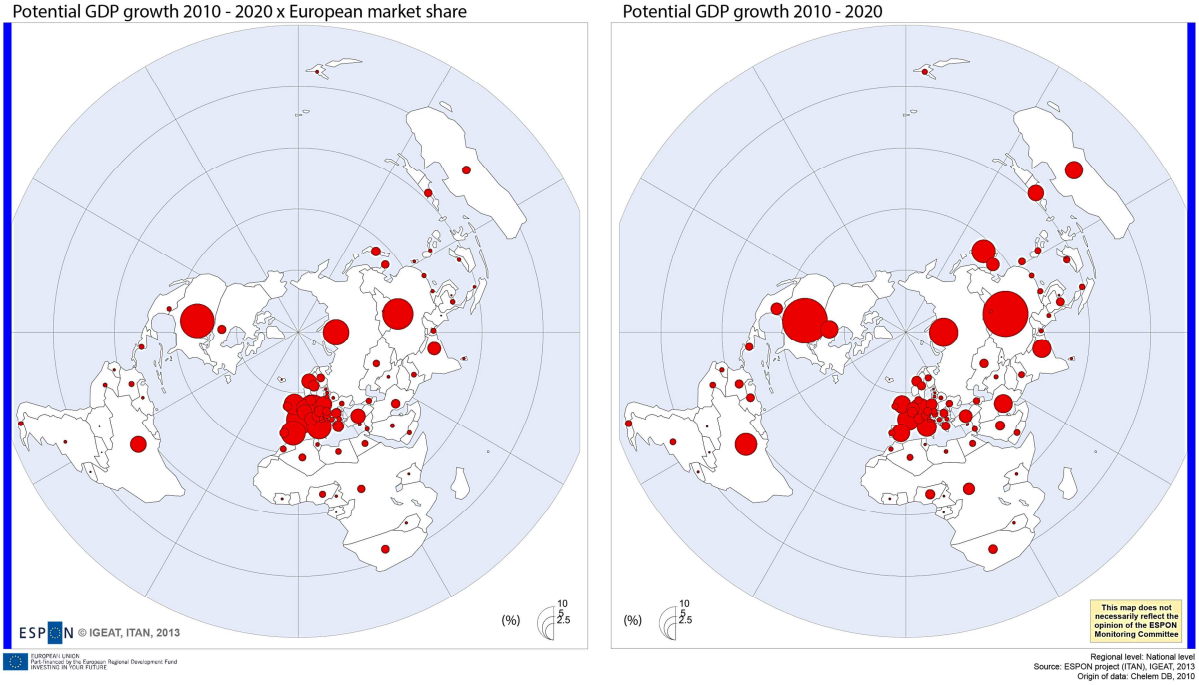


Table 2-2 - Share of the world main economic powers in the growth market potential for 2010-2020

	Absolute growth potential 2010-2020, current $	*growth potential for the EU, in current $*	*Absolute growth potential 2010-20, PPS*	*growth potential for the EU, PPS*
EU27 +	25,4	54,3	16,3	37,8
Eastern neighbours (1)	6,9	6,7	3,8	6,3
Western Balkans	0,4	0,6	0,3	0,6
Turkey	1,4	2,1	1,3	2,1
Near East (2)	0,9	0,8	1,3	1,3
Maghreb	0,4	0,9	0,5	1,2
Neighbourhoods	9,9	11,1	7,2	11,5
North America	18,0	11,5	16,3	11,1
India	2,7	1,7	7,4	5,2
Japan	4,3	0,8	4,1	1,9
China	15,7	8,9	23,9	19,3
rest of the world	23,7	11,3	24,8	13,2

(1) Russia, Belarus, Ukraine, Moldavia
(2) Egypt included

Table 2-3 - Share (%) of Neighbourhoods and other parts of the world in EU relations and flows

	Trade of goods: exports plus imports (2011)	*FDI in and out (2006-2008)*	*Cooperation (2010)*	*Air flows (2012)*	*(Im)igrations (2010)*	*Energy supply*
EU27 + (1)	70,0	71,8	0,0	80,4	37,9	42,4
Eastern neighbours (2)	3,8	2,2	1,8	1,9	5,7	21,1
Western Balkans	0,5	0,2	3,5	0,7	6,1	0,3
Turkey	1,3	0,7	1,7	1,7	7,9	0,1
Near East (3)	0,4	0,0	3,3	0,8	1,2	0,7
Israel	0,4	0,0	0,0	0,4	0,1	0,0
Maghreb	1,1	0,2	4,6	1,5	8,7	10,3
∑ Neighbourhoods	7,5	3,4	14,8	7,1	29,8	32,5
North America	6,2	17,8	1,0	4,2	1,9	2,5
Latin America	1,9	1,7	13,4	1,4	8,6	1,6
Southern Asia	1,2	0,4	14,8	0,7	5,6	0,6
Japan, Korea, Taiwan	2,2	1,1	0,0	0,5	0,6	0,8
China	5,1	0,8	3,7	0,7	1,9	0,1
Rest of Asia and Oceania	2,8	1,9	6,8	1,1	3,8	3,4
Sub-Saharan Africa	1,6	0,8	44,0	1,3	7,7	5,5
Middle-East	1,7	0,5	1,5	2,0	1,7	8,6
rest of the world				0,4	0,3	1,8
Total	100	100	100	100	100	100

(1) includes Switzerland, Norway, Iceland, Liechtenstein, Andorra
(2) Russia, Belarus, the Ukraine, Moldavia
(3) Egypt included

Table 2-4 - Share of the EU, Neighbourhoods and the rest of the world in different flows, around 1995-2000 and 2010

		EU (1)	*Eastern Neighbours (2)*	*Western Balkans*	*Maghreb*	*Near East (3)*	*Rest of the world*
Air flows	1999	84,4	1,0	0,4	0,7	1,7	11,7
	2012	80,5	1,9	0,7	1,5	3,0	12,5
Trade (Total)	1996	71,5	2,1	0,4	1,0	1,8	28,4
	2011	70,0	3,6	0,5	1,1	2,1	22,7
Migration (origin of the migrants in the EU)	2000	40,5	8,2	9,9	7,4	8,2	25,8
	2010	38,0	5,5	6,1	8,7	9,3	32,5
Energy (origin of the energy)	1995	23,0	4,5	0,1	5,8	0,8	65,7
	2009	20,5	9,5	0,1	5,1	0,5	64,3
FDI (investments from the EU)	2000	59,6	0,4	0,1	0,3	0,3	39,4
	2007	78,4	0,2	0,0	0,0	0,1	21,2

(1) includes Switzerland, Norway, Iceland, Liechtenstein, Andorra
(2) Russia, Belarus, the Ukraine, Moldavia
(3) Egypt, Turkey and Israel included

Table 2-5 – Share (%) of Neighbourhoods and other parts of the world in European trade flows, 1968-2011

	1968	*1986*	*1996*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
EU27 +	60.3	69.0	71.5	71.5	71.7	70.6	71.1	70.4	70.0
Eastern neighbours	3,3	3,2	2,1	3,6	3,7	4,4	3,0	3,5	3,8
Western Balkans	1,0	0,8	0,4	0,4	0,4	0,5	0,5	0,5	0,5
Turkey	0,4	0,5	0,9	1,2	1,2	1,2	1,2	1,3	1,3
Near East	0,7	0,7	0,5	0,4	0,4	0,4	0,5	0,4	0,4
Israel	0,6	0,4	0,5	0,3	0,3	0,3	0,3	0,3	0,4
Maghreb	2,3	1,6	1,0	1,2	1,2	1,5	1,3	1,3	1,1
∑ Neighbourhoods	8,2	7,2	5,5	7,1	7,2	8,3	6,9	7,4	7,5
North America	12,3	9,6	8,1	7,3	6,9	6,5	6,7	6,3	6,2
Latin America	4,2	2,0	1,9	1,6	1,6	1,7	1,7	1,7	1,9
Southern Asia	1,2	0,8	0,8	0,8	0,9	0,9	1,0	1,1	1,2
Japan, Korea, Taiwan	1,4	3,5	3,7	2,5	2,4	2,3	2,3	2,3	2,2
China	1,0	1,5	2,3	3,7	3,9	4,1	4,6	5,1	5,1
Rest of Asia and Oceania	3,1	1,9	3,4	2,5	2,5	2,6	2,7	2,7	2,8
Sub-Saharan Africa	5,1	2,0	1,3	1,4	1,3	1,4	1,4	1,5	1,6
Middle-East	3,1	2,4	1,4	1,6	1,6	1,7	1,6	1,6	1,7
Total	100	100	100	100	100	100	100	100	100

2°) The Neighbourhoods in globalisation

We now take the reverse perspective by interrogating the importance of Europe in the whole set of relations and flows of Neighbouring countries.

The unequal importance of Europe in Neighbouring countries

Table 2-6 shows the evolution of the importance of the EU, of the Neighbourhoods and the rest of the world for the different Neighbourhoods. Most figures illustrate the declining importance of the EU in Neighbours' flows, although this declining importance depends on the nature of the flows as well as the Neighbourhood we take into consideration. For example, the share of the EU in the Neighbours' trade is declining for all Neighbour areas but the Eastern Neighbourhood (including Russia) which has become a key partner in energy. In air flows by contrast, we observe the increasing importance of the

EU for both Maghreb and Western Balkans and the opposite trend for the Near East and Eastern Neighbours.

If we now turn to the relations of the Neighbours with themselves, we find very poor integration, with the notable exception of the Eastern Neighbourhood which has a moderate and declining economic integration but intense human and related air flows. In the Maghreb, the integration is poor and stagnant. Similar pattern is found in the Near East although we observe here an important increase in human flows.

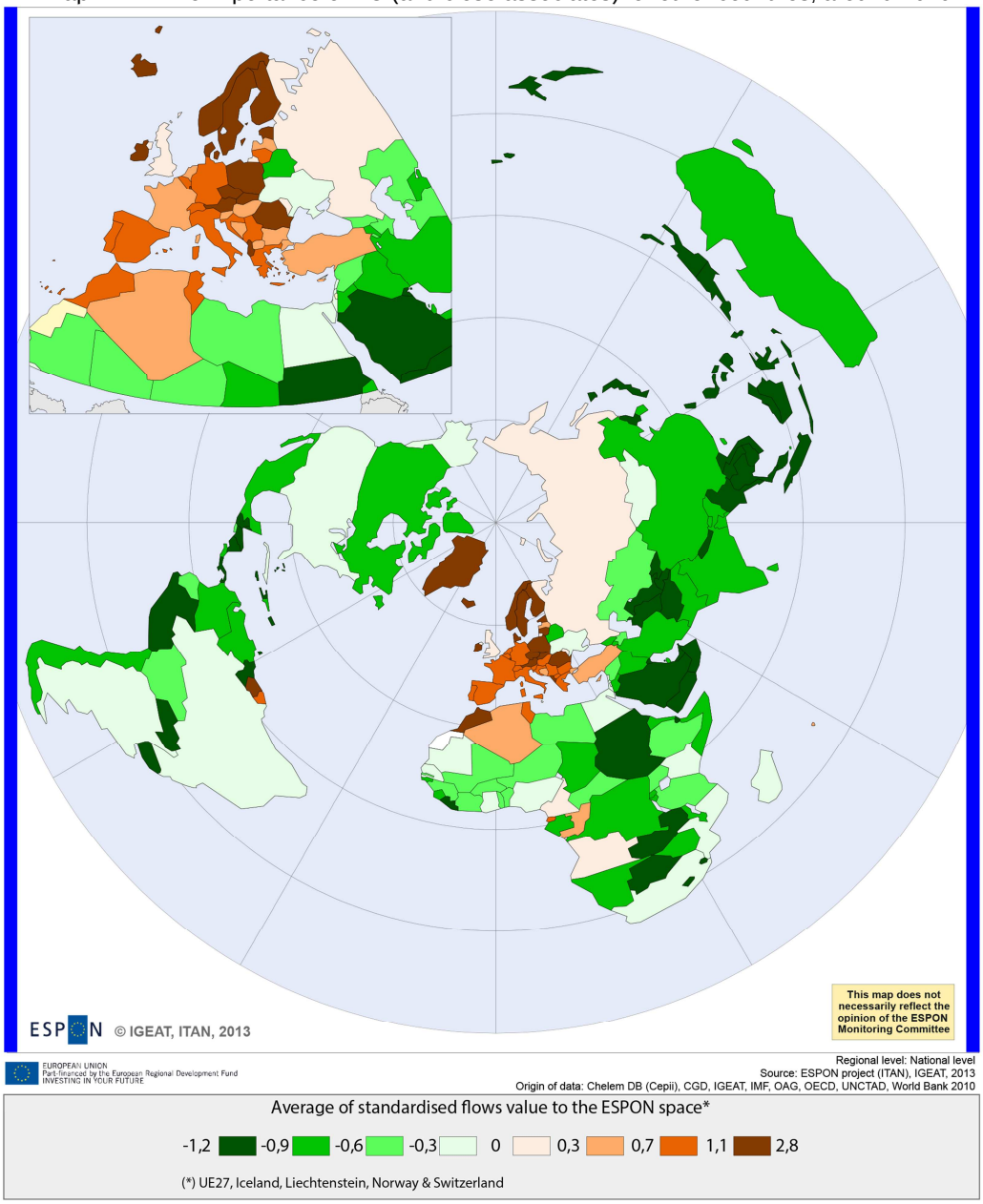
Table 2-6 - The importance of the EU, of the Neighbourhoods and the rest of the world for the different Neighbourhoods, around 1995-2000 and 2010 (in %)

	Share of	*EU*		*Eastern Neighbours (1)*		*Western Balkans*		*Maghreb*		*Near East*		*Rest of the world*	
	for:	*1995-2000*	*2010*	*1995-2000*	*2010*	*1995-2000*	*2010*	*1995-2000*	*2010*	*1995-2000*	*2010*	*1995-2000*	*2010*
Air flows (1999 and 2012)	Eastern Neighb. (1)	23,5	18,3	57,6	61,8	0,9	0,2	0,1	0,1	3,7	4,6	14,2	15,1
	Western Balkans	46,9	69,7	4,1	2,5	43,5	19,2	0,6	0,2	4,2	7,7	0,7	0,6
	Maghreb	42,8	58,6	0,3	0,3	0,3	0,1	47,4	25,5	2,5	6,7	6,8	8,8
	Near East	28,3	24,9	2,5	3,9	0,6	0,6	0,7	1,4	50,1	46,7	17,8	22,4
Trade (1996, 2011)	Eastern Neighb. (1)	45,8	50,4	23,6	15,5	0,2	0,5	0,4	0,5	3,4	4,4	26,6	28,8
	Western Balkans	80,4	69,0	2,2	4,8	7,5	14,0	1,4	0,3	1,6	2,7	6,9	9,1
	Maghreb	69,2	57,4	1,3	1,9	0,5	0,1	3,7	3,8	3,7	4,7	21,7	32,2
	Near East	49,8	40,6	4,3	6,2	0,2	0,4	1,5	1,7	4,1	5,3	40,2	45,8
Migration (destination of the migrants) (2000, 2010)	Eastern Neighb. (1)	15,7	13,7	54,9	56,9	0,1	0,0	0,0	0,0	3,3	5,7	25,9	23,7
	Western Balkans	72,1	69,9	0,1	0,0	11,2	15,5	0,0	0,0	3,6	1,0	13,1	13,6
	Maghreb	77,5	84,7	0,1	0,0	0,2	0,0	4,5	2,1	7,6	7,4	10,1	5,8
	Near East	37,2	41,1	0,0	0,1	0,0	0,1	4,3	3,9	3,7	11,8	54,7	43,0
Energy (destination of energy exports) (1995, 2009)	Eastern Neighb. (1)	18,4	25,7	1,7	2,7	1,2	1,7	0,0	0,0	0,2	0,4	78,6	69,5
	Western Balkans	25,3	29,8	0,3	1,5	17,3	2,9	0,0	1,1	1,7	3,2	55,3	61,5
	Maghreb	39,9	33,1	0,1	2,3	0,7	0,3	0,0	0,0	0,5	0,0	58,7	64,2
	Near East	33,6	18,2	4,2	1,5	1,7	3,0	0,3	0,6	0,1	0,1	60,2	76,6
FDI (origins of the investments) (1998-2002, 2006-2008)	Eastern Neighb. (1)	56,4	76,3	1,3	1,3	0,0	0,0	0,0	0,0	0,3	0,5	42,0	21,9
	Western Balkans	92,9	98,2	0,9	1,2	1,4	0,6	0,0	0,0	0,1	0,0	4,6	0,0
	Maghreb	73,6	71,6	0,1	0,0	0,0	0,0	1,0	1,0	4,1	1,9	21,1	25,5
	Near East	76,1	77,0	0,0	0,4	0,0	0,0	0,0	0,2	0,0	1,1	23,9	21,3

(1) including Russia

Map 2-14 synthesises the importance of Europe for ENCs taking into account migratory stocks, trade, foreign direct investments and airflows. It shows the dominance of Europe in most of these countries' external flows.

Map 2-14 - The importance of EU (and close associates) for other countries, around 2010

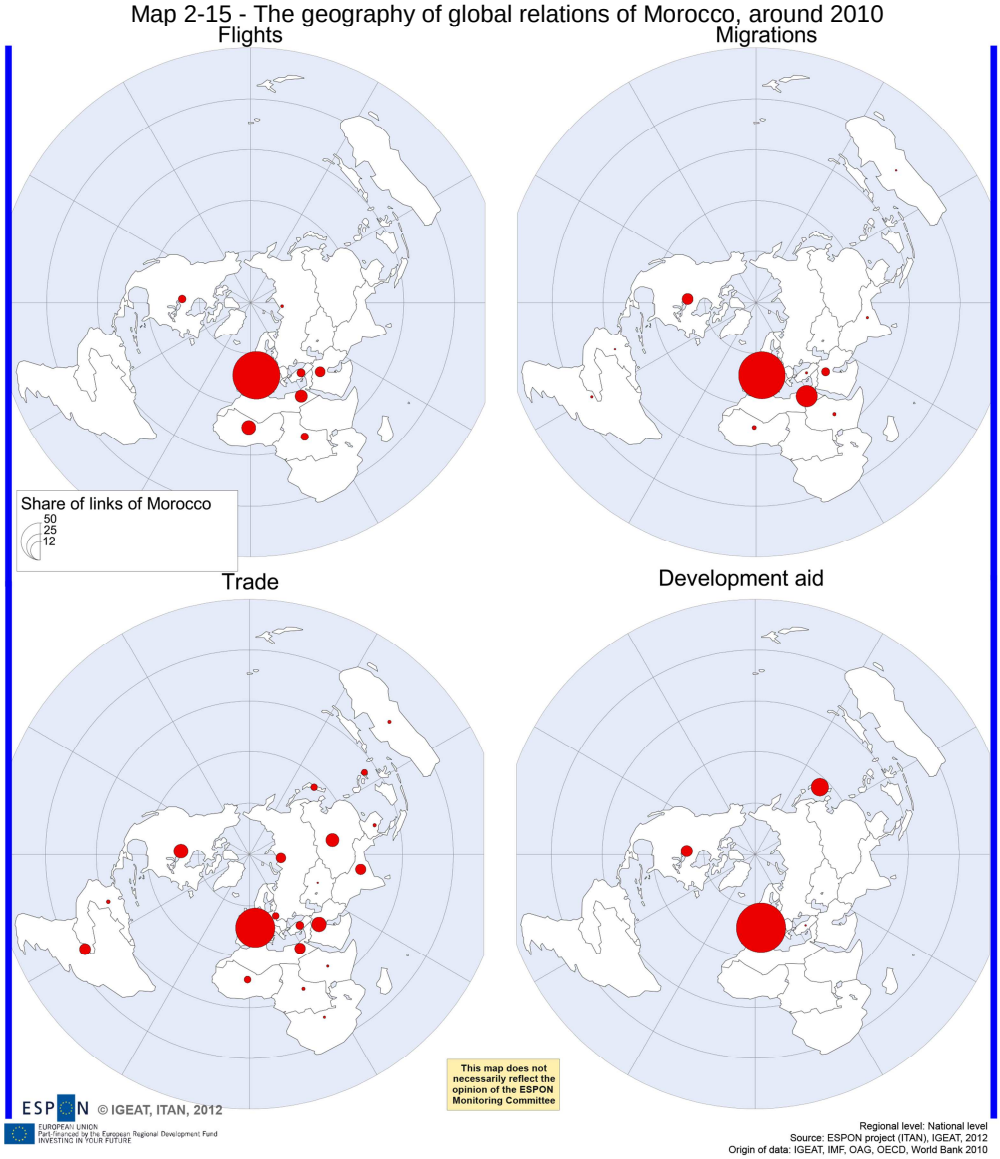


Note: This map is based on the importance of the EU (including close associates) all over the world, based on migratory stocks, cooperation, FDI, trade and air flows. For each country, we calculate the standardised share of the EU (and associates) in all countries' flows; the final value is the average of standardised value on the five types of flows. Positive value means that the country in general has more intense links to Europe than average. Standardised value takes into account average and standard deviations in the relations to Europe.

However, it also illustrates the unequal importance of Europe in the different Neighbourhoods. First, in the Western Balkans and in Maghreb, Europe is by far the main, if not hegemonic partner. We illustrate this by the geography of relations of Morocco (Map 2-15). In all types of flows, (western) Europe is the first partner; only in migratory stocks, we observe another important destination, mainly the close countries. This illustrates that not only Europe is the main partner of Morocco, but also that

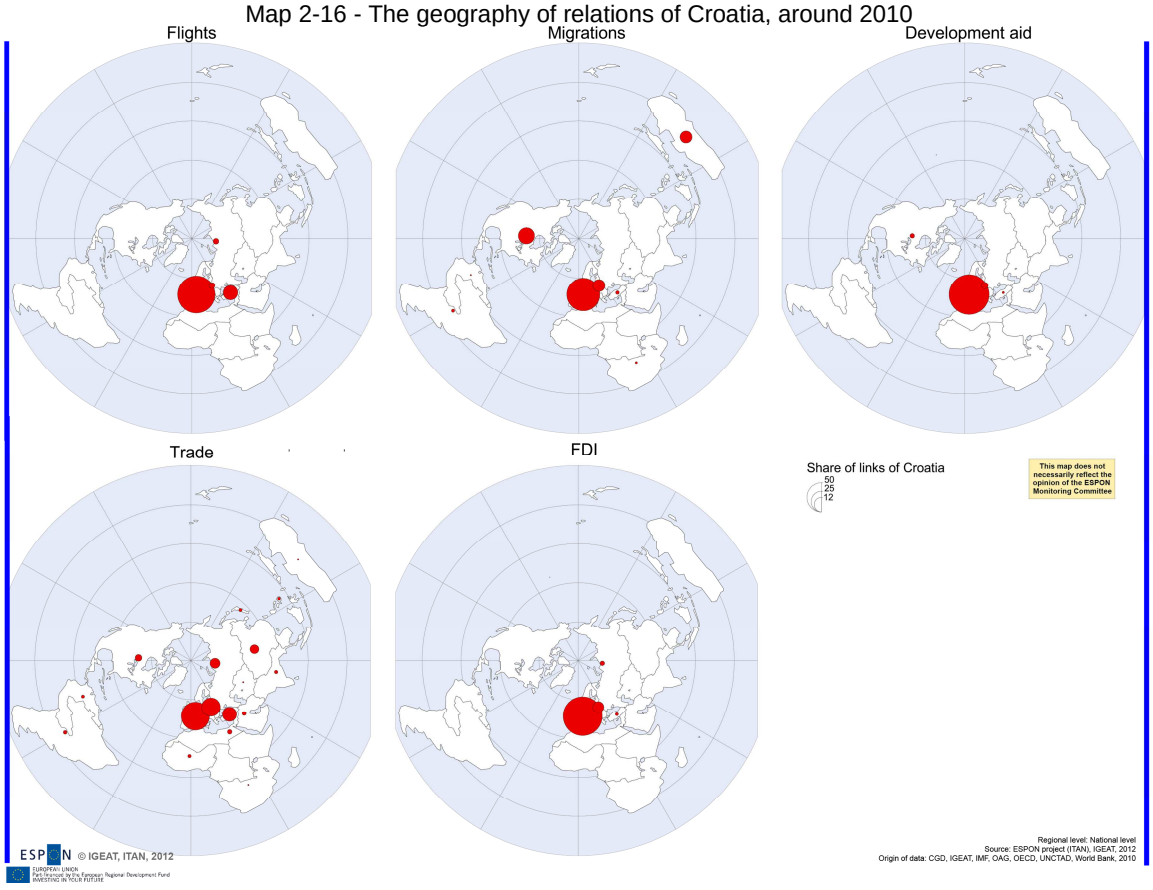
Morocco does not have another important partner and that, except for migrations, relations with other Maghreb countries are very weak. The situation is similar for Tunisia, and, to a lesser extent Libya and Algeria. In the latter case, the lower importance of Europe is the result of a political choice to sell oil resources not only to Europe but also to the US.

Map 2-15 - The geography of global relations of Morocco, around 2010



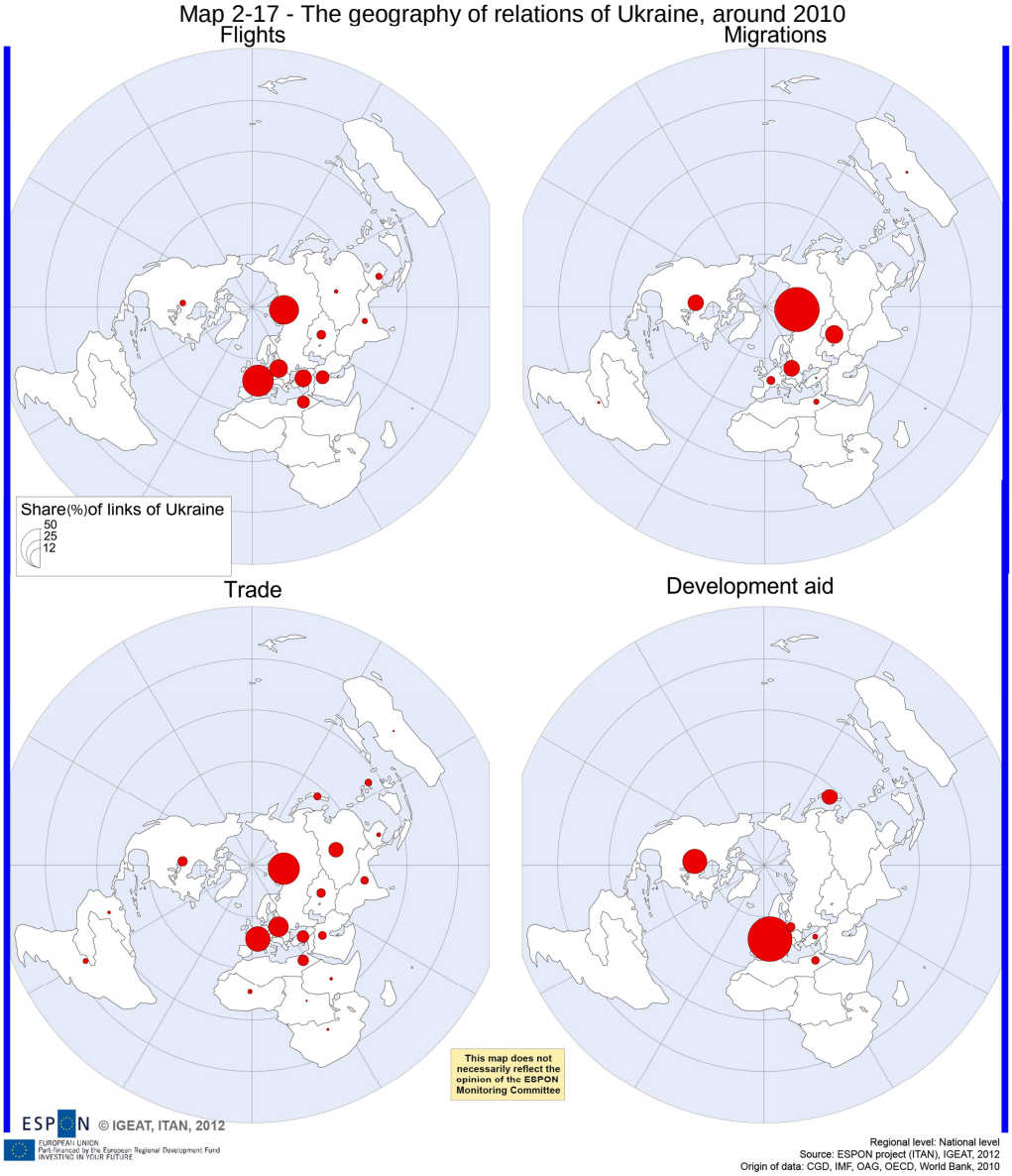
The European dominance is similar for Croatia, though in a completely different political context, because of the likely adhesion to the EU (Map 2-16). However, in contrast to the Maghreb, Croatia keeps important relations with the neighbouring Balkans, notably through trade and flight connections.

Map 2-16 - The geography of relations of Croatia, around 2010



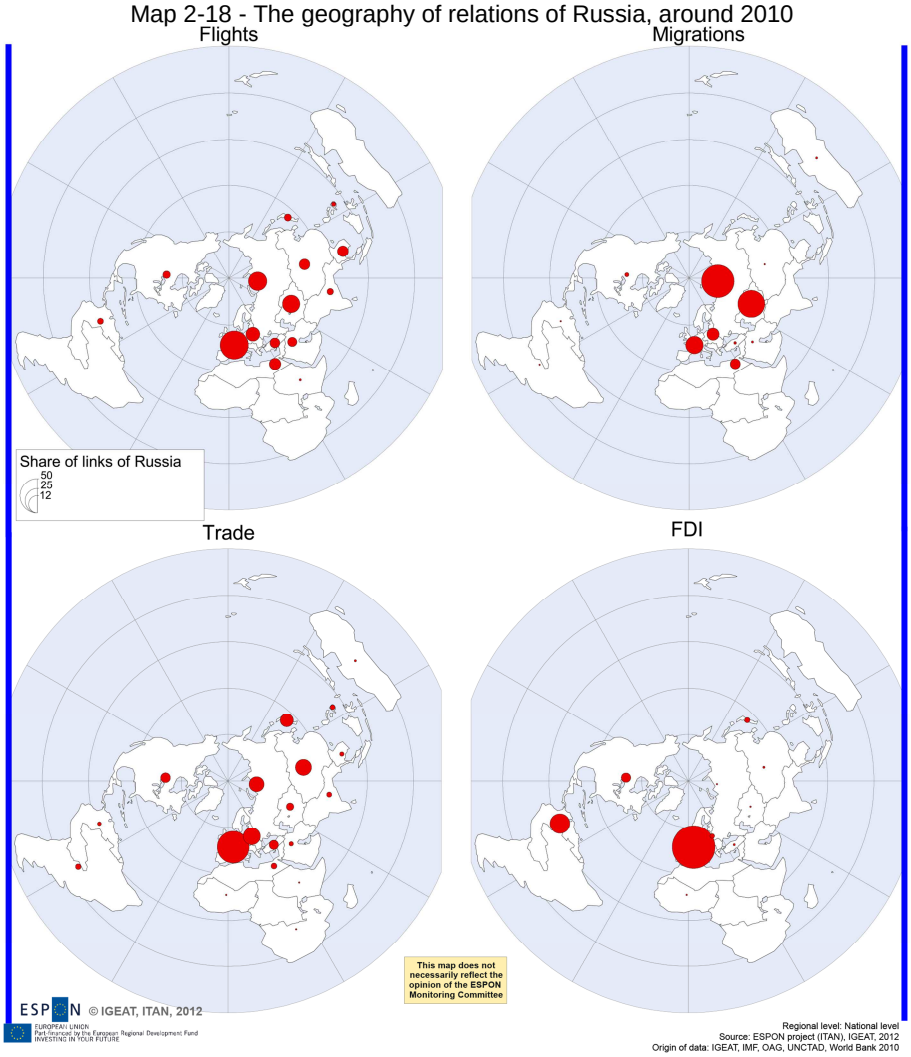
In contrast to the previous areas, the situation is a bit different in former USSR, where the persistence of flows between former USSR republics explains the lower importance of Europe. Map 2-17 illustrates this situation for the Ukraine for which relations are balanced between western and central-eastern Europe, on the one hand, and Russia, on the other (see a more detailed analysis in Annex 5).

Map 2-17 - The geography of relations of Ukraine, around 2010



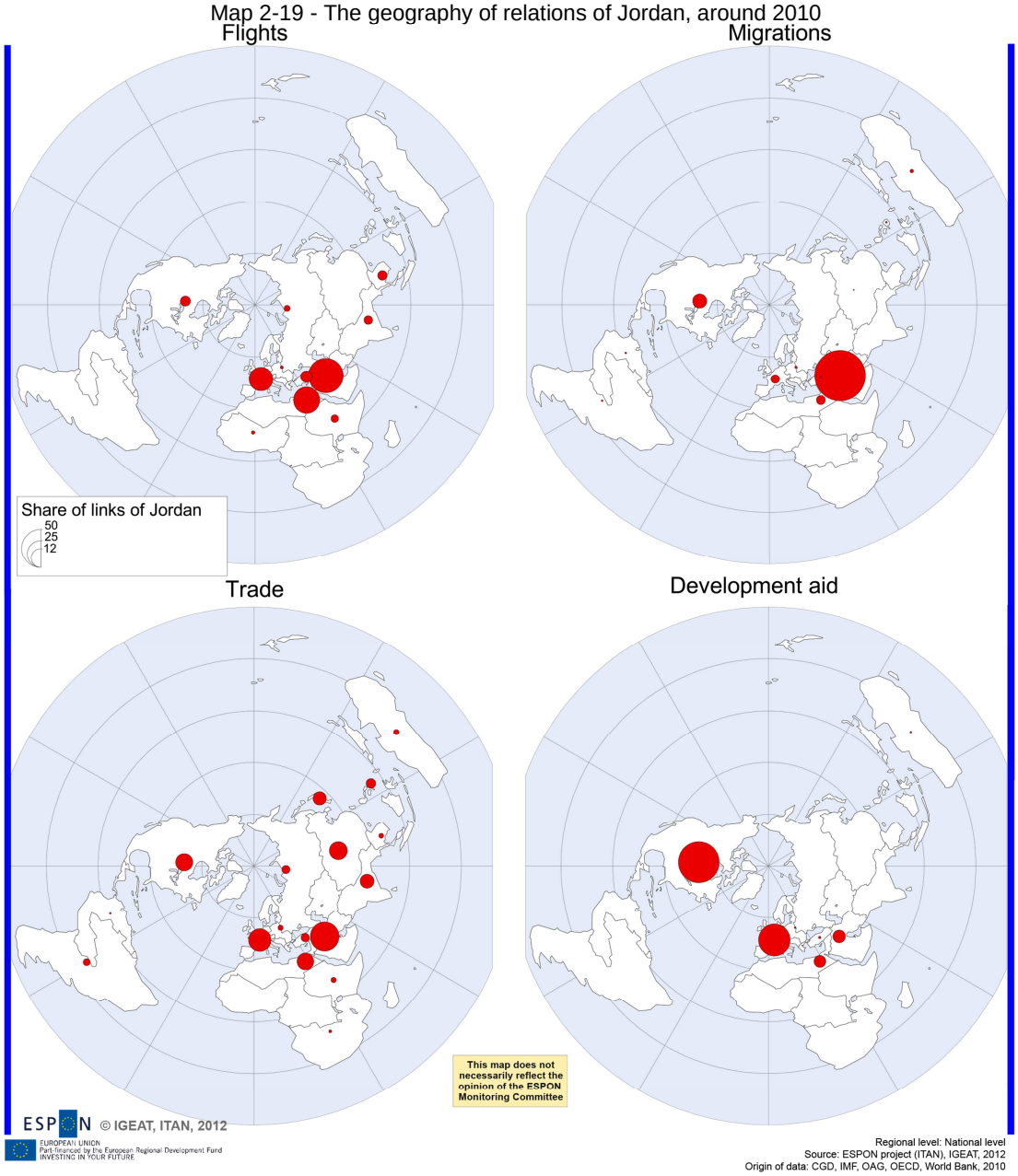
The case of Russia itself is a bit different because its partners from former USSR has much lower weight than Russia itself, making the polarisation toward western Europe more intense, except for migratory stocks because of the presence of Russian in all former USSR republics (Map 2-18).

Map 2-18 - The geography of relations of Russia, around 2010



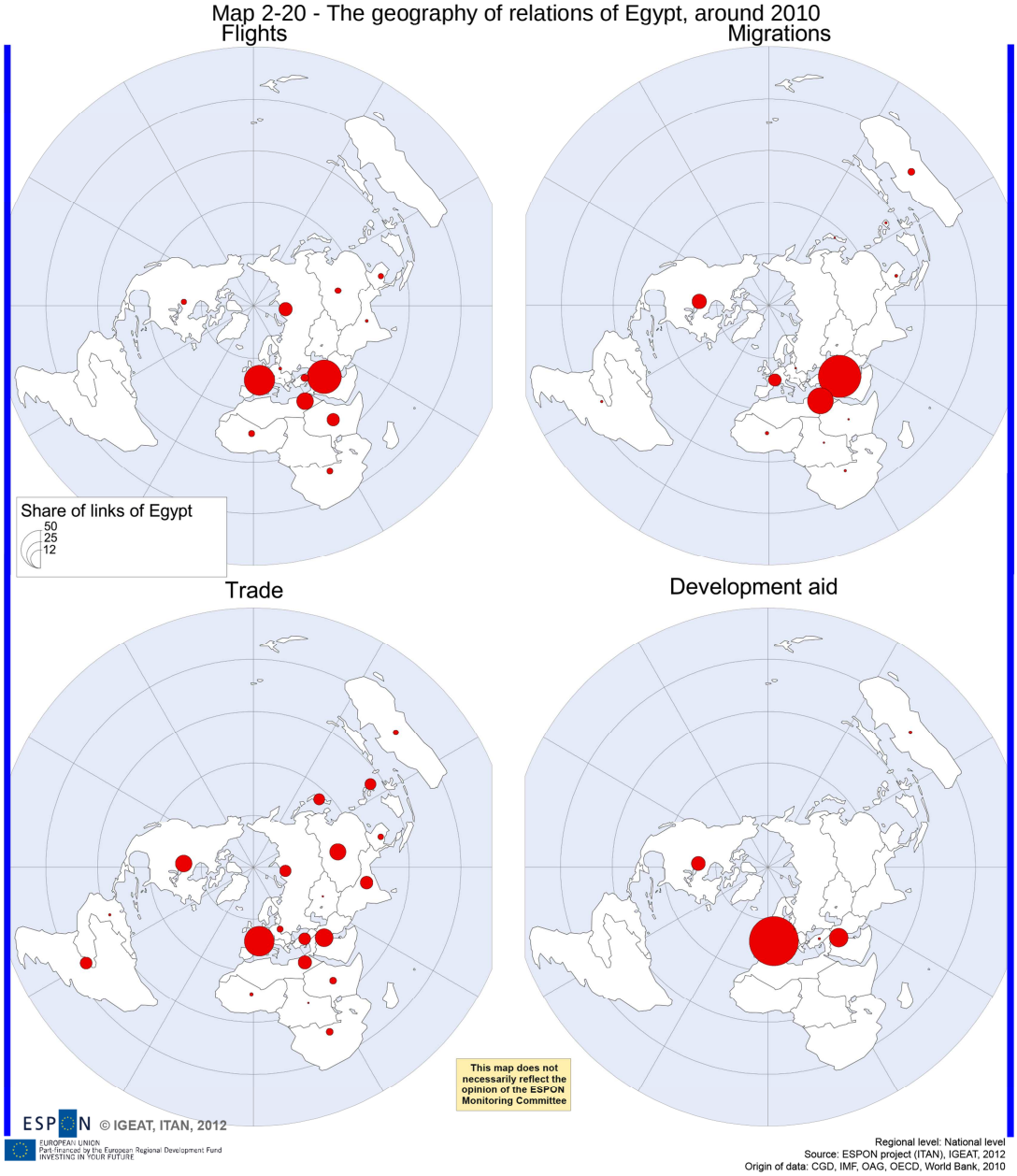
In the Near East, the low share of Europe in global flows is the result of the European decline versus the increasing importance of the oil powers of the Gulf in this region. The Jordan case illustrates this importance of Gulf countries (Map 2-19). However, the EU remains an important partner for trade and the second donator in development aid, behind the US.

Map 2-19 - The geography of relations of Jordan, around 2010



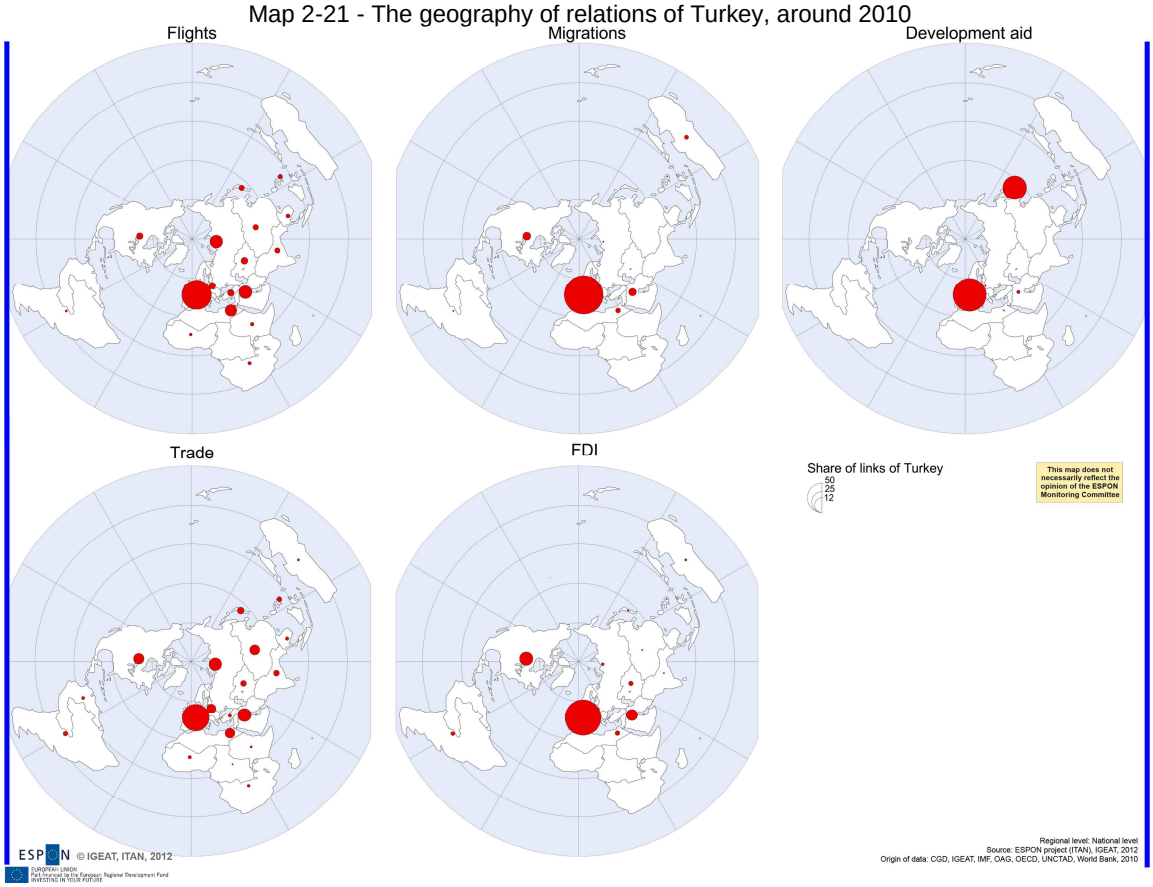
The case of Egypt is more complex, since economic flows are still dominated by Europe (Map 2-20). However, in terms of flight connections and migrations, the relations with the Middle East have become central.

Map 2-20 - The geography of relations of Egypt, around 2010



The Israeli position is somewhat different because of close links with the US. Finally, Turkey is strongly polarised toward Europe though, as we will develop, a bit less than before (Map 2-21).

Map 2-21 - The geography of relations of Turkey, around 2010

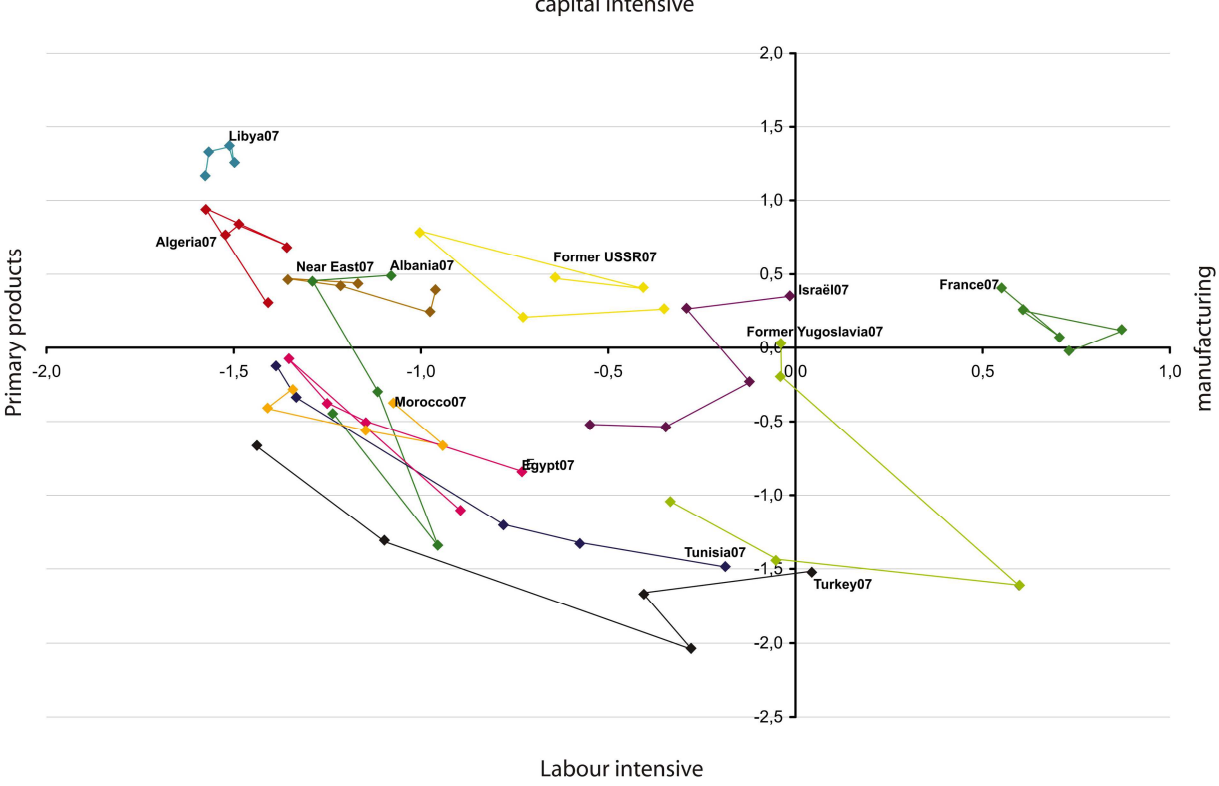


The changing patterns of trade in EU neighbouring countries

Most EU Neighbours can be considered as semi-peripheral or peripheral countries [Van Hamme & Pion 2012]. It reflects the dependence to Europe in qualitative and quantitative terms. On the one hand, Europe is more important to its Neighbours than the Neighbours are for Europe. On the other hand, the exchanges are unequal in their nature: the EU buys primary or low added value manufactured products while selling products with medium and high technological content. Moreover, qualified labour force is attracted to western Europe while tourist flows take the reverse direction [Grasland, Van Hamme 2011; Van Hamme 2012].

Figure 2-1 describes the evolution of ENCs in the international division of labour (for methodological precisions, see Grasland & Van Hamme [2011]). This graph distinguishes between three positions: on the top right quarter, countries standing high in the division of labour with positive balances in technological manufacturing goods; on the left, countries mainly selling primary goods; on the bottom, countries mainly specialized in labour intensive manufacturing goods. Among ENCs, Libya and Algeria keep their exclusive specialisation in primary goods, mainly oil and gas. The same is true for former USSR – dominated by Russian trade – though the position nearer to the centre indicates a higher share of manufacturing goods in their trade than in the Libyan case for instance. In contrast, some countries move from a pure peripheral position, mainly selling primary goods, toward specialisation in low added value manufacturing goods: Turkey and Tunisia are the best examples, Egypt being less clearly engaged in this path while Morocco is still highly specialized in mining and agricultural products.

Figure 2-1 - The position of the Neighbours of the EU in the international division of labour, 1967-2007



Notes: the position of countries is related to the products they export through a Principal Component Analysis based on the share of each product in the trade of each country from 1967 to 2007. France is shown as an example of a European core developed country.
Source of data: Chelem, CEPII
Source: IGEAT for Eurobroadmap project, revised for ITAN.

Graphs in Annex 5 show for all ENCs the evolution of the geography of trade since 1967. Trends are not similar across them. By no doubt, the EU remains by far the first partner for nearly all its Neighbours. The only exceptions are countries of the Near East (Jordan and Syria) as well as Russian neighbours (Belarus, Ukraine and Georgia). In most countries, the importance of Europe has been declining in the last two decades, with the exceptions of former USS republics. Concerning the former Soviet republics, we must point the contrast between Russia, whose trade is mainly oriented toward Europe, and the other republics mainly oriented toward Russia. It illustrates the strong regional position of Russia, still polarising flows from its direct neighbours, though the share of the European partner has been growing to the detriment of Russia in most countries (Belarus, Ukraine etc.). However, in all cases, this decline is weak and has not hindered the hegemonic trade position of the European partner. The Annex 5 confirms that only in the Near East has this European hegemonic position really been challenged, with the sharp decrease of the share of the trade with western Europe to the benefit of oil powers of the Gulf. In Israel also, the decline is rapid, to the benefit of the US partner. A significant decline is also visible for Algeria as a consequence of a state policy aiming at balancing the European hegemony by exporting significant share of oil resources to the US as we said, for geo-economic and geo-political motives. However, this geographical rebalancing toward the US has not been observed for imports, indicating the strong embeddedness of Algeria in the European economy.

The positions in the International Division of Labour of ENCs hide in most cases their intermediate – semi-peripheral – position visible when considering both the geography and the product specialisation of their trade. Let us detail the cases of Tunisia and Turkey, two typical examples. When disaggregating their trade by world region, we clearly observe two contrasting types of trade: with

western Europe, by far their main partner, both countries show negative balance in all sophisticated products (chemical, mechanical industry etc.) and positive balance in agro-food and textile goods; with more peripheral countries (North African neighbours of Tunisia or Gulf countries for Turkey), the situation is different, both countries showing positive balances in all types of products but primary goods.

A similar pattern is observed for the Ukraine, buying sophisticated goods to western and central-eastern Europe, while having positive balance in these goods with Russia, their first trade partner. More peripheral positions are also observed as in the case of Morocco: the country has positive trade balance in textile and primary goods and negative balances in other types of products, whatever the region Morocco is trading with. Russian position is more complex, showing positive balances with all partners in primary goods, but also in heavy industry, and negative balances in sophisticated goods.

The changing geographical pattern of migratory relations, flight connections, maritime connections and energy exports in neighbouring countries

Graphs in Annex 5 illustrate the diversity of migratory geographies in the different parts of the Neighbourhoods, which is only partly polarised toward Europe. The dominance of the European destination for migrations concerns most “inner” ENCs from the North and the Balkans. It also concerns Turkey and the Maghreb since the sixties, when massive migrations toward North-West Europe initiated. The pattern is different in the former USS Republics which clearly form an integrated region with massive cross migratory movements. In the Near East, situations differ from one country to another: Israeli and Lebanese have strong diaspora spread nearly all over the world for the latter, more specifically in western developed countries for the former. Egypt is a major source of foreigner labour for Gulf countries for the last three decades; the same is true for Jordan, though the migratory stocks have dramatically increased in the US during the last decade. For Syrian emigrants, we observe in the last decade a dramatic decline of the share of Gulf countries in favour of nearby destinations.

In maritime connections, there is a relative stability in the distribution of Europe-related (ESPON-related) maritime flows across the Neighbourhoods during recent years. The spatial pattern resembles in many ways other ones on migrations for instance. In the case of container flows by global vessel movements in 1996 and 2006, North Africa (as a whole) and the Black Sea/Russian Baltic areas realized rather moderate volumes in absolute terms but the share of Europe in their total traffic was the highest compared with other world regions, followed by western Africa and southern America. It has, however, reduced from over 50% to between 30-50% between 1996 and 2006 thereby suggesting important shifts mainly caused by the import of manufactured goods from Asian countries rather than from Europe itself, which is a general tendency of many world regions. A similar pattern was obtained when considering all commodity flows (containers, bulks, vehicles, general cargo) for the year 2004: more than 50% of North Africa and the Black Sea/Russian Baltic areas' traffics was with European countries, but this time with higher absolute volumes due to the high importance of liquid bulk traffics such as natural gas, crude oil, and refined oil, the rest of such traffics being imported by Europe through pipelines and therefore not being counted in maritime flows. Data for 2011 (containers and bulks) confirmed the drastic shrink of Europe's external influence globally but with a maintained dominance of the nearest regions (South, East).

On the level of port cities and for containers in 1996, ports having the highest proportion of Europe-related flows concentrate all around Africa and the (southern) Mediterranean basin in terms of both volumes and shares, followed by noticeable concentrations outside the Neighbourhoods (Quebec, Mexico, Madagascar). The pattern in 2006 is highly similar, notwithstanding a drastic shrink of this estimated European influence around North/West Africa and the Mediterranean basin for the aforementioned reason of trade reorientation towards Asian countries. Europe's global influence is indeed dominantly concentrated at its Neighbourhoods when considering all commodities (Russian Baltic, Black Sea, eastern and southern Mediterranean).

Looking to the last two decades (1990 to 2012), we observe similarities between the evolutions of flight connections and those observed for migrations. The most spectacular changes mainly take place

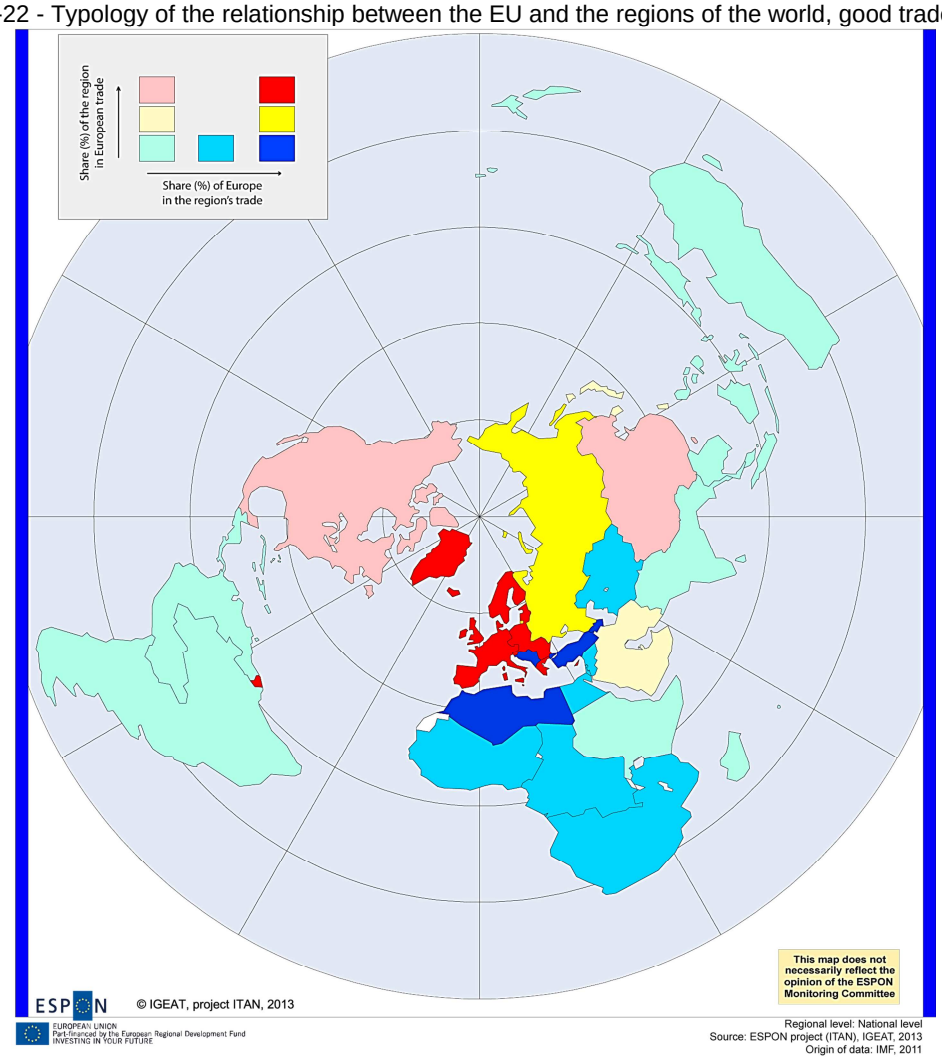
in the Near East: in the last two decades, we observe a reorientation of flows toward the Middle East mainly at the disadvantage of western Europe for Jordan, Syria and Lebanon. The decline of western Europe for flight connections with Israel and Turkey is also rapid though it leads here to diversification rather than the emergence of a new polarisation.

The main energy suppliers in the Neighbourhood display different patterns. In the case of Russia, the main external supplier of energy for Europe, the share of Europe in the energy exports has been increasing as to reach more than half of Russian energy exports. In the Libyan case, nearly all the energy is exported toward Europe, despite the decrease in the most recent years. In Algeria, as we said, the situation is quite different since the Algerian state has deliberately diversified the geography of its energy exports, Europe and the US accounting each for around 40% of Algerian energy exports in the recent years.

A typology of the relationship between EU and the regions of the world, based on trade data

To achieve a synthesis, we cross the importance of the EU for world regions and the importance of world regions for the EU (Map 2-22). As far as the ENCs are concerned, it is no surprise that they appear very dependent on Europe, with high share of their flows turned toward their big neighbour but as modest partners for the EU. Eastern Europe makes an exception here since it is a relatively important trade partner for the EU while the Near East is less oriented toward Europe than the other areas of the EU Neighbourhoods.

Map 2-22 - Typology of the relationship between the EU and the regions of the world, good trade 2011



3°) Internal divides and preferential relations in the Euro-Mediterranean space

Until now, we have considered EU (and associates) as a block. This is legitimate for previous studies have shown the strong internal coherence and the dominance of internal flows in the European space. However, EU/ENCs relations hide strong preferential links between ENCs and specific European countries. We now look at these links at national level and test whether the different European Neighbourhoods emerge from these analyses.

In the following maps, countries are classified according to the relative intensity of their relations. Countries of Europe and of the Neighbourhoods are grouped together if their relations are more intense than expected on the base of their respective size. We must underline that only internal relations within the wider European region (EU + Neighbourhoods) are considered in this iteration, no relation with the rest of the world has been taken into account. In the iteration process, countries are grouped together until no preferential relations can be found between the groups of countries. The results are shown in Map 2-23 for air connections, development aid, migratory stocks and trade around 2010.

These maps illustrate a complex picture in detail but show the existence of coherent areas within the wider European region (EU + Neighbourhoods):
The first coherent area includes south-western Europe and the Maghreb; the precise limits of this group vary according to the flows considered but it always includes France, Morocco, Algeria and Tunisia. It confirms the strong polarisation of the Maghreb toward this part of Europe since previous analyses have demonstrated the weakness of interrelations between countries of the Maghreb.
Former USS republics are always grouped together forming a second coherent area.
Germany also forms a third coherent area with central eastern European countries. In the case of air and cooperation flows, this area is grouped together with former USSR.

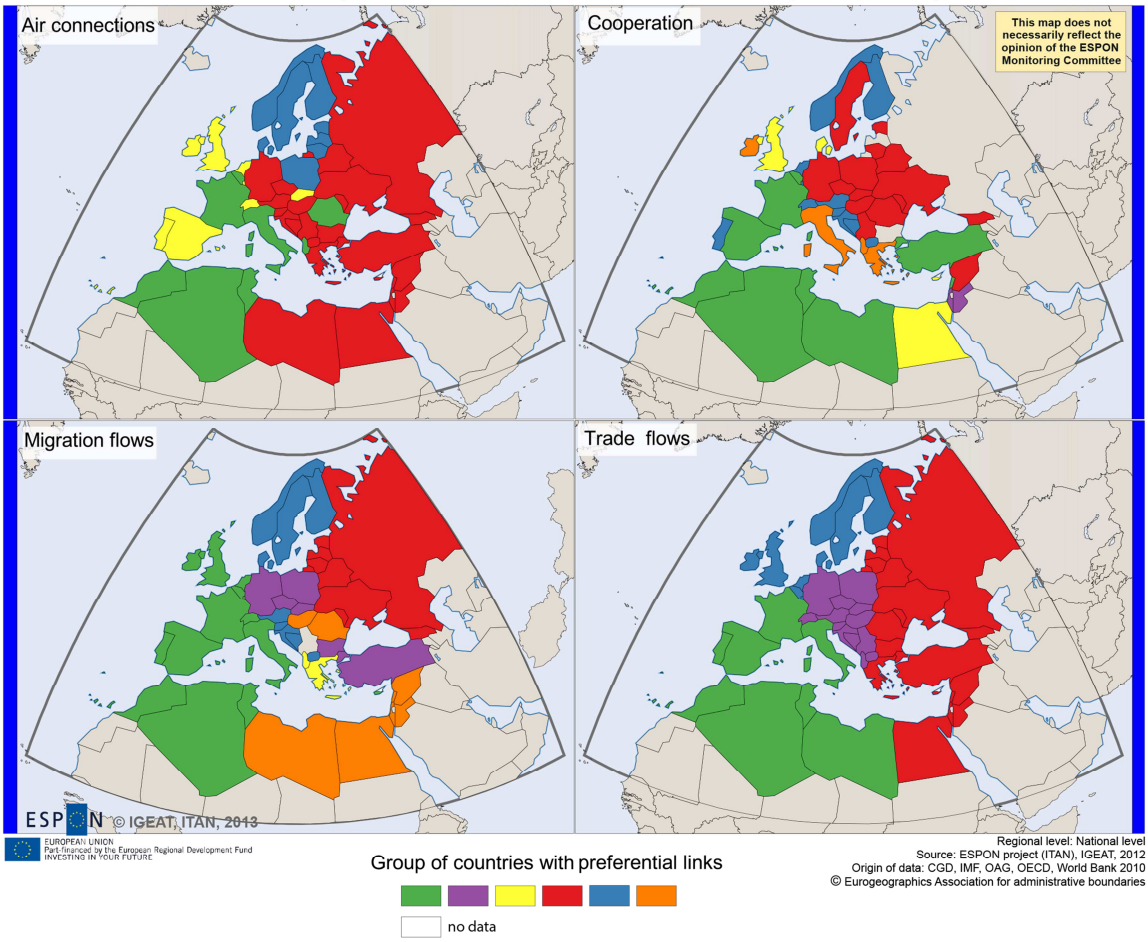
Finally, Nordic countries are always grouped together, except in cooperation flows since no cooperation exists between European countries, and are grouped with Western Balkans in cooperation and migration flows.

Taking another perspective, we may ask to which parts of Europe neighbouring countries are linked: First, neighbours do not constitute independent coherent groups, except in the case of the former USSR. Second, Maghreb countries – except Libya – are always linked south-western Europe. Third, Western Balkans seem to belong to different groups according to the types of flows: linked to Germany and central-eastern Europe for trade and air connections, they are linked to Nordic Europe in cooperation and migration flows. Fourth, Turkey and the Near East are grouped with former USSR in air and trade flows. In contrast, Turkey is grouped to the German group in migrations while the Near East forms a coherent area in migratory flows.

To conclude, these maps perfectly illustrate the existence of several distinct Neighbourhoods (former USSR, Maghreb, and Western Balkans) linked to different parts of Europe.

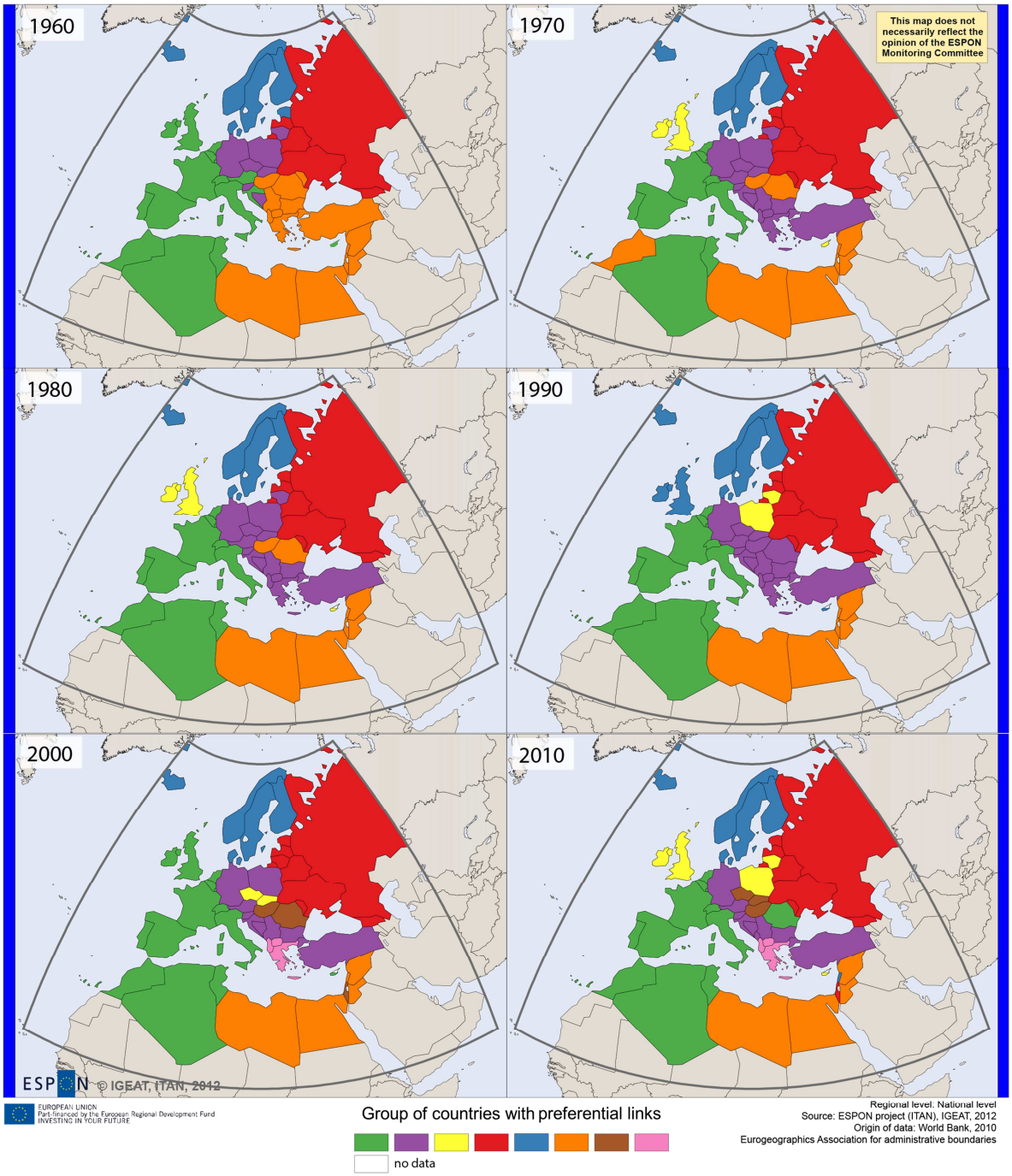
The following maps (Map 2-23 to Map 2-25) show the evolution of the preferential links within the Euro-Mediterranean space for migratory stocks, trade flows and air connections. We observe quite stable preferential links trough the time. One of the main evolutions is to be seen in trade flows, where the East/West divide during the cold war has disappeared. In place, we find a central-eastern European group centred to Germany, including Western Balkans, and an eastern, from the former USSR to the Near East, including Turkey and south-eastern Balkans.

Map 2-23 - The space of privileged relations within the wider European region (UE+Neighbourhoods), 2010



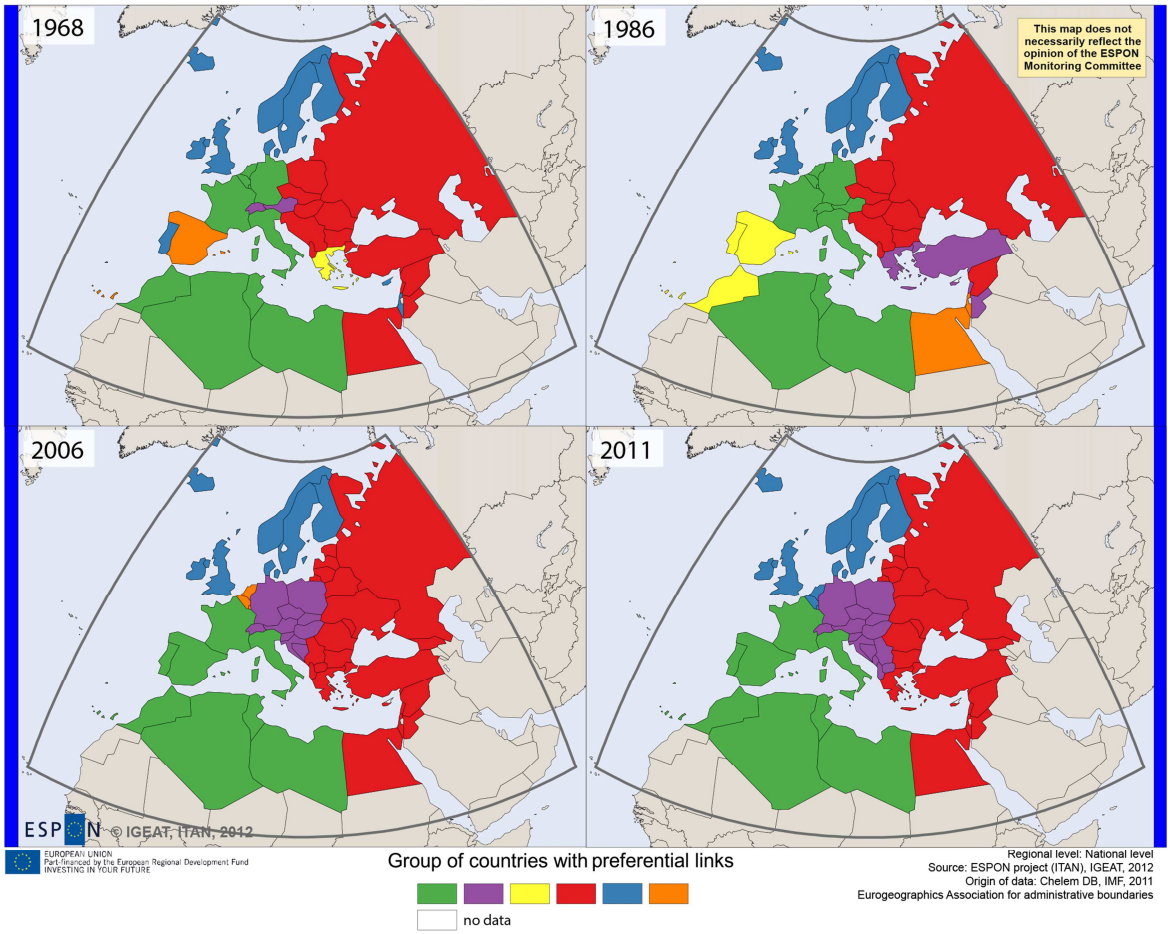
Note: countries of Europe and ENCs are grouped together if their relations are more intense than expected on the base of their respective size. For each pair of country, we thus calculate their theoretical relations according to their respective size, compare them with real flows through a Chi², and then group countries according to the intensity of these relations.

Map 2-24 - The space of privileged relations within the wider European region: migrations stocks



Note: countries of Europe and ENCs are grouped together if their relations are more intense than expected on the base of their respective size. For each pair of country, we thus calculate their theoretical relations according to their respective size, compare them with real flows through a Chi², and then group countries according to the intensity of these relations.
NB : For analyses before 1990, Germany is considered as a whole, which of course affects its relations with other countries, notably in eastern Europe

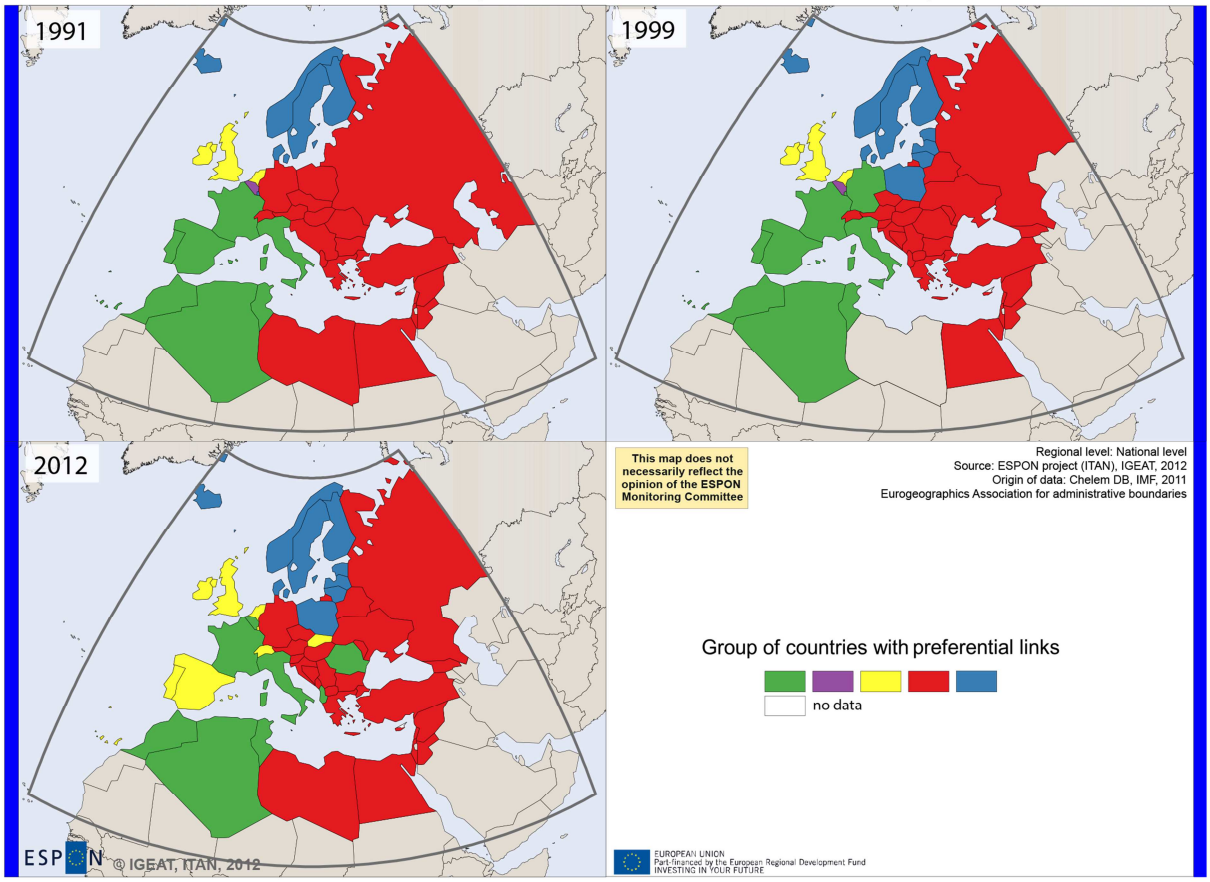
Map 2-25 - The space of privileged relations within the wider European region: trade



Note: countries of Europe and ENCs are grouped together if their relations are more intense than expected on the base of their respective size. For each pair of country, we thus calculate their theoretical relations according to their respective size, compare them with real flows through a Chi², and then group countries according to the intensity of these relations.

NB : For analyses before 1990, Germany is considered as a whole, which of course affects its relations with other countries, notably in eastern Europe

Map 2-26 - The space of privileged relations within the wider European region: air flows



Note: countries of Europe and ENCs are grouped together if their relations are more intense than expected on the base of their respective size. For each pair of country, we thus calculate their theoretical relations according to their respective size, compare them with real flows through a Chi², and then group countries according to the intensity of these relations.

Concerning maritime flows, the application of single linkage at port city level allows identifying a number of subsystems and their dominant hub, each subsystem including both European and neighbouring nodes.

For containers, a part of Europe was actually part of the largest subsystem centred upon Hong Kong, which ranges (both in 1996 and 2006) from western Europe to the west coast of North America (as well as all around Africa in 2006 only).

- In 1996, most of north-western Europe and the Scandinavia/Baltic area are indeed included in the Asian subsystem. Few and much smaller subsystems remain independent: those internal to Europe (i.e. Kemi in Finland, Trieste in North Adriatic, Barcelona for the West Mediterranean range) and those including both European and neighbouring ports (i.e. Liverpool/Quebec, Las Palmas and parts of Morocco and Spain, Piraeus-Athens being the largest capturing the whole East Mediterranean / Black Sea region).

- In 2006 the pattern is much more complex geographically as many small subsystems remain independent from the large Asian one. They again can be distinguished among those internal to Europe (i.e. Rostock/Iceland, Bergen/Norway, Lisbon/Portugal/Azores, Trieste/North Adriatic) and those including external/neighbouring ports (i.e. Hamburg / Baltic / Russia, Antwerp / Quebec, Barcelona / Canary / Morocco, Constantza / Ukraine / Russia, Izmir / Russia, Mersin / Egypt). Other large European ports such as Rotterdam, Algeciras, Gioia Tauro, and Piraeus are thus included in the Asian subsystem. The picture in 2006 is thus more fragmented than in 1996 and this can be explained by the increased role of transhipment (transit) hub ports that directly connect distant core regions through major trunk lines while

smaller ports became bound to local services (i.e. short-sea shipping and feeder links). Can we talk of an atomisation of Europe? It seems more the effect of logistical arrangements (ocean carriers' network design) than local/territorial factors (performance and demand side).

When considering all commodities together through same methods:

- in 2004, a large Asian subsystem again appeared reaching across Europe but this time restrained to southern hub ports (Algeciras, Gioia Tauro). European subsystems thus appeared larger, such as the one polarized by Rotterdam covering most of northern Europe and reaching up to Montreal (Quebec), except from the smaller and very local subsystems of London and Belfast. Barcelona "dominated" most of southern Europe (including parts of Morocco, Algeria, Ukraine and Russia) except the Lisbon/Madeira, Venice/Piraeus/Black Sea, and Las Palmas/Canary smaller subsystems. Rotterdam and Barcelona thus appeared as the two dominant hubs of Europe. The pattern differed according to the main commodity type and such results can be summarized as follows:

    - *liquid bulks*: Marseille as hub of North Africa (Maghreb), Izmir hub of a Black Sea/Libya subsystem, Alexandria (Egypt) dominating the rest of the eastern Mediterranean (including southern Italy), Lisbon/Portugal/Madeira, Palma/Baleares, London/Goteborg, Oslo/Norway, and Helsinki/Finland; Rotterdam being the main hub of the large subsystem including the rest of North Europe (including Russian Baltic);

    - *solid bulks*: a large Asian subsystem polarised by Singapore including a large part of northern Europe (of which Saint Petersburg, Hamburg, Rotterdam, Atlantic Spain and France), the rest of Europe and its neighbourhood being split among many small other subsystems such as Helsinki/Finland, Bergen/Norway, Amsterdam/Netherlands, Belfast/UK, London/UK, Barcelona/Spain/Morocco, Venice/North Adriatic, Valletta/southern Italy, Piraeus/Greece, Volos/Greece, Istanbul/Black Sea, but also Mariupol/Ukraine/Romania;

    - *general cargo*: scattered distribution of small subsystems due to the nature of this commodity group (a mix of various goods, from scrap metal to auto parts), revealing a diversity of local circuits that is not useful to detail fully. The subsystems comprising both European and neighbouring ports are St. Petersburg/Finland/Baltic, Valencia/Algeria/France, Naples/Tunisia/Libya, and Istanbul/Black Sea.

- In 2011, southern Europe is split among the two large subsystems of Valencia and Istanbul (followed by Venice/North Adriatic and Alexandria/Mersin) while Rotterdam remains dominant all over northern Europe.

4°) Conclusion

European Neighbourhoods can certainly be considered as peripheries of Europe. Indeed, relation between Europe and its Neighbourhoods are characterised by imbalances in many aspects. Indeed, Europe is more important for Neighbourhoods than the reverse. In other terms the European Union (and close associates) appears as a very cohesive area, with intense internal relations, and ENCs, except Turkey and Russia, play a minor and dominated role in these relations. Eurobroadmap [Grasland, Van Hamme 2012] present Europe as a series of circle around a north-western core which includes Germany, France, Benelux and the UK; eastern, northern and southern Europe form a first circle around this core, while the different Neighbourhoods constitute a second circle strongly linked to Europe but less integrated to this very cohesive area. Second, the relation between Neighbourhoods and Europe is imbalanced in its nature: high level services and products vs. primary or low added value manufacturing goods; tourist flows vs. migratory flows including highly qualified labour.

That being said, grouped together, Neighbourhoods are important partners for Europe, reaching 7,5% in the trade of goods, 7% of European air connections, absorbing 15% of the European aid of development, providing 30% of immigration toward Europe and providing 32,5% of energy supply of the European market. Moreover, we assess to 11% the share of Neighbourhoods in the potential

global growth market of Europe in the next decade. These figures nevertheless point to the importance of Neighbourhoods for energy supply and as a source of labour force (or migratory threat depending on the perspective adopted) for Europe rather than a major economic partner. And political relations tend to focus on these matters as well as on security issues.
In reverse, the European Union is the main partner by far for nearly all ENCs, except Russian neighbour and some Near East countries, whatever the flows considered. But though European Union remains a major actor at global scale, its influence has been shrinking in the last decades and its dominance has been more and more reduced to its Neighbourhood [Van Hamme et al. 2012]. However, even in the Neighbourhoods, our analyses highlight the declining influence of Europe in most countries, especially the Near East.

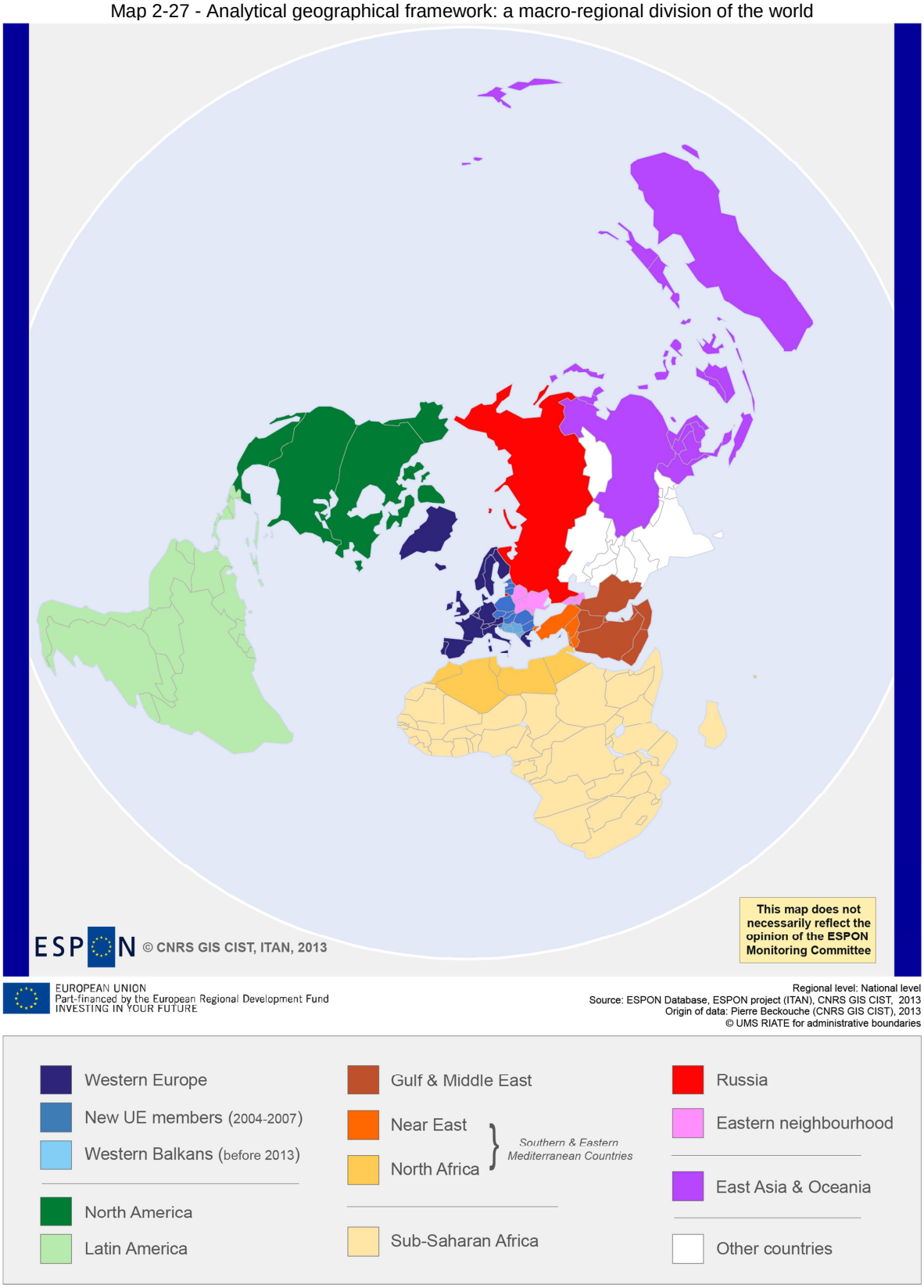
Finally, our analyses of Neighbourhoods highlight the diversity in terms of relations to the world. Several Neighbourhoods can thus be identified:

- Former USSR is the only part of the Neighbourhoods which forms a cohesive area, with declining though important interrelations. As a result, Russian neighbours such as the Ukraine, Moldavia or Belarus are equally polarised toward Russia and the European Union;
- Western Balkans, though keeping important internal relations, are nearly exclusively turned toward Europe, mainly central eastern Europe but also, in relative terms, toward Nordic countries;
- The Maghreb remains highly polarised toward Europe, mainly south-western Europe. Unlike the former USSR, countries of the Maghreb have poor internal relations, each country being strongly polarised toward Europe;
- Turkey is strongly though decreasingly oriented toward Europe in its external relations but does not belong to any cohesive regional area;
- The Near East, including Egypt, is less and less oriented toward Europe and has seen the influence of the Gulf powers increase in the last decade.

2.2. Neighbourhoods: stakes, opportunities and threats for Europe

In this section we gather the key elements of the European Neighbourhoods' stakes, opportunities and threats – for both Europe and for the ENCs. The gathered information come from various works: (i) some external works from which we synthesise analyses in particular on natural resources; (ii) the general ITAN research with results mapped in the scope of the wider region (Europe + Neighbourhoods); and (iii) further ITAN analyses comparing this wider region to other world leading regions, namely East Asia and North America. In that case, we opted for a delineation of the world regions showed on Map 2-27. It draws a "Gulf and Middle East" area because these countries are, relatively, in the European area of influence, and because they are a potential lengthening of the Arab Neighbouring ENCs to be taken into account in terms of energy issues and potential markets for European enterprises. Within the European region we distinguished between western Europe and the new member states because the latter, as "former European neighbours", constitute a useful comparison for the actual ENCs and suggest a possible future for them – at least on the socio-economic ground if not on the institutional ground of membership.

Map 2-27 - Analytical geographical framework: a macro-regional division of the world



2.2.1. Opportunities: labour forces, markets, investment

For European actors, the Neighbourhoods constitute opportunities because of their natural resources as has been said, but not only. Neighbourhoods are opportunities thanks to their demographic and economic size, which is rising in particular in the Mediterranean Neighbourhood although the previous section showed that European investment there is low and declining, and the European share in international trade also declining. Here we want here to understand this statement of the previous section, that the Neighbourhoods could represent more than 11% of the global potential growth for Europe in the coming decade.

1°) Population dynamic, labour force and markets

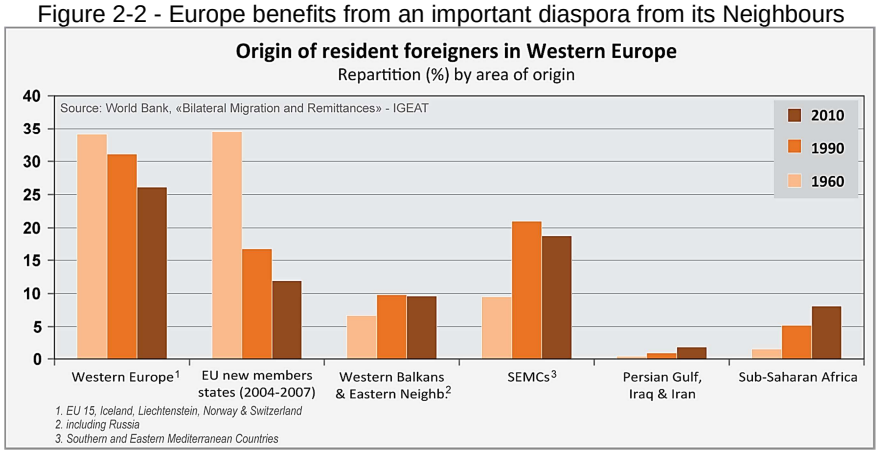
Population growth

The 508 million people of the ENCs (2011) progress rapidly in the South, mostly in the eastern Mediterranean. Turkey is a transitional country in many senses. The demographic transition is largely advanced there, and the national territory is split into demographically rising territories and declining territories. For a little part of their national territories, this is what is beginning to happen also in Tunisia and in Morocco, with an overall strong demographic growth. Reversely, the demographic decline of almost all the Balkans and Eastern ENRs is striking.

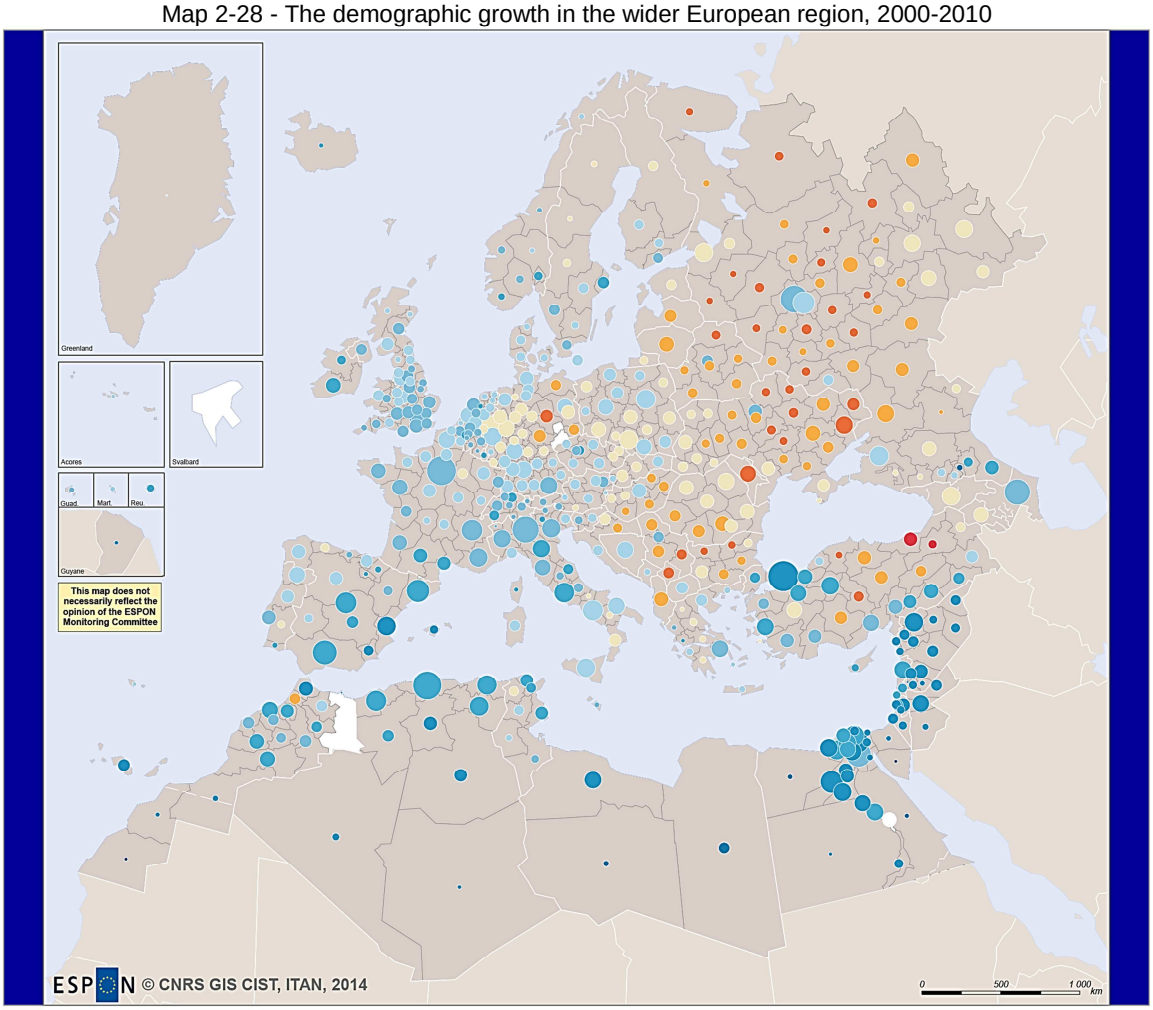
Map 2-30 shows that the young people of the wider European region are concentrated in the Near-East and in some southern parts of North Africa. The elder – consider it as an asset when it come to know how or as a burden when it comes to pension funding issues – are concentrated in Europe, Eastern Neighbourhood included. This demographic shift is striking: poorly managed, it could drive to conflicts between territories and perhaps countries confronted to a difficult transition, but properly managed it constitute very favourable complementarities. One thing is obvious: both aging Europe and booming Mediterranean have to tackle high dependency ratios, in a context of insufficient jobs creations: this creates a de facto convergence of stakes.

Another demographic asset has to be enhanced: Europe benefits from an important diaspora coming from its Neighbourhoods (Figure 2-2). Given the growing role of diasporas in the economic and cultural development, it is important for European public opinion and politicians to consider migrants in a renewed way: they used to be all too often regarded as a social problem (integration, education…), they should all the more be regarded as a solution that their education level is raising. As a whole, it is of utmost relevance to think in terms of “mobility” rather than of “migration”, because the actual economy is based on the former much more than on the latter. The people who live in western Europe as foreigner come more and more from the Neighbourhoods, namely the Mediterranean one, and from Sub-Saharan Africa which is a lengthening of the European area of influence. This is an asset to rely on, given the foreseen development of Africa in the coming century – which for the moment benefit mostly to other world players than to Europe.

Figure 2-2 - Europe benefits from an important diaspora from its Neighbours



Map 2-28 - The demographic growth in the wider European region, 2000-2010



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Regional level: NUTS 2 & SNUTS 1-2
Source: ESPON project (ITAN), CNRS GIS CIST. Data standardised by IGEAT, 2013
Origin of data: INSTAT (AL), 2013; DEMOBALK (BA), 2013; Federal Office of statistics (BA), 2001; DZS (HR), 2013;
National Statistical Committee of the Republic of Belarus, 2012; ONS (DZ), 2012; CAPMAS (EG), 2013; Hagstova Føroya (FO), 2013;
Naatsorsueqqissaartarfik (GL), 2013; CBS (IL), 1997-2012; DOS jordan - Myriam Ababsa (JO), 1994-2011; MoSA/UNFPA (LB), 2011;
CAS&UNDP/MoSA (LB), 2007; Libyan Ministry of Planning (LY), 2006; HCP (MA), 2004-2012; Biroul National de Statistică al Republicii Moldova (BY), 2013;
Бурпа М.П., Гушан В.А., Казмалы И.М., ИПЦ "Шериф" (BY) & Государственная служба статистики Министерства экономики ПМР (BY), 2013;
MONSTAT (ME), 2011; State Statistical Office of the Republic of Macedonia, 2011;PCBS(PS), 1999-2010; Republički zavod za statistiku (RS), 2010;
Federal State Statistics Service (RU), 2001-2012; CBS (SY), 2004; Mamdouh Al Mobayed (SY). 2013;Tunisie Statistiques. 2001-2011;TURKSTAT (TR), 2000-2011:
UKRSTAT (UK), 2001-2012; Federal Statistical Office of the Federal Republic of Yugoslavia (XK), 2011; ASK (XK), 2013; US Census, 2013; Eurostat, 2013
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For some territories no clear international statement exists

Total population in 2010 (million)

0,5 1 2,5 5 7,5 10 14 (Istanbul)

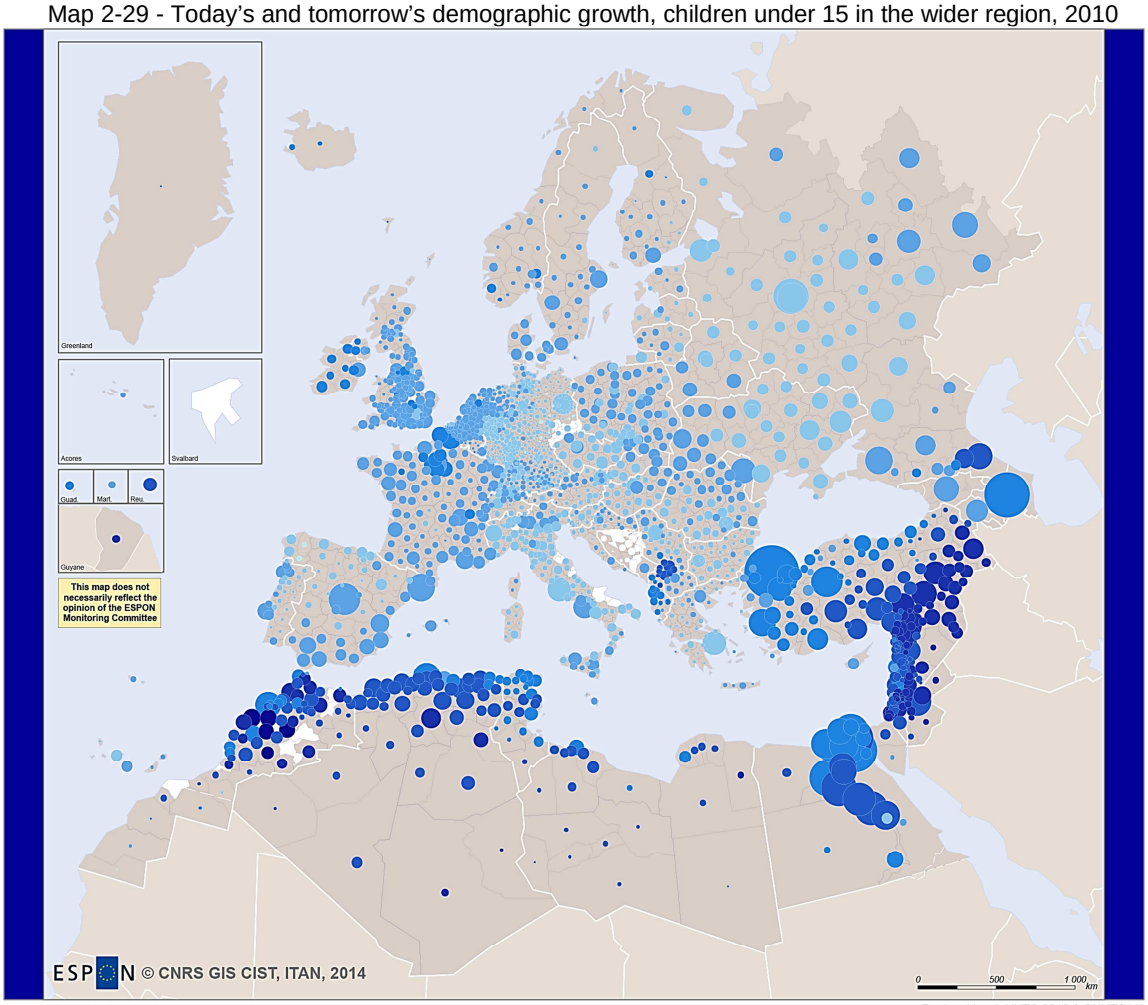
Total population annual growth rate (%), 2000-2010*

no data

-2,3 -2 -1 -0,5 0 0,5 1 2 4 8 13,1

Statistical data for Cyprus refer only to the areas under effective control of the Government of the Republic of Cyprus.
**To calculate the annual growth rate of population, available data closest year of 2000 & 2010 are used. The collected data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Therefore, data are harmonised against the national values provided by the US Census. A cross-multiplication is used to apply the observed ratio at the regional scale. These are computed at the SNUTS 2 level whenever possible, at the national level*

Map 2-29 - Today's and tomorrow's demographic growth, children under 15 in the wider region, 2010



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Regional level: NUTS 2010 & SNUTS V1
Source: ESPON Database, ITAN project, CNRS GIS CIST, 2014
Origin of data: Eurostat, National statistics Institutes, US Census, 2013, 2014
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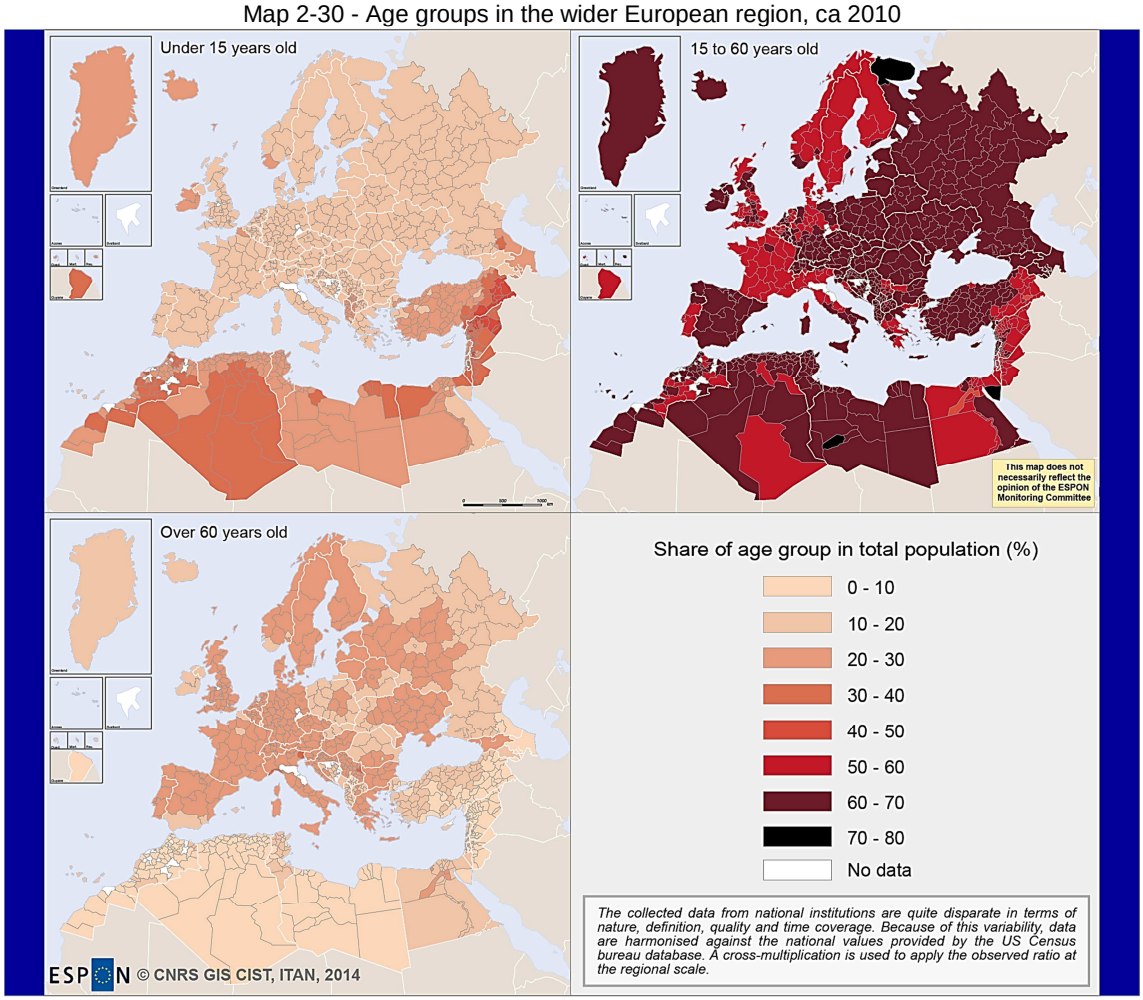
-15 yo age group population, 2010

3 121 429 (Istanbul)
1 000 000
500 000
100 000

Share (%) of -15 yo population in total population, 2010

4,5 10 15 20 25 35 50 60,9 no data

Map 2-30 - Age groups in the wider European region, ca 2010



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Regional level: NUTS 2 & SNUTS 0-1-2-3
Source: ESPON project (ITAN), CNRS GIS CIST. Data standardised by IGEAT, 2013
Origin of data: Eurostat, national statistics institutes & US Census, 2013
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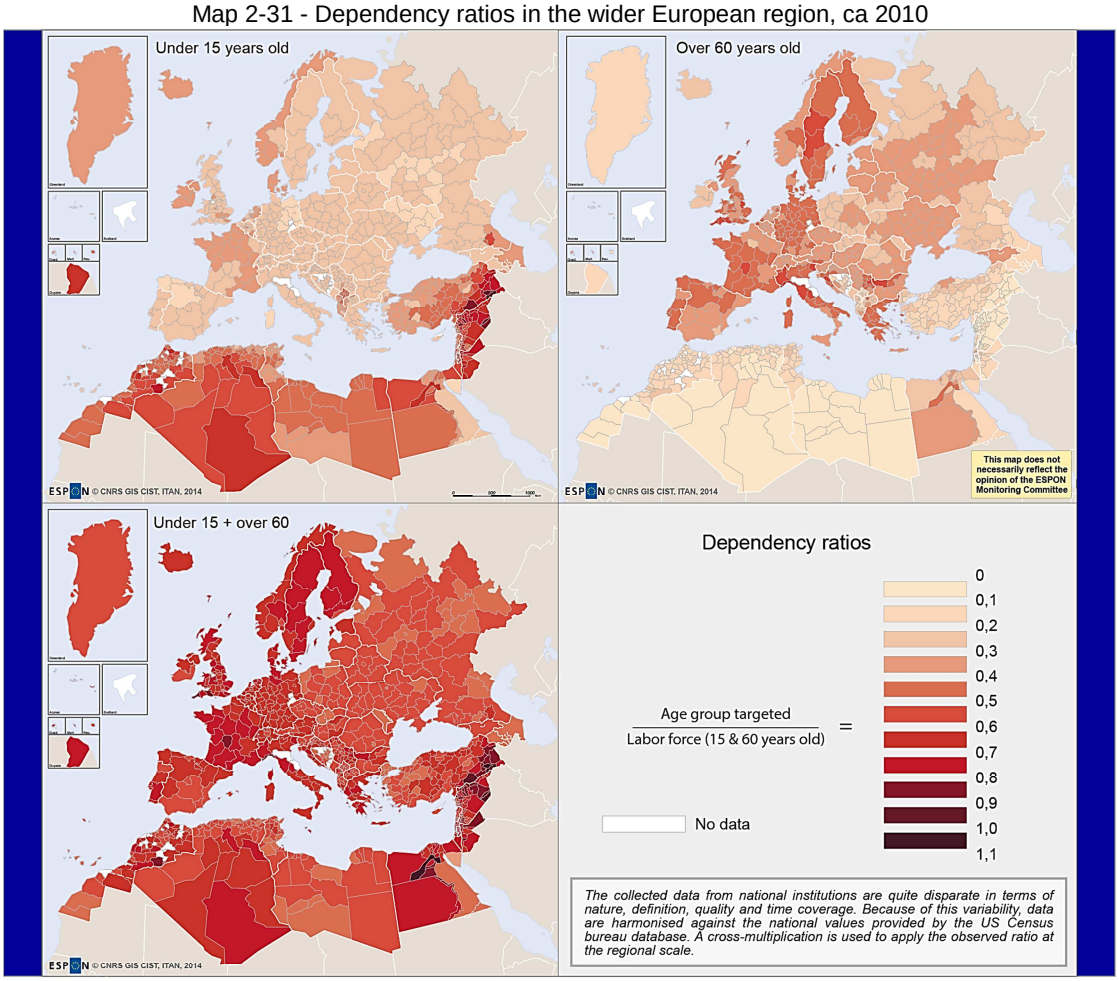
Map 2-31 - Dependency ratios in the wider European region, ca 2010



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Regional level: NUTS 2 & SNUTS 0-1-2-3
Source: ESPON project (ITAN), CNRS GIS CIST. Data standardised by IGEAT, 2013
Origin of data: Eurostat, national statistics institutes & US Census, 2013
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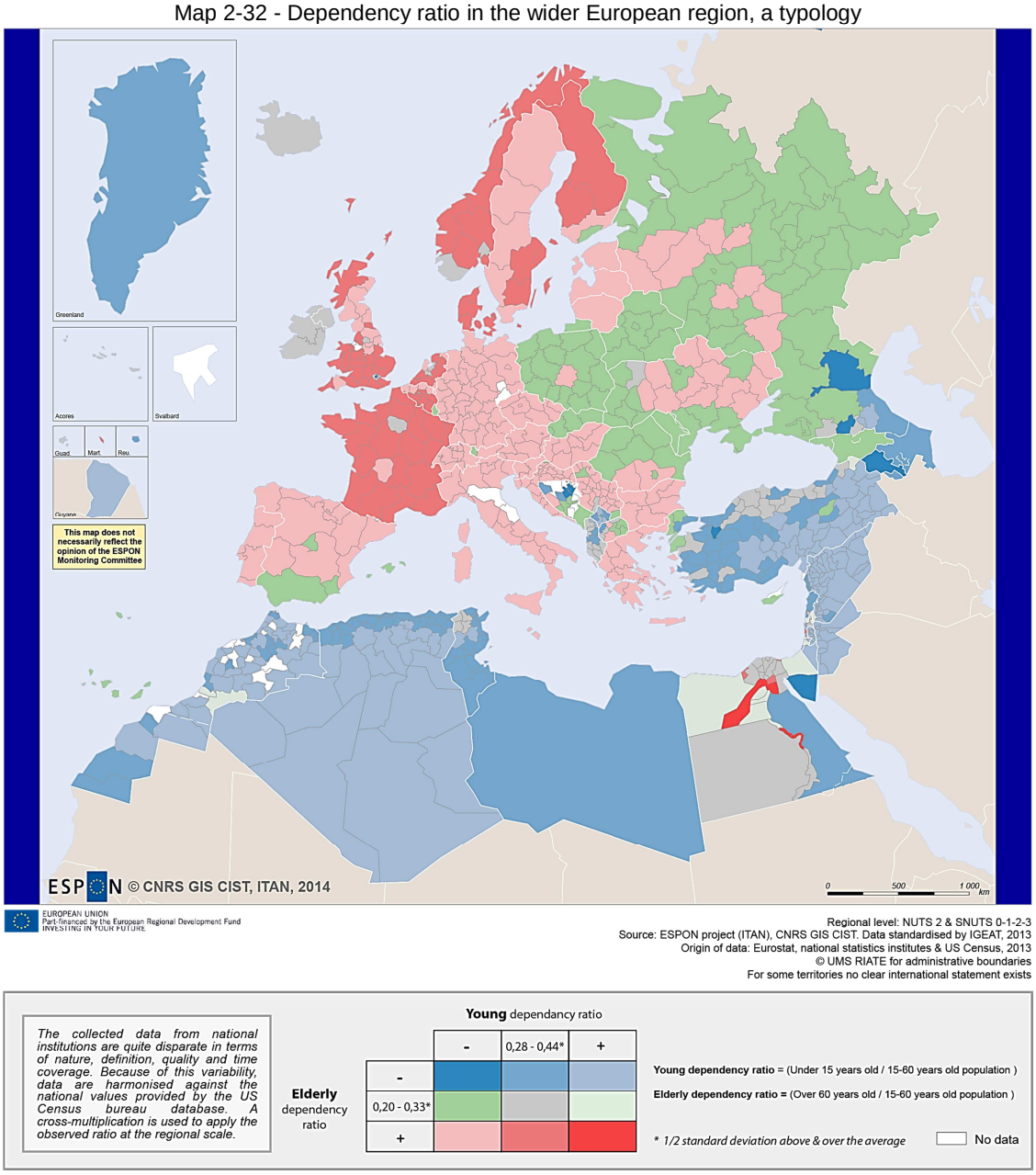
Map 2-32 - Dependency ratio in the wider European region, a typology



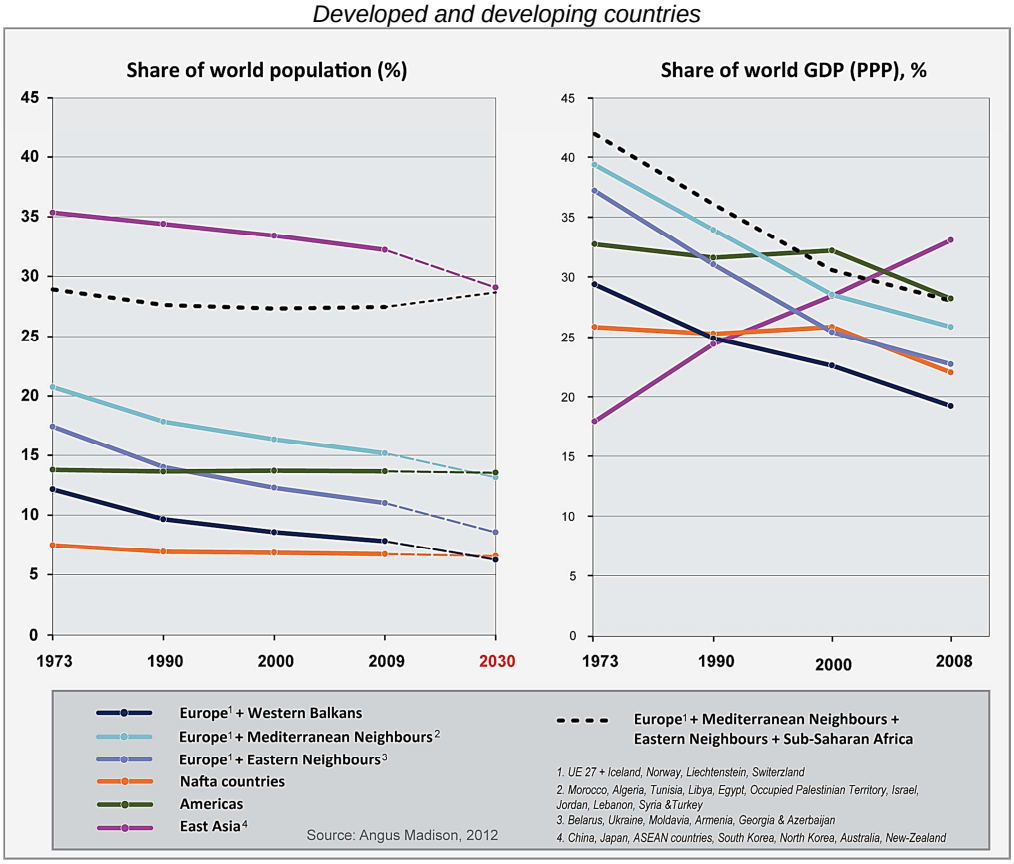
2°) Markets

The wider European region as a response to the booming place of East Asia in the world economy

The

Figure **2-3** displays several meaning of the “European region”: ESPON countries (EU27, Iceland, Liechtenstein, Norway, Switzerland) + Western Balkans, plus the Eastern ENCs, plus the Mediterranean ENCs, plus sub-Saharan Africa. In all cases, the contrast of its share of the world’s GDP is striking vis-à-vis the huge rise of the East Asian share. But indeed, the larger the European region, the higher its place in the world economy.

Figure 2-3 - World markets: can we cope with the rise of the East Asian region?
Developed and developing countries



developing countries only

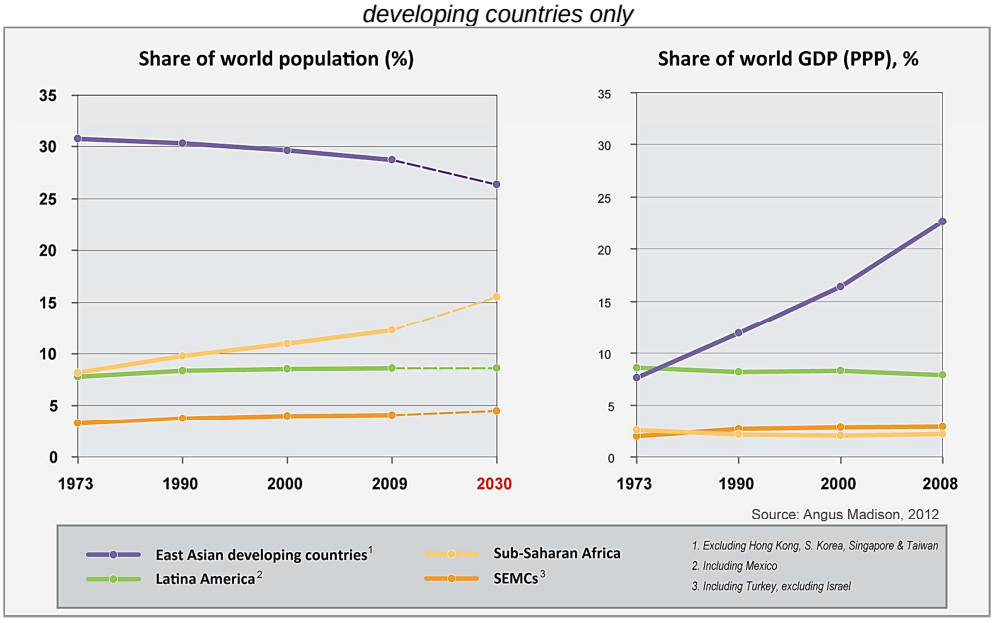
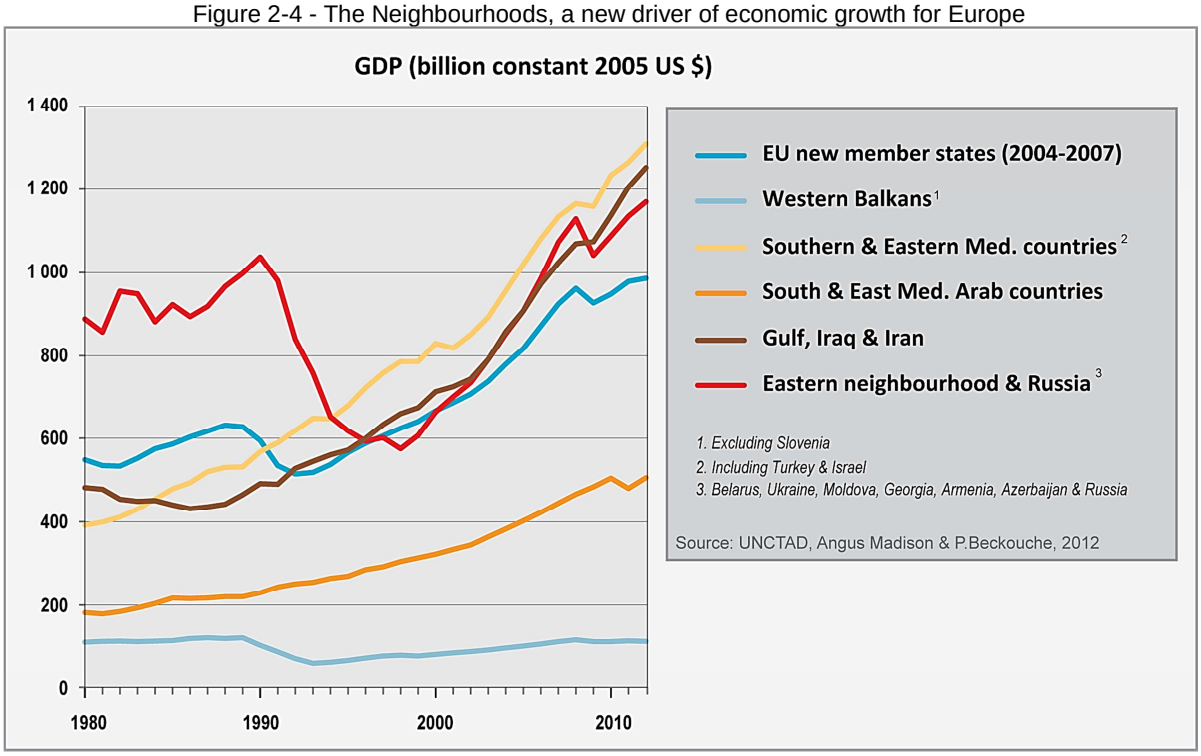


Figure 2-4 compares the GDP growth since 1980 in the various neighbourhoods of Europe. It considers the ITAN Neighbourhoods, but also the Gulf plus Iraq and Iran, and the EU new member

states (2004-2007) because prior to 2004 they were former Europe's neighbours. The first lesson is that almost all these neighbourhoods have an impressive economic growth, expressed in constant currency; this is undeniably un major asset for Europe. Second, the economic hierarchy as dramatically changed during these three last decades: the Eastern Neighbourhood was first and the new member states second, they are now in third and fourth position, whereas the Mediterranean and Middle-East neighbourhoods have become first and second; Western Balkans are now lagging behind. A more detailed analysis of the Moroccan case in the Gibraltar case study in section 6.3 confirms the economic rise of the Mediterranean neighbours.

This analysis has to be tempered by several facts: (i) the huge transition experienced by the former Socialist countries, with much better growth rates in the 2000s of course; (ii) the driving role of Israel and Turkey among the Mediterranean Neighbours, whose performance is much lower if one takes into account the sole Arab countries; (iii) the Arab countries performance is dampened by the on-going unrest and wars. Before the beginning of the Arab Spring, the World Bank was forecasting growth rates in 2011 by 4,4% in Morocco, 4% in Algeria, 5% in Tunisia, 6% in Egypt, 4.5% in Jordan, 7% in Lebanon and 5,5% in Syria; the real rates have been much lower, and nobody knows how long this difficult political transition will last. Still, it has to be highlighted that the European neighbouring areas are experiencing a long term shift from East to South, which is due to continue given the demographic figures presented in the previous section.

Figure 2-4 - The Neighbourhoods, a new driver of economic growth for Europe



Exports

The section 2.1.3 has confirmed the rather low and declining economic integration between Europe and its Neighbours. Beyond the European case, the general trend throughout the world is that of a slowing down of the economic integration within the major regions over the 2000s, due to the booming importance of a new global player: China, which has become a major trade partner of the countries of the world whatever the region they belong to. Should we conclude that the regional integration era is over? Certainly not, because the long run stays in favour of the regionalisation thesis. In the 1960s the European countries would only make a third of their trade between them and the trading links would be still lower between the United States of America (USA), Canada and Mexico. The respective regions are much more integrated today. Figure 2-5 shows that, even at a slower pace, the trade

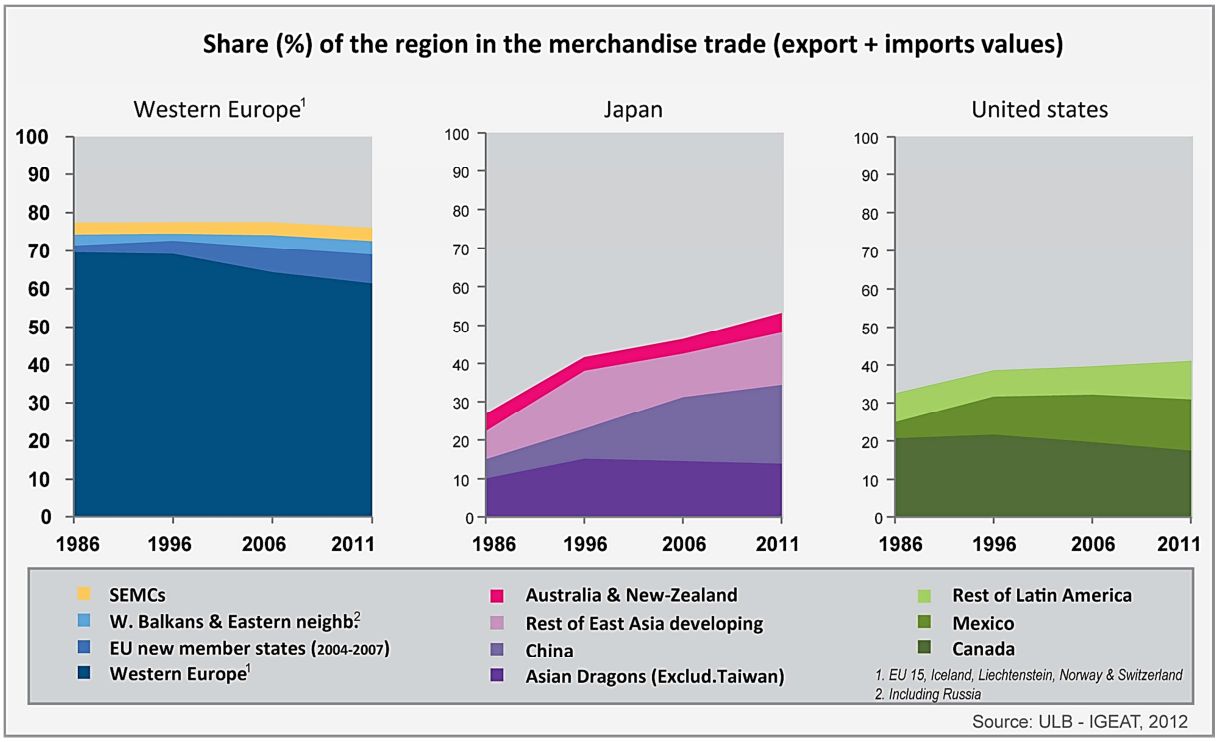
regionalisation is on-going for the US as well as for Japan. The big difference with Europe is that the latter trades very much within UE and very lowly with the developing and emerging countries of its neighbourhood.

Another feature of the previous section has to be further analysed: the declining role of Europe in its Neighbours' trade. Over the three last decades, the European new member states have drastically reoriented their trade with western Europe instead of the former Soviet bloc. But this is the reverse way for the neighbourhoods, which means that EU membership is a driver to trade regional integration whereas a Neighbourhood status comes down to declining integration with Europe:

- The Eastern Neighbourhood is indeed strongly linked to western Europe's markets, but less and less to central Europe's partners and, above all, the evolution shows a rising importance of their Asian partners. Along with that, the internal trade within the Eastern Neighbourhood is on the rise due to the gas diplomacy used by Russia to expand its economic influence in former Soviet republics, and due to the wider prospects offered thanks to a single economic space pushed by Russia (customs union of Russia, Belarus, Kazakhstan, and now Armenia and Ukraine, initiated in 2010 in the framework of the "Eurasian Economic Community").
- The Mediterranean ENCs are also highly linked to European trading partners, but also less and less: 60% in the 1980s and only 44% in the 2000s. This trend has accelerated in the 2000s, at the time when these countries applied the Association agreements with Europe and opened their markets to international exchanges. Mediterranean ENCs find growing partners within themselves, in the Gulf, in North America, and somehow in sub-Saharan Africa.
- Remarkably, the Gulf countries (including Iraq and Iran here) trade less and less, too, with Europe. Their growing partner is Asia, in particular East Asia which henceforward buys the two thirds of the Gulf's hydrocarbons (against less than 40% in the 1980s).
- The feature is true also for sub-Saharan Africa, which diversifies its trading partners at the expenses of Europe (Europe represented 59% of Africa's exports in 1986 but 26% in 2011).

In sum, all neighbourhoods of Europe, in a wide meaning including sub-Saharan Africa and Gulf states, send to Europe a declining part of their exports and import a declining part of European products. This can be considered good news if this means a wider insertion of these countries in the global economy. This can also be regarded as bad news for Europe's influence which remains high upon its neighbourhoods, but is undoubtedly declining. One can consider that the rapidly rising markets of the ENCs are an opportunity for Europe which has to regain its influence upon them.

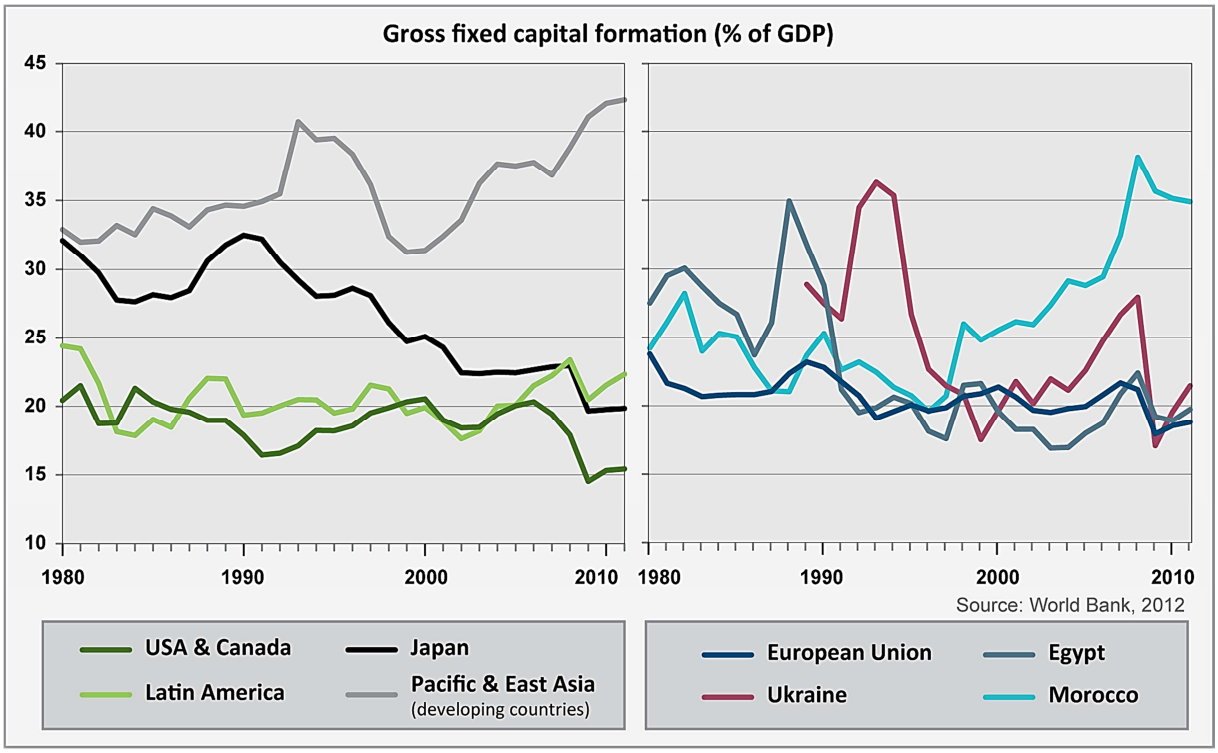
Figure 2-5 - The share of the developing neighbours is high in East Asian and American regions



Investment

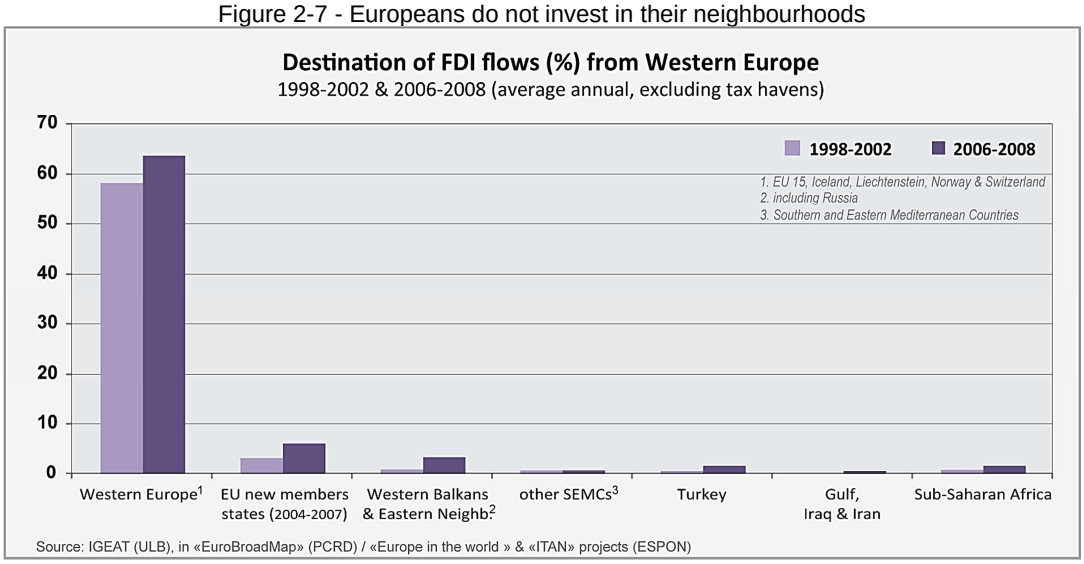
The East Asian region's boom is based on the complementary between its national economies: highly developed (Japan), developed (Dragons), and developing (China…). The developed countries have found growth drivers in their developing neighbourhood. Figure 2-6 shows it clearly for the investment rate in the Asian region. The complementarities are less obvious between the US and Latin America but it exists too. In the European wider region this is the case when it comes to Morocco for instance, but not for Egypt, whereas Ukraine shows a chaotic path. Since the Arab spring, investment in the Mediterranean Neighbourhood as diminished.

Figure 2-6 - Investments in the peripheries of the Triad, slowdown in the centres

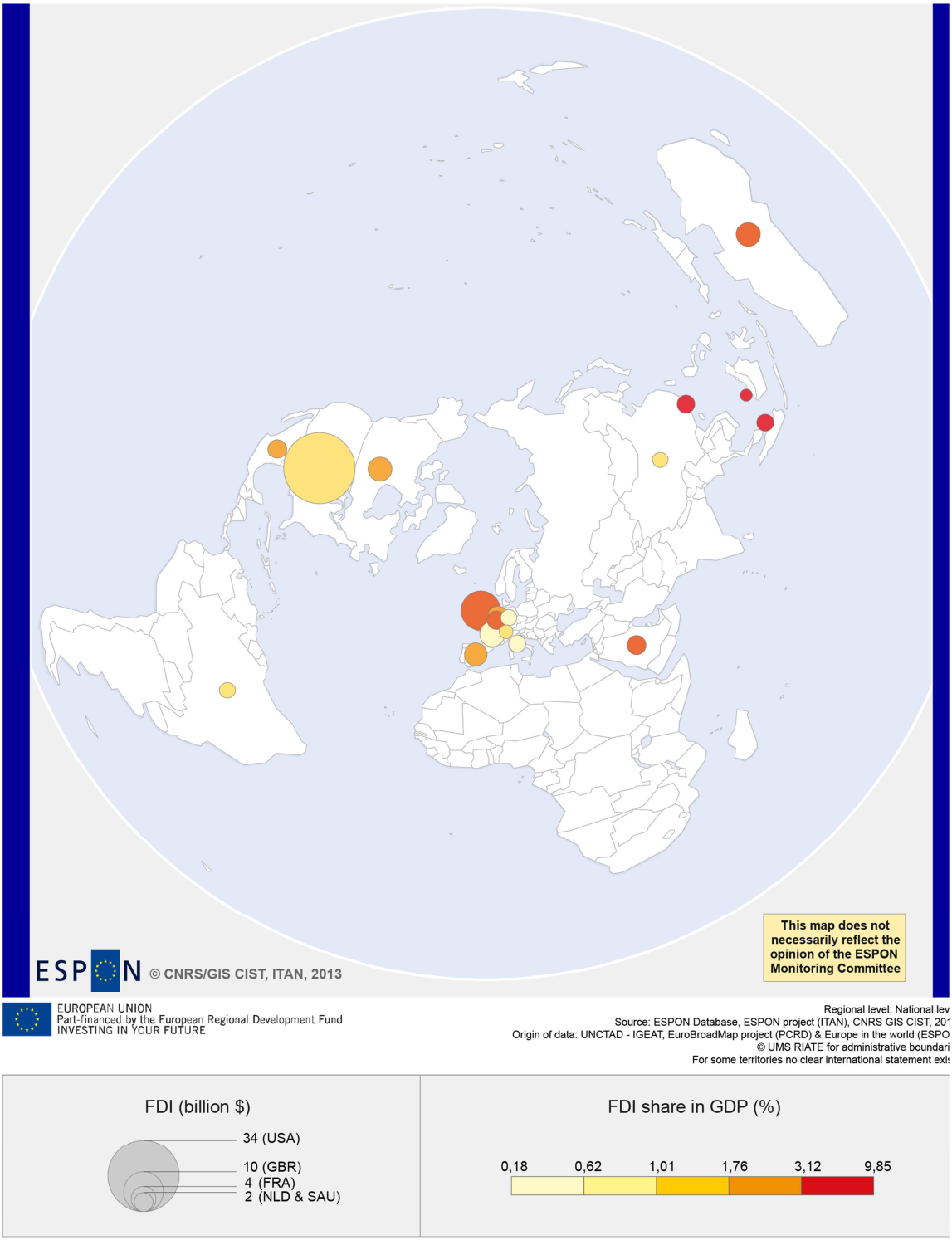


The Mediterranean Neighbours remain marginal players in the world's FDI flows, as indicated in the 2.1.3 section. North Africa attracts less than 1% of the world's FDI inflows, the Arab Near-East (that is Near-Eats excepted Israel and Turkey) less than 0,5%. Turkey is rising but attracts less than 0,8%. The Eastern Neighbourhood shows more attractive: altogether the Western Balkans and the Eastern Neighbourhood attracted 1,1% of the world's FDI inflows in the 1990s and 4,3% in the 2000s. But these figures stay far away from the Asian records. Under the impetus of the Japanese enterprises, emerging and developing East Asia attracted 7% of the world's FDI inflows in the 1970s, 9% in the 1990s and 15,5% (China's boom) in the 2000s. The post-crisis period confirms this mega trend: in 2007 China has attracted US$85bn, in 2011 the figure reached 125; the other emerging and developing countries of East Asia 150 and 210. As a whole, the emerging and developing East Asian countries have attracted in 2011 22% of the world's FDI inflows – much ahead of Latin America (10%), not to speak of the European Neighbour Countries. Figure 2-7 shows that the latter attract in particular a very marginal part of the European countries FDI outflows.

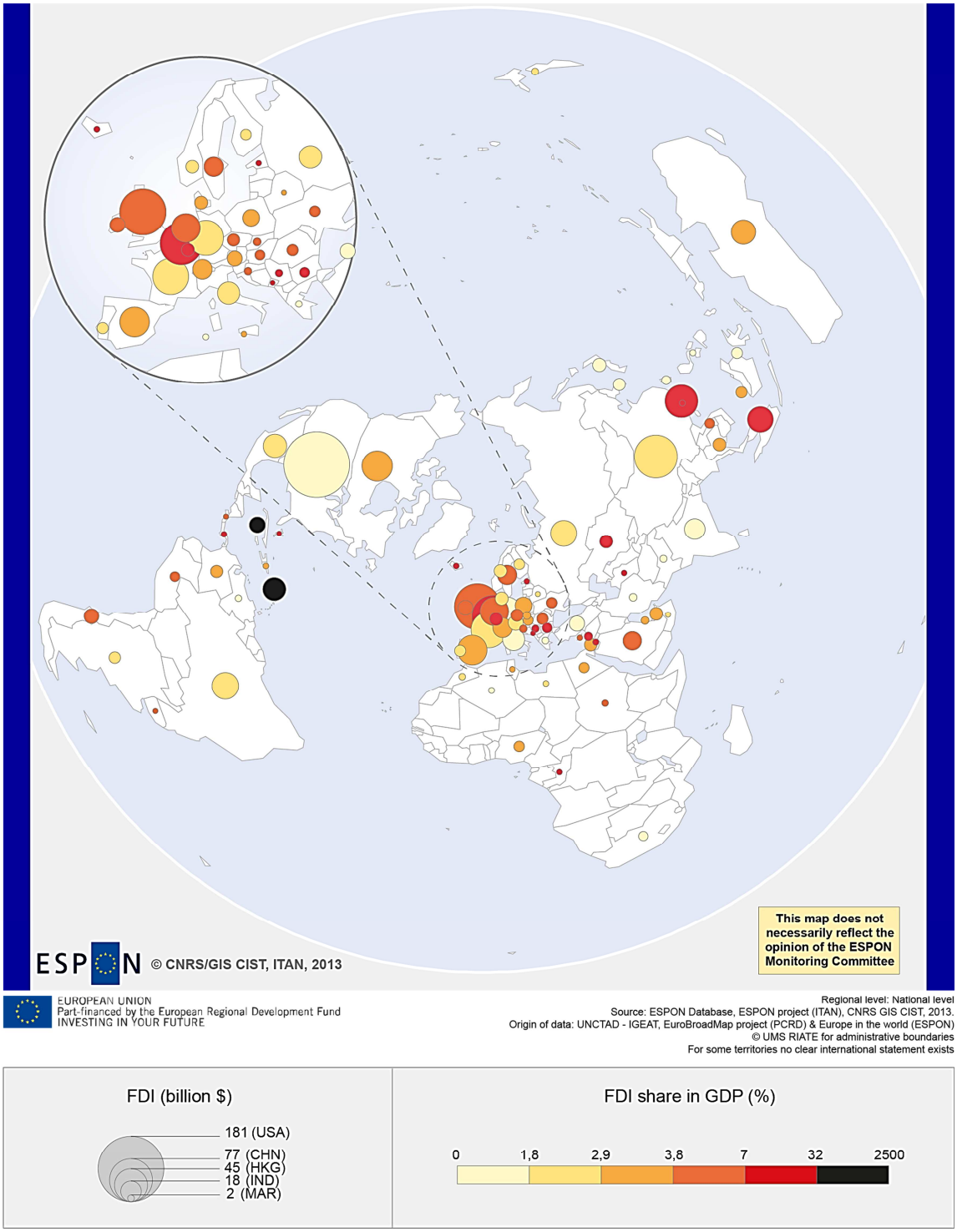
Figure 2-7 - Europeans do not invest in their neighbourhoods



Map 2-33 - FDI inflows and share in GDP in the 1980s



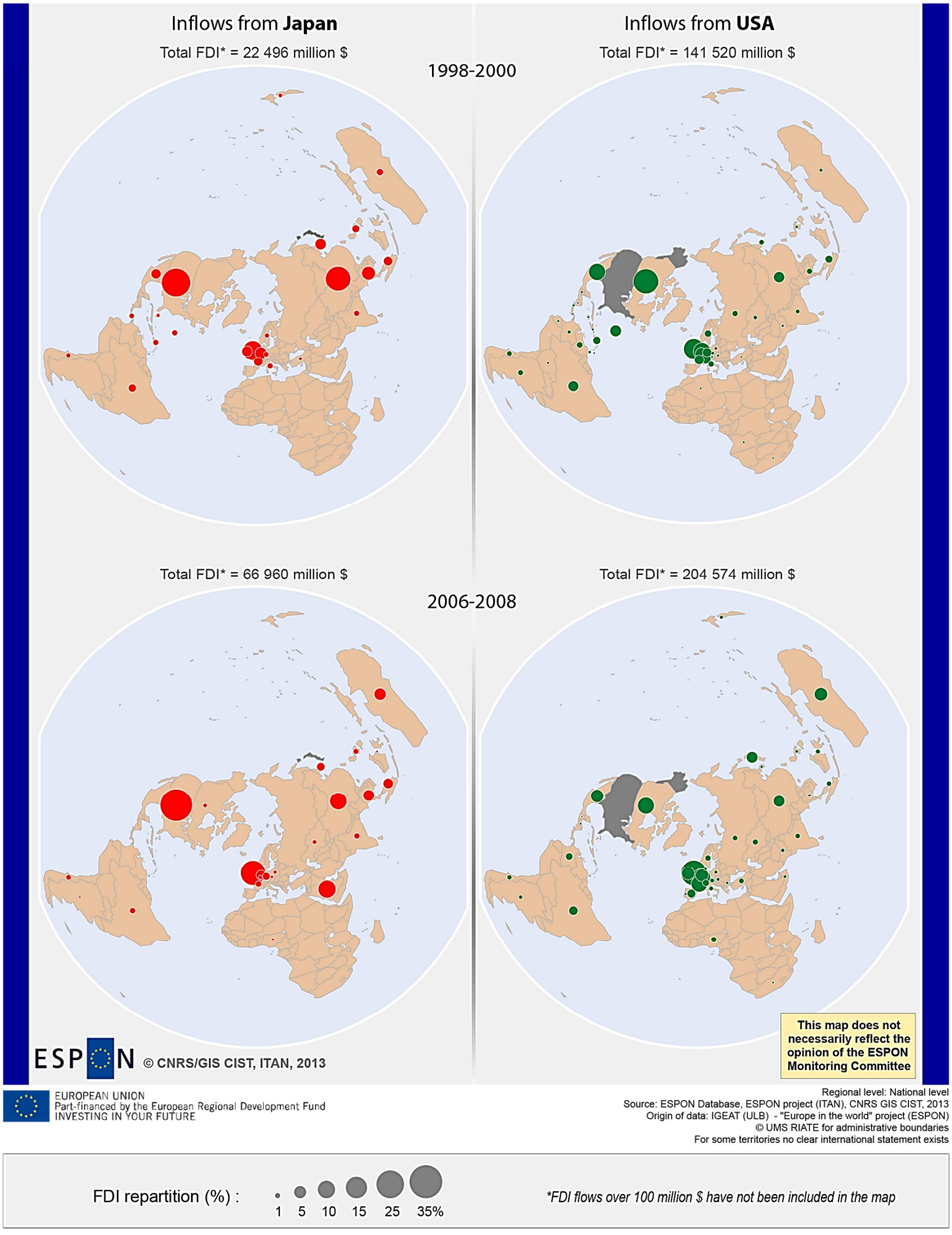
Map 2-34 - FDI inflows and share in GDP in the 2000s



The low attention paid by the European investors to their Neighbourhoods is at stake. Circa 2000, Japan investors targeted East Asian countries for one third of their FDI outflows, American countries for another third, and European for a quarter. A decade later, the figure has slightly change with a reducing part of East Asian countries, but still, it is possible to say that Japanese investors invest strongly in their neighbouring region. When one agglomerates all the FDI outflowing from any East Asian country, the regional integration shows very high since East Asia itself attracts the half of these outflows. When it comes to the US, they invested in their region quite a lot in 2000, but this has

lowered over the 2000s because they more and more invest in Russia, central Asia, Turkey, South Asia but mainly in East Asia and Europe. The synthetic figures is clear: at the end of the 2000s, the emerging and developing countries of the region attracted 21% of Japan FDI outflows, 10% of US FDI outflows, but only 4% of European FDI outflows.

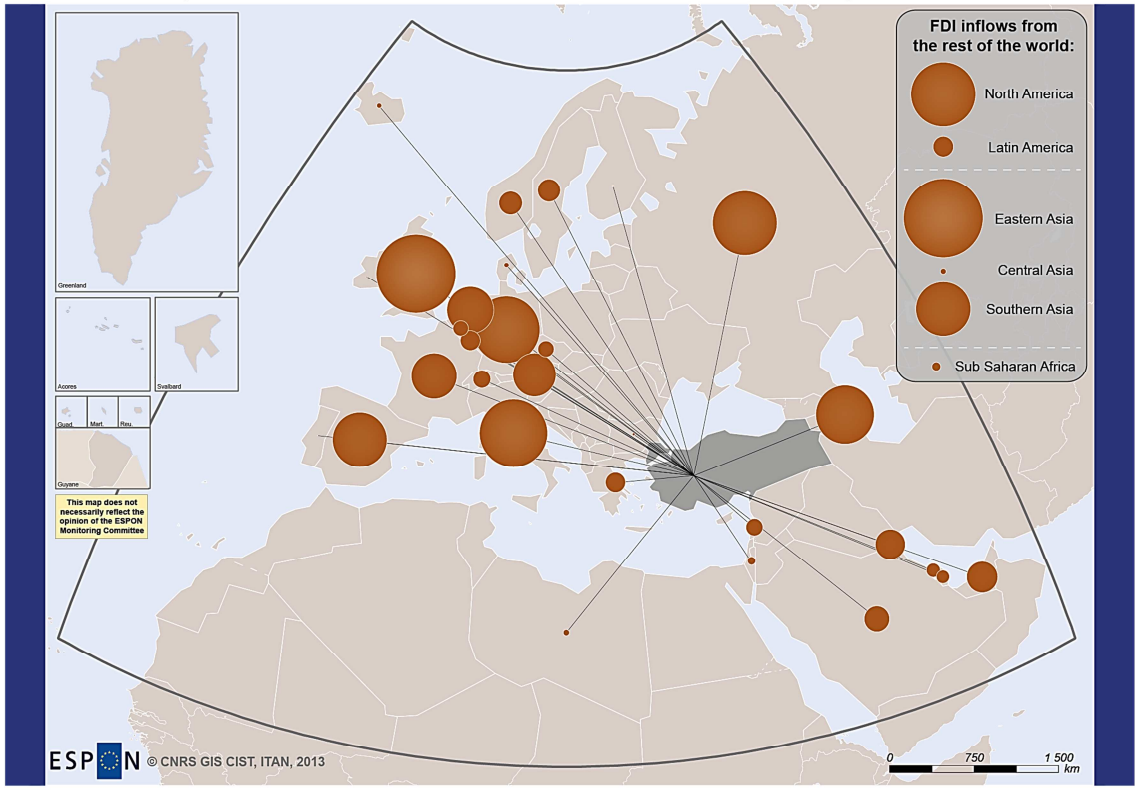
Map 2-35 - Do the US and Japan invest in their region? Destination of FDI, 1998-2008



Seen from the developing countries' standpoint, the geography of FDI flows is different, because they highly rely on investments originated from their developed neighbours. For example Morocco, Tunisia or even Turkey FDI inflows highly come from Europe: 85% for Morocco, 57% for Tunisia and 77% for Turkey at the end of the 2000s. What is the evolution? Again, the role of Europe as FDI provider for the Mediterranean ENCs is declining: more than 50% at the beginning of the 2000s (the figure is lower than for the sole Maghreb because the Mashreq is much less linked to Europe), 30% in 2010 (whereas the figure is 20% for the Gulf as origin of FDI invested in the Mediterranean ENCs).

In the other regions the figures are alike: half of FDI flows in Mexico come from the US; the bulk of FDI flows in China or Thailand comes from Japan and the Dragons (along with Caribbean tax havens).

Map 2-36 - Where do FDI in-flows come from? The case of Turkey, 2006-2008



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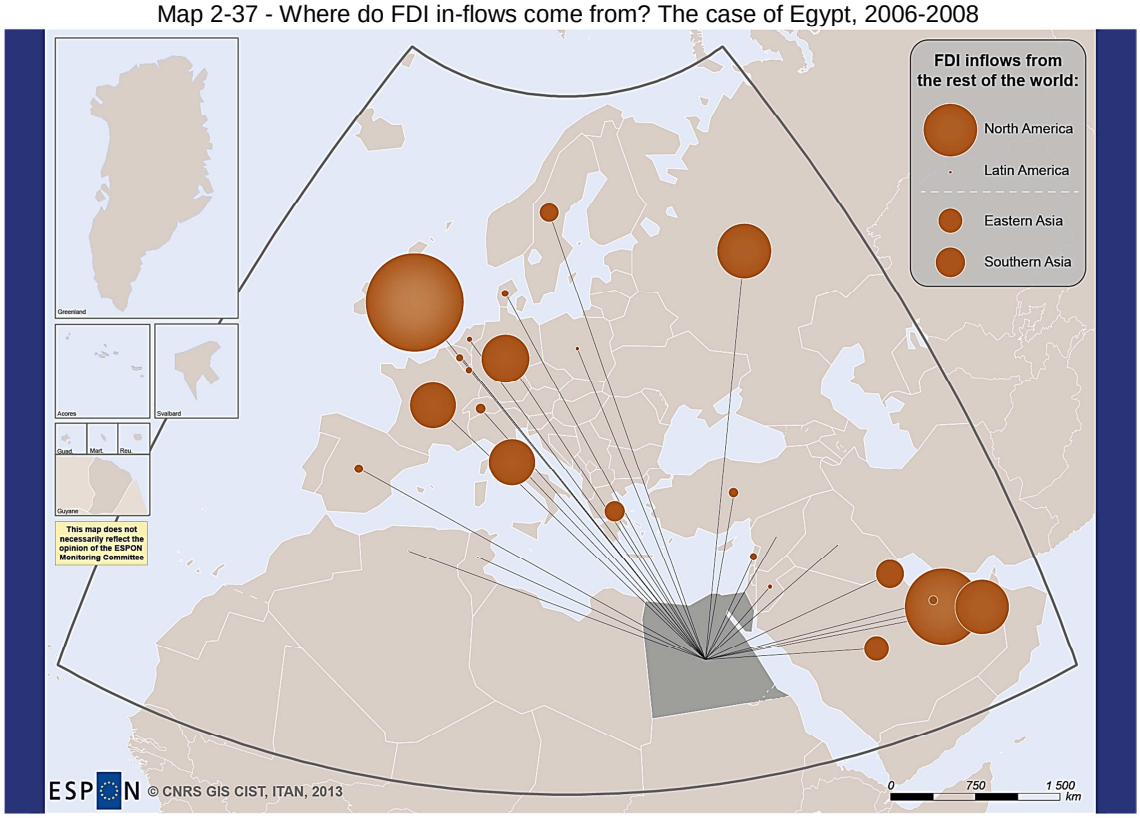
Map 2-37 - Where do FDI in-flows come from? The case of Egypt, 2006-2008



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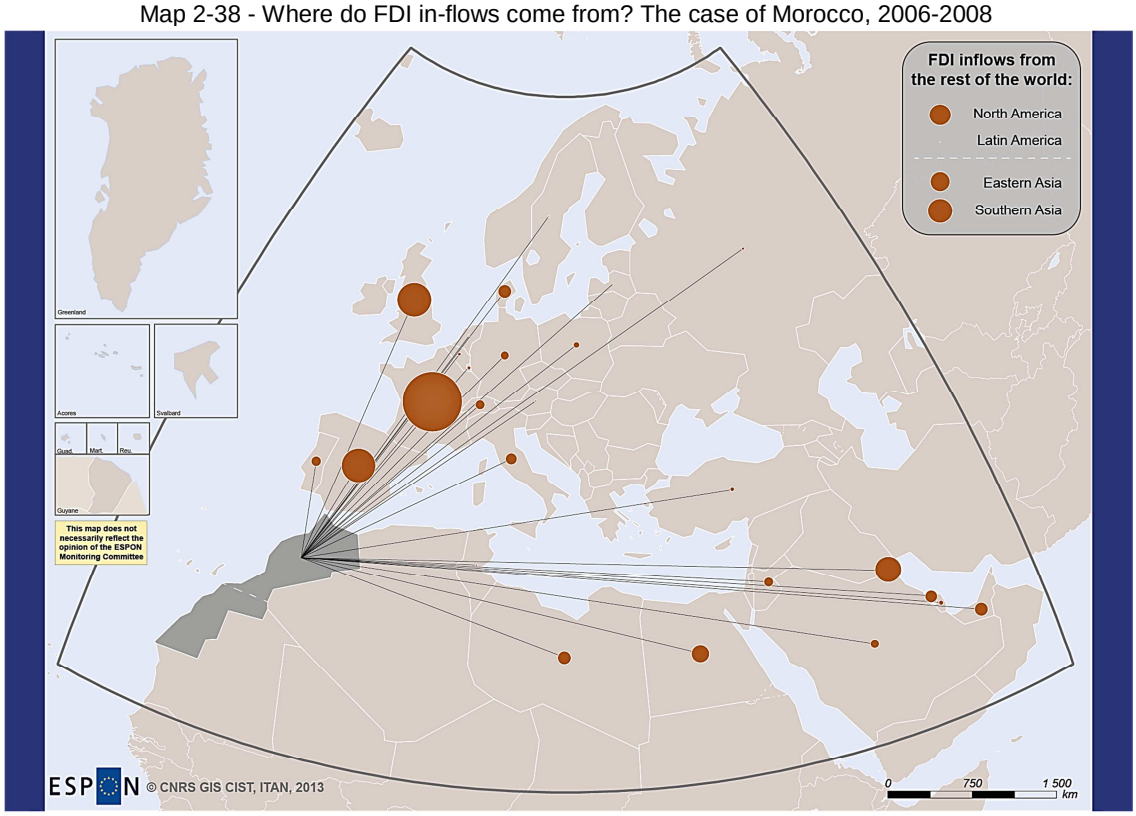
Map 2-38 - Where do FDI in-flows come from? The case of Morocco, 2006-2008



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Regional level: National level
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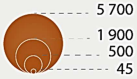
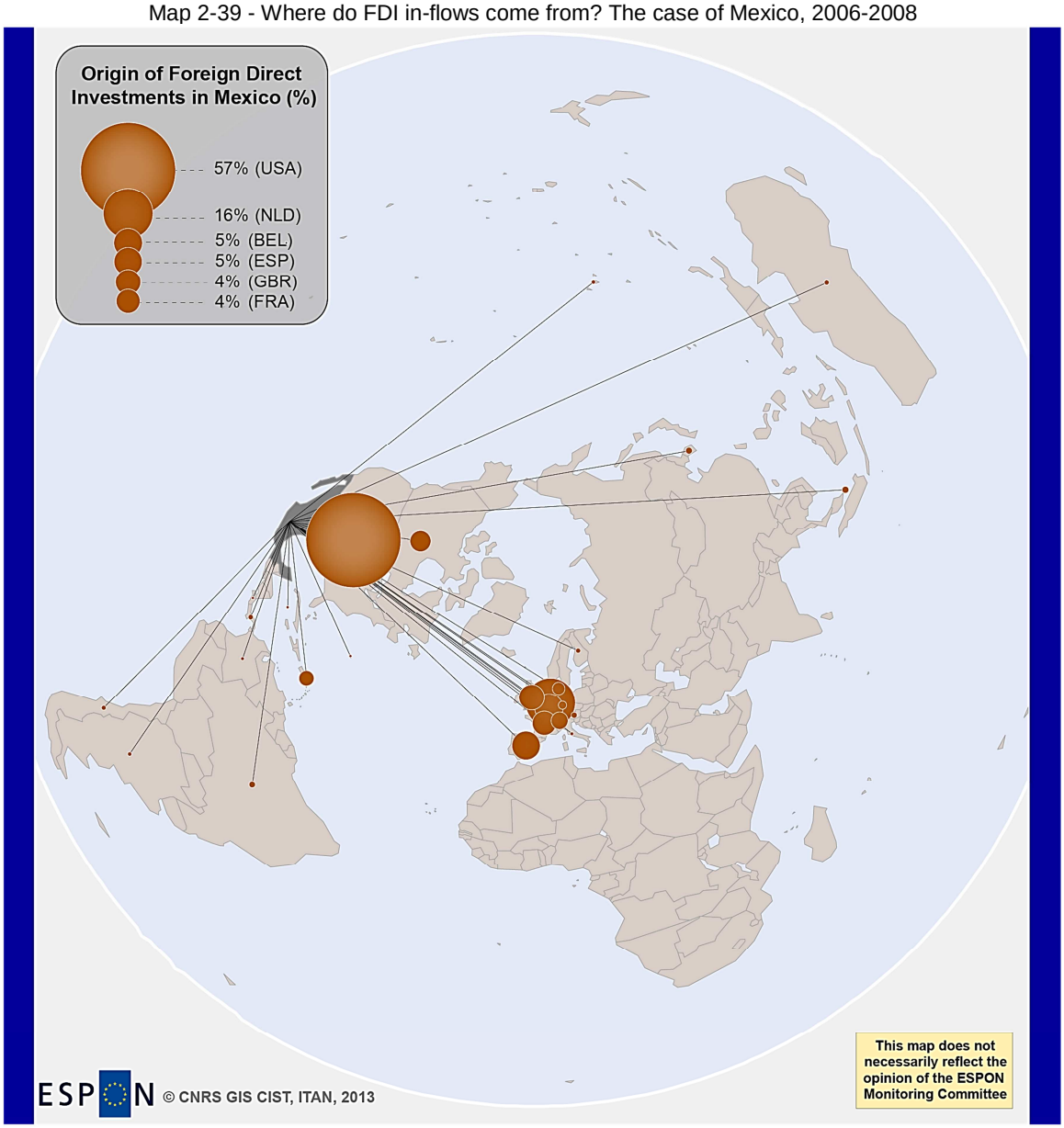
Inflows of FDI to Morocco (M€)



Map 2-39 - Where do FDI in-flows come from? The case of Mexico, 2006-2008



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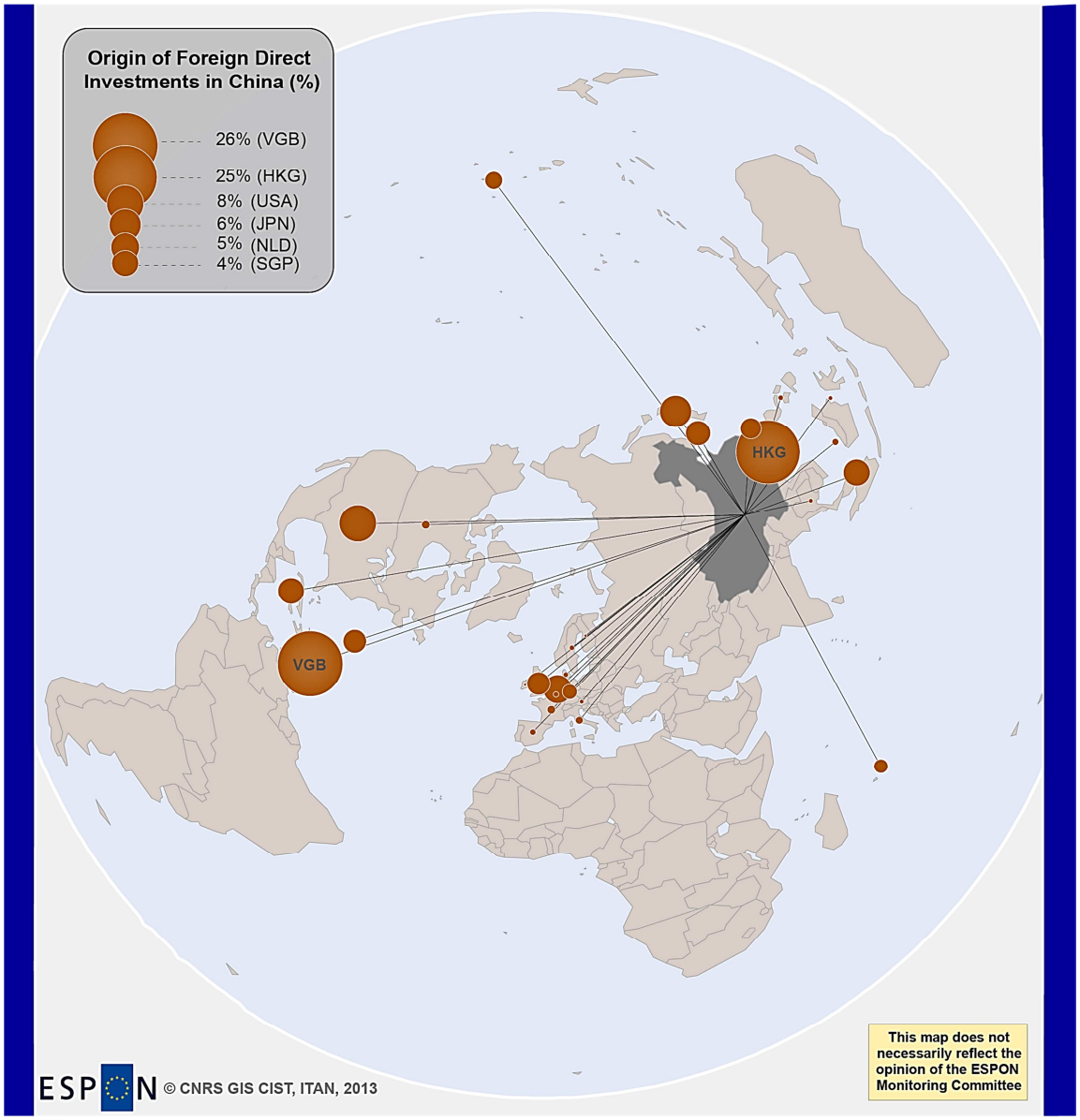
Map 2-40 - Where do FDI in-flows come from? The case of China, 2006-2008



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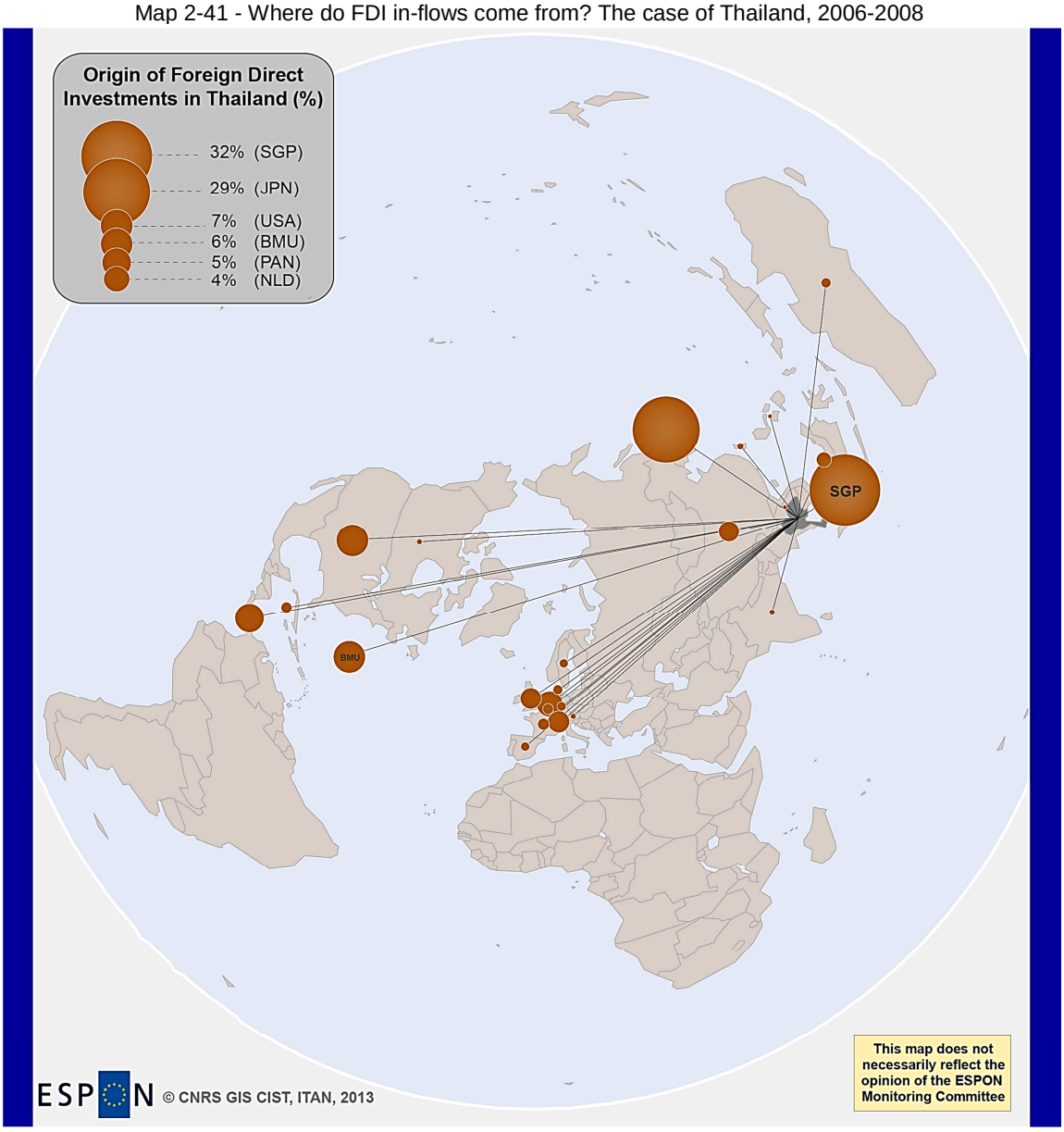
Map 2-41 - Where do FDI in-flows come from? The case of Thailand, 2006-2008



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Map 2-42 displays the FDI inflows in the entire Neighbourhood at local scale (SNUTS 2/3, sometimes at country scale when data were not available). Russia, Israel and Turkey are the main target, despite the latter shows a per capita record minor than expected; Maghreb is less targeted than the Near-East, which highlights the potential in the Maghreb countries.

Some peculiar territories appear here and there, for instance Ukrainian Ivano-Frankivskiy oblast at the border of Slovakia, with rising FDI since 2008 in the fields of chemistry and food business, mostly from western European countries (60%) and from the Russian economic area of influence (Russia, Serbia, Cyprus and… Virgin Islands: 40%) – a symbol of the contest between the European Union and Russia upon Ukraine.

Map 2-42 - The FDI inflows in the Neighbourhoods, SNUTS 2

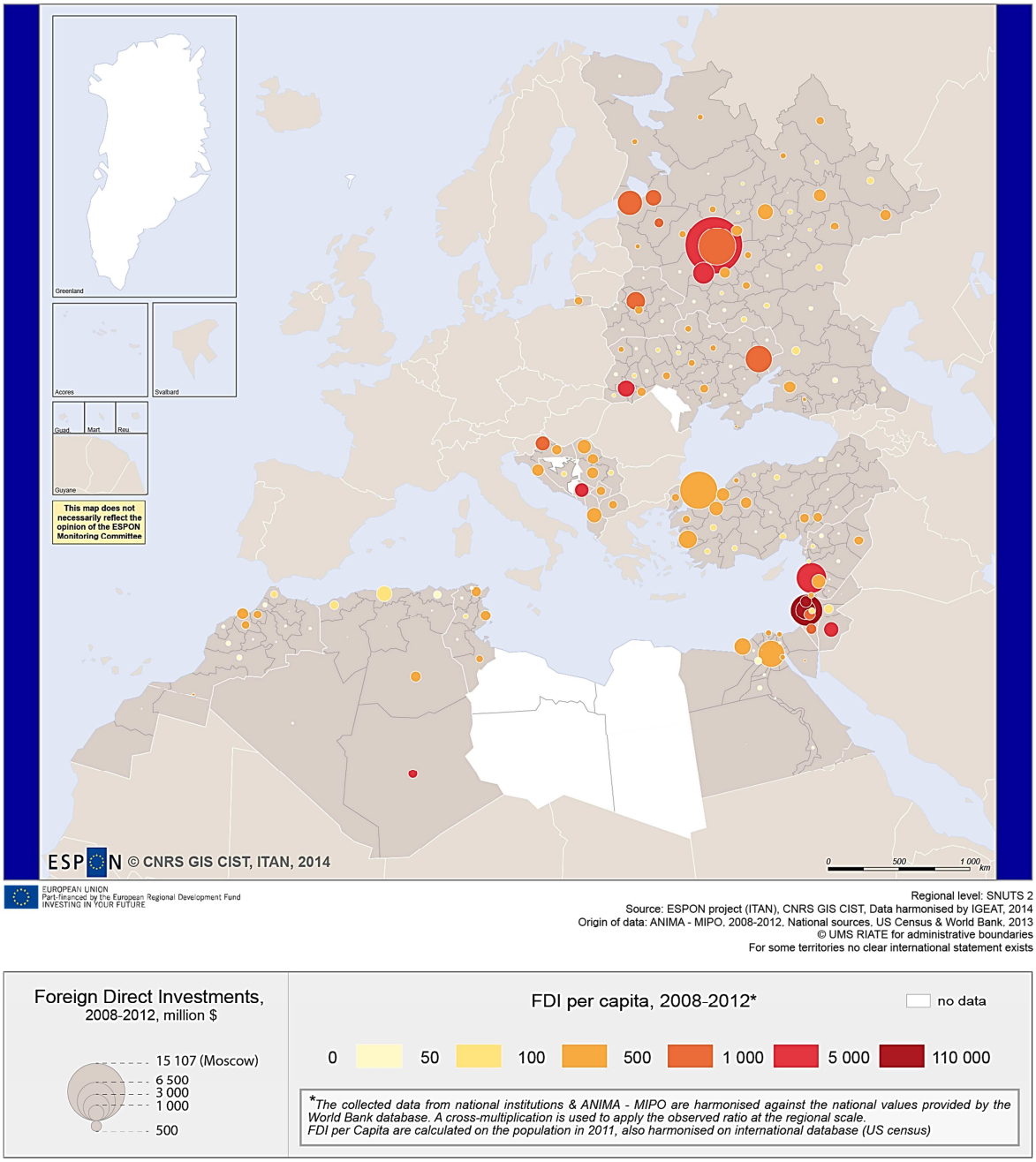
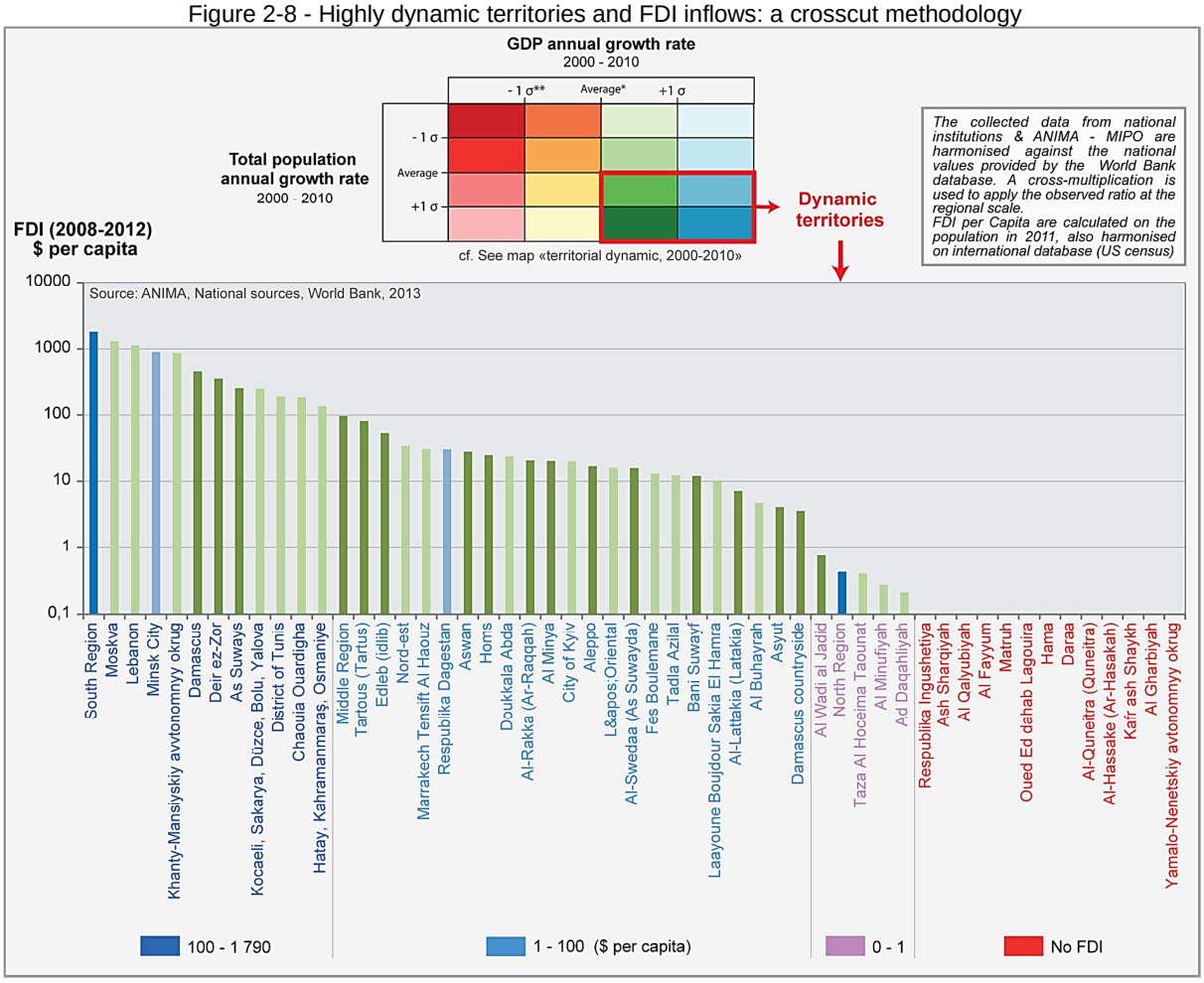


Figure 2-8 gives an idea of the usefulness of the indicators developed by ITAN: it crosses FDI inflows at SNUTS 2/3 scale, with the local index of territorial dynamics based on local GDP and population growth. That kind of method is relevant to check if all the dynamic territories of the Neighbourhoods are regarded as such by international investors. Minsk or Kiev, quite dynamic territories of the Eastern Neighbourhood, attract FDI; similarly for numerous territories of the Mediterranean Neighbourhood including Syrian (Damascus, Der ez-Zor, Tartous, Homs, Lattakia, Aleppo… data are an average of the 2008-2012 period, things have deeply changed since then). But many local territories, mostly of the Mediterranean Neighbourhood and namely in Egypt, show dynamic which means need for further equipment and services with – at least potentially – rising purchasing power, but show little or not at all attractive for FDI.

The chapter 6 will give another example of what can be derived from the ITAN indicators: in the case of the Mediterranean Neighbourhood, we show that the FDI, contrarily to what is often said, are quite territorially inclusive because they are not limited to the capital cities on these countries.

Figure 2-8 - Highly dynamic territories and FDI inflows: a crosscut methodology



3°) Natural resources: the examples of Northern and Eastern Neighbourhoods

Not only the Mediterranean (hydrocarbons) but also the Eastern and Northern Neighbourhoods have extensive mineral resources. Natural resources in the Eastern Neighbourhood have been exploited more extensively in the process of industrialisation compared to the Northern Neighbourhood due to easier access. Belarus has large deposits of potassium salt (in Soligorsk, operated by a Belarus-Russia consortium), non-ore materials and peat (occupies more than 10% of the country's territory). Donets basin in Ukraine is an important coal mining area. The country is also rich in uranium, iron ore and nickel (Map 2-43). The reserves of sulphur in Ukraine are considered to be the largest in the

world. Russia ranks first in the production of natural gas (30% of world production). Along with northern Russia, North Caucasus and the Caspian Sea area are rich in natural gas. The Republic of Tatarstan in the North-East of the European Russia is among the most economically-developed regions in the whole country due to large oil reserves. Kursk area and southern Karelia have large ore deposits. Moreover, Russian regions possess rich reserves of timber (especially Karelia and Archangelsk oblast) and various minerals.

Vast areas in the Northern Neighbourhood remain undeveloped, mainly because of their remote location, lack of transportation facilities and harsh climate, which results in high costs of developments. This Neighbourhood hosts large deposits of oil and gas, but also rare materials and timber. Particularly large oil and gas reserves can be found in the Barents Sea shelf. Stockman gas field in the north-western part of the South Barents Basin is one of the world's largest natural gas fields. In the south-eastern part of the Barents Sea lies an oil field, the Timan-Pechora Basin. Pechora Basin has also large coal deposits. The Kola Peninsula is rich in ore deposits, phosphorus, titanium, apatite, nickel, nepheline and other rare metals. Greenland has large reserves of rare materials, such as zinc, gold, diamonds, platinum, but also coal and iron ore (Map 2-44). As discussed in the next chapter dedicated to the Northern Neighbourhood, the possibilities of increased transport with the opening of the North-West passage and the North-East passage will facilitate greater exploitation of these resources.

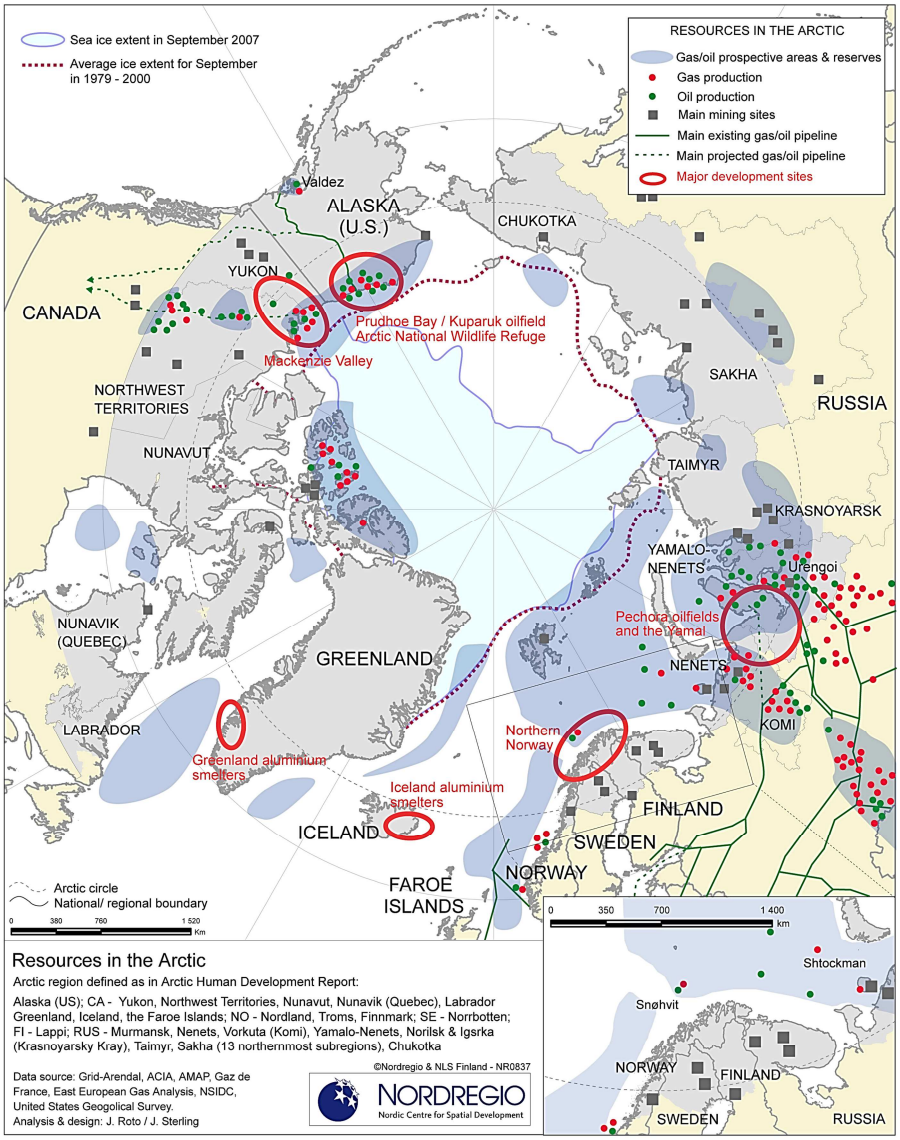
Map 2-43 - Natural resources in Ukraine and Belarus

Sources: INCOTEC. *Oil, gas and product pipelines of Russia and nearby states* and *Atlas. Fuel-energy complex of Russia XXI*. Moscow 2006; Lecarpentier A. *Underground gas storage in the world*, CEDIGAZ, 2006; Belarus State University. *Atlas of Belarus Geography*. Minsk 2005; State Committee for Land Resources, Geodesy and Cartography. *National Atlas of Belarus*. Minsk 2002; Botnaru V. and O. Kazantseva. *Republic of Moldova. Atlas*. Chisinau 2005; State Committee for Natural Resources. *Integrated Atlas of Ukraine*. Kyiv 2005. ENVSEC consultations 2006-7.

THE MAP DOES NOT IMPLY THE EXPRESSION OF ANY OPINION ON THE PART OF ENVSEC PARTNER ORGANISATIONS CONCERNING THE LEGAL STATUS OF ANY COUNTRY, TERRITORY, CITY OR AREA OF ITS AUTHORITY, OR DELINEATION OF ITS FRONTIERS AND BOUNDARIES.

Source: ENVSEC maps (2011) http://envsec.grid.unep.ch/easteur/index.php

Map 2-44 - Main sites and areas for gas & oil production including infrastructure, main mining sites and sea ice extent in the Arctic



2.2.2. Energy: threat or opportunity?

1°) The wider European region: strategic complementarities

EU's energy dependency will reach 65% by 2025; for gas it will reach 80%. Unlike the ESPON countries (EU27, Iceland, Liechtenstein, Norway, Switzerland) the ENCs possess a large amount of the world's resources: (i) notwithstanding the Arctic potential resources, the East possesses an impressive part of the world's energy; the sole Russia holds 32% of world proven natural gas reserves, 12% of the proven oil reserves and 10% of the explored coal reserves. It procures a third of the hydrocarbons imported by Europe and a quarter of its coal imports. Other countries of the area such as Azerbaijan and Turkmenistan also hold some hydrocarbons reserves. (ii) Mediterranean Neighbours possess 5% of the world's oil resources and 3% of its gas; they supply a third of the gas and a quarter of the oil consumed in Europe, as well as transit (Turkey, from both Russian and Gulf production). Production and transit countries are similarly dependent on European consumer markets: 70% of North Africa's oil exports and 90% of its gas exports are sent to Europe, despite the aforementioned rising part of the US in Algerian sales. The potential for energy collaboration in the

Mediterranean is therefore strategic. It could be the basis of an ambitious social (employment), industrial, technological and environmental partnership.

2°) How the European Union tries to reduce its dependence upon Russia and how it hardly manages

Here we focus on the gas issue, for two reasons. One is the rising share of gas in the energy mix of Europe and its Neighbours today and in the coming decade (lower greenhouse gas emission than oil). Two is the strong geographical dimension of gas delivery (see above section 2.1.2), since oil is mostly delivered on the spot market (by boat) whereas gas is mostly delivered by pipes which can hardly be longer than 3 to 4 000 km because of cost and safety reasons.

The security of energy supplies is a particular concern in the EU since most of the EU member states rely on energy imports from Russia. Moreover, Russian interests rise in European gas distribution and production. For instance Russian firms own one third of Estonia's and Latvia's and 37% of Lithuania's energy firms. The high dependency on Russian procurement sometimes crosses the line for autonomy, like in the Baltic States where 100% of natural gas and almost of oil imports come from Russia [Lithuanian Tribune 2012].

The EU has been seeking to limit Russia's influence on the European energy market, especially in connection with the gas supply disruptions of 2006 and 2009 by the Russian export monopoly Gazprom. Although the situation has now quite stabilized, the uneasy relations of the transit countries, Ukraine and Belarus, with Russia are a serious factor of instability of energy supply in the region. In the light of these events, Russia is developing new pipelines bypassing Ukraine and Belarus, which would secure stability of energy exports to the EU and avoid dependency from transit countries.

A new energy strategy for Europe 2011-2020 contributes to limiting EU dependence upon Russian energy sources. The strategy seeks to promote a more widespread use of renewable energy and reduce oil and natural gas consumption in the long run. Secondly, the EU energy strategy seeks to diversify the EU's energy imports in order to avoid dependency on a single supplier. For this reason the EU has supported several projects bypassing Russian territory, such as Baku-Tbilisi-Ceyhan oil pipeline and the planned Nabucco gas pipeline – but the latter has low chance of success [Zimin 2013].

The Nabucco Gas Pipeline project initially intended to secure gas from Iraq and Iran, but given the current political and economic instabilities in the two countries it has readjusted, with main potential suppliers being Azerbaijan and Turkmenistan, and maybe Romania since the discovery in 2012 of a large gas field in the Black Sea. The Nabucco project was originally backed by several European Union member states and by the United States, and was seen as a rival to the Russian South Stream pipeline project (Russian pipe under the Black Sea to south-eastern Europe, construction started in December 2012 with first commercial deliveries in late 2015). Since then, the Azerbaijan has stated that the gas will be transported only through those routes which would be commercially most attractive, which means not necessarily by Nabucco; also the opening of the Central Asia-China gas pipeline and the agreements to build the South Stream pipeline have been seen as the end of Nabucco project.

There is a large gas infrastructure project connecting the EU countries of the Baltic Sea Region and Russia. Nord Stream pipeline transports gas from Russia through the Baltic Sea directly to Germany, bypassing the Baltic States. The pipeline runs through the waters of five countries in the Baltic Sea region: Finland, Sweden, Denmark, Germany and Russia. Nord Stream started operations in November 2011 after a fierce criticism from Estonia for environmental and safety reasons, claiming that hosting a strategic Russian asset could create a security threat for the Baltic countries [EWR 2012].

Some analysts argue that with new pipelines and seaports projects, Russia is attempting to re-establish its geopolitical influence in the former Soviet countries and in Europe at large. Others argue that the Atlanticist powers (mainly US and UK) are seeking to promote Russo-phobia in Europe in order to "*prevent the rise of the European Union as a powerful competitor, partly with the strategic aim of preventing the integration of a Great Eurasian space extending from Vladivostok to Lisbon"*

[Eskelinen et al. 2013 p.119]. According to this interpretation, the new pipelines are seen as means to unite Europe. Active lobbying of the US against the new pipelines and backing the development of other projects (i.e. Nabucco), as well as American support for the 'colour revolutions' in Ukraine and Georgia are among the arguments supporting this theory [Zimin 2013]. There is also a third opinion, according to which Russia is more likely to be driven by solely economic interests of the involved companies.

3°) The two drivers of a common energy policy between Europe and the ENCs

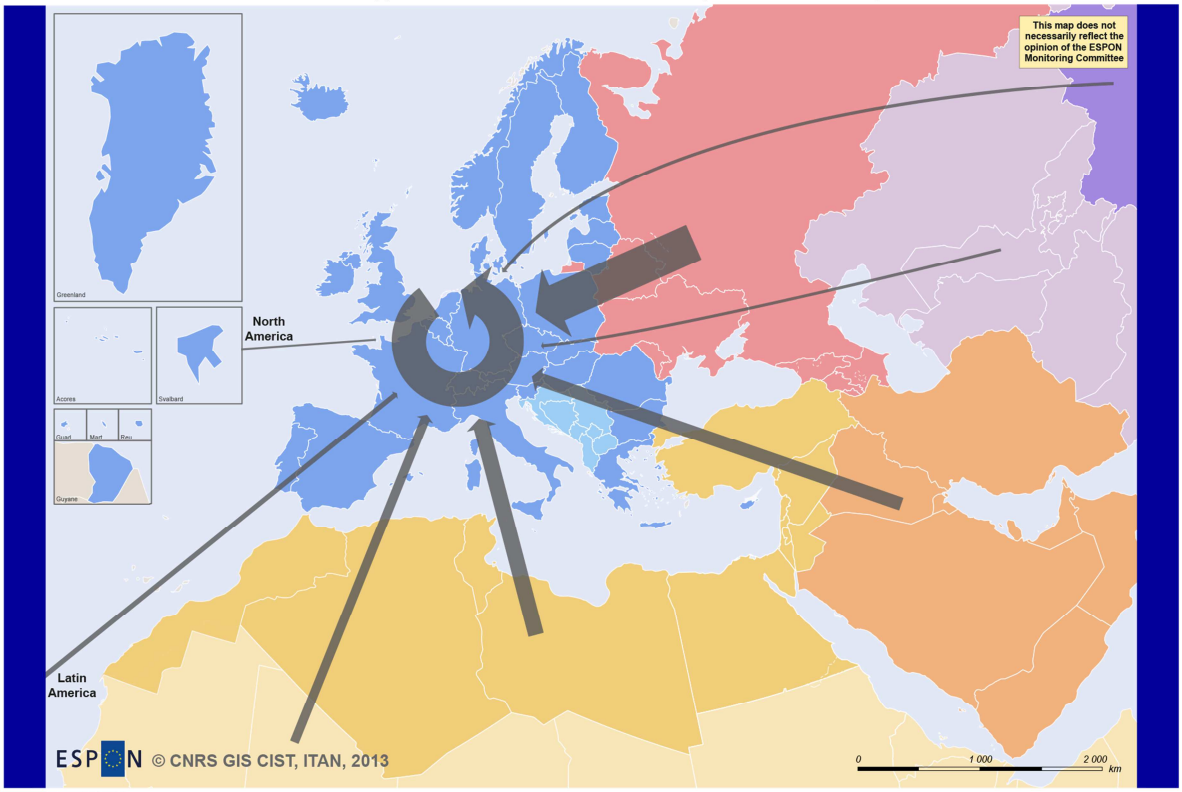
The maps below synthesise the main energy issue in the wider European region. Map 2-45 shows the importance of the Eastern Neighbourhood – read Russia – in the primary energy consumed in Europe. Russia is the main provider of crude oil and natural gas with more than a third of the EU27 imports. Europe itself stands second (Norway provide 14% of the crude oil and 28% of the natural gas imported by the EU) but as has been said, this ratio decreases rapidly. The Mediterranean Neighbourhood stands in the third place (Libya with 10% of the crude oil imports and Algeria with 14% of the natural gas) but is largely surpassed. However the oil and gas fields in northern Africa have not yet been fully developed, and in the near future they might become the first source of oil and gas for Europe; Algeria might also become a transit country for the gas coming from Nigeria if the Trans-Saharan pipeline were built.

Map 2-46 demonstrates the complementarities between Europe and its neighbours: trade deficits (except Norway) in Europe, trade surpluses in most in the Neighbourhoods – even though some Neighbours are confronted to deficits: Western Balkans, Morocco, Tunisia, Near-East except Syria, Moldova and Ukraine.

Map 2-47 displays the huge rise of the energy demand in the southern neighbourhoods. This means in the same time, (i) huge potential markets for European energy enterprises which could find opportunities in these booming countries, and (ii) a threat if this boom is managed with low energy efficiency and high greenhouse gas emissions. Map 2-48 speaks about the threat: these booming southern neighbours depend very much on hydrocarbons. As it is the case also in the Eastern Neighbourhood, the map displays a striking contrast between the ESPON space (EU27, Iceland, Liechtenstein, Norway, and Switzerland) were the energy transition has really begun, and the ENCs. The consequence is given in Map 2-49: the greenhouse gas emissions have been booming in the booming southern neighbours. Indeed they started with a low level of emission (see map 65 on per capita emissions), but they are clearly catching up.

The conclusion is clear. An in-depth cooperation with the ENCs in the field of energy would provide Europe with two key advantages: one is the security of procurements; two is a common policy in favour of the energy transition and fight against the greenhouse gas. The following section adjusts the scope in the case of the Mediterranean Neighbourhood.

Map 2-45 - Energy consumed in Europe: the key role of the Neighbourhoods



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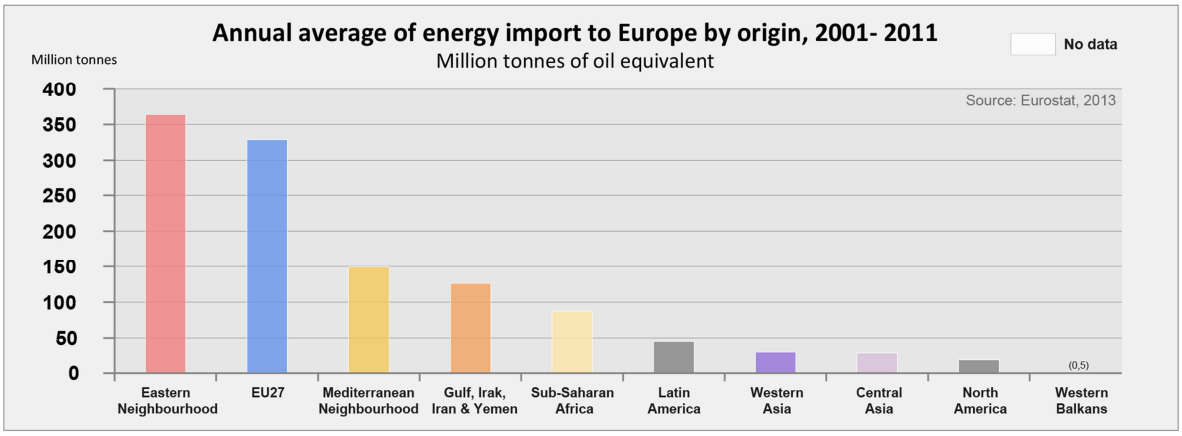
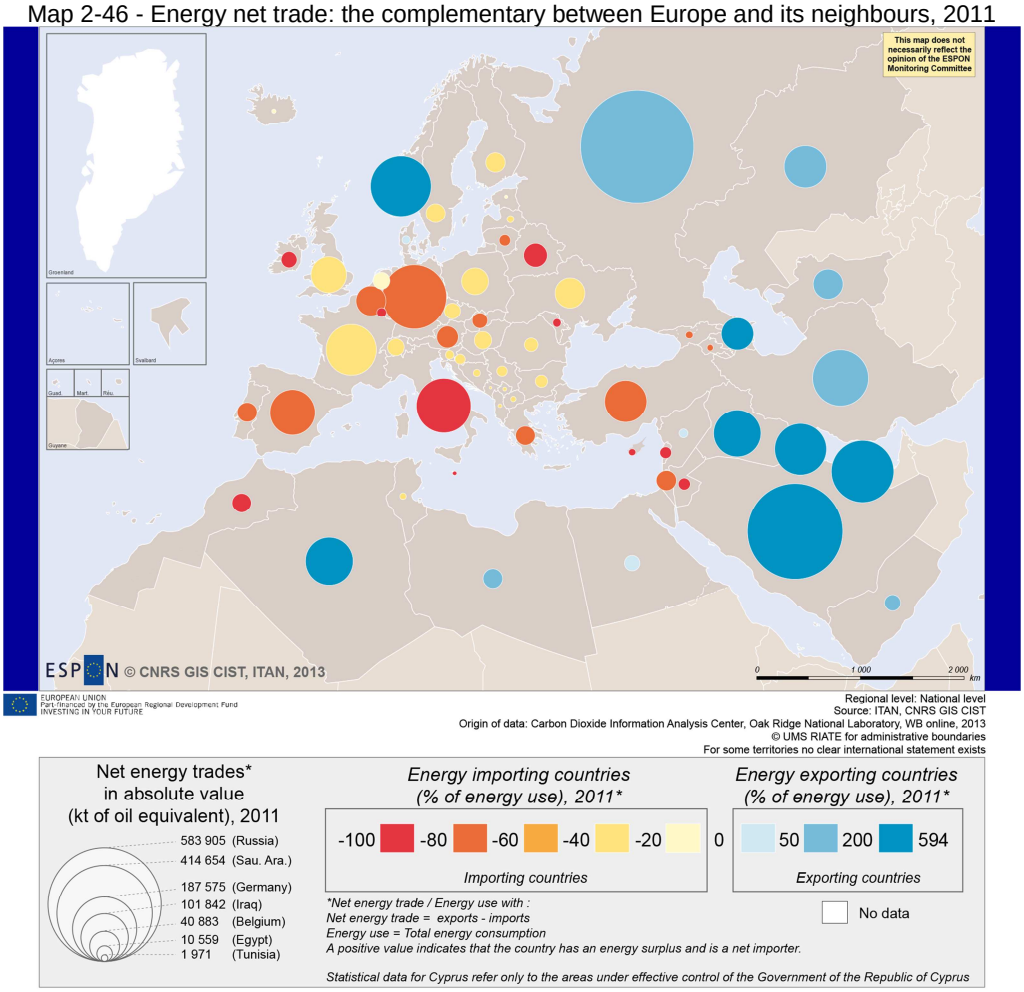
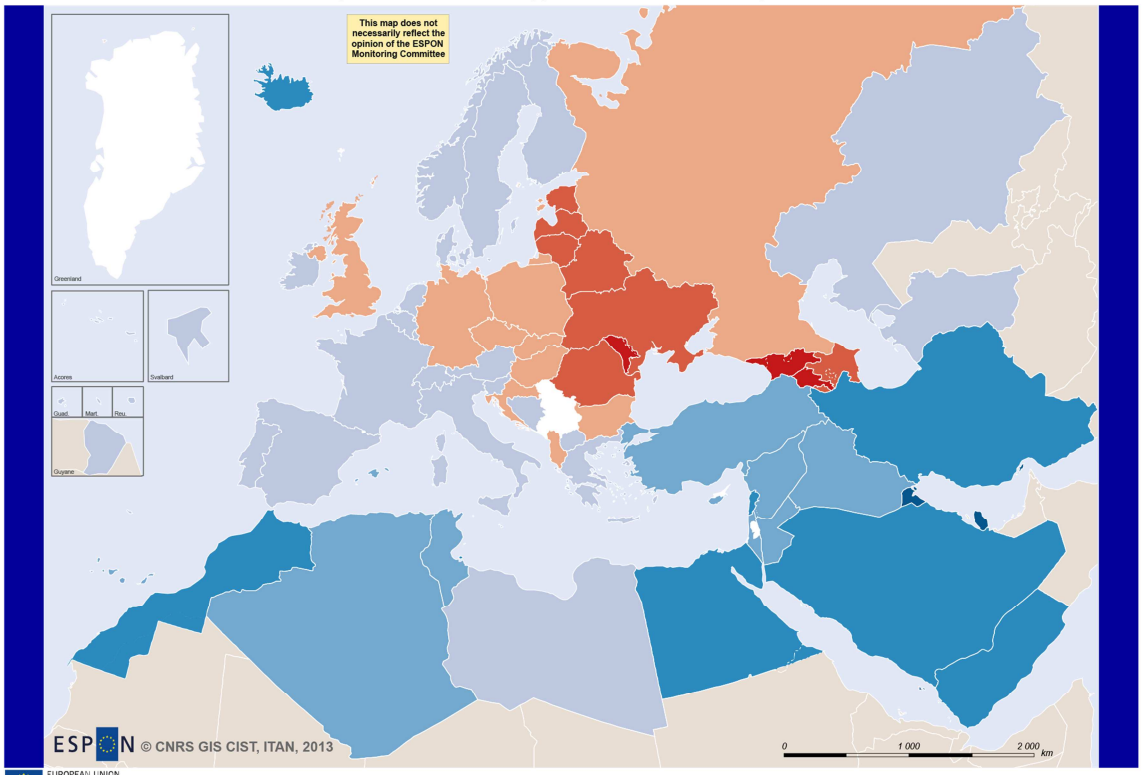


Map 2-46 - Energy net trade: the complementary between Europe and its neighbours, 2011



Map 2-47 - The huge rise of the energy demand in the Neighbourhoods, 1990-2011



Regional level: National level
Source: ITAN, CNRS GIS CIST.
Origin of data: international Energy Agency, WB online, 2013
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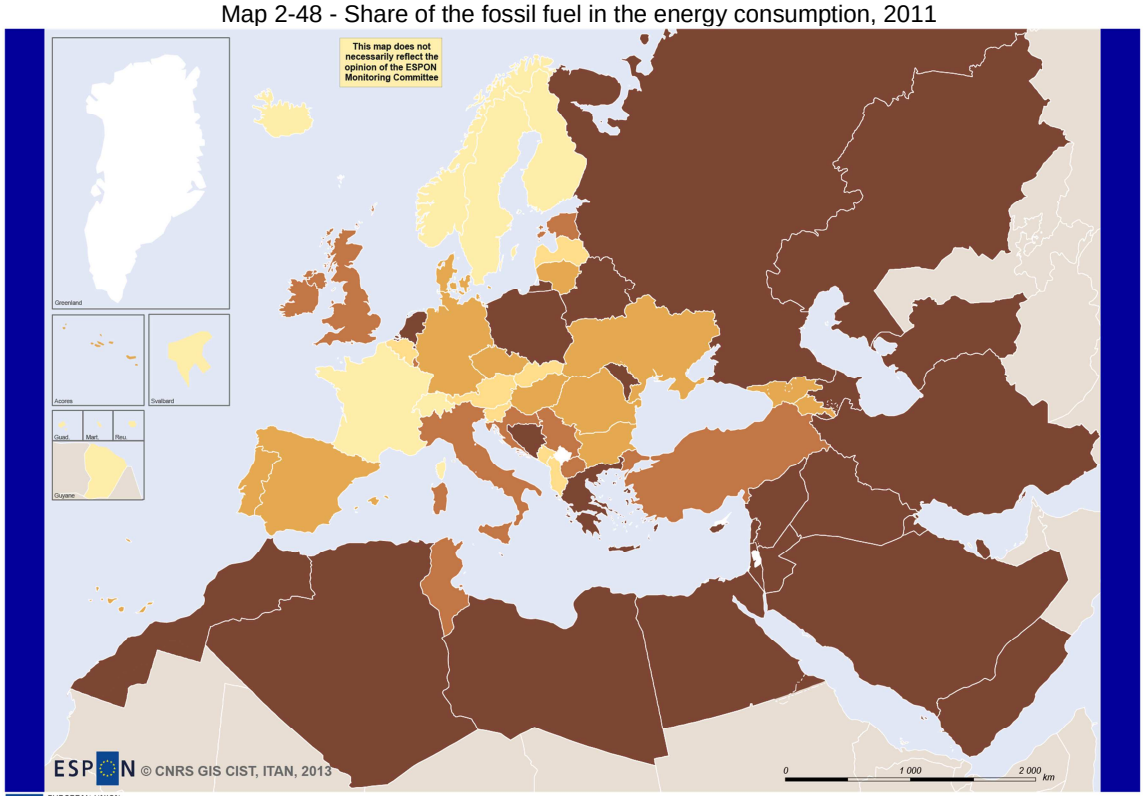
Average annual growth rate (%) of energy demand, 1990-2011

-5,8 | -4 | -2 | 0 | 2 | 4 | 6 | 8,1 | No data

Map 2-48 - Share of the fossil fuel in the energy consumption, 2011



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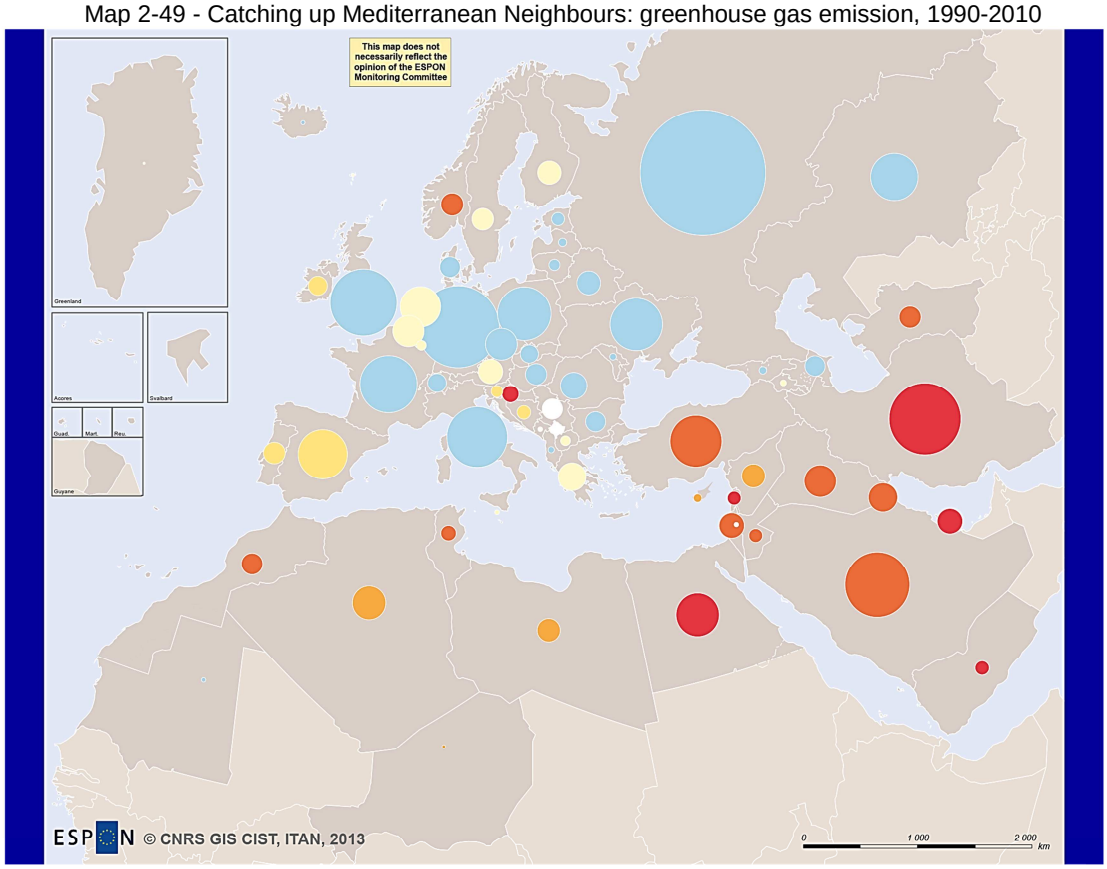
Fossil fuel* energy consumption (% of total) in 2011

16 60 70 80 90 100

*Fossil fuel comprises: coal, oil, petroleum, and natural gas products.

No data

Map 2-49 - Catching up Mediterranean Neighbours: greenhouse gas emission, 1990-2010



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Regional level: National level
Source: ITAN, CNRS GIS CIST.
Origin of data: Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory / WB online, 2013
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CO2 emissions (kt), 2010

1 741 000 (Russia)
493 500 (United Kingdom)
298 000 (Turkey)
123 500 (Algeria)
40 000 (Ireland)
6 240 (Georgia)

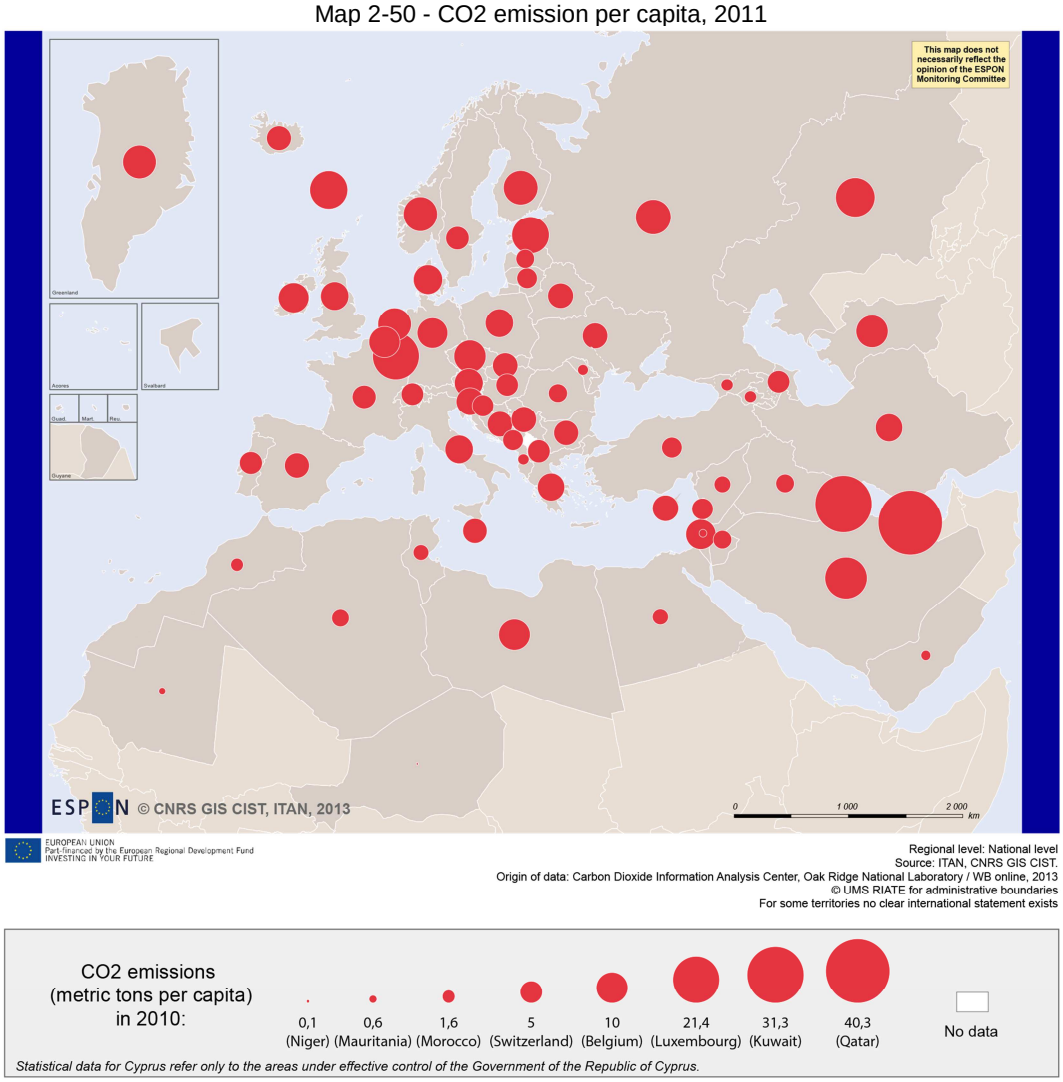
Average annual growth rate (%) of CO2 emissions (kt), 1990-2010

-7,8 | 0 | 1 | 2 | 3 | 4 | 11,9

No data

Statistical data for Cyprus refer only to the areas under effective control of the Government of the Republic of Cyprus.

Map 2-50 - CO2 emission per capita, 2011



4°) A prospective to 2030: the case of the Mediterranean

The OME's[29] "Mediterranean Energy Perspectives", published every three years, is an authoritative publication. It covers twenty-four counties of the Mediterranean rim, including the European Mediterranean countries, the Western Balkans' ones, Turkey and the countries of the Mediterranean Neighbourhood. A most interesting aspect is that it provides prospective scenarios to 2030.

The shortcoming of this publication is that is does not give figures for the whole European countries. Nevertheless, it provides a useful prospect of the European stakes throughout its Mediterranean countries (Portugal, Spain, France, Italy, Malta, Greece, and Cyprus). The same for Western Balkans, of which the MEP does not give the profile of this whole Neighbourhood; but it gives those of Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia and Serbia. The MEP's supply/demand outlook by sector and fuel to 2030 is based on a modelisation separately processed for 19 out of these 24 countries. The 2030 perspectives are analysed throughout two demand scenarios: the "Conservative scenario" (cs) pursues the actual trends, whereas the "Proactive scenario" (ps) is based on a slowdown of the rising energy demand, better energy efficiency and larger

[29] The *Observatoire méditerranéen de l'énergie* (http://www.ome.org/fr) is the reference Euro-Mediterranean body dedicated to the energy issue: general analysis, specific studies on each of the energy fuels, country profiles and perspectives.

use of renewable energy (RE). Here are the main lessons learnt from the last publication of this MEP [OME 2011].

No area in the world will experience a more rapid electricity demand growth than the South Mediterranean

The major information about the region's energy demand (once again here the "region" means the twenty-four countries of the Mediterranean rim) is its impressive rise: +40% between 2010 and 2030 (Conservative scenario), +20% if robust energy savings policies are put in place. The major fact is that, anyhow, 75% of the increase will come from the South.

Figure 2-9 shows the impressive growth of energy use[30] in the South Mediterranean countries. Indeed the proactive scenario would diminish this rise but not that much. In 2030, in any of the two considered scenarios, the energy use would be almost as high in the Southern Mediterranean countries than in the EU's Mediterranean countries, whereas the West Balkan would experience a stagnating energy use. Such an evolution should not be astonishing: the energy use rise goes along with the development process, hereafter indicated with the DGP growth – as we already said this economic growth will be much bigger in the southern side than on the northern in the coming decades.

This is bad news when it comes to environment. The regional CO_2 emissions would increase by +9% in the Proactive scenario, still more in the Conservative scenario: +40%. We saw that the CO_2 emissions where much lower in the Southern Neighbourhood than in Europe; sadly, the southern emissions will particularly increase.

But this is good news when it comes to potential markets for European enterprises. It has to be highlighted that the Mediterranean electricity demand and supply will be particularly booming. Up to 2030, no area in the world will experience a more rapid electricity demand growth than the southern Mediterranean countries, at an average rate of 5% per year. This trend has a major territorial side: the electricity grids are to be major infrastructures for the coming years, which represents in the same times huge investments (including for European investors) and main territorial challenge; in particular, the rural development will not be possible if these territories are not provided with electricity supply.

Between 2010 and 2030, the electricity production will be multiplied by 1,4 in the EU's Mediterranean countries (by 1,3 if they choose the Proactive scenario); it will be multiplied by 2,6 in the South Mediterranean (by 2,1 in the Proactive scenario) – in other words, up to 2030, the electricity capacity to develop in the southern rim, including Turkey and Israel could be almost as important as the actual capacity in the EU's Mediterranean countries.

The second lesson of OME's MEP-2011 is that the general figures show a diminishing gap between the North and the South of the Mediterranean. The energy demand per capita gap will decrease somewhat by 2030. In 2010-2013 the figures are almost stagnating for the EU's Mediterranean countries, whereas they are booming in the southern (Figure 2-10). This is particularly so for Israel (whose level of energy per capita should exceed that of the EU's considered countries by 2030) and Turkey; but even without these two countries, the Arab South Mediterranean countries with partly bridge the gap vis-à-vis the northern side. In 1990, the Arab Mediterranean ENCs' ratio of energy use per capita (without Turkey and Israel) was a quarter of the EU's Mediterranean countries'; in 2030 it will be the half. The figures for the Western Balkans will also experience a rapid growth.

Energy transition in the Mediterranean ENCs: a remote perspective

The third major lesson is that the energy transition will not be an easy thing in the Mediterranean area. Yet, the difference between the Conservative and the Proactive scenarios is much bigger in the South than in the EU: in the South the energy use would be of 18% smaller if the Proactive scenario was implemented; in the Western Balkans the decrease would be -13%; in the EU's Mediterranean

[30] That is, the total energy use, whereas the "energy final consumption" would not take into account the energy used to generate energy fuel available for households and entreprises.

countries the decrease would only be -6%. Nevertheless, the South's transition to better energy efficiency and to renewable fuels will require high commitments.

The solar electricity production will develop on both sides of the Mediterranean. Today, it really exists on the northern side only; in 2010 the solar production in the South was 1% of the EU's Mediterranean production; in 2030 it could be 18% (cs) or 38% (ps). But even in this Proactive scenario, the southern production will stay far behind. The reasons are (i) the low capacity of these countries to subsidise their solar industry (this capacity has severely diminished in Europe since the financial crisis but remains much higher than in the South); (ii) the lack of technology and industrial know how; (iii) a lower sensitivity to this issue than in Europe. This is ironic since the solar potential is indeed much higher in the South than in the North.

The European plan on climate change paved the way to a possible cooperation in the Mediterranean

According to the European plan on climate change adopted by the European Parliament on December 2008 ("20-20-20 targets"), EU member states will have the possibility to include imported renewable energy among their 20% RE of their policy mix – namely imported from the Saharan solar plants. Still, and despite the huge Desertec initiative launched by the German enterprises in the framework of the Mediterranean Solar Plan promoted by the Union for the Mediterranean, and despite the enlargement of the trans-Mediterranean electricity grid to boost the electricity import-export in the Mediterranean, such plans will have to be accompanied by strong commitments – in both North and South side – to come into force. In 2030 OME's MEP says in its Proactive scenario, the two major solar player in this Mediterranean region will be Spain and Italy (46 TWh); far after could come Turkey (18), then France and Algeria (13) if this country manage launching an industrial and technological initiative to become a lead country in the energy filed – but will it succeed without a strong trans-Mediterranean cooperation? Morocco (6 TWh) would come much behind, not to cite Jordan (2,3) nor Tunisia (0,6, Map 2-55).

As a matter of fact, the Mediterranean energy mix will remain largely dominated by hydrocarbons in 2030, whatever the scenario, and especially in the South. The

Figure **2-11** shows it clearly: hydrocarbons, in particular natural gas, will be very largely prominent in the South Mediterranean mix. One explanation is the hydrocarbons production there of course: three countries - Libya, Algeria, and Egypt – hold 94% of the Mediterranean's oil reserves. Libya will continue to increase levels of oil production to 2030; total oil production in the Mediterranean will remain above 6 mb/d in 2030.

Over the next two decades natural gas production is expected to double, especially in Algeria but also in eastern Mediterranean where important reserves have been recently discovered in the "Tamar" and "Leviathan" fields, close to Egypt, Gaza strip, Lebanon, Israel and Cyprus, these two latter countries being to become gas exporters in a decade [Karbuz 2012]. Gas will overtake oil as the dominant energy source over the outlook period, especially in the South Mediterranean due to strong demand coupled with attractive prices and easy availability.

In a word, heavy reliance on fossil fuel will endure in the South. In the Conservative scenario, the share of wind, solar and other renewable in the SEMCs (Israel and Turkey not included) will represent only 2,5% of the total energy use. As a whole, to 2030 the Mediterranean region will remain a net importer of oil and gas regardless of the scenario.

The
Figure **2-11** gives a synthesis of the Conservative scenario picture: the rising share of hydrocarbons in all the parts of the Mediterranean region but most particularly in the South; the rising role of gas – hence the importance of the gas pipes infrastructures and the long term contracts v. spot market issue in the gas sector; a tiny share of renewable.

Box 1 - Toward a common North-South Mediterranean scheme for energy transition?

The Mediterranean Solar Plan

According to the Trans-Mediterranean Renewable Energy Cooperation, 0,3% of the Saharan surface could provide all energy current and coming needs of Europe and its Mediterranean Neighbours. The issue is to make this potential both actual and fair between Europe and its Mediterranean partner countries. Launched in 2008 as an emblematic project of the Union for the Mediterranean, the Mediterranean Solar Plan has a main focus on solar but also addresses wind and, on the side-lines, biomass. The aim is (i) to increase the proportion of renewable in the southern countries' energy mix, and in Europe's especially (the 2008 climate-energy packet allows consideration to be taken of "green kilowatts" purchased from the southern Mediterranean countries), and (ii) to increase energy supply security in urban and rural areas in North and South alike.

The plan has two major themes. The first is the deployment in the Mediterranean ENCs of a large number of solar energy production sites (photovoltaic cell clusters and concentration solar energy), with wind and biomass sites as a complement. Output was planned to reach 20GW by 2020 for a total investment of €80 bn, an amount of money difficult to gather. The second is the manufacture in the ENCs of solar panels, solar radiation concentrators and related equipment in order to contribute to their productive modernisation and the rise of seawater desalination. In the longer term perspective, meeting the South-North electricity transport requirements stemming from the implementation of the Mediterranean Solar Plan will require the creation of around half a dozen new links (cost around €800 m per link).

Desertec

Desertec is a non-profit foundation funded in majority by German stakeholders. It aims to provide 15% of Europe's electricity by 2050 through a vast network of solar and wind farms stretching right across the Mediterranean ENCs and connecting to continental Europe via special high voltage, direct current transmission cables, which lose only around 3% of the electricity they carry per 1 000km. The tentative total cost of building the project has been estimated at €400bn.

Medring

The development of renewable energies in the southern neighbourhood will benefit from another project related to the electric grid. Presently the countries of northern Africa and the eastern Mediterranean have partially separated high voltage networks working with non-synchronous frequencies. Thus there is no transmission of electricity among countries at big scale. However, the European network of transmission system operators for electricity (ENTSO-E) is developing an ambitious plan to connect the different isolated networks, effectively creating a closed ring of electric networks around the Mediterranean, the so called Medring. This future network will merge the electric distribution systems of Europe and the Mediterranean Neighbourhood effectively helping to achieve some of the priorities of the EU Energy Policy: security, adequacy, market and sustainability. In particular the sustainability criteria can be fulfilled when coupling the Medring distribution network and the Desertec generation plants.

Avenues for cooperation with the ENCs: energy efficiency, renewable, key role of electricity grids

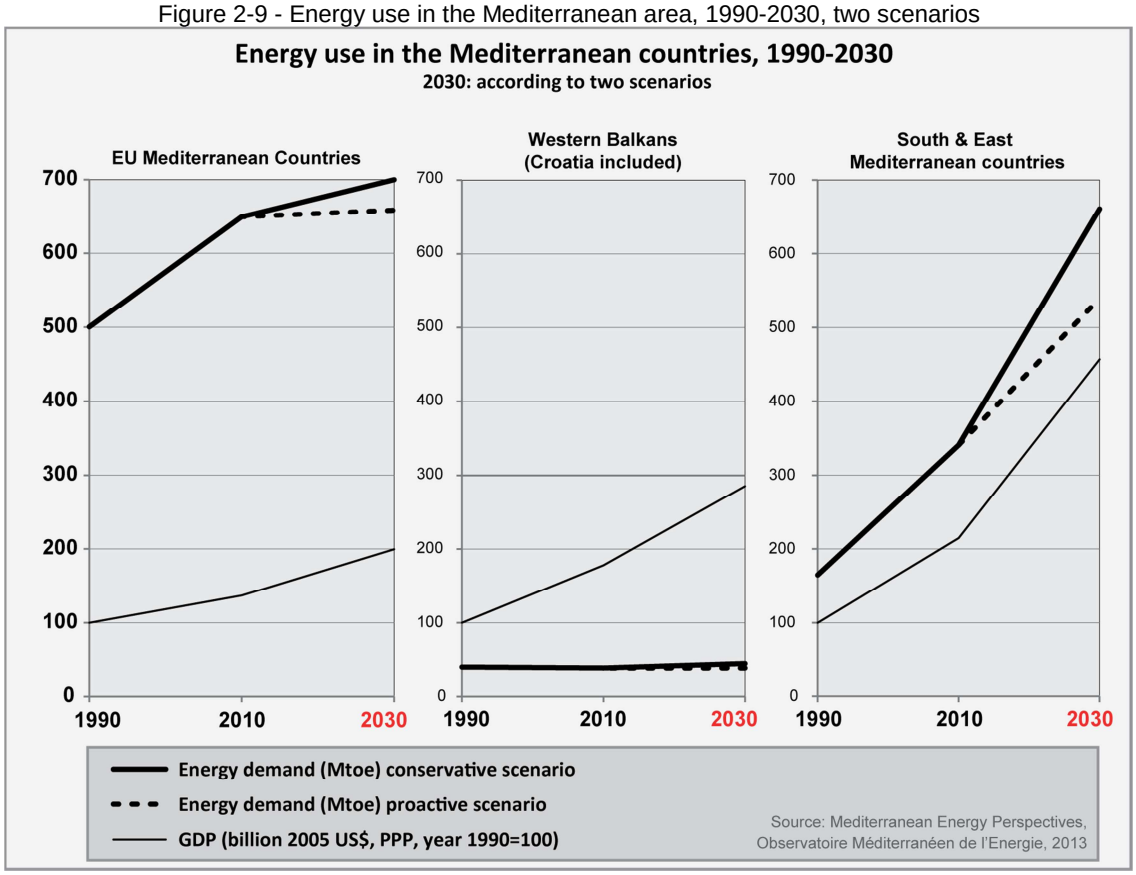
The fourth lesson is the importance of promoting the energy transition in the region, especially in the Mediterranean ENCs. Current energy trends are not sustainable and would jeopardise energy security. Besides, Figure 2-12 shows that in the Conservative scenario the energy intensity, that is, the energy use divided by the GDP, will hardly decrease in the Mediterranean Neighbourhood. The decrease will be impressive in the Western Balkans (by 1990 the energy intensity was extremely high), and it will significantly decrease in the EU's Mediterranean countries. According to this indicator, the gap is rather enlarging between the North and the South.

Even if the Mediterranean should dream of a very windy and shiny energy future, renewable could all the same supply 15% of primary energy demand by 2030 in the Proactive scenario. Solar photovoltaic would then grow at a rate of 15,5% p.a. in the Mediterranean region and 39% p.a. in the South.

Along with that, the potential for energy efficiency is very important (10% of the regional energy demand can be saved by 2030), namely in the South. This means that the Mediterranean ENCs could choose a lighter model of development for energy use – but in that case adapted institutional and legal frameworks are needed. The Plan Bleu[31] estimates that for the two coming decades, the further investment needed in the Mediterranean ENCs to build energy efficient buildings would be of €260bn. On the other hand it would create deux millions jobs up to 2030, including in the informal sector. At the Mediterranean regional scale, oil and natural gas net import requirement would be nearly halved by 2030 in the Proactive scenario compared to the Conservative scenario. In the Proactive scenario, the South would meet its electricity demand (less additional capacity needs, more renewable, more energy efficiency gains and substantial upgrade of networks).

The last lesson is the rising role of electricity grids in the territorial development and cooperation in the Mediterranean Neighbourhood. Here OME's statement is strategic: "*while oil and gas trade have brought about fruitful long term Mediterranean partnerships for decades, nowadays electricity (through renewable) emerges as another strong driver for reinforcing regional cooperation*". This matters very much, because it makes the electricity grids a major component of territorial development in the Mediterranean Neighbourhood, within this Neighbourhood and through the trans-Mediterranean connection.

Figure 2-9 - Energy use in the Mediterranean area, 1990-2030, two scenarios



Notes. EU Mediterranean countries: Portugal, Spain, France, Greece, Malta, Cyprus. SEMCs : including Turkey & Israel.
Source: Mediterranean Energy Perspectives, Observatoire Méditerranéen de l'Energie, 2011

[31] As an UNEP body, the Plan Bleu (http://planbleu.org/) is the reference institution dedicated to environmental matters in the Mediterranean.

Map 2-51 - Energy demand in the Mediterranean, 2010-2030

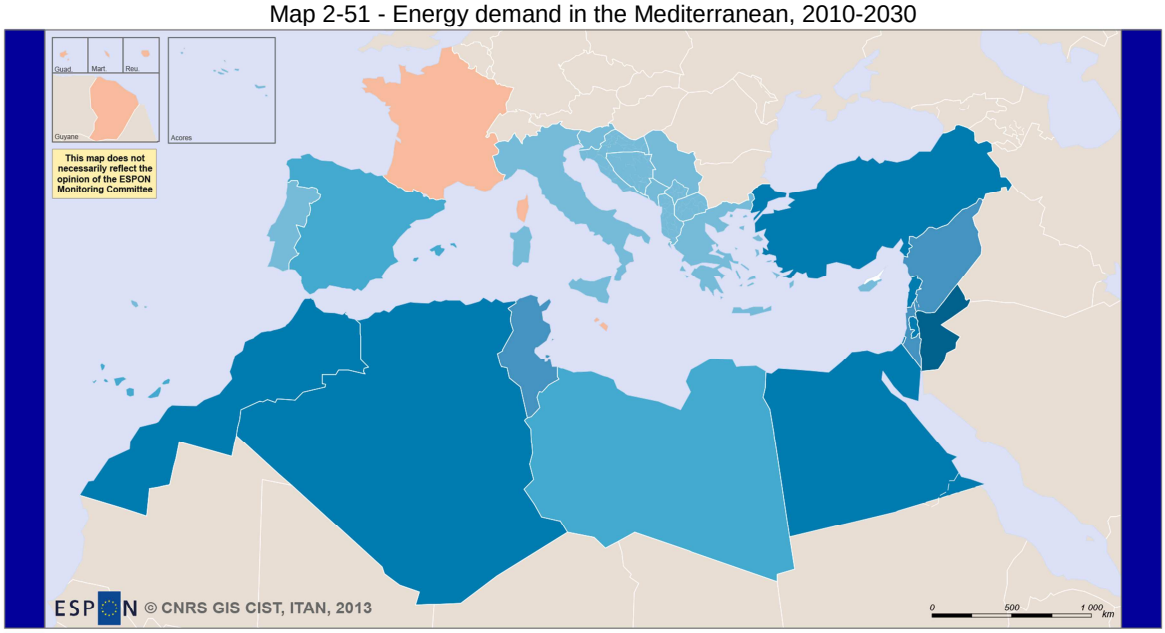
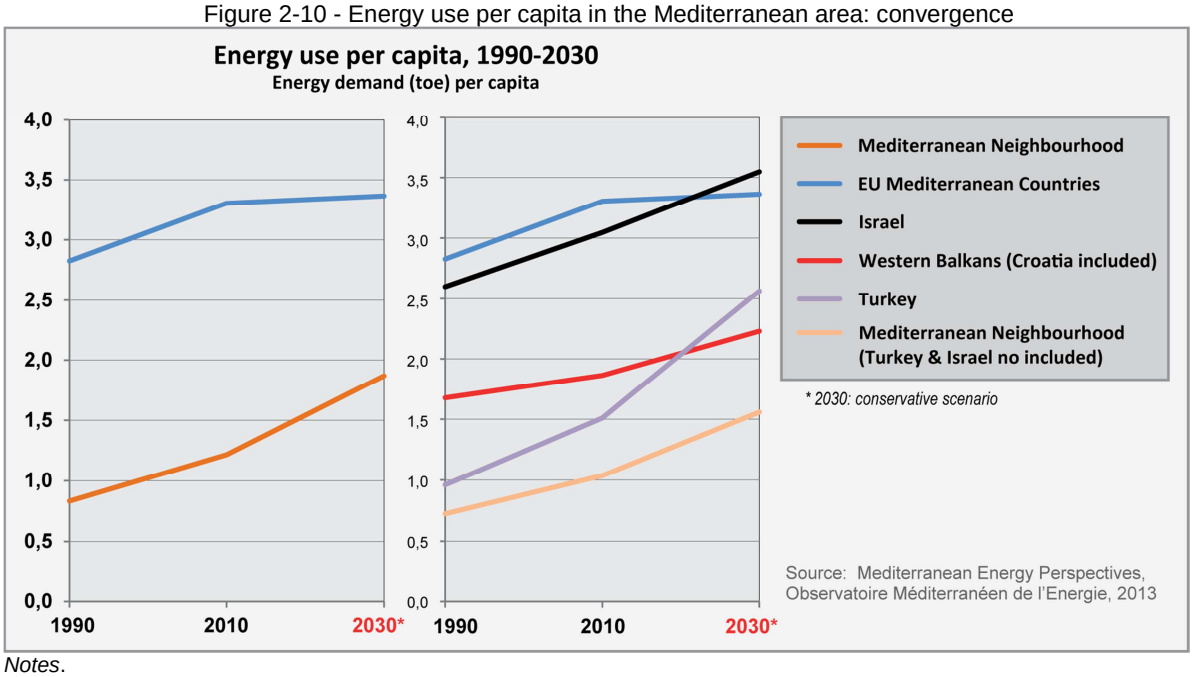


Figure 2-10 - Energy use per capita in the Mediterranean area: convergence



Notes.
EU Mediterranean countries: Portugal, Spain, France, Greece, Malta, Cyprus.

Figure 2-11 - Energy use by type of energy in the Mediterranean in 2030: two scenarios

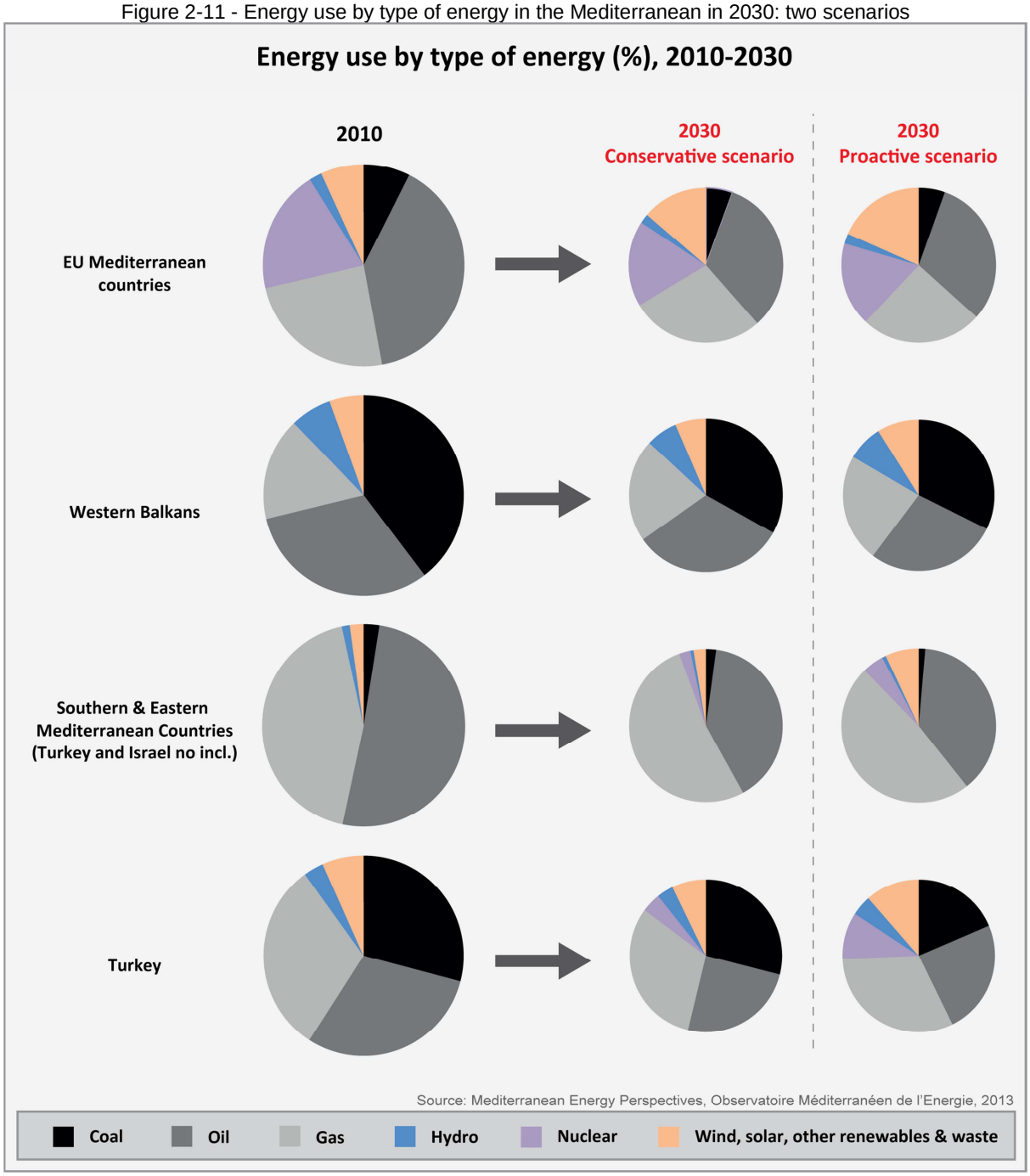
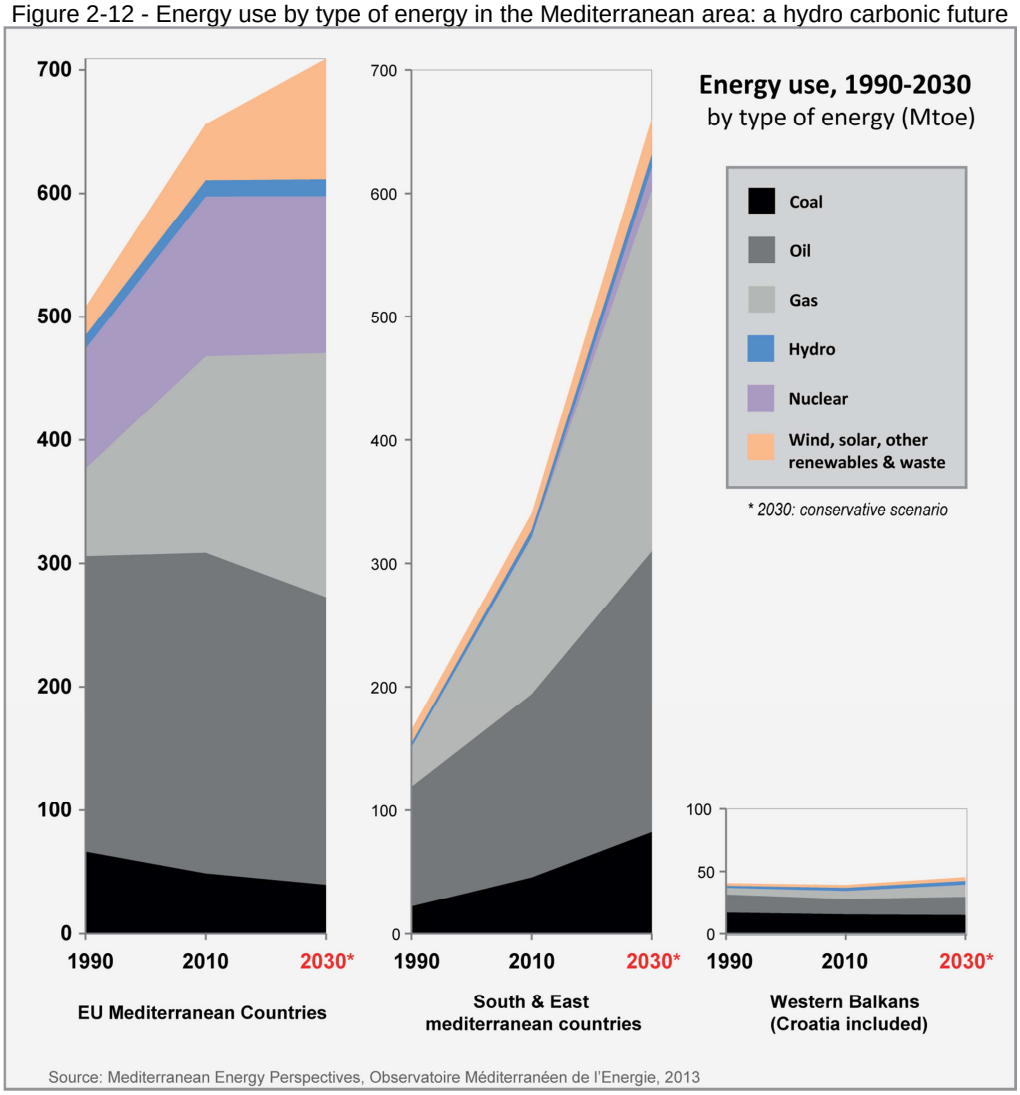


Figure 2-12 - Energy use by type of energy in the Mediterranean area: a hydro carbonic future



Map 2-52 - Energy intensity 1990-2030: a common challenge between Europe and its neighbours

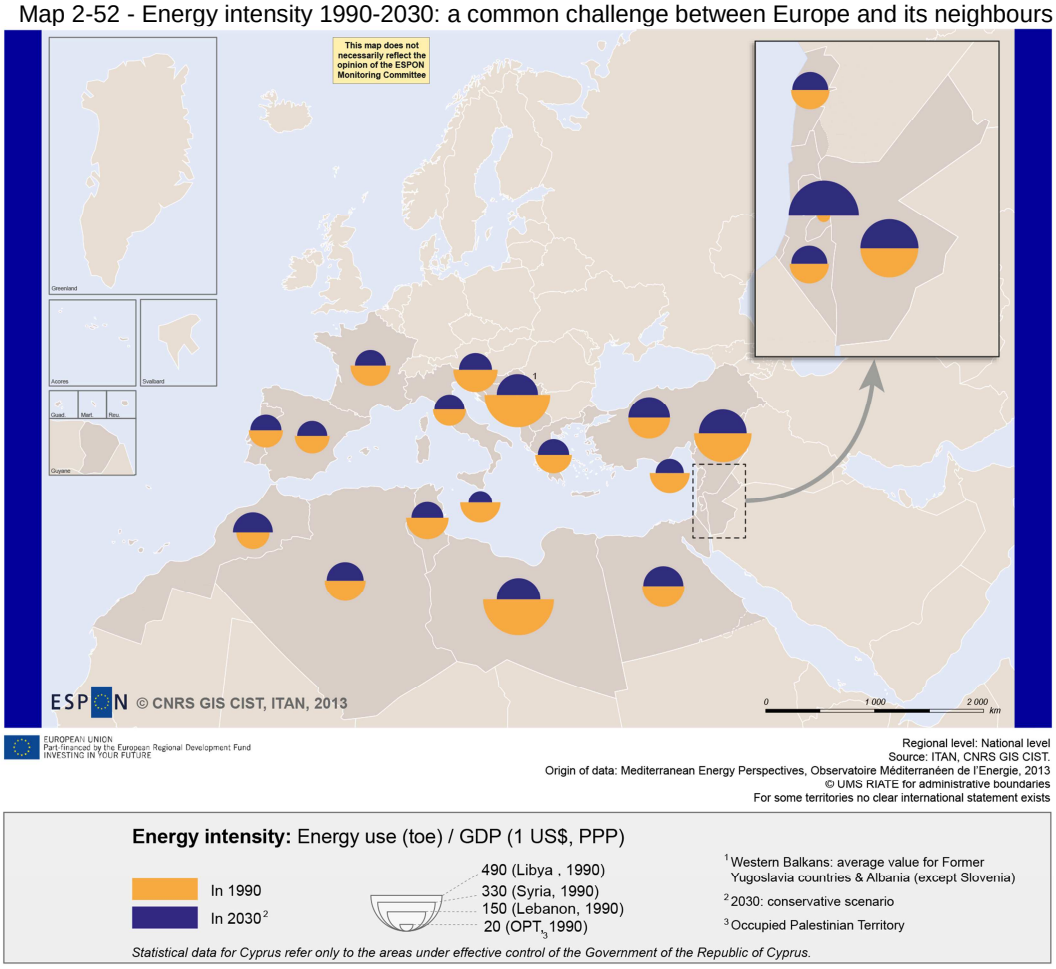
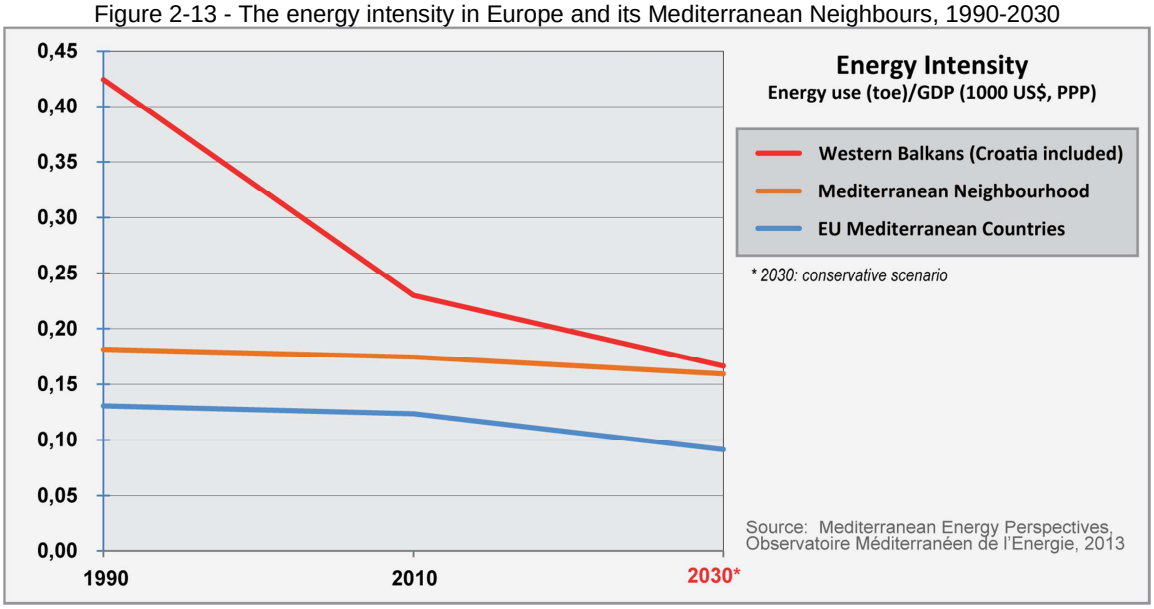
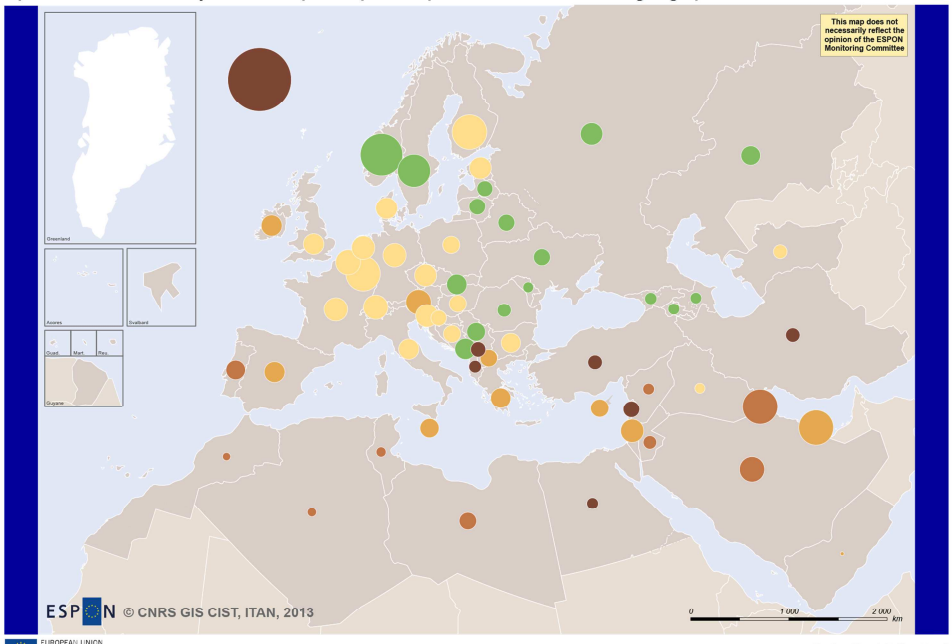


Figure 2-13 - The energy intensity in Europe and its Mediterranean Neighbours, 1990-2030



Map 2-53 - Electricity consumption per capita, 2011: still a large gap to fill in the Mediterranean



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Regional level: National level
Source: ITAN, CNRS GIS CIST.
Origin of data: Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory / WB online, 2013
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For some territories no clear international statement exists

Electric power consumption (kWh per capita), 2010

52 374 (Iceland)
23 174 (Norway)
14 030 (Sweden)
5 701 (Ireland)
3 189 (Bosnia and Herzegovina)
193 (Yemen)

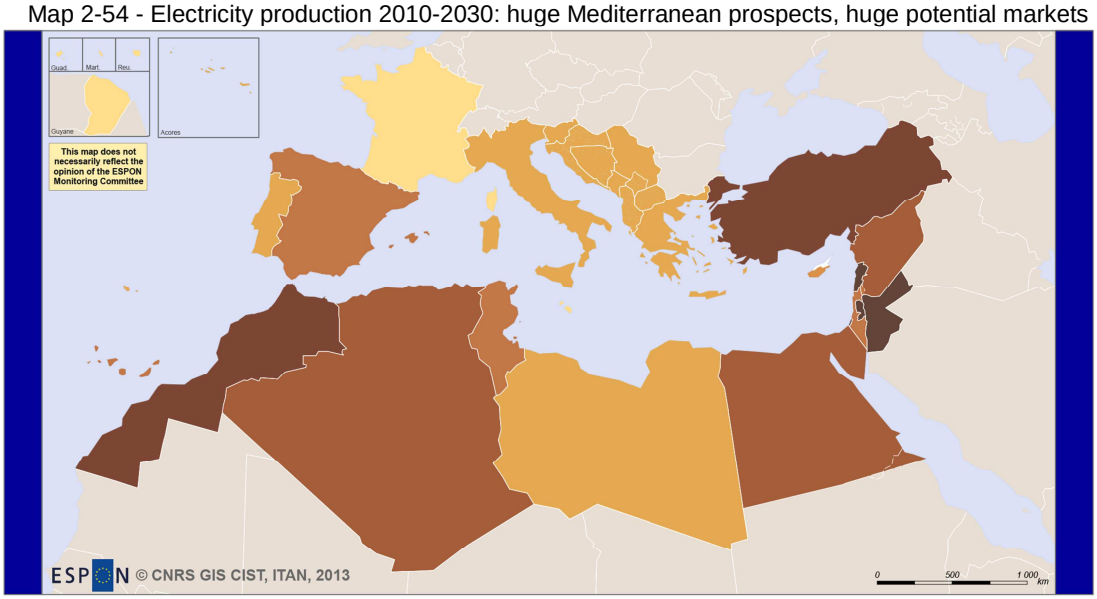
Average annual growth rate (%) of Electric power consumption (kWh per capita), 1990-2011

-3,7 | 0 | 1,5 | 3 | 4,5 | 9,5

No data

Statistical data for Cyprus refer only to the areas under effective control of the Government of the Republic of Cyprus.

Map 2-54 - Electricity production 2010-2030: huge Mediterranean prospects, huge potential markets



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Regional level: National level
Source: ITAN, CNRS GIS CIST, 2013.
Origin of data: Mediterranean Energy Perspectives, Observatoire Méditerranéen de l'Energie, 2013
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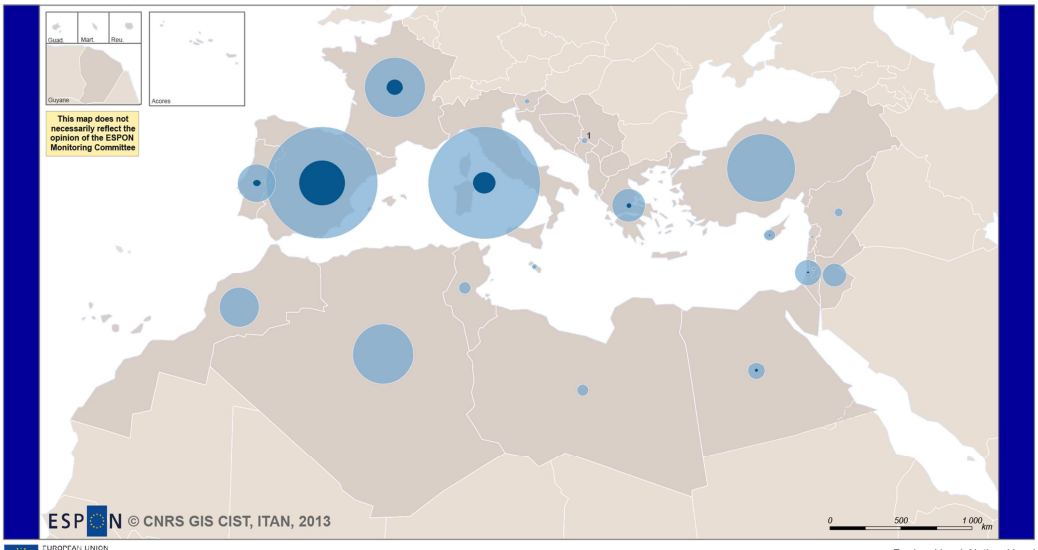
For some territories no clear international statement exists

Average annual growth rate (%) of electricity production, 2010-2030*

0 1 2 3 4 5 6 7 No data

* 2030: conservative scenario / Value for Western Balkans: average value for Former Yugoslavia countries & Albania (except Slovenia)

Map 2-55 - Solar electricity production 2010-2030 in the Mediterranean countries



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Regional level: National level
Source: ITAN, CNRS GIS CIST, 2013.
Origin of data: Mediterranean Energy Perspectives, Observatoire Méditerranéen de l'Energie, 2013
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Solar electricity production (TWh), 2010-2030*

2010
2030 (*Proactive scenario)

46 (Italy, 2030)
17 (Turkey, 2030)
13 (Algeria, 2030)
5,7 (Morocco, 2030)
2,3 (Jordan, 2030)
0,5 (Cyprus, 2030)
0,1 (Malta, 2030)

[1] Value for Western Balkans: average value for FormerYugoslavia countries & Albania (except Slovenia)

No data

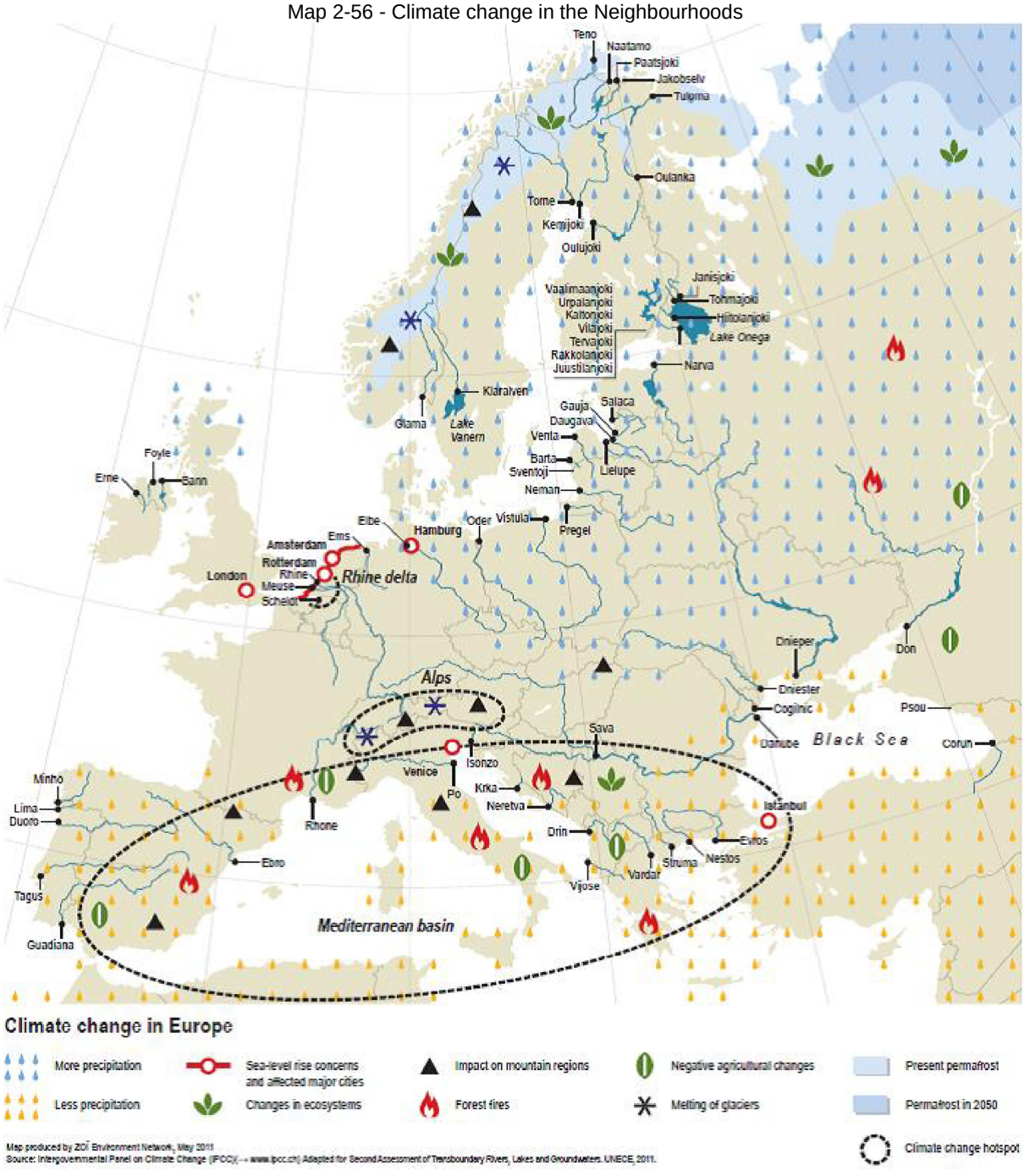
Statistical data for Cyprus refer only to the areas under effective control of the Government of the Republic of Cyprus.

2.2.3. Threats: environmental risks, water scarcity, non-inclusive growth, political unrest

1°) Environmental risks

It is impossible to give a comprehensive view of all the environmental threats of all the Neighbourhoods. Environment is indeed one of the most important stakes in the relation between Europe and its Neighbours but we could not focus on it within the ITAN project, due to all the other challenging ENRs issues. Here we swiftly highlight some examples, taken in two Neighbourhoods and in the fields of earthquakes, climate change and water – which have direct impacts on the ESPON territory. Other analyses can be seen in the chapters dedicated to each Neighbourhood.

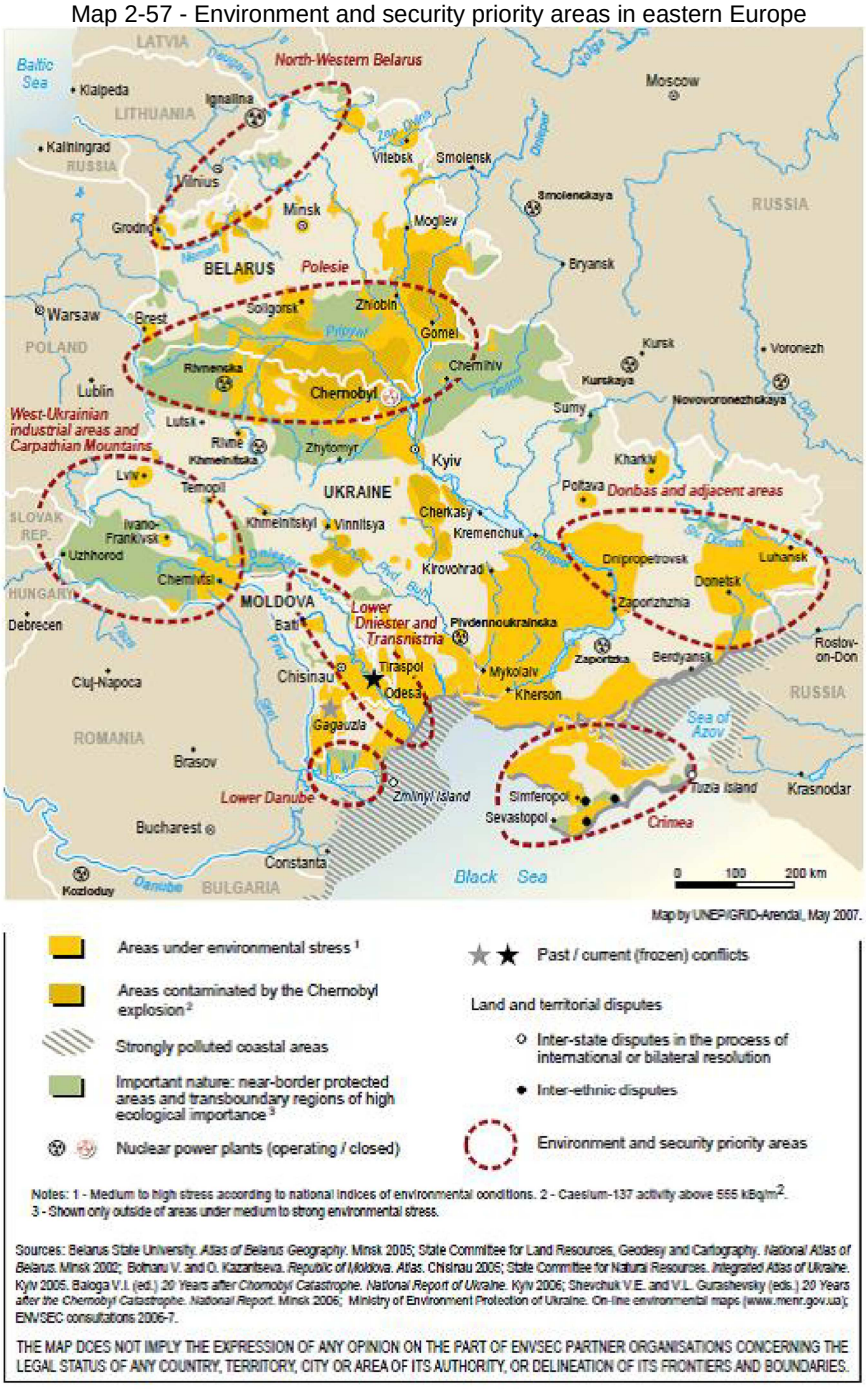
Map 2-56 - Climate change in the Neighbourhoods



Case of the Eastern Neighbourhood

Here we just want to raise awareness on the environmental concern in the Eastern Neighbourhood throughout a synthetic map (Map 2-57). The section 4.2.4. analyses in detail several environmental issues which have direct impacts on the ESPON territory: the consequences of Chernobyl nuclear accident in 1986, environmental problems linked to the industrial processes, the military heritage, radioactive and toxic waste, poor status of the water environment, and the pollution of the Black and Baltic seas.

Map 2-57 - Environment and security priority areas in eastern Europe



Source: PIC 1 (Viktor Novikov, UNEP/GRID-Arendal)

Case of the South-Eastern Neighbourhood

The South-Eastern Neighbourhood has to deal with the legacy of pollutions inherited from the socialist period: concentration of highly polluted zones in industrial centres or exploitation of mineral raw now closed are the major sources of unsolved solid waste and other environmental problems. Even if in the 1990s conflict and economic crisis reduced the pollution from agriculture and industry, the rehabilitation of all polluted industrial and mining-energy sites is one of the main issues.

In contrast, the South-Eastern Neighbourhood, despite its dimension, offers a huge range of landscapes, from coastal landscapes to mountainous ones. The fragmentation of the region into internal mountainous basins divided by rivers valleys and wetlands gives way to diverse climatic influences, such as Mediterranean, continental and mountainous. Natural zones in mountain areas are widespread in countries where mountain is everywhere: in Albania 51% of the territory is situated above 600m: in Serbia 15% is above 1000 m. These features give the Balkan countries exceptional landscape diversity and biodiversity; for example, Albania concentrates 30% of the European plant species. This potential needs to be protected, but in 2007 only 6,5% of the overall territory was placed under protected areas, ranging from 0,8 % of the territory in Bosnia and Herzegovina to 10,4% in Albania [EEA 2010].

In the last two decades, the South-Eastern Neighbouring countries were confronted with two major issues:

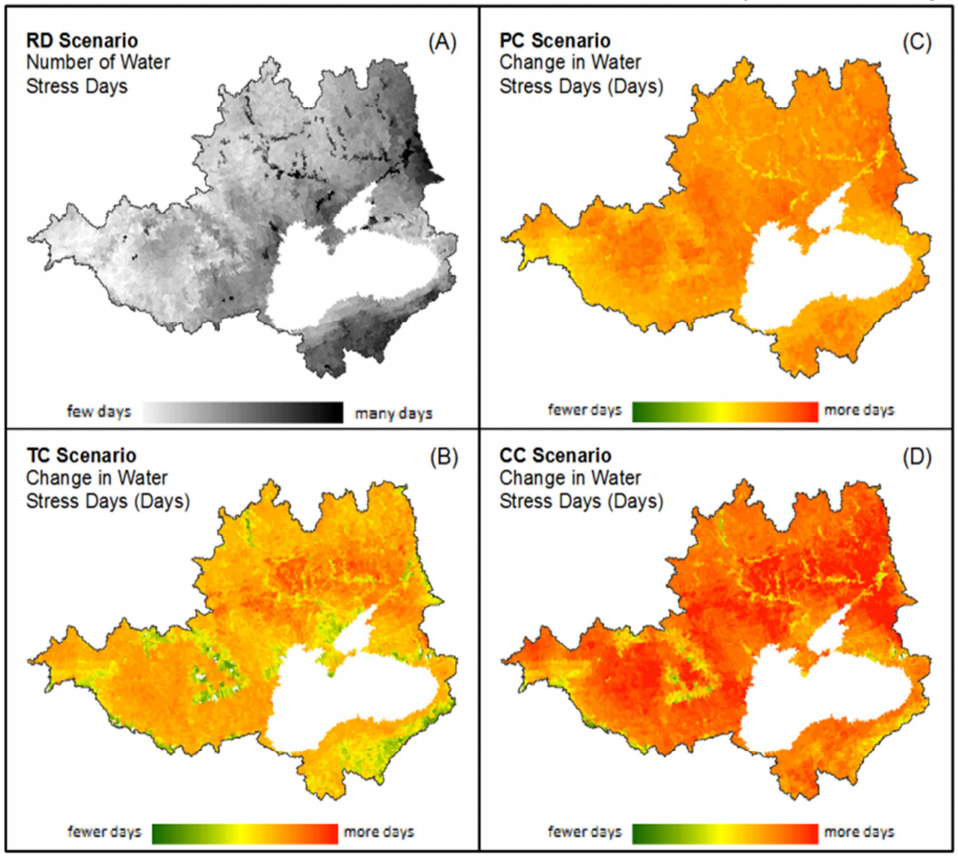
(i) the waste management of both industrial activities and municipalities, which threatens the quality of water and soils. The generation of municipal waste has risen steadily, and it is currently estimated to be at levels similar to those in the EU new member states and more and more convergent to the EU-27 levels (about 500kg/inhab);

(ii) the risk management of floods and droughts, which requires international cooperation. The region seems to be one of the most vulnerable to the climate change with important floods in the northern part (Danube river basin) and severe droughts in the southern part, but further analyses are needed concerning the impact of the climate change. The international cooperation is enhanced by the ICPRD (International Commission for the Protection of the River Danube).

Other projects have stressed the coming impact of the climate change on the Black Sea area and in particular on Ukraine. The different scenarios of the Envirogrid project are not convergent on the impact on agriculture, but they are convergent on the rising scarcity of water (

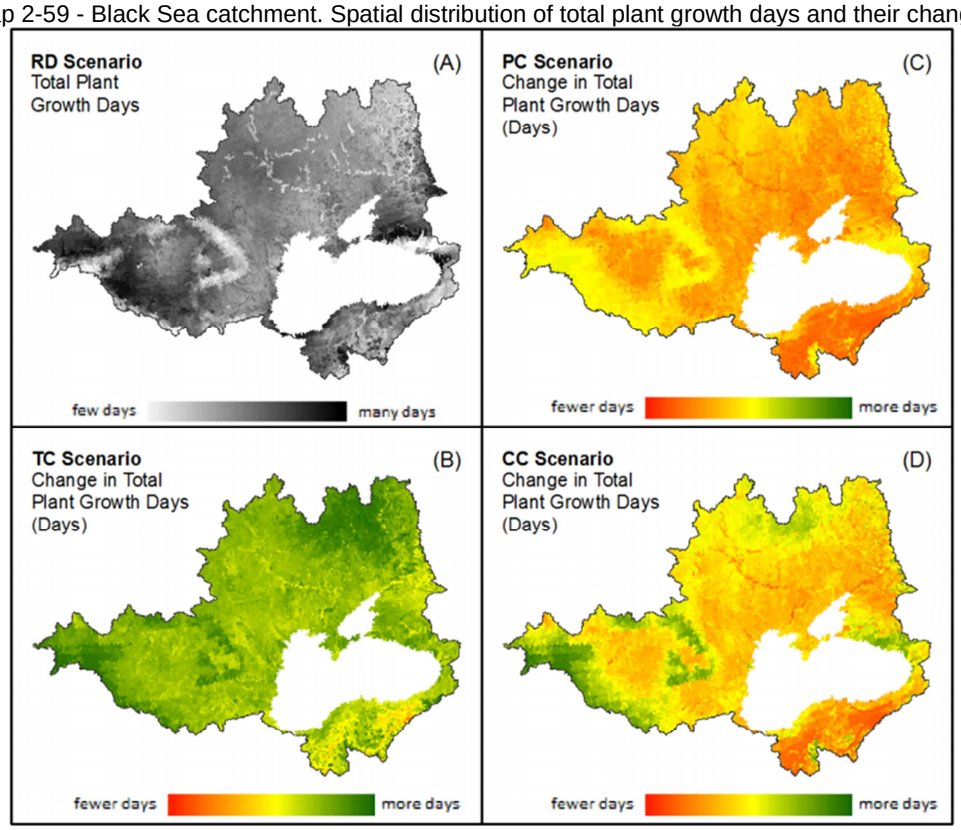
Map 2-58, Map 2-59).

Map 2-58 - Black Sea catchment. Spatial distribution of water stress days and their changes



Source : Envirogrid

Map 2-59 - Black Sea catchment. Spatial distribution of total plant growth days and their changes

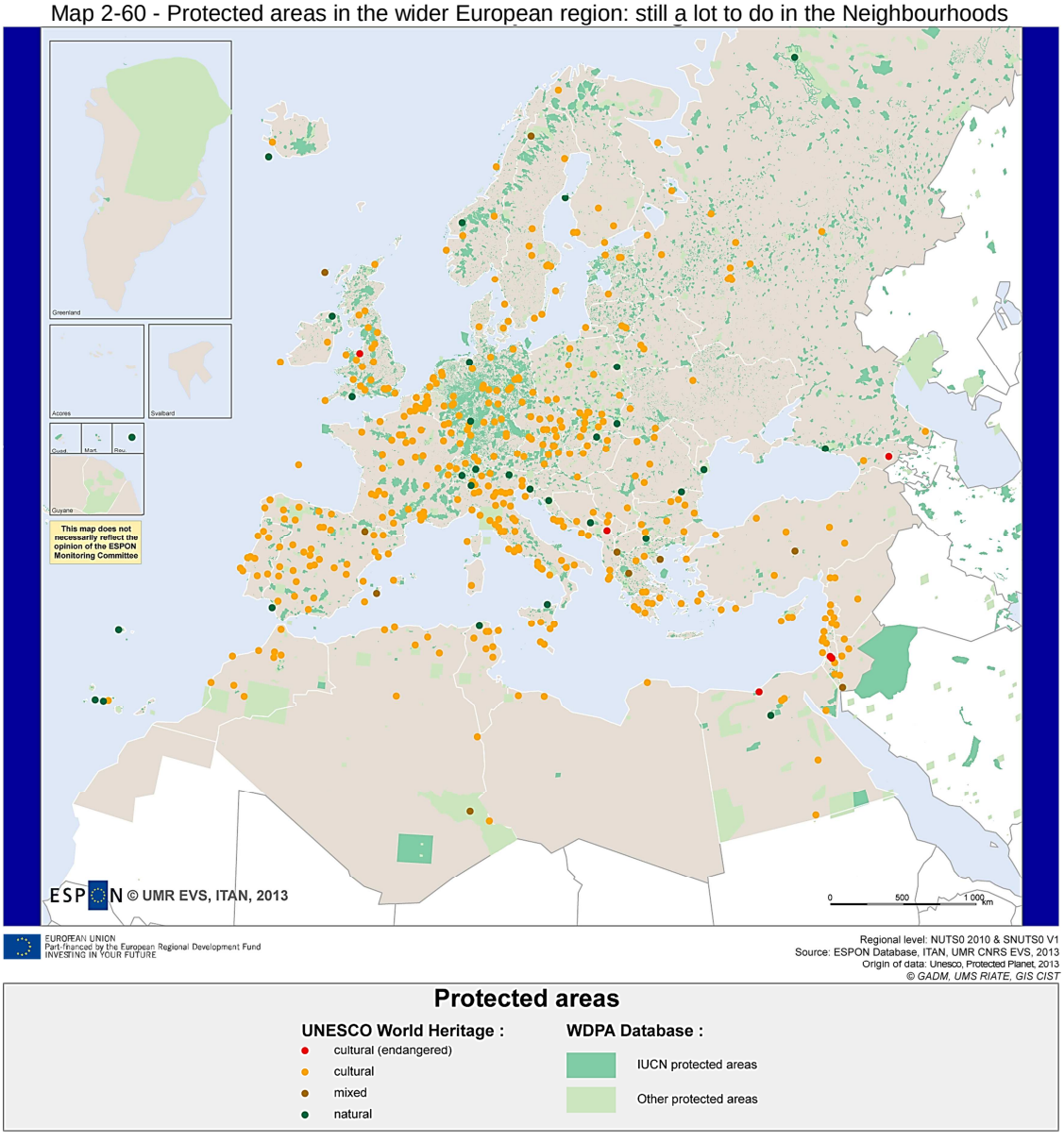


Source : Envirogrid

The case of the protected areas

Map 2-60 shows the long way to go for the ENCs to catch up with Europe in the field of protected areas.

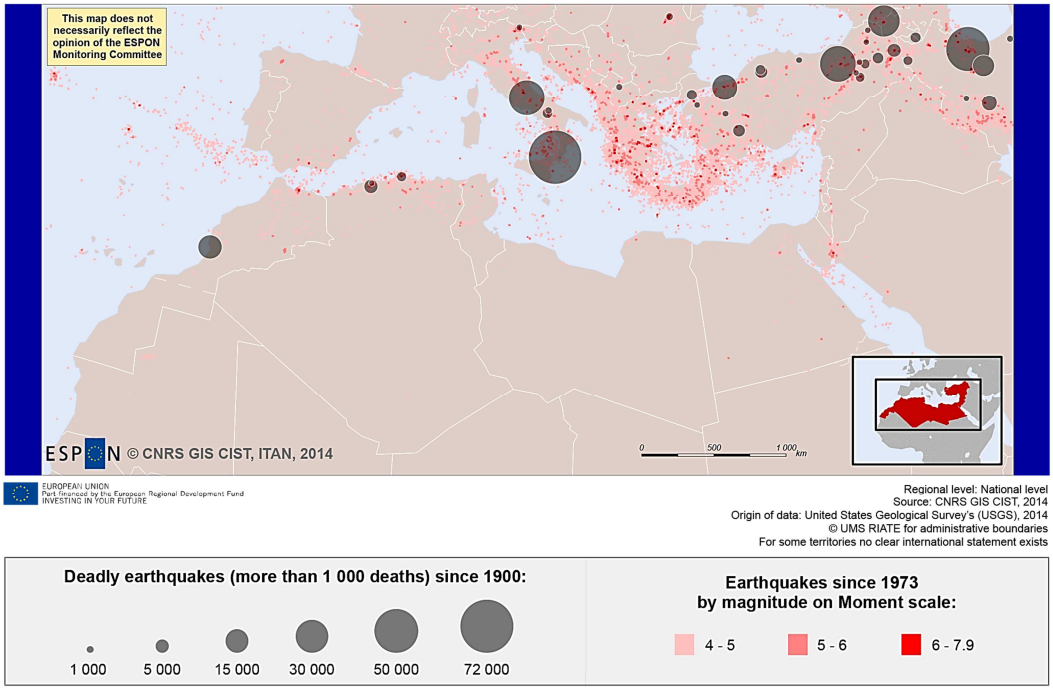
Map 2-60 - Protected areas in the wider European region: still a lot to do in the Neighbourhoods



Earthquakes: common risk and common policies between EU and Neighbours?

The numerous earthquakes in the Mediterranean and the historic tsunamis prove that the threat remains high. This calls for a cooperation between Europe and its Neighbours (which has largely begun e.g. between Greece and Turkey) in the three domains of (i) common alert system, training and exchanges of experiences in the field of crisis management or insurance issues; (ii) concerted crisis management; (iii) post-crisis reconstruction.

Map 2-61 - Earthquakes in the Euro-Mediterranean area since the beginning of the 20th century



Water

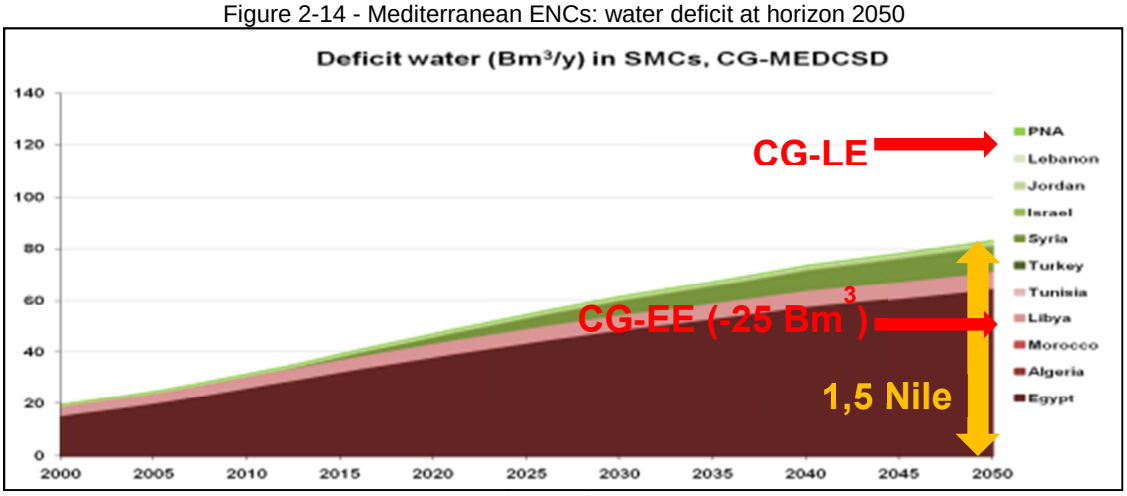
The climate change will highly impact the ENCs, especially in the Black Sea area and in the Mediterranean. The water shortage will particularly impact Egypt (
Figure **2-14**). The water exploitation index is high in the water basins of the Mediterranean, and not only in the southern side: compared to available water resources, withdrawals have been historically high in the previous decades, especially in the Near-East, in Libya and Tunisia but also in Greece and Spain (Map 2-62). In the 2000s the pressure seems to have lowered but anyhow the available water resources are not sustainable in the South, because they rely a lot on groundwater.

Today, the water resources per capita are worrisome in the Mediterranean as a whole, especially in the South but also in Spain: the water issue is not only a Neighbour concern (

Map 2-65). The current solutions are hardly sustainable. As an example in Tunisia, which is one of the Arab countries the most efficient in the field of water, improvement in drinkable water (Map 2-66) and sewage (

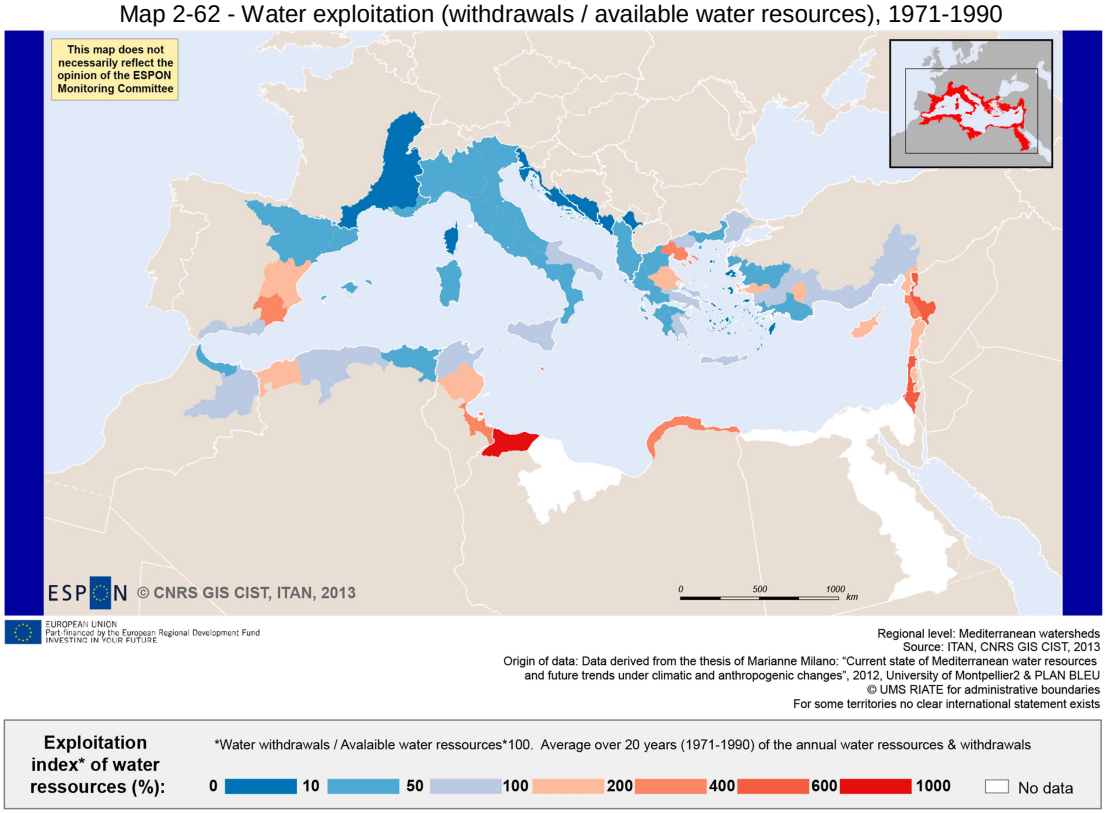
Map **2-67**) raises various problems: (i) ecological, since the water resources are taken from non-recharged groundwater. (ii) managerial, since the know-how is lacking in both the governance and the technical aspects. (iii) political, since the modernisation of the water service would need an increase of the water tariffs that no government can assume. (iv) financial, since the needs for modernisation of the water and above all of the sanitation infrastructure remain huge. (v) territorial, since the North-West of the country (water and sewage) and the South (sanitation) are lagging behind the North-East. The water issue is one of the most important fields of possible cooperation between Europe and its Neighbours.

Figure 2-14 - Mediterranean ENCs: water deficit at horizon 2050

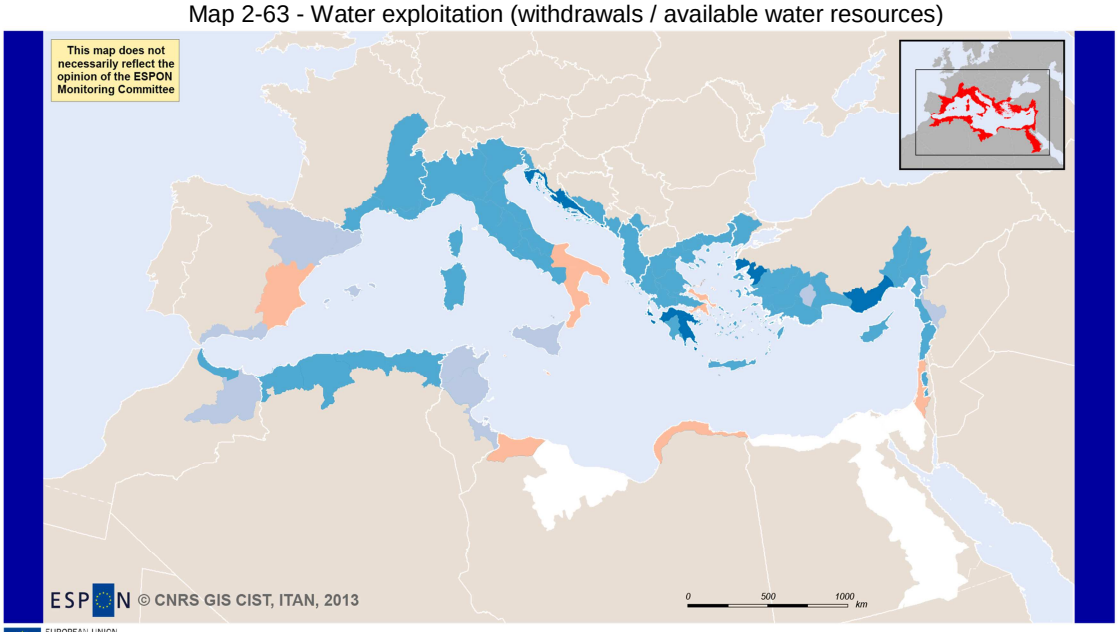


Source: OME

Map 2-62 - Water exploitation (withdrawals / available water resources), 1971-1990



Map 2-63 - Water exploitation (withdrawals / available water resources)



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Regional level: Mediterranean watersheds
Source: ITAN, CNRS GIS CIST, 2013
Origin of data: PLAN BLEU, according to FAO Aquastat (National sources), 2010
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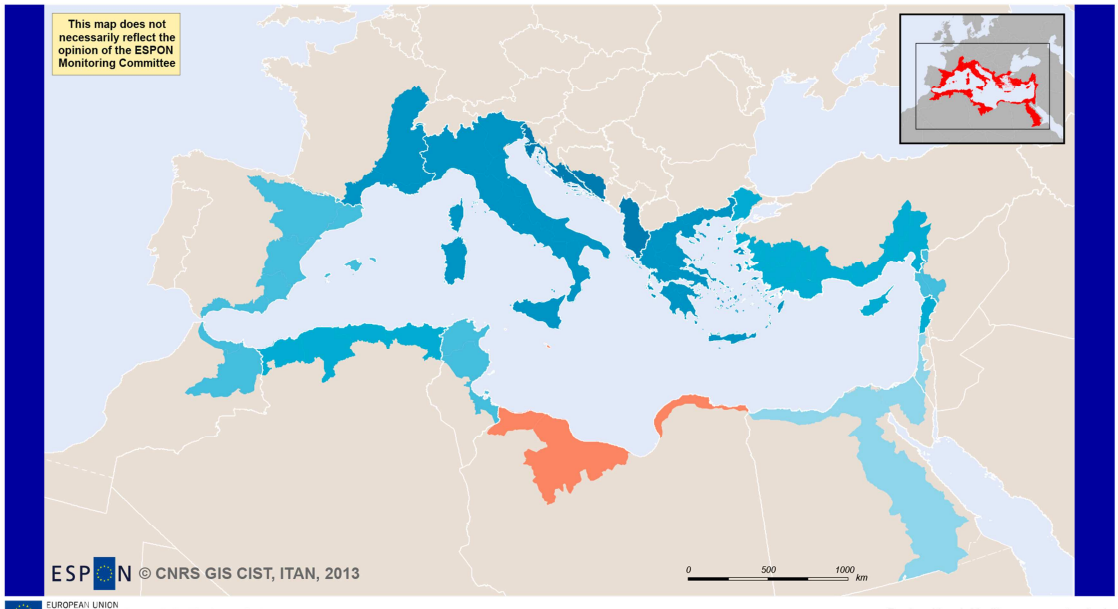
For some territories no clear international statement exists

Exploitation index* of water ressources (%):

*Water withdrawals / Avalaible water ressources. Annual average between 2000 and 2010.

0 | 10 | 50 | 100 | 200 | 400 | 600 | 1000 | No data

Map 2-64 - Water exploitation (withdrawals / available water resources), estimation 2025



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Regional level: Mediterranean watersheds
Source: ITAN, CNRS GIS CIST, 2013
Origin of data: PLAN BLEU (National sources), 2010
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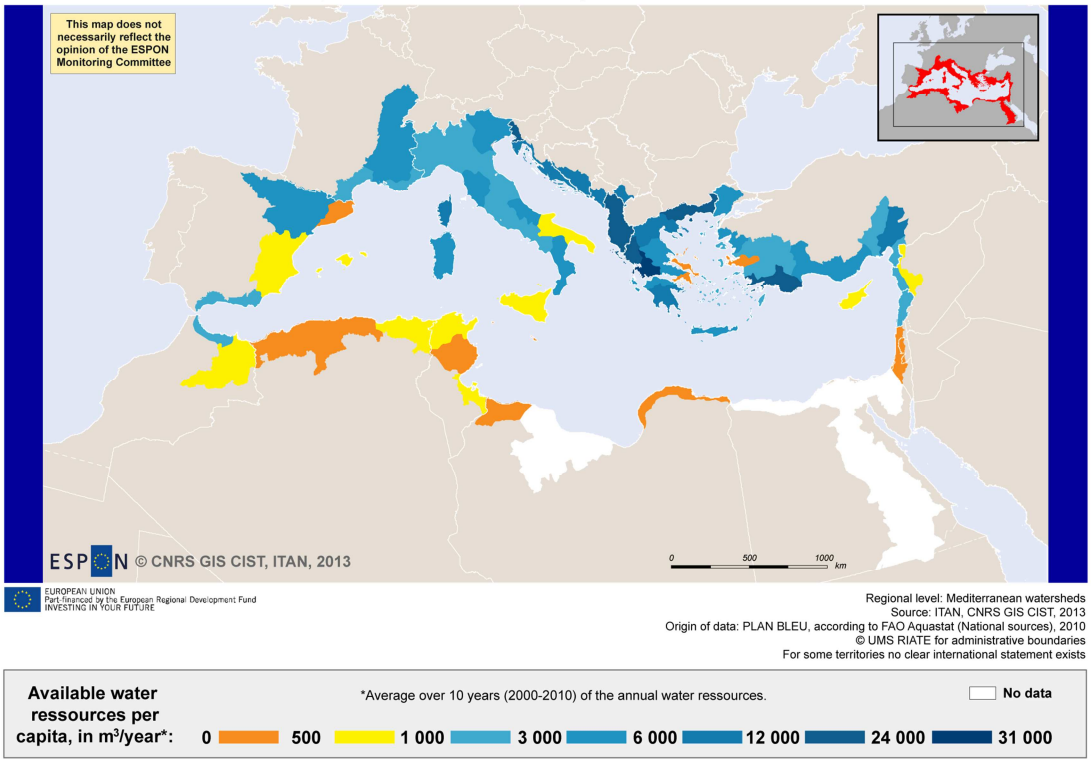
For some territories no clear international statement exists

Exploitation index* of water ressources (%):

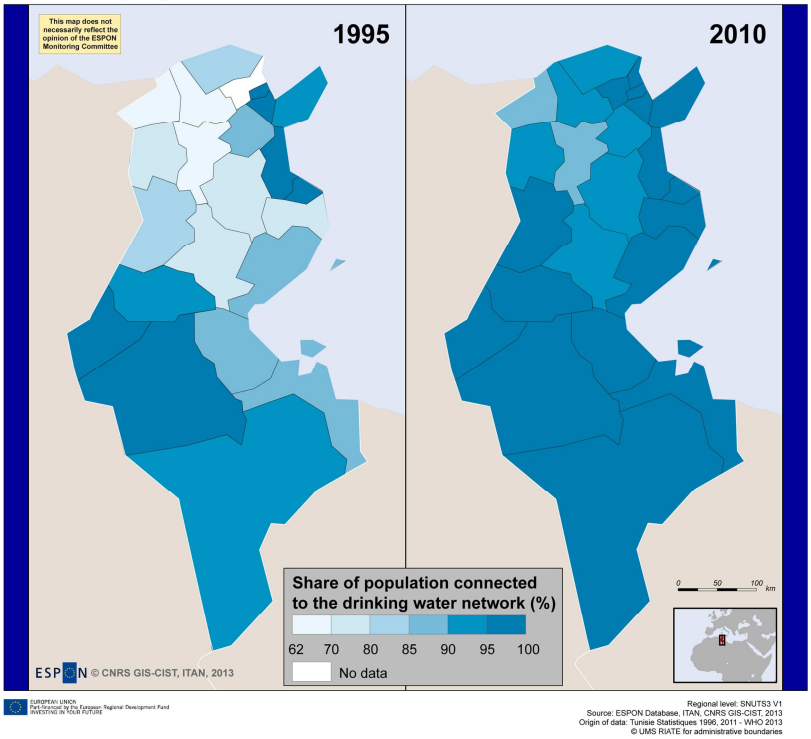
*Water withdrawals / Avalaible water ressources. Estimation for 2025, by national Mediterranean watersheds

0 | 10 | 25 | 50 | 75 | 100 | 200 | 286 | No data

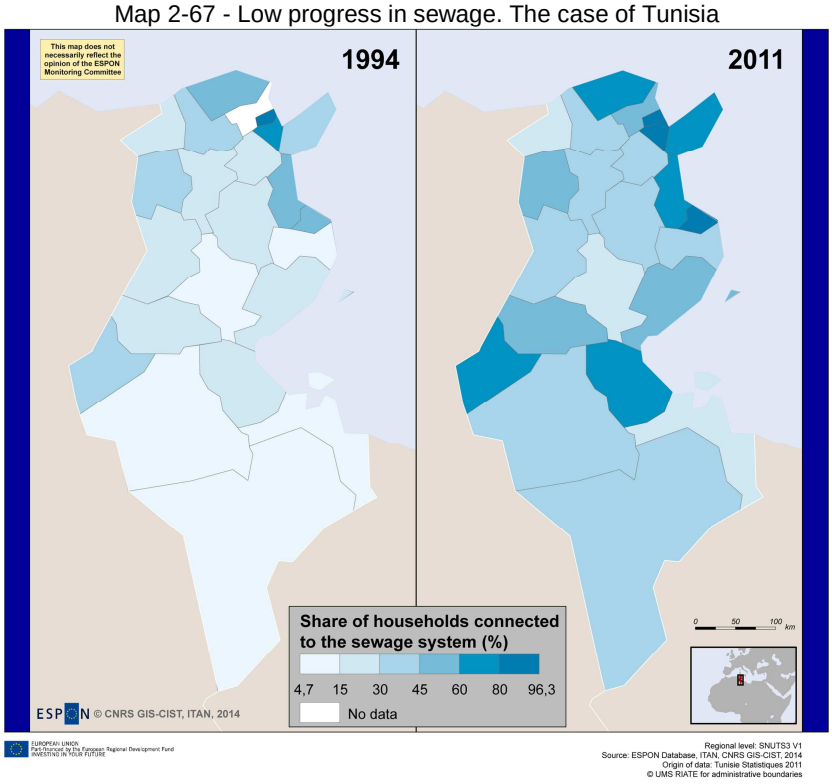
Map 2-65 - Water resource per inhabitant, 2000s



Map 2-66 - Is the progress in access to drinkable water sustainable? The case of Tunisia



Map 2-67 - Low progress in sewage. The case of Tunisia

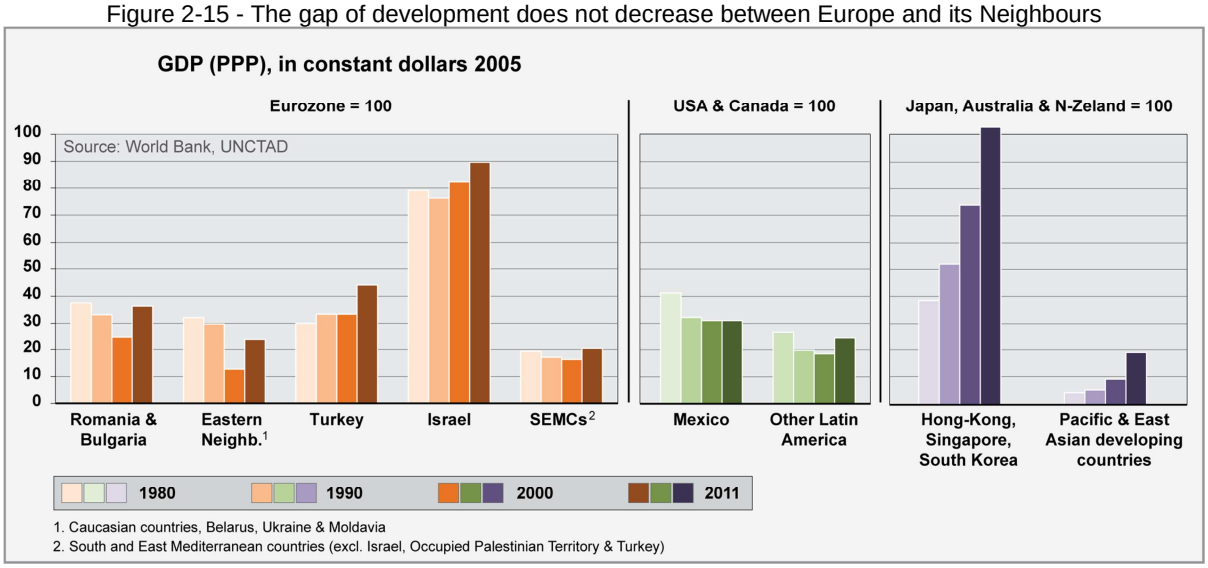


2°) Non-inclusive growth

The issue of inclusive growth is a stake a many scales:

- locally because of the poor quality of development, access to universal services such as water, and people participation in the ENRs governance;
- at national scale because the regional disparities are rising in particular in countries such as Tunisia or Turkey;
- at the scale of the wider European region, where the discontinuities are not sustainable. Figure 2-15 compares the GDP per capita in PPP in the three major world regions. In East Asia, the Dragons clearly caught up with Japan, and the developing countries (including China) are progressively bridging the gap. In the Americas, the emerging and developing Latin America does not fill the gap vis-à-vis the USA, but (i) the US experience a rapid growth of their GDP per capita, and (ii) Latin America is at the level 25 (Mexico excluded, 100=USA). In the European region, apart from Israel and Turkey, the gap remains huge: the Arab Mediterranean ENCs hardly reach a level of 20 (Eurozone=100).

Figure 2-15 - The gap of development does not decrease between Europe and its Neighbours



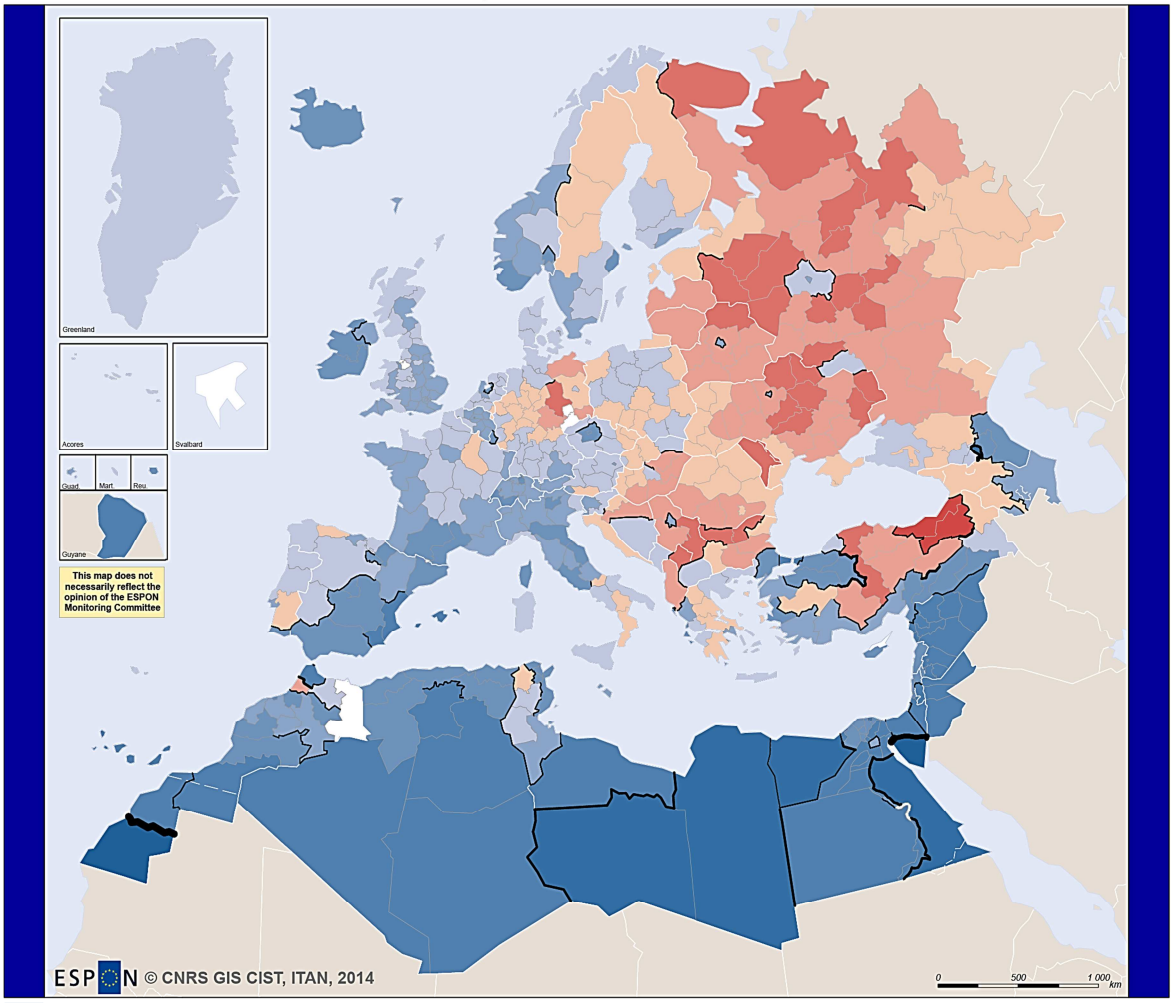
The ITAN composite indicators provide key information to assess ENRs' insufficiently inclusive development. To begin with, simple classic indicators such as demographic evolution, education and income shed light on the sharp territorial disparities in the Neighbourhoods, at the three scales: macro-regional, national, local.

The map of the demographic evolution in the 2000s displays the major discontinuities in the wider region. Except in the south-eastern Europe vis-à-vis Turkey, major discontinuities are not that much between Europe and its Neighbours than within the Neighbourhoods. Between Europe and the Eastern Neighbourhood, there rather is a progressive gradient from positive demographic growth in the westernmost Europe to a mix situation in Germany and a negative growth when one crosses the external borders eastward and lastly to very clear decline in many Russian territories. Within Russia a strong discontinuity appears between the Moscow urban area and its surrounding regions. In Ukraine, apart from Kyiv City, all territories are demographically declining.

Within the Western Balkans, globally in demographic decline, discontinuities appear in Serbia and between Kosovo under UNSCR 1244/99 and the Former Yugoslav Republic of Macedonia: the demographic issue is indubitably one of the stakes of the Western Balkans territories. Discontinuities also appear vis-à-vis EU's territories in northern Greece and western Bulgaria.

In the Mediterranean Neighbourhood major discontinuities appear within Morocco, within Algeria, within Tunisia, within Egypt, within Israel, and, mainly, within Turkey, because these countries are experiencing a rapid urbanisation process as well as an economic transition with severe contrasts between developing areas and left behind territories. Here, the stake here would rather be to transfer in the Neighbourhoods the European know-how in the field of territorial planning and regional policy. It seems to be particularly important in the case of Turkey.

Map 2-68 - Demographic evolution in Europe and ENCs



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Regional level: SNUTS 0-1-2-3
Source: ESPON project (ITAN), CNRS GIS CIST, Data harmonised by IGEAT, 2014
Origin of data: National statistical institutes, US Census,2013
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For some territories no clear international statement exists

Annual growth rate of the population (%), 2000-2010

-2,3 -2 -1 -0,5 0 0,5 1 2 4 8 13,1 no data

Territorial discontinuities
(gap between bordering NUTS/SNUTS)

1 - 2,5
2,5 - 5
5 - 7,5
+ 7,5

To calculate the annual growth rate of population, available data closest year of 2000 & 2010 are used.

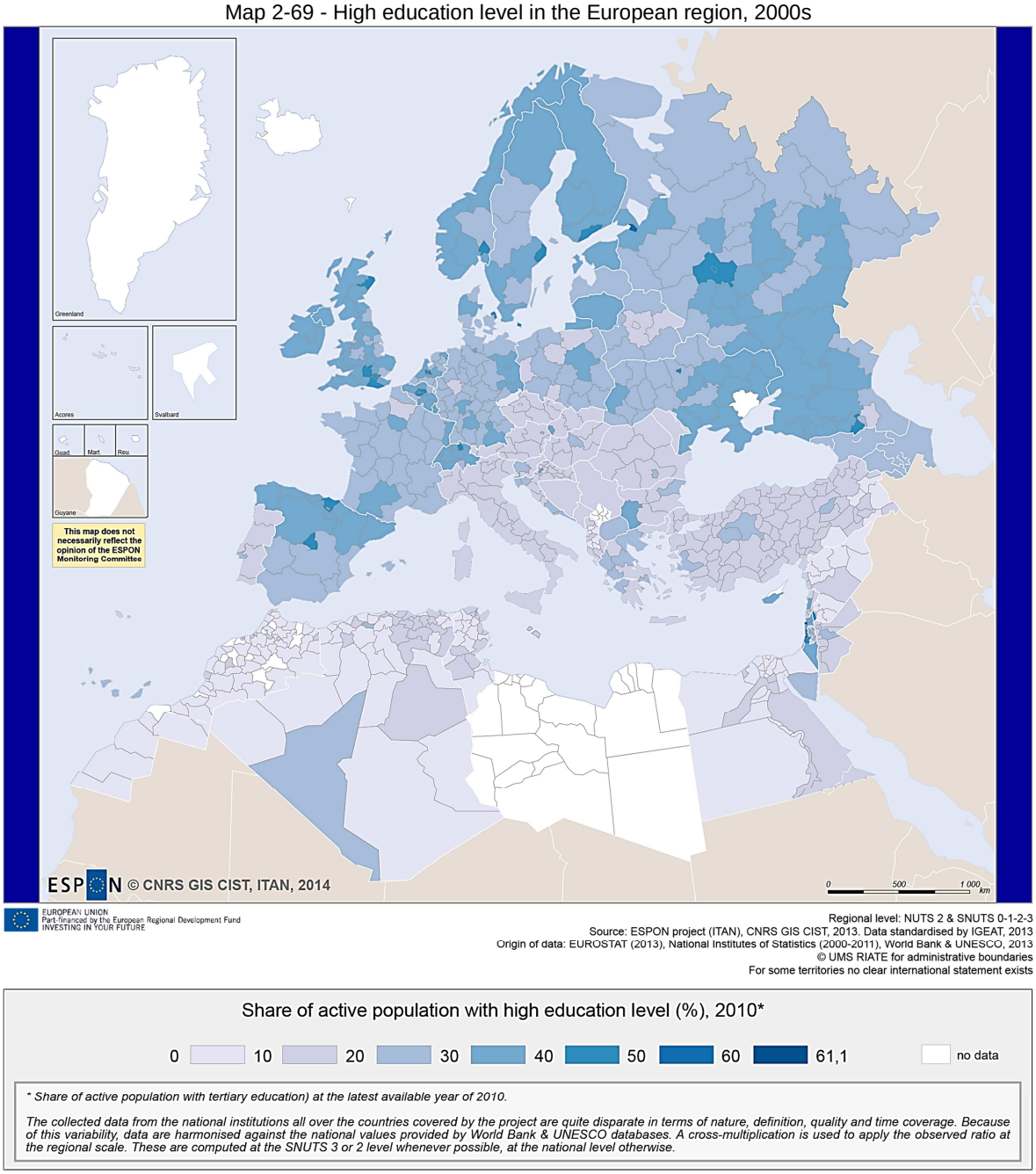
The collected data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Because of this variability, data are harmonised against the national values provided by the US Census databases. A cross-multiplication is used to apply the observed ratio at the regional scale. These are computed at the SNUTS 2 level whenever possible, at the national level otherwise.

Another stake of the wider region is about education. The chapter 6 will show that the Mediterranean Neighbours have managed rapid progress in school enrolment. But many difficulties remain, in particular in the rural areas, in particular for women, in particular for the people over 30 years. The chapter 6 will show an unexpected concern for *young* girls: in secondary school, they happen to be much more enrolled than their elder but also than their masculine counterparts, because at this stage boys all too often drop out; the contrast is incredibly high between over-representation of girls in secondary school and under-representation of women on the labour market, in particular out of the metropolitan areas. This suggest a coming rising concern of South Mediterranean women, namely in the non-metropolitan areas, when these now very numerous educated girls will have become young women looking for – lacking – jobs. Generally speaking, the contrast between Europe – extended to its Eastern Neighbourhood but not to its south-eastern part including many new member states'

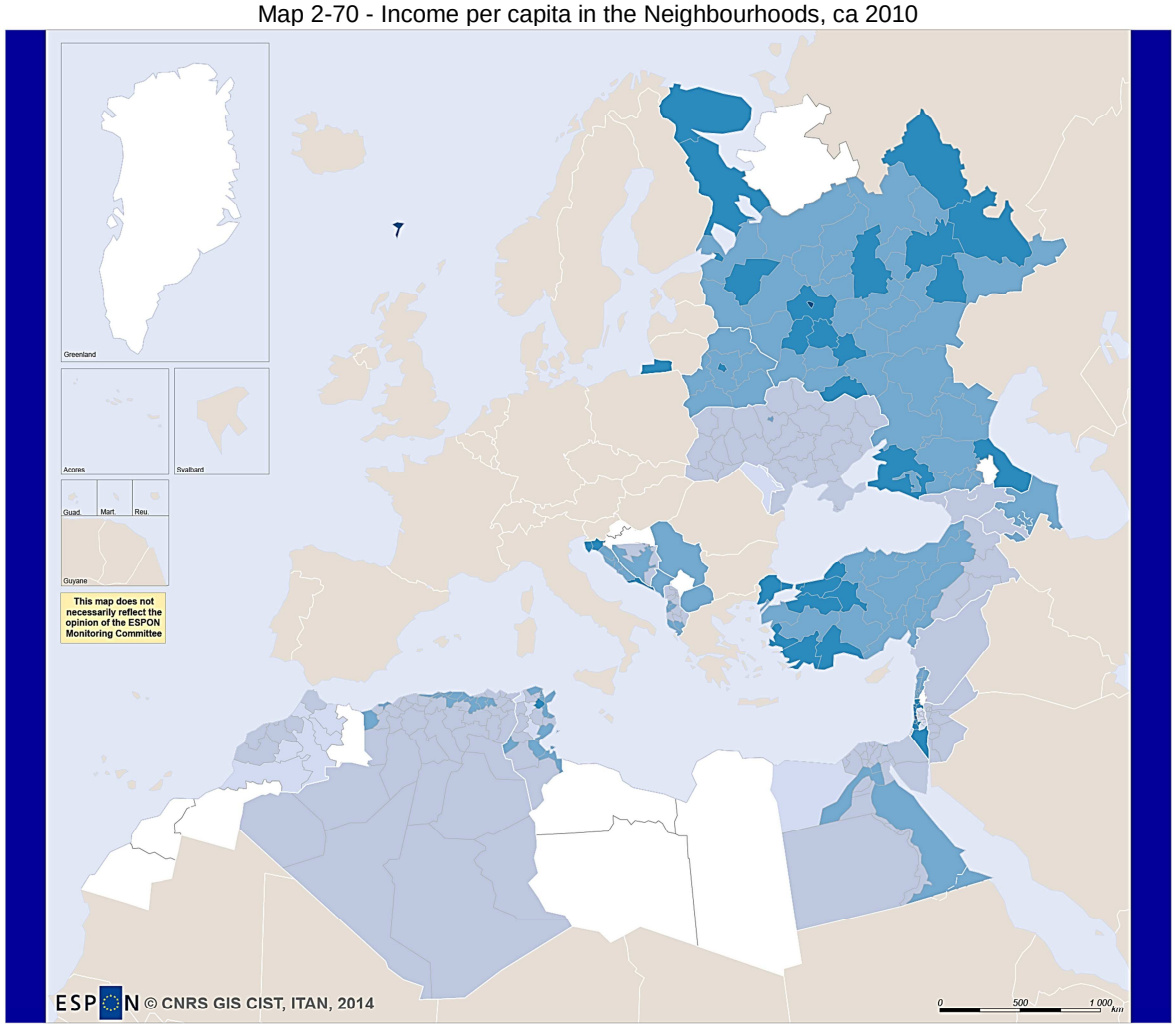
territories – and the Mediterranean Neighbourhood is one of the highest among all the indicators (Map 2-69). The potential cooperation in that field seems boundless between Europe and Neighbours.

Very much related to the previous indicator is the income issue. Map 2-70 shows the gap between the Russian, Israeli and western Turkish territories on the one hand, and almost all the other ENRs on the other. Again, the issue of internal inequality proves relevant, particularly in Turkey, Egypt, Algeria and Tunisia where the opposition between the littoral and/or the capital city area and the inner country is impressive. In the Near-East, the contrast between Israel and the rest of the area is a part of the geopolitical mix. In the Western Balkans, Bosnia and Herzegovina and Albania appear as the most unequal countries (but we do not have regional data for Serbia). In Ukraine the contrast is strong between the capital city and the rest of the country where income seem evenly low.

Map 2-69 - High education level in the European region, 2000s



Map 2-70 - Income per capita in the Neighbourhoods, ca 2010



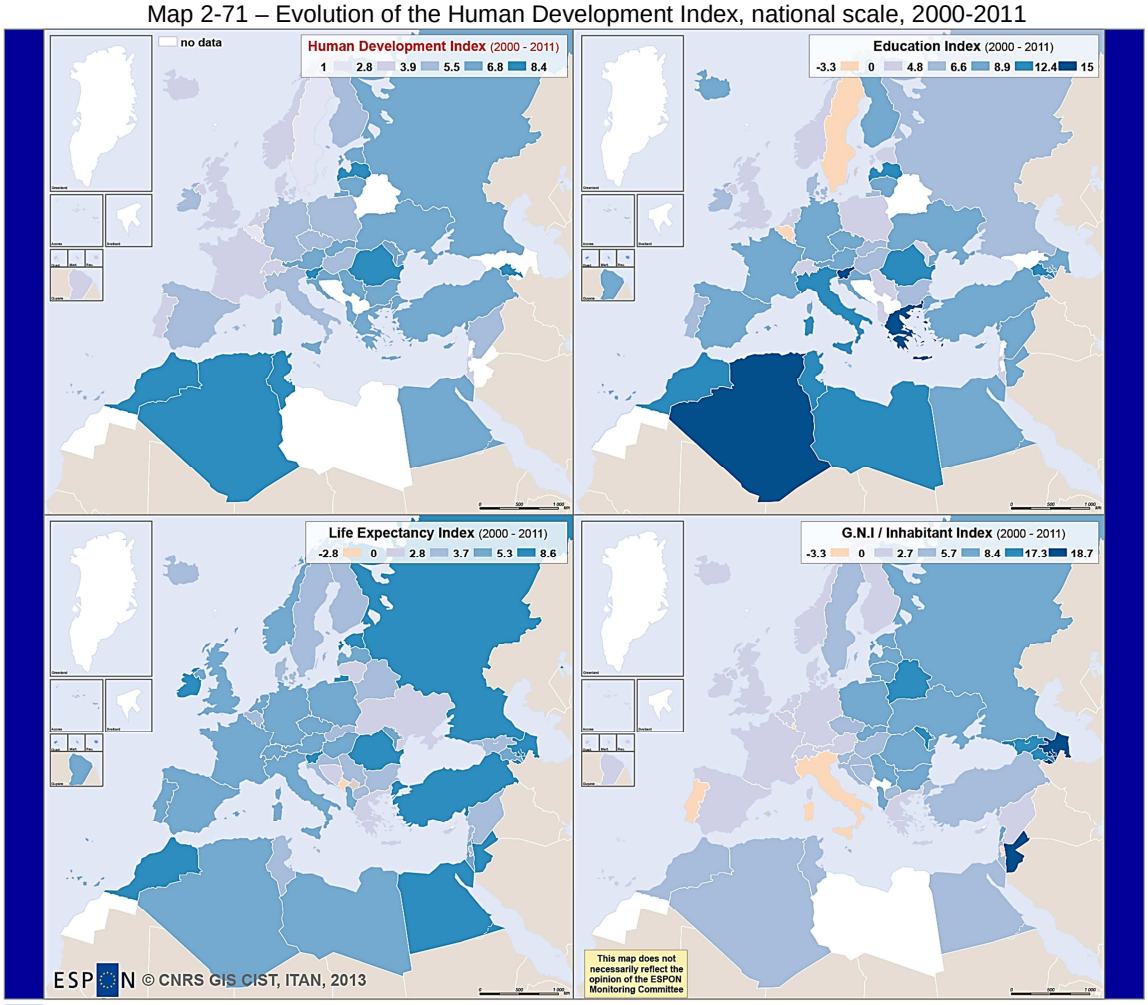
The evolution of the Human development sums up the previous analyses and provides further information. The ITAN project carried out an analysis at macro-regional scale, at national scale and at local scale thanks to the local Human Development Index (HDI) presented in the above 1.3.13 section. The Eastern Neighbours is recovering after its harsh 1990s decade, and the Mediterranean Neighbours keep on improving (Map 2-71). As a whole, the divide between Europe and its Neighbours has rather decreased in the 2000s. The Mediterranean Neighbours seem to benefit from their long run effort in education, even though the chapter 6 will say all the remaining shortcomings with regard to education. The life expectancy is improving in the Eastern Neighbourhoods but for Russia only and from a low level; the chapter 4 will show that the picture is not very favourable in particular for men. As well as Annex 14, chapter 4 also confirms the bad situation of all the Ukrainian territory except Kyiv City, making the insufficient human development a major component of the on-going crisis there.

The

Map **2-72** gives an idea of the added value of ITAN thanks to the calculation of the local HDI. Its first output is to confirm that local realities rely very much on national structures, especially in human development where national public policies are determinant for health and education. In Russia, Ukraine, Egypt, local records more or less equal the national values, despite some peculiarities such as Belgorod Russian oblast at the immediate north-eastern periphery of Ukraine (this territory hosts energy and in particular nuclear activities, with high salaries and educated people). But in other countries, internal disparities are confirmed: the chapter 6 confirms the littoral vs. inner Tunisia issue, and highlights the importance of the territorial disparities in Turkey. The first geographical results of this ITAN composite indicator are encouraging: the territorial analysis at local scale can bring a very positive contribution to the HDI, in the ENRs as well as in Europe, by providing useful local details to the classic analysis of the national index.

The Map 2-73 uses a simpler way to express the indicator, and stresses on the discontinuities – which confirm the major contrast within the ENRs that we had analysed with the previous indicators. Hence, the integrated analysis permitted by this composite indicator proves consistent.

Map 2-71 – Evolution of the Human Development Index, national scale, 2000-2011



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Regional level: National level
Source: ESPON project (ITAN), CNRS GIS CIST, 2013
Origin of data: UNDP, 2012
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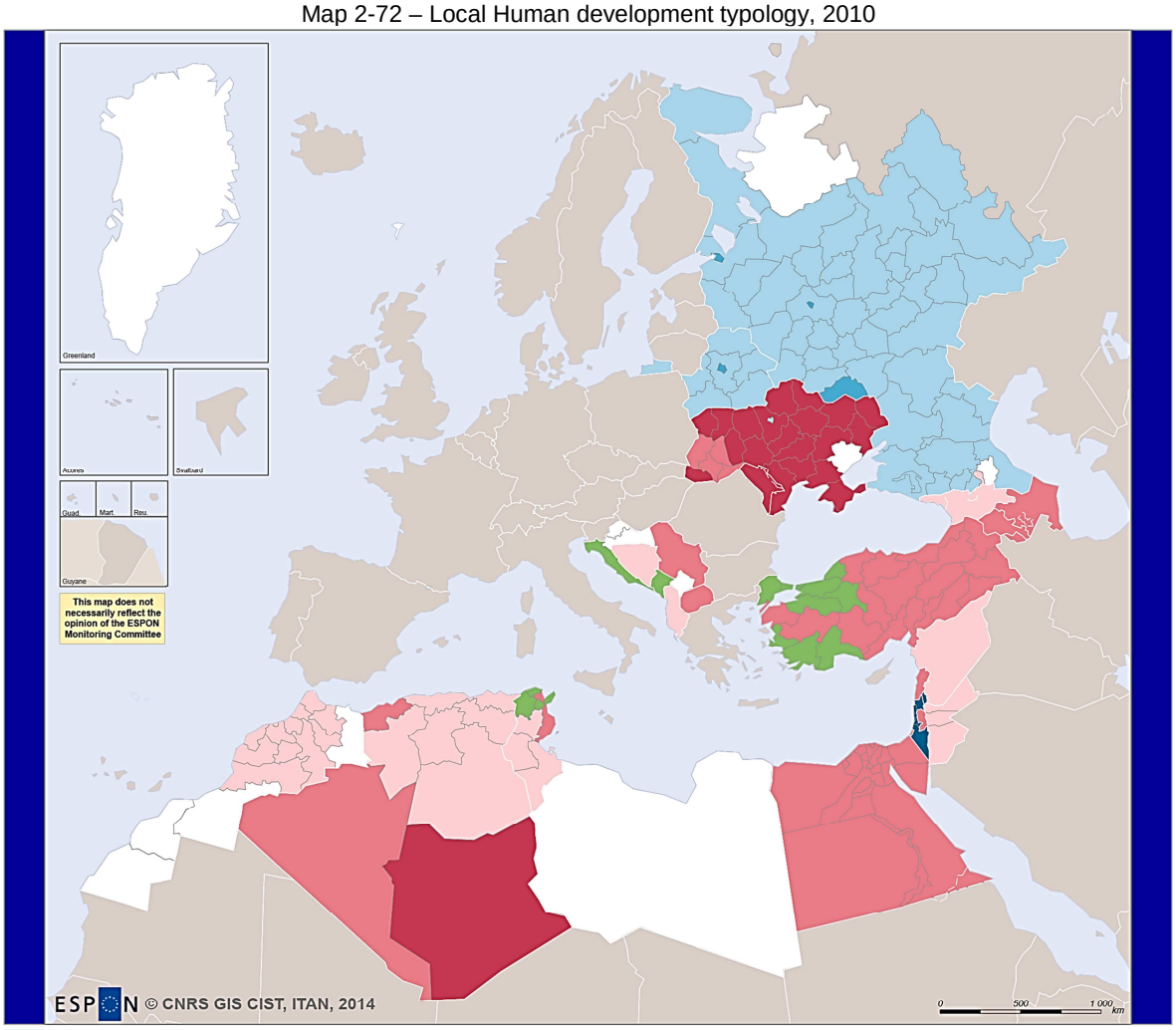
For some territories no clear international statement exists

Map 2-72 – Local Human development typology, 2010



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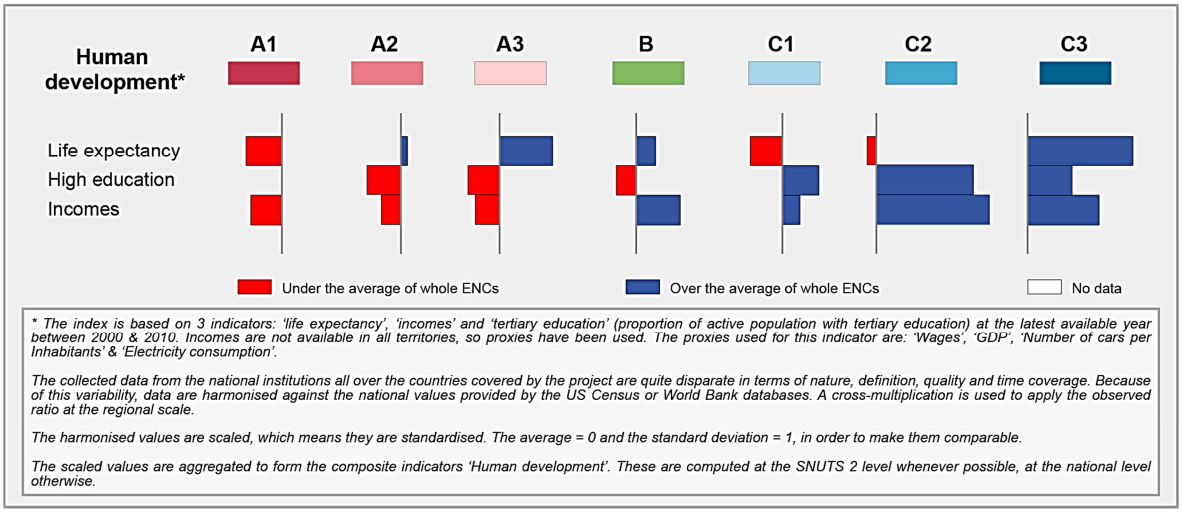
Regional level: SNUTS 1-2
Source: ESPON project (ITAN), CNRS GIS CIST, Data standardised by IGEAT, 2014
Origin of data: National statistical institutes, US Census, World Bank, 2013
© UMS RIATE for administrative boundaries
For some territories no clear international statement exists



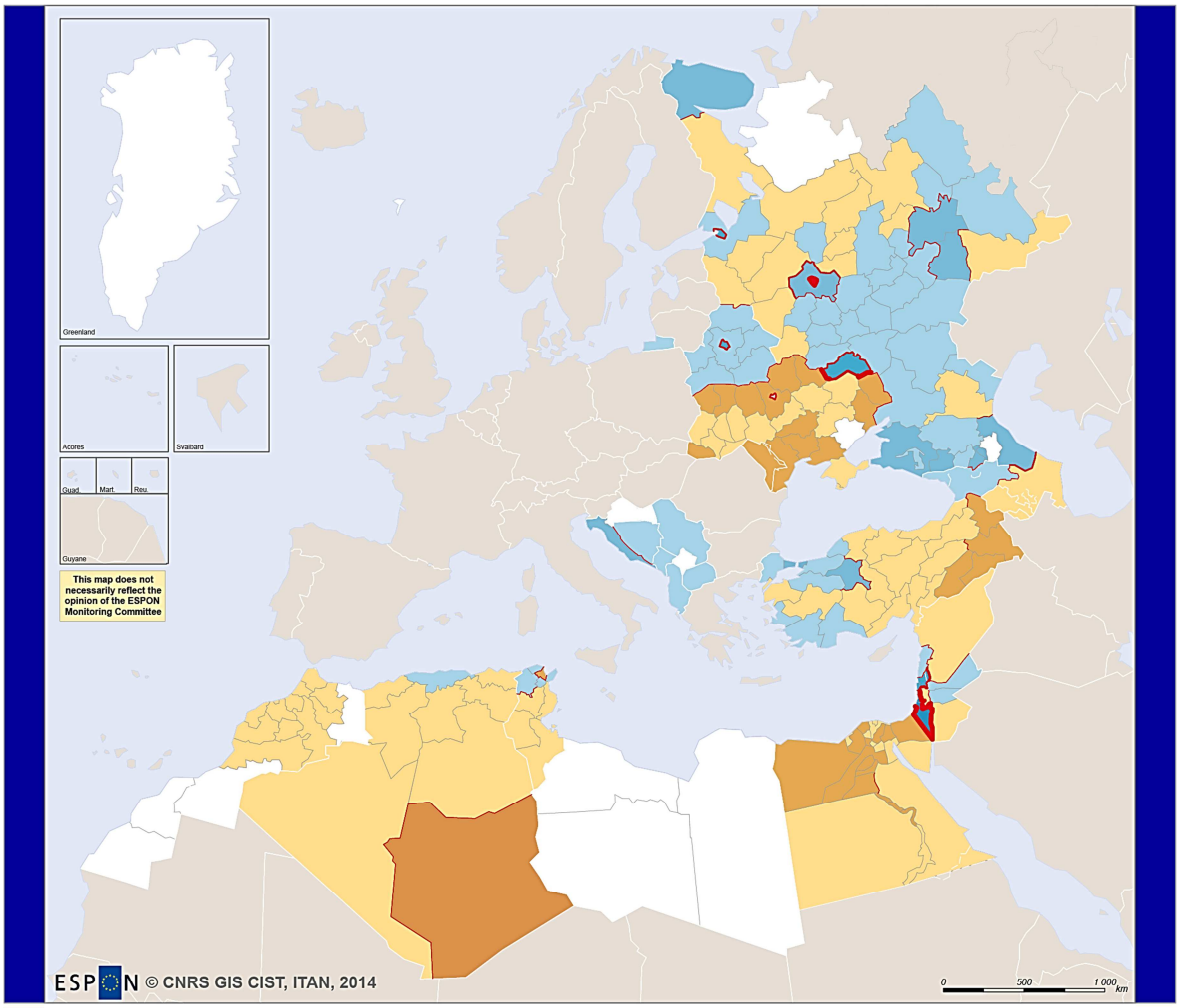
** The index is based on 3 indicators: 'life expectancy', 'incomes' and 'tertiary education' (proportion of active population with tertiary education) at the latest available year between 2000 & 2010. Incomes are not available in all territories, so proxies have been used. The proxies used for this indicator are: 'Wages', 'GDP', 'Number of cars per Inhabitants' & 'Electricity consumption'.*

The collected data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Because of this variability, data are harmonised against the national values provided by the US Census or World Bank databases. A cross-multiplication is used to apply the observed ratio at the regional scale.

The harmonised values are scaled, which means they are standardised. The average = 0 and the standard deviation = 1, in order to make them comparable.

The scaled values are aggregated to form the composite indicators 'Human development'. These are computed at the SNUTS 2 level whenever possible, at the national level otherwise.

Map 2-73 – Local Human development, index and discontinuities in the ENRs, 2010



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Regional level: SNUTS 1-2
Source: ESPON project (ITAN), CNRS GIS CIST, Data harmonised by IGEAT, 2014
Origin of data: National statistical institutes, US Census, World Bank, 2013
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For some territories no clear international statement exists

Index of Human development*, 2010

Weak — Strong

-1 σ | - 0,5 σ | Average | +0,5 σ | +1 σ | +2 σ

Territorial discontinuities of the index, according to the standard deviation

- 0,5 - 1 σ
- 1 - 1,5 σ
- 1,5 - 2 σ
- 2 - 2,7 σ

no data

σ = Standard deviation

*The index is based on 3 indicators: 'life expectancy', 'incomes' and 'tertiary education' (proportion of active population with tertiary education) at the latest available year between 2000 & 2010. Incomes are not available in all territories, so proxies have been used. The proxies used for this indicator are: 'Wages', 'GDP', 'Number of cars per Inhabitants' & 'Electricity consumption'.

The collected data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Because of this variability, data are harmonised against the national values provided by the US Census or World Bank databases. A cross-multiplication is used to apply the observed ratio at the regional scale.

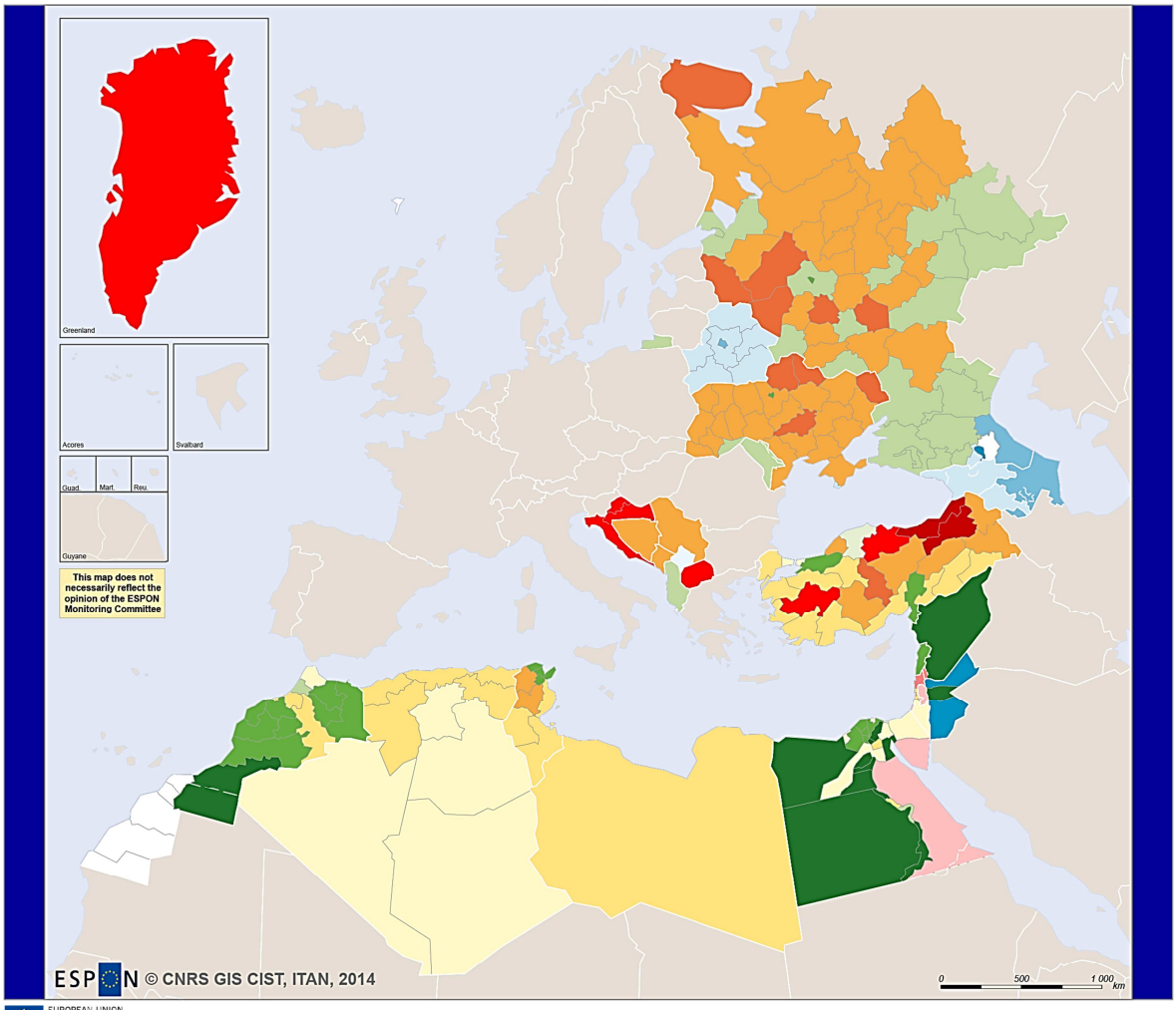
The harmonised values are scaled, which means they are standardised. The average = 0 and the standard deviation = 1, in order to make them comparable.

The scaled values are aggregated to form the composite indicators 'Human development'. These are computed at the SNUTS 2 level whenever possible, at the national level otherwise.

Map 2-74 gives the cartographic output of another ITAN composite indicator: the territorial dynamics. The typology set up here keeps the distinction between the demographic evolution (very much in favour of the Mediterranean territories and not at all of Eastern,
Figure **2-16**) and the economic evolution. As a whole, the dynamic confirms to be rather In the South than in the East, despite some Mediterranean ENRs show very worrisome because their strong

dynamic is demographically driven and not economically sustained (see southern Algeria for instance). The situation of the greater Cairo in Egypt, not easily readable given the delineation of the Egyptian governorates, will be further detailed in the chapter 6.

Map 2-74 - Territorial dynamics, 2000-2010



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Regional level: SNUTS 0-1-2-3
Source: ESPON project (ITAN), CNRS GIS CIST, Data harmonised by IGEAT, 2014
Origin of data: National statistical institutes, US Census, World Bank, 2013
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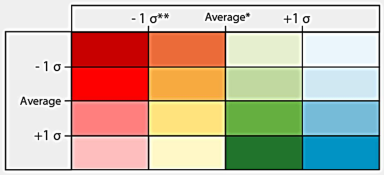
For some territories no clear international statement exists

GDP annual growth rate
2000 - 2010



Total population annual growth rate
2000 - 2010

No data

*The averages in the ENCs (non demographically weighted) are:
CAGR of Population = + 0,68%
CAGR of GDP = + 4,5%

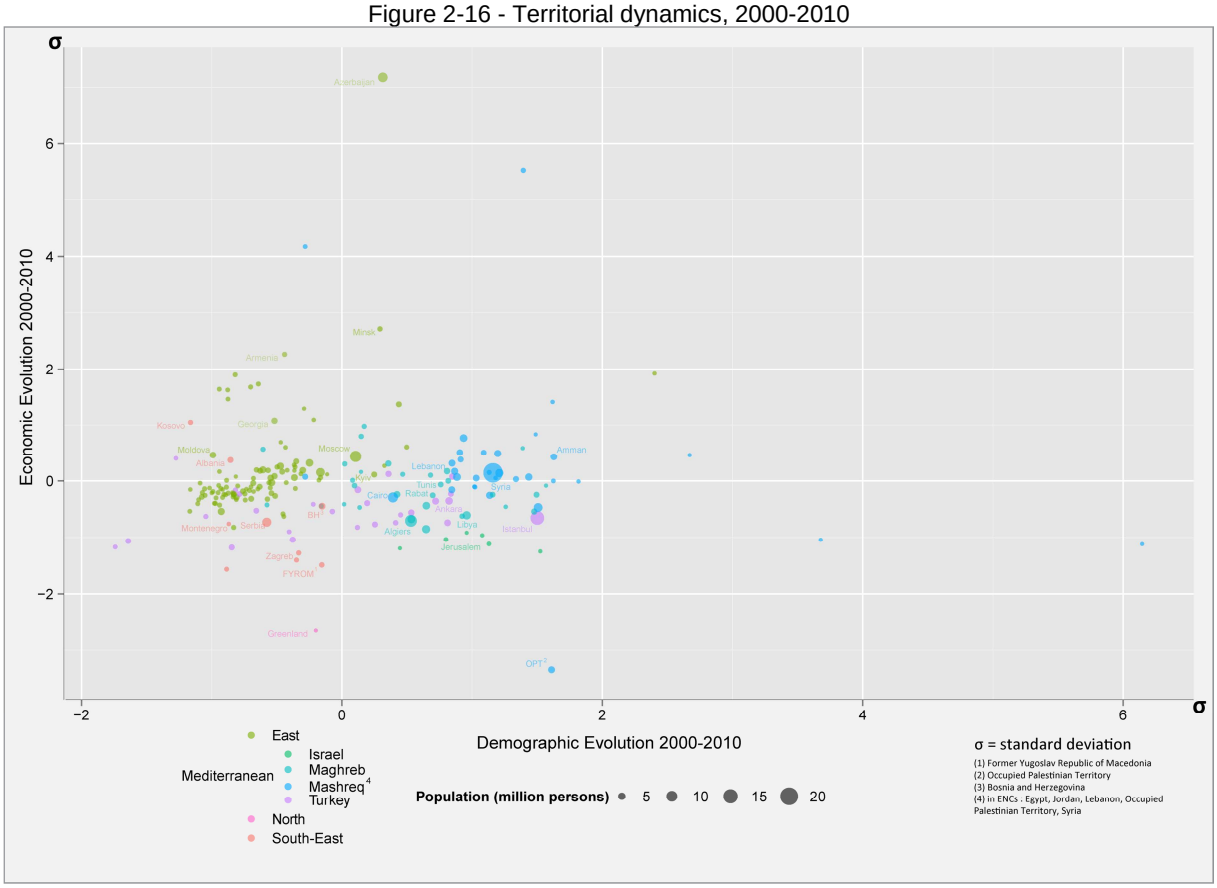
** σ : standard deviation

To calculate the annual growth rate of population, available data closest year of 2000 & 2010 are used. The annual growth rate of GDP between 2000 and 2010 is based on the application of regional employment growth (closest year of 2000 & 2010) on national economic growth in constant dollars according to the World Bank.

The collected data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Because of this variability, data are harmonised against the national values provided by the US Census or World Bank databases. A cross-multiplication is used to apply the observed ratio at the regional scale. These are computed at the SNUTS 2 level whenever possible, at the national level otherwise.

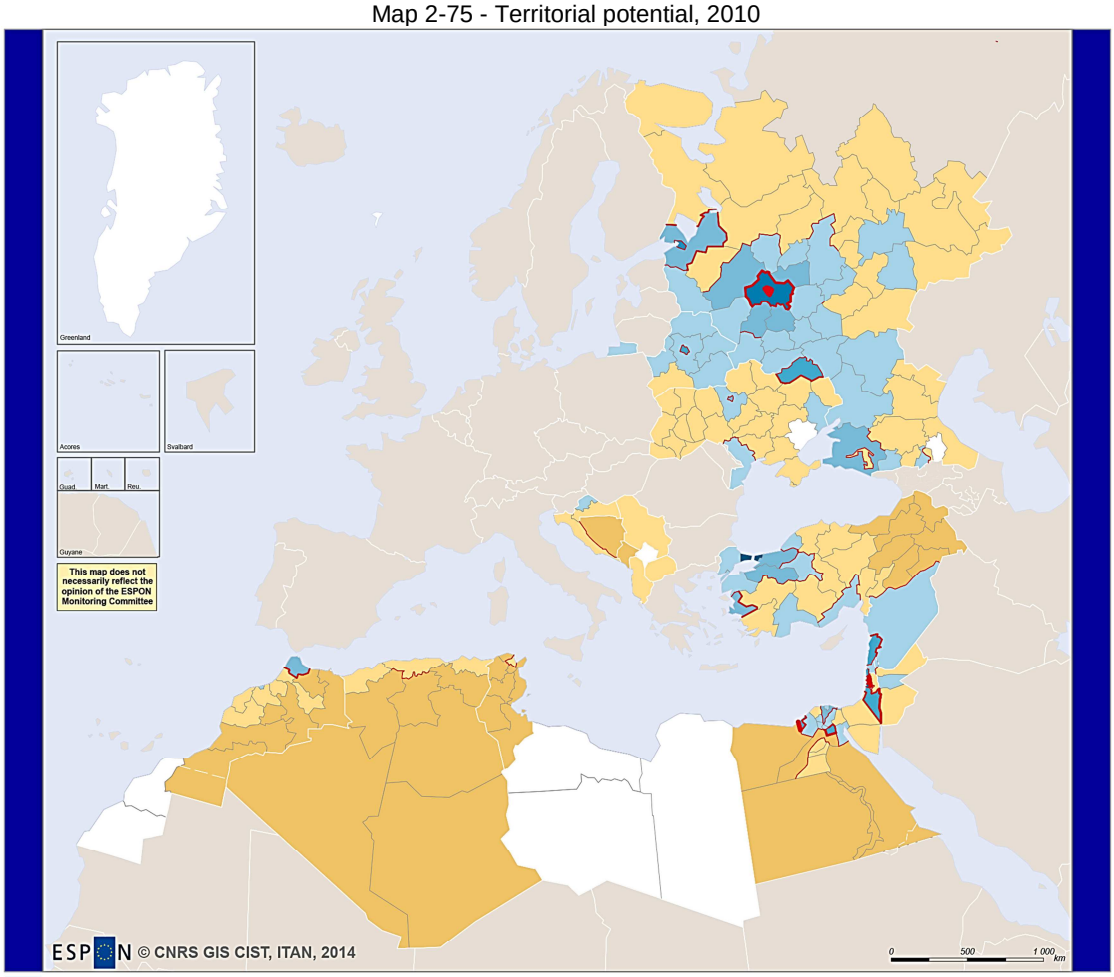
The harmonised values are scaled, which means they are standardised. The average = 0 and the standard deviation = 1, in order to make them comparable.

Figure 2-16 - Territorial dynamics, 2000-2010



But when it comes to the territorial potential, the last composite indicator of the ITAN project, the assets seem clearly in the East – read Russian and not Ukrainian – rather than in the South, with Turkey in an intermediate position and with, again, an internal great heterogeneity. Here Moscow and Israeli territories are far ahead, but several territories in upper Nile Egypt show up. Maghreb, meanwhile, is lagging behind.

Map 2-75 - Territorial potential, 2010



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Regional level: SNUTS 0-1-2
Source: ESPON project (ITAN), CNRS GIS CIST, Data calculated by MCRIT & standardised by IGEAT, 2014.
Origin of data: National statistical institutes, US Census, World Bank, MCRIT, 2013
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For some territories no clear international statement exists

Index of territorial potential*, 2010

Weak — Strong

- 0,5 σ | Average | +0,5 σ | +1 σ | +1,5 σ | +2 σ | +2,5 σ

Territorial discontinuities of the index, according to the standard deviation

- 0,5 - 1 σ
- 1 - 1,5 σ
- 1,5 - 2 σ
- 2 - 2,7 σ

no data

σ = Standard deviation

*The index is based on 3 indicators: 'tertiary education' (proportion of active population with tertiary education) at the latest available year between 2000 & 2010, 'Accessibility index' & 'Openness index'.
'Accessibility index' is based on the distance to international ports & airports. 'Openness index' is based on three indicators: number of air seats available in international flights from airport to airport, volume of international maritime flows by port & foreign direct investments.

Tertiary education & FDI data from the national institutions all over the countries covered by the project are quite disparate in terms of nature, definition, quality and time coverage. Because of this variability, data are harmonised against the national values provided by the US Census or World Bank databases. A cross-multiplication is used to apply the observed ratio at the regional scale.

The harmonised values are scaled, which means they are standardised. The average = 0 and the standard deviation = 1, in order to make them comparable.

The scaled values are aggregated to form the composite indicators "Territorial potentialal'. These are computed at the SNUTS 2 level whenever possible, at the national level otherwise.

3°) Political threats

The political threats are many. They sometimes have direct territorial impacts or origin. Table 2-7 gives a sight of the contested territories in the ENCs.

Table 2-7 - Contested territories in the Neighbourhoods, 2014

Countries or territories concerned		*International disputes*
Abkhazia & South Ossetia	Georgia	Secession of Abkhazia and South Ossetia, recognized especially by Russia
Afghanistan	Russia	Smuggling of poppy through Central Asian countries
Albania	Greece	Mass migration of unemployed Albanians
Albania	Italy	Mass migration of unemployed Albanians
Algeria	Morocco	- Rejection Moroccan administration of Moroccan/Western Sahara (the Polisario Front, exiled in Algeria, represents the Sahrawi Arab Democratic Republic) - Algeria's border with Morocco remains an irritant to bilateral relations, each nation accusing the other of harbouring militants and arms smuggling
Algeria	Libya	Libyan claims of about 32,000 sq km of south-eastern Algeria
Armenia	Azerbaijan	Break-away Nagorno-Karabakh region and the Armenian military occupation of surrounding lands in Azerbaijan
Armenia	Turkey	- Damaging of the medieval ruins of Ani (blasting from quarries) - No diplomatic ties between Armenia and Turkey
Armenia	Georgia	Ethnic Armenian groups in Georgia seek greater autonomy
Armenia	Azerbaijan & Georgia	Illegal transit of goods and people across the porous, no demarcated Armenian, Azerbaijani and Georgian borders
Azerbaijan	Russia (+ Iran & Kazakhstan)	Ratification of the Caspian seabed delimitation treaties based on equidistance, while Iran continues to insist on a one-fifth slice of the sea
Azerbaijan	Turkmenistan	Dividing the seabed and contested oilfields in the Caspian Sea
Belarus	Ukraine	Unresolved financial claims : no ratification for boundary delimitation
Belarus	Poland	Poland seeks enhanced demarcation and security along this Schengen hard border with financial assistance from the EU
Bosnia and Herzegovina	Serbia	Boundary sections along the Drina River in dispute
Bosnia and Herzegovina	Croatia	Several boundary small sections in dispute related to maritime access
Canada	*Greenland* (Denmark)	Sovereignty dispute over Hans Island
Chad	Libya	Various Chadian rebels from the Aozou region in southern Libya
Croatia	Slovenia	Pirin Bay and 4 villages and Croatia's claim of an exclusive economic zone in the Adriatic Sea
Cyprus	Turkey	- Cypriot Government creation hydrocarbon blocks and maritime boundary with Lebanon - Turkish recognition of Turkish Republic of northern Cyprus
Denmark	*Faroe Islands*	Faroese continue to study proposals for full independence
Egypt	OPT*	Gazan breaches in the security wall
Egypt	Sudan	Halaib region North of the 22nd parallel boundary (+Bir Tawil region)
Egypt	Saudi Arabia	Islands of Tiran and Sanafir
Estonia	Russia	- No signed a technical border agreement - Russia demands better treatment of the Russian-speaking
Faroe Islands (Denmark)	Iceland, Ireland & UK	Faroe Islands' continental shelf extends beyond 200 nm
Finland	Russia	Various non-official groups in Finland advocate restoration of Karelia
FYROM**	Greece	Use of the name Macedonia or Republic of Macedonia
Georgia	Russia	Russia's military support and recognition of Abkhazia and South Ossetia
Greece	Turkey	Complex maritime, air, territorial and boundary disputes in the Aegean Sea
Greenland (Denmark)	Russia	Russia' additional data to augment its 2001 Limits of the Continental Shelf
Greenland (Denmark)	Norway	Limits of the Continental Shelf

Countries or territories concerned		*International disputes*
Iraq	Turkey	- Turkish hydrological projects to control upper Euphrates waters - Turkey has expressed concern over the status of Kurds in Iraq
Israel	OPT*	- West Bank is Israeli-occupied with current status subject to the Israeli-Palestinian Interim - Israel construction of a separation barrier along the Green Line and within the West Bank
Israel	Lebanon	Shebaa Farms area of Golan Heights
Israel	Syria	Golan Heights
Japan	Russia	Islands of Etorofu, Kunashiri, Shikotan and the Habomai group remains the primary sticking point to signing a peace treaty formally ending World War II hostilities
Jordan	Syria	2004 Agreement settles border dispute with Syria pending demarcation
Kosovo under UNSCR 1244/99	Serbia	Kosovo's declaration of its status as a sovereign and independent state in February 2008
Latvia	Russia	Russia demands better Latvian treatment of ethnic Russians in Latvia
Lebanon	Syria	Portions of the boundary are unclear with several sections in dispute
Mauritania	Morocco	Mauritanian claims to Moroccan/Western Sahara remain dormant
Moldova	*Transnistria*	Secessionist movement from Pridnestrovian Moldavian Republic
Moroccan/Western Sahara	Morocco	Secessionist movement from Polisario Front (“Sahrawi Arab Democratic Republic")
Morocco	Spain	- Enclaves of Ceuta, Melilla and Penon de Velez de la Gomera & islands of Penon de Alhucemas, Perejil/Leila and Chafarinas - Maritime delimitation around Canary islands - Morocco serves as one of the primary launching areas of illegal migration
Norway	Russia	- Limits of the Continental shelf - Maritime limits in the Barents Sea
Romania	Ukraine	- Zmiyinyy/Serpilor Island and Black Sea maritime boundary delimitation - Romania opposes Ukraine's building of a navigation canal from the Danube border through Ukraine to the Black Sea
Russia	Ukraine	- Boundary through the Kerch Strait and Sea of Azov - Crimea annexation by Russia
Russia	USA	No ratification of 1990 Bering Sea Maritime Boundary Agreement with the US
Syria	Turkey	Turkish hydrological projects to control upper Euphrates waters

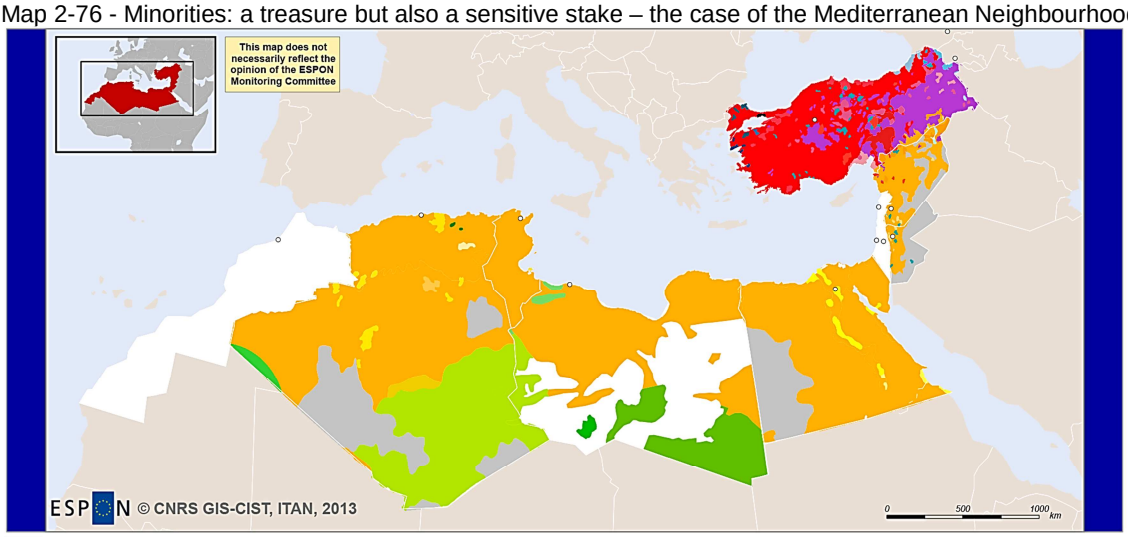
* Occupied Palestinian Territory
** the Former Yugoslav Republic of Macedonia

Source: The World Factbook 2013-14. Washington, DC: Central Intelligence Agency, 2013
https://www.cia.gov/library/publications/the-world-factbook/index.html

A Minority report

A major threat of the ENRs is related to the minority issue – as long as a cultural treasure of the wider region of course, but undoubtedly it is a component of many of the contested territories of the ENCs. Map **2-76** is an attempt to represent it in the Mediterranean Neighbourhood, but due to the lack of reliable information, it would require a whole ESPON project per se to gather the needed data. And such a project would prove hard: Arab states' censuses more and more delete questions about religion of "ethnicity", because these issues are more and more sensitive.

Map 2-76 - Minorities: a treasure but also a sensitive stake – the case of the Mediterranean Neighbourhood



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Regional level: NUTS0 2010 & SNUTS0 2013
Source: ESPON Database, ITAN, CNRS GIS-CIST, 2013
Origin of data: MINDEF France, 2013
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For some territories no clear international statement exists

- Arab
- Arab, Armenian
- Arab, Kurd
- Arab, Adyghe (Tcherkesse)
- Arab, Berber
- Arab, Berber of Oasis
- Arab, Béja
- Arab, Chaoui
- Arab, Copt
- Arab, Kabyle
- Arab, Mozabite
- Arab, Nubien
- Arab, Tuareg
- Berber
- Kabyle
- Tuareg
- Moors
- Toubou
- Toubou, Haratin
- Adyghe (Tcherkesse)
- Assyrian
- Azerbaijani (Azeri)
- Laz
- Karakalpak
- Kurd
- Albanian
- Bosniaks, Bulgarian
- Greeks
- Turk
- Turk, Adyghe (Tcherkesse)
- Turk, Arab
- Turk, Kurd
- Turk, Turkmen
- Turkmen
- Sparsely populated area
- Multiethnic population
- No data

An ethnic group is a social category, identified and mobilised by the actors themselves. The main characteristic of this group is to organise interactions between individuals. The sense of belonging is built by the ethnic group's members and is generally based on a communal language, history and culture. This is distinguished by similarity, social organisation, way of life and differentiation will - even opposition - with the other social groups.

The occupied Palestinian territory case

Nowhere in the ENCs are these contested territories, data and mapping more complex than in occupied Palestinian territory and Israel. Over the years of a conflicting history, and depending on one's political affiliation, the word "Palestine" has acquired various meanings. Generally, it refers to

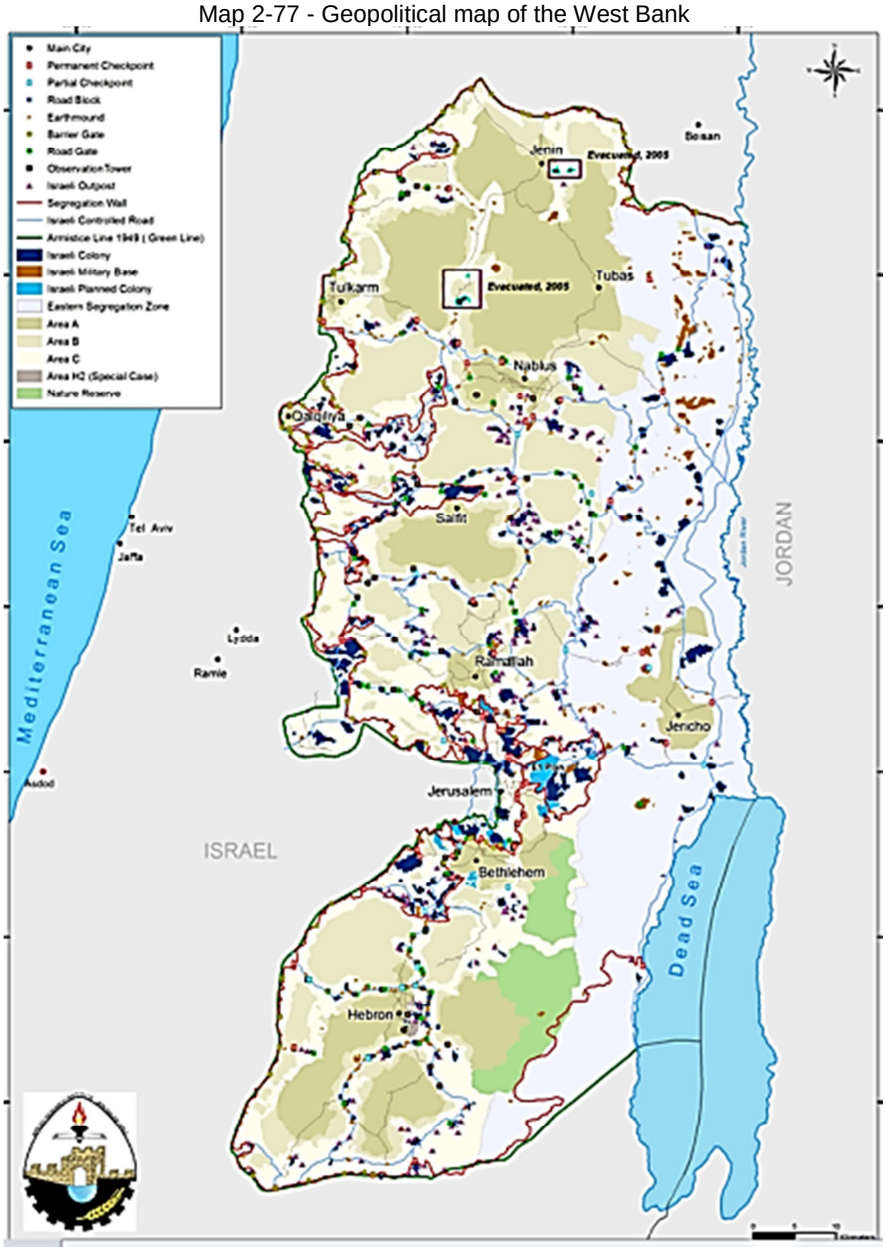
that political unit of 27 090 km^2 area laying between the river Jordan and the Mediterranean Sea, designated by the British Mandate that took possession of the region from the vanquished Ottoman Empire in the First World War After the 1948 war, Jewish forces took control of 20 700 km^2 and established the State of Israel. Then in 1967, Israel occupied the remainder plus the Golan Heights and the Sinai Peninsula. In 1988, the Palestinian National Assembly (Parliament in exile) adopted the two-state solution; hence, "Palestine" started to refer to the West Bank and Gaza. With the advent of the Oslo agreements (1993), a new term was added to the conflict's lexicon: “Palestinian territories”. This term came to mean the areas in which the Palestinian National Authority has jurisdiction; that is Area “A” and Area “B” according to the Oslo Accords. In sum, “Mandate Palestine” refers to the 27 090 km^2 area, the “Palestinian State” or “Occupied Palestinian Territory” refers to the West Bank and Gaza areas as they were before the 1967 war, and the “Palestinian territories” refer to those areas over which the Palestinian National Authority exercises some level of self-rule [POICA - ARIJ 2004].

This conflicting history has directly impacted not only the size of "Palestine” but also its internal territorial organisation and data production. Between 1948 and 1967, West Bank (800 000 inhabitants) was under the Jordanian administration and divided into 3 districts, Gaza Strip (300 000 inhabitants) was under the Egyptian administration and included 5 territorial entities. Under Israeli administration between 1967 and 1994, West Bank was divided into 8 governorates, and Gaza Strip into 5 governorates. Since 1994, according to the Palestinian Authority administration, the Occupied Palestinian territory (OPT) consist of two physically separated land masses, the West Bank (5 660 km^2, 2,6 million inhabitants in 2011, 11 governorates including East Jerusalem) and Gaza Strip (360 km^2, 1,6 million, 5 governorates).

The conflicted complexity of these recurrent territorial changes is heightened by the settlements developed under the on-going Israeli occupation: upon the Israeli withdrawal from the heart of the Gaza Strip in 2005, the main urban areas of Gaza constitute a single territorial unit, with the exception of an unpopulated security buffer zone along the northern and eastern borders of Gaza that remains under the Israeli control.

But in the West Bank, Israel’s aim has been to control as much land as possible, and this aim has been marked in 1991 by a master plan for every single settlement. In the past two decades the Israeli settlements’ built-up areas have increased from 69 km^2 in 1990 (240 000 settlers) to 189 km^2 in 2011 (179 settlements, 628 000 settlers [ARIJ GIS Department 2011] whereas the Israeli Central Bureau of Statistics says “531 000” people including East Jerusalem, see below). 84% of the Palestinian West Bank population live in Areas A and B, whilst Area C, over which Israel has full control, constitutes 61% of the total West Bank but is scarcely populated with Palestinians because of the long term restrictions imposed by the Israeli occupation to any kind of Palestinian development, particularly construction of residential homes. In the West Bank as a whole, in addition to the 72 checkpoints, 26 partial checkpoints, 94 road blocks, 163 earth mound, 121 road/iron gates, 71 watchtowers and 113 agricultural gates, Israel initiated in 2002 its “defensive wall”. Once completed, the wall will isolate 66 Palestinian localities (320 000 people including 274 000 in Jerusalem), that is 733 km^2 i.e. 13% of the total area of the West Bank [ARIJ GIS Department 2011]**.**

Map 2-77 - Geopolitical map of the West Bank



Source: Applied research institute Jerusalem (ARIJ)

When it comes to the data issue, the most valuable data on population come from the census taken by the British in 1931, and prove more reliable than any others taken in Ottoman or Mandate times. The quality of Mandate statistics declined after the 1931 census. Civil unrest, followed by World War II, made it impossible for the British to take another census. After 1948, during the Israeli occupation, the statistical situation deteriorated even further in the West Bank and Gaza Strip. Enumerating Palestinian numbers after 1948 is a difficult proposition, all the more that the Palestinians outside Mandate Palestine borders were counted poorly and sporadically[32]. Often, Palestinians arrived in countries, most of those in the Middle East, which did not take accurate censuses. In the West Bank, the Jordanians took censuses in 1952 and 1961; the second was more complete than the first, but neither was complete. Gaza's citizens were not enumerated between 1931 and 1967, when the

[32] Today, the Palestinian CBS estimates that the number of Palestinians in the world is 11,8 million, of whom 4,5 million are in Palestine (OPT), 1,4 million in Israel, 5,2 million in Arab countries and around 0,7 million in other foreign countries.

Israelis made a census of both Gaza and the West Bank. The Israeli census in 1976 provided the most valuable data yet collected.

In this report, directly derived from the ARIJ work, occupied Palestinian territory data for the years 1950 to 1990 are taken from the Palestine remembered website[33], a non-profit organisation that gathers data from this variety of statistical sources. The task is all the more difficult that Israel did not transfer the data to the Palestinian covering the years 1948 to 1994. Despite serious efforts have been made by different governmental and non-governmental institutions to generate demography data for that period, data for the years 1991 and 1993 remain unavailable, because of the unrest of the first Intifada which occurred since 1987 until the Oslo Agreements of 1993. When the Palestinian Authority took the administration in 1994, it established the Palestinian Central Bureau of Statistics (PCBS); data for the years 1994 to 1996 are preliminary estimates published by the PCBS; the first census taken by the Bureau was conducted in 1997, and the second in 2007, with quite good reliability.

Let us now see these data matters from the Israeli side. The occupation, annexation of East Jerusalem and Golan Heights, and the settlement movement emanating from the 1967 war have influenced the complex way Israel counts its own population. The 1949 borders of Israel, known more commonly as the pre-1967 borders, or the "Green Line," were in effect for only 18 years, until 1967 when Israel unilaterally occupied the West Bank, the Golan Heights, the Sinai Peninsula and the Gaza Strip. At the end of 2012, about 531 000 Israeli Jewish settlers lived in the occupied West Bank (including an estimated 190 000 in East Jerusalem); an additional 19 000 settlers reside in the annexed Golan Heights. Israel considers its population to include all those residing within the 1967 borders, plus all those residing in Jewish settlements in the West Bank, as well as all those (both Jews and Palestinian-Arabs) residing in annexed East Jerusalem and the Golan Heights. By contrast, the international community does not consider the occupied West Bank and the Golan Heights to be part of Israel, nor does it recognise the annexation of East Jerusalem or consider the settler population in the occupied Palestinian territory to be part of Israel. However, because of the way Israel collects and publishes data on its own population, it has not been possible for ITAN to obtain statistics on all characteristics of the Israeli population that excludes settlers residing in East Jerusalem and the Golan Heights. However, specific statistical analyses made it possible for ITAN to compare the settler population in the West Bank (not including those in East Jerusalem) to the population in Israel's other six districts, something which had not been done by previous research on territorial issues. Note that many Israeli maps, notably those available at schools and other state institutions, do not show the 1967 borders (Green Line) between Israel and the West Bank and the Golan Heights.

2.2.4. The ENRs' International openness as a major stake for the interaction with Europe

This section presents the geographical results stemming from the methodological analysis made in the above 1.3.13 section about the International openness composite indicator. The methodology distinguishes two approaches, one weighted by time-distance of each SNUTS 2/3 to international transport facilities which highlights *accessibility*; and one non-weighted, which highlights the *agglomeration effects*.

1°) Non-weighted international openness

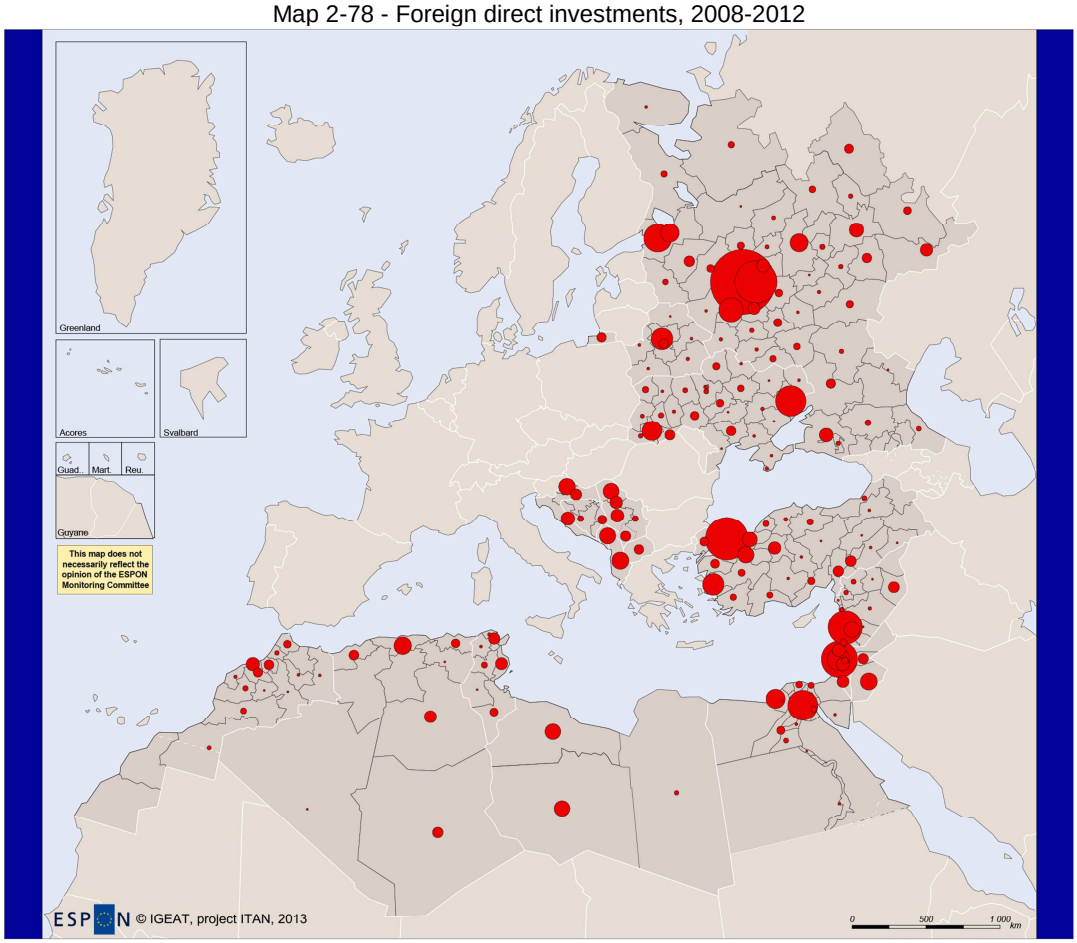
The maps below show the three components of international openness as well as their synthetic index (Map 2-78 to Map 2-81). There are two keys of interpretation of this final synthetic indicator of international openness: country effect and metropolitan effect. First, bigger and/or more developed countries have in general higher internationalisation; this was an expected result. However, the strong concentration in the first pole of the country is tempered by the geography of the major ports, often located in another city, which is an important pattern of the Neighbourhoods' geography.

In the synthesis map, we also take into account the demographic size of the territorial units (SNUTS 2/3). This highlights the international openness of Israeli territories, and the low international openness of the North African territories although we saw that their potential accessibility to the European

[33] http://www.palestineremembered.com

territory was very high. This suggests important avenues for territorial development there, to take better advantage of these North African territories' situation. The strong position of the Istanbul area is all the more impressive that it is not only due to maritime flows but also to air flight and foreign investment. In Russia, the overarching dominance of Moscow appears clearly on the map.

Map 2-78 - Foreign direct investments, 2008-2012



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FDI as a share of maximum value (Moscow = 100)
100
50
25

Regional level: SNUTS 2
Source: ESPON Database IGEAT 2013
Origin of data: Anima, Worldbank, national institutes, 2010
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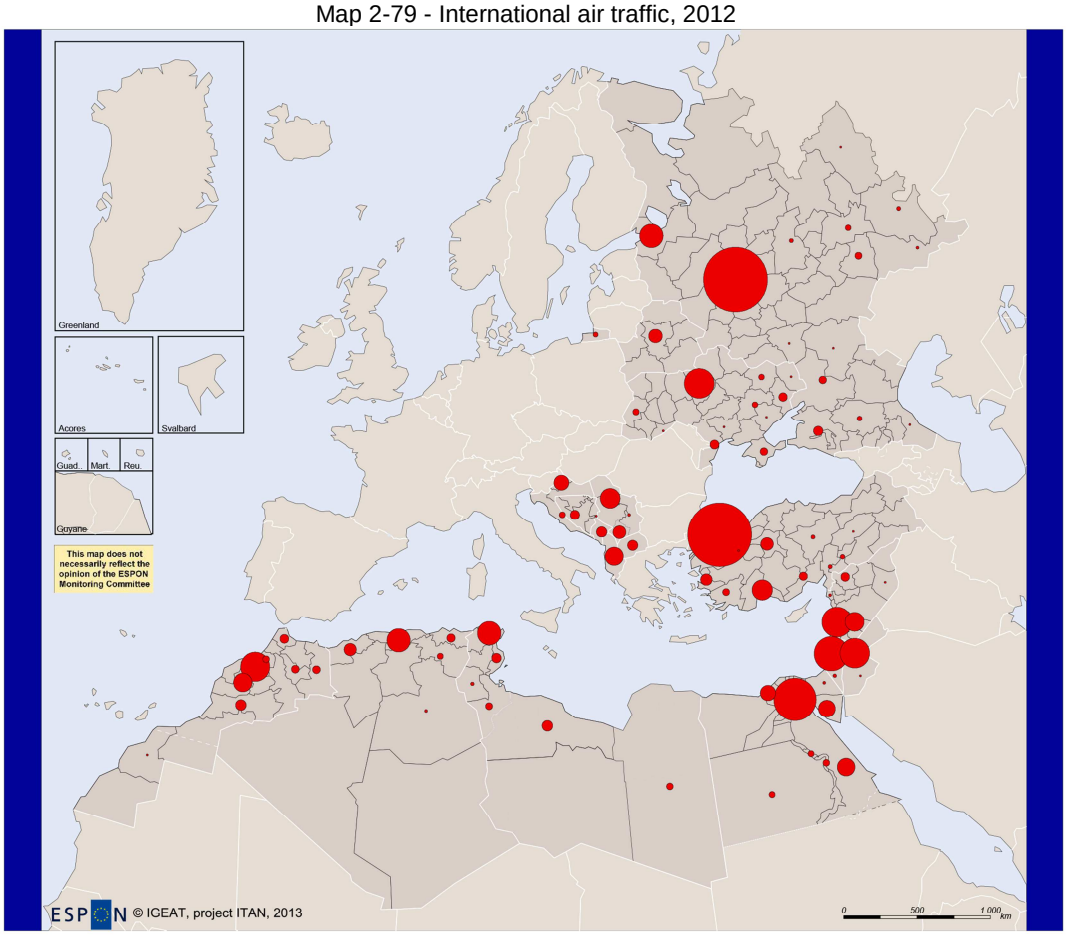
For some territories no clear international statement exists

Map 2-79 - International air traffic, 2012



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Regional level: SNUTS 2
Source: ESPON Database, IGEAT 2013 ;
Origin of data: OAG, 2012
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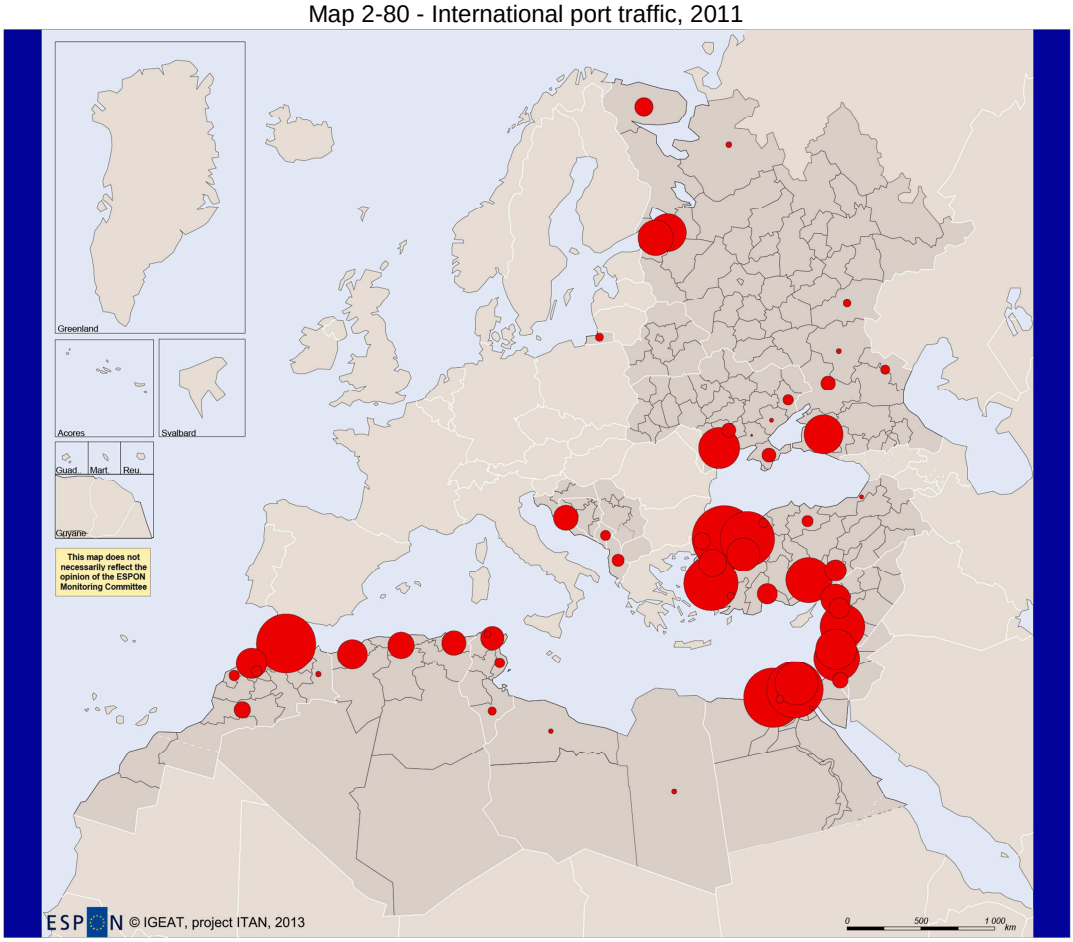
For some territories no clear international statement exists

Air seats as a share of maximum value (Moscow = 100)

Map 2-80 - International port traffic, 2011



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Regional level: SNUTS 2
Source: ESPON Database, IGEAT 2013 ;
Origin of data: Lloyd's, 2011
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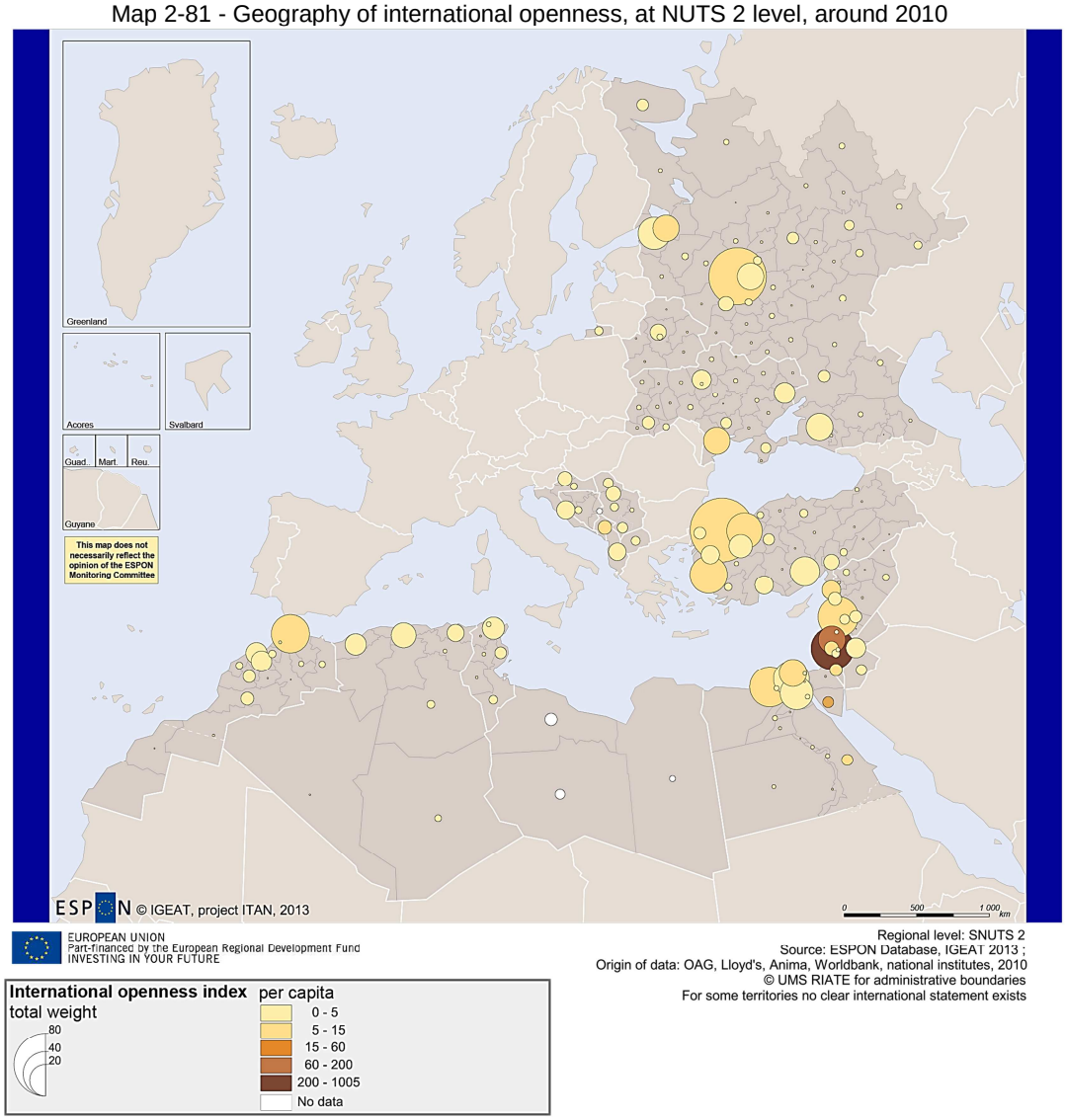
For some territories no clear international statement exists

Port traffic as a share of maximum value (Istanbul = 100)

Map 2-81 - Geography of international openness, at NUTS 2 level, around 2010

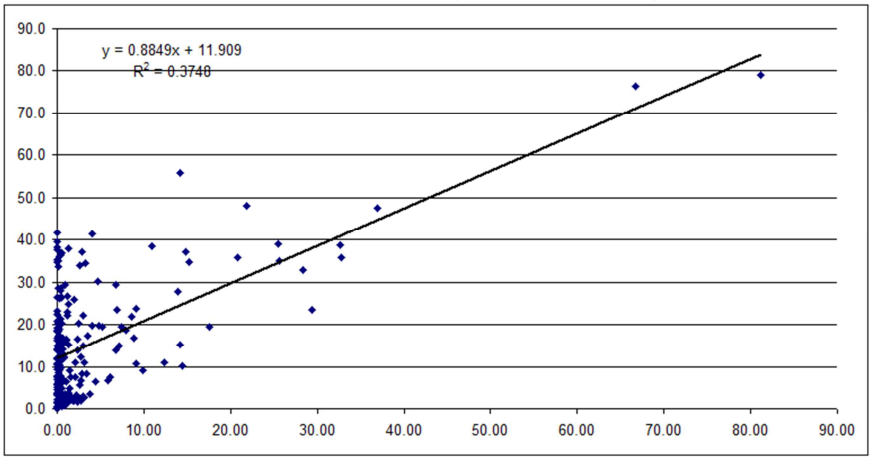


2°) Weighted international openness

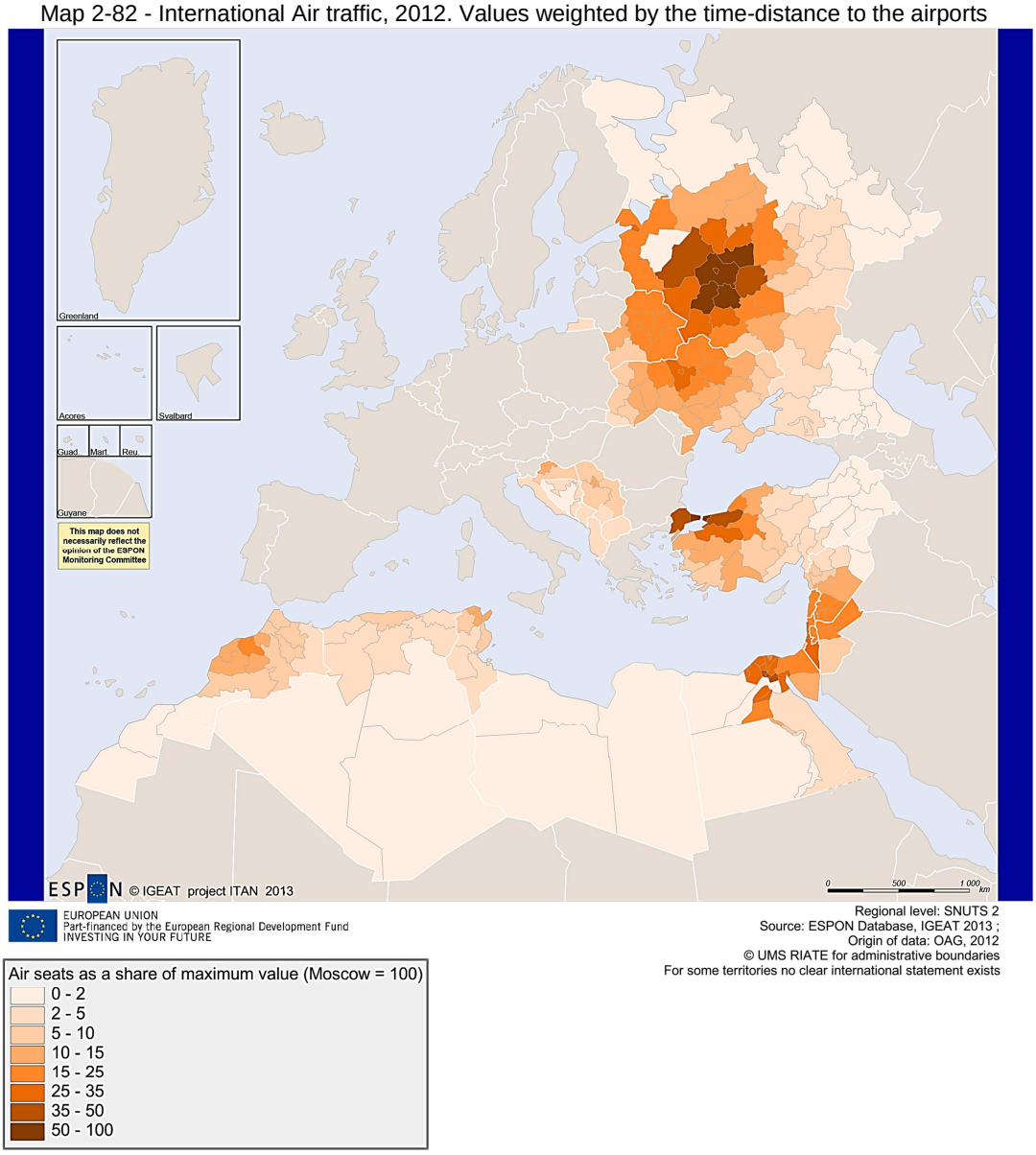
The maps below show the two components of openness which have been weighted (air and maritime flows) as well as the synthesis index. What is striking is the low performance, again, of Maghreb territories except in northern Morocco, but also of the Western Balkans (except Croatia for maritime openness). This reveals important avenues for further transport development in these parts of the Neighbourhoods.

As a whole, the correlation between the two synthetic indexes (weighted and non-weighted) is relatively low. Major differences do not only result from the diffusion effect linked to the proximity to the major port and airport infrastructures, as illustrated in the Nile delta which benefit from their proximity from Cairo airport or the Damietta and Alexandria ports, but also from the proximities to major European infrastructures in some parts of the Neighbourhoods, notably the Western Balkans.

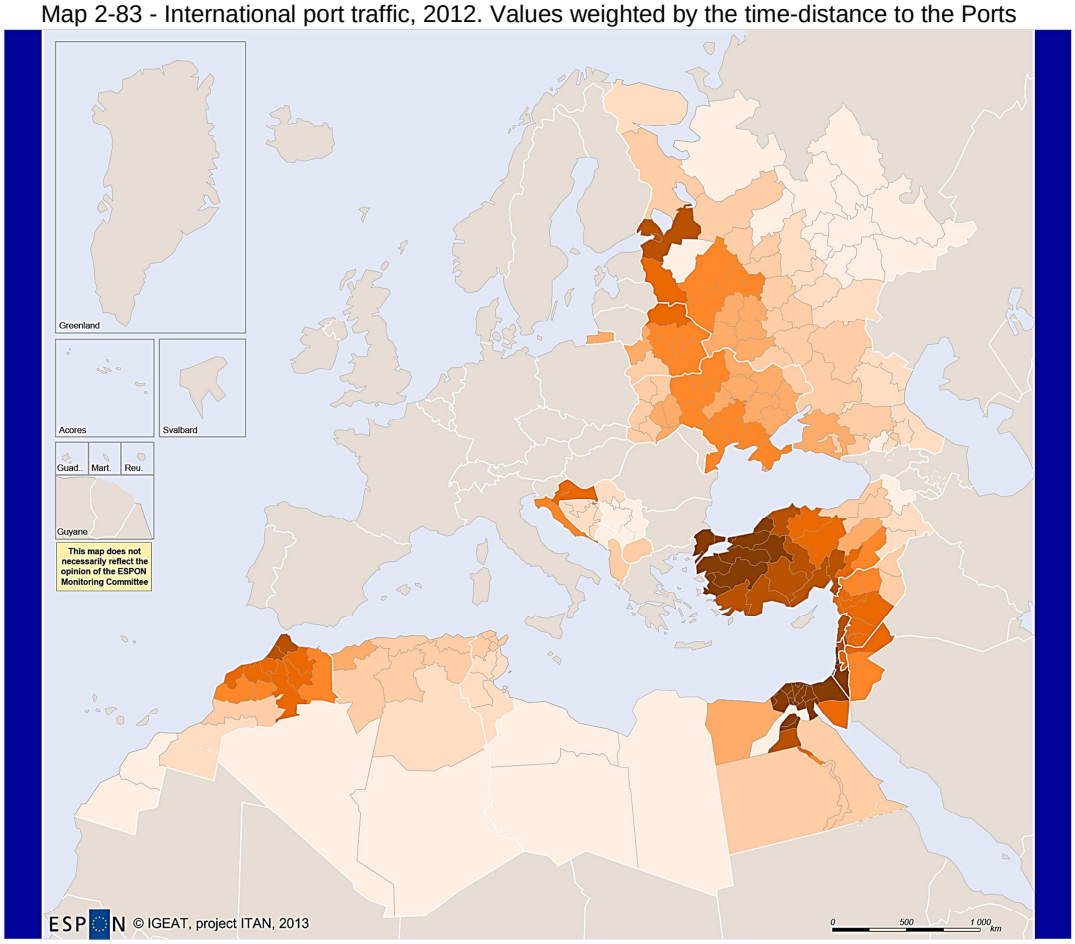
Figure 2-17 - Scores of each entity on the weighted and non-weighted international index



Map 2-82 - International Air traffic, 2012. Values weighted by the time-distance to the airports



Map 2-83 - International port traffic, 2012. Values weighted by the time-distance to the Ports



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Regional level: SNUTS 2
Source: ESPON Database, IGEAT 2013 ;
Origin of data: Lloyd's, 2011
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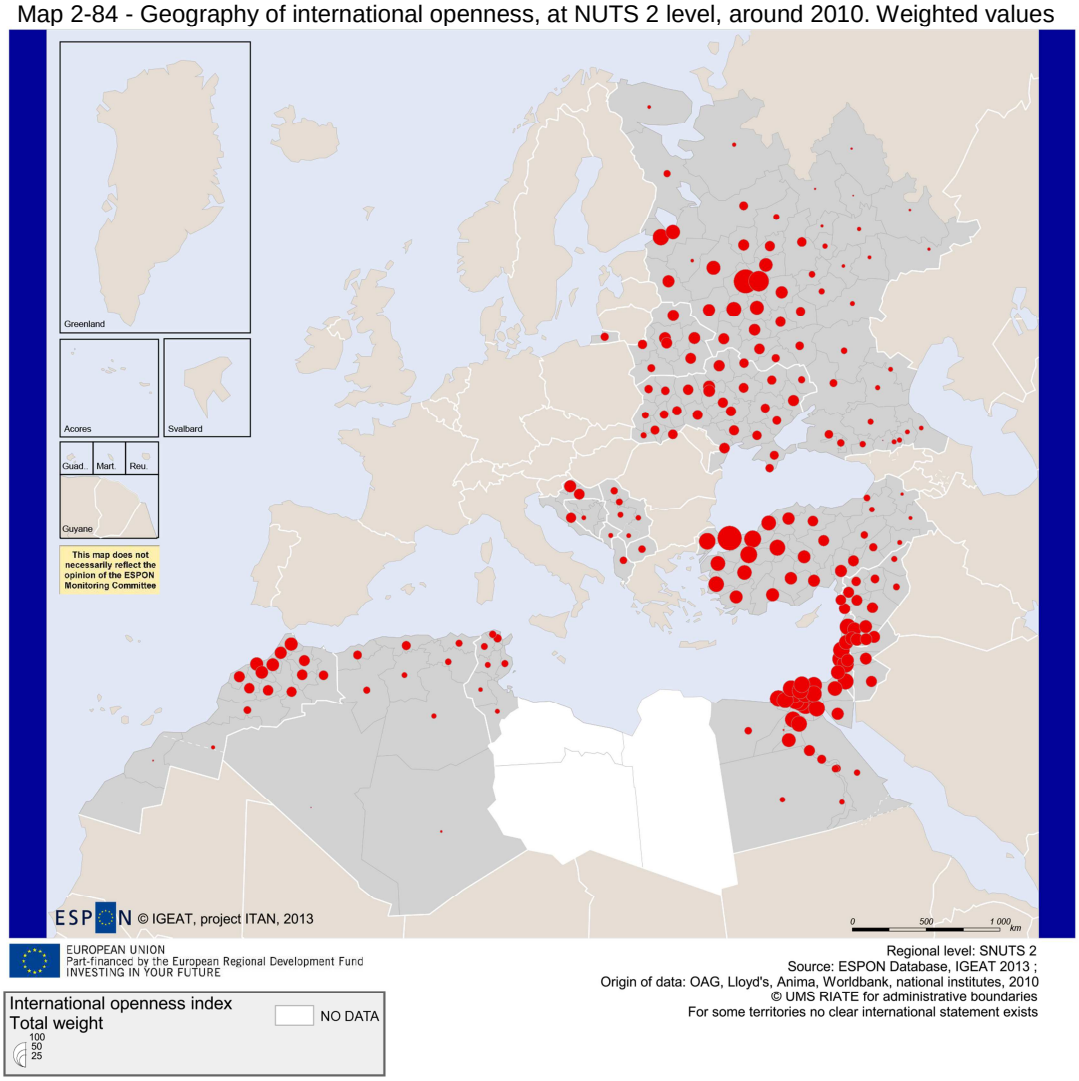
For some territories no clear international statement exists

Port traffic as a share of maximum value (Istanbul = 100)
- 0 - 5
- 5 - 10
- 10 - 20
- 20 - 25
- 25 - 35
- 35 - 50
- 50 - 65
- 65 - 100

Map 2-84 - Geography of international openness, at NUTS 2 level, around 2010. Weighted values



2.3. Do European mind about their Neighbourhoods? An analysis of the media data

This section analyses the European representation about the ENCs as seen by the European Press. It gives a first overview of the tremendous advantage than researchers can take from the media databases and their geographical treatment. They can provide a robust picture of spatial representation and mental images – a tricky field, all too often analysed through a limited number of data, surveys or interviews. To start with, we explain our choice for a panel of five generalist newspapers and five business newspapers of different European countries within the Factiva database.

2.3.1. The choice of our corpus of European newspapers

From Factiva we have constructed our own database translating the spatial vision of *a* part of the European press. We selected national flagship reference media in Europe which offered some regularity and comprehensiveness in the referencing of their articles, and have a wide audience. In order to compare them, we selected two types of press: general media, open to a wide cross-section of the public; and a more specialised press centred on the business world, for two reasons: (i) the economic potential of the Neighbourhoods is widely under-estimated by European stakeholders beyond oil and gas procurements, and (ii) business newspapers make a quite homogenous corpus

whereas generalist newspapers necessarily show a wider variety of thematic subjects from one media to another. Thus we chose one generalist newspaper and one business newspaper in five major European countries (only economic for the Czech media, see Table 2-8), under the assumption that the French, Italian and Spanish media would rather report on Mediterranean Neighbourhood's events, the German and Czech media rather on East Neighbourhood's ones. Not least than 2,4 million international (i.e. excluding the articles on the newspaper's country) press articles were analysed, over two periods: 1998-2000 so as to cover in particular the on-going change in the Eastern Neighbourhood in transition, and 2010-2012 so as to cover in particular the Arab spring.

Table 2-8 - Factiva corpus of part of the European press used by ITAN TPG

Country	*Generalist newspapers*	*Economic newspapers*
France	*Libération*	*La Tribune*
Germany	*Suddeutsche Zeitung*	*Financial Times Deutschland*
Italy	*Corriere della Sera*	*Italia Oggi*
Great Britain	*The Guardian*	*Financial Times UK*
Spain	*El Mundo*	*Cinco Dias*
Czech Republic		*Hospodarske Noviny*

Notes.
Periods 1998-2000 and 2010-2012
The Italian and German newspapers were only included for the period 2010-2012

2.3.2. Silence and noise in the European media regarding Neighbourhoods

1°) European newspapers pay a small and declining attention to the ENCs

Over the two periods 1998-2000 and 2010-2012, 15% of the 2,4 million analysed international articles focussed on at least one ENC. 17% of the articles in general newspapers include a reference to these countries, whilst the percentage is only 13,5% for the economic newspapers. This confirms that the European business milieu pays rather scant attention to the Neighbourhoods.

French newspapers make a relatively important effort to report information from ENCs: on average, in our sample 21% of French international articles addressed this area; then come British newspapers with 19%. A striking difference is that the French generalist newspaper reports many events whereas the French business newspaper reports on the ENCs in only 11% of its articles. The British business newspaper shows much more interest in the Neighbourhoods; even the German business newspaper reports more on the ENCs than its French or Spanish counterparts. But as a whole, barely 11% of the articles in the two German newspapers pay attention to these Neighbour countries.

Another concern comes from the evolution, since media attention to ENCs has rather declined between the two periods: 18,4% in 1998-2000 but 15,7% in 2010-2012. Here the figures differ according to the type of newspaper: for the general newspapers they went from 25% to 15%, for the economic newspapers from 13 to 14%. This suggests a progressive awareness of European business milieu vis-à-vis the Neighbourhoods.

It also differs according to the reported countries. From the first period (1998-2000) to the second (2010-2012) the spatial breakdown shows the decline of media coverage of the Western Balkans, for the benefit of two Arab countries in transition: Tunisia and Libya. The map pictures a – relatively – growing interest of the Mediterranean for the selected European newspapers.

Figure 2-18 - Share of the ENCs in ITAN international articles' sample by type of newspaper, 1998-00 & 2010-12

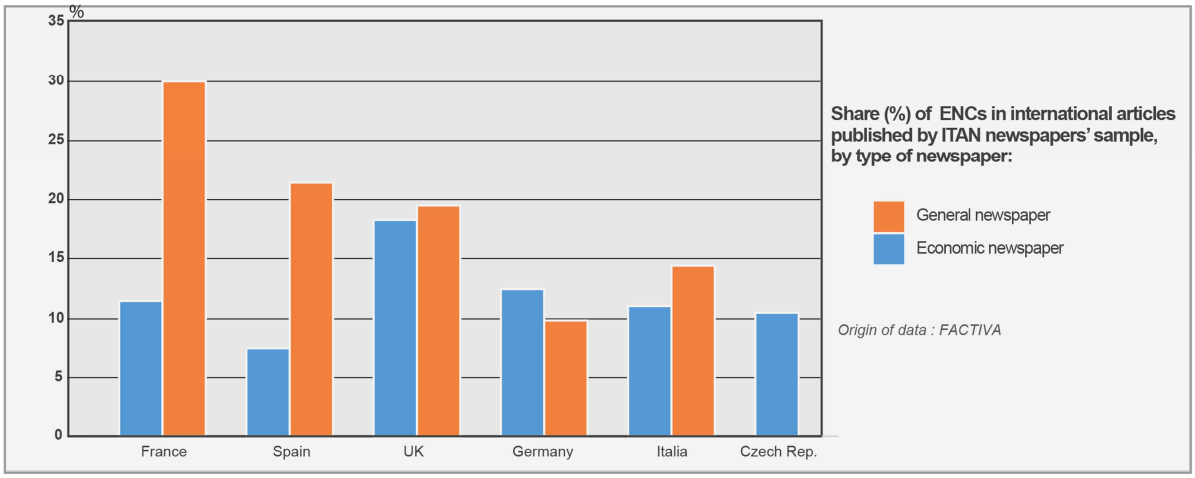
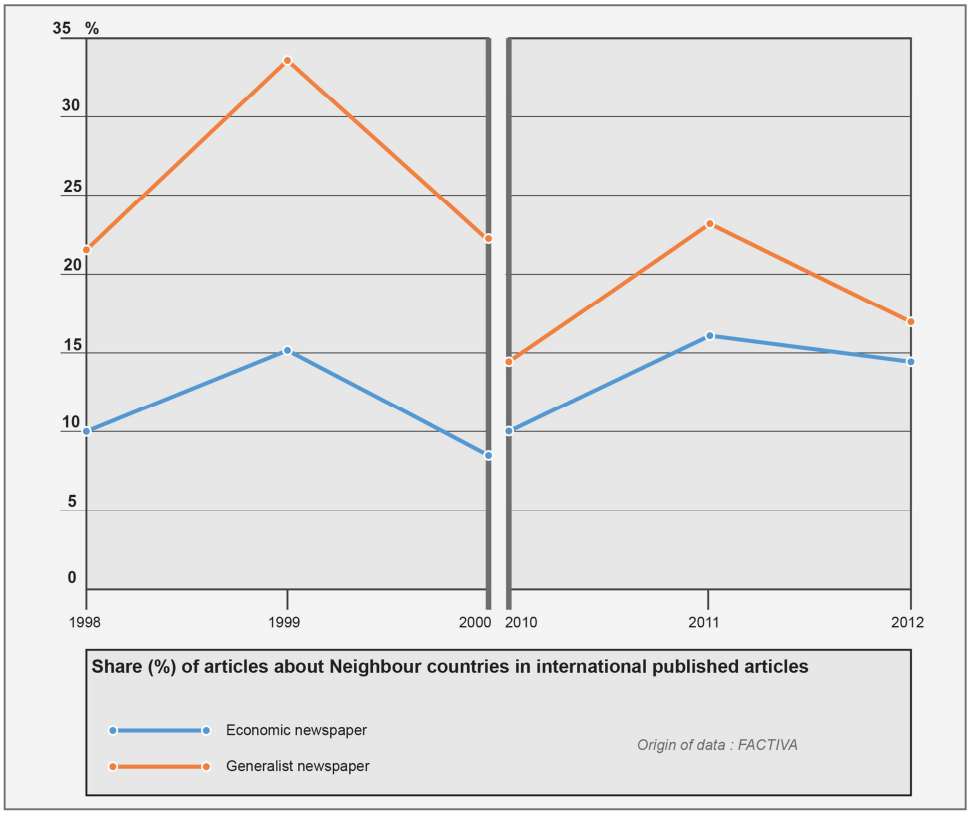
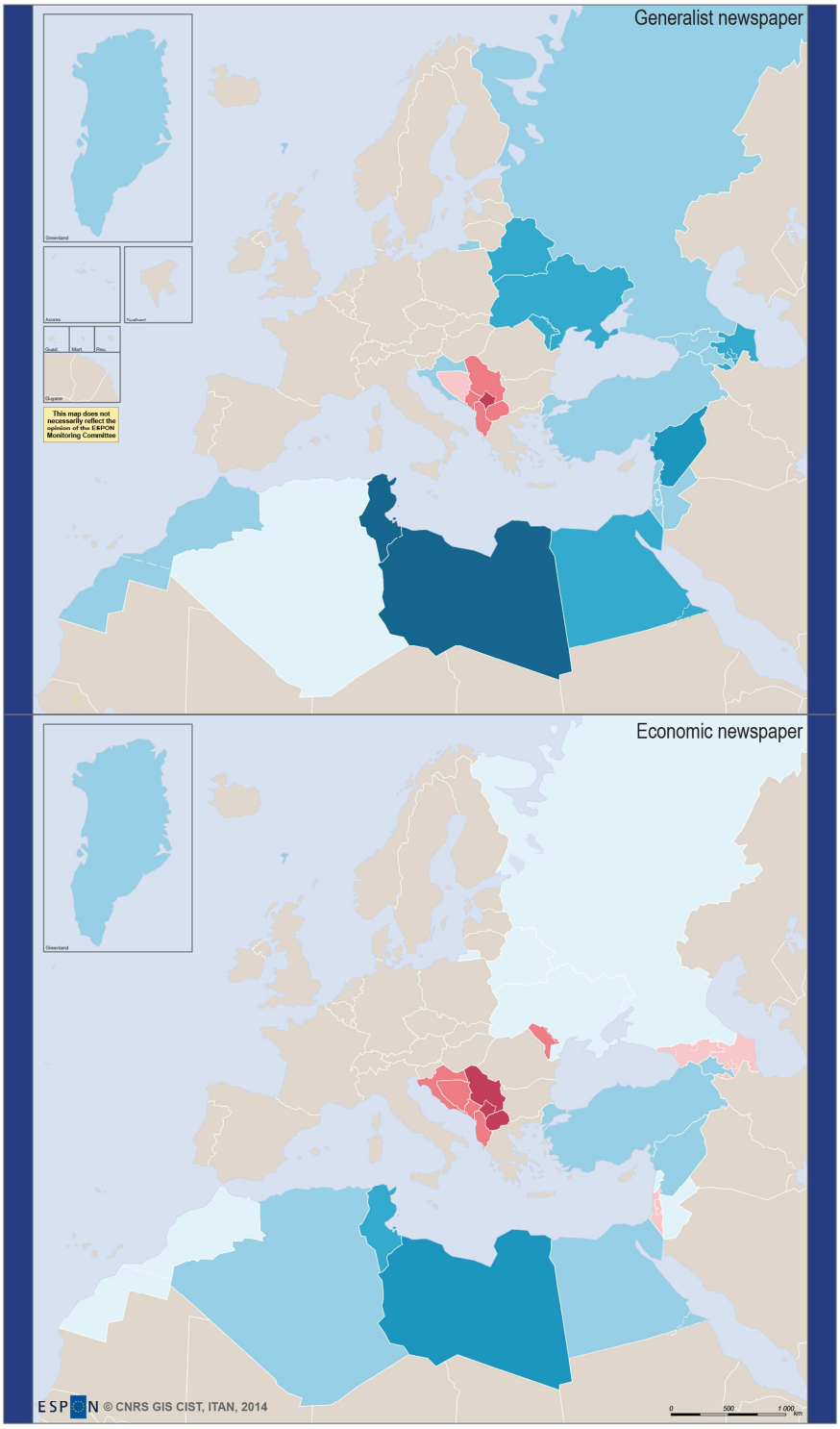


Figure 2-19 - Changing interest for the ENCs of ITAN international articles' sample, 1998-2000 & 2010-12



Map 2-85 - Media referencing in ITAN international articles' sample, from 1998-2000 to 2010-12



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For some territories no clear international statement exists

Evolution of each ENC in newspapers international published articles (in 2010-2012, base 100 = 1998-2000)

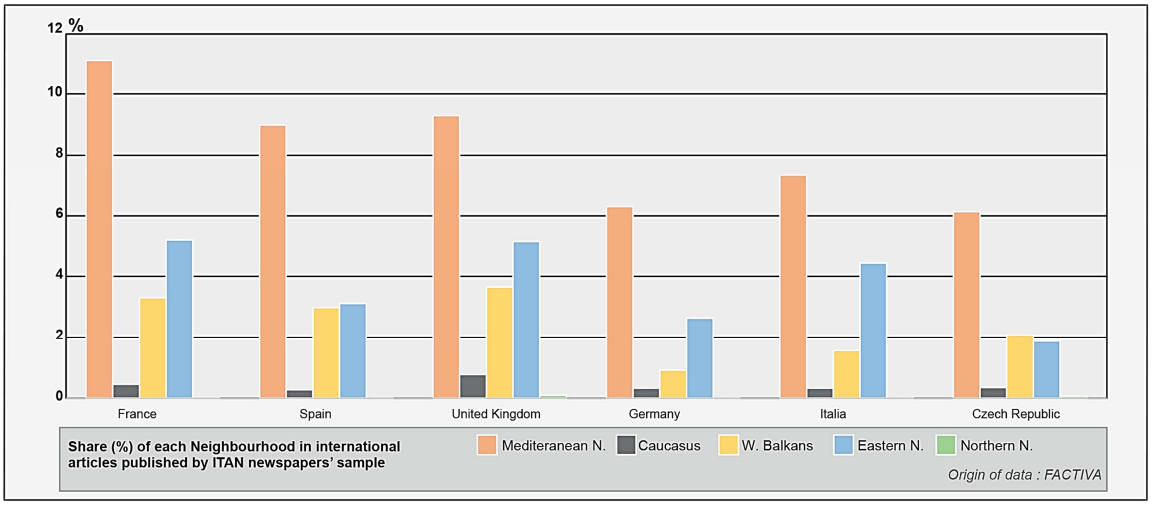
9 | 30 | 75 | 100 | 150 | 350 | 510 | 650 | 1 292

2°) Importance of the Mediterranean particularly Turkey, in the East importance of Russia

Figure 2-20 displays the high coverage of countries of the Mediterranean Neighbourhood, which is logical given the number of considered countries (11) and the media events that took place in those countries since 2011. French newspapers appear to pay more attention than others to events in the Mediterranean.

The second area of media coverage are the Eastern Neighbourhood countries, which prove particularly attractive to the French and British press and not, surprisingly, to the German. Western Balkans rank third, primarily featured in British, French and Spanish newspapers, and not very much, once more surprisingly, in German, Italian or Czech media. The Caucasus area turns out to be quite forgotten by our European newspapers, together with the Northern Neighbourhood; this is primarily explained by the small number and the tiny size of these countries.

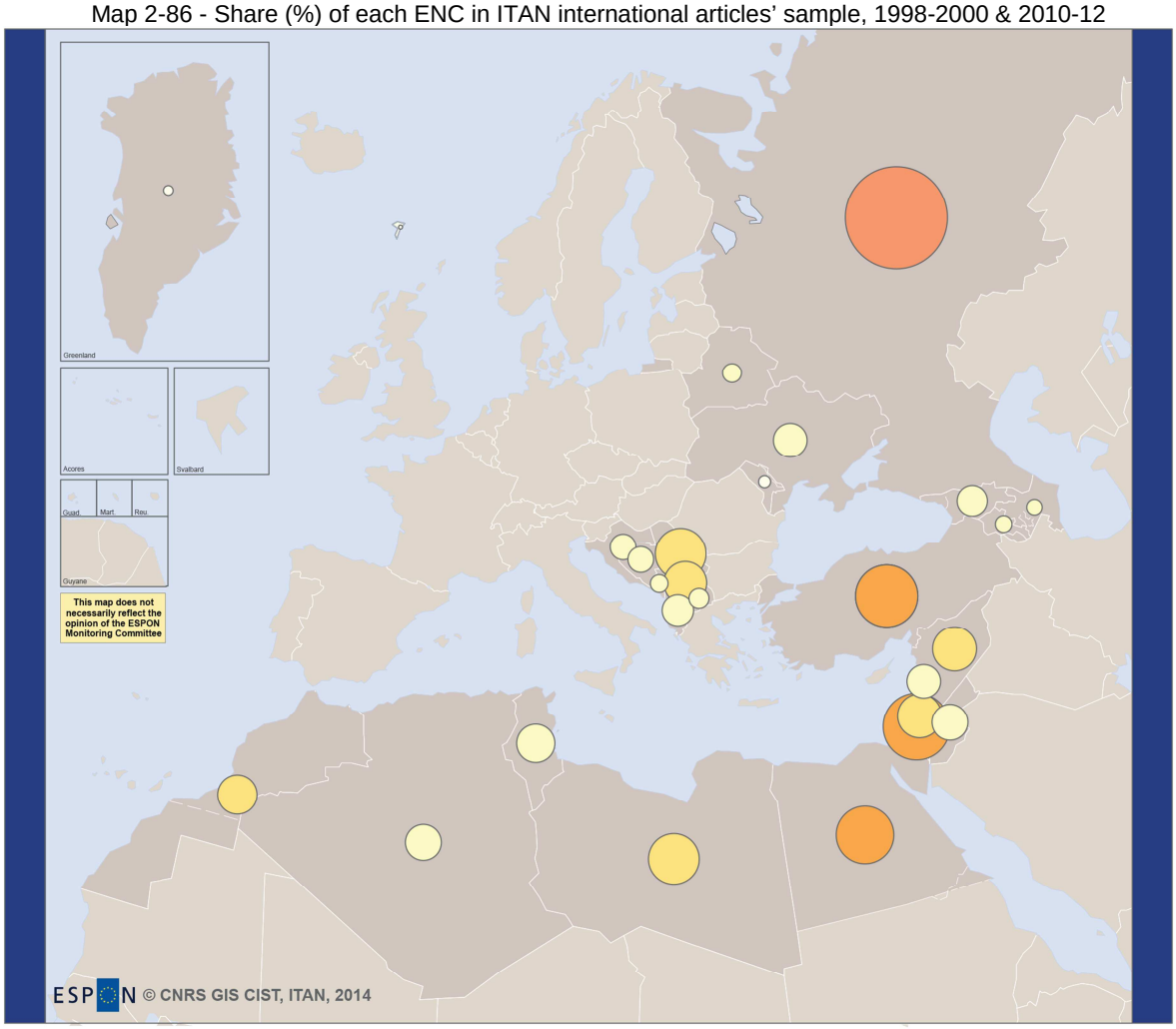
Figure 2-20 - Share of each Neighbourhood in ITAN international articles' sample, 1998-2000 & 2010-12



By country, Russia achieves the highest coverage level with 3,5% of our sample. A small group of countries receive a 1%-1,5% amount of media coverage due either to the magnitude of the events taking place (Egypt and Serbia) or to the business and political ties with the European Union (Turkey and Israel). All other ENCs are under 1%.

The general spatial organisation remains the same whatever the type of newspaper. Note however that some countries are very lowly mentioned on the business media scene: Albania, Bosnia and Kosovo under UNSCR 1244/99 in the Western Balkans which do not seem to be credible target for European business except Serbia; occupied Palestinian territory to a lesser extent (Map 2-87).

Map 2-86 - Share (%) of each ENC in ITAN international articles' sample, 1998-2000 & 2010-12



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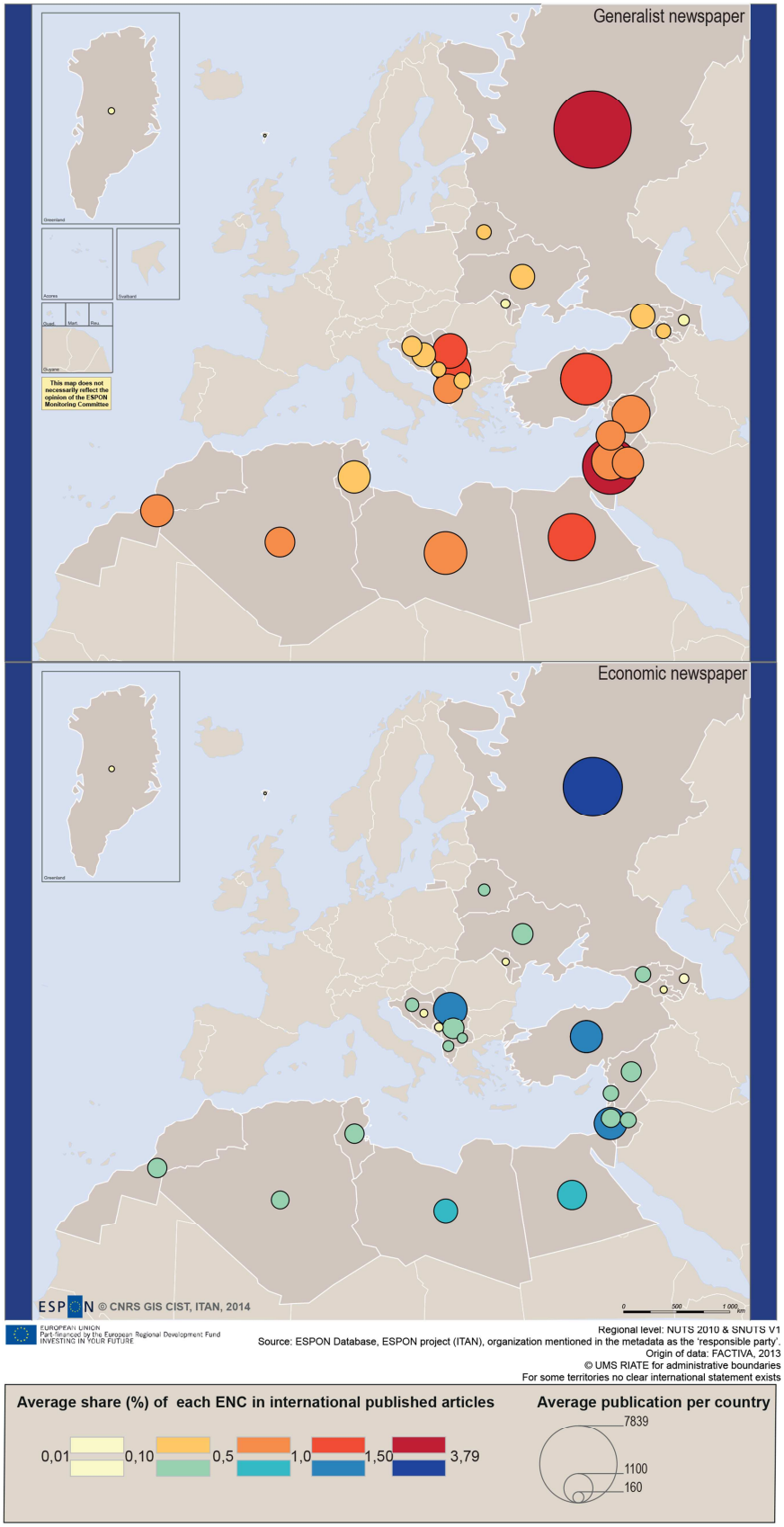
Average share (%) of each ENC in international published articles

0,001 | 0,05 | 0,5 | 1,0 | 2,5 | 3,47

Average publication per country

6887
1739
253

Map 2-87 - Share (%) of each ENC in ITAN international articles' sample by type of newspaper, 1998-2000 & 2010-12



The analysis by nationality of the considered newspaper brings further information. As we said the French press is more open to the Mediterranean than the other European media. The specificity of the French generalist newspaper is that it covers the whole Neighbourhoods, with a focus on Russia and Turkey. The Neighbourhoods geography of the business French newspaper is quite alike that of its European counterparts.

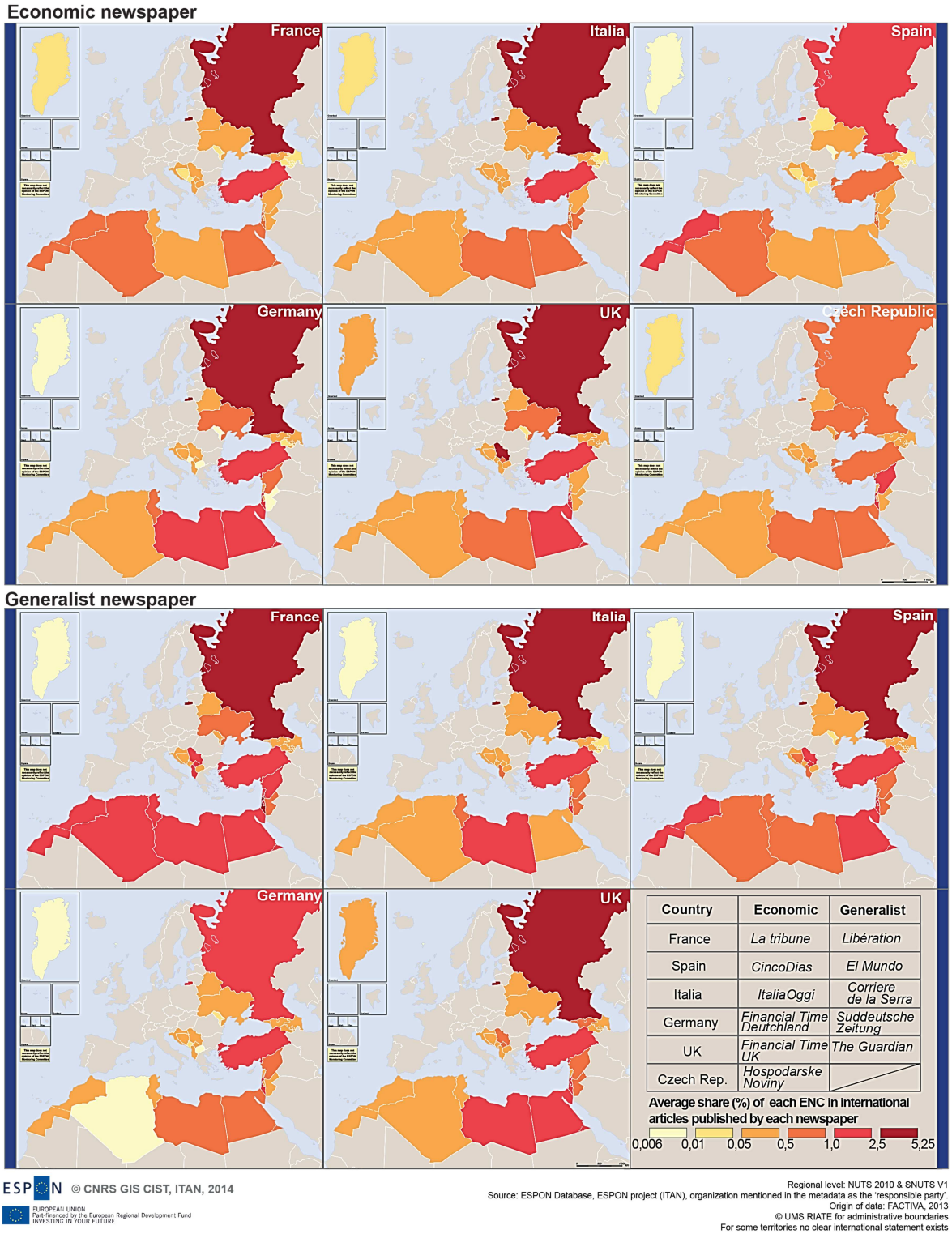
The coverage of the Italian media is concentrated on a small number of countries: Russia and Turkey (Turkey is a target of all newspapers whatever their nationality or type), and Libya for the business newspaper. Conversely, Italy neglects some countries in the Western Balkans (Kosovo under UNSCR 1244/99 and Serbia).

Spain has a quite balanced coverage, with its business newspaper being focused on Russia, Turkey and Maghreb especially Morocco. The British press, including business, holds little interest in the Maghreb events and more (along with Russia) in countries such as Turkey, Egypt, Libya and Serbia, but not that much, for the business newspaper, in the English speaking Near-East. The general German newspaper concentrates on Russia and Turkey, the business one has a wider outlook including Tunisia where the German enterprises have recently significantly invested, but, as we said, not the Western Balkans.

The press in the Czech Republic pays attention to a quite wide outlook of countries, and, compared with the other newspapers, less in the most important countries elsewhere: Turkey and…Russia – a surprising result.

Belarus is hardly reported by either of these newspapers, Ukraine a little bit more (by British and German business newspapers).

Map 2-88 - Share (%) of each ENC in ITAN international articles' sample, by type and nationality of newspaper, 1998-2000 & 2010-12



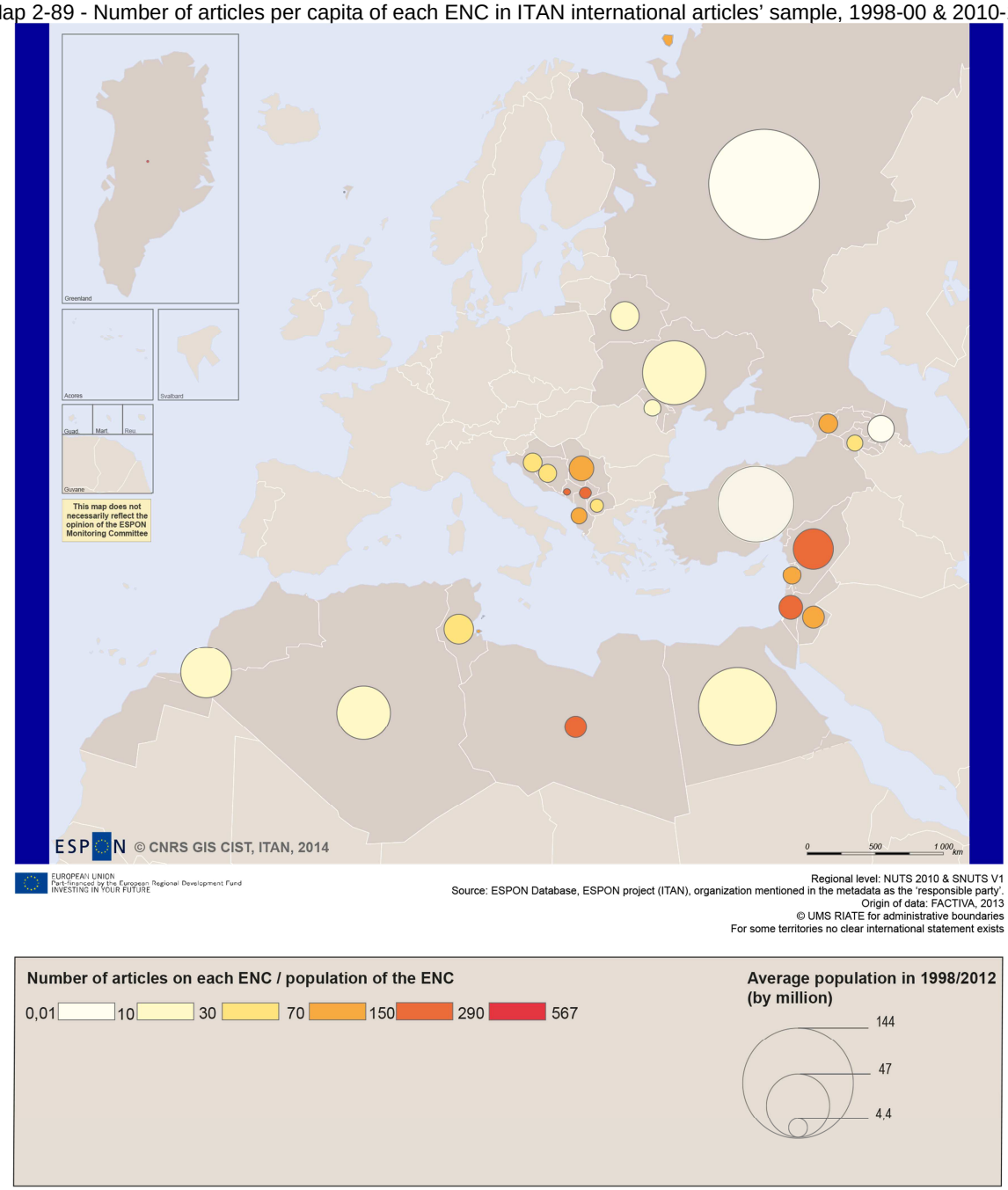
3°) Removing demographic and economic differences: war places and the Mediterranean

The following maps calculate a media coverage factor that is independent of the ENC's demographic (Map 2-89) and economic (

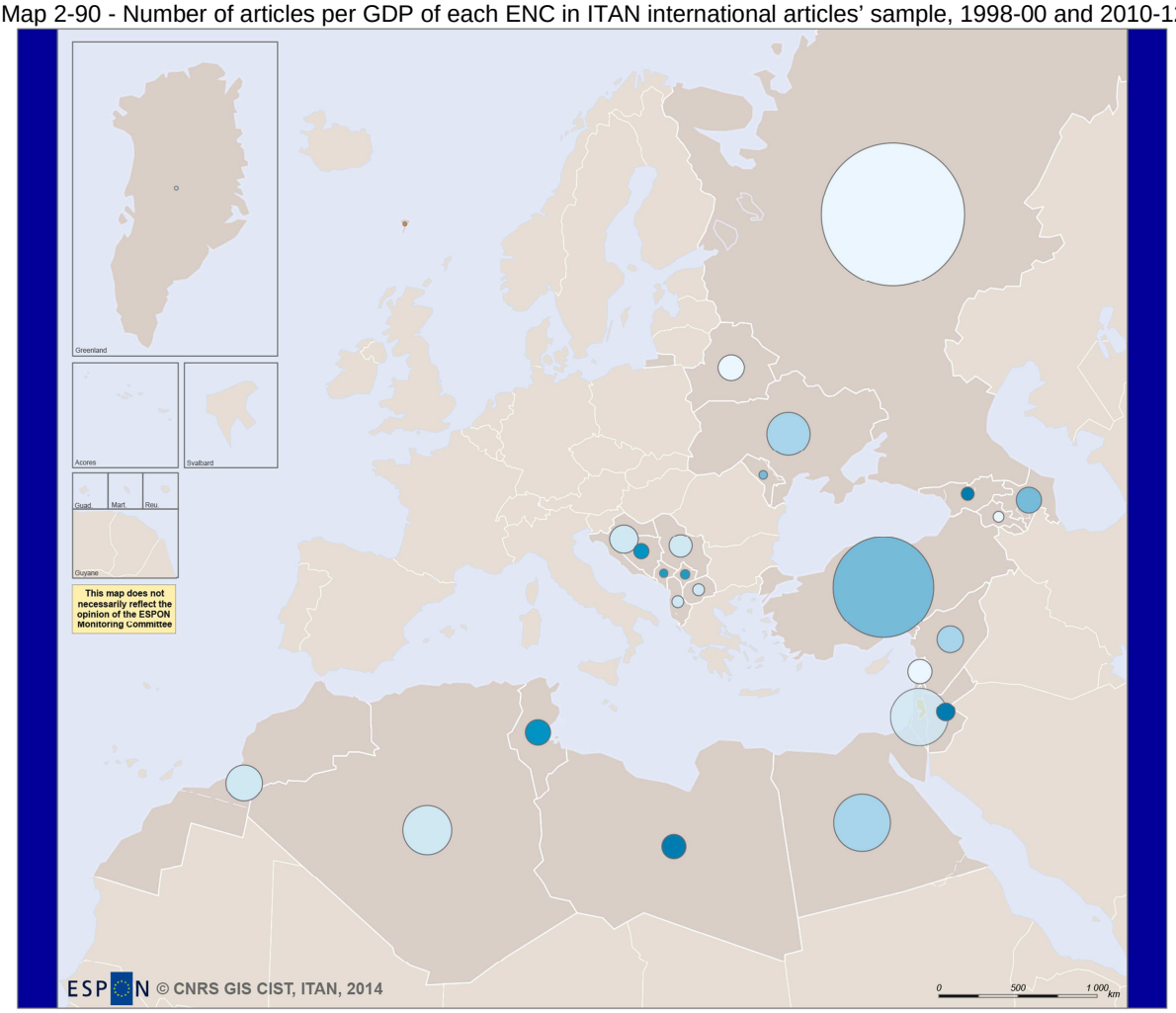
Map **2-90**) weighting. Per capita (number of people living in the considered Neighbour country), Near-East becomes the major area under the European press scrutiny along with Western Balkans and Libya, that is to say the recent or actual unrest places. Two further smaller focus areas can be added: Georgia and Tunisia. We can conclude that the first thing that interests European readers in the Neighbourhoods is political instability.

When measured per GDP, the cope changes. The poorest countries receive better media coverage: Kosovo under UNSCR 1244/99 and Montenegro, Georgia, Libya and even Jordan. Conversely, some countries with higher GDP like Russia or Israel receive few mentions in the newspapers. Only Turkey appears to stand out. According to this per GDP indicator, Belarus, Algeria, Morocco, Serbia and even Croatia show surprisingly very lowly interesting for European newspapers.

Map 2-89 - Number of articles per capita of each ENC in ITAN international articles' sample, 1998-00 & 2010-12



Map 2-90 - Number of articles per GDP of each ENC in ITAN international articles' sample, 1998-00 and 2010-12



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For some territories no clear international statement exists

Number of articles on each ENC / GDP of the ENC

0,01 | 3 | 10 | 30 | 85 | 230 | 601

Average GDP in 1998/2012 (by million, constant $ 2005)

945
640
108

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