

TPM

Territorial Performance Monitoring

Targeted Analysis 2013/02/13

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The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU27, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

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List of authors

Lead partner:

Institut de Gestion de l'Environnement et d'Aménagement du Territoire (IGEAT) – Université Libre de Bruxelles (ULB), Belgium: Moritz Lennert, Mirjam Schindler, Catherine Patris

Coordination of qualitative analyses

Departement Architectuur Stedenbouw en Ruimtelijke Ordening (ASRO) - Katholieke Universiteit Leuven (KULeuven), Flanders, Belgium: Loris Servillo

Regional partners:

Departement Architectuur Stedenbouw en Ruimtelijke Ordening (ASRO) - Katholieke Universiteit Leuven (KULeuven), Flanders, Belgium: Els Lievois, Loris Servillo, Pieter Van den Broeck

Institut d'Estudis Territorials (IET), Catalonia, Spain: Joan López Redondo, Laura Capel Tatjer

Institut für Landes- und Stadtentwicklungsforschung (ILS), North Rhine-Westphalia, Germany: Isabel Ramos Lobato, Mario Reimer

National Institute for Regional and Spatial Analysis (NIRSA), Dublin, Ireland: Justin Gleeson

Navarra de Suelo Residencial (NASURSA), Navarre, Spain: Marian García, Guillermo Álvarez

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Framework for qualitative analysis

Complete regional qualitative reports

Detailed description of indicators and tools used for benchmarking

Complete regional quantitative reports

Monitoring systems in North Rhine-Westphalia

ESPON TPM Prototype Benchmarking Tool plus NUTS 2 and NUTS 3 indicator files for the tool

ESPON HyperAtlas .hyp files and related .xls files with NUTS 2 and NUTS 3 indicators

Introduction

State of the project

This is the interim report of the Territorial Performance Monitoring project. The project's main objective is to develop tools in order to support regions in their attempts to monitor their performance in addressing the main European challenges identified by previous ESPON projects (demography (ageing), new energy paradigm, climate change, and globalisation) in their regional policies.

We are half-way through the project and can present first results. We have spent the last six months with two main tasks: a qualitative analysis of the regional planning systems and policies in our stakeholder regions in order to provide an overview of how they deal with the European challenges and a quantitative EU-level benchmarking exercise which allows to position a region in a comparison with all other EU regions. Both of these can stand as results of their own and will hopefully provide useful insights to our regional stakeholders and other policy makers, but they also serve as basis and test for the elaboration of a draft monitoring tool kit which any region should be able to use and which we will test in the upcoming phase of our project.

Please note that because of different delays in the elaboration of the different analyses and the fact that this report comes at the end of the summer period which is always a difficult time for coordinated working, the "results" presented in this report should be considered as draft which will be discussed with the project stakeholders and within the scientific team at the next meeting foreseen end of September.

Introduction to the content of the report

The first part of the report presents the current empirical results, beginning with a short reflection on the translation of European challenges to regional scale and then going on to present a summary of the bulk of our recent work: the quantitative benchmarking and qualitative analyses of our stakeholder regions.

The second part presents our proposal of a draft monitoring tool kit which we will test in the stakeholder regions during the next phase.

Part A Empirical results

A.1 Introduction

A.1.1 On the translation of European challenges to regional scale

In the ESPON TPM project, the explicit demand is to evaluate how regions fare within challenges defined at European level. It, thus, seems relevant to compare a region's performance with the EU average. This might also allow to relativise some issues that are perceived as problems in the region, but are actually not a "problem" as such, when compared to the EU average. At the same time, this average mixes the situations of many, very diverse regions and thus might not mean very much for the specific situation of the region.

A specific European perspective might, however, help a region interpret its evolution within the context of larger, Europe-wide, phenomena, thus allowing a different perception. Such an approach is generally not well served by generic benchmarking which posits the position of a region for a specific indicator against the average value of this indicator at European level, although such benchmarking allows to relativise a region's situation. It rather needs a more structural, explanatory approach which provides insights into the position of a region in patterns of development. For example, when looking at demographic evolutions, a region might simply note its loss of population and see this as a problem. At a European scale, however, there might be a perspective of necessary concentration of population in order to achieve agglomeration effects. Understanding this phenomenon of concentration at another scale should allow the region to develop more adequate responses to its specific local situation. However, there is no straightforward and unequivocal way of interpreting the regional effects of global challenges and it often depends on the political perspective one chooses to take. For this interim report, we have used two approaches to deal with the question: on the quantitative side, we have very simply used the typologies created by relevant ESPON projects in order to understand where a region stands amongst different possible Europe-wide regional paths. On the qualitative side, we have explored whether and how regions take into account the European perspective when dealing with their regional development and spatial planning policies.

An important issue in European regional policy making is the frequent attempt at European level to downscale indicators used at national scale to regional scales, in order to understand different regions' contribution to the overall phenomenon under study. When it comes to understanding the structure and geography of a particular question, this can be a very helpful approach. However, when it comes to policy making, an indicator which has a specific meaning at one scale, might be more or less

meaningless at another. An example would be the debate about ageing and what is seen by some as a need to raise activity rates in order to ensure the sustainability of social security programs, and notably pension schemes. Indicators such as the activity rate or the old-age dependency rate are used to illustrate and measure the issue. While this may make sense at national level, which is the level at which social security systems currently function in Europe, the meaning of these indicators becomes quite different when used at regional level as they give more a vision of residential preferences of different age and population groups, more than an idea of the sustainability of social security systems. Unless the political objective is to create absolutely identical regions across Europe, such indicators thus have to be handled with care in a regional monitoring context. However, across countries the relevant scale for using such policy-oriented indicators might vary, depending on levels of competencies the organisation of social security or other public systems and there is, therefore, no one truth. Stakeholders in each region rather have to define which indicators have which meaning in their context, and this work of definition is an important part of any regional monitoring system.

A.1.2 On the objective of using ESPON data, results and tools in Priority 2 projects

ESPON priority 2 projects such as this one are not meant to develop many new datasets or new tools, but rather should focus on the use of existing ESPON results through the lens of a specific question and through the lens of specific regions. The idea was thus not to develop many new indicators relating to the global challenges, to collect data from new data sources and to develop new analyses, but rather to use the existing work in ESPON, notably priority 1 projects, and apply it to the particular question at hand. However, unfortunately some of the data was not yet available (notably from the Climate Change and TIGER projects) and for those where data was available, it was not necessarily in a usable state (wrong metadata, sometimes obviously wrong data) in the ESPON Database. So we did have to complement with specific downloads from Eurostat, causing more work than should be necessary. This is an important issue for ESPON if in future ESPON data is to be easily usable by regional stakeholders.

But ESPON not only provides data, but also tools and we decided to put the focus on the ESPON HyperAtlas for the quantitative benchmarking. This tool, although far from perfect, provides a very interesting approach for multiscalar analysis allowing to situate a region in its context. The potential for a very useful service to regions is there, but the ESPON programme will have to invest more into this tool to allow the full usage of this potential.

A.2 State of stakeholder regions in Europe-wide quantitative benchmarking

A.2.1 Introduction

In this first quantitative “benchmarking” exercise within the project, we used a simple and fairly classical approach, using existing ESPON data and tools whenever possible. For more indicators, we used an ESPON tool that has been developed precisely for this purpose, the ESPON HyperAtlas.¹ The HyperAtlas is an online tool that provides the possibility to map the situation of a region in absolute and in comparison to reference values in a multi-scalar approach. In its current development version, it allows to upload personalised datasets. Even though some elements still need improvements, it has the potential of becoming a very useful benchmarking tool to regional policy makers. Together with this interim report we provide files for NUTS 2 and NUTS 3 level that were used for our benchmarking and which can be amended and loaded into the HyperAtlas, thus allowing data updates and change or addition of indicators.

The HyperAtlas only allows the use of indicators that can be decomposed into a nominator and a denominator. It is thus impossible to feed it with indicators such as life expectancy or median age, or with any indicator which in theory could be decomposed in such a way, but for which in practice the decomposed values are not available. We, therefore, built a second prototype tool, the ESPON TPM Benchmarking prototype tool, based on a simple LibreOffice² spreadsheet approach and which allows to use data for which the nominator / denominator approach is not possible. Either by providing it with the value for higher-level spatial units, thus allowing a comparison, or by providing it with weights for one single level of spatial units allowing the calculation of weighted averages for higher-level spatial units. Both versions can also be fed other, external reference values. They do not, however, allow comparisons to a given neighbourhood such as possible in the HyperAtlas.

Most ESPON analyses and typologies are at NUTS 2 level. With the exception of Nordrhein-Westfalen and Flanders this will only allow an analysis of the region as a whole (for the Greater Dublin Area a region even above that). For the benchmarking exercise presented in this report, we decided to benchmark each region as a whole, i.e. Flanders and Nordrhein-Westfalen as NUTS 1 regions, and the other three as NUTS 2³. However, all the maps are presented in the smallest spatial unit available, thus already giving a first glimpse of intra-regional differentiations. Part of the

1 http://www.espon.eu/main/Menu_ScientificTools/ESPONHyperAtlas/

2 LibreOffice is a free software office suite that can be downloaded at <http://www.libreoffice.org/>. The spreadsheet can also be used with OpenOffice.org.

3 An approach benchmarking each subunit of the stakeholder regions, even if data would have sometimes allowed it, would have led to a very long report.

application of the monitoring tools in the regional tests after the interim report will be the refinement of this analysis to even lower scales, in order to allow the analysis of the position of subregions. For this, specific input files for the HyperAtlas will be elaborated for each region, allowing the use of this tool at local scale as well.

In the following, we present a short synthesis of the benchmarking results. Details can be found in the respective regional annexes. Please note that these are first draft results which have not been validated, yet, by the regional stakeholders.

A.2.2 Regional results of the quantitative benchmarking

A.2.2.1 Flanders

Globalisation

Summarizing the results of benchmarking Flanders as one region reveals that Flanders is performing well in most of the examined aspects. Overall, Flanders lays above the European average when looking at R&D, accessibility by car, by plane and to services like internet access; education is ranked very highly while the unemployment rate is volitional low compared to the rest of the European space. Attractiveness measured on migration into its NUTS 3 regions as well as temporarily for tourism is comparably very good.

On the other hand, the share of employment in the selected economic sectors information/communication and professional/scientific/technical activities is relatively low, even in all comparisons. Also average salaries in these sectors are high above all averages.

Comparing the selected indicators at regional scale, however, points out that Flanders exceeds the national averages only in aspects such as R&D, number of patents, accessibility, the share of people born outside of Flanders and education; but falls behind the rest of Belgium when it comes to people employed in the examined sectors, tourism statistics as well migration between NUTS 3 regions. The national comparison is dominated by average performance. On neighbourhood scale, its performance is highly diverse but Flanders competes well with its neighbouring regions.

Flanders' bad achievement in employment in the information sector as well as the region's high salaries especially in the manufacturing sector is eye-catching in relation to all benchmarking scales.

Demography

Flanders' demographic structure can be described as similar to other European regions and its neighbours: the region has an average population growth between 1999 and

2009, an average share of young population as well as elderly people, but a life expectancy above average and with 40.6 years a relatively old median age. Comparing the region's performance to the different benchmarking values does not reveal a great depending diversity. Taking the average of the according typology type as benchmarking value also results in an average performance in terms of demographic structure.

Climate change

In a European perspective, Flanders falls behind the European average expectation in terms of area being sealed up, the share of NATURA 2000 areas of the total NUTS 3 surface as well as the concentration of particulate matter on surface level and the change in minimum and mean temperature in January. The changes in maximum and mean temperatures in July exceed the average of other European regions. Comparing Flanders to the rest of Belgium does not brighten the performance significantly since it mostly falls into average achievements. Just the area defined as NATURA 2000 makes up a highly greater share in Flanders than the average of all its neighbouring regions. Flanders takes average position in all deviations in terms of days with ozone exceedance and the potential energy consumption for heating. Flanders thus has to cope with the challenges of increasing minimum temperature in January and an overall increase of the mean temperature in January.

Overall, Flanders shows its good performance in the examined temperature indicators of the month of July and its mostly average performance at national scale but the benchmarking results clearly call for improvement for tackling climate change in a European perspective.

Energy

Monitoring the region's performance in terms of energy reveals results that clearly need change: besides the relatively high share of fuel costs as percentage of GDP and the relatively large share of employment in energy intensive industries at all benchmarking scales, Flanders also accomplishes low benchmarking results when looking at its potential for solar energy as one way of generating energy in a renewable way. The region only scores well in terms of wind power at European scale as well as compared to other regions classified as the same type of the ESPON energy typology.

Overall, one can say that Flanders is very depended on its status quo of energy supply and purchase when looking at the monitored indicators and thus, needs improvement in order to keep up with other regional players.

A.2.2.2 North Rhine-Westphalia

Globalisation

In terms of European benchmarking of the challenge of globalisation, North Rhine-Westphalia (NRW) accomplishes an overall good performance with minor fields that seek improvement. Simultaneously, the national and neighbourhood perspective conclude in a picture that requires much more differentiation and change.

High accessibility, high relative number of patents filed, high tourism occupancy rate and a low number of early school leavers together with a low unemployment rate represent the indicators that score well in the European context. In the contrary, high average salaries per economic sector, low shares of employment in the sectors of information /communication and professional/scientific/technical activities as well as the number of tourists coming from outside of NRW, migration into the region and the share of population with tertiary education do badly at the same time.

However, when looking at the entire country of Germany or even at neighbourhood scale, the picture becomes converse: while most of the well performing fields turn into average or low performing domains at regional level, the ones performing worse at European scale are categorized as well-performing at regional level. Except for the manufacturing sector, most aspects of accessibility and a bad performance in the share of population with tertiary education, the benchmarking picture differs highly, depending on which scale is examined.

Demography

The picture resulting from benchmarking indicators of demography can in general be described as average performance: young dependency ratio and population growth are categorized as average at all scales while the other demographic representatives vary in the European perspective, but even out at average performance at the regional scales. The population tends to a higher share of elderly people, a relatively old median age but also high life expectancy at European deviation. Only the median age is relatively young in comparison to other German regions. Even in comparison to other regions classified in the type of "Euro Standard" of the ESPON demography typology NRW's demographic structure shows similar characteristics.

Climate change

Taking together the benchmarking values and the spatial patterns shown in the maps NRW's performance in terms of climate change lies mostly below European averages. High percentage of sealed soil, low share of NATURA 2000 areas, high concentration of particulate matter at surface level as well as comparably many days exceeding the standard ozone concentration are representatives of NRW's bad score in tackling climate change. Only the indicator monitoring the change in mean temperature in July brightens the benchmarking picture with a good performance on all deviations. The

relatively high increase in maximum temperature in July earns NRW a bad position in the Europe-wide perspective. All other temperature indicators developed in contrary to the sighted direction mostly on all comparative levels. Only the increase in NRW's maximum temperature in July results in better benchmarking values at national and typology level. NRW's potential energy consumption for heating derived from the change in heating degree days over time also shows the region's average position among the other European regions.

In sum, NRW does in general not well in climate change aspects but even compared to other regions in the same type of the climate change typology this benchmarking sheds light on the necessity of improvement in coping with control and impacts of climate change.

Energy

Monitoring energy indicators for NRW reveals highly differing results between the indicators, but less between the different examined scales: NRW's low potential for solar energy is visible, but at the same time also the region's quite good position in potential sites for wind energy as renewable energy generation. At least at European perspective, the NUTS 1 region of NRW can compete with other regions for which relatively high potential for wind energy has been calculated. Also good performances can be found in terms of fuel costs for freight traffic as percentage of GDP since NRW has a comparatively low share here. Nonetheless, when looking at the indicator monitoring the employment in energy intensive industries, NRW falls below average performance because of its relatively high share of employment in this sector.

All in all, the calculated benchmarking values for the selected indicators shed light on the necessity for improvement in order to stay competitive and stable in terms of energy aspects also in the future.

A.2.2.3 Dublin

Globalisation

Regional benchmarking in a European perspective provides the overall impression of need for improvement in economic aspects in Dublin, at least in terms of the entire NUTS 2 region which comprises the Greater Dublin Area, but is obviously much larger than the actual GDA. Striking is the bad performance in the following economic fields: expenditure on R&D, relative number of patents filed, employment in the manufacturing and professional activities sector, the average salaries per economic sector, tourism aspects, accessibility by car and plane as well as unemployment. In the contrary, employment in the information and communication sector as well as migration into the NUTS 3 regions and the share of population with tertiary education achieve the best benchmarking values for the European deviation.

When looking at the comparison to the national level, Ireland, some red traffic lights

were exchanged by yellow ones, indicating average achievement. For instance, the employment situation seems better, just as the salary and the accessibility aspects tend more towards average performance. Benchmarking Dublin in relation to its neighbouring regions, its performance is categorized as "good" for more indicators, such as unemployment rate, employment and the share of population born outside the EU. However, tourism and the relative number of patents filed still fall below the average, as in all deviations and thus mark the indicators in which Dublin is doing badly at all comparative scales.

All in all, the benchmarking results are highly diverse, depending on the examined deviation and thus, need to be looked at more closely in order to find the fields of challenges and opportunities of the region.

Demography

Dublin's demographic structure is predominantly positioned above all benchmarking averages: in the European perspective a very high share of young population, very low share of elderly people, very low median age as well as high population growth between the years 1999 and 2009. The national comparison reveals just an average ranking of Dublin's demographic structure but exceeds most expectations in relation to its neighbouring regions.

Overall, benchmarking Dublin's demography reveals a very satisfying result with few fields for improvement.

Climate change

In terms of European benchmarking of the challenge of climate change, Dublin accomplishes differing results: on the one hand, its performance regarding soil sealing, concentration of particulate matter as well as ozone concentration and the change in minimum (January) and mean temperature (July) is very good. However, the share of NATURA 2000 areas and the change in maximum (July) temperature, on the other hand, reveal very bad benchmarking values, especially on the European perspective.

Compared nationally, climate change presents a real challenge for the region since all benchmarking values lay below or close to national averages. Only the change in maximum temperature in July earns Dublin a good national position: the temperature increased in relation less than in other European regions. However, as mentioned before, the interpretation of temperature indicators as a measure for climate change has to be seen with caution since the impacts may vary from region to region and thus affect the direction of evaluating this benchmarking.

The neighbourhood perspective reveals the same need for improvement in order to being able to cope with the challenges of climate change. However, in terms of typology benchmarking, Dublin's situation seems much brighter since its performance lies predominantly in line with other regions categorized in the same climate change

type. All in all, Dublin is positioned quite well among other European regions and only shows some challenges that need to be tackled in terms of climate change.

Energy

Looking at energy aspects in Dublin leads to predominantly very good monitoring results: Except for the relatively low potential for solar energy resources, the region has relatively many hours of potential wind energy per year, a comparably low share of the GDP as fuel costs for freight traffic as well as a low employment rate in energy intensive industries in comparison to other European regions. The national comparison, however, puts the region's performance into perspective again, since it varies between averagely and bad. Nonetheless, monitoring Dublin in relation to other regions classified as « cool and windy, but working » in the ESPON energy typology, reveals its position above average for any indicator.

Hence, Dublin's position in this monitoring of energy indicators can in sum be described as very good with some challenges on the European and national scale.

A.2.2.4 Catalonia

Globalisation

Benchmarking Catalonia for economic aspects reveals in most fields a good result. The only bad achievements persistent throughout all reference scales arise from a high share of population born outside the EU, high average salaries in the manufacturing sector and a low share of employment in the communication/information and the professional/scientific/technical sector. Besides that, benchmarking Catalonia in the European perspective points out its good position in terms of accessibility, average salaries in communication /information and professional/scientific/technical activities, tourism aspects, positive migration as well as the share of population with tertiary education. Only the number of early school leavers needs reduction so that Catalonia performs above European average in this field as well.

The benchmarking results of national comparison look similar, although tending to slightly lower relative achievements: its performance in accessibility, education, employment and salaries drops down to average while its attractiveness for migration falls even below the national average.

Looking at the numbers in relation to Catalonia's neighbouring regions underlines the above mentioned results regarding its need for improvement in terms of education and scientific activities. Catalonia's low unemployment rate achieves very good benchmarking values in all deviations.

Demography

Comparing Catalonia's demographic structure to the other European regions displays an overall similarity with one divergence from the referenced averages: Catalonia's median age lies with 40.6 years highly above average on all reference scales. Life expectancy at birth exceeds the European average but lies within the common range of national and typological reference values. The old age dependency ratio in Catalonia is higher than in the surrounding regions but is attended by the performance of the rest of the European regions. In sum, the benchmarking results call for slight improvement in all fields in order to perform better than other regions, neighbours or the rest of Spain.

Climate change

Catalonia has a relatively high share of NATURA 2000 regions in comparison to its neighbouring regions and performs better in the number of days with ozone concentration exceeding the tolerable $120\mu\text{g}/\text{m}^3$. The maximum temperature in July and mean temperature in January did increase less since 1994 in relation to other European regions and neighbours, whereas the potential energy consumption for heating calculated through change in heating degree days only reveals average achievements. However, besides that, Catalonia's achievement in climate change issues lies below the European and national averages or is attended by them. Even in comparison to other regions classified into the same climate change type Catalonia is ranked below the performance of other comparable players. This means a high share of soil that has been sealed up, high concentration of particulate matter at surface level, high increase in the minimum temperature in January since 1994 (national comparison) as well as bad results for mean temperature changes in July.

Overall, the achievements in national relation are slightly better than the ones in the entire European context. This benchmarking shows some challenges for Catalonia in terms of climate change but also reveals that the region is generally in a quite good position, compared to other regions.

Energy

Monitoring energy aspects in Catalonia reveals a very polarized picture: while the region has been benchmarked for very high potentials for solar energy, its position in terms of wind energy as a way of generating renewable energy is very bad in comparison to all monitored regions. Furthermore, Catalonia shows very good achievements in terms of a relatively low share of employment in energy intensive industries; but on the other hand falls into a bad position when looking at the share fuel costs for freight traffic amount to of the total GDP of the region. Even in relation to the regions classified in the type « with problems and potentials » in the ESPON energy typology benchmarking results in the same polarized picture: the same very good or very bad performance for the same indicators.

These benchmarking results bare difficulties in explaining Catalonia's overall position in Europe in terms of climate change but point at the region's potentials and challenges.

A.2.2.5 Navarre

Globalisation

Benchmarking Navarre's economic performance in relation to other European regions results in a very diverse picture: on the one hand, its expenditure on R&D, its net migration as well as its share of population having tertiary education are relatively high compared to the numbers of other examined European regions; on the other hand, looking at the relative number of patents that have been filed in Navarre, salaries (manufacturing and information/communication) and employment in professional/scientific and technical activities, tourism statistics, the share of population born outside the EU as well as academic and employment aspects and accessibility by car and plane bare an under-performance in the European context.

Comparing indicators such as employment, the share of tourists coming from outside Navarre as well as change in unemployment between 1999- 2009 reveals the need of improvement in order to brighten Navarre's achievements at all benchmarking scales. On the contrary, the share of tertiary education, share of employment in manufacturing sector as well as the expenditure on R&D and average salaries in professional/scientific/technical activities exceed all averages.

On the national deviation, the results only vary slightly in a positive way since the benchmarking values of the number of early school leavers and the unemployment rate turn to "good" and thus, represent Navarre's overall better performance in a national relation.

Looking only at Navarre's neighbouring regions, Navarre shows low performance only in scientific activities and the share of tourists coming from outside the region but does quite well in the other fields.

In sum, this benchmarking reveals better results at smaller deviations than in the greater European context and points at the region's potential for improvement.

Demography

In terms of demographic structure, Navarre is attended by the European average, except for one aspect: life expectancy at birth, which is higher than the European and national average. Looking at the different deviations does not change the benchmarking result a lot since the young dependency ratio and population growth spread in all deviations around the average. Navarre only sticks out in comparison with its surroundings with a relatively low share of elderly people and the average

median age in Spain lies below the 39 years in Navarre. All in all, the benchmarking results are satisfying to good but call for improvement in the European context.

Climate change

In terms of climate change, Navarre does very well in the European perspective: most benchmarking values, including soil sealing, NATURA 2000 areas, concentration of particulate matter at surface level and days with ozone exceedance and changes in all temperature indicators indicate a performance above European average. The same result for a comparison at national level, except for a low share of NATURA 2000 areas in relation to the rest of Spain. Looking at neighbouring areas converts the performance in soil sealing and the areas defined for natural protection to an average one. Thus, Navarre's achievements are good in the European perspective but are put into perspective when compared on a smaller deviation. Only the temperature indicators position Navarre very well in almost all comparisons.

Navarre takes up a bad position when looking at the change in minimum temperature in January: with the high increase since 1994 in the region, this indicator results in low benchmarking values as a measure for climate change.

In comparison to regions in the same ESPON climate change type, Navarre does moderately up to well. Overall, Navarre's position in terms of climate change can be described as average up to good, while better in the European context, and thus points only at some challenges for the region.

Energy

Summarizing the results of benchmarking Navarre as one region reveals that it is not performing well in most of the examined aspects: the region's low potential for generating renewable energy through wind power together with its high share of employment in energy intensive industries and the high share that fuel costs for freight traffic make up of the total GDP of the region lead to a bad position on all deviations. However, the high potential of solar energy brightens the picture because of the region's high benchmarking values for this indicator.

Looking at the different scales or comparing Navarre's performance to other regions classified in the same type of the ESPON energy typology leads to the same results.

All in all, monitoring the listed indicators for Navarre points at the need of improvement in terms of energy in order to stay competitive and stable also in the future.

A.2.3 Lessons from the quantitative benchmarking exercise

Several lessons can be learned from the benchmarking exercise presented above:

1. Such an exercise stands and falls with the quality of the available data. Some of the data used was either not of sufficient thematic resolution or of sufficient overall quality to give totally convincing results. Nevertheless, we do believe that useful information can be obtained from the exercise when using the necessary caution in interpretation of results.
2. In order to take into account the specificity of regional configurations, each region will have to adapt the benchmarking tools to their own reality. As an example, the Greater Dublin Area might wish to construct a benchmarking system where the GDA as such (i.e. the combination of the two NUTS3 regions composing it) is compared to either NUTS 2 or NUTS 3 regions across Europe. Such an approach is possible both with the HyperAtlas and with the prototype spreadsheet tool. In the former case specific files need to be prepared for which the ESPON Database team should be able to provide some help. However, we would recommend that in the long-run the ESPON programme should foresee a support structure for regions that want to elaborate their customised HyperAtlas input files. Such a structure could be either part of the ESPON Database project, or a separate effort.
3. Many choices have to be made during such a benchmarking process (reference values, spatial levels, thresholds, etc), and many of these choices are policy-level choices without one single possible answer. Building a monitoring system is as much about making these choices as it is about the technical issues.

A.3 State of stakeholder regions planning system in relation to challenges

A.3.1 Introduction

This chapter presents a synthesis of the qualitative analyses conducted in each region. These analyses are based on a combination of desktop research, interviews and expert meetings. The detailed reports for each region can be found in the annexes. Please note that this synthesis is a draft which has not, yet, been validated by regional stakeholders.

Both for the analysis on resilience and for each of the four challenges a summary table is presented in the annexe in order to allow a quick overview of responses. **It is highly recommended to print these tables (A3 format) for more detailed reference while reading the rest of this chapter.**

A.3.2 Overview of planning systems

There are differences between the planning system that operates within the five participating regions in this project: Greater Dublin Area, Flanders; North Rhine-Westphalia; Navarre and Catalonia.

These regions not only have a different level of legislative competencies on planning system and for territorial policies in areas such as housing, demographics, economic development, transport, environment quality and planning, climate change, energy, water and waste management etc., which could effect directly the way they tackle the macro-challenges and their territorial effects. They also have different autonomies and structural capacities due to different juridical definitions of their administrative level, which embedded in a multi-scalar governance system. They range from regional government systems that are relatively weak with a limited range of functions and powers (e.g. in Ireland) to the upper administrative level with full legislative competences on spatial planning and on several sectors.

In the case of Ireland, core competencies on most policies are managed by various Government Departments at the national level, while the Regional Authorities (including the GDA) have a limited range of functions and powers with core responsibility being the successful alignment of local with national policies. In other cases, the expression 'region' is inappropriate from a legislative perspective, since the administrative level of the case study is at State level (NRW). At this point it is important to highlight the specific characteristic of the partner region NRW – its multi-level governance system. Besides the municipal level, there is not only the level of the

state in NRW but also the regional level, with different district administrations and regional planning authorities. Therefore, it is necessary to differentiate between the term 'regional level' as a planning level within the planning system of NRW and as an expression for the five different partner regions (Greater Dublin Area, Flanders; North Rhine-Westphalia; Navarre and Catalonia).

At the same time, the other case studies are autonomous regions that can almost be considered a state level with sub-regional levels or provinces under them (the two Spanish regions and Flanders).

Moreover, while in Ireland the case study is an intermediate administrative level, albeit with elected representative body, the other four cases have their own constitution, an elected parliament and their own government, which have the right and the power to decide on almost all issues concerning their own territory.

NRW, Navarre, Catalonia, and Flanders thus have autonomous competences in their respective planning systems. In NRW, due to the mutual feedback principle, guidelines of the federal spatial planning must be taken into account. On the contrary, GDA is a large metropolitan area/ urban region, which would appear as a part of the territory of the above mentioned regions, while Ireland, de facto, has a regional dimension, and the competences of an independent region.

Concerning their planning competences, all the cases but NRW have a relatively recent spatial-planning history, with important developing acts in the last two decades, which means they are dealing with relatively recent experimenting phases. More specifically on the instruments, some of the general plans and visions are either under revision (Flanders, Catalonia, NRW), or of recent approvals (Navarre). Nevertheless, discussions about new guiding principles and changes of the development plan have taken place during the last decades in NRW as well, in which the state development plan is also under revision at the moment.

Moreover, in terms of traditions of planning, while the Spanish regions have a strong physical approaches that belongs to the urbanism tradition, the German State has a more comprehensive approach, while the Irish and Flemish regions have stronger strategic approaches, albeit with some specific differences.

Table 1 synthesises some crucial spatial-planning characteristics of each case study and highlights the differences among them.

| | Administrative level | Scope | Legislative competences | Tools/instruments | Spatial planning typology |
|------------------|-----------------------------------|---|---|--|----------------------------------|
| Catalonia | Autonomous region | Regional coordination of physical aspects | Full competences (upper level in planning domain) | Plans and sectoral policies | Urbanism / Physical planning |
| Flanders | Region and cultural community | Vision and strategy for the regional territory | Full competences (upper level in planning domain) | Spatial structure plan, programmes and sectoral policies | Strategic integrated planning |
| GDA | Intermediate administrative level | Coordination and connection between National and local levels | No direct competences. Subordinated level to the national system | Guidelines | Strategic integrated planning |
| Navarre | Autonomous region | Physical strategy of the region and definition of parameters | Full competences (upper level in planning domain) | Plans and sectoral policies | Urbanism / Physical planning |
| NRW | State | Definition of comprehensive strategy and general principles | Full competences (upper level in planning domain), but due to the mutual feedback principle guidelines of the federal spatial planning must be taken into account | State development plan, regional spatial structure plans, programmes and sectoral policies | Comprehensive planning |

Table 1: Overview of spatial planning characteristics of the case study regions

There is an interesting variety of roles and tasks among the above mentioned case studies:

- a coordinative role without substantive power in a hierarchical and centralized system (GDA: set up in 1991, the Regional Authorities have been assigned the important function of addressing the centre-local disconnect by “bridging and co-ordinating” between the two established layers with a view to achieving ‘joined-up’ multi-level governance and integrated multi-scale planning),
- the definition of general principles and the outlines of the State through comprehensive, supra-local and super-ordinate state development plan as well as regional spatial structure plans on the level of the regional planning authorities, through spatial planning cooperation and arrangement of spatially significant planning and measurements in a system based on subsidiary and mutual feedback principle (NRW),
- the definition of the vision of the region with different programming and

implementing capacities and instruments (Navarre, Flanders),

- the implementation of a regional coordinative capacity on the subordinate levels and different sectors, which keep prominent roles, though (Catalonia).

Also the core responsibility may vary in a significant way.

In Ireland, it concerns the development of the Regional Planning Guidelines (RPGs) to ensure successful alignment with national policies such as the National Spatial Strategy (NSS) and associated guidance documents. The RPGs are not only aimed at guiding development plans (population and housing), they also provide an overarching policy framework intended to inform decision making across a range of policy sectors such as transport, communications, environment, energy, climate change, water and waste-water and social activity.

In NRW, spatial planning is responsible for the consolidation and coordination of the sectoral planning as well as for the conflation of different space requirements. Here, the main task of the State spatial planning is to fix general principles and to develop strategies for the spatial development. Like the other German States (except the three city-states), NRW is obliged to implement a comprehensive and superordinate plan, the state development plan.

In Navarra, the legislative mandate contains territorial and urban planning objectives, including the definition of quantitative parameters that regulated the proportions of public spaces in urban contexts. The system consists of five key instruments, some of them recently introduced, that are applied in the order of larger (region) to smaller (municipality), but it is with the legislative act of 2002 that two important strategic tools have been introduced: Territorial Strategy of Navarre (ETN) and the Regional Spatial Planning Programmes (POT).

In Flanders, the spatial development policies are articulated in three administrative levels (regional, provincial and municipal) and by means of two types of plans at every level (spatial structure plans and spatial implementation plans), but it is the Region who has the main coordinative role with its structure plan, currently under revision. Moreover, the region uses also socio-economic visions (The VIA Plan - Vlaanderen in Actie, Pact 2020)

In Catalonia, the Catalan spatial planning system can be divided into three main categories: first, the General Territorial Plan of Catalonia, covering the whole of the region and the sectors that affect it; and, at lower levels, sectoral planning and regional plans, which develop policies of the General Territorial Plan. However, while the former establishes regulations for a single sector throughout Catalonia, the latter establish criteria for each of the seven regions which Catalonia is divided into.

Going through the characteristics of the different case studies, interesting differences can be also found concerning formal bodies that intervene in the planning processes. In Ireland in particular is interesting to highlight the third party planning appeals system operated by An Bord Planeála, established in 1977, that is responsible for the

determination of appeals made at the request of applicants or other interested bodies that relate to planning application decisions made by a planning authority.

In Navarre, instead, the regional law (2002) establishes the creation of the Social Council of Territorial Policy of Navarre, as the body of a participating and deliberating nature on subjects related to the territory. It combines a political power (provided by its institutional members) with social representation (half of its members are social or economics agents, professionals and experts), with interesting steering capacity about spatial policies. Furthermore in Navarre, the law proposes the creation of the Territorial Observatory of Navarre (OTN), a technical unit with the specific task of the implementation, evaluation, adaptation of instruments and policies in relation to the ETN (Territorial Strategy of Navarre). The OTN has as a strategic and guiding objective of all its activity to provide Navarre with a study forum that permits advancing towards better management and evolution of the territory of the Region. Similar to the Navarre observatory, Flanders has a Policy Center providing ad hoc studies on the Flemish territory and an interdisciplinary assessment of the implementation of spatial policies.

As a conclusion, we can see important differences among the five case studies, due to institutional aspects and spatial planning traditions, which render a comparison among their policies difficult without taking into consideration several structural variables.

Moreover, these differences highlight how specific institutional aspects of the planning system provide different degrees of resilience capacity in front of new spatial challenges. Together with a policy assessment and monitoring processes, it becomes worth analysing the flexibilities and the rigidities of the different planning systems when macro-challenges as demographic changes, energy provision, climate changes and globalization processes manifest themselves in regional spatial phenomena.

A.3.3 Resilience of planning systems

The assessment of a planning system in relation to its capacity to tackle macro-challenges (e.g. globalization, climate change, demography, energy, etc.) is based on the belief of the possibility to tackle them through their spatial characterizations, and thus through spatial policies. Thus, a crucial aspect is not only the interpretation of their spatial translation, but also the capacity to set meaningful and feasible strategies, which should be able to adopt flexible measures according to changing spatial configurations and dimension of the phenomena.

These measures, moreover, should be framed by vertical and horizontal coordination in order to have a coherent multi-scalar and multi-sectoral approach, the decision-making process of which should be also open to the various interested stakeholders and citizens, granting a shared perspective and the resolution of possible raising conflicts. If the spatial strategy is shared among different stakeholders and embedded in a multi-scalar approach it can become a powerful tool to coordinate and to frame

sectoral approaches, which are usually the straightforward competent areas in which the macro-challenges receive a policy answer (the economic sectors, the environmental or the social departments, etc.).

The approach to the macro-challenges has a crucial regional dimension, the administrative level of which is in charge of setting diagnoses, solutions and preventions, albeit in a multi-scalar governance frame. In this perspective, the assessment of the spatial planning system at regional level means on the one hand to reflect on its capacity to provide the conditions for a proper approach and thus to appraise its resilience capacity of adopting policy measures in respect of oncoming challenges, on the other hand to assess the answers that different policies coming from different areas of competences (policy bundles) are providing in order to address the macro challenges and their regional spatial translation.

A.3.3.1 Flexibility

The flexibility of the planning system is defined by a specific combination of vision capacity and further elaboration of operative measures for the coherent implementation of the vision. Each region has shown different strategic potentialities, with some specific characteristics due to their planning tradition in which they are embedded. Almost all the case studies present good strategic capacities, though, but they differ in the implementation of the vision, with different degrees of integrative capacities for sectoral approaches. This aspect is relevant also because the budgeting of the interventions is rarely at the spatial-planning level, but is often articulated in the sectoral actions.

In general terms, though, it is possible to affirm that the more the planning system is limited to physical aspects, the less it presents strategic and coordinative capacities. It is due to a strong sectoral redistribution of competences, according to which the complex phenomena are not strategically related to their spatial effects.

All the Authorities of the case studies act as a coordinating body and attempt to develop a more integrated and joined up approach linking Local Authorities with national and regional bodies, both public and private. However, there are differences in the way they perform as coordinative body and/or deliberative institution. When the Regional Authorities are not directive or delivery authorities (Ireland), they concentrate their functions on coordination, but without direct strong strategic capacity. Moreover in the Irish case, the region, which does not have delivery tasks, behaves as a traditional public body with only public interlocutors, e.g. local authorities, without any specific involvement in partnership with private bodies for the delivery of e.g. infrastructure or services. On the opposite, the increasing of regional operative functions and deliberative functions corresponds to a more articulated configuration of governance processes in which also different stakeholders are part of the decision-making phases.

Apart from NRW, which has not a real 'territorial vision' at state level, all the other

regions present some rigidities in the updating and the renewal of the vision. In particular, when there are no formal obligations in updating it (e.g. with a formal lifetime of the plan and/or the vision) and a consequent obligation to renewing it regularly, the decision of starting a new process needs a combination of political intentions and a favourable socio-economic conjuncture. Such uncertainty is transformed in an induced rigidity, due to the inertia in gaining a political attention to collective challenges if not evident phenomena. Thus, the long time interval up to the establishment of a new vision leads to less flexibility in dealing with current issues, with negative consequences in terms of late awareness of the on-going processes and missed opportunities of tackling them on time.

The relationship between lifetime of the plans and political mandate is a controversial aspect. The extent to which the planning system is in a position to respond to and to tackle the challenges is also related to the planning instruments that can be activated in a legislative mandate. It raises the question of whether policy legislation periods are possibly too short for instruments such as structure plans, or vice versa, given that the frequent short-term changes in policy objectives can only be incorporated within the framework of a currently valid structure plan. At the same time, the independence of political legislative periods and the long-term nature of the planning horizon certainly represent a strong point on establishing planning certainty with the help of a superordinate and non-partisan master plan.

If NRW report highlights the importance of a non-partisan plan, which can survive to the changing political configurations due to its long-time horizon, in Flanders the plan and its partial updates show a flexible capacity of adaptation to socio-economic changes, embedding different political orientations along the time. In the latter case, however, it appears clear that stronger emphasis toward economic development strategy reduces the capacity to use a spatial perspective as an integrative approach.

In general terms, the regional level, as well as the state level in NRW, appear as crucial administrative levels for several aspects:

First, it is the place where general principles can be defined (e.g. NRW), as well as cross-sectoral targets and measures (Navarre, Flanders). Second, it is crucial for the coordination of municipal and province levels, which are the administrations with specific operative functions (Catalonia). Third, the combination of measures and principles on the one hand, and of coordinative role on the other hand, gives rooms for the elaboration of specific instruments for the implementation of the vision, through calls and specified targets (NRW). Moreover, the definition of targets and parameters could provide an inter-sectoral base for the definition of embedded monitoring activities.

A.3.3.2 Horizontal coordination

A key issue for the resilience of a planning system is its capacity to integrate sectoral perspectives and actions, as well as different stakeholders, using a spatial perspective

in the actions dealing with macro-challenges. However, despite having potential for proposals both in prevention and adaptation to changing conditions, spatial planning systems have to face limitations in terms of competences and synergy capacities. If the system is only concerned with physical aspects, it deals with variables such as location, shape or density of elements, etc., limiting its capacity of coordination. On the opposite, a more complex and interdisciplinary approach, with a strong integration with socio-economic and territorial elements, may achieve in providing a general framework for integrated actions and sectoral policies.

In order to make the coordination more effective, resources often matter. While a coordinative role is helpful in encouraging a cross-sectoral approach in directing appropriate development and investment strategy, it may lack in key governance capacity by not having direct control of resources for both decision-making and investments. Usually specific strategies are embedded in areas of competence that are reluctant to share decisional aspects, e.g. about economic development strategies, which requires the cooperation with economic departments.

Competences vary according to the mandate of the administrative level. Unlike other regions in this project, the GDA, does not have competences for the definition of specific policies and strategies for the macro-challenges of this project (demographics, globalisation, climate change and energy) but instead develops a series of guidance and recommendations that aim to align local implementations within the region in a coherent manner with national policies. However, this role allows the preservation of the strategic public role of the administration and its attention to the collective value of space. The more the region has a deliberative function, the more the co-participation with private stakeholders raises, with consequent risks of weakening the public interests.

Joint tasks and cooperation among sectors might be facilitated by the implementation of EU programmes. The procedures promoted by EU institutions can be an important break-through for activating cooperation among different public sectors.

In general terms, what appears from the analysis of the five case studies is that the preparation of a new vision or a new structure plan can be considered as one of the moments of more intensive cooperation among different stakeholders. The continuity of the process and its updating phases, as underlined in the previous session on the flexibility of the system, together with a regular monitoring system that helps in the definition of appropriate policy measures, may have positive implications in the coordinative capacity of the planning system.

Moreover, cross border cooperation is a difficult task. Despite years of EU incentives and programmes, institutional, territorial and political struggles are still important factors that impeded extensive cooperation. Paradoxically, it becomes even more difficult when the border is internal to the same state (Flanders).

A.3.3.3 Vertical coordination

The analysis of the vertical cooperation in the case studies presents some common trends. In particular, while the cooperation with the lower levels seems less problematic, the cooperation with upper levels (State, or EU) is more controversial.

The former aspect has a variety of approaches, that vary from the top-down hierarchical relationships (Ireland, , but also to certain extent Flanders) to attempts of defining supra-local coordinative actions in a planning system traditionally characterized by dominant local administrative levels (Spanish regions). However, in all the cases the cooperation has been assessed as well-working, despite some complications that might raise when the administrations differ in political coalitions.

About the role of the lower levels, it is interesting how the application of the subsidiary principle together with the definition of a mutual feedback principle is formally expressed in NRW: it states that within the development and structuring of lower planning levels, requirements of higher levels have to be taken into account. At the same time the interests of the lower levels have to be considered by the higher planning authorities, completing the governance framework and the vertical cooperation among levels.

However, it is the latter aspect that shows some weaknesses. Through the confrontation with stakeholders in the different regions, it comes evident that there is a general pragmatical and often opportunistic relationship with the EU institutions and roles. The confrontation with European documents and strategies aims at deducing specific opportunities within the funding period and analysing to what extent one's own objectives and interests can be subsumed under them. While European spatial development discourses and recommendations are thus taken into consideration with some scepticism, incentive-oriented approaches like the European Regional Development Fund (ERDF) or the INTERREG programme do influence national and regional policy to a far more significant extent. European policy contents do, however, exhibit a particularly strong influence through EU Directives, such as the European Water Framework Directive or the EU Waste Framework Directive, which are also more frequently cited in documents.

A.3.3.4 Cooperation and participation

Cooperation and participation are important aspects, in order to have a wider agreement on policies and to facilitate their implementation. Most of rigidities of the system are due to a lack of capacity to promote shared cooperation with both public and private actors, as well as a limited involvement of citizen in the decision-making phases.

About cooperation, some regions present a good capacity of integrating other actors in the policy making processes together with different forms of public-private partnerships, in particular when their mandates include a variety of deliberative competences and an integrated perspective on space (NRW, Flanders). On the

opposite, strong physical approaches (Spanish regions) and intermediate administrative levels without deliberative functions (GDA) limit the administrative role to coordinative capacities in an exclusive public domain. At the local level, however, the cooperation with public and private actors appears more frequent. In some reports (NRW and Flanders) some comments highlighted how the involvement of private actors has produced doubtful effects in terms of public interests, though. In cases where cooperation forms like public-private-partnerships (PPP) are initiated within the framework of a privatisation process, the gains in efficiency frequently propagated beforehand have not materialised in a lot of cases and the public interest in PPPs has tended more to wane.

Interesting observations come from Flanders report, and they might be generalized as common comment. It assesses that the cooperation in recent years appears to be more and more product-oriented, due also to a general shift toward the necessity to induce better economic performances. The rooms for activating processes of investigation on complex issues are becoming rarer and, at the same time, the general political trend is a plea for immediate solutions. Together with this general trend, the search for solutions concerning space are more toward land use regulation that toward policies. Thus, a reduction of 'collective responsibility' can be seen as a trend of the last years with difficulties in affirming priorities in the name of collective needs. The macro-challenges could be appropriately tackled only if there is a shared assessment of the ongoing processes and adequate measures in the name of collective needs, and less driven by individual(istic) values. On the opposite, there is the risk of seeing collective challenges less as spatial issues due to individualization/liberalization of ownerships (e.g. for which the changes in regulation about building permissions in Flanders can be seen as an indicator).

About participation, the involvement of civil society and opinion groups is often limited to the formal consultation period that is established by law in the making-of of the planning instruments.

However, some innovative procedures has been introduced (e.g. NRW and Flanders), together with some institutional bodies with cooperative and participative functions (e.g. the Social Council of Territorial Policy of Navarre, or at local level in Ireland, the Policy Committees and County Development Boards).

The case studies have shown that the participation may vary according to the topics. While climate change and energy raises more interests, demography and globalisation offers less capacities of participative processes.

A.3.3.5 Monitoring system

The capacity to monitor the evolution of spatial aspects and the effectiveness of policy measures in the five case studies varies according to the peculiarities of the local approaches. However, some general comments can be drawn.

The impression is that impact analyses based on ex-ante and ex-post assessment are

generalized practices. Nevertheless, a real monitoring tool associated to the regional planning system is rather rare. In the cases where some attempts have been made (Flanders, Navarre, at regional level in NRW) or it is under-preparation (GDA), the main difficulty seems to be the capacity to embed the tool in the planning system in tight relation with its main planning instruments.

A large inventory of performance indicators have been highlighted as being useful in measuring the implementation of the plans, but it has been clearly stated within the documentations that the effectiveness will be dependent on the resources available during the life time of the plan and the constancy of the assessment. Resources (in terms of structures and funds) and structural capacities (interdepartmental cooperation, capacity to maintain a time-frame, data availability, personnel shortage, etc.) appears to be the main constrains.

In the embryonic attempts of monitoring tool, the analysis is mainly quantitative, while uses of qualitative approaches have not been detected in the five cases. From a practical perspective, crucial obstacle in the definition of the monitoring tool appears the agreement on the indicators that need to be adopted.

Nevertheless, different are the conditions for monitoring analyses in sectoral areas, in which there are more structured capacities. However, in these cases the capacity to cross-reference data from different departments is at stake, due to the difficulties to have comparable sets of data.

Finally, interesting roles of bodies dedicated to policy analysis and monitoring has emerged from the case studies. In Navarre and in Flanders observatories are in the process of building up expertise for monitoring the performance of spatial planning policies. While in the Spanish case it is the planning law that establishes the necessity of a territorial observatory, together with a body that gathers different representatives with the mandate to approve the assessment, in the Belgian case it concerns an interdisciplinary university cooperation with different analytical tasks, albeit not yet structured in the form of monitoring tool.

A.3.4 The macro-challenges in the regional planning systems

A.3.4.1 Globalisation

The globalisation challenge has a large variety of regional characterizations in the case studies, in particular related to the regional economic structures. Some regions appear more exposed to foreign direct investment (Navarre, Ireland) while other contexts present a more variegated and structured economic basis (NRW). All the cases have followed the macro global economic trends in the last two decades, with growth expansion in the 90's, its decrease during the last decade, and the strong impact of the recent global crises, with ongoing recovery strategies. In particular the Spanish regions, and even more Catalonia, in which the building sectors represented a strong factor of economic boom, together with the Irish regions, have experienced deep effects of global crisis, with the burst of the real estate property bubble, and the vast overexposure of banks to toxic property loans.

Decreasing GDP growth, relocation of multinationals and FDI, and growing unemployment rate are direct effects of the crises and represent current challenges, with some regional distinctions, though. Being competitor in the global markets has different meaning according to the regional characteristics, and specific challenges: the dependency of FDI allocation and the rising competitors of developing countries (for Ireland, Flanders and Navarra), the strong export sectors of NRW and the problematic of reducing penalizations due to transport congestions, together with the shortage of skilled personnel due to changes in number and structure of labour force, which affect mainly the potentiality of SME's, the problem of two-speed economy in Ireland, with a growing export economy and a stagnant domestic economy, the (international) tourism for the Spanish regions as an important successful sub-sector (10% of GDP and employment in Catalonia) and the specific elements of competition (qualitative offer, low cost accessibility, etc.), and other rising forms, e.g. the service economy (e.g. health, care) in Flanders are all different expressions of the macro-challenge in specific territorial contexts.

Almost all the case studies have shown a strategic capacity to tackle the crisis, but they have all adopted a mainly sectoral perspective. The competences are held by the respective responsible of the economic sector, which are the promoter of regional strategies that deal with internationalisation processes and the definition of profitable conditions for investment and economic growth. Despite presenting different characteristics, there is a general trend in setting out an ambitious set of actions to reorganise the economy with the aim of building a 'Smart Green and Sustainable Economy' (the EU 2020 strategy) with a thriving enterprise sector, high quality employment, secure energy supplies, an attractive environment and first class infrastructure: from the 'Smart economy strategy' of GDA, to the definition of a 'environmental economic strategy' of NRW in order to maintain its position in the

market of environmental technologies, to the knowledge-economy and internationalisation strategy of Flanders, Navarre and Catalonia, there are common key words in their discursive strategies.

Concerning this challenge, the EU plays an important role on different aspects: in the diffusion of guidelines and discursive strategies through informal documents (Europe 2020, Lisbon strategy, etc.), which are powerful in steering the general policy orientations as shown above, albeit seen with scepticism by some stakeholders (NRW); incentive-oriented approaches (e.g. ERDF) which influence national policy; and EU Directive, which have direct effects on national and regional strategies.

The regional and national strategies are embedded in planning documents, in which the objectives are well articulated in different lines of actions and goals to achieve, while in some cases these measures have also related timeframe, allocated budget and monitoring system with specific indicators. They may have the form of Pact (Flanders), multi-scale integrated strategies with strategies and implementing guidelines (Ireland – GDA), combination of strategic documents (e.g. those that define the internationalization strategy and the economic model of Navarre), or they may be the product of a specific interdepartmental cooperation, as for instance the strategy set out by the Catalan agency or the cross-sectoral approaches of the environmental economic strategy in NRW.

However, globalization has also important spatial repercussions, which affects in different forms the case studies. Most significant territorial impacts are the relocation of industries and location of the most powerful economic sectors in specific areas, following clustering processes and proximity, which may increase the problem of territorial imbalances. If brought to extreme consequences, depopulation of rural areas and tensions on the territorial development model due to change of migration patterns are the most likely phenomena that regions have to deal with.

The high concentration of economic activities in the metropolitan areas and 'centralising' tendency of foreign companies are already evident in Catalonia and in Navarre, with a tendency to alterate the urban system with the strength of the Metropolitan Area of Pamplona in contrast to other territories such as the Pyrenees.

At the same time, localization and intensification of activities go together with traffic issues. The intensive external relations and good exchanges (NRW), the traffic induced by international hubs (Antwerp and Rotterdam harbors), the presence of big mono-centric metropolitan areas (Barcelona, Pamplona, Dublin, Bruxelles, Antwerp) are all factors that induce high demands of transport infrastructure and management. The preponderance of (saturated) road transport systems and low use of railways may be a limiting competitiveness factors for internationalization.

As countermeasures, the adoption of a spatial economic policy which stress a liveable environment, and tackle mobility issues with integrated and coordinated measures could be an important asset. The importance and opportunity of a move towards an adoption of a more 'entrepreneurial' approach to governance rather than the more

traditional 'managerial' approach which is primarily focused on the effective provision of services (as expressed by GDA's report) may be a crucial point. Far from being easily achievable, though, this purpose has to deal with the difficulties to steer professionalised real estate's decisions on locations and has to break in into decision making processes that take place in context in which the private sector tends to expropriate government tasks (as highlighted by the Flanders' report).

A.3.4.2 Demography

Among the case studies, there are two main groups, which are differently characterised in terms of demographic trends. A first group presents ageing population trend and dependence on immigration due to a sharp decline in fertility (Catalonia, Navarre), which is a phenomenon that is characterising the entire EU Mediterranean arc. The consequences of these factors are the increasing necessity to provide care services and facilities for elder population, whom appears to be inhomogeneously distributed (either in metropolitan areas or, in particular, in low-density areas, with additional problem of accessibility); moreover, there are problem of integration for immigrants and risk of spatial segregation (albeit strong tradition in integration policies in Catalonia).

A second group, is characterized by the absence of population decline (with some local exceptions), both due to the combination of external migration and high birth rate (Flanders and GDA). In Ireland, which is one of the country with the highest birth rate, the demographic patterns have recently changed, with a return of emigration phenomenon due to the economic crisis. Also in this case the demographic characteristics have recognizable spatial patterns. Migration tends first to focus on big cities, subsequently it proceeds in suburbanization movements. Persisting trend of suburbanization are alimeted mainly by middle-class population, while the need for both care facilities for the elderly and specific education for children with a migrant families are mainly localised in big cities (e.g. Antwerp and Dublin). While in Flanders has been characterised by a long period of spatial consumption with suburbanization processes, in Ireland, the trend of settlements dispersion and peri-urban growth has received a boost during the growth patterns and the Celtic Tiger property "boom" period. In all these urban areas there is a needs of increased investment for education facilities and to provide residential areas of required services, with difficulties in providing adequate and extensive public transports.

An intermediate category is represented by NRW, which has a very heterogeneous structure characterized by shrinking and still growing municipalities that can be found in direct vicinity.

However, general problems are shared by all the case studies. First, the problem of service delivery to improve the quality of life of extra-metropolitan settlements is a shared issue. The suburbanization can be seen also as a tendency of self-isolation of middle-class group from urban areas in which security and migrations are factors of

disaffection. There is an increasing difficulty in integration capacity, and there are evidences of 'glass ceiling' effects for the social mobility of some migrant groups (as highlighted by Catalonia's report). In this perspective, the budget restrictions due to the economic crisis may even further affect service supply and integration policies. Second, the actual trends tend to provoke territorial imbalances, in which lack of infrastructures and mismatches in the labour market could cause changes in urban system and territorial cohesion (Navarre).

In terms of policy measures, there is a general sectoral approach to demography challenge, with limited and narrow measures to specific demographic aspects (ageing trend, migration, labour supply, etc.). Thus, there are a variety of specific measures as the reform of the pension system, or policies to stimulate the birth rate for the ageing population phenomena, or integrated policy framework about integration of immigrants, with involvement of local inhabitants and facilitating processes for the access to services and resources. Forecasting tools are used in all the case studies, but their indications have limited use in policy domain, while documents usually mention the challenges but they do not go beyond the analysis and diagnosis of the situation.

It is worth mentioning that a related aspect to demography is the housing sector, about which all the cases studies have shown articulated systems and different capacity to give policy answers. Housing growth and development is a primary cause of land consumption, Being primarily market driven (Flanders), it can aliment suburbanization processes becoming an additional threat to sustainable settlements, if not controlled. In Ireland, for instance, the current targets set out within the regional guidelines have been based on 'boom-time' growth rates, while the real requests seem to be different. The key new objective in GDA thus is to ensure that the guidance outlined at regional level is adhered to at the Local Authority level through "Core Strategy" requirements.

An exception seems to be NRW, in which different monitoring systems are integrated in policy specifications in all administrative levels (e.g. residential area monitoring, residential market monitoring; permanent evaluation system of the program 'social city' etc.) and where integrated policies have been adopted. The initiative 'area alliance' introduced by the Ministry of the Environment, consisting in an interdisciplinary approach by political, social, economic and private forces to tackle the problem of land consumption seems remarkable.

In general terms, however, the demographic challenges declined in their different aspects in the various case studies present necessity to new forms of tackling social and spatial segregation, the need of facilitate creation of urban environments accessible for elderly and new migrants, combining the slow down in housing development with plans for better community services and sustainable settlements. The current situation should offers a clear opportunity to rethink and reform the system and reformulate spatial planning objectives and targets with a more realistic and sustainable future vision.

A.3.4.3 Climate change

The challenge has shown its face in several forms of manifestation, with similarity and some specific characterizations at regional level. While all the case studies highlight the risks related to water (sea and river areas), which implies articulated strategies of water management and prevention of the effects (rising level of the sea, flooding, erosion of the coast and regression of deltas, etc.), each of the reports focuses on different sets of consequences: from changes in landscape (Navarre) to bio diversity (NRW). Moreover, in some cases climatic changes may determine also advantages, as for instance the increased range of possible production for the agriculture and the development of the tourism sectors in the northern regions.

The macro-challenge and its effects have been mainly dealt through sectoral competences in all the Regions within the project. As a general trend, there has been a rising awareness of the challenge and its implications in the last decades, acquainted through thorough studies and consistent forecasts at Regional or National level. Consequently, different measures have been progressively adopted in almost all the case studies, according to specific set of problems and framed by dedicated sectoral planning documents, which compose a variegated collection of methods and styles. At this stage, some of the regions are also preparing new advanced planning documents or an updated version of existing plans, in which the specific issue of climate change is articulated in several streams of interventions, objectives and measures. In some cases, moreover, specific dedicated agencies have been defined (Inter-departmental committees in Catalonia and GDA), with the main task of coordinating actions tackling climate change.

In this perspective it is recognizable that the EU political role on the issue, albeit having been the outcome of pragmatical compromises among States, has become an important reference, which has imposed the topic on the political agenda of the different national and regional institutions through directives, studies and policy orientations, as well as has offered a platform for sharing examples and best practices.

However, despite being a raising topic in all the regions (with some significant differences, though), there is still a long way before spatial planning could play a determinant role in tackling the challenge through spatial coordination of mitigation and adaptation strategies. Coordination forms among sectors are not fully developed yet, and a territorial perspective could better support them. Nevertheless, some reports have highlighted the correlation between climate change and energy challenges, being energy-efficient measures part of the crucial measures of a strategy that intends to tackle climate change. Here, the compatibility among strategies, the cross-sector coordination and the synergy among different measures differ from case to case.

In terms of threat related to planning actions, a shared issue is represented by the negative economic trend that is affecting all the regions, which could negatively

influence the allocation of resources in developing long-term actions. The contemporary situation reinforces also the tensions between need of long term planning and short term political agenda of the different governmental authorities. In all the regions, thus, there are a large variety of governance struggles and specific capacities of addressing the issues related to the macro challenge. It is worth mentioning, however, that where stakeholders have been involved in supporting the strategy with innovative and bottom-up initiatives, it has become an important source of innovation and governance improvement (Flanders).

In general, though, two main policy problems can be considered as generally shared within the case studies. First, it is difficult to deal with factors that go beyond policy and territorial competences, in particular when the magnitude of these factors is at macro scales. It requires a shared pan-EU strategy and full support from multi-level governance cooperation. Second, if the strategies that deal with the macro-challenge had a spatial perspective, the cooperation among sectors would be facilitated, and the approach to complex issues would benefit of an integrative perspective. It is the case of traffic management, which appears among the most complex issues with relevant consequences, since mobility is one of the top causes of gas emissions and energy consumption in all the Regions. Integrated strategies to deal with transit management and reduction of long distance commuting through sustainable settlements would be at stake. As well as traffic, other spatial issues could be the priority objects of integrated measures.

A.3.4.4 Energy

All the cases report an excessive dependence on fossil fuels, oil and gas, and a strong dependence from external sources. The use of renewable energy is very limited, and in particular the solar energy is very low, even in sunny areas as the Spanish regions. However, the Navarre region represents a virtuous exception, due to the pioneering attention to renewable sources since the 90's. Nowadays, in Navarre, more than 80% of the electrical energy comes from renewable energy, with a percentage that is above the Spanish and EU average.

The main consuming sectors are in general terms transport and industry. Moreover, an additional consumption of energy is caused by inefficient spatial structure and consequent over-use of transport systems. This aspect is mostly evident in Flanders and its scattered urban-region settlement system. The energy usage and supply trends have severely increased in the last 2 decades in almost all the cases, which highlights the urgent necessity to tackle the issue. However, there is an evident link between the decreasing energy use of the last year and the current economic downturn, the effect of which are clearly evident in the Irish region of Dublin.

Although in all the case studies there is a strong focus on moderating the energy consumption, the promotion of renewable energy, and the reduction of combustion fuels, which are the three crucial energetic aspects of the macro-challenge, the energy

system conditions and their capacity to make strategies operative differ according to planning capacity and political commitment of the Region.

As a shared aspect, however, the general sectoriality of the approaches is underlineable, with a scarce or almost non existing coordination with spatial and regional planning. Some exceptions can be done in those regions with a strong strategic intersectoral capacity (e.g. in the Irish planning system) as well as in areas with an ongoing strong comprehensive revision of the territorial strategy (e.g. Flanders).

The nuclear energy represent an incognito. The ongoing debate (in particular in NRW and Flanders), partly enhanced by the emotional wave caused by the recent disaster in Japan, will influences the general energy policy. If an abandon of the nuclear energy can be foreseen, there will be an unavoidable push ahead in the direction of strong renewable energies usage.

The energy challenge could have some implications in terms of spatial strategies. They go from the control of a dispersed pattern of population and housing growth in order to promote sustainable settlements (Flanders), to the emerging conflicts in occasion of localization of energy infrastructures (plants and transport networks), against which strong oppositions from environmentalists and local groups may arise (Catalonia). Concerning the latter aspect, questions of acceptance of the local population should not be pushed to one side, in particular for the designation of areas for wind energy which are often controversial not only due to optical aspects (NRW).

A.3.5 Methodological lessons learned from the qualitative analyses

A.3.5.1 Reminder of the proposed method

In the first period of the project, a methodology for the qualitative analysis of the way macro-challenges are addressed in the case studies was defined. Its focus was in particular on two main aspects:

- Planning systems and governance structures
- Strategies and planning documents

The framework was built on a set of five aims from which to derive and to structure appraisal questions that has been used for the analysis, according to different methodologies.

The aims of the qualitative analysis are to:

1. Evaluate the awareness of the (spatial) policy domain about the macro-challenges;
2. Assess the resilience of the planning system and its capacity to react/take in account these challenges;
3. Estimate the effectiveness of the actual measures in the policy documents/strategies and tools in addressing eventual answers to the challenges;
4. Give indication about possible future threats/opportunities that the macro-challenges can represent in the following decades.

Each 'aim' corresponds to a session, and it is articulated in a group of appraisal questions (the final version of the document is included in the annex), and have been used for the development of the qualitative analysis in each region.

Figure 1 reports the general structure of the analysis that was presented in the Inception report and that has been interpreted in different way by the teams, combining in different way desktop analysis, questionnaire, semi-structured interviews, focus group and ranking technique according to their needs. For a detailed description of the framework of analysis see the relevant annex.

Some groups have insisted more on the desktop analysis phase, some others have preferred to dedicate more time to the interaction with stakeholders and sector experts in order to combine their often contradictory expertises. Moreover, in the second phase, some teams have used round tables, some others have implemented a second round of interviews to improve the knowledge and receive feedbacks. In one

case the focus group has been postponed for the unavailability of the stakeholders in the scheduled period.

Compare to the scheme above mentioned, two aspects should be mentioned:

- the process could not make use of draft quantitative outputs due to mismatches of time schedules between the qualitative and the quantitative analyses
- only one group succeeded in developing a ranking exercise.

The following section goes more into detail on the lessons learned from the analysis.

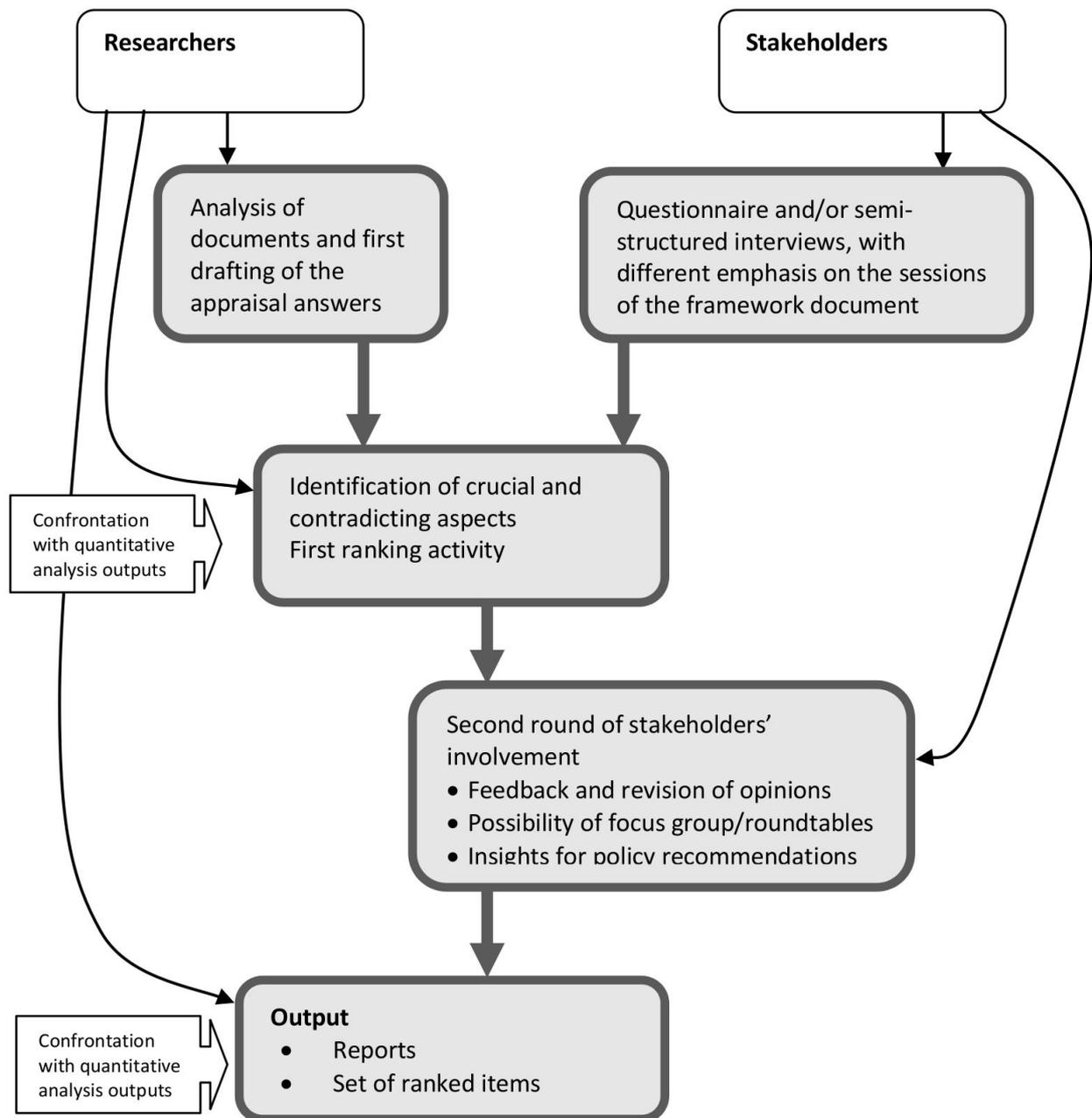


Figure 1: Schematic overview of the proposed methodology

A.3.5.2 Feedback on the applied methodology

The two-step analysis

The general assessment of all the teams is that this articulation has been very useful, in particular for the capacity to integrate the different knowledge of stakeholders (public administration, sectoral experts, etc.) and different scales (NRW's team involved State and Regional stakeholders).

The implementation of the method has shown that certain skills from the researcher are needed and some expertise in policy research would be an added value. However, the questionnaire list is clear and straightforward enough to be able to conduct the analysis with the policy documents as a basis (difference in vision strategy, operational measures, etc.) and to support the activities. Nevertheless, due to the complexity of the topics, their difficulty and the required time and efforts in gathering knowledge through desktop analysis and different forms of interactions with stakeholders, the process has been longer than what foreseen in the timeframe of the project.

Within the two-step analysis, positive feedbacks came about the use of workshops and expert seminars, resulting good complements to the interviews in the first round. Through this technique abundant information and different data were compared, leading the teams to fine-tuning the draft assessments.

In some cases it was worth providing the participants with one sheet per challenge with series of affirmations extracted from the first round, which were lately evaluated quantitatively through a ranking exercise. However, NRW's team indicates the workshop as less appropriate tool for ranking exercises. On the base of their experience, they estimate that Delphi-rounds or focus group discussions would have been better to create pseudo-quantitative data and to perform a ranking exercise.

In most of the workshop the qualitative assessments deriving from the main sections of the questionnaire were debated. In some cases the seminars were characterized by high degree of involvement of the stakeholders, which created an appropriated working climate and stimulated the confrontation of different opinions. In other cases, however, strong contradictions appeared among the opinions of the experts and the interaction was more difficult. In the latter case, the workshop did not led to a shared assessment. Another drawback of the workshop is that it could turn on very concrete cases and issues, so that it appeared difficult to lift the results on a more general level.

NRW team suggested the possibility to inverse the order between interviews and workshop. This would be an opportunity to catch at first more general opinions and the main lines according to the stakeholders within the workshop activities, and afterwards to use the interviews to focus on specific topics.

At the same time, the Irish team has found more suitable to implement the knowledge gathered during the interviews through a second round of desktop analysis, in some cases on documents that were suggested during the interviews and not yet included in the policy bundle, in order to fix concepts and assessments.

The role of stakeholders

The cooperation with the stakeholders was in general terms very useful, especially to find out what the state of the art, and the needs at various levels. The interviews proved to be an excellent validation to the desktop analysis, providing also more detailed insights. They also prove to be necessary since the broadness of the themes and the scattering of policy domains can lead to a “loss of the overview” and the way in which policy domains interact.

However, the interaction between scientist and stakeholders (even more if they represent different levels) appeared complex, and opinions among them may diverge. As pointed before, the presence of both may result difficult in seminars and workshops.

Flanders’ team suggested to have a good list of contacts as soon as possible, considering the different steps of the consultation process (interviews, focus groups) and the role of the contacts (scientific experts, policy representatives, etc.). Scattered competences and busy agendas may hamper the time schedule and the quality of the process.

The preferences for the list of interviews and participants of the workshops in terms of sectors and roles were different among the case studies, and may vary according to the general functioning of the administrative bodies.

In different cases, some teams had to face some reluctance of the stakeholders and experts, and in one case even the explicit request of not recording the interview. This can be explained by a fear of making political-sensitive assessments. On the contrary, it is important to highlight that in general terms teams have found enthusiasm and will to participate among their stakeholders.

The combination with the desktop analysis

Most of the teams have indicated that documentation analysis was the key for a better understanding of the contents which were going to be developed in next rounds. Without an appropriate research of the framework it would have been very difficult to obtain later on reliable results and conclusions. However, the scale and diversity of the different challenges required a prolonged and detailed initial period of research to become familiar with the various challenges. Each challenge presented a complex set of issues and had a multiple set of relevant policy documents at various levels – national, regional and local, which may become an onerous task to develop in a suitably clear understanding of each individual challenge.

In general, though, the desktop analysis is considered feasible if confined to the limited number of indicated policy documents. However, in many interviews suggestions were made about relevant research reports and ongoing researches, but it was not feasible to consult those in the period of the project. It could be, however, very valuable to make a reference list of those documents.

The appraisal questions and the questionnaire as a tool for qualitative analysis

The design of the questionnaire was considered optimum for the extracting of ideas and conclusions for each of the 4 epigraphs (Awareness of the macro challenges, Resilience of the planning system, Consistency of policy bundles and Future threats/opportunities of the macro challenges) presented. The adaptation of the questionnaire to each macro-challenge was made without difficulties as it was homogeneous enough to cover in reliable way both general and specific aspects of the macro-challenges.

However several comments highlighted some limits or some ways of adaptation, which was the general idea behind its redundancy.

First, the basic idea of the questions were good, but difficult for the non-trained researcher, consequently difficult to bring them over during the interview. To answer them all consequently, is a complicated but interesting research process.

Second, some questions were evaluative and in this respect difficult to answer (e.g. is there a coherent policy?). The result of the analysis should therefore be seen as a starting point, based upon the appraisal of the researcher and two interviewees. It will have to be taken into account, however, that some appraisals can be subjective.

Third, it was noted that that it was hard to distinguish for some of the experts the questions concerning the item number 2 "Strategic capacity..." in epigraphs "2. Resilience of the planning system" and "3. Consistency of policy bundles". Despite the importance of having a separate epigraph for the policy bundles as they were one of the key aspects of the research, the Irish team suggested, according to the answers given by the experts, to join both epigraphs into one better clarified and less repetitive.

Forth, the level of detail required in the appraisal document and the complexity of many of the questions often resulted in it being unsuitable material to use as direct means of questioning within the interviews. Thus, in most of the cases, the interviews took the form of a more general discussion under some main headings, or based on a simplified questionnaire.

Finally, concerning the developed matrix, the teams agreed on the fact that the detailed questionnaire has been useful in the way that, besides the framework and initial idea that the documents can provide for the next steps, it has served for the deepening into the concepts and focusing on the indicators, which must be the core of the TPM project. In particular the session on resilience of planning system could provide some interesting comparative framework between the different planning systems in place (not only) in the five regions taking part in the TPM project.

Ways of representing the outcomes

The representation of the outcomes is a point of discussion. It was immediately felt

that the proposed length of the texts was not adequate for the analysis. This of course is the result of a needed trade-off between the need for “synthesis” and “analysis” in the research. In some cases the choice was in favor of a more extensive report.

Constrains and positive aspects

The assessment of the methodology account and the necessary efforts has to be taken with the fact that this was a first analysis. This means that in a following phase the basis material is already available for updating with new policy strategies and documents.

In general, the comparison of different regions and its translation in a qualitative monitoring tool seems to be an ambitious goal, but the general feeling is that the questionnaire list, with the necessary amendments and flexibility for adaptation to each context, could give a good basis. Thus, the methodology used seems to be correct in order to develop the assessment process and provides reliability to the obtained results.

Part B Draft guidelines for regional monitoring

B.1 Introduction

During the next phase of the project the scientific team members in collaboration with the stakeholders of the case study regions will conduct a concrete monitoring exercise in each region applying some of the ideas developed in the previous phase.

In this part of the report we present our draft proposal for the different elements of such a monitoring system. This proposal will be discussed and finalised at the next project meeting. The application of these elements will differ according to the specific situation in each region (already existing monitoring systems, levels of competency, availability of information and accessibility of other regional stakeholders, etc.), but we propose to observe the following general outline, the order of which will depend on the regional realities:

- 1) Choosing elements to be monitored and monitoring criteria for these elements
 1. Choice of relevant indicators and clear definition of their regional meaning
 2. Choice of reference criteria
 3. Identification of qualitative information necessary, notably information that can be translated into pseudo-quantitative indicators
- 2) Quantitative assessments
 1. Adaptation of relevant tools for monitoring
 2. Quantitative benchmarking
- 3) Qualitative assessments with stakeholders and experts
 1. Establishment of a system of monitoring of the resilience of the regional planning system (checklist)
 2. Establishment of a pool of relevant persons
 3. Definition of best method for reaching these persons and getting the necessary information
 4. Qualitative assessments
- 4) Visualisation and presentation of results

These different elements are detailed in the following sections.

At the end of each section, we offer a concrete proposition on how the elaboration of the specific regional monitoring tool should go on from here.

B.2 Quantitative elements

B.2.1 Choosing elements to be monitored and monitoring criteria

This project targets the monitoring of the four global challenges identified at EU-level: globalisation, demography, climate change and change of energy paradigm. In the quantitative benchmarking and the qualitative analyses presented above, we propose a series of elements to analyse and measure in order to understand regional performances in these fields. However, other analyses certainly are possible, and each region will have its own priorities concerning the choice of relevant elements to monitor and how to interpret them. Debating this choice is already an important part of regional monitoring as it forces regional stakeholders to be explicit about their priorities and thus to already start the elaboration of a common framework of understanding and a common postulate of cause-and-effect relationships.

We propose that in each region this debates starts from the mind map elaborated by the project which can then be adapted to regional needs and understandings.

B.2.1.1 Choice of relevant indicators and their regional meaning

Quantitative monitoring is based on indicators. We propose and describe a long list of indicators for EU-wide regional benchmarking in the relevant annex. The main criteria that went into the choice of this list was obviously the availability of data, which is the single most limiting factor for EU-wide regional quantitative analyses. Through ongoing work by Eurostat, DG Regio and obviously ESPON, this list can potentially evolve constantly and should, therefore, not be seen as neither exhaustive, nor static. Any regional monitoring process will thus have to constantly survey new datasets and possibly amend the proposed list. Ideally, this should be the result of the ESPON Indicators and Monitoring projects which could possibly provide a permanent (but constantly adapted) list of indicators, providing easy access to the relevant data.

A first step for the regional monitoring system will be the choice, amongst the existing data, selecting a limited amount of indicators that are considered most informative for the specific regional questions. This also entails a discussion about the meaning of these indicators, including their political meaning, and the link between on the one hand both political options and ideological orientation and on the other hand the means to express these in quantitative terms.

We propose that in each region the debate start with the proposed list as a basis. Within the limits of data availability the IGEAT will assist regions if they wish to amend that list.

B.2.1.2 Choice of reference criteria

The notion of monitoring encompasses two concepts: 1) the value-free observation of trends in order to be well-informed, and 2) the observation of trends in order to compare these trends with expectations or objectives. The former implies the collection and treatment of data or information and its regular reporting. The latter (which we will mainly deal with here) builds upon the former, but adds a benchmarking dimension. When trying to determine where a region stands in terms of its development, reference points are needed. This is where benchmarking comes in. It helps evaluate how well a region is performing. However, the "how well" obviously is a relative concept. The target can be defined by absolute values (a certain amount of CO₂ reduction, for example) or relative to other entities or groups of entities (better or worse than the national or the EU average, than the neighbours, than other regions of similar type, etc). There is no one good solution, it obviously depends on the political necessities of the monitoring process.

Part of the elaboration of a monitoring tool that is to include some form of benchmarking it is important to go through a conscious and explicit phase of selection of the relevant thresholds or reference points, in order to provide results that are meaningful in the particular policy context of the region. This is thus something for which we cannot provide a one-size-fits-all answer, but only some elements of reflection that should help each region find its own "best" solution.

Other spaces as references

Comparing a region's evolution to other spaces means using the evolution of other regions or of other scales as reference point. This could mean comparing a region to the neighbouring regions or to similar regions, or it can mean comparing the region to the national or European average or to some other higher-scale combination of regions. It is important, however, to avoid the fallacy of trying to compare a region's performance with regions of completely different characteristics. In other words, while it makes sense to compare the region to national or European averages in order to get a very rough understanding of where a region stands, it seems nonsensical to compare the share of financial services in the regional economy between a global city region and a remote agricultural region. Depending on the subject and indicator, attaining the average of a supra-regional spatial delineation might or might not be a relevant objective.

It is, thus, important to choose the reference spaces which have a particular meaning and usefulness for the region to be monitored. Mostly, as all policy-monitoring processes are politically driven, each region has to identify those regions it would like to compare itself with.

Another often forgotten issue is which value to calculate for the space of reference: should it be the average, the median, or some other value. The classic choice is the average, but this might be strongly influenced by some outliers. The median is

generally a more robust measure of “average” behaviour (another option would be the average of everything between the 10th and the 90th percentile in order to exclude outliers), but again, the choice is more a political one, than one related to a clear scientific “best” answer.

Policy goals as references

The second big family of threshold values in benchmarking exercises contains values derived from policy objectives. This can vary from Europe-wide policies to regional policies and from loosely-defined targets to targets imposed by treaties or even legislation.

These values are not based on any current reality, and not linked to any other spatial levels (unless the policy option is something like “be part of the top 10 NUTS 3 level units in the country”), but rather represent the political wishes at a given time. These values thus have to be known and entered into the benchmarking system as they cannot be calculated automatically. They also, therefore, vary from region to region depending on the political priorities.

Defining “good and bad”

In order to allow rapid understanding of benchmarking results, indicator levels are often classified into good, neutral, bad, or some similar scheme. However, it is not always easy to determine whether a given indicator should be considered as “good” when high, and “bad” when low, or vice versa. For example, the share of foreign-born in the total population can be considered good when high as it might indicate the openness of the region and the capacity to attract new residents, but it may also be considered bad as it might indicate potential socio-ethnic conflicts and spatial concentration of immigration. Another example are sectoral wages which might be considered good when high, especially when compared to the national average as this might indicate particularly high qualification rates within the given sector, but it might also be considered bad when high as high salaries might hamper international competitiveness. It is necessary to explicitly take this question into account when choosing indicators and reference levels.

As this project is about the relationship between EU-wide global challenges and regional policy, EU-wide benchmarking seems one appropriate element within the process. We, therefore, propose that each region keep the multi-scalar approach used in the regional annexes of this report. However, other reference values might be added. The benchmarking tools can then be run again in order to take into account both the change in indicators and the change in reference values.

B.2.2 Adapting tools for monitoring

B.2.2.1 Existing regional tools

It was decided at the beginning of this project, that its goal should not be the elaboration of a one-size-fits-all monitoring tool which would replace whatever exists in regions, but that it would rather aim at offering a tool kit out of which regions could pick and chose in order to adapt their own existing monitoring system in order to take aboard some of the elements considered by this project. This should continue to be the priority.

Box 1: The challenge of integration of monitoring systems from different sectors and at different scales: the example of North Rhine-Westphalia

Especially for the larger regions with decentralised (planning) governance systems a specific issue in the elaboration of a regional monitoring tool might be how to coordinate and integrate existing monitoring efforts at other sub-scales and/or sectoral monitoring systems into one integrated regional system. This is the case, for example, in North Rhine-Westphalia where monitoring systems that cover the area of spatial planning are normally found on lower levels. Due to the distribution of competences between the different levels of spatial planning, it is not the intention of the state spatial planning to standardize and harmonize other monitoring instruments on the state-level. This explains the presence of a number of monitoring instruments on regional or even lower levels in NRW and leads to the need to coordinate their results if a state-wide monitoring is to be achieved.

Problems sometimes occur with the access and compilation of monitoring results from the regional level by the state spatial planning. Cited as being problematic in this regard are the different criteria and standards on which the collection of data is based and which consequently sometimes prevents the comparability of such data or makes it considerably more difficult. In addition to the problem of standardised statistical details and recording criteria, the question of what developments are to be recorded at all are of particularly great importance. Other challenges include the unwillingness of other levels or other sectoral administrations to share their internal data and the lack of resources to comply to centralised requests for information. Implementing a state-wide monitoring system thus implies finding solutions to such challenges. Possible paths might include: the building of a coalition around a common definition of monitoring objectives amongst all relevant administrations in order to ensure the willingness of all to collect the necessary information (win-win compromise); financial incentives of the central authorities to other spatial levels providing them with the necessary resources; the use of the dynamics caused by the INSPIRE directive to ensure data sharing by web services even for data that would not directly fall under the INSPIRE definitions; etc.

For more information about the specific North Rhine-Westphalia case, notably a review of the different monitoring systems existing at different levels, see the relevant annex.

B.2.2.2 ESPON HyperAtlas

The ESPON HyperAtlas has the potential to become a very useful tool for policy makers at different scales who wish to analyse the situation in their region through the lens of comparative benchmarking and mapping. The tool can definitely be improved and early adopters will also have to play the role of testers and bug reporters. ESPON should make sure that the resources and man power are there to continue its development and to provide support for users. At this stage users can already elaborate their own datasets for a series of predefined spatial extensions and resolutions. The real power of the HyperAtlas becomes obvious however, when each region can elaborate the necessary input files to build customised extensions and resolutions. In the wake of this interim report we will elaborate such input files for the 5 stakeholder regions. In order to allow other regions to do the same, a reflection should be held in ESPON, in collaboration with the ESPON Database project about possible future development of such a service to regions. This would seriously enhance the visibility of ESPON.

For the test phase of regional monitoring in this project we propose that regions use the existing input files for EU-wide benchmarking, possibly amended with new indicators, and specific custom-built input files for each region allowing use of the HyperAtlas down to LAU2 level (see the example of the MetroBorder region in the current HyperAtlas application). These input files will be compiled by the IGEAT.

All regions are invited to provide feedback on the usage of the HyperAtlas to the IGEAT which will compile and relay the information to the ESPON Database team.

B.2.2.3 The TPM prototype benchmarking spreadsheet

As described above, we developed the prototype of a complementary tool to the ESPON HyperAtlas, the ESPON TPM Benchmarking Tool (the spreadsheets are provided together with this report). This is a simple to use system which can easily be fed with customised dataset, irrespective of the scale, as long as certain rules are respected. The tool is in a prototype state, meant to show what is possible, but is already usable, although definitely not optimised (notably in terms of speed optimisation). The team does not have the time and resources to develop a complete and optimised tool. The prototype is thus to be understood as an invitation to regions to think about their current infrastructure and needs and to implement a more efficient tool within the framework of their existing systems.

For the testing phase we recommend that the tool be tested and used as is, unless other regions have the possibility to use more sophisticated tools. Feedback should be given to the IGEAT in order to collect a larger picture about needs for such tools.

B.3 Qualitative elements

B.3.1 Assessment of regional planning system

As the results of our qualitative analyses show, a thorough assessment of regional planning (and more general governance) systems can provide insights into possible paths of improvement. A particularly important aspect to that in the context of the analysis of European challenges is to assess a region's awareness of European (and national) issues and policies and its capacity to act and react toward and in interaction with that level.

Such an assessment does not have to be done at high frequency and, as our experience has shown, can already provide very interesting insights without a too high investment in terms of time and resources. The questionnaire used for our analyses is reproduced as an annex for information. As such it is quite long and exhaustive. Each region should use it as a basis for elaborating a lighter questionnaire more adapted to its local reality. Questions should include issues such as:

- 1) Is the administration aware of European and national legislation and policy ? Is there a specific process of monitoring such legislation ?
- 2) Is there a capacity to intervene in the higher scale policy processes and debates when necessary ?
- 3) Is the administration aware of and capable of digesting Europe-wide information material (studies, reports, etc) ?
- 4) Is there a capacity to access and treat European data ?

During the test phase in the next months, each region should elaborate such a light weight questionnaire on the basis of the experience of the qualitative analyses. The comparison of all these questionnaires and their results at the end should then allow the extraction of a common denominator which can then be edited as a generic version of such a questionnaire.

B.3.2 Use of pseudo-quantitative information

Much of the relevant information for monitoring either cannot be translated into quantitative information, or, even if theoretically possible, such quantitative information does not exist. One option would then be to just use qualitative assessments in the form of interviews or qualitative reports. However, it might sometimes be desirable to structure qualitative information in a form providing a quick

and easy to read access to the main content of that information. This is especially true when experts are asked to assess planning systems or to evaluate the relevance of specific issues for their region. In our inception report we presented an overview of possible methods for such an approach. At this stage, we focus our recommendation on three methods: surveys, Delphi exercises and focus groups with ranking or scoring. Which of these three is the most appropriate technique depends on the information required, the resources and time available, and on the targeted audience.

B.3.2.1 Surveys

Surveys can be a quick and easy way to receive feedback from a series of stakeholders in a region. Follow-up by phone or personal contact might often be necessary in order to ensure a sufficiently high response rate, but if the survey system is clearly and visibly integrated into decision-making processes, this should raise the motivation of respondents. It might actually become a regular habit for a fixed group of people to respond to an annual questionnaire on a series of issues. Today's online questionnaire systems make this even more comfortable. Advantages of simple surveys include the potential to reach a large group of (even casual) participants and the possibility to easily (automatically) extract information (as long as the survey is well-structured).

B.3.2.2 Delphi method

Delphi exercises are also based on surveys, but involve a stronger commitment by participants since they have to respond to questionnaires several times through the exercise and justify their responses. However, the advantage of Delphi is the feedback that participants receive allowing them to adjust their opinion depending on what others say. This can lead to more precise results, and makes the participants feel more involved in the process. Newer techniques, such as real-time Delphi make the experience even more interactive and less repetitive. Delphi is generally used with a limited audience of motivated expert participants.

B.3.2.3 Focus groups

In most case study regions, the qualitative analyses involved both interviews with individuals and gathering of these individuals in a group session. Such group sessions, when well-structured can provide an interesting tool both for raising common awareness of certain issues, but also to form common opinions and evaluations. The latter can be transformed into pseudo-quantitative indicators through ranking, scoring or other exercises where participants attribute quantitative values to priorities, opinions or other information elements. Focus groups are aimed at limited amounts of people (experts and non-experts) and have the advantage of promoting personal interaction between stakeholders, of allowing people to express themselves more informally than via surveys and of providing a time-efficient way of reaching

group opinions. Online focus groups can be an option to limit travelling.

Box 2: Examples of creation of information in the case studies

In North Rhine-Westphalia a questionnaire was handed out to the experts that had already participated in a collective meeting (figure 2), while in Navarre a scoring exercise was conducted during such a meeting (figure 3).

Obviously the results of such exercises have to be taken with caution because of the small sample size. They, therefore, cannot be taken directly side-by-side to quantitative indicators from large-sample surveys or administrative data. They can, however, provide a quick view of the views of a sample which might not be representative but whose opinion might count in regional policy making.

A specific issue with the treatment of ranking results is the need to adjust them according to the response behaviour of participants. In the Navarre case for example, one can see that the variance of ranking levels varies strongly between experts. Whereas some vary their response within a large amplitude of values, others stay within a very small range. Responses, therefore, need to be adjusted through relevant techniques (in this case some form of normalisation taking into account the standard deviation of the responses of each participant).

1. Awareness of the global challenges

| | strongly agree | rather agree | rather disagree | totally disagree | cannot assess / not relevant |
|---|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|
| All administrative levels (state, region, municipality) are aware of the four global challenges demographic change, globalization, climate change and energy supply and take them into account in the planning process. | <input type="checkbox"/> |
| On a small scale the spatial relevance of the four global challenges varies significantly and requires location-based solutions. | <input type="checkbox"/> |
| The integration of forecasts in planning decisions contributes to an improved perception of the four challenges mentioned above. | <input type="checkbox"/> |
| The European spatial development policy and its guidelines (EUREK, Territorial Agenda of the EU, strategy Europe 2020) contribute to an increased sensibility in dealing with the four challenges mentioned above. | <input type="checkbox"/> |

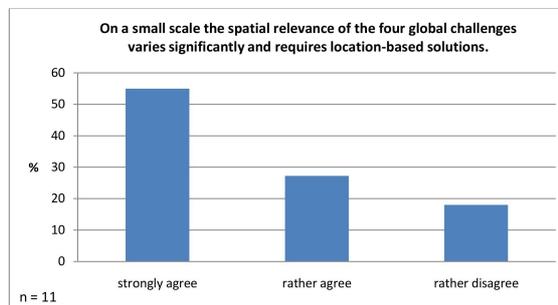
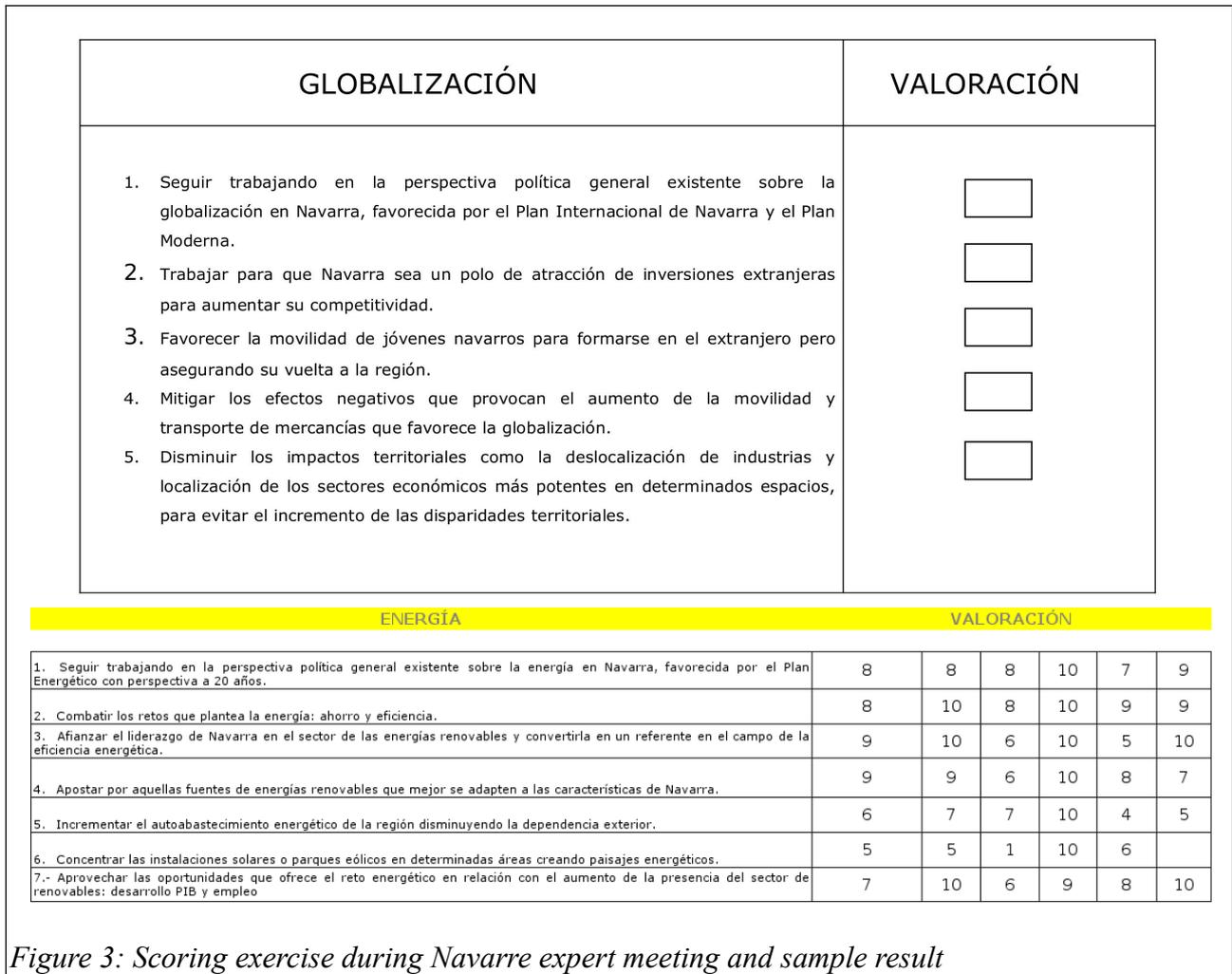


Figure 2: Questionnaire used in NRW and sample result



We recommend that regions evaluate the qualitative information needed and the audience providing this information in order to choose the best method for gathering this information. The IGEAT and ILS will provide advice in this choice.

B.4 Visualisation and presentation of results of monitoring

Any monitoring exercise has to provide an easily accessible presentation of its results in order to make them useful. After having studied several types of possible presentations, we decided to go for a very simple traffic light system, complemented with maps (see figure 4). This allows a very quick view of both the general situation of the region and the geography of the phenomenon within the region. Even though we haven't done so up to now, this system also allows the integration of pseudo-quantitative information that is classifiable into a good-average-bad scheme.

The project does not have the resources to propose an automatic visualisation system. Although the ESPON HyperAtlas proposes mapping, this mapping is currently not of very presentable quality. Each region should, therefore, evaluate how best to integrate mapping and more general visualisation into its existing infrastructures, or whether to buy relevant services or products.

We propose to use the same system during the next phase. IGEAT will provide the mapping if necessary.

| Demography | | | | | | |
|----------------------------------|-------------|----|----------|---------------|----------|--|
| Indicator | value | EU | National | Neighbourhood | Typology | |
| Young age dependency ratio, 2009 | 22% 93 | | 105 | 92 | 94 | |
| Old age dependency ratio | 31% 120 | | 99 | 109 | 110 | |
| Life expectancy, 2004 | 78.6 0.86 | | - 0.01 | - 0.02 | | |
| Median age, 2008 | 41.4 - 0.92 | | 0.13 | - 0.72 | | |
| Population growth, 1999-2009 | 0% 96 | | 100 | 98 | 99 | |

b) Regional maps demography

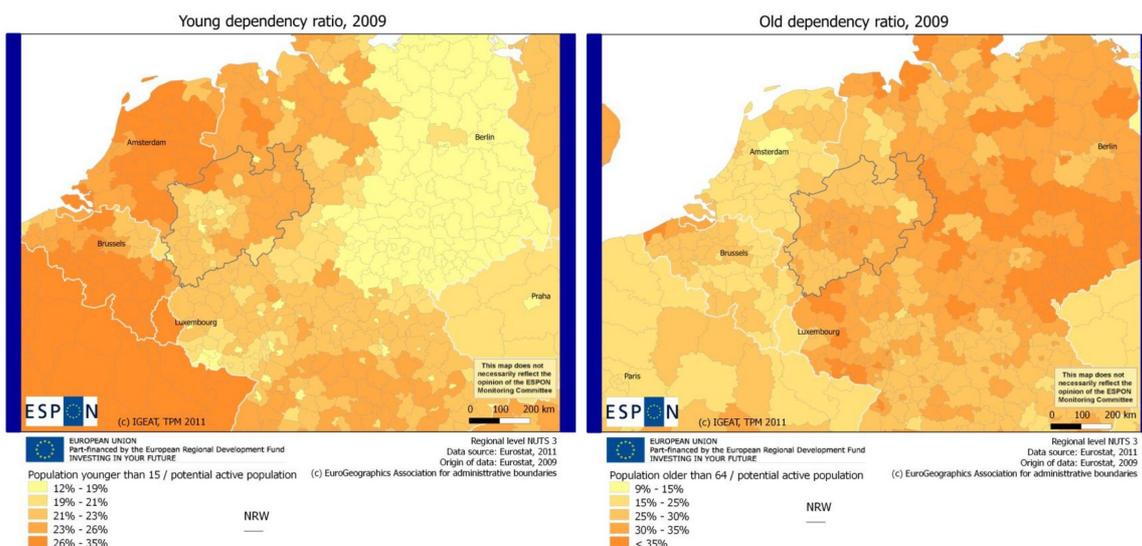


Figure 4: Example of the presentation of benchmarking results

Conclusions

A first assessment of the situation of our stakeholder regions in light of the global challenges

This report has presented a first assessment of our stakeholder regions in terms of quantitative benchmarking comparing them to the rest of Europe and in terms of an extensive qualitative assessment of how their respective planning and governance systems cope with these challenges.

A major conclusion obviously has to be the diversity of situations. This diversity is first of all linked to the diversity of the nature of our regions, ranging from very large almost state-like entities with wide-ranging powers to a fairly small entity with no real administrative reality other than a coordination function. This diversity can be seen as a weakness for the analysis since it does not easily allow comparison, but it can also be seen as a strength as it means that the tools developed during this project will be tested and validated in very different realities.

No general conclusions can be drawn about the readiness of the stakeholder regions' planning and governance systems for confronting the four global challenges. They come from very different levels in these fields and responses will have to tailor-made within each regional context. We believe that the analyses presented here are a first step in this direction, and are confident that the next phase of the project will allow us to systematise the information.

Proposal on how to use the monitoring tool kit in policy making and recommendations for ESPON

The draft monitoring tool kit presented in this report presents a generic approach, i.e. it should fit for most regions in Europe. However, as mentioned several times throughout this report, it is a kit of tools which has to be adapted in each region to its specific situation in terms of governance system, resources, already existing tools, etc. The idea of the tool kit is to allow easy benchmarking with minimal effort, to provide hints as to how integration between quantitative and qualitative elements could work and to structure a process which should lead to an explicit debate about aims and objectives of monitoring in a particular region. Monitoring is not policy-neutral, nor is it ideologically neutral. What and how one monitors is part of a more general political orientation. Proposing a one-size-fits-all tool would lead to it being ignored. We, rather, have tried to present how regions can integrate some of these tools into their monitoring systems in order to enhance their awareness and readiness

for EU-wide global challenges.

ESPON can play an important role in providing in a more sustainable way such tools for regions. Two major fields should be investigated for the future: data and tools. In terms of data, the ESPON Database needs to increase its quality standards and its accessibility. At the same time, an effort to provide a permanent (even if changing) set of indicators for different challenges in a ready-to-use form (i.e. ready-to-download datasets by theme and by spatial level) would seriously enhance the usefulness of ESPON data to regions. In terms of tools, the ESPON HyperAtlas stands out with a formidable potential for wide-spread usage. However, besides the technical improvements that are still necessary, ESPON has to reflect upon the possibility to provide a service around such a tool which the current Database project probably does not have the means to provide.

Outlook until draft final report

In the next phase of the project we will test the concrete application of our tool kit in the stakeholder regions. This means adapting the generic tools and indicator lists to regional realities, zooming down the analysis to local level and reflecting about the possible integration of some or all of the tools into permanent regional monitoring structures. Even though time is very short in this project, we hope to be able to present a riper and richer version of the tool kit for the draft final report, based on the regional experiences.

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