

TPM

Territorial Performance Monitoring Annexes

Qualitative Analysis
Catalonia

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1. Introduction: Note on spatial planning in Catalonia

It is not possible to understand the resilience of the Catalan system of spatial planning in the face of global challenges without prior consideration of its organisation, the extent of partial planning and its nature.

Thus, with regard to **organisation**, 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 a lower level, sectoral planning and regional plans. These develop policies of the General Territorial Plan, but 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 for this purpose. While sectoral plans, such as energy, highways and environmental facilities are supervised by the different departments in the Catalan Government with jurisdiction in each ambit, regional plans are prepared by the Ministry of Territory and Sustainability.

In this context, **coordination** between the three instruments of planning is essential, but so far the process of development of spatial planning has only established rather weak coordination mechanisms. Thus, the various government departments prepare their sectoral plans quite independently of regional plans, and the latter establish their regulations with strict adherence to sectoral laws and regulations. It could be said in this regard that the two instruments for planning co-exist, rather than achieve integration and mutual reinforcement in their provisions.

Furthermore, the instrument that, over and above these other instruments, should facilitate this coordination has so far not had the opportunity of bringing them together. The only experience of general spatial planning in Catalonia corresponds to the document approved in 1995¹, which was unambitious in content and regulatory capacity. Suffice to say, in this regard, that the next revision of the General Territorial Plan of Catalonia, already under way, is an opportunity to put forward a document that coordinates and integrates regional and sectoral proposals.

Regarding the **scope** of regional plans, we need to understand the relationship between the spatial planning system (above the municipal level, prepared by the Catalan Government) and urban

¹ Law 1/1995 of 16 March, approving the General Territorial Plan of Catalonia. To consult documentation on current spatial planning in Catalonia: www20.gencat.cat/portal/site/

planning (approved by the Catalan Government, yet a municipal initiative). Regional plans have to respect current urban planning and they have no regulatory power for classifications and restrictions on land use. The criteria established in regional plans are not directly applied to land use but are articulated through urban planning. This relationship of dependency on urban planning, together with the coordination with sectoral planning, described above, means that it is not to be expected that Catalan regional plans adopt criteria that establish specific uses of land or siting of specific facilities or services, but rather give an indication of locations and basic characteristics that must be established by other planning instruments.

Finally, it is important to consider the **character** of the current Catalan regional plans in the historical context in which they were introduced. Catalonia has a rich tradition of proposals for regional planning, in stark contrast to the lack of plans that have been passed into law. Apart from the scant experience of the General Territorial Plan of 1995, the oldest spatial plan currently in force dates from 2006. In a context of significant demographic and economic growth over the past 60 years, accompanied by intensive processes of urban sprawl, the lack of regional planning has had very negative consequences and has often led to dysfunctional situations and even chaos. We should consider this first generation of regional plans a necessary urgent response to the territorial disorder in Catalonia, which has made territorial planning a priority. They are, therefore, essentially physical plans, without the strategic dimension of spatial planning commonly found in other parts of Europe.

In this context, the Catalan Government set up the Territorial Planning Programme in 2004 with the goal of "providing tools for correcting the tendency to dispersion, specialisation and segregation of urban planning above the municipal level"². It is important to

² NEL·LO, Oriol (2011): "El planeamiento territorial en Cataluña" (Spatial Planning in Catalonia) in *Cuadernos geográficos*. 2011, Number 47/2 [in press]. For a comprehensive description of the criteria that guided the Spatial Planning Programme for Catalonia see: *Planejament territorial. Criteris*. (Spatial Planning. Criteria) Secretariat for Territorial Planning of the Department Regional Policy and Public Works, Generalitat of Catalonia. Barcelona, January 2006. www20.gencat.cat/portal/site/ptop. For a justification of these criteria and an overview of the contents, objectives, constraints and development of the Programme see also: NEL·LO, Oriol (2007), "La nueva política territorial en Cataluña (2003-2006)" (New territorial policy in Catalonia (2003-2006)), in Joaquim Farinós and Joan Romero, editors, *Territorialidad y buen gobierno para el desarrollo sostenible (Regions and Good Government for Sustainable Development)*, Valencia, Publications of the University of Valencia (pages 191-236); ESTEBAN, Juli (2006): "El Programa de Planejament Territorial: continguts i mètode" (The Spatial Planning Programme: content and method), in *Espais*, 52 (pages 14-24), and ESTEBAN, Juli (2009): "La pianificazione territoriale in Catalogna" (*Spatial Planning in Catalonia*), in *Tria. Rivista internazionale semestrale di cultura urbanistica*, 3 (pages 153-167). To consult the specific regulations for each of the mentioned items, see the documentation of the seven Regional Plans at www20.gencat.cat/portal/site/

understand the content and limitations of the seven recently passed regional plans for Catalonia within the planning framework, their precedents and the historical and territorial context. The plans show a marked concern for issues to do with the four global challenges we refer to in this document but they offer rather limited scope for action.

In order to analyse the resilience of the planning system we will focus in one of the seven approved regional plans, specifically the Partial Regional Plan of the Barcelona Metropolitan Region³. This plan gathers the principles and methodology followed by all the regional plans, according to the Territorial Planning Programme created by the Catalan Government to guide the process

2. Resilience of the planning system

2.1. Vision

The Territorial Planning Programme was born with a clear vision: to provide the tools to deal with the territorial challenges that the Catalan region faces and to foster the opportunities it has. This general vision is articulated in three main principles: a compact territory (avoiding sprawl), complexity (of the uses of the territory) and cohesion (avoid segregation). These three principles are used to deal with three basic areas: open spaces, urban settlements and infrastructures. These principles were defined by the Ministry of Territorial Policy and Public Works (currently changed to Ministry of Territory and Sustainability).

This vision was stated by the Catalan Government in 2004 and has guided the regional plans until its completion in 2010. The new government wants to continue this work with the revision of the General Territorial Plan of Catalonia, and in its government plan states that the Catalan territory should have a structure that is efficient, sustainable and with cohesion.

The Partial Regional Plans had a time horizon of 25 years, from 2001 to 2025. The revised General Territorial Plan of Catalonia is expected to be valid until 2050, but this is still in discussion. During the elaboration of the plans there was a revision of the demographic and labour market forecasts that were used by the Programme, just to ensure they were still valid.

³ For a summarized version of the document see: http://www.ietcat.org/images/pdfnas/Opuscle%20PTMB/Opuscle_CAST.pdf

2.2. Shared objectives

The three principles that guided the Territorial Planning Programme were then articulated in 15 more specific principles that have guided all the regional plans. This meant that all plans had to follow these guidelines as a framework to organise its different proposals. The principles referred to issues as favouring the diversity of the territory, to moderate land consumption, to facilitate public transportation, facilitate housing policy, etc. They were inspired in the European Territorial Strategy, and were defined again by the responsible Ministry and even if they were implicitly shared by the Catalan Government as a whole, there was no direct participation of other departments in their definition. Other stakeholders (civil society, other administrations) were not directly involved in the definition of these 15 criteria, but all along the process of drawing up of the different plans there were different participation mechanisms to consider the stakeholder's opinions.

The different plans approved have, as said in the introduction, a marked concern for issues related with the four challenges, but their action is limited to the spatial elements of them.

For instance, the actions undertaken in relation to **climate change** can focus on prevention of the process itself, that is, directly in the fight to reduce emissions, and adapting to the conditions of new scenarios that are likely to result from climate change, either positively, by taking advantage of positive impacts that may occur, or negatively, by minimising negative impacts.

Spatial planning has the potential for proposals both in prevention and adaptation. In all cases, however, the scope of proposals will be limited, logically, to the territorial component. That is, it will affect those variables related to location, shape or density of elements, while aspects such as efficiency (of people, companies, farms, etc.) in energy or water consumption correspond to other sectoral policies.

Because of their physical rather than strategic nature, current regional plans do not include specific proposals aimed at adaptation to climate change⁴, only in an indirect way.

Regarding energy: Current spatial planning in Catalonia has not yet exploited the whole range of possibilities for influencing the spatial configuration of energy supply. Territorially, the limited room for manoeuvre results in an inability to influence the infrastructure of energy production and distribution beyond the establishment of

⁴ Only one of the regional plans (Terres de l'Ebre) makes explicit reference to climate change, without including, however, any related action in the section of proposals.

spatial requirements that these infrastructures must meet, whether through the establishment of criteria for environmental adaptation, or identification and delimitation of areas where they must be located.

Spatial planning has addressed demographic issues (basically an increasing population but changes in age and nationality distribution), unevenly, depending on available powers and needs and priorities. Sectoral policies for the ageing of the population and migration described in the demography section) have little or no relation to the territorial dimension. This does not mean, however, that spatial planning does not take demographic variables into account when proposals are drawn up. On the contrary, the analysis of the current and future profile of the Catalan population was a factor of special importance in the Spatial Planning Programme of the Generalitat of Catalonia launched in 2004.

The Programme was endowed from the moment of its creation with its own tool for forecasting the country's demographic evolution: the V15-CAT model. This model permitted development of various scenarios relating the three main variables considered: the population, the job market and housing⁵. The period of validity is until 2026. The initial assumption is that the independent variable that determines demographic evolution is the dynamics of economic development (evolution of annual GDP) and, more specifically, the part of this that corresponds to an increase in jobs. The demographic dynamics consist of a vegetative and a migratory component. The vegetative component is conditioned by the age profile, and the migratory component depends mainly on jobs that are available, because they are not taken up by the insufficient number of young people already resident.

Use of this model allows us to consider population growth, immigration and age profiles, but it does this for Catalonia as a whole and only refers to smaller territorial areas to propose total population distributions, without taking into account the differences in population locations and characteristics at the local level, let alone the impact that these differences may have.

Regional plans also include measures to combat social segregation, which is one of the fifteen basic criteria behind all the proposals in the plans. However, the measures only establish minimum

⁵ For more information, see the chapters on scenarios for population and activities in all regional plans approved recently by the Generalitat of Catalonia, and MONÉS, M.A., and CARRERA, J.M.: *La Barcelona metropolitana els propers 20 anys. Prospectiva del mercat laboral, demografia i habitatge. (Metropolitan Barcelona over the next 20 years. Prospects for the job market, demographics and housing.)* Barcelona, Barcelona City Council, 2003.

thresholds for subsidised housing in certain urban developments, with a limited effect on combating social segregation

Regional plans passed in recent years in Catalonia, despite the limitations of their physical approach, include a series of decisions closely related to the **promotion and internationalisation of economic activity**. Firstly, regional plans ensure that there are sufficient land reserves for productive activity. The lack of a strategic approach, however, means that the plans do not make specific proposals for certain sectors at the expense of others and therefore do not identify specific areas for promoting particular activities. However, each plan, based on the specific region where it is applied and in accordance with the expected evolution of the population and economic activity, described above, and includes various hypotheses for evolution of the sectoral composition of the economy and, on this basis, the need for industrial land and service facilities. This is not a question of which land or facility should be used for a specific activity but rather ensuring that there is a minimum of space available so that economic activities, whatever the sector, can be carried out. Catalan spatial planning is limited to offering spatial conditions, as the future evolution of economic activities falls outside its scope.

Secondly, along with land reserves for specific activities, Catalan regional plans emphasise the configuration of a system of open, well-articulated spaces. This system is not conceived as a counterpart to the area used for urban development, but as an asset in itself, playing a particularly important role in promoting activities. In a case such as Catalonia, where a large proportion of earnings from abroad comes from tourism, the **preservation of areas of great natural value** is vital. Along the same lines, there is the identification, preservation and promotion of cultural and architectural heritage.

Thirdly, regional plans identify the **transport infrastructure needed** to support the activity of each region in particular and the country in general. The layout of the highway network ensures internal access and segregates local and international transport of goods, whether on a large scale by building roads primarily for local traffic (such as the Ronda del Vallès), reducing traffic in the major corridors (AP-7 and AP-2 motorways and the east-west Eix Transversal), or on a smaller scale, by deciding to put major production and logistics centres near high capacity roads. An even greater interest in facilitating transport of goods is the case of rail infrastructure, which as well as providing a passenger service connects the main centres for generation of goods (such as major

industrial areas and the ports of the metropolitan area of Barcelona and Tarragona) and provides good connections through the territory. Port and airport facilities, despite being state-owned, are also important, in terms of transport of passengers and goods.

Fourthly, owing to their conceptual framework, the regional plans of Catalonia **favour urbanization economies**. The model of complex, compact cities, with sufficient access to ensure the operation of the whole network of cities, promotes the diversity and exchanges that make it possible for companies with specific urban development needs to prosper. The growing importance of these contextual factors in an increasingly knowledge-based economy is supported by a territorial model based on planning. However, there is little cooperation with the Ministry of Economy and Knowledge for the implementation of these economic oriented spatial strategies.

2.3. Monitoring

Once the seven partial plans were approved a first monitoring system was settled. This system has as a goal to endure that all the new urban plans to be created by municipalities follow the regulations and proposals established by the different Regional partial Plan. For instance, a municipality of the Metropolitan region of Barcelona cannot decide to build in an area that fall in the category of open space according to the Partial Regional Plan of the Barcelona Metropolitan Region provisions, so the Ministry of Territory must control this and reject the approval of this plan if needed. This is somehow a bureaucratic procedure but that nevertheless wants to ensure that the principles of the Territorial Planning Programme are followed.

Then there is the intention to have a more long-term monitoring to analyse to what extend the Territorial Plans have been useful to achieve the goals of compacity, cohesion and complexity of the territory, but this analysis has a longer and more complex horizon.

2.4. Communication

The contents of the different plans approved have been widely discussed and debated in the media and in the civil society. All along the process of creation of the plans there were news, articles and public debates about the different aspects of the plans, some very polemic (as the creation of new infrastructures or the approval of new housing space) and some more easily accepted. The debates were organised all over the territory by the responsible Minister with

the presence of the representatives of municipalities, civil society associations and public in general.

Besides this, during the elaboration of the plans there were periods of public consultation during which the different social agents had the opportunity to comment and allege the proposal of the regional plans. After this, the plans had to answer all these allegations and accept those that were considered adequate. The different agents that participated were: other departments of the Catalan Government, other administrations (municipalities, counties), political parties, NGOs, private persons and enterprises. In the particular case of the Territorial Plan of the Barcelona Metropolitan Region (PTMB) most of the allegations came from municipalities, followed by civil society organizations and political parties, and most of them referred to transportation infrastructures and the protection of open spaces. There were two processes of public consultation before the definitive approval of the PTMB. Similar process was followed in the other plans.

2.5. Horizontal and vertical integration

The level of horizontal integration was medium. In certain issues (as the open spaces) there was a close collaboration between the Department of Public Works and the Department of Environment (that have in the current government been merged into one). The cooperation with the rest of departments and institutions of the Catalan Government (Economy, Energy, etc) was much lower or non existing. The planning system had a very much spatial orientation and it left to the competent department the elaboration of sectoral plans for instance in the area of energy or telecommunication infrastructure.

The vertical integration, especially with lower administrative levels as the municipalities, was better. In the case of the PTMB there was an specific will to have the plan elaborated in close cooperation with the municipalities and local entities of the metropolitan region. A *Commission of Territorial Planning* was constituted, with 22 members representing the Catalan and local governments. The provincial administration and the state-level administration were invited too to participate in this Commission.

2.6. Cooperation and participation

There is no specific episode or tool to allow cooperation with the private sector in regard spatial planning. If any, there are measures

that make compulsory that certain urban developments need to have a minimum threshold for subsidized housing.

The participation and cooperation with NGOs and citizens has been articulated mainly through the processes of public consultations, but this has been somehow a “top-down” approach.

3. Climate change

3.1. Awareness of the macro challenge: CLIMATE CHAGE

a. HOW DO THE CHALLENGES MANIFEST THEMSELVES LOCALLY?

Climate change will have a particularly severe impact on Catalonia. Its geographical location not only renders it extremely sensitive to climatic variations but also place it in a region with a great degree of uncertainty regarding future scenarios.

The two basic features of climate change in Catalonia will be, firstly, an increase in temperature and, secondly, altered rainfall patterns. In general, there is a consensus that the temperature rise will be exponential, that is, it will be greater in areas that are warmer already. As for rainfall, models agree that regions to the north of the Iberian Peninsula will experience a significant increase; while to the south rainfall will be much lower. In this context, therefore, Catalonia is in an area of uncertainty, where the different models fail to specify precisely how rainfall will change. Whatever the case, it seems clear that there will be greater irregularity.

b. WHAT ARE THE SPATIAL CONSEQUENCES AND IMPACTS?

A sharp increase in temperature and a significant variation in rainfall, at least in terms of regularity, will without doubt be matched by an increase in water stress. Some of the possible spatial consequences are:

- The **physical structure** of the territory will be affected by changes in climatic conditions through consequences for soil erosion, whether in the case of rivers, due to more erratic rainfall, with particularly violent episodes, or on the coast, with deterioration of beaches and fragile coastal areas, especially those under human influence: regression of deltas through construction of dams, slowing the pace of deposits, or loss of beaches through the construction of ports that alter coastal dynamics.

- **Natural areas** will suffer changes in flora and fauna as a result of altering rainfall patterns, longer periods of drought or, simply, a modification in the cycle of the seasons. The alteration of cycles will give rise to the appearance of new species and the disappearance of those that cannot adapt to new conditions, through total extinction or displacement (migration). Whatever the case, there will be a change in the composition and diversity of species and in the functioning of ecosystems. In the case of Catalonia, the endemic risk of forest fire will probably also be affected by climatic perturbations.
- **Agricultural activity** in Catalonia is particularly exposed to risks deriving from climate change, not because of the many irrigation systems, some of which are still rather inefficient in their water consumption, but because of threats to traditional crops such as vineyards (which in the new climatic conditions could produce wine that is more alcoholic and unattractive to consumers) and fruit (which requires a period of winter frost for successful flowering in spring). Pests and invading species are other risks associated with changing climate conditions⁶.

c. IS THERE ANY SPECIFIC CHARACTERIZATION OF THE REGION COMPARED TO THE EU CONTEXT CONCERNING THE CLIMATE CHANGE?

One issue (mentioned in question 1) is the geography of the region, positioned between two "climatic models" inside the Iberian Peninsula. On one hand the northern area which will experience a significant increase of rainfall and in the other the south, where rainfall will be much lower. Catalonia is in an area of uncertainty between the two, but whatever the case, it seems clear that there will be greater irregularity.

Other issue is how this change in temperature will affect **tourism**, one of the most important subsectors of the Catalan economy. In this case, however, the effects could be diverse, with a possible drop in the number of tourists during the hot season but with an increase in spring, autumn and even winter.

Finally, the **population and population centres**. Despite efficient use of water by the Catalan population, efficiency which has

⁶ It is worth reflecting on the scope of the possible effects of climate change on various aspects under study. While there is undoubtedly a direct link between climate change and many of the impacts described, there are also other factors at play, beyond purely climatic phenomena, in many current and future transformations. The arrival of invasive species is a good example of the risk of an alteration in rainfall and temperature, but it is also a reminder of aspects such as the increasing number of interconnections in the world, which has little or nothing to do with climate change.

increased over recent years, we must take into account the population growth of the last few years (20% over the last decade) and the possible continuation of this growth (although probably at a lower rate) in the immediate future and the greater demand for water per person arising from the rising temperature. This increased demand will have to be satisfied with water resources undergoing significant variations in terms of river flow, replenishment of aquifers and chemical quality of water.

The increase in temperature will have consequences for the health of the population, either through appearance or reappearance of diseases currently limited to other geographical areas or through episodic heat waves, which though having less of an impact in Catalonia than in northern Europe, because of previous experience, will affect the most vulnerable in society.

d. IS THERE ANY SPECIFIC CHALLENGE THAT IS CHARACTERISTIC OF THE REGION AND HAS BEEN EXPLICITLY PRESENT IN THE POLICY STRATEGIES IN THE LAST YEARS?

In 2005 there was a dramatic episode of drought and the regional government reacted with exceptional measures in the use of the water resources.

A specific characteristic of the Catalan region is in the livestock sector, which inside the agricultural sector is the one generating most emissions and waste in the form of pig slurry (waste from pork farming). One specific measure of the *Framework Plan for mitigating Climate Change 2008-2010* is related to the creation of plants for biogas production from the anaerobic digestion of pig slurry that would achieve a mean annual reduction between 2008 and 2012 of 0,109 Mt CO₂ eq/year.

3.1.1. Ways of addressing the challenge

a. IS THE REGION AWARE FROM A GENERAL POLICY PERSPECTIVE OF THE CLIMATIC CHANGE CHALLENGE?

The analysis of these impacts has been studied by the Catalan Government, which has for some time been aware of the great implications of climate change for Catalonia and the need for detailed knowledge of its effects, and with this in mind it commissioned the ***1st Report on Climate Change in Catalonia***, published in 2005⁷.

⁷ See: www20.gencat.cat/portal/site/canviclimatic/

In 2010 the Government of Catalonia, together with the Institute of Catalan Studies prepared a second version, the **2nd Report on Climate Change in Catalonia**. Its framework was endorsed by the Interdepartmental Committee on Climate Change of the Generalitat of Catalonia and its methodology is more highly verified than for the 1st Report.

b. THE CHALLENGE IS ADDRESSED IN AN EXPLICIT OR IMPLICIT WAY?

The challenge is addressed in a very explicit way in the above mentioned documents, especially the second one which consists of a comprehensive analysis of the vulnerability of the Catalan biophysical environment to the impacts of climate change and its management, mitigation and measures for adaptation.

In late 2006 the Government of Catalonia established two formal instruments to address climate change in Catalonia: the Catalan Office for Climate Change and the Interdepartmental Commission on Climate Change⁸. In 2008, the government approved the Framework Plan for Mitigating Climate Change in Catalonia 2008-2012, endorsed by the Interdepartmental Committee.

3.1.2. Forecasting activity

a. DOES THE REGION USE FORECASTING METHODS/RESULTS? b. WHAT IS THE TIME HORIZON?

Yes. In the **Framework Plan for Mitigating Climate Change in Catalonia 2008-2012** the Government of Catalonia decided to promote measures to reduce emissions of greenhouse gases in Catalonia, using Catalan executive powers. Specifically, the Plan established a reduction in emissions of 5.33 million tonnes of CO₂ between 2008 and 2012. There is no forecast beyond 2012. A new framework for the period 2013-2020 should be issued but at the moment of writing this report there was no notice on when this would occur.

c. IT IS SHARED WITH STAKEHOLDERS AND EXPERTS?

The reports on Climate Change in Catalonia are a good example of the prolific research work on climate change in Catalonia over many years. Suffice to say, however, that this important work of research and diagnosis has not always been coordinated with action by the authorities. Although in most cases these have been studies

⁸ Decree 573/2006 of 19 December, on partial restructuring of the Catalan Ministry of the Environment and Housing.

commissioned or funded by the Catalan Government itself, we would like to see a closer relationship between the results of the diagnosis and the preparation (and subsequent execution) of concrete measures.

d. WHAT IS THE USE OF SUPRA-REGIONAL (E.G. EUROPEAN) FORECASTING ANALYSIS CONCERNING CLIMATE CHANGE?

The documents mentioned above and the measures for reduction of emissions were prepared having in mind the Kyoto Protocol. The ratification of the Kyoto Protocol by Spain in 2002 meant a commitment to limiting emissions growth by 15% compared to 1990 for the period 2008-2012. Given the difficulties in reaching this benchmark, Spain proposed a plan to the EU to meet the commitment of the Kyoto Protocol, with a 37% increase over base year emissions, corresponding to the following percentages:

- 15% increase in emissions, in line with the Kyoto Protocol commitment;
- 2% to compensate for growth in carbon sinks (forests, mainly);
- 20% emissions rights that Spain will buy to offset excess diffuse emissions.

The EU approved the proposal.

3.1.3. Relationship between the forecasts and the declared measures

All the specific measures in the ***Framework Plan for Mitigating Climate Change in Catalonia 2008-2012*** are defined based on the forecasted reduction of emissions of CO₂. The proposals in the Plan focus on so-called diffuse sources, since other emissions are regulated by the market for trading rights. However, the Plan also envisages actions for these other emissions. Specifically, the Plan is structured into three programmes (more analysis in the following sections): P1: Reduction in emissions in diffuse sectors; P2: Support for facilities covered by the Directive on emissions trading; P3: Actions across different fields for mitigation

3.2. Effectiveness policy bundles

Challenge

3.2.1. Direct / indirect relationships with the macro-scale challenge

a. IS THERE ANY DOCUMENT / STRATEGY WITH A DIRECT OR INDIRECT INTENTION TO ADDRESS THE ASPECTS RELATED TO THE MACRO-CHALLENGE? b. IS THERE A COHERENT APPROACH?

As has been indicated, the analysis of these impacts has been studied by the Catalan Government since 2005, with the elaboration of the 1st and 2nd **Reports on Climate Change in Catalonia** (2005 and 2010).

These documents are part of a wider strategy of the Catalan Government articulated through two formal instruments to address climate change in Catalonia: the Catalan Office for Climate Change and the Interdepartmental Commission on Climate Change⁹.

On 2008 the Interdepartmental Committee on Climate Change endorsed the first version of the **Framework Plan for Mitigating Climate Change in Catalonia 2008-2012** and agreed to send it to the Government of Catalonia. The Plan was finally approved in October 2008.

Therefore, one can say that the approach is coherent and coordinated.

3.2.2. Strategic capacity of the policy bundles

Visioning: Updated, knowledge based, framing dynamics in wider perspective, shared with stakeholders

The vision of the policy strategies is well defined and based on previous research (the Reports on Climate Change). The measures proposed in the **Framework Plan for Mitigating Climate Change in Catalonia 2008-2012** are based on the main objective of reducing CO₂ emissions in 5.33 million tonnes of CO₂ between 2008 and 2012.

This objective is coordinated with the Spanish and European objectives of climate change mitigation.

⁹ Decree 573/2006 of 19 December, on partial restructuring of the Catalan Ministry of the Environment and Housing.

The policies and strategies developed by the Catalan Government to fight climate change can be considered coherent among them, as the explanation of how the different initiatives work will illustrate:

The **Catalan Office for Climate Change** provides technical support to the Interdepartmental Commission on Climate Change¹⁰. The Office is responsible for ensuring the implementation of measures against climate change and compliance with the Kyoto Protocol. The Catalan Office for Climate Change opened in February 2007 as a formal response, providing administrative and technical reinforcement of actions initiated in 2004 for managing this issue.

The Government of Catalonia agreed on the objectives and the composition of the **Interdepartmental Commission on Climate Change**, the body that coordinates Catalan Government action in this area. This Commission makes decisions and promotes actions in the Catalan executive to combat climate change and, given its interdepartmental nature; it has broad influence across all areas of government. The Commission's four objectives are:

- Coordinating the actions of the Government of Catalonia to combat climate change.
- Promoting actions across different departments to facilitate adaptation to climate change and reduction of its impact in Catalonia.
- Promoting actions across different departments to reduce emissions of greenhouse gases, which are responsible for climate change.
- Monitoring and assessment of previous actions.

Lastly, this Commission issued the **Framework Plan for Mitigating Climate Change in Catalonia 2008-2012**, approved by the Catalan government in 2008.

Articulation in objectives

The policy strategy is articulated in the above mentioned Framework Plan. There, specific measures are defined to achieve the three strategic objectives of the plan, articulated through three programmes, which are:

- Programme 1: Reduction in emissions in diffuse sectors, also known as Programme 5.33, as it corresponds to actions outside the market for trading emissions rights and, therefore, the Government has relevant powers. The programme classifies actions into eight basic areas: agriculture,

¹⁰ The contents of this section have been prepared from information provided by the Catalan Office for Climate Change:

www20.gencat.cat/portal/site/canviclimatic/

construction and use of housing, the service sector, industry not subject to the Directive, prevention and treatment of waste, transport and mobility, voluntary agreements and pilot offset domestic experiences, and fluorinated gases. For each of these subprogrammes the Plan identifies the departments of the Generalitat of Catalonia responsible for implementing the corresponding actions.

- Programme 2: Support for facilities covered by the Directive on emissions trading, which includes both support to improve production processes and promotion of the progressive introduction of alternative fuels, saving of electricity, reducing emissions in the energy sector and encouraging participation in mechanisms for greater flexibility.
- Programme 3: Actions across different fields for mitigation, including fields such as research, awareness-raising and environmental education, and good practice in public administrations, among other initiatives.

Is there prioritization and coherent time-plan framework?

The Framework Plan states that it will be implemented through two programmes of specific actions, one for the period 2008-2010 and the other 2011-2012. The actions defined in the programmes are prioritized and have a forecast on the amount of CO₂ that each particular action would achieve to reduce between 2008 and 2012. For instance, for the agricultural sector it is mentioned that the implementation of the actions defined is expected to bring a total reduction of diffuse emissions of 0,259 Mt CO₂ eq/year (Framework Plan, page 46).

Is there a financial budget?

In the Framework Plan there is an estimation of the global cost that its implementation would have, about 196,1 million €/per year. The cost of each specific action defined in the plan should have to be covered by the responsible Department of the regional government or the relevant institution.

The financial plan is therefore very general and leaves to each department the responsibility for its implementation according to the budget they have.

Is present a monitoring capacity in order to keep the targets and objectives updated?

In 2009 and 2010 there were monitoring programmes to analyze the level of implementation of the Framework Plan. According to the Office for Climate Change in 2010 about 85% of the measures were being implemented¹¹. No such programme has been issued for the 2011.

The recently new elected government has included in its "Government Plan 2011-2014"¹² an specific action devoted to energy and climate change, where it is mentioned the intention to create a new plan for mitigation of emissions for the 2013-2020 period, according to the goals established by the EU.

Is there any form of involvement of stakeholders private actors, NGOs, etc), either in the definition of the measures or in their implementation?

Yes. The Catalan Convention on Climate Change established the process of public participation for preparation of the Framework Plan for Mitigating Climate Change in Catalonia 2008-2012. There was a high level of public participation in the Convention, with the inclusion of nearly one thousand proposals from over 800 participants and 500 organisations. In this first phase, the Convention consisted of a series of briefings held in June 2007 and the Inaugural Conference on 17 October 2007, which served to launch a series of meetings for reflection and debate that came to an end with the Closing Congress of 14 February 2008. After the Convention, in the period between the Closing Congress and the meeting of the Interdepartmental Commission on Climate Change on 28 April 2008, a total of 30 observations and suggestions from various members of society (individual citizens, businesses, public administrations, etc.) were received, and their incorporation was considered by the Interdepartmental Commission on Climate Change.

¹¹See:

<http://www20.gencat.cat/portal/site/canvidimatic/menuitem.c4833b494d44967f9b85ea75b0c0e1a0/?vgnextoid=c5a3cf68a97d6210VgnVCM1000008d0c1e0aRCRD&vgnextchannel=c5a3cf68a97d6210VgnVCM1000008d0c1e0aRCRD&vgnextfmt=default>

¹² See: http://www.gencat.cat/pladegovern/cat/2011_2014/PdG_2011_2014.pdf

3.2.3. Efficiency of the strategic capacity of the policy bundles Feasibility

Are there any forms of horizontal integration/synergic cooperation among traditional sectors (transport, environment, energy, development, education, health, price strategy, etc) for the implementation of the strategy?

The main formal instrument to ensure the horizontal integration among traditional sectors in the fight against climatic change is the **Interdepartmental Commission on Climate Change** that coordinates the action of government in this respect. The commission is chaired by the Regional Minister of Environment and has one representative for each governmental department (health, education, public works, etc). Each department is responsible for the implementation of those actions defined in the Framework Plan that fall in its area.

For instance, the department of public works and planning was defined responsible for actions in the field of transportation, for instance the creation of a lane in a highway exclusive for buses, as a way to promote use of public transportation. Actions related to the improvement of sewage treatment plants, on the other hand, are charged to the department of Environment and Housing.

This situation might however change in the next years, as a new government has been formed since November 2010, which has already modified the government structure (eliminating or merging departments). It is not clear yet whether the new government will maintain this Commission. In any case, it seems that the coordination will continue as the Plan (2013-2020) and, because of the close relationship between the issues, will be set up jointly with the Energy Plan 2012-2020 prepared by the Catalan Institute of Energy, also under the auspices of the Government of Catalonia.

Is there a predominance of any of the following fields?

The predominance in the area of climate change is in sectoral competences, as in the end each department is the last responsible for the implementation of the different actions, and is the one setting the regulations and programs needed to achieve the goals of mitigation. The budget allocated to the actions comes too from each department's budget, with no specific allocation from the Government in general.

Are there specific innovative governance episodes?

Voluntary Agreements Program with entities and institutions in Catalonia that want to reduce their green-house gas emissions. This follows the examples of other European countries where these types of agreements have been very successful in the way to sustainability.

All the companies, administrations, associations and foundations that have join the Agreement compromise to monitor their emissions and to establish measures to reduce them. The Catalan government gives public recognitions to them and facilitates their work.

Vertical integration

As mentioned before, the Catalan policy is correctly framing regional dynamics within the wider territorial context, the Spanish and the European. The objectives of the Framework Plan are consistent with the Catalan Plan of Government, which states that the Government of Catalonia seeks to have a responsible attitude to climate change and assist the Spanish Government in complying with the Kyoto Protocol. In this regard, the Government of Catalonia decided to promote measures to reduce emissions of greenhouse gases in Catalonia, using Catalan executive powers. Specifically, the Plan established a reduction in emissions of 5.33 million tonnes of CO₂.

It is important to bear in mind the two territorial levels which are being referred to and their interrelationships. The obligation to comply with the Kyoto Protocol corresponds to the Government of Spain. But there is no territorial division of these obligations for reduction in emissions across different Spanish regions, and in this regard, efforts being made in each region are entirely voluntary, as it is the case of Catalonia.

At a lower territorial level (provinces and municipality) there is also certain coordination of the actions, even if all collaboration is on a voluntary base. In any case, at provincial and local level there are also important initiatives to fight climatic change.

- At the provincial level

The **Office for Climate Change and Sustainability of the Barcelona Provincial Council** provides technical and financial assistance to municipalities in the province of Barcelona to implement sustainability policies and, together with members of the general public, participate in actions to mitigate and adapt to climate change promoted by global forums¹³. In this regard, the Office:

¹³ See: www.diba.cat/mediambient/canviclimisost.asp

- Manages the preparation of energy audits and action plans for sustainable energy (PAES) under the Covenant of Mayors Against Climate Change of the European Union.
- Encourages reduction of emissions of greenhouse gases into the atmosphere.
- Promotes energy efficiency in municipalities, sustainable public lighting and the introduction of renewable energy for municipal facilities.
- Collaborates in the preparation of environmental audits and action plans within the framework of Local Agenda 21.
- Supports spatial planning and sustainable construction.
- Promotes sustainable mobility policies, such as school routes, public transport on industrial estates and peaceful use of bicycles.
- Promotes corporate social responsibility of municipal bodies.
- Locally

The European Commission formally established the **Covenant of Mayors** on 29 January 2008¹⁴. This is the most ambitious initiative to date for the participation of municipalities and members of the general public in achieving the objectives of the Sustainable Energy Policy of the European Union. The Covenant is an official commitment of member municipalities to meet the objectives established by the European Union for 2020, reducing CO₂ emissions in their respective territories by at least 20% by implementing an Action Plan for Sustainable Energy. Barcelona Provincial Council is currently the support structure for municipalities in the province of Barcelona for tasks concerning the Covenant, whereas the Generalitat of Catalonia has put itself forward as the support structure for the other three provinces in Catalonia.

Previously, local councils developed their **Local Agenda 21**. These Agendas were long considered the ideal framework for developing action plans for sustainable energy, since the targets for reducing emissions of greenhouse gases are fully borne by Local Agenda 21. If we study Local Action Plans, we can see that over 50% of actions are for reducing emissions and about 30% are for adaptation to climate change.

We consider these to be very positive initiatives, but at the same time we recognise their essentially passive nature: participation is voluntary and mainly consists of actions for reducing emissions. But

¹⁴ See: www.eumayors.eu/home_en.htm

the implementation of best practices does not ensure that overall operation of the municipality is more efficient.

Who has the main competence in dealing with the issues characterizing the challenge?

The Catalan government as is the one that can approve the budget needed to implement the different actions. However, the actions undertaken by the Catalan Government to help Spain complying with the Kyoto Protocol are voluntary.

3.4. Future threats and opportunities

The main threat from a governance perspective is related with the situation of strict budgetary adjustment that the new Catalan Government has implemented for the year 2011 and probably for 2012. This adjustment will probably affect some of the policies and programs developed by the Catalan Administration.

The main opportunity in the governance field is the closer cooperation with the Catalan Energy Institute in order the implementation of the actions and measures, which will improve their efficiency.

In spatial terms, main opportunities rely on the fact that the proposals contained in recently passed spatial planning in Catalonia show a marked concern for **prevention that** is, reducing energy consumption and thus emissions. From the standpoint of spatial planning, this means creating the spatial conditions necessary to minimise consumption.

The threats can be found in the lack of capacity of the spatial planning system to actually develop measures in the field of **adaptation** to climate change. Adapting to climate change in Catalonia will essentially involve adapting to a higher temperature and lower water availability, whether through reduced rainfall or rainfall of greater irregularity.

The contents of Catalan regional plans are rather poor in specific measures for harnessing the potential possibilities of the new situation and minimising its negative impacts. The creation of open spaces, which have established a high level of protection for 71,2% of Catalonia, has been more important for compensating emissions. But this benefit must be interpreted as a knock-on effect of actions designed for a different purpose.

4. Energy

4.1. Awareness of macrochallenge: ENERGY

4.1.1. Local articulation of the macro challenge

a. HOW DO THE CHALLENGES MANIFEST THEMSELVES LOCALLY?

Primary power **consumption** (directly from natural sources, without transformation) in Catalonia in 2007 was 26,840 ktep. Primary energy consumption in Catalonia has been restrained in the last four years¹⁵. The cumulative increase in primary energy consumption in Catalonia was only 4.0% in the period 2003-2007, and even reached negative inter-annual variations. This implies an important change in trends compared to previous years. This behaviour is due mainly to two factors: firstly, moderation in final energy consumption experienced during the period 2004-2007 and, secondly, evolution of the Catalan electricity production mix, especially with regard to a significant reduction in nuclear power electricity production and combined cycle power plants, and low hydro-electric production, which was not offset by production from other power stations in Catalonia, but rather through imported electricity.

Renewable energy accounted for 2.7% of total primary energy consumed in Catalonia, most of this hydro-electric power, with 1.71%, but the total consumption of renewable energy other than hydro-electric power increased by 47.0% in the period 2003-2007, mainly as a result of the increased contribution of biofuels, wind power and biogas. This increase, however, has not made up for the significant decrease in the production of hydro-electric power, which fell 40.8% in Catalonia, as a result of the drought in the country during that period. The result of these two factors was a slight reduction in renewables in the Catalan energy balance, from 3.2% of primary energy consumption in 2003 to 2.8% in 2007.

Regarding **final energy consumption** (converted from primary sources to facilitate use and transport) one of the main manifestations of the energy challenge in this particular region is

¹⁵ See Generalitat of Catalonia, Department of Economics and Finance: *Pla de l'energia de Catalunya 2006-2015 (Energy Plan for Catalonia 2006-2015), Revision of 2009*, Barcelona, 2010, and follow-up data provided by the Catalan Institute of Energy; and COROMINAS, J.: "Energia" (Energy) in LLEBOT, J.E. (editor): *Segon informe sobre el canvi climàtic a Catalunya (Second Report on Climate Change in Catalonia)*. Generalitat of Catalonia and Institute of Catalan Studies. Barcelona, December 2010.

the excessive dependence on fossil fuels, oil and gas. Final energy consumption in Catalonia in 2007 was 16,173 ktep and, as for primary energy consumption, was characterised by moderation of growth experienced in previous years to an average annual growth rate of 1.8% between 2003 and 2007. Despite the significant increase in the proportion of renewable energy in recent years (increasing by 18% per year on average between 2003 and 2007), total consumption of energy from renewable sources was 3.8% and the remaining 96.2% came from fossil fuels and nuclear power, particularly diesel fuel with 31% of total final energy consumption. More than 96% corresponds to non-renewable sources, including in this category imported electricity. Use of diesel (in transport) predominates, followed by non-renewable electricity and natural gas. 75% of final energy consumption is in the form combustion fuels, with predominance of liquids. Electricity occupies second place, closely followed by gas combustion fuels (natural gas and liquefied petroleum gas). The use of heat from solar energy is very low. The largest sector for consumption of final energy is transport, with almost 40% of total final energy. Industry follows with 31.6%. The primary sector only consumes 3.5% of final energy in Catalonia.

b. WHAT ARE THE SPATIAL CONSEQUENCES AND IMPACTS?

The main spatial consequences and impacts come from the way the supply of energy is shaped in Catalonia, which can be summarized in two main factors:

- **Lack of a planning tradition.** The lack of comprehensive planning in the energy sector in Catalonia has a long history. Thus, since early industrialisation and the exploitation of energy resources in Catalonia, the situation has been characterised by the presence of a multitude of suppliers with different interests and areas of activity, without ever subjecting initiatives to any planning, beyond the sectoral provisions and requirements for this field. As a result, the Spanish energy map in general and the Catalan map in particular has traditionally been marked by lack of coordination and efficiency in production, transport and distribution. And, what is worse, an inability to anticipate future needs.
- **Mismatch between the localization of production and demand of energy:** Due to historical reasons the production of energy in Catalonia is concentrated in the southern region of Tarragona, while most of the demand concentrates in the municipalities of the Metropolitan Region of Barcelona.

Moreover, the increase in demand has not been accompanied with an increase in internal production, which comes in more than $\frac{3}{4}$ parts from nuclear energy. As a consequence the Catalan energetic model depends increasingly of external sources, which demands more infrastructures for transportation, with a greater environmental impact.

c. IS THERE ANY SPECIFIC CHARACTERIZATION OF THE REGION COMPARED TO THE EU CONTEXT CONCERNING ENERGY SUPPLY?

Two specific characteristics:

- **The business structure of the sector.** For the electricity sector, the regulations mentioned above have resulted in the establishment of a supply system segmented into the various stages of the process, with many private agents for production, the monopoly of a single company (Red Eléctrica Española) for transport (a network of 220 kV and 400 kV), the dominance of a single company (Endesa) for distribution and the presence of various companies for sales, in association with production companies. For gas, the situation is quite similar to the electricity sector, while for oil the market is far less regulated, being considered more mature and worldwide, and therefore, without the need for protection from the other two sectors. Whatever the case, due in large part to Spanish legislation, the corporate structure of the energy sector in Catalonia follows the same pattern as for the whole of Spain.

- **Foreign relations.** The foreign relations of the Spanish energy system in general and the Catalan system in particular are shaped by two inefficiencies of a different kind. For electricity, there are few foreign network connections, because of a lack of physical infrastructure and an interest in maintaining a level of protectionism. In a context, as we shall see later, of increasing importance for renewable energy, the isolation of the Spanish electricity system is even more hazardous, as renewable energy, with necessarily greater oscillations in production, requires a greater level of interconnectivity to compensate for these oscillations. In the case of fossil fuels, the situation is one of great dependence on foreign supply, which has historical roots, and which means that now almost all resources come from abroad.

d. IS THERE ANY SPECIFIC CHALLENGE THAT IS CHARACTERISTIC OF THE REGION AND HAS BEEN EXPLICITLY PRESENT IN THE POLICY STRATEGIES IN THE LAST YEARS?

The promotion of renewable energies has been an important goal of the government at least until 2010. Another important goal is the

promotion of savings and increased efficiency in energy consumption¹⁶.

4.1.2. Ways of addressing the challenge

a. IS THE REGION AWARE FROM A GENERAL POLICY PERSPECTIVE OF THE ENERGY CHALLENGE?

Since 1991 the region has its own institute for dealing with energy issues, the ICAEN (Institut Català de l'Energia). More recently, the awareness towards this issue was made more evident with the elaboration of a comprehensive energy plan for the period 2006-2015 (more information in next sections).

b. THE CHALLENGE IS ADDRESSED IN AN EXPLICIT OR IMPLICIT WAY?

The challenge is addressed in an explicit way either through the above mentioned institute as with the Plan, with specific actions both for the production and the consumption of energy.

4.1.3. Forecasting activity

a. DOES THE REGION USE FORECASTING METHODS?

The main policy document dealing with the energy challenge in Catalonia is the **Catalan Energy Plan (2006-2015)**, passed in 2005 and revised in 2009. This is a very extensive plan that includes a prospective analysis of Catalonia for the 2030 horizon. This envisages six prospective scenarios with different sensibility for different issues (as nuclear energy)¹⁷. The analysis includes the definition of a "Framework Scenario" and the visualization of the Catalan contribution to the Spanish and European compromises in energy and climatic change. The scenarios range from a very energy-consuming one to a more sustainable one.

2 - For each of these six scenarios there are GDP and population forecast until 2030. From them, the following energy scenarios are settled:

3 - Final consumption of electrical energy

4 - Final consumption of fuel

¹⁶ See the "Informe del sector de l'energia" for an extensive analysis of the Catalonia's specificity: <http://www20.gencat.cat/docs/icaen/Migracio%20automatica/Documents/Activitats%20i%20dades%20energetiques/Arxius/quadernplaenergia.pdf>

¹⁷ See: http://www20.gencat.cat/docs/icaen/08_Institut/Documents/pecat0615_rev2009.pdf (chapter 4)

- 5 - Total final energy consumption
- 6 - Evolution of the participation of different energy sources in the final energy consumption
- 7 - Finally, there are scenarios of energy consumption for transportation, manufacturing, services, primary sector and private consumption.

b. IT IS SHARED WITH STAKEHOLDERS AND EXPERTS?

The above mentioned Catalan Energy Plan was elaborated by the **Catalan Institute of Energy**, but it includes the contributions of a Expert Group formed by professionals in different areas of the energy field. This Expert Group had the responsibility of evaluating the field of action of the Catalan government in the energy field and to diagnose strategies and lines of actions in the area.

c. WHAT IS THE USE OF SUPRA-REGIONAL (E.G. EUROPEAN) FORECASTING ANALYSIS CONCERNING ENERGY?

As mentioned, the Catalan Energy Plan wants to contribute to fulfil the compromises in energy and climate change of Spanish and European governments. The forecasts made in the plan are therefore settled based on these recommendations.

The Plan analyses one by one which the objectives settled by the EU in the legislative package Energy and Climate (passed on April 6th 2009) and whether Catalonia can accomplish them.

4.1.4. Relationship between the forecasts and the declared measures

a. ARE THE FORECAST RESULTS USED TO SHAPE ACCORDINGLY SOME POLICY MEASURES?

Yes. For instance, the forecast states the need to invest in renewable energy, and so since the approval of the Plan, there was an increase of the amount of subventions given to stimulate the investments in installing this energy. If in 2004 the subventions in this field amounted to 1.178.333 Million€, in 2008 the amount was of 5.103.024 Million€.

b. IS THE FORECAST ACTIVITY EMBEDDED IN A CYCLIC MONITORING ACTIVITY?

Yes. The Catalan Energy Plan was revised in 2009 and is currently pending a new review. In the 2009 revision, the Plan took into account the economic crisis, changes in European and Spanish legislation, as well as the need to revise the forecast of demand and supply of energy to take into account the new lines of action of the

Catalan energy policy and other sectoral policies of the Regions related with energy. For instance the new revision mentions the pass of the Plan for Mitigation of Climatic Change in 2008 or the future Management Plan of the River Basin District of Catalonia.

4.2. Effectiveness policy bundles

4.2.1. Direct / indirect relationship with the energy challenge

a. IS THERE ANY DOCUMENT / STRATEGY WITH A DIRECT OR INDIRECT INTENTION TO ADDRESS THE ASPECTS RELATED TO THE MACRO-CHALLENGE? b. IS THERE A COHERENT APPROACH?

Mandatory energy planning in Spain is limited to the transport networks for electricity and gas, through the document **Planning for the Electricity and Gas Sectors 2008 -2016. Development of transport networks**, approved in May 2008, while other planning serves merely as guidance. In this context, and given the lack of a comprehensive energy plan in Spain, the Spanish Government, in addition to the aforementioned planning for transport networks for electricity and gas, prepared two strategies for two specific aspects of the energy system¹⁸. First, the **National Action Plan for Renewable Energy in Spain (PANER) 2011-2020**, approved on 30 June 2010 in response to Directive 2009/28/CE of the European Parliament and the Council, of 23 April, on the promotion of the use of energy from renewable sources. This document establishes basic goals for Spain, particularly that renewable energy should account for 20% of gross final energy consumption by 2020. Previously, on 26 August 2005, the **Plan for Renewable Energy 2005-2010** had been passed. Moreover, in November 2003 the **Strategy for Energy Saving and Efficiency in Spain (E-4) 2004-2012** had been passed.

In Catalonia, in contrast, within the framework of its own powers, it was decided that there should be a comprehensive energy plan, so in 2005 the **Catalan Energy Plan 2006 - 2015** was passed in order to "set out on a path towards a new model based on sustainable development" through promotion "of cleaner and more efficient energy technologies, and taking into account the profound changes in consumption patterns in society"¹⁹. This plan, revised in

¹⁸ See the energy page of the Ministry of Industry, Tourism and Trade of the Spanish Government: www.mityc.es/energia/ca-ES/Paginas/index.aspx

¹⁹ See the original plan at www20.gencat.cat/docs/economia/Documents/Arxius/doc_67117973_1.pdf

2009²⁰ and currently pending a new review, is proposed as a mission for moving "towards an energy system with low energy intensity and low carbon emissions, being innovative, competitive and sustainable". In addition to sections for diagnosis and future prospects, the Plan gives details of a series of strategic actions that affect energy saving and efficiency as well as renewable energy, competitiveness, research and technological innovation, and planning of electricity and natural gas infrastructure.

4.2.2. Strategic capacity of the policy bundles

Visioning

The vision of the Catalan Energy Plan is updated to take into consideration recent changes for instance in economy (economic crisis) and legislation. The revision of the plan in 2009 shows the willingness to keep it updated.

Articulation in objectives

Questions a, b:

The main goal of the Catalan Energy Plan is to moderate the increase of energy consumption at the end of 2030, the final date of the implementation period, and to induce a change of attitude and habits regarding energy consumption. One of the main ways of achieving this goal is the promotion of renewable energy, also as a way to reduce the dependence on combustion fuels. Therefore, the Plan is addressing in a direct way some of the challenges identified in the region.

Regarding the promotion of renewable energies, initiatives have helped boost these alternative energies in an unequal manner, with greater emphasis on wind energy and solar thermal energy for water heating in housing. For wind energy, its greater profitability has been a decisive factor for growth, but in Catalonia implementation has been more difficult, mainly as a result of greater rigidity in environmental and location regulations for sources of supply. For solar thermal energy, the possibility of regulating use (by making incorporation into new buildings mandatory) has been the main advantage. Meanwhile, photovoltaic energy is still uncompetitive and other technologies such as cogeneration with biogas, waste recovery or use of biomass are alternatives with a long way to go, especially in Catalonia. In all these cases, existing facilities, besides being few, lack the right dimensions to ensure profitability.

²⁰ www20.gencat.cat/portal/site/icaen/

It is worth mentioning, in this regard, the predisposition of the management of the electricity transport network to the incorporation of production from renewable sources. However, in a context of increasing importance for wind energy, transport and distribution will need to cater for new needs, as the sources of supply of such energy are sited and grouped in a very different way to what was previously the case.

Regarding **measures to promote energy saving and increased efficiency**, which receive more emphasis in the Catalan Energy Plan, there are **two main lines of action**: information and awareness-raising; and actions that have an influence through decisions and specific regulations for the three main vectors of consumption: industry, the residential-tertiary sector and transport. For the first vector, because consumption affects production costs, industry has already gone some way in taking measures to reduce consumption and increase energy efficiency. With regard to the residential-tertiary sector, measures to be taken are on a more detailed level, in urban planning or even building regulations. Finally, the transport vector is where spatial planning can have the greatest impact, through direct decisions on infrastructure and transport services (transferring individual transport flows to collective transport flows) and particularly through organisation of territorial units to reduce the need for travel.

Is there prioritization and coherent time-plan framework?

Yes. The revision of 2009 of the Catalan Energy Plan settled the goals for reduction of energy consumption and increase of renewable energies between 2009 and 2015. Currently the new government is pending the elaboration of a new Catalan Energy Plan for the period 2012-2020²¹.

Is there a financial budget for the measures?

The original plan had a budget of 652 Million€, but the 2009 revision increased it up to 1.053 million for the period 2009-2015, a 62% increase. This amount is then broken down in several concepts, each of them with its allocated budget. This increase is expected to be covered with the economic resources coming for the intensification of the Strategy for Energy Saving and Efficiency in Spain 2004-2012 and the National Action Plan for Renewable

²¹ See the 2011 Budget Project of the Catalan Government: http://www15.gencat.cat/ecofin_wpres11/pdf/PRE_P_CAT.pdf

Energy 2011-2020, and with provisions of the Catalan government. Each administration (Spanish and Catalan) will provide respectively 30% and 70%.

The Plan however specifies that the allocation of resources depends ultimately on the decision to make them effective. In the current context of economic crisis and control of public deficit in Spain and Catalonia it is not clear whether this will be done. In fact, the recently presented budget for 2011, the Catalan government has allocated 71,8 M€ for all energy policies (including the elaboration of the 2012-2020 Energy Plan and issues of Mining, consumption and defence of competencies), which is clearly below the 150M€/year that the 2009 revision was proposing.

Is present a monitoring capacity in order to keep the targets updated?

Yes. In fact, as mentioned above, the 2009 revision of the Catalan Energy Plan proposes new goals in the field of energy saving and use of renewable resources. In the first case, the revision reduces the forecasted energy consumption, adducing the increase in the price of fuel and the economic crisis as main drivers of this reduction. In the case of renewable sources the revision reduces slightly the weight of these in the final consumption due mainly to a strong reduction in the goal settled for the biodiesel given the changes in Spanish and European regulations in this field and in the sustainability linked to the raw materials needed.

The new government (appointed in November 2011) has included in its Government Plan the elaboration of a new Catalan Energy Plan.

Is there involvement of stakeholders?

Yes. The first Energy Plan was open to public consultations for about two months, and more than 140 comments were received. However, it is a very top-down approach, as it is not clear whether these comments were included in the final version of the Plan.

Others

Current context of budget restrictions in Catalonia and heavy economic crisis makes difficult to know whether the measures stated in the Plan will be implemented.

4.2.3. Efficiency of the strategic capacity of the policy bundles

Feasibility

Are there any forms of horizontal integration/synergic cooperation among traditional sectors (transport, environment, energy, development, education, health, price strategy, etc) for the implementation of the strategy?

The characteristic of the Energy challenge, with implications in all fields and areas of society (from the productive sector, the transportation, the private consumption and the administration) makes it necessary to involve all sectors in the implementation of the measures defined in the Catalan Energy Plan. In fact, the Plan mentions in the different lines of action which of these actors has to be involved. However, it is not clear how this involvement is promoted, as there are only general explanations but not specific measures to achieve it.

Inside the public administration, there is the will to achieve reduction of energy consumption in the different Departments and institutions depending on it, as well as to promote the consciousness of the public workers in the field. It is also mentioned the collaboration of other government Departments needed for the implementation of some specific measures.

For instance the Plan mentions that the Catalan Institute of Energy (main responsible of the Plan) and depending on the Department of Enterprise and Employment) will have to work together with the Department of Environment and Housing to find a solution for the problem related with soil contamination. There are also collaborations with the Catalan Office for Climatic Change.

The recent changes in the government structure, with the unification of the Departments of Public Works, Environment and Housing in a single one Department might facilitate the implementation of such measures.

Is there a predominance of any of the following fields?

The main institution responsible for designing the energy policies is the *Institut Català de l'Energia*, affiliated to the Department of Enterprise and Employment. However, the implementation of the different measures mentioned in the Catalan Energy Plan depends on many different actors (both public and private) so the strategic capacity of the plan is limited. The approach to energy challenge is therefore much based on sectoral policies even if there is certain willingness to establish cooperation between the different actors both at administrative level (more) than with the civil society (less).

No specific episodes of innovative governance can be found in this policy area.

Vertical Integration

As mentioned before, in the elaboration of the Plan several experts in the energy field were involved. Currently the Catalan Energy Institute has an Advisory Council with experts too.

Regarding the involvement of the private sector, there are more considerations to make in the area of the renewable energies and in the generation, transport and distribution. Regarding the first issue, there is a positive predisposition of the management of the electricity transport network to the incorporation of production from renewable sources. However, in a context of increasing importance for wind energy, transport and distribution will need to cater for new needs, as the sources of supply of such energy are sited and grouped in a very different way to what was previously the case. Moreover, whatever the case, the lack of a clear and stable legal frame of reference has often made it difficult to develop these energies, as it is difficult for promoters to foresee the viability of their investments.

About the second issue, it is clear that the plan point to a need for a new energy system model, moving from a system of large-scale generation-transport-distribution-consumption to a new model with a greater emphasis on multiple small-scale generation sites near end consumers, through capture of solar energy, mini-wind farms, etc. This new model is consistent with the new economic context, with a shift from initiatives that require large initial investments that, owing to their size, can only be undertaken by public administrations, an example of which are nuclear power stations, to progressively smaller initial investments, albeit with some higher and more unpredictable variable costs. The new energy model will tend to be based on the diversification of supply sources and the interconnection of networks, where generation of renewable energy is complemented by power production that is more predictable and stable, such as combined cycle power plants, where maximum proximity between the site of generation and the site of consumption is compatible with interconnection of networks to ensure energy supply.

Regarding cooperation with the State and the EU we must consider that the regulation of the energy sector in Catalonia is determined, firstly, by European sectoral decisions, in the form of mandatory directives for member states of the Union and, secondly, by Spanish law, especially the law regulating the electricity sector and

hydrocarbons²² and its subsequent numerous modifications. Both laws, despite recognising the strategic importance of the energy sector and the natural monopoly character of many of its components (such as transport and distribution of electricity), have a marked liberalising character, distinguishing between activities that are regulated and those that are open to free competition. For electricity, transport is regulated but, in the case of gas, the transport and distribution networks, regasification terminals and underground storage are regulated, whereas supply and marketing of foreign gas to the Spanish market is open to free competition. In this context, **the specific powers of the Government of Catalonia, according to Article 133 of the Statute of Autonomy, are limited to joint actions.**

There are no specific measures or initiatives about cooperation with lower levels, but some of the measures taken regarding the climate change challenge at local level also have an effect on the energy topic.

Cooperation and awareness of the topic

The forms of involvement of private stakeholders have been mentioned above. The involvement of NGOs and citizens in the formal elaboration of measures is not clear, in any case very low (in the form of the previously mentioned public consultation).

However, both the issue of renewable energies (especially wind energy) and the international interconnectivity to ensure electric supply are very present in the public debate, both in the media (newspapers, tv, etc) and through demonstrations of different environmental associations. The proliferation of wind mills have been very much contested by the territories where they were being set and by environmentalists as they claim it affects landscape and the ecosystem. There has been a recent resolution of the High Tribunal of Justice of Catalonia suspending the plan for the implementation of wind energy parks in the region after a legal action of two Catalan environmentalist associations that accused this plan of lacking the requested environmental impact evaluation. There has been a lot of opposition to the interconnection with French electric lines and the installation of a High Voltage Line in the Girona county (north of Barcelona) to do so. Ecologists and groups from the affected area have long claimed against it and finally the government agreed to partly bury it, but to continue with its construction.

²² See Law 54/1997 of 27 November, on the electricity sector, and Law 34/1998 of 7 October, on the hydrocarbons sector, respectively.

4.3. Future threats and opportunities

The future threats come mostly in the form of the current economic crisis and the strict budget adjustment of the Catalan government which can affect the implementation of some of the measures.

Regarding spatial planning, the desired scenario will be one of greater integration of energy sector planning factors in regional plans would make it possible to include aspects of great significance in the three main stages of the energy process, that is, generation, transportation and distribution and consumption. Failure to do so could affect the correct development of the measures for energy saving.

First, regarding **generation**, possible measures to include focus mainly on the criteria and requirements for location of facilities

Measure	Description of the benefit related to the challenge	Included in plans?
Identification of areas for energy generation infrastructure	Optimises the conditions for introduction of generation centres on the basis of territorial factors and facilitates choosing a location	No
Location of major infrastructures for energy generation	Optimises the conditions for introduction of generation centres based on territorial factors	No
Promotion of small-scale energy generation infrastructure close to urban areas	Minimises the need for transporting energy	No
Establishment of environmental requirements for the location of energy generation infrastructure	Ensures preservation of the environment	Yes
Inventory of renewable resources 1: map of wind farms	Facilitates siting sources of wind power and, at the same time, ensures the preservation of certain areas based on territorial criteria	No

Inventory of renewable resources 2: map of photovoltaic installations	Facilitates siting sources of photovoltaic energy and, at the same time, ensures the preservation of certain areas based on territorial criteria	No
Inventory of renewable resources 3: map of biomass installations	Facilitates siting sources of energy from biomass and, at the same time, ensures the preservation of certain areas based on territorial criteria	No
Other		

Regarding **transport and distribution**, the measures to adopt are logically related to the infrastructure needed:

Measure	Description of the benefit related to the challenge	Included in plans?
Identification of corridors for energy transportation and distribution	Ensures provision and efficient layout, taking territorial factors into consideration	No
Layout of energy transportation and distribution infrastructure	Ensures provision and efficient layout, taking territorial factors into consideration	No
Establishment of environmental requirements for the layout of energy transportation and distribution infrastructure	Ensures the preservation of nature in territory affected by the layout of energy transportation and distribution	Yes
Other		

Finally, in terms of **consumption**, many of the measures for inclusion in spatial planning are virtually the same as those identified for the mitigation of emissions in the climate change section, but there are also some other specific measures:

Measure	Description of the benefit related to the	Included in plans?

	challenge	
Minimum density for urban development	Reduces the need for motorised transport; favours efficiency of transport	Yes
Guidelines on compact urban development	Reduces the need for motorised transport; favours efficiency of transport	Yes
Guidelines on mixed use	Minimises obligatory mobility resulting from territorial segregation of activities	Yes
Minimum size and location consistent with high capacity rail and road networks for areas of activity that generate transport needs (logistics and industrial activities)	Reduces road traffic	Yes
Promotion of public transport infrastructure over that targeted at private transport	Allows the transfer of individual transport users to public transport	Yes
Validation of the viability of energy supply for new urban developments	Ensures the viability of urban development in energy terms	No
Validation of the viability of energy supply to new infrastructure	Ensures the viability of the infrastructure in energy terms	No
Coordination / Programming of new urban developments with energy supply needed	Ensures the viability of urban developments in energy terms	No
Coordination / Programming of new infrastructure with energy supply required	Ensures the viability of the infrastructure in energy terms	No
Other		

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5. Demography

5.1. Awareness of macrochallenge: DEMOGRAPHY

a. HOW DO THE CHALLENGES MANIFEST THEMSELVES LOCALLY? /
c. SPECIFIC CHARACTERIZATION OF THE REGION COMPARED TO EU?

The demographic challenge in Catalonia, as in many other European regions, has two main components: the ageing population and the high influx of immigrants.

There are several causes for these phenomena, principally the following three:

- First, the characteristics of Catalan **reproductivity**, with a structural inability to maintain population levels, forcing the country into a permanent need to resort to immigration from outside. This need, which was manifest already in the eighteenth and nineteenth centuries, was a necessity throughout most of the twentieth century, with contributions from neighbouring Spanish regions first and later from more distant regions and even abroad, and this tendency has continued into the twenty-first century with the arrival of large contingents of foreigners, from almost every continent, mainly South Americans and East Europeans.
- Second, a **longer life expectancy**, which, logically, has resulted in an ageing population. This longer life expectancy has coincided with a series of sociocultural changes, as explained below, which have affected a large part of the population that traditionally took care of the elderly, mainly children, and forced people to resort to foreign immigrants for the provision of this care.
- Third, a combination of various **socioeconomic factors** has also altered the demographic structure of the population. Thus, although, as noted, Catalan fertility has tended historically to be insufficient to achieve internal replacement of the population, in recent years there has been an even sharper **decline in fertility**. Social conditions (incorporation of women into the job market, increasing value attached to activities outside the family, etc.) have been decisive for this low fertility. These recent social trends are unlikely to be

reversed and low levels of fertility can be expected over the coming years.

Moreover, the decrease in the number of children per family, along with an increase in average income, has led to children delaying their age of emancipation and using this long period free of responsibility to prolong their training. This has given rise to **over-training** of the Catalan population, which has had a decisive effect on the arrival of immigrants, as it has led to a failure of the indigenous population to meet the demand for labour in the economy, both in quantitative terms (because the younger generation which might have entered the job market was instead in training) and in qualitative terms (because, once trained, people do not want a job they consider below their educational station). This shift has been more serious because the Catalan economy has had much of its growth in sectors of low added value and low qualifications, such as construction and certain personal services.

At a time of strong economic growth, based on labour-intensive sectors (and in many cases with little training), the strong **demand for labour** coincided with a dramatic decrease in availability, because of the small number of people reaching a working age (those born in Catalonia in 1995 numbered less than half those born twenty years earlier) and because of the longer period of training. This imbalance has led to resorting to immigrants from abroad.

b. SPATIAL CONSEQUENCES OF THE MACRO CHALLENGE

From a territorial perspective, the consequences of the demographic changes described above are diverse and on occasion profound.

The ageing of the population will lead to an increased need for care services and facilities for the elderly, and probably the need for special housing and types of urban planning for this group. The intense population growth experienced in Catalonia during the period 1950-1975 and the subsequent redistribution of the population across the territory focused on two types of territorial destination with two clearly differentiated urban typologies: **the intensive growth** in the first period **took place mainly in the large cities** and, consequently, focused on dense, compact urban typologies, while the **redistribution of the second period** consisted of outflow from these dense, compact urban areas to progressively more distant sites in a **low density sprawl**.

This pattern established two situations that later had repercussions on the capacity of the territory to meet the needs of the population.

First, the growth of municipalities occurred in waves that affected areas increasingly distant from the large cities. Given that most population migration involves very specific age groups, it is easy to see how each municipality, depending on its location, tended to attract a certain age group and to foresee that as these people become older there will be a sudden ageing of the whole municipality. Thus, the ageing process is not homogeneous across the entire territory, dramatically affecting some municipalities while others still have a relatively young population²³. From the standpoint of the location of services and facilities, this variability in space and time makes it difficult, of course, to render them efficient.

The second major implication of the pattern of settlement of the population over recent decades has to do, not with unequal distribution across municipalities in terms of age, but rather **the urban typologies of the destination municipalities**. This type of low density dispersal was chosen by many migrants seeking lower house prices or an environment more suited to their wishes, attractive enough to compensate for the possible inconvenience of greater isolation: essentially, the increased need for travel, sometimes over quite large distances, for virtually any activity, making use of private vehicles unavoidable. In these cases, the ageing population, with their gradual loss of faculties and often the need to give up driving, takes place in an environment far from facilities and where public transport is not efficient. As a result, most people see their access to services and facilities drastically reduced just at that stage in life when they have the greatest need. The estimated need for services and facilities should take into account not only an increase in demand (because there will be more elderly people), but also problems of location: **an uneven and fluctuating distribution over time across different municipalities and problems of access in areas adapted primarily for use of private vehicles**.

Meanwhile, immigration usually brings with it the challenge of integration with the local population which, from the territorial viewpoint, means coexistence in the same areas or, conversely, segregation. Catalonia, with its long tradition as a host country, has managed to devise effective policies on immigration, with a territorial dimension, so that extreme segregation of immigrants

²³ In 2010 the Catalan town of over 5,000 inhabitants with the highest proportion of elderly people (24.9%) had three times the figure of the town with the lowest proportion (7.60%). Only municipalities of over 5,000 inhabitants were considered in order to avoid very small populations distorting the age profile and the results. Nonetheless, the same calculation for municipalities of over 1,000 inhabitants gives a considerable increase in the difference.

leading to the formation of ghettos is a rare phenomenon, if not non-existent. **However, the endemic lack of spatial planning above the municipal level has made it difficult to combat spatial segregation at a regional level**²⁴.

5.1.2. Ways of addressing the challenge

a. IS THE REGION AWARE FROM A GENERAL POLICY PERSPECTIVE OF THE DEMOGRAPHIC CHALLENGE?

The two issues that have generated more awareness in the regional policy have been immigration and ageing of the population.

Regarding ageing, its effects are of concern because of the unsustainability of the economic system created, in terms of generating the workforce needed to carry out activities and the difficulties in maintaining a population consisting mostly of the elderly, who are the main users of social and health services and facilities, and of a costly pensions system. Apart from specific actions, such as reform of the pensions system by the Spanish Government, which is in the last analysis a change in the parameters of transfer of resources between population age groups, other actions have been carried out with more structural objectives, designed to have a direct impact on the age profile of the population. Unsurprisingly, given the impossibility of fighting ageing through a reduction in the number of elderly people, the only alternative are policies to stimulate the birth rate.

The first actions of the Generalitat of Catalonia concerning migration took place in the late eighties. Since then, the actions of the Generalitat of Catalonia in the field of immigration have grown into a global policy framework with particular emphasis on the integration of immigrants, in a mutual process that also involves local inhabitants in a normal process facilitating access to services and resources under the same conditions as other citizens. Local administrations (municipalities) have also assumed responsibilities in the reception and integration of immigrants.

b. THE CHALLENGE IS ADDRESSED IN AN EXPLICIT OR IMPLICIT WAY?

Here we must differentiate among the ageing and the immigration challenge. As said in the section above it is difficult to address the ageing of the population in an explicit way, therefore the challenge is addressed in an implicit way through other measures as the

²⁴ For further details about the need to address urban renewal and social segregation above the municipal level, see: LÓPEZ, J. & TOSICS, I: *Nodus. Linking Urban Renewal and Regional Spatial Planning Urbact II*. Barcelona, May 2010.

reform of the Spanish system or campaign to promote a healthy lifestyle to prevent illness (and therefore reduce the costs to the public health system).

Regarding immigration, there have been very explicit policies and agreements that have dealt with the topic (see next sections, mainly with the goal of achieving integration of the new population.

5.1.3. Forecasting activity

Catalonia has several resources for monitoring, analysis and forecasting of demographic variables. The Statistical Institute of Catalonia²⁵, under the Catalan Government, is the official body responsible for managing statistics on Catalonia and, therefore, provides statistics on population (and many other variables), makes forecasts of total population, school age population, active population and households, with time horizons and different levels of territorial breakdown for each type of projection. It also offers projections for migratory growth until 2021.

In parallel to the quantitative work of the Statistical Institute of Catalonia, several bodies report on the evolution of the main demographic variables and their possible effects. These bodies include the Centre for Demographic Studies²⁶, a research consortium of the Generalitat of Catalonia and the Autonomous University of Barcelona. The Centre for Demographic Studies has three core areas of work: teaching, research and publishing.

Alongside it, there are many research centres with different origins, characteristics and objectives that monitor the evolution of the major sociodemographic variables, from a territorial, social and economic standpoint.

As explained in the section of "resilience of planning system", the Program for Spatial Planning also used very precise forecasting of population and occupation from 2001 to 2026 in order to establish the need of land for different uses until that date.

There is no evidence of use of supra-regional forecasting analysis regarding population or other demographic variables.

There is no evidence that the forecasts are updated with changes in spatial dynamics. The main issue regarding demography, immigration, is object of attention and updated policies but without reference to specific monitoring of the forecasts.

²⁵ www.idescat.cat

²⁶ www.ced.uab.es

5.2. Effectiveness policy bundles

Challenge

5.2.1. Direct / indirect relationships with the macro-scale challenge

Specific documents /strategies

The Department of Social Welfare and Family of the Catalan Government is the main responsible for the design and implementation of policies in the area of ageing, immigration and families. Regarding ageing, there is no specific policy document, but there are several measures that try to stimulate the birth rate. There are also policies in the social and health assistance for elderly, but they are not strategic but responding to specific needs (day assistance, care homes, etc.)

Immigration is a much more debated issue, and there have been several documents with strategic policies to manage this topic. The planning, proposals and assessment of policy guidelines on immigration, within the framework of powers of the Generalitat of Catalonia, have been carried out by the General Directorate for Immigration since its creation in 2001. This work was done under three **Interdepartmental Immigration Plans**: 1993-2000, 2001-2004 and 2005-2008. The last plan issued covers the 2009-2012 period.

Coherent approach

We cannot answer this question as it was not clearly mentioned during the interviews.

5.2.2. Strategic capacity of the policy bundles

Visioning

In the case of ageing, the policies are oriented, as said to the stimulation of the birth rate. Then, at Spanish level, the recent reform of the pensions system by the Spanish Government answers the need change the parameters to transfer of resources between population age groups, by increasing the retirement age to 67 years of age. It is not obvious the articulation of this policy with other policies or if it is framing regional dynamics in a wider territorial perspective.

Policies specifically to stimulate the birth rate are based on two initiatives: a "universal child benefit" and a "universal benefit for

birth, adoption or multiple fostering"²⁷. Subsidies are very small compared with those of most countries in the European Union, both in terms of duration (three to six years) and amount. Recently the new government has reduced this subsidy only to families with economic problems, in the package of measures to reduce public debt. Alongside this, in 2007 the Spanish Government introduced a grant of 2,500 euros for the birth of a child²⁸, in addition to tax relief of 100 euros per month. The so-called "baby cheque" was discontinued in 2011 as one of the measures taken by the Spanish Government in 2010 to reduce the public deficit²⁹. Such measures have often been regarded as ineffective for increasing the birth rate, not because of the amount involved, its duration or its universality in benefiting in the same way social groups with very different income levels, but because of the need to combine them with other policies, such as increasing the number of free childcare centres or other measures that could reconcile work and family life.

Regarding immigration, there is a clear vision based on different plans, agreements and documents that organize the policy strategy. These different instruments are coherent among them as one usually depends on the other. To exemplify this, at the end of the **Third Interdepartmental Immigration Plan 2009-2012**, the Catalan Government and various economic and social partners signed the **National Pact for Immigration** (19 December 2008) in order to meet the demands on Catalan society of the demographic transformation caused by migration and its consequences. Once the National Pact for Immigration had been signed, approval was given to the current **Plan for Citizenship and Immigration 2009-2012**. The Plan includes various programmes and actions to be undertaken by all Catalan Government departments. The elaboration of these plans and pacts have been made in close cooperation with stakeholders, specially local government and NGOs that work since long in the integration of immigrants.

Articulation in objectives

Questions a, b

Regarding ageing, in the previous section we mentioned the main measures, both at Spanish level (reform of the pensions, which also

²⁷ Law 18/2003 of 4 July, on support for families; Decree 151/2009 of 29 September, on partial implementation of Law 18/2003 of 4 July, on support for families.

²⁸ Law 35/2007 of 15 November, establishing income tax rebates for birth or adoption and Social Security single payment economic benefits for birth or adoption.

²⁹ Royal Decree-Law 8/2010 of 20 May, of special measures for the reduction of the deficit.

affect Catalan workers) and at Catalan level (the child-care subsidies and the senior citizen's social policies).

In the case of immigration, the current ***Plan for Citizenship and Immigration 2009-2012***³⁰ develops a series of measures and programs to be undertaken by all Catalan Government departments. The Catalan model of integration of immigrants has been defined over the years with the involvement of the Government of Catalonia and also local government, economic and social partners, civic organisations and society in general, including people who have joined in more recently. Unlike earlier plans, this Plan has come about in a context marked by the new powers set out in the Catalan Statute of Autonomy, by the fruit of the accumulated experience of all agents involved, their great diversity of backgrounds, legal and administrative situations, family members, work situations, places of residence, etc., and by changes in the job market and the economy and includes programmes of specific relations with the Maghreb, for regrouping and work, for return, for resources for professionals, for awareness-raising, etc.

Priorization, budgeting and monitoring capacity

In the case of immigration, the above mentioned Plan provides for an annual set of actions and budgets.

The plan defines three main lines, from which a set of challenges and the actions envisaged are settled. The lines are:

- Management of migratory flows and access to labour market (Line 1)
- Adaptation of public services to a diverse society (Line 2)
- Integration in a shared public culture (Line 3)

The budget for the 2009 year to implement the different measures amounted to 212,5 Million €, with a clear specification to which department or administration had to implement the different actions defined in the Plan.

The ***Plan for Citizenship and Immigration 2009-2012*** establishes for each of the projects (based on the lines, challenges and programmes) a series of "assessment indicators". For instance, the Line 2 (see above) has a challenge to "ensure access to public services", and as one specific project of this line to "improve the distribution of foreign students in schools. The specific action associated with this project is the maintenance of municipal

³⁰http://www20.gencat.cat/docs/dasc/03Ambits%20tematics/05Immigracio/03Politiquesplansactuacio/03placiutadania09_012/01Presentacio/pla_angles.pdf

schooling offices. The assessment indicator is defined as “Number of extant municipal schooling offices”

This monitoring, however, seems to be very general and there is no indication to when the assessment will be done, if periodically or at the end of the Plan period (2012).

Involvement of stakeholders

The National Pact for Immigration is the result of the work of more than 1,700 people who participated in the process of drafting the document in the diagnosis, consultation, participation and final negotiating stages.

Moreover, the Catalan Government gives subsidies to civil society’s organization that work with immigrants, as well as with old people.

There is also a permanent body, the Citizenship and Immigration Board, created by Decree 86/2008 dated 15 April, affiliated to the Secretariat for Immigration. This board is the multimember advisory body that channels the participation of the general public and their organizations in immigration policies. It is decentralized as each “comarca” (county) has its own “Territorial Board” to deal with the specificities of the immigration phenomena in them.

The membership of the regional boards is open to organisations and local authorities who have expressed their wish to take part. People who either personally or as representatives of a group can make a useful contribution due to their specialization, knowledge, responsibilities or for other reasons can also be invited to be members. In this board there are 24 different organizations, ranging from trade unions, chambers of commerce or immigrant associations (Chinese Women in Catalonia, Senegalese Associations, Latin American Federation of Associations, etc).

5.2.3. Efficiency of the strategic capacity of the policy bundles

Feasibility

Are there any forms of horizontal integration/synergic cooperation among traditional sectors (transport, environment, energy, development, education, health, price strategy, etc) for the implementation of the strategy?

Yes. As mentioned before, the Plan for Citizenship and Immigration 2009-2012 specifies which department of the Catalan government is responsible for each of the projects defined, as well as other public

institutes and administrations (as municipalities). Almost all departments are involved, from the Health to the Housing departments and others.

Is there a predominance of the spatial planning, sectorial competences or developing strategies fields?

The approach to ageing is very sectorial oriented as the policies are defined from the department of Social Welfare and Family and then opened to the civil society and other institutions.

The approach to immigration is better integrated with different policies, those of a more social character and those related with employment or legal issues.

As mentioned in the section "Resilience of the planning system", the recently passed Regional Plans have as main criteria to prevent urban sprawl and promote growth with social cohesion. However, the relationship of the Spatial Planning program with the sectorial departments has been very weak.

No specific innovative governance episodes so far.

Vertical integration

As mentioned before, the lower administrative levels (municipalities) participate both in the provision of services for elderly (day centers, care homes, leisure activities) and in the integration of immigrants. Moreover, they are represented in Citizenship and Immigration Board, the organ for consultation and participation in migration management policies promoted by the Generalitat of Catalonia.

In the case of **Spain**, the Ministry of Labour and Immigration has a specific Secretary of State for Immigration. The Secretariat, in addition to the General Directorate for Immigration and the General Directorate for Integration of Immigrants (along with the General Directorate for Spanish Citizens Abroad), has a Permanent Observatory of Immigration.

As **coordinating bodies** between the two administrations, there are the Interdepartmental Committee on Immigration and the bilateral Spanish Government and Catalan Government Committee. Given the importance of local authorities for immigration policies, the new Plan for Citizenship and Immigration 2009-2012 also consolidates the position of the coordinating body for municipalities and county councils, the Joint Committee of the Generalitat and Local Authorities.

Who has the main competence?

According to the Spanish Constitution (Article 149.1.2) the State has exclusive powers in matters of nationality, immigration, emigration, foreigners and asylum. The Statute of Autonomy of Catalonia (Article 138.2), reformed by Organic Law 6/2006 of 19 July, establishes that the Generalitat of Catalonia has executive powers for granting work permits to foreigners who work in Catalonia. In addition, Article 138.3 of the Statute establishes that the Generalitat of Catalonia should participate in the Spanish Government's decisions on immigration that specifically affect Catalonia and, in particular, is to participate in determining the foreign worker quotas.

The General Directorate for Immigration (DGI) attached to the Ministry of Social Welfare and family is responsible for proposing policy guidelines on immigration to the government. It is responsible for planning, proposing and assessing decisions on integration of immigrants. It also coordinates the participation of the Government of Catalonia in Spanish Government decisions on immigration of particular import to Catalonia. The General Directorate for Immigration coordinates the actions on immigration of the ministries of the Generalitat of Catalonia and local authorities and proposes criteria on migratory flows. It also manages the return policy for Catalans or descendants of Catalans who live abroad. And it prepares programmes for voluntary return of immigrants to their countries of origin.

Regarding the ageing challenge, it is the Spanish Government the one responsible for the reform of the pension system, as explained before. The Catalan Government has competencies in the social welfare policies.

Cooperation and awareness

Main tool of cooperation is the above mentioned Citizenship and Immigration Board, as well as the subventions that the government gives to NGO and civil society associations for social welfare policies and programs.

Awareness: topic of immigration is very much present in media, and in recent regional elections a xenophobe party obtained representation in some municipalities of Catalonia, some of them being the ones concentrating high percentages of foreign population.

5.3. Future threats and opportunities

Future threats regarding immigration from a governance point of view are found mostly in the capacity of integration. Social and territorial integration is a process over several stages, with progressively closer contact between immigrants, local inhabitants and the host territory. Each wave of immigrants has traditionally been used to improve the lot of the people in earlier waves of migration: the new arrivals have always tended to do the lowest paid jobs and live in the poorest areas. The positive side to this sad reality is that the arrival of each new group allows for 'upward' mobility of those who have arrived earlier. In the case of recent immigration influxes, however, this replacement process has broken down and, probably as a result of greater cultural and language similarities, people coming from Eastern Europe and from South America have tended to hold better jobs and live in better conditions than Moroccans, who were in the previous wave of immigration and which is still the largest group of foreigners in Catalonia (the number of Moroccans is 3 times the number of the largest South American nationality). Consequently, as well as overcoming the cultural gap that may exist with people from Morocco in particular and Africa generally, there is now a "glass ceiling" of new immigrants more quickly integrated into the host society, which puts limits on the possibilities of social promotion of Africans and Moroccans.

Another important future threat is the budget restrictions that have been recently approved and which could affect some of the programs created for instance to facilitate care of old and depending persons. Also the recent elections at municipal level, with the new presence of a xenophobe party in certain municipalities might mean the end of policies that at local level were working to ensure integration of foreigners, as the cultural mediator figure.

Spatially the challenge is how spatial planning can help fight social and spatial segregation and facilitate creation of urban environments accessible for elderly.

Actual or potential actions for spatial planning are the following:

Measure	Description of the benefit related to the challenge	Included in plans?
Production of demographic projections	Allows prediction of future needs for housing, facilities,	Yes

	etc.	
Estimation of housing needs from the projections	Allows quantification of future residential land needs	Yes
Provision of specific facilities for the elderly	Avoids the need for journeys to meet basic needs for people with reduced mobility	No
Specific measures to adapt the territory to the limitations of the elderly	Facilitates movement of people with reduced mobility	No
Other		

6. Globalization

6.1. Awareness of the macro challenge: GLOBALIZATION

6.1.1. Local articulation of the macro-challenge

a. HOW DO THE CHALLENGES MANIFEST THEMSELVES LOCALLY?

As everywhere else, globalisation in Catalonia has four consequences: environmental, demographic, cultural and economic. Since the factors affecting the first two have been analysed in the previous sections of this document, and since the most obvious consequences of sociocultural transformations associated with globalisation have little bearing on territorial aspects, this section focuses on the economic aspects of globalisation and its territorial component.

Catalonia already has an internationalised economy, the result of historical industrialisation processes since the early twentieth century. During the sixties, when the Spanish economy started to open up, Catalonia played a key role (and still does), concentrating Spain's most important export sectors. The position of Catalonia for access to Europe and the quality of life here have made Catalonia an attractive region for foreign investment. Attraction of foreign investment has become a key factor in boosting local companies that can act as suppliers of products and services to multinational companies. Catalonia has competed with similar European regions in attracting foreign investment, either in the form of purchase of

existing companies (particularly in the eighties), entry of international companies, creation of joint ventures with local firms or attracting Asian companies seeking an entry point at a European level, as has become more common in recent years.

The ability to attract foreign investment has been accompanied by Catalan investment abroad, which in addition to increased international flows of capital has also contributed to the increase in movement of goods and services. Catalonia now has 3,500 manufacturing companies with a minimum of 50% foreign capital. The competitiveness of Catalonia over other locations is based on a concentration of different competitive factors. Although Catalonia is not a world leader in any specific area, it is competitive because of its good position in all of them, and it is all these factors taken together that is the main competitive advantage. Issues involved include quality of life, advanced facilities (synchrotron, biomedical research park, business schools) and the diversity of Catalan small and medium enterprises in various sectors that can act as service providers for foreign companies here. The capital city, Barcelona, is attractive to university students and business executives from around the world and this is also an asset for foreign companies.

In this general context, the situation in Catalonia in terms of globalisation of the economic structure has these specific features:

- **Growth.** Since the late nineties and until very recently Catalonia had strong economic growth. Between 1995 and 2001 Catalan Gross Value Added had a mean annual growth rate of 4.17%. This growth rate is much higher than the average growth rate of 1.9% of GDP for the Euro Zone in 2001 and is higher than the growth rate in other comparable European regions. For example, between 1986 and 1997 Catalan GDP grew by 3.67% while in Baden-Württemberg growth was 2.02% and in Lombardy 1.65%. This higher growth was maintained until 2007, before the outbreak of the financial crisis. Since 2008 Catalonia (and Spain) has greatly suffered the consequences of this crisis, resulting in a decrease in GDP growth and high unemployment. According to stakeholders in the Catalan Government, in this context of contraction of domestic demand, Catalonia needs to invest especially in economic sectors that target foreign markets, since these will allow it to become more competitive.

- **Sectoral composition.** The excessive importance of construction (compared to other similar regions) for jobs and GDP growth has been a feature of Catalonia since the late nineties and has meant that the economic crisis has had a greater impact in the region, following the bursting of the house price bubble. The

economic crisis has also affected the country's industrial base and has resulted, for example, in the relocation of multinationals and large-scale redundancies. These are the two sectors that have suffered the greatest number of job losses since the start of the crisis, with a reduction in employment of 33% in construction and 22% in industry between 2008 and 2010. The tertiary sector has also been affected by the economic crisis, but because of its heterogeneity the impact has been uneven across its various subsectors.

Two sub-sectors in Catalonia particularly affected by globalisation, tourism and advanced business services, need a mention apart. Tourism accounts for about 10% of GDP and employment in Catalonia and is therefore a key sector for the economy. Catalan tourism is a quality product, because this is a country with variety, with countryside, beaches and historical and cultural heritage, but management of tourism over recent decades has been uneven. Demand centres on sun and beach resorts (the Costa Brava and the Costa Daurada accounting for 56% of hotel occupancy by foreign visitors to Catalonia), which are often overcrowded as a result of development that for many years put quantity before quality. This model of tourism makes it more vulnerable to competition from other destinations that can offer new experiences, lower prices and less congestion, and are now equally accessible to tourists from developed countries. For their part, advanced business services, such as financial services, data centres, business consulting and legal services, account for only a small proportion of total services, around 14%, similar in size to the retail trade or catering. These services are not very internationalised, which could reduce their level of competitiveness.

b. WHAT ARE THE SPATIAL CONSEQUENCES / IMPACTS?

The main spatial characteristic of Catalonia with an spatial impact on economic competitiveness is the high concentration of economic activity in the metropolitan area of Barcelona. This currently accounts for 80% of the population and about 70% of Catalan GDP (2009). This has implications at a territorial level because economic concentration in the metropolitan area offers competitive advantages in economies of location (expertise in the metropolitan area being crucial in some sectors) and also urban development. Proof of this competitive advantage is that concentration in other areas, in some cases for important sectors such as food in Lleida

and the chemical industry in Tarragona, has not been as competitive in international terms.

In fact, one of the problems mentioned by experts on the territorial impact of globalisation is precisely this "centralising" tendency of foreign companies that might invest in Catalonia. These companies, albeit with some variations in specific sectors, tend to invest in the metropolitan area of Barcelona and do not even consider other locations that might offer the same degree of accessibility and expertise. Despite government efforts to "rebalance" the territory and ensure that foreign investment reaches everywhere, the preference of these companies for the metropolitan area is basically due to the existence of a critical mass for many productive sectors, manufacturers and services. In fact, 80% of all foreign companies in Catalonia are located in the metropolitan region of Barcelona. Outside this area, only very specific areas are attractive, such as for the chemical industry in Tarragona and the food sector in Terres de l'Ebre. The metropolitan area, therefore, suffers from a lack of spaces available for activities (or at least that is the perception of companies) and areas for activities available outside the metropolitan area are not attractive enough to foreign investment.

Another spatial impact affects the position of Catalonia in the global economy is related with the provision of infrastructure. There are some clearly positive aspects, such as the strategic location of Catalonia at the heart of the Mediterranean corridor, at the intersection with the Ebro valley, with good communications with Zaragoza and the Basque Country. Nevertheless, other factors limit the capacity for internationalisation of the Catalan economy, mainly the preponderance of goods transport by road and the low use of rail, saturation of some roads, and Spanish state or private ownership of major infrastructure hubs connecting with other countries (the airports of Barcelona, Girona and Reus; the ports of Barcelona and Tarragona; motorways and railway lines), which puts limits on the reach of the Catalan Government.

c. SPECIFIC CHARACTERIZATION OF THE MACRO-CHALLENGE COMPARED TO EU?

The above mentioned relative excessive weight of the construction sector during many years and the following crash of the real estate bubble and the territorial concentration of foreign investment in the Metropolitan Area of Barcelona are specific features of globalization in Catalonia.

d. SPECIFIC CHALLENGE EXPLICITLY PRESENT IN THE POLICY STRATEGIES?

The Catalan Government has posed great emphasis in the internationalization of the Catalan economy, both attracting companies here and promoting Catalan companies abroad.

6.1.2. Ways of addressing the challenge

The Government of Catalonia has developed various policies over the past 20 years for improving the position and competitiveness of Catalonia in the global economy.

The challenge of globalization is addressed in an explicit way with specific policy strategies developed by the Catalan Ministry of Enterprise and Labour³¹ and the Catalan Ministry of Economy and Knowledge³². As part of these Ministers, different agencies and institutions deal with topics as foreign investment, R&D, High Education policies, etc.

6.1.3. Forecasting activity

The Catalan Ministry of Economy and Knowledge is responsible for defining the economic policy of the Catalan Government and its management (public finances, public debt, budgets, etc.) and also for promotion of research. This ministry makes growth forecasts for the Catalan economy and periodically publishes a series of macroeconomic indicators (GDP, employment, etc). These forecasts have a short time horizon, only until 2012.³³

No evidence that these forecasts are shared with stakeholders.

The forecasts also include those that the Spanish and European institutions publish for Spain and other European countries. For specific policy strategies as the one about clusters, the Catalan Government has followed the guidelines of the European Union³⁴.

6.1.4. Relationship between forecast and declared measures

The most recent policy document dealing with globalization is the *Strategic Agreement for Internationalisation, Quality of Employment and Competitiveness of the Catalan Economy* (AEC). This document

³¹ http://www20.gencat.cat/portal/site/empresaiocupacio?newLang=ca_ES

³² http://www20.gencat.cat/portal/site/economia?newLang=en_GB

³³ <http://www20.gencat.cat/docs/economia/ecocat/documents/Informes/EM201105.pdf>

³⁴ Hernández J., Fontrodona, J. and Pezzi, A.: *Map of Local Industrial Production Systems in Catalonia*, Ministry of Employment and Industry of the Generalitat of Catalonia. Barcelona, 2005.

defines specific measures, with monitoring indicators. However, there is no specific mention to forecasting methods beyond 2011.

6.2. Effectiveness of the policy bundles

6.2.1. Direct / indirect relationships with the macro-scale challenge

Document/strategy/programme to address the challenge? Coherent approach?

As mentioned above, the Catalan government has developed over the past 20 years, several policies and programs to help the internationalization of the Catalan economy. These policies cover different areas:

On one hand, since the mid-nineties the Generalitat of Catalonia has conducted studies on the presence of clusters in Catalonia, helping to identify competitive sectors in different parts of Catalonia . This policy of defining clusters has been maintained and has evolved to the stage of defining, for example, manufacturing systems and establishing specific policies for each of them in accordance with the guidelines of the European Union.

Since 2004 *Territorial Innovation Plans* have been created for territories (counties, cities) to prepare economic development plans in specific areas of the territory, including participation of town councils and county councils.

Another Catalan government initiative more directly addressing the issue of globalisation has been the *Strategic Agreement for Internationalisation, Quality of Employment and Competitiveness of the Catalan Economy* (AEC), signed in 2008 and concluded recently with over 90% of its measures having been carried out..

There are other strategies and publications that analyse prospective of foreign markets for Catalan enterprises, published every year. This is the case of the publications done by the Observatory of Foreign Markets³⁵, depending of the Agency for the competitiveness of Catalan enterprises ACCIO (more information bellow).

In general there seems to be a coherent approach and well divided tasks among this different policies and programs, and especially

³⁵

<http://www.acc10.cat/ACC10/cat/talent-coneixement/ome-prospectiva-internacional/activitats/>

since 2005 there has been an effort to unify the different initiatives in the single “umbrella” of the agency called ACCIO.

6.2.2. Strategic capacity of the policy bundles

Visioning

The most recent explicit policy strategy addressing the globalization challenge is the above mentioned *Strategic Agreement for Internationalisation, Quality of Employment and Competitiveness of the Catalan Economy* (AEC). This agreement covers the 2008- 2011 period, and is an update of a previous agreement covering the 2005-2007 period.

There is a close relationship between academy and policy regarding this challenge. In the elaboration of the different documents there is the participation of university professors that deal with the scientific coordination of the documents. It is the case, for instance, with the documents elaborated by the Observatory of Foreign Markets.

Moreover, the current Minister of Economy and Knowledge is a famous economist and former professor at the University Pompeu Fabra.

The AEC, the Observatory and the agency ACCIO are all concerned with the position of Catalonia in the European and international context, framing correctly the regional dynamics into this wider context. Another issue is whether the policies are sufficient to deal with international dynamics that space the competencies of the Catalan Government.

As mentioned, the different strategies developed by the Catalan government are coherent among them, especially since their unification in the ACCIO agency, created specifically with this purpose of coherence.

The AEC is an agreement between the Catalan Government, the two main trade unions and the major business associations in Catalonia, therefore the main stakeholders in this particular area have been involved in the elaboration of the policy strategy.

Articulation in objectives

The *Strategic Agreement for Internationalisation, Quality of Employment and Competitiveness of the Catalan Economy* (AEC) has seven blocks, addressing seven objectives: innovation and knowledge, training and education, infrastructure, business competitiveness, economic activity and the environment, quality of employment, and social cohesion. Each of these blocks is divided into several lines of action and territories for these are defined

where possible. Block 1 includes lines as innovation and technological transfer, R&D, attraction and retention of talent. Block 2 lines include, among others: professional training and university policies. Block 3 includes the promotion of strategic infrastructures and mobility policies. Block 4 wants to simplify administrative procedures for business, develop cluster policy, programs for internationalization, industrial land policy, etc. Block 5 refers rational use of resources and sustainable development and climatic change. Block 6 includes lines as immigration and labour market, occupation policies or model of competitiveness. Finally block 7 refers to the promotion of social cohesion.

The objectives and lines are therefore well articulated and content wise as they have been grouped according to the different lines of actions and goals to achieve.

The AEC establishes for each measure a calendar (between 2008 and 2011) for their accomplishment but there is no specific prioritization of the different measures among them.

Each measure has a budget assigned that has to be covered by the government department responsible for that measure. For instance, the measure "develop and promote the network of technological transfer in Catalonia", belonging to the Block 1 has a budget of 23,4 Million euros. The total budget for the 2008-2011 Agreement amounted to 33.168 M€.

In addition, there is a structure for monitoring the implementation of the measures established. 93% of the 443 measures envisaged in this agreement have been carried out, leaving only 14 incomplete, mainly owing to lack of funding.

As mentioned before the ACE was agreed upon the Catalan government, the main trade unions and the major business associations in Catalonia. There is no involvement so far of NGOs or other private actors in the process.

6.3.3. Efficiency of the strategic capacity of the policy bundles

Forms of horizontal integration among traditional sectors?

The AEC defines that each measure has to be implemented by a different department or institution of the Catalan Government. This is therefore a clear effort to coordinate the different actions to follow a common objective (improve competitiveness and internationalization of Catalonia) but on the other hand it is not clear whether the different departments cooperate or they simply implement their own measures. For instance, it is not clear the

degree of cooperation among the institutions responsible of implementing the measures of social cohesion and those responsible of promoting professional training (two of the measures part of the Agreement).

One area where there seems to be more synergy is in the Climatic Change, as this is a measure that tries to combine reduction of emissions with economic activity, helping business reduce them without losing competitiveness.

Predominance of any field in particular?

This is an economic oriented plan, with a clear predominance of the Ministry of Enterprise and Labour and the Catalan Ministry of Economy and Knowledge. However, there is a certain interest in including a spatial dimension (by considering in each measure if it can be developed by an specific county or not) and a social one (the last of the Blocks refers to social cohesion, but it only includes 2 measures).

The Agreement itself might be considered an innovative governance episode as it was agreed by the main actors in the field.

Vertical integration?

No evidence of integration / cooperation with upper levels in the implementation of this Strategic Agreement.

There is, instead, a certain form of cooperation with lower levels, specifically the counties, by mentioning in each measure whether it can be territorialized or not, that is, if there is a specific county that will benefit from the action or that can help in its implementation.

Who has the main competence?

At present, policies directly related to globalisation are carried out mainly by the Catalan Ministry of Enterprise and Labour and the Catalan Ministry of Economy and Knowledge.

The ACCIÓ agency of the Catalan Government brings together all the initiatives of the Ministry of Enterprise and Labour and the Ministry of Economy and Knowledge for helping to improve the competitiveness of Catalan companies and promote their internationalisation. It has offices abroad to facilitate access to foreign markets. This agency was created in 2008, as the result of the fusion of institutions that were responsible for promoting business and the economy in Catalonia: COPCA (Consortium for Commercial Promotion of Catalonia), CIDEM (Centre for Information and Business Development) and the Catalan Investment Agency, which was created in the late eighties to promote the

internationalisation of the Catalan economy (establishing Catalan companies abroad, increasing exports, creating multinational companies) and innovation in Catalan companies, the creation of new companies and attracting foreign capital. For 20 years the governments of the Generalitat of Catalonia have invested in the internationalisation and competitiveness of the Catalan economy. ACCIÓ is currently developing several initiatives, grouped into five thematic areas:

- Grants and funding: subsidies for internationalisation, innovation and business management, for companies and other organisations.
- Business strategy: offering free advice to companies wishing to improve their management, identify their market position and enhance their growth strategy.
- Internationalisation: resources to address the various stages of international activity: initiation, expansion and consolidation, international advice, research of new markets, access to finance in preferential conditions, creation of companies abroad, training in international trade, etc. It has a network of business promotion centres in several countries to facilitate introduction of Catalan companies. It also organises activities to attract investment to Catalonia, offering information about Catalan land available to foreign companies wishing to invest in Catalonia. In 2010 over 800 individual projects for internationalisation were developed by 510 Catalan companies and organisations. In addition, some 200 companies have participated in the programme on initiating exports. In 2010 a total of 279 investment projects were worked on, giving rise to 34 projects that have led to creating or maintaining over 2,700 jobs.
- Technological innovation: facilitating the incorporation of scientific and technical knowledge for companies. ACCIÓ has a network of leading technology transfer agencies in Catalonia (TECNIO), with advice and funding for R&D and technology innovation projects. In this area there are grants to create territorial innovation systems, with action plans for specific territories to assist them in creating innovation, networking among local agents, etc. In 2010 members of TECNIO worked with over 7,000 clients and generated earnings of over 140 million euros.
- Talent and knowledge: one of the main components of ACCIÓ and the Catalan Government's economic strategy, facilitating knowledge of markets and the world economic situation for Catalan companies, promoting networking between Catalan and foreign companies (online or physical), internships abroad, etc.

This agency and all its programmes are a clear indication of the commitment of the Catalan Government to internationalisation of Catalan companies to enhance their competitiveness.

Another branch of globalisation policy is attracting foreign capital. The "Invest in Catalonia" agency (formerly, the Catalan Investment Agency) has worked since its launch in the late eighties to promote Catalonia as a European location for multinational companies. It tries to attract companies wishing to open new plants (industry or services) to serve the international market, and encourage companies already here to expand their capital investment or plants.

There are also initiatives undertaken by local government, mainly the preparation of economic strategic plans. Although in many cases these plans are prepared by the councils for the municipality itself, there are many larger-scale experiences (county, metropolitan area of Barcelona, etc.). These plans address issues of a very diverse nature, from economic promotion of companies to training people, and not many of the proposals have a territorial dimension. Only for issues concerning structural factors is there any reference to location, but there are few details of specific sites. They are not, therefore, strategic spatial plans, with a comprehensive vision of the territory, based on strategic decisions to shape planning, but rather strategic plans that can on occasion include territorial aspects in their proposals. A strictly local approach to attracting foreign investment, with numerous uncoordinated local economic development initiatives, could be counterproductive, through simultaneous initiatives that compete with each other or even display incompatible requirements and interests.

Cooperation and awareness

The cooperation question has been answered before.

About awareness, the current economic crisis has made the issue of the economic competitiveness of Catalonia and its enterprises a very common topic in the media. The new government passed recently a law of "economic promotion" that includes measures to help economic recovery and that has been very much debated both in specialized and public media.

6.3. Future threats and opportunities

As mentioned in the previous challenges, the main threat is the economic crisis, with a high unemployment and high public deficit. However, Catalonia continues to keep its exporting capacity and currently about 40% of the exports of Catalan companies are to the rest of Europe and the world.

In spatial terms, one important issue is how to achieve territorial equilibrium between Barcelona and the rest of Catalonia. Spatial planning could help in this respect. Catalan regional plans could go further in making decisions closely related to the promotion of economic activity, in general terms and for issues strictly related to globalisation. As mentioned, the lack of strategy in approved regional plans is largely responsible for this orientation. But here, once again, the next revision of the General Territorial Plan of Catalonia is an opportunity for the inclusion of these strategic factors. If this opportunity is taken, the future Plan should address issues such as assigning a certain level of productive specialisation to each of the Catalan regions, in line with their characteristics and comparative advantages; the location of activities and specific infrastructure in certain areas, beyond the mere provision of land; consideration of and coordination with proposals for development of neighbouring regions (Valencia, Aragon and the south of France), especially with regard to transport infrastructure, whether on land, by sea or by air; coordination with the initiatives undertaken by other Catalan Government ministries, such as ACCIÓ territorial innovation plans and strategic plans to create territorial innovation systems in different territories.

Measure	Description of the benefit related to the challenge	Included in plans?
Land reserves for productive activity	Ensures the availability of land for activities	Yes
Establishment of guaranteed minimum employment levels when initiating the development of industrial estates	Prevents empty industrial estates with plots of an inappropriate size for existing demand	No
Deciding the location of specific production activities	Ensures efficiency of implementation based on spatial factors, ensuring	No

	coherence with other locations	
Protection of areas and items of great natural, cultural, visual value, etc.	Ensures the conservation of heritage and its use as a resource	Yes
Promotion of areas and items of great natural, cultural, visual value, etc., as a resource	Converts a resource into a product that can be exploited in line with spatial efficiency criteria	No
Promoting specific factors for tourism	Ensures the use of a resource in line with spatial efficiency criteria	No
Strengthening specific infrastructure for exterior transport of goods	Allows for increasing economic efficiency by facilitating import and export	Yes
Consideration of the spatial development strategies of neighbouring regions	Ensures coherence of proposed infrastructure and promotion of productive activities	No

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