ESPON

KITCASP
Key Indicators for Territorial Cohesion and Spatial Planning

Targeted Analysis 2013/2/20

(Draft) Final Report | Version 31 July 2013

Part C | Scientific Report

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

This report presents the draft final results a Targeted Analysis conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU28, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

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

Information on the ESPON Programme and projects can be found on www.espon.eu

The web site provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

This basic report exists only in an electronic version.

List of Authors:

National University of Ireland, Maynooth (Lead Partner)

- Gavin Daly
- Ainhoa Gonzalez
- Justin Gleeson
- Eoghan McCarthy

London South Bank University (Partner)

- Neil Adams
- Phil Pinch

Universitat Politècnica de Catalunya (Partner)

- Malcolm C. Burns

University of Akureyri Research Centre (Partner)

- Hjalti Johannesson
- Valtýr Sigurbjarnarson

Vidzeme University of Applied Sciences (Partner)

- Visvaldis Valtenbergs
- Agita Līviņa

Part C | Scientific Report

C1. Introduction

The purpose of the Scientific Report is to reflect on the delivery of the KITCASP project specification. KITCASP is a Priority 2, targeted analysis financed by ESPON. The stakeholder demand origins from five stakeholder territories: Scotland, Ireland, The Basque Country, Iceland and Latvia. The overall aim of the KITCASP project is the **identification of the most suitable core set of key indicators of significant practical use to policy-makers and practitioners at national and sub-national levels in the preparation of territorial development strategies.** The brief as presented in the project specification is as follows:

- Review the current use of spatial data by government and public agencies in the case study nations and identify any gaps, uncertainties or limitations in the data available;
- Examine the extent to which ESPON data has informed national spatial planning strategies and territorial development policy in each case;
- Develop guidelines on the use of indicators and ESPON data in territorial policy development at the national level;
- Identify a core set of key indicators of territorial cohesion, economic competitiveness and sustainable development to inform spatial planning at the national level, drawing on ESPON research and datasets available in the case studies;
- Consider how the capacity for spatial analysis can be strengthened and harmonised at the national level; and
- Examine how national analytical experience and expertise can help to inform and take forward the EU Territorial Agenda and the implications for future ESPON research.

This (Draft) Final Report provides a detailed account of the methodological approach adopted in KITCASP and the resulting policy themes and indicators developed. The outcomes of the project are presented and encompass:

1. The set of common identified priority policy themes to which the indicators are grouped and linked. These were identified by the TPG based on an analysis of policy objectives and development priorities for the territories as well as on stakeholder consultations;
2. The final set of key (i.e. applicable to all the case study territories) and discretionary (i.e. case-specific indicators that address explicit regional issues) indicators. These were selected in consultation with local stakeholders on the basis of previously identified themes, existing national indicator sets and available national data.
3. Guidelines and recommendations for national stakeholders. This set of guidelines, to optimise the use of selected indicators in territorial policy and spatial planning, was informed by the lessons learnt from the case study territories. The recommendations include measures for strengthening and harmonising spatial analysis capacity at the national level, addressing means for better access to, take up, and application of ESPON data and methodological parameters.

4. Recommendations to ESPON. These provide specific guidance on the framing and deployment of ESPON data and indicators in addressing territorial objectives, in support of the broader ESPON research and policy application processes and objectives. The recommendations address issues of scale, availability, comparability, interpretation and compatibility of datasets.
5. A web-based data portal based on the All Ireland Research Observatory (AIRO) platform and transferable to case study Web portals. The final set of core indicators are presented in this platform: http://airo.ie/spatial-indicators

The (Draft) Final Report addresses the queries and incorporates the comments and remarks provided by the ESPON Coordination Unit (CU) and the Stakeholders on reviewing both the Inception and Interim Reports.

C2. Conceptual and Methodological Framework

C2.1 Introduction

The aim of the project was to explore the use of indicators to support evidence-based, integrated policy-making for spatial planning. The methodology designed by the TPG combines both 'bottom-up' and 'top-down' approaches. Information (methodologies, data, indicators, maps and typologies) from existing ESPON projects have been applied, together with information from other sources, including national and regional statistical information. Extensive stakeholder consultation was also undertaken in each of the five territories to better understand stakeholder perspectives and practical requirements on territorial development and monitoring.

Selecting an appropriate set of key indicators is not a straightforward task. There are many parameters which can be measured and there is an abundance of indicators and datasets available. Only a few, however, are able to communicate complex relationships between phenomena in a simple way and in a manner which can be easily understood by policy-makers to provide usable and reliable signals of important trends (Duhr et al., 2010). A key challenge is that in recent years, an enormous range of datasets on an ever wider series of topics have been collected in the EU and at national and regional levels, but the use of these data to inform evidence-based policy-making has been sub-optimal, partly due to the sheer breadth, fragmentation and compartmentalised nature of the information available.

This challenge led to yet a further challenge identified by the TPG - that is how data and indicators are interpreted in diverse political and spatial planning cultures. In order to be able to select an indicator one must have a clear common understanding of the system, and that is not always possible when dealing with complex systems in diverse territories. The methodological approach of the KITCASP project sought to identify a standard set of priority indicators capable of achieving this task through the application of a filtering process which evaluated indicator sets based on their explanatory power, availability, regional dimension and practicality. Through this process, and iterative consultation with stakeholders, a common position was arrived at on interpretation of data/indicator sets and linkages to policy objectives/drivers.

This necessitated a compromise between standardisation and diversity in the selection of key indicator sets (Carlo et al., 2002).

C.2.2 'Bottom-Up' Approach

The preliminary indicator selection was undertaken by each project partner for their case study territory, using a bottom-up stepwise approach and applying the criteria as set out below. The devised steps link to the indicator selection criteria/questions developed by the TPG ***(See Box C1 and Figure C1),*** as well as to the questions raised by the stakeholders during the project.

Box C1: Key Questions for Indicator Selection

1. Does the indicator address the policy objectives and development priorities (i.e. overall priority themes) of the case studies?
2. Does the indicator enable assessment of the performance and dynamics of balanced territorial development (i.e. can it be mapped to illustrate spatial patterns)?
3. Is the indicator regularly measured (i.e. are there reliable and regularly updated datasets available or monitoring arrangements in place)?
4. Does the indicator effectively provide information sensitive to change to timely aid decision-making processes?
5. Is the indicator well-understood by planners and decision-makers (i.e. can it communicate the results in a concise and accessible manner)?

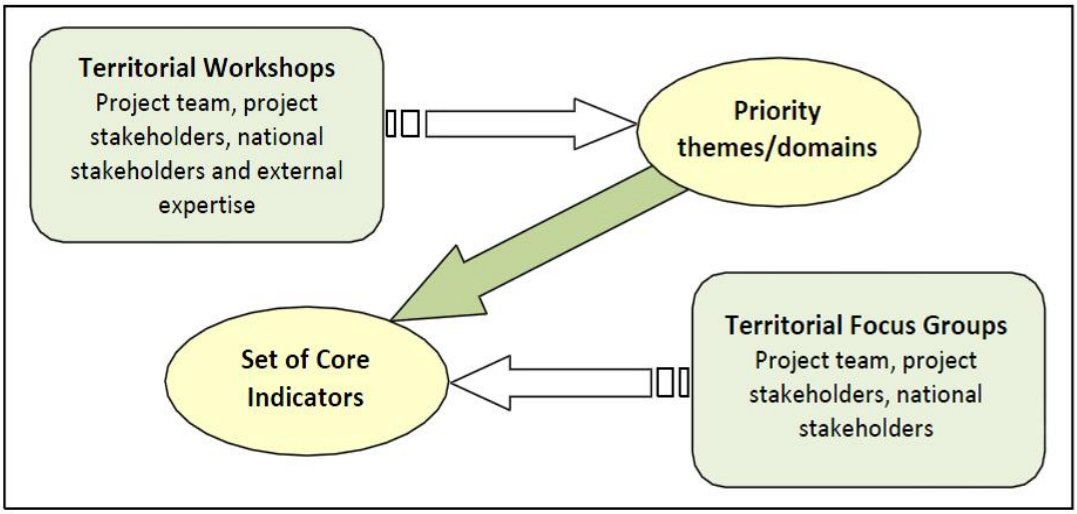
Only those indicators that positively answered the questions posed in ***Box C1*** for each case study territory were brought forward for consideration. This resulted in a preliminary inventory of indicators which was subsequently further fine-tuned to ensure their common applicability throughout the case study territories. Particular attention was given to indicator wording and measurement units, to ensure transferability and understanding across the territories.

The identified and agreed common policy themes presented the foundation for indicator selection. Indicators must have a clear and rational purpose and, therefore, be practical, relevant and applicable - i.e. address the identified policy objectives and development priorities in each case study territory.

Existing indicators sets and data sources available at national and EU level were used as the basis for indicator selection. Using existing relevant data signifies that indicators are more likely to be currently applied and understood by plan and policy-makers, and a monitoring system is in place. Overall, this step contributed to ensuring the applicability and usability of indicators, as this directly relates to the relevance, quality, quantity and timeliness of data collected.

The selected indicators were chosen on the basis that they were, as far as possible, quantifiable and spatially-specific. This allowed the indicators, where possible, to be mapped and thus contribute to their explanatory power. It was also verified that the indicators were capable of capturing change over time, and thus provide information sensitive to change in a timely manner.

Figure C1: Key Components of the Participatory Approach



C2.3 'Top-Down' Approach

The preliminary indicators selected through the 'bottom-up' approach were further scrutinised and fine-tuned using a 'top-down' approach that entailed cross-checking these indicators with those identified in other relevant ESPON projects and EU policies.

A cross-check was undertaken to ensure the indicators captured one or several policies, strategies, and key themes/indicators in European policy including, for example, the headline targets under Europe 2020 "Smart, Sustainable and Inclusive Growth" (CEC, 2010), the territorial development priorities established in the Territorial Agenda 2020 (CEC, 2011a, 2011b), and the "territorial keys" as identified by the Polish Presidency (Bohme et al., 2011). The territorial keys are designed to op[en up the territorial dimension of Europe 2020 by highlighting the specific strengths and weaknesses of territories that should influence the selection of measures taken in relation to the delivery of the Europe 2020 strategy. They simplify the territorial approach in order to make it more user friendly ***(See Figure C2).***

This step helped identify the link between the inventory of preliminary indicators and ESPON data that can support the preparation and monitoring of spatial strategies. This step also assisted in identifying any gaps or limitations in the available ESPON data. The relevant ESPON projects[1] examined included, particularly:

- INTERCO (Indicators for Territorial Cohesion);
- TANGO (Territorial Approaches for New Governance);
- SIESTA (Spatial Indicators for a 'Europe 2020 Strategy' Territorial Analysis);
- EU-LUPA (European Land Use Patterns);

[1] Details of all projects available at www.espon.eu

- ReRisk (Regions at Risk of Energy Poverty);
- DEMIFER (Demographic and Migratory Flows Affecting European Regions and Cities);
- PURR (Potential of Rural Regions);
- TPM (Territorial Performance Monitoring); and
- BSR TeMo (Territorial Monitoring for the Baltic Sea Region)

This step also aimed at fine-tuning the wording of indicators to ensure they are clear and well-understood by the spatial planning community while adhering to common usage of the terms to also facilitate understanding by the wider ESPON community.

Figure C2: Territorial Keys of Europe 2020 TA2020

Territorial keys	Linking issues
1. Accessibility	• Global accessibility • European and trans-border accessibility • National accessibility and daily accessibility between metropolises • Accessibility of the main, and secondary, centres (regional accessibility including services of general economic interest) • Modal split, public transport, intermodal transport change • *E*-connectivity • Access to energy networks
2. Service of general economic interest	• Services of general economic interest (sparsely populated areas) • Access to services of general economic interest • Investing in education
3. Territorial capacities/ endowments/ assets	• Territory-bound factors (local *milieus* etc.) • Local innovation systems & networks • Wise management of cultural and natural assets • Renewable and local energy production • Territorially-related characteristics for energy production • Revitalisation of cities
4. City networking	• Interactions between metropolises at the EU scale • Interactions between the main national growth poles, • Territory-bound factors (local *milieus* etc.) • Accessibility of metropolises and between metropolises
5. Functional regions	• Enlargement of local labour markets, • Critical mass of means through territorial cooperation, • Accessibility of secondary growth poles and regional centres • Public transport connections to regional centres. • Compact cities (sustainable cities)

Source: (Bohme et al., 2011)

C2.4 Additional Steps

- The preliminary inventory of indicators selected for each case study territory was forwarded to the each project stakeholder for review and comment before their submission to the Lead Partner.

- The Lead Partner subsequently undertook and analysis contrasting the preliminary indicators across the case studies to identify commonalities and divergences. Where an indicator was selected in at least in four case studies, the indicator became a "core indicator". Where differences were noted, an order of priority of such indicators was established for further discussion within the TPG. Where an indicator was selected in

one/two occasions only, but it captured a key concern of a given case study territory, it was brought forward as a "discretionary indicator".

- The final preliminary set of 20 core indicators were agreed by the TPG before presenting it to the stakeholders at the final Steering Committee meeting the 30th of May 2013.

C3 Territorial Profiles

C3.1 Introduction

In order to establish a baseline comparative understanding of each of the case study territories, profiles were undertaken by each TPG member using a common framework. The territorial profiles had two objectives as follows:

1. To provide a qualitative description of the case study territories supplemented by some quantitative data to describe their context and offer insights into why certain areas may focus more on certain priorities / objectives / indicators rather than others; and
2. To review the current use of spatial data by government and public agencies in the case study nations and identify any gaps, uncertainties or limitations in the data available;

The territorial profiles provided below summarise the key spatial planning issues in each stakeholder territory of direct relevance to indicator selections. This process, in association with the Stakeholder Workshops, allowed the development of the comparative table of policy drivers and objectives presented in ***Table C3.*** Readers are referred to ***Appendix A*** for further more detailed background information for each stakeholder territory. **Appendix G** provides the inventories of spatial datasets collected by national and public agencies in each case study territory.

C3.2 Ireland

C3.2.1. Key Characteristics of the Case Study Territory

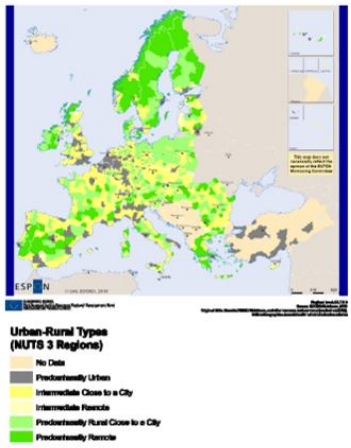
Positioning within European Context

Ireland is the most Westerly country in the European Union (EU), and shares territorial boundaries with Northern Ireland (UK). It occupies a land area of 69,750 km^2 with a population of 4.58 million recorded at the last Census of population in 2011.

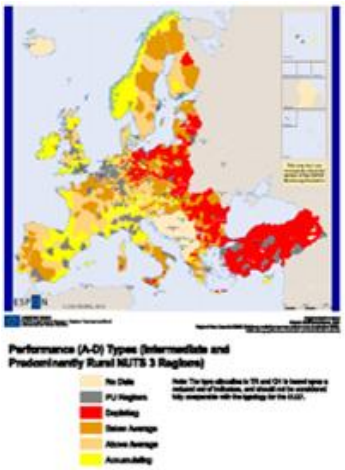
A preliminary analysis of the ESPON typologies in ***Figure C3*** helps to situate Ireland within its broader European context. The ESPON typologies have been developed at the NUTS 3 level. Ireland consists of 8 NUTS III regions (2 NUTS II regions), 'Predominantly Urban' accounts for one of the NUTS III Regions while 'Predominantly rural regions close to a city' account for four of NUTS III regions, reflecting the distribution of three of the larger cities and towns in Ireland; Cork in the South-West, Limerick in the Mid-West and Galway in the West. The remaining three NUTS III regions are classified as 'Predominantly

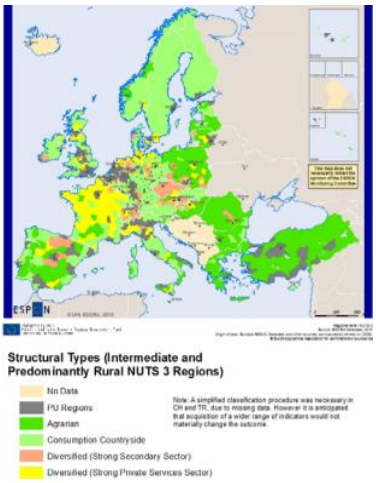
rural, remote regions'. In a European context the regions classified as predominantly rural are generally situated in the geographical periphery of the EU.

Figure C3: ESPON Typologies



Source: ESPON EDORA Final Report.





Urban-Rural Typology	**Performance Typology**	**Structural Typology**

Key Spatial Planning Policies/Documents

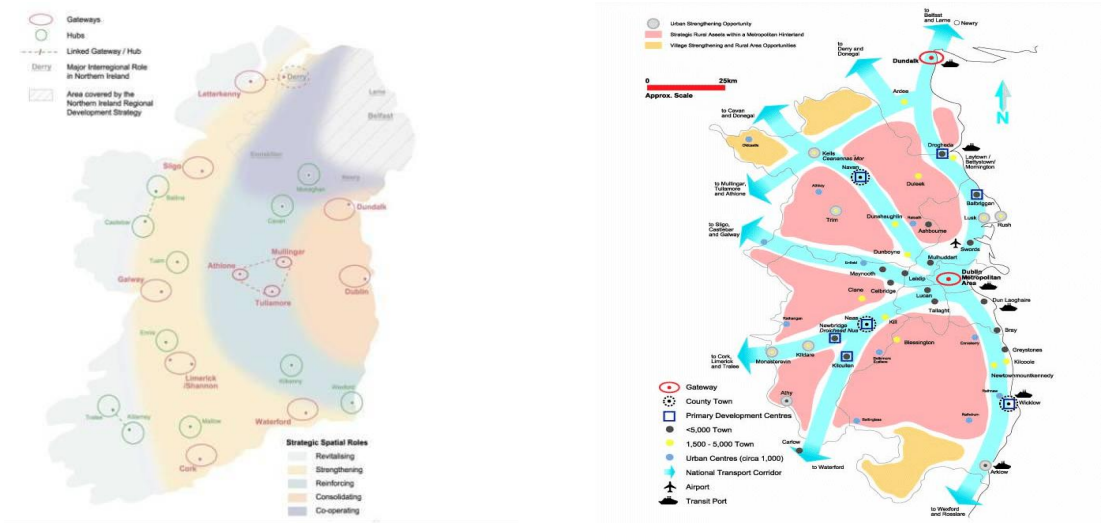
The National Spatial Strategy (NSS) was published in 2002 with the aim of achieving a better balance of social, economic and physical development across Ireland, supported by more effective planning ***(See Figure C4).*** The NSS was heavily influenced by the nomenclature and vocabulary of the ESDP and has been cited as a model example of European spatial planning and territorial cohesion agenda. In order to drive balanced development in the regions, the NSS proposed that areas of sufficient scale and critical mass will be built up through a polycentric network of nine 'Gateways' and nine 'Hubs'. In summary, the key objectives of the NSS are to:

- Sustain economic and employment growth;
- Improve competitiveness;
- Foster balanced regional development;
- Improve quality of life for all; and
- Maintain and enhance quality and diversity of natural environment and cultural heritage.

In 2010 the Government report 'Implementing the National Spatial Strategy: Update & Outlook' (DoECLG, 2010) found that implementation of the NSS to date had been sub-optimal. This, together with a significant need for reorientation of the planning system as a result of the economic crisis, prompted a very significant shift in national planning policy towards a greater regionalisation of spatial planning powers overseen by much stronger central

government control to ensure national coordination. As part of this process the Government has stressed a much greater emphasis on evidence-based decision making and the role of new monitoring arrangements – particularly at the regional scale.

Figure C4: Irish National Spatial Strategy Showing Gateways And Hubs (Left), And Dublin And Mid-East Regions (Right).



Source: NSS 2002-2020 (2002).

C3.2.2 Key Territorial Development Challenges

Ireland faces a number of major interrelated territorial development challenges. The original NSS set out the key development challenges as achieving balanced regional and sustainable development which are challenging objectives. A further objective was the development of an all-island economy following the normalisation of the security situation in Northern Ireland post 1998. The key territorial development challenges that the NSS sought to address were:

- Urban congestion and other diseconomies;
- Rural diversity and rural-urban disparities;
- Urban sprawl and counter-urbanisation;
- Unsustainable environmental pressures;
- Increased importance of quality of life; and
- Integration with Northern Ireland

All of these challenges remain today. Furthermore, in the aftermath of the 'Celtic Tiger' property bubble and the huge acceleration of new development particularly during the years from 2000 to 2007, has created an additional layer of complexity and some further significant legacy issues.

Of key concern in national planning policy remains the primacy of Dublin and the underperformance of other regions. Despite the introduction in 2002 of the NSS, the primacy of Dublin is increasing. Ireland trades as a small, open and

flexible economy and is heavily reliant on foreign direct investment which is primarily attracted to Dublin (being of sufficient scale to attract mobile international investment) and, to a lesser extent, other larger urban centres such as Cork, Galway and Limerick. Currently, almost 15% of Ireland's workforce is unemployed and emigration is increasing. These recent trends and the immediate political imperative to reduce unemployment hamper policy initiatives to limit the primacy of Dublin.

Throughout the past decade high property prices in urban centres together with a non-strategic and fragmented approach to spatial planning policy implementation has resulted in widespread suburbanisation, particularly in the Greater Dublin Area. Ireland also has an historical and cultural predisposition towards individual 'one-off' housing in the countryside with over one-quarter of the population living in dispersed settlement patterns. These extremely low density settlement patterns create immense challenges in delivering and maintaining infrastructure and services together with reducing car dependency and greenhouse gas emissions. It also has had the effect of hollowing out the centre of towns and cities leading to an underutilisation of infrastructure and services in urban areas and a demand for inefficient provision in other areas.

Property tax incentives were historically used by Government to stimulate development in peripheral regions. As an example of the lack of joined-up thinking in respect of spatial development, regions targeted for tax incentives often included regions not designated for growth under the NSS. This incentivisation of property development together with low interest rates and easy access to credit through much of the early years of this century has created a very significant overhang of unoccupied and uncompleted development. Ireland has in the order of 2,800 so called 'Ghost Estates' and it is estimated that there are some 230,056 vacant units in the country (excluding holiday homes), of which 110,000 constitute oversupply on a base 6% vacancy rate. As discussed above, many of these developments are located in peripheral rural regions which are not targeted for growth in the NSS. A major challenge for future spatial development is what to do with this legacy of a large oversupply of dwellings.

Over the past decade strong competitive pressures between local authorities together with a laissez faire approach to spatial planning policy has also resulted in a significant oversupply of zoned development land. Ireland is currently negotiating the difficult task of de-zoning this development land. In 2009 the Government decided to create the National Assets Management Agency (NAMA) as a 'bad bank' mechanism for removing non-performing property loans from the balance sheets of failed financial institutions. As a result the Irish government has a direct financial interest in much of the development land around the country creating both challenges and opportunities for territorial development.

The implications of various EU Directives also present significant spatial development challenges particularly the Water Framework Directive, Habitats Directive and the 2020 Climate and Energy package. Some 14% of Ireland's land area is subject to EU Natura 2000 designations and the implementation of the WFD River Basin Management Plans creates complex multi-faceted challenges in respect of land-use planning and water quality management. At

the same time, Ireland has a binding target to achieve 20% renewable energy and 20% reduction in greenhouse gas emissions by 2020. To date, Ireland's increase in renewable energy generation has been largely focussed on on-shore wind energy development which creates wider spatial challenges in terms of tourism development, social cohesion, ecology and grid connections.

C3.2.3 Territorial Policy Orientations and Objectives

The territorial policy orientations and objectives can be identified through an analysis of key spatial planning documents. In the main the key objectives of national policy are:

- To strengthen the spatial policy dimension to all public and private investment coordination (particularly in respect of water, ICT and transport infrastructure) to enhance Ireland's competitiveness and facilitate overall economic recovery, increasing economic resilience in an era of increased energy insecurity;
- Create strong governance models to drive the overall economic and physical development of the NSS gateways, especially, and their wider regions; and
- Support the emergence of much more economically, socially and environmentally sustainable patterns of development by tackling the drivers for urban sprawl, maximising the opportunities to reduce CO_2 emissions and fossil fuel energy use while adapting to the emerging effects of climate change and protecting the qualities of our rivers, habitats and heritage.

These broad objectives are to be achieved through the following key policy measures:

- Support the overall national and international economic role played by Dublin through more strategic and plan-led development aimed at consolidating the physical form of Dublin;
- Achieve increased levels of development in the regions outside the Greater Dublin Area;
- Accelerate the development and strengthening of a network of nine Gateway cities and towns – as well as nine Hub towns - as key motors of economic activity to energise the development of their wider regions;
- Support the emergence of key networks of cities and urban areas such as the Dublin – Belfast corridor and the Atlantic Gateways
- Encourage more strategically focused and plan-led development of Ireland's small town and village structure and avoid a drift towards unsustainable commuter driven and car-based development;
- Accelerate the development potential of rural areas by facilitating the diversification of the rural economy and playing to the competitive and comparative advantages of the rural economy in economic, social and environmental terms;
- Promote the emergence over time of more sustainable travel choices on the back of more compact and sustainable development patterns;
- Protect the integrity and quality of key environmental assets in relation to Ireland's natural and built heritage and the quality of our water, air, marine environment and landscape; and

- Co-ordinate more effectively with parallel spatial planning exercises in Northern Ireland and the implementation of its own spatial strategy, "Shaping Our Future".

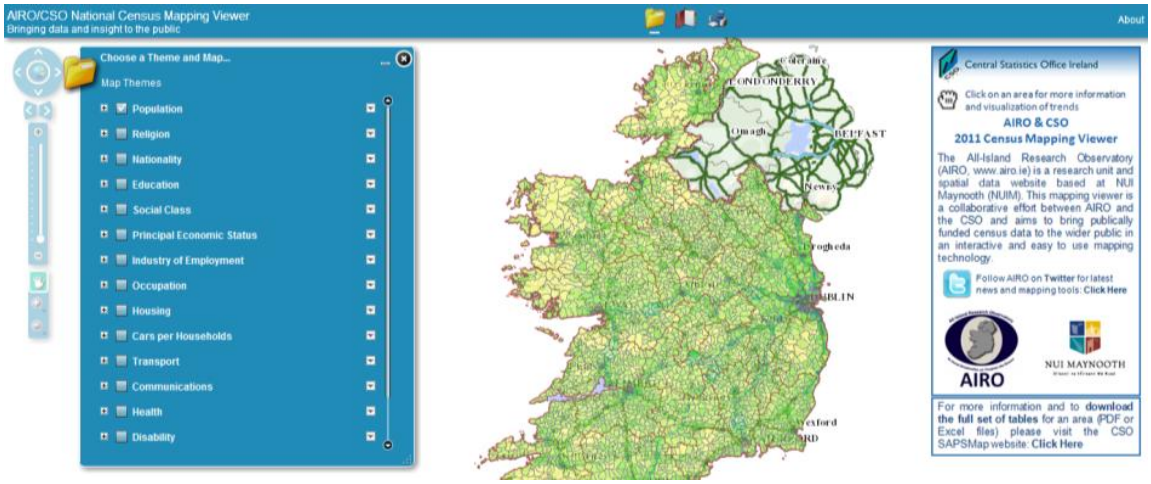
C3.2.4 Current Use of Spatial Data and Indicators

A number of initiatives have focussed on monitoring and indicator development at both national and regional levels since the publication of the NSS. However, a formal national monitoring system is not yet in place.

In 2009, the two NUTS II Regional Assemblies jointly produced a Gateway Development Index which sought to measure progress in the key Gateways identified in the NSS. This index draws on both fine-scale quantitative spatial data and a questionnaire survey commissioned specifically for this purpose. The Regional Assemblies are currently in the process of updating this index and extending it to the 'Hub' towns.

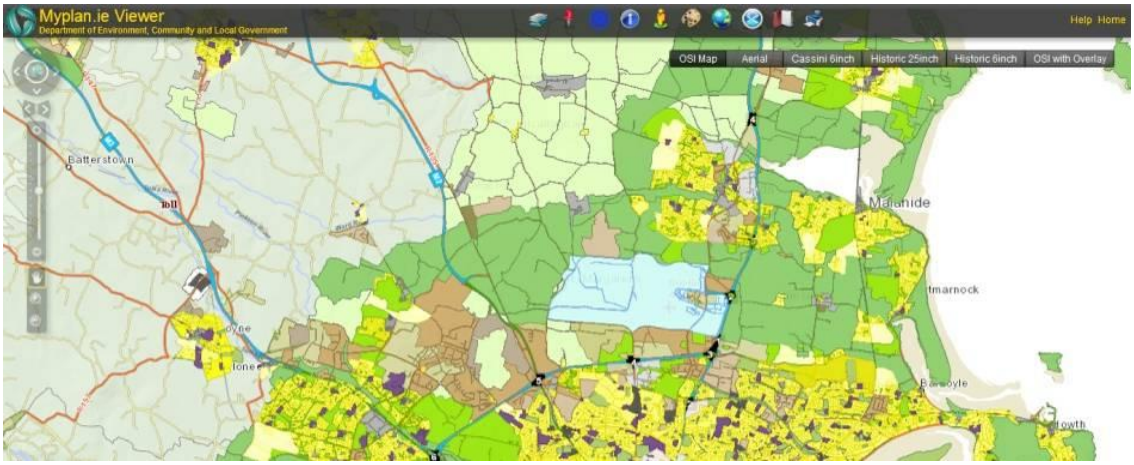
The eight NUTS III Regional Authorities are currently in the process of developing a common framework for monitoring and indicator development in relation to the implementation of Regional Planning Guidelines (RPGs). The RPGs provide a direct link between the NSS and local authority planning and are regarded as a key mechanism of translating national policy to the local level. As a consequence, monitoring the RPGs may be seen as a core element of the wider process of monitoring the NSS. This monitoring framework is supported by the work of the All-Island Research Observatory (AIRO), a data portal and research unit, hosted at the National Institute for Regional and Spatial Analysis ***(see Figure C5).*** AIRO focuses on making spatial data, derived from multiple public sector sources accessible to policy-makers and practitioners at local, regional and national levels. AIRO also provides GIS mapping and spatial analysis modules, all available through an online data portal. It is recognised as a key spatial data infrastructure for the evidence-based spatial planning on the island of Ireland. The regional level monitoring process is also supported through the involvement of the Dublin Regional Authority as a stakeholder in the ESPON Territorial Performance Monitoring project. AIRO is also partnered with the Central Statistics Office (CSO) and makes Census data freely available through its web-portal. The CSO also publishes Place Of Work Census of Anonymised Records (POWCAR) data every six years which is a powerful spatial data tool providing information on work and travel patterns. The Environmental Protection Agency also publishes a range of environmental indicators on its website and also through an annual 'State of the Environment' report.

Figure C5: Sample Map (Screenshot) from AIRO.



In addition, the Department of Environment, Community and Local Government has launched an online GIS for systematically compiling and coordinating land-use zoning information and other spatial planning data at the national level (www.myplan.ie). This is a vital tool for national level monitoring and oversight. At central government level, ESPON results are viewed as important conceptualising Ireland's location within Europe. As such, analyses of transportation accessibility and integration in European networks are of particular interest.

Figure C6: Sample Map (Screenshot) From www.myplan.ie



C3.3 Scotland

C3.3.1 Key Characteristics of the Case Study Territory

Positioning within European Context

Scotland is the northern most nation in the United Kingdom and is located in the north-eastern periphery of the European Union (EU) between the North Sea and the Atlantic Ocean. It has a land area of 78,000km^2 and an estimated population of 5.2 million in mid 2010.

A preliminary analysis of the ESPON typologies ***(see Figure C2)*** helps to situate Scotland within its broader European context. The ESPON typologies have been developed at the NUTS 3 level. Scotland consists of 23 NUTS 3 regions (4 NUTS 2 regions), 8 of which are categorised as predominantly urban (all located within the Central Belt) in the urban – rural typology. This typology further classifies rural areas into the following categories: intermediate accessible, intermediate remote, predominantly rural accessible and predominantly rural remote. In a European context the regions classified as predominantly rural are generally situated in the geographical periphery of the EU. The classification of urban areas deriving from the ESPON Study on polycentrism identified the cities of Edinburgh and Glasgow as potential Metropolitan European Growth Areas (ESPON, 2004)[2].

Key Spatial Planning Policies/Documents

The Scottish administration established under the process of devolution that took place in the UK in the late 1990s is fully autonomous in the area of spatial planning. They key documents relating to spatial planning and territorial development are:

- National Planning Framework for Scotland (2004)
- National Planning Framework for Scotland Monitoring Report (2006)
- National Planning Framework for Scotland 2 (2009)
- National Planning Framework for Scotland 2 Action Programme (2010)
- National Planning Framework for Scotland 2 Monitoring Report (2012)

The National Planning Framework is a statutory document and planning authorities must take account of it in preparing their strategic and local development plans.

The third National Planning Framework (NPF3) is scheduled for publication in the summer of 2014, shortly before the planned a referendum on the independence of Scotland. Though it is unclear how and to what extent the independence debate will influence spatial planning agendas, the Scottish National Party is currently the party of government and it is likely that their Ministers will want to present a positive and ambitious vision round which it will be possible to build a strong consensus.

[2] ESPON (2004) *Urban areas as nodes in a polycentric development*, ESPON Project 1.1.1, Final Report.

C3.3.2 Key Territorial Development Challenges

The key territorial development challenges can be identified on the basis of the key spatial planning documents listed above. The first and second National Planning Framework documents have a similar structure with key challenges identified followed by a vision over a twenty year time horizon and spatial perspectives for different parts of the country.

The key challenges identified in the National Planning Framework 2 (2009) were similar to those identified in the 2004 document, though with an increased focus on climate change and renewable energy and key strategic infrastructure projects designated as "national developments". The key challenges identified in the document are as follows:

- Developing places and infrastructure to support economic development;
- Sustainable development (climate change, transport, energy, waste, biodiversity and new technologies);
- meeting the needs of people and households; and
- Strengthening Scotland's links with the rest of the world (including Europe and the rest of the United Kingdom).

On the basis of discussions with relevant stakeholders a list of potential policy agendas and drivers was presented at a workshop at the Scottish Government Offices on 5th September 2012. As a result of these discussions the following list of policy agendas and drivers relevant for Scotland was agreed:

- Economic recovery, growth and transition to a low carbon economy;
- Meeting climate change targets, environmental sustainability, natural resource management and realising renewable energy potential;
- Realising the potential of different areas in relation to their specific territorial assets;
- An aspirational agenda for Scotland;
- National infrastructure development;
- Importance of place and quality of life; and
- Managing demographic change.

C3.3.3 Territorial Policy Orientations and Objectives

Territorial policy orientations and objectives can also be identified on the basis of an analysis of the key spatial planning documents listed above.

In National Planning Framework 2 (2009) the key aims of the strategy for Scotland's spatial development to 2025 are identified as follows:

- To contribute to a wealthier and fairer Scotland by supporting sustainable economic growth and improved competitiveness and connectivity;
- To promote a greener Scotland by contributing to the achievement of climate change targets and protecting and enhancing the quality of the natural and built environments;
- To help build safer, stronger and healthier communities by promoting improved opportunities and a better quality of life;

- To contribute to a smarter Scotland by supporting the development of the knowledge economy.

The key elements of the spatial strategy to 2030 are to:

- Support strong, sustainable growth for the benefit of all parts of Scotland;
- Promote development which helps to reduce Scotland's carbon footprint and facilitate adaptation to climate change;
- Support the development of Scotland's cities as key drivers of the economy;
- Support sustainable growth in the rural economy;
- Conserve and enhance Scotland's distinctive natural and cultural heritage and continue to safeguard internationally protected sites, habitats and species;
- Expand opportunities for communities and business by promoting environmental quality and good connectivity;
- Promote development which helps to improve health, regenerate communities and enable disadvantaged communities to access opportunities;
- Strengthen links with the rest of the world;
- Promote more sustainable patterns of travel, transport and land-use;
- Realise the potential of Scotland's renewable energy resources and facilitate the generation of power and heat from all clean, low carbon sources;
- Encourage a sufficient supply of homes which are affordable in places where people want to live;
- Facilitate the implementation of the National Waste Management Plan including waste management targets.

Many of these territorial policy orientations and objectives remain relevant. However, on the basis of discussions with stakeholders regarding the new and emerging policy agendas and drivers listed above, a list of themes has been agreed that are likely to inform the development of the third National Planning Framework as well as providing a basis for grouping indicators for territorial cohesion and spatial planning. These themes are as follows:

- Economic resilience and transition to low carbon economy
- Adaptation to and mitigation of climate change and environmental resource management
- Connectivity and regional resilience
- Social inclusion / cohesion
- Innovation and the knowledge economy
- Quality of life, the importance of place and realising the potential of places based on territorial assets
- Territorial co-operation and governance.

C3.3.4 Current Use of Spatial Data and Indicators

The Monitoring Report for the NPF for Scotland (2004) was published in 2006 and the Monitoring Report for NPF2 (2009) was published in 2012. Both reports adopt a strategic approach with a qualitative discussion of the issues

identified in the spatial strategies supplemented by quantitative statistics and data. The NPF2 Monitoring Report assesses progress in relation to the twelve key elements identified in the development strategy in the NPF2 (2009). The key challenges facing Scotland are reviewed and emerging priorities in other key policy documents are identified, for example the increased focus on promoting a low carbon economy in the Governments Economic Strategy. Other emerging issues include the establishment of 14 enterprise areas and links are made to targets identified in a variety of sectoral and thematic documents.

The relevance of research undertaken in the context of the ESPON Programme is emphasised. This is followed by a discussion of issues in relation to economic and social trends (the labour market, disadvantage based on the Indices of Multiple Deprivation Scotland and town centres), housing supply, the built and natural environment (vacant and derelict land, greening the environment, the natural environment, national parks and built heritage), transport (external links, internal connectivity and sustainable transport), energy (electricity generation, renewable energy, electricity transmission and heat), waste management, water, environment and flooding and finally communications technology. This is followed by a more specific discussion of progress in relation to the spatial perspectives for the Central Belt, the East Coast, Highlands and Islands, Ayrshire and the South-West and the South of Scotland. Finally, progress in delivering the national infrastructure developments designated as "national developments" in NPF2 is considered.

In the absence of datasets dedicated specifically to spatial planning the Scottish Government has adopted a pragmatic approach to the use of indicators. The first two NPF documents draw on a range of the extensive number and types of datasets and indicators that are available in Scotland. The Scottish Government is now seeking to adopt a more structured approach with the development of more specific dedicated datasets that will provide stronger evidence base for spatial planning and the development of territorial policies.

The key datasets in Scotland are:

- Scotland Performs
- Scotland Neighbourhood Statistics
- Scotland Environmental Web
- Integrated Land Use Database

Other potentially useful datasets and sources of data include:

- Scotland and Northern Ireland Forum for Environmental Research (SNIFFER)
- Natural Capital Index
- Tayplan and other strategic development monitoring reports
- Visit Scotland
- Health and education data
- Greenspace Scotland
- CABE indicators on future proofing

There is currently a strong focus on the contribution of spatial planning to the achievement of the Scottish Government's target of generating 100% of electricity demand from renewable sources by 2020.

C3.4 The Basque Country

C3.4.1 Key Characteristics of the Case Study Territory

Positioning within European Context

The Basque Country is located in the North of Spain, on the South-Western periphery of the European Union at the Western edge of the Pyrenees. It borders marginally with France to the North-East and with the Southern limits of the Bay of Biscay (Cantabrian Sea) to the North. Otherwise it adjoins the other Spanish "regions" of Navarra, La Rioja, Castilla y León and Cantabria. It has a total land area of 7,235 km^2 and a population of just under 2.2 million inhabitants in 2011.

An initial approach to the analysis of the ESPON typologies helps situate The Basque Country within the broader European context. The ESPON typologies have been developed at the NUTS3 level[3]. The Basque Country consists of one NUTS2 region and 3 NUTS 3 regions. With regard to the urban-rural typology, the two coastal NUTS3 regions are both classified as "predominantly urban". By contrast, the inland region is classified as "intermediate close to a city"; on the structural typology it is a diversified region with a strong secondary sector; and finally on the performance typology it is classified as an "accumulating region". The classification of urban areas deriving from the ESPON Study on polycentrism identified Bilbao as a potential Metropolitan European Growth Area (ESPON, 2004)[4].

Key Spatial Planning Policies/Documents

The key documents relating to spatial planning are as follows:

- The Modification to the Spatial Planning Guidelines deriving from a revision of the original 1997 Guidelines (Euskal Hiria NET, 2012).
- The Sectoral Spatial Plans.
- The Sub-regional Spatial Planning Guidelines pertaining to The Basque Country's 15 "functional areas" as identified within the Spatial Planning Guidelines.
- The Basque Environmental Strategy of Sustainable Development (2002-2020).

C3.4.2 Key Territorial Development Challenges

The spatial planning vision for The Basque Country was originally enshrined in the Spatial Planning Guidelines approved in 1997. The more recent updating (*Modificación de las DOT, como consecuencia de su Reestudio*, March 2012) of the former Guidelines provides a framework for the spatial development of The

[3] ESPON (2011) *European Development Opportunities for Rural Areas* (EDORA) Final Report.
[4] ESPON (2004) *Urban areas as nodes in a polycentric development*, ESPON Project 1.1.1, Final Report.

Basque Country in a contemporary knowledge-based society policy context. The first part of the *Modification* reaffirms the spatial model contained within the 1997 Guidelines, interpreting The Basque Country as a *city-region*, identifying the challenges for the updating of the 1997 document (sustainability and territory; climate change; innovation and territory; and polycentrism) and understanding the spatial positioning of The Basque Country within the south-west European context. This justifies the spatial planning vision of The Basque Country – the Euskal Hiria New Territorial Strategy (*Euskal Hiria NET*) – as The Basque *city region*. The public have participated in the development of the Strategy which provides an integrated vision of the territory which incorporates the landscape, the physical environment, the rural and urban environments, and the interrelations and complementarities between The Basque capital cities, as well as between these and the rest of the different sized settlements comprising the urban system of The Basque Country. The second part addresses the two key priorities of the strategic proposal (*Euskal Hiria NET-Ecosistema de Innovación*) for the spatial development of The Basque Country – innovation and sustainability.

The pre-amble to the Guidelines recognises the two major paradigms of the contemporary knowledge-based society[5] of The Basque Country – innovation and sustainability – being the two sides of the same coin. What is required is the preparation of The Basque territory for a new phase of development[6] in which *competition*, *social cohesion* and *sustainable development* are three inseparable and interrelated elements, equally necessary for the future development of The Basque nation.

As a consequence, the key territorial development challenge for The Basque Country can be expressed as the avoidance of an imbalance between the three capitals and other cities and towns of the urban system, and the rest of The Basque territory, in accordance with the objectives of *Euskal Hiria*. Specific challenges resulting from the changes occurred in the last decade, include:

- The need of establishing a limit for new urban developments, as an alternative to the model mainly based in the growth of urban areas.
- The necessity of preserving rural lands, due to the huge reduction that it has suffered during the last decades.
- The consideration of the real necessities for new dwellings, establishing strict limits in relation with the construction of new buildings, avoiding specially urban sprawl and giving priority to the use of urban areas.
- The recovering of areas that have been abandoned or are underused as a consequence of the industrial crisis (brownfields), including the necessity of cleaning up contaminated lands.
- The protection of landscape, including the recovery of degraded urban areas

[5] Characterised in The Basque context in terms of *population* (increased life-expectancy, immigration, and ethnic and cultural diversity), the *environment* (renewable energies, sustainable mobility, biodiversity and landscape, and health and security), the *cities* (the digital city, spaces of fusion, opportunities, local and global, stimuli and sustainability), the *wider territory* (cities in a network) and the *economy* (knowledge-based economy: new technologies, R+D+I, creativity, increased productivity and clusters).
[6] Making the clear distinction between The Basque Country's former periods of *strong industrialization* (1880-1983) and the *first transformation* (1983-2008).

- The improving of public transport, reducing the use of private means of transport.

C3.4.3 Territorial Policy Orientations and Objectives

The current territorial policy orientations and objectives essentially reflect a continuation of those contained in the 1997 Guidelines, with the difference being in the recognition of the need to link these to the current *knowledge-based society and economy*.

The components and basic structure of The Basque territory remain unchanged. The *Territorial Model* of the original Guidelines rests upon the *Polynuclear System of Capitals* (Bilbao – Donostia-San Sebastian – Vitoria-Gasteiz) and the *medium sized cities*, and the *functional areas* which surround them; the management of the *physical environment* based upon ensuring *appropriate land uses* and evaluating the *territorial carrying capacity*; as well as a relational system which articulates the functional areas themselves and connects The Basque Country beyond the administrative limits of the NUTS 2 region.

This model is just as important today as a reference for managing the processes of spatial change, taking into consideration areas of importance which have evolved in the period between the elaboration of the 1997 Guidelines and the Modifications. These important areas include sustainable mobility, landscape, the reuse of existing built form for new and/or more intensive uses, and the development of spaces for more knowledge-intensive economic activities, all within the context of promoting the notion of The Basque city-region (*Euskal Hiria*) in the widest sense. This city-region concept is not based upon any one city in particular – rather priority is placed upon the importance and complementarity of each system component for the benefit of The Basque territory a whole.

The second part of the Spatial Planning Guidelines focuses specifically upon the two paradigmatic issues of innovation and sustainability in detail. The policy orientation of the innovation issue is dealt with in the context of the networks and landscapes of a first rate territory; the metropolitan areas as unique foci of innovation; the medium-sized cities and functional areas; innovation nodes; and the physical medium and landscapes of The Basque city-region. In terms of the sustainability policy orientation the Guidelines address the issues through connectivity and sustainable mobility; energy efficiency; and strategies for sustainable urban development.

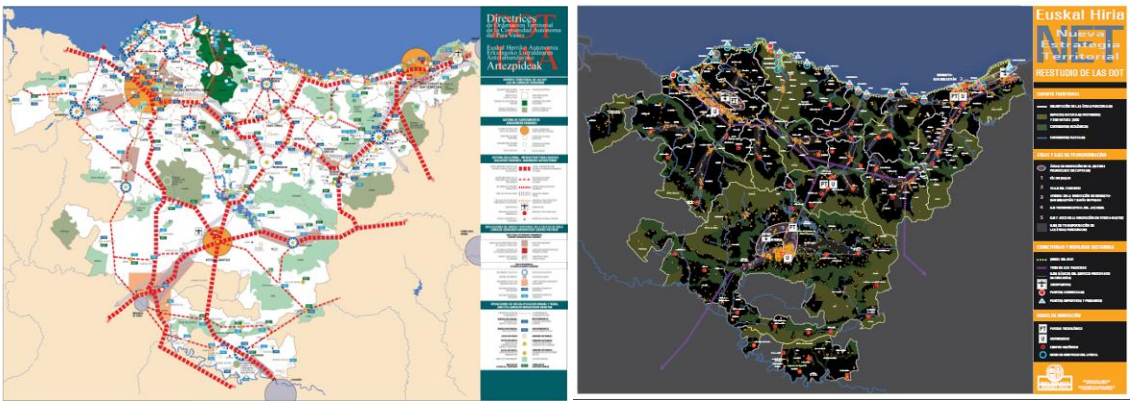
In addition to these two pragmatic issues, other policy drivers of The Basque Country include the need for protection to be given to the biodiversity of The Basque territory; the need to reduce greenhouse gas emissions; the introduction of means to encourage recovery from the economic crisis; the emphasis on regional development; the importance of regeneration; and an integration between settlements and infrastructure of the territory.

As a consequence, the regional development policy objectives identified by The Basque Government cover the overall encouragement of innovation (without jeopardising environmental capital); social cohesion; sustainable

development; regional balance complementing each component of the territorial model; limiting land consumption; the regeneration of former industrial land; protecting special landscapes; increasing waste recycling; increasing sustainable transport; sustainable mobility; and finally green infrastructure.

The overall vision for the spatial development of The Basque territory can be appreciated in ***Figure C7***; which identifies the basic elements of the territorial model (left) and illustrates the key elements of the new spatial strategy as contained in the Modification (right).

Figure C7: Diagrammatic Representation Of The Territorial Model And Spatial Planning Guidelines (1997) (Left) And Key Elements Of The Basque City-Region's New Spatial Strategy (2012) (Right). Source: Basque Government.



C3.4.4 Current Use of Spatial Data and Indicators

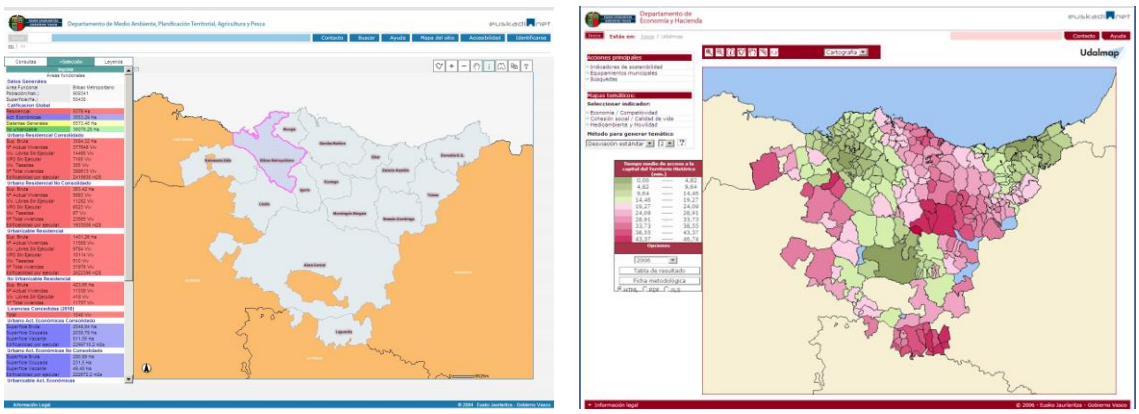
The question of coordination between the national (Basque Government), provincial (the three historical territories of Araba/Álava, Gipuzkoa and Bizkaia) and local (251 municipalities) administrations is critical in relation to the approval of local development plans. The three provincial administrations are vested with the responsibility of approving such local development plans for municipalities with less than 7,000 inhabitants. This represents just less than 200 municipalities and accounts for 14.5% of The Basque population. In all other cases it is the municipality which is vested with the power to formally approve its own local development plan. However, all 251 municipalities are legally bound to submit their plans to The Basque Government for comment. Therefore, the overall responsibility lies with the national autonomous administration to ensure that the content of the local development plan accords with the strategic spatial planning policies and in turn in harmony with The Basque city region vision.

In this sense, the key data set for monitoring the evolution of The Basque urban system and enabling The Basque Government to determine the degree of conformity between local development policies and the strategic spatial vision is that of Udalplan ***(Figure C8)***. Since 1993 the Department of the Environment, Spatial Planning, Agriculture and Fisheries has been producing

an inventory relating to residential land and economic activity at the municipal spatial scale. As of 2003, Udalplan has been produced on an annual basis. The parameters covered relate to the use of the land, projected housing construction, and projected development for new industries, facilities or infrastructure according to the proposals contained in local development plans. Udalplan can be described as a geographical information system and spatial database of The Basque Country, providing data at the spatial scales of The Basque Country as a whole (NUTS 2), the 3 provinces (NUTS 3), the 15 functional areas and the 251 municipalities (LAU 2).

A complementary database is that of Udalmap ***(Figure C8),*** which is a cartographic information system managed by the Department of Economics and Finance, but drawing upon data from a wide range of national (Basque Government) and Spanish Government sources. Udalmap aims to provide detailed territorial information, at the spatial scales of The Basque Country (NUTS 2), the 3 provinces (NUTS 3) and the 251 municipalities (LAU 2). The information is map based and records can be accessed for the different spatial units under the two headings of sustainability indictors and community facilities. The sustainability indicators are presented under the three broad categories of economy and competitiveness; social cohesion and quality of life; and mobility and the environment. The database allows for the elaboration and evaluation of public policies designed to facilitate decision-making in many areas related to the growth and development of the territory, allowing for "greater territorial cohesion, economic, social and environmental respect".

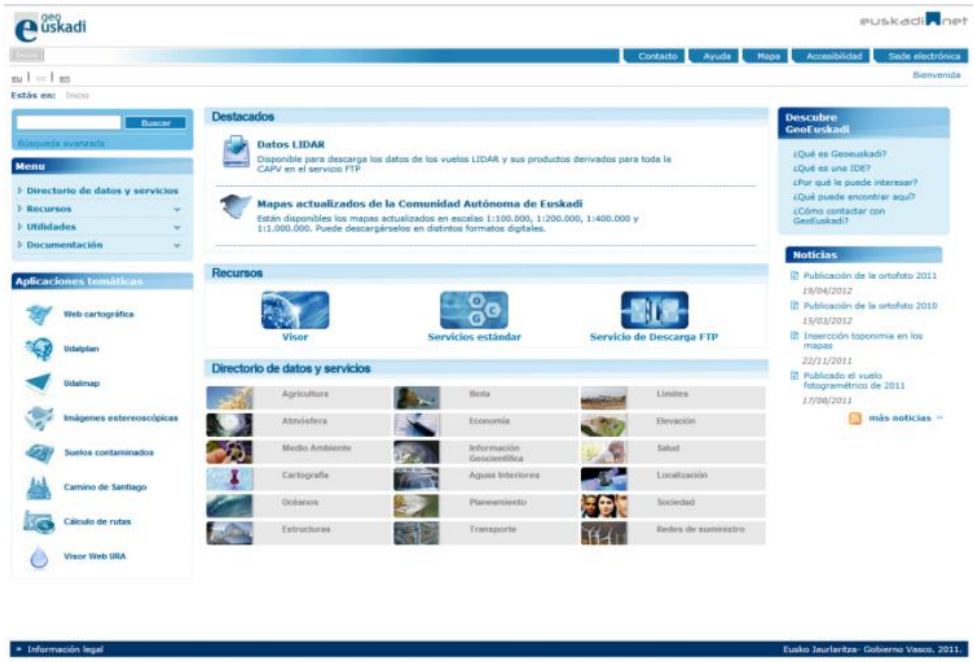
Figure C8: Udalplan (Left) And Udalmap Websites (Right).



Both these cartographic databases can be accessed through GeoEuskadi ***(Figure C9)***, a GeoPortal hosted by the Department of the Environment, Spatial Planning, Agriculture and Fisheries – the same Department responsible for the elaboration of the Spatial Planning Guidelines, the Environmental Programme Frameworks and the host of complementary environmental strategies. The highly advanced Spatial Data Infrastructure (SDI) seeks to provide free access to all the spatial and territorial data of The Basque Country, with direct links to the Department's cartographic website; a stereoscopic image service; information on contaminated land; a map-based

route calculation service operated by the Department of Transport and Public Works; and The Basque Water Agency's cartographic service.

Figure C9: GeoEuskadi Portal



Despite the maturity and sophistication of the GeoEuskadi SDI, it would appear from the outside that there is a distinct absence of a systematic process of cross-referenced territorial monitoring of spatial planning in The Basque Country. Albeit that Annex1 of the Modifications to the Spatial Guidelines (2012) contains a section addressing "territorial indicators", these indicators are very basic and provide no means of monitoring questions of competitiveness, social cohesion and sustainable development. It would therefore seem that there is considerable scope to incorporate ESPON results and build upon the already existing strong base of territorial and environmental policy initiatives.

C3.5 Latvia

3.5.1.Key Characteristics of the Case Study Territory

Positioning within European Context

Latvia is located in North-Eastern Europe on the East coast of the Baltic Sea. It covers an area of 64,562 Km^2 with a population of 2.04 million.

The whole territory of Latvia is considered a single NUTS 2 region. It consists of six NUTS 3 statistic regions – Rīga city, Kurzeme, Latgale, Pierīga, Vidzeme and Zemgale. Similar to other case study territories, Latvia is strongly dominated by the capital city and surrounding metropolitan area. As a result, Latvia has pronounced regional disparities as shown by particularly high dispersion of regional GDP per inhabitant. The main challenges for the country

include high level of population decline and significantly lower economic activity in peripheral regions. Because of the large internal disparities between the capital city and other planning regions, the analysis of territorial cohesion must take into consideration variations among territories at NUTS 3 and lower level.

According to structural typology elaborated in EDORA project, most regions in North Eastern Europe with exception of metropolitan regions have more rural and less urban characteristics. The regions have lower level of accessibility and tend to be more agricultural with considerable environmental resources. Latvian regions, with exception of metropolitan Pierīga region and the capital city, which are more consumption-based economies, fit this profile. The planning regions of Latgale, Vidzeme and Zemgale are characterized by demographic depletion and low economic performance on European scale; while Kurzeme and Pierīga regions show slightly higher economic performance.

Key Spatial Planning Policies/Documents

The key documents relating to territorial development in Latvia are:

- *Sustainable Development Strategy of Latvia 2030* (Latvia 2030) approved by Latvian Parliament on 10.06.2010.
- *National Development Plan of Latvia 2014-2020* (NDP 2014-2020) approved by Latvian Parliament on 20.12.2012 and *National Development Plan of Latvia 2007-2013* (NDP 2007-2013) approved by the Cabinet of Ministers on 04.07.2006.
- *Strategy for Spatial Development of the Coastal Area 2011-2017* (SSDCA, 2011-2017) adopted by the Cabinet of Ministers on 20.04.2011.

The medium term planning framework of current NDP 2007-2013 was based on a human capital approach and an economic growth scenario, which did not materialize due to the financial and economic crisis. In response to changing economic and social context, the Strategic Plan of the Development of Latvia 2010-2013 was drafted. The plan adjusted the existing policy orientations by emphasizing efficiency in public sector governance, enhancing service delivery and increasing productivity via technical, technological, structural and institutional adjustments. The Strategic Development Plan puts forward three key priorities: economic growth, social security, and reforms in the public sector. The Strategy, which was aligned with goals of the long-term planning document Latvia 2030, also recognised several shortcomings in the existing development planning system. It emphasized the need for united and coordinated strategic planning across different policy sectors and result-oriented approaches to using policy planning indicators - from macro-level indicators to policy and action indicators.

On Dec 20, 2012 *NDP* 2014-2020 was adopted by the Latvian Parliament. The plan was guided by the orientation towards "economic breakthrough" and emphasized concentration and targeting of investment, in the framework of a place-based development approach. Unlike the previous NDP, it also contained several indicators for policy monitoring. NDP 2014-2020 envisaged focused investment in national and regional development centres (9 republican cities

and 21 towns). These centres would become key forces for drawing business investment and new job creation.

Objectives and corresponding priorities in territorial development are mainly focused on promoting economic activity in regions, providing access to services while also ensuring sustainable management of natural and cultural capital. Manufacturing and services sectors are prioritized for economic activity generation. Access to services is also envisaged as means of creating economic activity. Services should be made available in accordance with demographic trends and population density. Achieving better quality roads and e-access are priority actions. The Plan also stresses development of both natural and cultural capital.

Growing impact of climate changes and need for coordinated management of coastal areas. *Coastal Spatial Development Strategy (2011-2017*) adopted on 20 April, 2011 aims at increasing use of Coastal Areas by emphasizing the role of sustainable development environmental and cultural heritage. In the same time there is focus ensuring coordinated efforts of state and municipal governments to planning coastal infrastructure to increase economic activity.

3.5.2.Key Territorial Development Challenges

The key challenge of territorial development in Latvia is to reduce negative territorial and social inequalities between the different regions, which continue to increase. This challenge can be viewed from many perspectives, but the perspective of territorial governance seems especially useful in summarising key arguments. For a long time the planning system in Latvia has suffered from frequent government changes, lack of a long-term common reference framework and weaknesses in policy implementation and evaluation. An important step towards a more systemic approach to planning was the adoption of Sustainable Development Strategy Latvia 2030 which contained clear baseline and target indicators for tracking the progress of development policies. It remains to be seen whether goal-implementation gaps can be narrowed by concrete interpretation of policy concepts and targeted actions. Several open questions remain. These questions are elated to past and present policy orientations and to the choice of territorial cohesion indicators.

The current key challenges can be formulated as follows:

- *Placing development goals and post-austerity context*. How can economic breakthrough and transition to knowledge-based economy be achieved in the context of post-austerity policies which in many instances have eroded social and knowledge foundations upon which policies of innovation, R&D can flourish.
- *Prioritizing development of territories.* How can sustainable and balanced territorial development of the country be delivered while prioritizing the development of Nation's capital and increasing its' international competitiveness at the same time.
- *Choosing appropriate policy instruments to close goal-implementation gap.* Coping with challenges in demography, and lower economic activity in regions might require more decisive and better-targeted policy instruments than are currently offered.

- *Developing indicators that are regionally and locally relevant*. Given high disparities between Latvian territories there is a need to for effective system of regional indicators
- *Policy coordination.* Regional policy and territorial cohesion is horizontal policy which requires inter-sectorial planning.

3.5.3.Territorial Policy Orientations and Objectives

Key statements of territorial development in policy documents have not significantly changed since mid 1990s. The main goal of the territorial development is to reduce negative territorial and social inequalities between different areas in Latvia – mainly between the nation's capital Riga and surrounding areas, and the rest of the territory of Latvia.

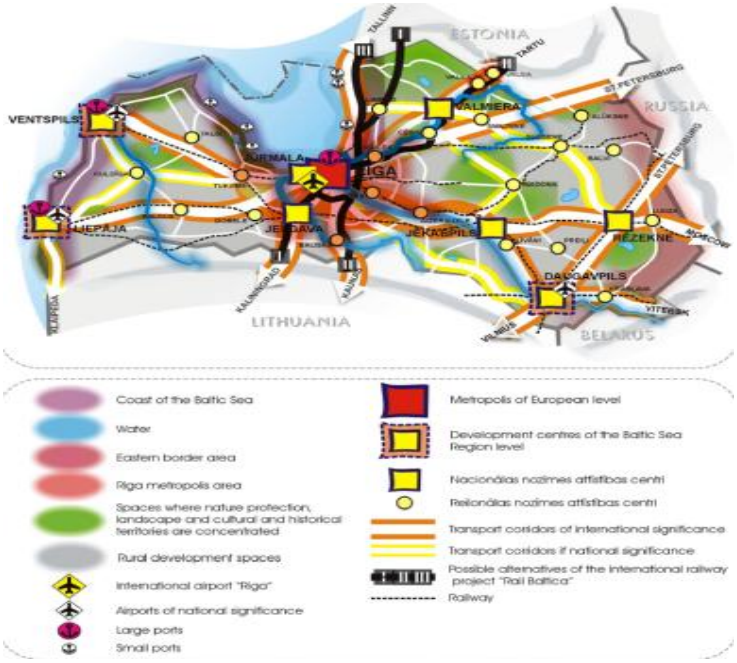
According to Latvia 2030 territorial and social inequalities have to be reduced by:

- Improving territorial accessibility and mobility;
- Implementing polycentric model of development; and
- Creating new division of functional territories.

These territories are:

- Development centres of national and regional significance (set by Latvia 2030);
- Rural areas;
- Riga metropolitan area;
- Baltic Sea coastal area;
- Eastern border area.

Figure C10: Development Strategy for Latvia. Source: Latvian Long Term Development Strategy, Latvia 2030 (2010), p. 62.



After difficult recession which was followed by decisive recovery measures, the life quality approach which was a guiding principle behind NDP 2007-2013 has been replaced by a motif of "economic breakthrough" in the current draft version of NDP 2014-2020. The plan establishes "regions for growth" as one of three key priority areas for achieving economic breakthrough. The other key priorities are human security (a form of resilience) and national economic growth. Several themes that are relevant for regional development, such as demography, education and R&D are also addressed under these two policy priorities.

According to NDP 2014-2020, there are three main objectives for growth in regions.

1. Strategic Objective "Promotion of Economic Activity in the Regions: Unleashing the Potential of Territories":

- Provide preconditions for the development of business activity and new job creation in the manufacturing and services sector in the regions.
- Create preconditions for improved economic activity in the Eastern border region.
- Establish an administrative structure of local governments to ensure that their financial capacity estimate for the performance of autonomous functions reaches at least 45% by 2020 (a business cycle indicator).

2. Strategic Objective "Availability of Services for Creating More Equal Work Opportunities and Living Conditions":
   - Ensure convenient and safe access to development centres, including achieving good driving quality on the roads connecting national and regional development centres and greater availability of public transportation by creating an efficient and balanced public transportation system by 2020.
   - Ensure the availability of services in accordance with demographic trends and changes in the density of settlement.
   - Ensure convenient access to services in digital form.

3. Strategic Objective "Sustainable Management of Natural and Cultural Capital":

- Maintain of the natural capital as the basis for sustainable economic growth and promote its sustainable uses while minimizing natural and human risks to the quality of the environment.
- Sustainable use of cultural capital resources.

Future territorial policy orientations will be determined in detail by Regional Development Guidelines (RDG 2014-2020). As of July, 2013 the document is in preparation. Draft RDG 2014-2020 offers a new system of public investments and spatial development which will be based on territorially-specific support directions of target areas (functional areas) defined in Latvia 2030, allocation of a "basket" of public services at each level of settlement

based on criteria, and investment requests based on regional and local development programmes. The general objectives of the draft RDG are:

- To address territorial and social inequalities.
- Develop business infrastructure for attracting investors.
- Develop regional and local transport infrastructure.
- Provide public services for centres of national and regional significance.
- To provide infrastructure for innovation, culture and creative industries.
- To strengthen capacity of regions and local municipalities.
- Strengthen international competitiveness of the regions, particularly functional areas as Riga metropolitan region, as well as coastal area of the Baltic Sea.

The draft RDG also specifies support actions to achieve these objectives. In addition to territory-specific support actions for each target area, some general actions (such as the diversification of municipal sources of income, increase in the range of available business incentives and public-private partnerships and support for regional and local innovation systems) are introduced. The draft RDG also aims at introducing territorially diversified instruments within sectorial policies, such as differentiated taxation, differentiation of social allowances, and/or remuneration for attracting skilled workers etc. The success of the RDG depends on whether important values and actions will be included in the NDP 2014-2020 and effectively implemented in practice.

In addition to the emerging policy framework, there have been important incentives to achieving better coordination of policies by setting up a Centre of Cross- Sector Coordination in 2011, under the supervision of the Prime Minister of Latvia. The Centre was also responsible for elaboration of the NDP 2014-2020. It is also responsible for monitoring it's implementation.

3.5.4.Current Use of Spatial Data and Indicators

In Latvia, the Territory Development Level Index has been a key indicator has been commonly used in regional development policy for more than a decade. It is a standardised synthetic indicator that combines demographic and socio-economic indicators and reflects the relative development level of territories.

Three strategic indicators for measuring growth performance of the regions have been used in the preparation of the NDP 2014-2020: the Territorial Development Index, the Regional Dispersion of GDP per capita at NUTS 3 level, and the Proportion of the Population living in Riga. These indicators are consistent with the long-term strategic indicators defined in Latvia 2030 (e.g. number of inhabitants, GINI coefficient, GDP per inhabitant, regional differences of GDP per inhabitant, Ecological Footprint Index, Human Development Index and Global Competitiveness Index). Current development priorities and assessment methods focus on economic growth, placing less importance on sustainability and cohesion. Together with an improved model of spatial planning, a new model of spatial development indicators is being developed, which will be accompanied by a more informative monitoring system analytically oriented towards examining different development issues

and territorial potentials. The methodology is currently being developed by the State Regional Development Agency.

A centralised territorial monitoring system does not yet exist in Latvia. However, databases of elaborated and accepted spatial plans, territorial development programs and amount of finance resources for spatial planning at both local municipality and planning regions level do exist. Since 1999, the Latvian territories are monitored using the Territorial Development Index. In addition, environmental monitoring is performed for water, air pollution, biodiversity and other aspects.

C3.6. Iceland

C3.6.1 Key Characteristics of the Case Study Territory

Positioning within European Context and Description of the National Context

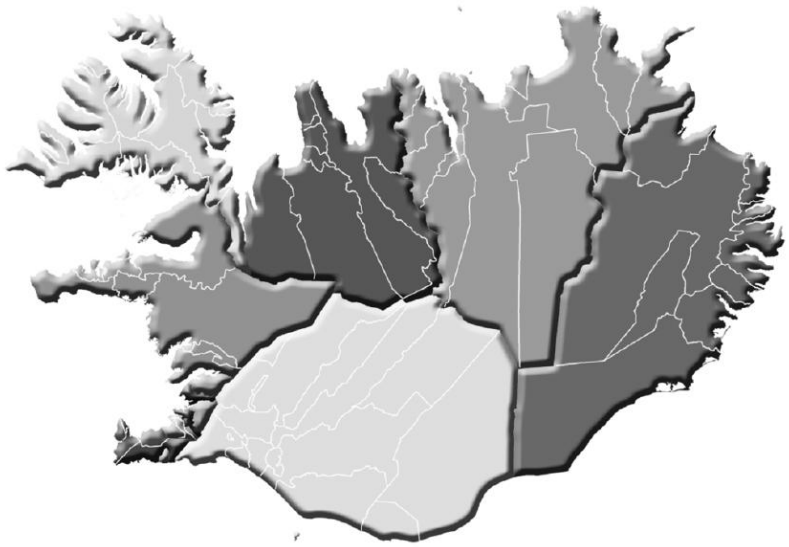
Iceland is a member of the European Economic Area (EEA)[7], and is located on Europe's North-Western edge. It has an area of 103,000 Km^2 and a population of 320,000.

Iceland has not been classified in the ESPON typologies in the EDORA project which makes positioning it within the European context using ESPON data a challenge. The country joined the ESPON programme in 2007 and has been taking active part in its projects since 2010.

Iceland is divided into two NUTS 3 regions[8]. One of the NUTS 3 regions consists of the capital area with 200,000 or 63% of the nation's population; the other region covering the rest of the country with predominantly small urban and rural settlements. The LAU 1 level[9] consists of smaller statistical regions, which mostly coincide with old constituencies used to elect the parliament Althingi during the period 1959-1999. Various data for key aspects, such as economic activities and education, are increasingly published by Statistics Iceland, only at NUTS 3 region level rather than LAU 1 or LAU 2 level as were previously gathered ***(see Figure C11).***

[7] Note: During the course of the KITCASP project Iceland withdrew its candidacy for membership of the EU.
[8] Hagskýrslusvæð i e. statistical regions [used by Statistics Iceland].
[9] Landsvæð i e. Regions.

Figure C11: Iceland divided into LAU 1 areas (shaded) and LAU 2 (lines). Source: Statistics Iceland.



The NUTS 3 classification has been considered too coarse to grasp various regional differences in Iceland.

Key Spatial Planning Policies/Documents

Iceland's National Spatial Strategy was established under a revised Planning Act in January 2011 and requires to be approved by Parliamentary Resolution. The Icelandic stakeholder, Skipulagsstofnun, is responsible for its preparation. The Spatial Strategy was published on the 24th September 2012 and, according to a decision by the Minister for the Environment, the key themes for the first planning period 2013-2024 are: settlement distribution, development of the highland interior and planning of coasts and the ocean.

The Strategic Regional Plan, which has an economic focus, is prepared by the Icelandic Regional Development Institute and approved by Iceland's Parliament for a four year period. The last Resolution is active for the period 2010-2013 and its main objectives are to: improve living conditions; innovation and sustainable development in all regions; and strengthen education, culture, communities and competitiveness of settlements and towns with various actions. This plan is mandatory and carried out according to law[10]. The relevant third plan, Iceland 2020, has a more overarching role. Its cornerstone is a strong and diverse economy characterised by responsible growth. It has 15 measurable objectives developed in consultation with the nation. Its five main objectives are related to economic well-being and quality of life. Policies and official plans will be reviewed and coordinated to support these primary objectives. Iceland 2020 is a result of a government decision made in the wake of the financial crisis in 2008.

[10] Act for Regional Development Institute no. 106/1999.

C3.6.2 Key Territorial Development Challenges

Iceland faces a number of territorial development challenges, such as the changing settlement pattern (urbanisation) and differing economic development of the regions. These challenges are among those addressed in the Parliamentary Resolutions on a Strategic Regional Plan which are being described in this report. Energy use and harnessing, and other resource use and management, notably fish stocks, are constant challenges and causes for much debate among the island´s citizens and interest groups. Internationally, key territorial development challenges are economic development in the wake of the credit crisis, resource use and management and the application for EU membership.

In the on-going work on the new Iceland‘s National Spatial Plan, the focus is on three key themes which address some of the development challenges mentioned above:

- Settlement distribution;
- Development of the highland interior; and
- Planning of coasts and the ocean.

Therefore, the Icelandic case study in KITCASP will very much have to focus on issues that serve to meet the current and future needs of this planning process. The stakeholder institute, the Icelandic Planning Agency, is responsible for preparing this plan. The above themes are all pressing issues and very relevant in the present discussion in Icelandic society and politics. It is anticipated that, in the future, the focus of the national land use plan will shift between themes and thus data needs may be different from one planning period to another.

C3.6.3 Territorial Policy Orientations and Objectives

A new part of the Icelandic planning framework is Iceland's National Spatial Plan which was part of a revised Planning Act from January 2011. The Icelandic case study will give special attention to this plan – the stakeholder in Iceland, Skipulagsstofnun, is responsible for the planning process. The Spatial Plan was advertised in 24 September 2012 but, according to a decision by the Minister for the Environment, the key themes for this first planning period 2013-2024 will be, as noted above, settlement distribution, development of the highland interior and planning of coasts and the ocean. This plan is not binding for the municipalities.

There are also two regional development policies active in Iceland, each with a different focus. One is the Parliamentary Resolution on a Strategic Regional Plan, prepared by the Icelandic Regional Development Institute and passed by the Parliament for a four year period; with the last one being active for the period 2010-2013. Its main objectives are to improve living conditions, innovation and sustainable development in all regions and strengthen education, culture, communities and competitiveness of settlements and

towns with various actions. This plan is mandatory and being carried out according to law[11].

Thirdly, there is Iceland 2020 which has a more overarching role than the two plans mentioned above. Its cornerstone is a strong and diverse economy characterised by responsible growth. There are 15 measurable objectives that have been developed in an extensive consultation process with the nation, with 5 main objectives related to economic well-being and quality of life. Policies and official plans will be reviewed and coordinated to support these primary objectives. This plan is being carried out as a result of government decision in the wake of the credit crisis which hit Iceland severely in 2008.

C3.6.4 Current Use of Spatial Data and Indicators

The use of specific spatial indicators in relation to planning initiatives is different between the three plans referred to above. In fact, the use of specific indicators to measure performance of spatial plan appears to be rather limited in Iceland.

The best examples of indicator use and development probably relate to sustainability initiatives. One key example of this is monitoring of a megaproject in East Iceland where the national power company Landsvirkjun and the American aluminium company Alcoa jointly initiated such monitoring in 2004, a year after project construction had started. There are diverse indicators that were selected and are regularly monitored to assess project development and implementation, and any changes/effects in the surrounding environment and communities.

Spatial data in Iceland is, in some instances, not made available below the NUTS 3 level – which has been criticised by many users as not capturing regional differences where they exist. Data is instead often only issued for the capital area and the rest of the country (NUTS 3) or as a national dataset. This is partly due to the low population number and density. Some areas are too thinly populated for detailed data to be published; high data collection and publication costs may also be a supporting reason. Due to the changing population pattern during the 20th century, adjustments are needed to improve the geographical units for Icelandic spatial data. To address this issue, Statistics Iceland published a report in 1 October 2012 with proposals for new geographical units (LAU 1).

Of the three plans which are dealt with in the Icelandic case study, Iceland 2020 uses spatial data and indicators most systematically. This is national data and indicators for measuring Iceland´s performance and recovery in many fields, particularly socio-economic after the credit crisis.
In the new planning initiative, Iceland´s National Spatial Plan, the indicators being developed are classified according to the main fields of emphasis in the plans. These indicators have, in many cases, not yet been thoroughly defined and it is rarely clear from the planning text what units of measurement will be used, if they already exist and what will be their geographical scope of

[11] Act for Regional Development Institute no. 106/1999.

measurement. This is however a work in progress, as it is the first time such a Spatial Plan is being carried out in Iceland.

The third plan, the Parliamentary Resolution on a Strategic Regional Plan for 2010-2013, does rely on a few indicators and data to measure its progress. There are 32 indicators divided into nine key areas, but very few can be measured in this way. According to the Parliamentary Resolution, the plan is based on innovation and economic development measures, in keeping with other strategies pertaining to the preparation of the governmental policy on development, Iceland 2020. Therefore, it must be assumed that the indicators used for Iceland 2020 will also be applicable for the Strategic Regional Plan. However, the geographical scope of measurement for Iceland 2020 is national, and this approach will not be able to capture the geographical differences which the Strategic Regional Plan is addressing. Indicators were mentioned in the planning document prepared before the Parliamentary decision was approved, but only a few have appropriate units of measurement or relate to supporting national data. It is interesting to note that the final document approved by the Parliament is very simple in character and does not refer to any indicators, units of measurement or supporting data.

In the stakeholder workshop held in Reykjavík 6 September 2012, one of the main issues raised was the limitations associated with the level of geographical analysis of spatial data.

C3.7 Stakeholder Perceptions (Stage 1)

C3.7.1 Approach to Workshops

Members of the TPG were in contact throughout the identification of key policy drivers through face-to-face meetings, telephone conversations and e-mail communication. The workshop format and list of participants was agreed with the individual stakeholders according to what was considered appropriate in each case. As a result the number of participants differed as illustrated in the ***Table C1*** below.

Table C1: Number And Nature Of The Participants At The Stakeholder Workshops (Stage 1). Source: Workshop Reports.

Workshop	No. of participants	Nature of participants
Latvia	23	Civil servants and representatives of public bodies including State Regional development Agency, Ministry of Environmental Protection and Regional Development, Vidzeme Planning Region and Riga City Council, various Latvian higher education establishments, KITCASP project participants from Latvia, The Basque Country, Ireland, Iceland and Scotland and the ESPON CU.
Scotland	10	Policy officers, analysts and a GIS specialist from the Scottish Government, Tayplan City Region, UK ESPON contact point, and two researchers from TPG.

Iceland	8	Representatives from national level institutions engaged with spatial planning and regional development, representatives of City of Reykjavik, the Association of Municipalities and 2 researchers from TPG.
Ireland	12	Regional Planning and Department of Environment, Community and Local Government representatives, and researchers from the TPG.
Basque Country	3	Representatives of The Basque Government, and researcher from TPG.

The questions agreed by the TPG were used to structure the workshops, though there was a degree of flexibility so that the individual workshops could focus on elements that were considered to be of particular relevance to them. The questions were therefore not necessarily all addressed in detail but were used to guide the discussions. The themes and questions were as follows:

Vision, Policy Drivers, Objectives and Priorities for each Case Study

1. *What is the spatial planning vision (or overarching goal) for the case study region?*
2. *What are the key policy drivers and emerging agendas influencing spatial development in the case study region?*
3. *What spatial policy objectives and priorities should be set in the case study region?*

Interpretation and Application of Terms in each Case Study

4. *What do the following concepts mean in the context of the case study region: territorial cohesion, economic competitiveness and sustainable development?*
5. *How do territorial cohesion, economic competitiveness and sustainable development relate to what planners do in the case study region at different spatial scales?*

Identification of Themes for Grouping Indicators for Territorial Cohesion

6. *To what extent are the themes identified below relevant to the case study region? Which themes should form the basis for selecting indicators for territorial cohesion in the case study region? What other themes, if any, are relevant to the case study region?*

Identification of Relevant Datasets and Data Sources

7. Are there indicators or datasets available at national level for monitoring the selected/defined themes? Are these being monitored on a regular basis?
8. What, if any, data gaps hinder the monitoring of relevant indicators? What additional data should be collected (wish list)?

9. At what geographical scale are data most relevant in the context of the case study region?

Use of ESPON data

10.To what extent is ESPON data used in the preparation of plans/programmes at the national and sub-national level in the case study region?

The key aim of the workshops was to agree on a set of common themes under which indicators for territorial cohesion and spatial planning could be grouped. The TPG had prepared a list of policy drivers and objectives to facilitate this task. The list had been drawn up on the basis of a review of key spatial planning documents in each case and then discussed and agreed with the main representatives of each stakeholder region. ***Table C2 below*** provides an overview of the agreed policy drivers and objectives for each case study region and this provided the starting point for the discussions of relevant themes.

C3.7.2 Stage 1 Workshop outputs

The workshops revealed numerous commonalities between the case study regions but also some differences. These will now be briefly discussed under the headings identified earlier.

Vision, Policy Drivers, Objectives and Priorities for Each Case Study

The visions of the stakeholder territories are generally fairly well established in existing documents. The vision for Ireland was established in the National Spatial Strategy that was published in 2002. The vision seeks to achieve more balanced patterns of social, economic and physical development across the country by targeting investment in a system of gateways and hubs to act as a counterbalance to the Greater Dublin capital region. Though the overarching vision remains the same, the priority for economic recovery and settlement-infrastructure alignment to pump-prime regional development have come increasingly into focus.

Stakeholders felt that there was a relatively high level of consensus about policy agendas and drivers in Scotland. The vision in Scotland was established in the two successive National Planning Framework documents published in 2004 and 2009. There was an evolution in the objectives and vision between the two documents and stakeholders stated that this was expected to evolve further through the process of developing National Planning Framework 3. The vision in NPF 2 embodied the following aims:

- To contribute to a wealthier and fairer Scotland by supporting sustainable economic growth and improved competitiveness and connectivity;
- To promote a greener Scotland by contributing to the achievement of climate change targets and protecting and enhancing the quality of the natural and built environments;
- To help build safer, stronger and healthier communities by promoting improved opportunities and a better quality of life; and

- To contribute to a smarter Scotland by supporting the development of the knowledge economy.

The vision in The Basque Country was originally enshrined in the Spatial Planning Guidelines first published in 1997. The vision promotes The Basque Country as a city region and this has been retained in subsequent documents. It is an integrated vision of the territory which incorporates the landscape, the physical environment, the rural and urban environments, and the interrelations and complementarities between the three main cities in The Basque Country as well as between smaller settlements and rural areas.

The vision for Latvia has not changed significantly since 1996. The main territorial development goal is to reduce internal economic, social and territorial disparities, primarily between the Riga capital region and the rest of the country. The aim is to pursue the sustainable and balanced territorial development of the country, while simultaneously increasing the international competitiveness of Riga. The key elements of this vision are retained in the most recent relevant documents such as the Sustainable Development Strategy for Latvia: Latvia 2030, which includes a Spatial Development Perspective for the country, and the Draft of the new National Development Plan 2014-2020 which has introduced the overarching principle of economic breakthrough.

The vision for Iceland is established in the Iceland 2020 policy statement and seeks to promote the country as being at the forefront of other nations in the fields of value creation, education, welfare and quality of life.

The policy drivers identified in ***Table C2*** were discussed with the stakeholders at the workshops and some revisions were made. The revised and agreed list of policy drivers is provided in ***Table C3.*** The key elements of the established visions have been retained in all case study territories, though a common theme was the emergence of economic recovery as key policy driver, which requires visions and priorities to be realigned to address the consequences of the post-recession economy. The promotion of economic competitiveness, resilience and job creation are high on the policy agendas of all case study territories, with stakeholders in Ireland pointing out that this was likely to be challenging within a context of significantly reduced budgetary resources. Stakeholders in Scotland felt that the long-standing goal of promoting more balanced patterns of development had become less of a priority in the current difficult economic climate. The pursuit of more balanced patterns of development remains strong in the rhetoric of the various policy documents and the over concentration of development in the capital regions remains a significant threat to cohesion, especially in Iceland, Ireland and Latvia where the capital regions are particularly dominant. Potential tensions are apparent in recent policy documents in Latvia between the simultaneous pursuit of more balanced patterns of development and strengthening the international competitiveness of Riga. The need to reduce greenhouse gas emissions, improve natural resource management, protect landscapes, habitats and biodiversity, and promote environmental sustainability was identified as influential policy drivers in all cases.

The need to improve strategic spatial planning practice and processes was identified as a policy driver in Ireland and Iceland, and managing demographic change was identified in Latvia and Scotland. These drivers are also likely to be relevant to the other case study territories though they were not identified explicitly by stakeholders during the workshops. The specific local context in some cases determined specific policy drivers being identified. A referendum is planned to determine the question of Scotland's independence in 2014 and the debate surrounding this coincides with the process leading to the publication of National Planning Framework 3. It is therefore inevitable that the process will be influenced by that debate and that the Scottish National Party Government will be keen to promote an aspirational agenda for an independent Scotland. The stakeholders in Iceland identified coastal and maritime planning issues as an important policy driver reflecting the geographical characteristics of the country. The list of policy drivers agreed on the basis of discussions with stakeholders at the workshops is shown in Table 4 below.

Interpretation and Application of Terms in each Case Study

There was a significant degree of consensus between four of the five case study territories with regards to the interpretation of territorial cohesion within the national contexts. Stakeholders in The Basque Country, Ireland, Latvia and Scotland agreed that territorial cohesion related to the pursuit of more balanced patterns of development and reducing disparities. Stakeholders in The Basque Country related this to achieving a balance between the 3 main cities and between the smaller centres and rural areas. Stakeholders in Scotland felt that the position of the Scottish Government resonates strongly with the cohesion agenda and stressed the importance of context sensitive solutions tailored to specific local characteristics and context.

Stakeholders in Latvia linked the concept of territorial cohesion to increasing the competitiveness of less developed regions, although there is an apparent gap between the rhetoric and the reality whereby the gap between Riga and the rest of the country continues to increase. The persistence of this gap between policy objectives and their outcomes could have a potentially damaging impact on public trust in and perception of regional policy in Latvia, and this could be relevant elsewhere. Stakeholders in Scotland raised concerns about the potential conflicts and tensions resulting from the pursuit of territorial cohesion simultaneously at different spatial scales.

Table C2: Summary of Key Policy Drivers And Objectives For The Case Study Territories				
Ireland	**Scotland**	**The Basque Country**	**Latvia**	**Iceland**
Policy drivers: • Recovery from economic crisis • Balanced regional development • Settlement-infrastructure alignment	**Policy drivers:** • Economic recovery and regional resilience • Adapting to and mitigation of climate change and transition to a low carbon economy (based on environmental sustainability, optimal use of natural resources and realising renewable energy potential) • Reduced territorial disparities and more balanced regional development	**Policy drivers:** • Innovation • Sustainability • Protection of landscape and biodiversity • Reduction of greenhouse gas emissions • Recovery from economic crisis • Regional development • Regeneration • Settlement-infrastructure alignment and integration	**Policy drivers:** • Demographic challenge • Sustainability • Economic breakthrough • Sustainable Planning of Coastal Areas	**Policy drivers:** • Recovery from economic crisis • Balanced settlement distribution • Development of the highland interior • Sustainable planning of coasts and the ocean
Policy Objectives: • To support sustainable national economic and employment growth • To strengthen international competitiveness • To foster balanced regional development • To promote social inclusion	**Policy Objectives:** • Contributing to wealthier and fairer Scotland by supporting sustainable economic growth and improved competitiveness and connectivity • Promoting a greener Scotland by contributing to the achievement of climate change targets and protecting and enhancing the quality of the natural and built environments • Building safer, stronger and healthier communities by promoting improved opportunities and a better quality of life • Supporting the development of the knowledge economy	**Policy Objectives:** • Encouraging innovation without jeopardising the environmental capital (competitiveness) • Social cohesion • Sustainable development • Regional balance based on the complementarity of each component of the territorial model • Limiting land consumption deriving from new urban development and infrastructure • Regeneration programme of former industrial land • Protecting singular landscapes and recovering degraded areas • Increasing the percentage of waste recycled • Sustainable mobility: Increasing the use of collective and non-motorized means of transport • Green infrastructure	**Policy Objectives:** • To address territorial and social inequalities • To develop business infrastructure for attracting investors • To develop regional and local transport infrastructure • To provide public services for centres of national and regional significance • To provide infrastructure for innovation, culture and creative industries • To strengthen capacity of regions and local municipalities • To strengthen international competitiveness of the regions, particularly functional areas as Rīga metropolitan region	**Policy Objectives:** • To ensure safety and common interests in spatial planning • To support sustainable development and effective planning • To support coordination of the policies of the state and municipalities on land use issues

Table C3: Comparison of Key Policy Drivers Agreed With Stakeholders At Stage 1 Workshops				
Ireland	**Scotland**	**Iceland**	**Latvia**	**Basque Country**
Economic recovery and employment within much reduced budgetary resources	Economic recovery, growth and transition to a low carbon economy	Recovery from economic crisis	Economic breakthrough and recovery from economic crisis	Recovery from the crisis
Need to deliver much greater efficiencies through enhanced settlement-infrastructure/services alignment	National infrastructure development	Balanced settlement distribution	Economic, social and territorial disparities	Integration between settlements and infrastructure of the territory
More balanced regional development	Realising the potential of different areas through the development of specific territorial assets	Development of the highland interior	Economic and human dimension of sustainability	Regional development
Environmental challenges: reducing greenhouse gas emissions, habitat protection and water quality management	Meeting climate change targets, environmental sustainability, natural resource management and realising renewable energy potential		Environmental sustainability	Protection of the biodiversity
				Reduction of greenhouse gas emissions
			Sustainable planning of coastal development	Sustainability
Need for a more rational and 'evidence based' spatial planning system		Integrate strategic planning from various government institutes/companies		
	An aspirational agenda for Scotland's future			
	Importance of place and quality of life			Regeneration Landscape
	Managing demographic change		Demographic dynamics (rapid depopulation, social cohesion....)	
	Land-based development to support offshore renewables	Sustainable planning of coasts and the ocean		
				Innovation

There was less clarity among stakeholders in Iceland about the interpretation of territorial cohesion. Stakeholders at the workshop demonstrated diverse understandings of the concept and the situation is further exacerbated by uncertainty about how the term should be translated into the Icelandic language.

The issue of language has presented a challenge in EU policy debates since the inception of the European Community. Extensive co-operation and networking initiatives between EU Member States have addressed this issue to a degree and has seen the creation of a joint spatial planning language at the EU level over recent years as a result of such co-operation and networking. The NSS in Ireland, for example, was one of the first national territorial strategies to be developed after the publication of the ESDP and draws heavily on the vocabulary and terminology of European spatial planning concepts, as does Scotland's National Planning Framework. As Iceland is not an EU Member State and, therefore, has not participated to the same degree in these initiatives, it is not surprising that EU terminology is less familiar and that there is more debate with regards to meanings and interpretations. The stakeholders in Iceland agreed that territorial cohesion related to regional disparities though there was considerable debate about the appropriate spatial scale.

There appeared to be a high degree of consensus between stakeholders in the case study territories about interpretations of other key concepts such as economic competitiveness and sustainable development. There was also consensus that these were extremely broad terms and in the context of KITCASP the focus should be on the territorial dimension of these concepts.

C4. Selecting Policy Themes

C4.1 Key Analysis

From an analysis of the literature, indicators must have a clear and rational purpose and, therefore, be practical, relevant and applicable - i.e. address the identified policy objectives and development priorities in each case study territory. The in-depth review of policy drivers, objectives, development priorities and available national datasets for each territory together with the stakeholder consultation as described in ***Section C3.6*** permitted the defining of common policy themes (or domains) around which indicators could be categorized (Duhr et al., 2010).

The ESPON INTERCO project identifies a number of themes capturing territorial cohesion (ESPON, 2012). These themes, together with other existing and emerging themes developed as part of EU initiatives, such as INTERREG-A funding programmes (Medeiros, 2012) and the Europe 2020 Agenda (CEC, 2010) illustrated in ***Table C4***, were used as the starting point for the identification of themes.

Table C4: Existing And Emerging Territorial Cohesion Themes		
INTERCO	**INTERREG A**	**Europe 2020**
Economic performance and competitiveness	Socio-economic territorial balance	Smart growth
Environmental qualities	Environmental sustainability	Sustainable growth (for a resource efficient, greener and more competitive economy)
Social inclusion and quality of life	Socio-economic territorial balance	Inclusive growth (a high-employment economy delivering economic, social and territorial cohesion)
Innovative territories		Smart growth
Access to services, markets and jobs	Balanced and polycentric urban system	Smart and inclusive growth
Territorial cooperation and governance	Territorial cooperation and governance	Economic governance
Polycentric territorial development	Balanced and polycentric urban system	Smart and inclusive growth

In order to address the overlap between 'territorial cohesion' and 'spatial planning' some unpacking of these concepts was required ***(See Section B1.3)*** through an analysis of the literature. It was agreed in consultation with the stakeholders that the key components of 'territorial cohesion', as understood by the TPG, would be over-layered with the 'sustainability paradigm' to address the key components of spatial planning ***(See Figure B3)***. Therefore, the indicators were required to capture: (a) economic competitiveness; (b) social cohesion; and (c) environmental protection. These are complemented by two additional core aspects in the territorial cohesion agenda: (d) territorial cooperation and governance, and (e) balanced polycentric urban systems.

C4.2 Stakeholder Perceptions on Policy Themes (Stage 2 Workshops)

The key aim of the second round of workshops was to agree a list of themes that can be used to group indicators. Through the analysis described above, the TPG had already identified a list of potential themes on the basis of the documentary review of key spatial planning documents, preliminary discussions with the key stakeholder representatives and policy drivers and objectives ***(See Table C5).*** This analysis had revealed numerous commonalities between the identified themes. However, the TPG considered it to be important that the themes were adjusted in discussion with the stakeholders to make them as relevant as possible to the specific context of the individual territories.

Table C5 shows that economic recovery is identified as a key overarching theme in all case study territories. There is a strong emphasis on the need to strengthen economic competitiveness and to create employment opportunities. Stakeholders in Scotland argued that resilience was more relevant than competitiveness as the latter is a more subjective term and can change with evolving economic circumstances. It was also felt that resilience was a broader concept which could be extended beyond the narrower economic focus of competitiveness to include economic resilience, community resilience, environmental and landscape resilience, resilience to climate change and food and energy security. There also appears to be a strong commitment in Scotland to capitalising on opportunities offered through a transition to a low carbon economy thus providing an environmental dimension to the promotion of a more resilient economy. Scottish stakeholders raised concerns about tensions between economic and environmental goals.

Stakeholders at the workshops in Ireland, Latvia and The Basque Country all identified an enhanced alignment between settlements and infrastructure as an important theme. Stakeholders from the same case study territories also identified the theme of promoting more balanced patterns of regional development and stakeholders in Iceland identified a similar theme articulated as more integrated polycentric territorial development. These themes appear to be closely linked and reflect a general concern about an over-concentration of development in some parts of the respective territories and increasing internal regional disparities. The theme of promoting more balanced patterns of development has consistently been high on the spatial planning agenda in many European countries for many years. There are concerns however about the extent to which the rhetoric of balanced development is reflected in the reality of the economies of countries increasingly being driven by a small number of large urban centres, primarily the capital regions. Stakeholders in Latvia raised concerns that despite the pursuit of more balanced development and the reduction of regional disparities being a well established regional policy goal since the mid-1990s, the reality of increasing socio-economic and territorial disparities between Riga and the rest of the country could significantly reduce the credibility of regional policy. The ongoing primacy of the areas that are already dominant is a common characteristic across the case study territories. The situation is further exacerbated in the current economic circumstances when attracting economic development and employment is likely to be the overriding priority regardless of location, a point of view that was expressed by stakeholders at the workshops in Ireland and Scotland.

The identification of a range of environmental issues as strong policy drivers is also reflected in the identified themes. Stakeholders at all workshops identified issues relating to environmental sustainability and natural resource management as important, and this is not surprising considering the spatial characteristics and environmental qualities of the case study territories. The Scottish Government has committed itself to ambitious climate change targets and the mitigation of and adaptation to climate change are powerful drivers for national spatial policy, though, as mentioned previously, there are significant tensions between environmental and economic agendas.

Territorial co-operation and governance was also a theme that emerged strongly during the workshops, particularly in Ireland, The Basque Country, Iceland and Latvia. Effective territorial governance is a pre-condition of successful spatial planning, particularly in the increasingly complex multi-level (vertical) and cross-sector (horizontal) environment within which decisions with spatial implications are made. Strengthening the effectiveness of governance structures and processes has received considerable attention throughout Europe in recent years. Nevertheless, recent reports in Ireland, for example, (DoECLG, 2010)have been critical of implementation mechanisms and processes, suggesting that there is still considerable scope for strengthening governance arrangements. Stakeholders in Scotland argued that the existence of strong and effective governance networks and a consensual and co-operative governance culture has meant that other priorities have taken precedence over governance in the Scottish context.

Table C5: Long List Comparative Analysis Of Spatial Planning Themes For Grouping Indicators				
Ireland	**Scotland**	**Iceland**	**Latvia**	**Basque Country**
Recovery from economic crisis, increased competitiveness and employment promotion	Economic resilience and transition to low carbon economy	Strong local economies ensuring global competitiveness	Recovery from economic crisis, increased competitiveness and employment promotion	Economic performance and competitiveness
Enhanced Settlement-Infrastructure alignment			Enhanced Settlement-Infrastructure alignment	Enhanced Settlement-Infrastructure alignment.
Sustainable development and enhanced management of environmental assets	Adaptation to and mitigation of climate change and environmental resource management	Attractive regions of high ecological values and strong territorial capital	Sustainable development and enhanced management of environmental assets	Sustainable development and transition to a low carbon economy
Better Regional/Local Governance	Territorial co-operation and governance		Better Regional/Local Governance with emphasis on territorial cooperation	Territorial cooperation and governance
Balanced regional development		Integrated polycentric territorial development	Balanced regional development	Balanced regional development
	Connectivity and regional resilience	Accessibility and fair access to services, markets and jobs		
	Social inclusion / cohesion	Inclusion and quality of life		Social inclusion / social cohesion
	Quality of life, the importance of place and realising the potential of places based on territorial assets			Dynamic and vibrant rural areas with strong agricultural sector
	Innovation and the knowledge economy	Innovative territories	Innovation and knowledge economy	Innovation and the knowledge-based economy
		Culture and people		

C4.3 Final Agreed Policy Themes

On the basis of the outcomes of the Stage 2 stakeholder workshops a degree of consensus across some of the themes was observed, including:

- Economic Competitiveness and innovation
- Balanced regional development and settlement-Infrastructure alignment
- Social cohesion and quality of life
- Sustainable development and environmental quality
- Territorial co-operation and governance

The themes were discussed and storylines developed with the stakeholders during a workshop in Donostia-San Sebastian in December 2012. As a result of this workshop, a final consensus was reached in the themes that would be brought forward as illustrated in ***Table C6[12].***

Table C6: Agreed Policy Themes On Spatial Planning And Territorial Cohesion For The Classification Of Indicators	
Theme	**Storyline**
Economic Competitiveness and Resilience	This theme embraces adaptability and diversification as promoters of increased economic activity and employment, paired with innovation and economic cooperation/collaboration
Integrated[13] Spatial Development	This theme is based on the principles of balanced regional development and settlement-infrastructure alignment, entailing well-managed and effective spatial development that is tailored to local needs. It supports polycentricism and compact cities that take account of territorial capacities and assets.
Social Cohesion and Quality of Life	This theme addresses issues of equality, choice and well-being. It encourages increased accessibility to services and green areas, and connectivity to public services in support of healthy living.
Environmental Resource Management	This theme sustains enhanced and sustainable management of environmental resources, including water, air quality, biodiversity and the landscape. It also addresses climate change issues, including flood risk and the need for a low-carbon economy.

C4.4 A Note on Polycentricism

It is noteworthy from the above identified themes that 'polycentric development' has not explicitly surfaced as an issue raised by the majority of the stakeholders or came to the fore in the territorial profiles. Polycentric development has been strongly linked to the territorial cohesion agenda and has consistently been the key aim of EU spatial and territorial development policy. While it may be implicit within the Integrated Spatial Development

[12] Note: The Basque Country stakeholders requested a fifth theme relating to 'Mobility and Infrastructure' be included. However, it was considered by the TPG that these issues were adequately captured in the four selected themes.

[13] Note: 'Managed Spatial Development' was originally selected but this was subsequently amended to 'Integrated Spatial Development' through consultation and refinement.

theme, the fact that it has not been explicitly raised (only in Iceland) has identified it as an issue that merits further research.

The concept of polycentric development is attractive to policy-makers as it resonates with concerns about pursuing more balanced patterns of regional development. As a result it is clearly more attractive to lagging and geographically peripheral areas than previous conceptualisations of EU space based on core – periphery, 'blue banana' or pentagon type models. A major problem with the concept of polycentric development, and probably one of the reasons why it appears to have lost EU wide political momentum, is its complexity and in particular the question of scale. It is well documented, and evidence from recent years has borne this out, that the pursuit of polycentric development at the EU level (with some degree of success) has generated counter tendencies at the national level. In many Member States, national development is being driven by a small number of large cities, particularly the capitals, resulting in ever widening disparities between the capital regions and the rest of the country (e.g. Riga, Latvia and Dublin, Ireland). The spatial structure of many EU countries means that pursuing polycentric development is extremely challenging for national territorial development policy.

The tensions between pursuing polycentric development simultaneously at different spatial scales, particularly in the current economic climate, means that national policy-makers may prioritise attracting development regardless of the location. Politicians are unlikely to want to be seen to be turning investment away and, as a result, the meaning of polycentric development at the national level has become more fuzzy and blurred. For example, the concept of polycentric development does not appear explicitly in Scottish spatial policy documents and has not been raised by the stakeholders. There was some discussion with the Scottish stakeholders about the pursuit of more balanced patterns of development within which polycentric development may be implicit. In a country where topography is a key determinant of settlement pattern and several cities already make distinctive contributions to the national economy, the active pursuit of greater polycentricity may not be seen as a priority. Also, there is a strong city region agenda in Scotland, with four city regions responsible for drawing up strategic development plans of the local authority areas within their boundaries. The focus on city regions implies a recognition that Scotland's largest cities are the motors for economic development and this is reflected in the recent establishment of a Scottish Cities Alliance. This in turn implies that there is some momentum in the polycentric development agenda. However, there have been tensions with local authorities outside the designated city regions (small towns and rural areas) who perceive themselves to be losing out.

In The Basque Country, the territorial model proposed in the original 1997 Guidelines placed strong emphasis upon the Polynuclear System of Basque Capitals and the (balanced) relations between the three provincial capital cities of Bilbo, Donostia-San Sebastián and Vitoria-Gazteiz. This remains a key element of the more recently modified Guidelines, as does the 'balance' between the 3 capital cities and the other components of The Basque territorial model, and the notion of The Basque city region (*Euskal Hiria*) which seeks overall complementarity at all levels – urban and rural alike. What needs to be appreciated as well is the spatial dimension of The Basque Country

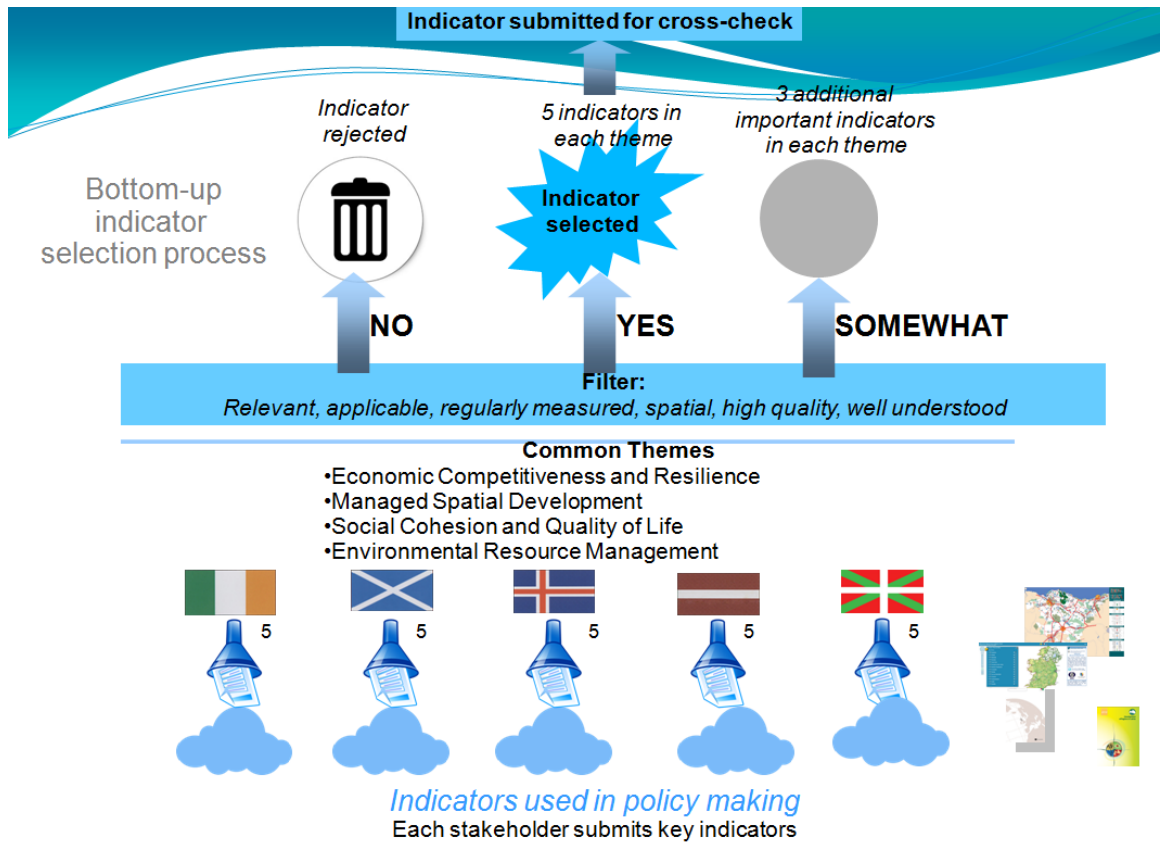
(7,235 km^2) which is significantly smaller in area than the other KITCASP territories.

C5. Final Indicator Filtering and Selection

C5.1 Key Indicators

Following agreement on the selection of the policy themes each member of the TPG was tasked with selecting five key indicators (plus three discretionary indicators) and putting them forward for consideration in the final set. The filtering and selection process is described in ***Section C2*** above and illustrated in **Figure C12** below

Figure C12: Diagrammatic Illustration of 'Bottom-Up' Indicator Selection Process.



As part of the selection process a further round of stakeholder consultation (Stage 3) was undertaken in each territory as described in ***Appendix B.*** Each of the preliminary sets put forward for consideration was subsequently considered by the Lead Partner. ***Table C7 and C8*** illustrates the comparative analysis undertaken by the TPG to reveal a common set of indicators.

A final set of twenty-one indicators was subsequently put forward for deliberation to the TPG meeting in Reykjavik. Following refinement, a final list

of indicators was agreed between the TPG and stakeholders as illustrated in ***Table B4.***

C5.2 Discretionary Case-Specific Indicators

It should be noted that the twenty final agreed set of common indicators reflects the application of the KITCASP methodological process to the five case study territories. By necessity this required a considerable element of negotiation between the stakeholders given the differing territorial profiles and policy drivers. However, it is not the intention of the KITCASP project that the final set of twenty key indicators be prescriptive. All of the indicators selected and put forward by each of the TPG members were done so in the context of the filtering process illustrated in ***Figure C11*** and described in ***Section C2.*** The indicators therefore not selected for the final list of twenty key indicators and included in ***Table C7*** provide a very valuable inventory of possible case-specific discretionary indicators that address explicit territorial issues.

For example, in the case of the Irish case study, the Lead Partner worked closely with the Regional Planners Network (RPN) in the development of indicators to measure progress in the implementation of the Regional Planning Guidelines (RPGs) 2010-2022 and to establish a baseline for the RPG mid-term reviews in 2013/2014 ***(see Appendix E).*** The work commenced in May 2012 and was ongoing throughout the KITCASP project. The final indicators selected by the RPN were based around three RPG themes of Economic Prosperity; People and Place; and Environment and Infrastructure. The KITCASP project had a significant influence on the design of the final set of indicators for the RPN project. The indicators and associated trends over time will be used to inform and guide the process of future policy development. However, all of the final set of indicators selected by the RPN team were put forward for consideration as part of the KITCASP process but were ultimately not selected for the final list of twenty key indicators. These indicators now form part of the discretionary list. This experience clearly illustrates the value of the discretionary set of indicators developed by the KITCASP project to address case-specific territorial context.

Note the Unit of Measurement, Scale, Availability and Data Source for all Discretionary Indicators are listed in ***Appendix B.***

Table C7: Indicators Put Forward By Each Stakeholder Territory For Consideration
** Note that green indicates priority indicators and orange refers to other relevant indicators.*
*Note the Unit of Measurement, Scale, Availability and Data Source for all Indicators are listed in ***Appendix B.***

Ireland	**Scotland**	**The Basque Country**	**Latvia**	**Iceland**
Economic Competitiveness and Resilience				
Gross value added (GVA) per capita	Productivity: Gross Value Added (GVA) per capita	Breakdown of economic activity in traditional sectors (agriculture, construction, industry and services)	Economically active persons/total population	Demographic structure
Employment rate of population aged 20-64	Employment rate of population aged 16-64	Unemployment rate	Economically active statistical units of the market sector	GDP per capita
Population with accessibility to internet	Research and development	GDP per capita	GDP per inhabitant per year	Participation higher education
Foreign Direct Investment	Foreign Direct Investment	Balance of external trade	Energy dependence – net import of energy resources/gross domestic energy consumption plus bunkering	Unemployment rate
Total R & D expenditure as % of GDP	Educational attainment	Self sufficiency of energy production	Turnover of innovative products.	Share of GDP in R&D
Small Medium Enterprises (SMEs)	GDP	Youth employment rate	Proportion of export of high technology sectors from total annual export	E-governance ranking
	Participation in higher education	Population > 10 years of age with tertiary education	Labor productivity	Activity rate
	Business birth/death/survival rates			
	Scottish Composite indicator: Economic performance, well-being, disadvantage and resilience	Rate of new firm creation	Total amount of foreign direct investment contributions per 1000 inhabitants of the municipality	Persons 20-39 years as a share of total population
	Skills and training			
	Demographic structure			
	Number of business visitors			
Integrated Spatial Development				
Population change	Population change	Index of artificialisation (of all land uses)	Proportion of urban/rural inhabitants	Apartments within agricultural areas without relation with agricultural activites
Population density	Modal split	Urban density	Population density	Apartments
Housing vacancy	House building	Housing density	Total number of jobs in municipality versus number of persons in working ages (15-61 years old) in the municipality	Transport mode

Population within 500 metres of public transport	Access to services	Housing units	Dispersion of regional GDP per capita	Agricultural land use
Number of houses connected to waste water treatment	Number of tourists on holiday	Modal split of transport (public, foot and bicycle; and automobile)	Number of the serviced air traffic passengers in the largest airports (over 1 Mill. Passengers per year)	Households
Modal split of passenger transport	Road traffic volume	Housing density forecasted in new residential development	Access to public transport	Apartments, number of rooms
Energy consumption per capita	Scheduled monuments 1991-2011	Forecast of land consumption	Number of pupils in schooling age versus number of places in schools within municipality (national, local municipality level)	Population density
	Designated areas 1991-2011	Balance of residential vs. economic activity land uses		Travel distances in commuting
	Population density			
	Type of land-use			
Social Cohesion and Quality of Life				
Population within 5Km of work/school	Income differentials	Natural population growth	Broadband Internet Connection in enterprises with the number of 10 or more employees	Life expectancy at birth
Population aged 30-34 with tertiary education	Healthy life expectancy	Ageing index	Pre- retirement age unemployment	Well-being Index
Dependency rate (population aged 0-19 and 65+)	Participation in community organisations	Employment rate: gender gap	Poverty risk index (after social transfers)	Human development index
Average disposable income	Neighbourhod perception	Travel time to nearest hospital	Number of registered criminal offences per 1000 inhabitants	Share of apartments in urban areas used a "summer" houses
Level of well-being	Local child poverty	Public open space per capita	Participation of voters in the elections of local governments	Proportion of population living in urban - rural areas
Population at risk of poverty	Healthcare resources	Bicycle way network	Youth unemployment	Global Gender Gap Index
Population within 500 metres of public green areas (active and passive)	Life expectancy at birth	Social Services expenditure per capita	GINI coefficient	Gini coefficient
	Social economy / social capital	Population with compulsory secondary school education qualification	Satisfaction with Life	Foreign citizens as a share of total population
	Cultural engagement			
	Deprivation levels			
Environmental Resource Management				
Renewable Energy Production (Wind, Hydro, Biomass, etc.)	Renewable energy production	Landscape designated for special environmental protection	Share of unused agricultural land as % of total agricultural land	Net greenhouse gas emissions
Status of water bodies (groundwater, rivers, lakes,	Breeding birds	Role of agriculture – farm units and area under cultivation	Forest cover	Size of defined protection areas

estuarine, coastal, bathing, drinking waters)				
Population at risk of flooding	Flora / fauna / biodiversity	Inventory of greenhouse gas emissions	Land area occupied by public open space	Wilderness areas not disturbed by human activity
Status of protected European habitats and species	Greenhouse gas emissions	Energy potential deriving from photovoltaic, wind-energy and hydro-electrical installations	Share of population living in flood-prone territories	Release of greenhouse gases from transportation
Municipal waste recovery rate	Municipal waste recovery rate	Water consumption OR Performance index of water supply system	Proportion of recycled waste	Share of food produced domestically in Iceland
Number of days where EU air quality limit values are exceeded	Dwellings in flood risk areas	Air quality statistics	Percentage or number of Eco schools	% of wasterecycled
GHG emissions per capita	Biodiversity, status of BAP Habitats in Scotland 2008	Nature 2000 designations	Number of biological farms	Renewable energy production
	Designated areas 1991-2011	Bio fuel consumption	Rural Bird index	Share of renewable energy in land transportation and fisheries
	Landscape			

Table C8: Comparative Analysis of Indicator Sets

*Note that the different colours don't have a particular meaning; they intend to highlight the correlations between indicators across the case study territories. Non-coloured boxes refer to those indicators that do not correlate.

*Note the Unit of Measurement, Scale, Availability and Data Source for all Indicators are listed in ***Appendix B.***

Ireland	Scotland	Basque Country	Latvia	Iceland
Economic Competitiveness and Resilience				
Gross value added (GVA) per capita	GDP	GDP per capita	GDP per inhabitant per year	GDP per capita
Employment rate of population aged 20-64	Employment rate of population aged 16-64	Unemployment rate	Economically active persons/total population	Unemployment rate
Population with accessibility to internet	Participation in higher education Educational attainment	Population > 10 years of age with tertiary education	Economically active statistical units of the market sector	Participation higher education
Foreign Direct Investment	Foreign Direct Investment	Balance of external trade	Total amount of foreign direct investment contributions per 1000 inhabitants of the municipality	Demographic structure
Total R & D expenditure as % of GDP	Research and development Business birth/death/survival rates	Self sufficiency of energy production	Proportion of export of high technology sectors from total annual export	Share of GDP in R&D
Small Medium Enterprises (SMEs)	Productivity: Gross Value Added (GVA) per capita	Rate of new firm creation	Turnover of innovative products	E-governance ranking
	Demographic structure	Breakdown of economic activity in traditional sectors (agriculture, construction, industry and services)	Labour productivity	Activity rate
	Scottish Composite indicator: Economic performance, well-being, disadvantage and resilience	Youth employment rate	Energy dependence – net import of energy resources/gross domestic energy consumption plus bunkering	Persons 20-39 years as a share of total population
	Number of business visitors			
Integrated Spatial Development				
Population change	Population change	Index of artificialisation (of all	Proportion of urban/rural	Apartments within

		land uses)	inhabitants	agricultural areas without relation with agricultural activites
Population density	Population density	Urban density	Population density	Population density
Housing vacancy	Housebuilding	Housing units	Total number of jobs in municipality versus number of persons in working ages (15-61 years old) in the municipality	Households
Number of houses connected to waste water treatment	Access to services	Housing density	Dispersion of regional GDP per capita	Apartments
Population within 500 metres of public transport	Scheduled monuments 1991-2011	Housing density forecasted in new residential development	Number of the serviced air traffic passengers in the largest airports (over 1 Mill. Passengers per year)	Transport mode
Modal split of passenger transport	Modal split	Modal split of transport (public, foot and bicycle; and automobile)	Access to public transport	Apartments, number of rooms
Energy consumption per capita	Type of land-use	Forecast of land consumption	Number of pupils in schooling age versus number of places in schools within municipality (national, local municipality level)	Agricultural land use
	Designated areas 1991-2011	Balance of residential vs. economic activity land uses		Travel distances in commuting
	Road traffic volume			
	Number of tourists on holidays			
Social Cohesion and Quality of Life				
Population within 5Km of work/school	Income differentials	Natural population growth	Broadband Internet Connection in enterprises with the number of 10 or more employees	Life expectancy at birth
Dependency rate (population aged 0-19 and 65+)	Healthy life expectancy	Ageing index	Satisfaction with Life	Well-being Index
Population aged 30-34 with tertiary education	Participation in community organisations	Employment rate: gender gap	Youth unemployment	Global Gender Gap Index
Average disposable income	Cultural Engagement	Travel time to nearest hospital	Number of registered criminal offences per 1000 inhabitants	Share of apartments in urban areas used a "summer" houses
Level of well-being	Healthcare resources	Bicycle way network	GINI coefficient	Gini coefficient
Population at risk of poverty	Deprivation levels	Social Services expenditure per capita	Poverty risk index (after social transfers)	Human development index
Population within 500 metres of public green areas (active and passive)	Life expectancy at birth	Public open space per capita	Participation of voters in the elections of local governments	Proportion of population living in urban - rural areas
	Social economy / social capital	Population with compulsory secondary school education	Pre- retirement age unemployment	Foreign citizens as a share of total population

		qualification		
	Neighbourhood perception			
	Local child poverty			
Environmental Resource Management				
Renewable Energy Production (Wind, Hydro, Biomass, etc.)	Renewable energy production	Energy potential deriving from photovoltaic, wind-energy and hydro-electrical installations	Share of unused agricultural land as % of total agricultural land	Renewable energy production
Status of water bodies (groundwater, rivers, lakes, estuarine, coastal, bathing, drinking waters)	River Water quality 1992-2010	Water consumption OR Performance index of water supply system	Forest cover	Release of greenhouse gases from transportation
Population at risk of flooding	Dwellings in Flood Risk Areas	Landscape designated for special environmental protection	Share of population living in flood-prone territories	Wilderness areas not disturbed by human activity
Status of protected European habitats and species	Designated areas 1991-2011	Nature 2000 designations	Land area occupied by public open space	Size of defined protection areas
Municipal waste recovery rate	Municipal waste recovery rate	Role of agriculture – farm units and area under cultivation	Proportion of recycled waste	% of waste recycled
Number of days where EU air quality limit values are exceeded	Breeding birds	Air quality statistics	Percentage or number of Eco schools	Share of food produced domestically in Iceland
GHG emissions per capita	Greenhouse gas emissions	Inventory of greenhouse gas emissions	Number of biological farms	Net greenhouse gas emissions
	Biodiversity, status of BAP Habitats in Scotland 2008	Bio fuel consumption	Rural Bird index	Share of renewable energy in land transportation and fisheries
	Flora/fauna/biodiversity			
	Landscape			

C5.3 Data Gaps and Limitations

Tables C9 to C12 below detail the level of data availability across the five stakeholder territories in respect of each of the twenty key indicators selected. In general, the indicators are widely available, however, depending on the level of precision required by the indicator, some are more available than others. For instance, indicators such as GDP per capita, Population Density, Population Change, R&D as a % of GDP, Dependency Ratio and Housing Completions are available in all regions to a wide variety of spatial scales from NUTS I to the Local Administration Unit (LAU). Other, more precise indicators (Land Use Change, Population aged 30-35 with tertiary education) have proved to be more difficult to capture and are only partly available across the partner territories and in some cases only available at the very broad (NUTS I or II) spatial scale.

A number of the chosen key indicators also require significant levels of research and analysis to calculate and are simply not available through national statistical agencies. Indicators such as 'Population at Risk of Flooding', '% of population within 500m of Green Spaces', 'Access to Hospitals or Schools' and 'Land Use Change' must be developed through either research projects or commissioned projects by planning authorities or central government and may require significant resource allocation for initial analysis and subsequent updates. It is also unlikely that the outputs of such research projects will be comparable between partner territories. As an example, the outputs of 'Access to Hospitals and Schools' results from both Scotland and Ireland use completely different methodologies. Although both are equally valid for internal use, it would not be advisable to undertake a comparable analysis between the two countries.

Table C9: Theme 1 Indicators - Availability, Scale and Quality			
Economic Competitiveness and Resilience (NA = not available)			
Region	Years Available	Spatial Scale	Quality of Indicator Match: 1 (Exact), 2 (Good), 3 (Poor/Different)
GDP per capita/GVA per capita - € per inhabitant			
Scotland	1997-2011	NUTs 1, 2 (4) ,3 (23)	1
Iceland	1991-2012	NUTs 1-2 (1)	1
Basque Country	1996,2000, 2005,2008	NUTS 2 (1), 3 (3), LAU 251	1
Latvia	2000-2011	NUTs 1,2 (1)	1
Rep of Ireland	2000-2011	NUTs 1,2 (2), 3 (8)	1
Employment rate of population aged 20-64 - % (total work force)			
Scotland	*2004-2011*	*NUTs 1, 3 (LAU 31)*	*NUTS 2(1), NUTS 3 (2)*
Iceland	*1991-2012*	*Nuts 1-2 (1), 3 (2)*	*1*
Basque Country	*2001-2012*	*NUTs2 (1), 3 (3)*	*1*
Latvia	*2002-2012*	*NUTs 1,2 (1), 3 (6)*	*2*
Rep of Ireland	2002-2012	NUTs 1,2 (2), 3 (8)	2
Total R & D expenditure as % of GDP			
Scotland	*2011*	*NUTS1*	*1*
Iceland	*2000-2009*	*NUTs 1-2 (1)*	*1*
Basque Country	*1996-2011*	*NUTs2 (1)*	*1*
Latvia	*1993-2011*	*NUTs 1,2 (1)*	*1*
Rep of Ireland	2008-2012	*NUTS1*	1
Balance of external trade - % of total trade			
Scotland	*NA*	*NA*	*NA*
Iceland	*NA*	*NA*	*NA*
Basque Country	*1979-2011*	*NUTs2 (1), 3 (3)*	*2*
Latvia	*NA*	*NA*	*NA*
Rep of Ireland	2002 - 2012	*NUTS1*	1
Economic structure - % employment by sector (Primary, Secondary, Tertiary)			
Scotland	*2010-2012*	*NUTs 1, 3 (LAU 32)*	*1*
Iceland	*NA*	*NA*	*NA*
Basque Country	*2001, 2006, 2010*	*NUTS 2 (1), 3 (3), LAU 251*	*1*
Latvia	*2008-2011*	*NUTs 1,2 (1), 3 (6)*	*1*
Rep of Ireland	2002, 2006, 2011	NUTs 1,2 (2), 3 (8), LAU 3,406 or 18k	1

Table C10: Theme 2 Indicators - Availability, Scale and Quality			
Integrated Spatial Development (NA = not available)			
Region	Years Available	Spatial Scale	Quality of Indicator Match: 1 (Exact), 2 (Good), 3 (Poor)
Population density/Population change			
Scotland	*2011P Den 2001-2011 Pop*	*NUTs 3/LAU 32*	*1*
Iceland	*2012P Den + 1990-2012 Pop*	*NUTs 1-2 (1)*	*1*
Basque Country	*2004-2012*	*NUTS 2 (1), 3 (3), LAU 251*	*1*
Latvia	*2010-2012 P Den*	*NUTs 1,2 (1), 3 (6), 4 (119)*	*1*
Rep of Ireland	2002, 2006, 2011	NUTs 1,2 (2), 3 (8), LAU 3,406	1
House completions - Absolute values or % of total housing stock			
Scotland	*1996-2011*	*NUTs 1, 3 (LAU 32)*	*1*
Iceland	*1990-2012*	*NUTs 1-2 (1)*	*1*
Basque Country	*91,96, 01, 06, 11*	*NUTS 2 (1), 3 (3), LAU 251*	*1*
Latvia	*1990-2010*	*NUTs 1,2 (1), 3 (6), 4 (119)*	*1*
Rep of Ireland	2002-2013 (Qtr)	NUTs 1,2 (2), 3 (8), 4 (34)	1
Modal split - % of total number of trips (bus, rail, car, bicycle)			
Scotland	*1998-2010*	*NUTs1*	*1*
Iceland	*NA*	*NA*	*NA*
Basque Country	*2011*	*NUTs2 (1)*	*1*
Latvia	*1990-2012*	*NUTs 1,2 (1)*	*1*
Rep of Ireland	2002, 2006, 2011	NUTs 1,2 (2), 3 (8), LAU 3,406	1
Land use change - % of total (building, roads, domestic, green space, agricultural, woodland, water, etc.)			
Scotland	*NA*	*NA*	*NA*
Iceland	*NA*	*NA*	*NA*
Basque Country	*2007 & 2012*	*NUTS 2 (1), 3 (3), LAU 251*	*2*
Latvia	*2010-2013*	*NUTs 1,2 (1)*	*2*
Rep of Ireland	1990, 2000, 2006 and 2012	NUTs 1,2 (2), 3 (8), 4 (34)	2
Services (hospitals and schools)			
Scotland	*2006, 2009,2012*	*LAU Data Zones 6505*	*2*
Iceland	*NA*	*NA*	*NA*
Basque Country	*2007*	*NUTS 2 (1), 3 (3), LAU 251*	*2*
Latvia	*NA*	*NA*	*NA*
Rep of Ireland	2010	LAU 3,406 or 18k	1

Table C11: Theme 3 Indicators - Availability, Scale and Quality			
Social Cohesion and Quality of Life (NA = not available)			
Region	Years Available	Spatial Scale	Quality of Indicator Match: 1 (Exact), 2 (Good), 3 (Poor)
Population aged 30-34 with tertiary education - % of total population aged 30-34			
Scotland	*NA*	*NA*	*NA*
Iceland	*1995-2010*	*NUTs 1-2 (1)*	*2*
Basque Country	*2004-2011*	*NUTs2 (1)*	*1*
Latvia	*2011*	*NUTs 1,2 (1)*	*1*
Rep of Ireland	2002, 2006, 2011	NUTs 1,2 (2), 3 (8), LAU 3,406	2
Population at risk of poverty - % of total population at risk of poverty			
Scotland	*2006, 2009,2012*	*Data Zones? 6505*	*2*
Iceland	*2004-2011*	*NUTs 1-2 (1)*	*2*
Basque Country	*2008 & 2012*	*NUTs2 (1), 3 (3)*	*2*
Latvia	*2004-2011*	*NUTs 1,2 (1), 3 (6)*	*2*
Rep of Ireland	2009-2011	NUTs 1,2 (2)	1
Green space accessibility - % of total population within 500 metres of public managed green areas (active and passive)			
Scotland	*NA*	*NA*	*NA*
Iceland	*NA*	*NA*	*NA*
Basque Country	*2005-2009*	*NUTS 2 (1), 3 (3), LAU 251*	*3*
Latvia	*NA*	*NA*	*NA*
Rep of Ireland	*NA*	*NA*	*NA*
Well-being index - Index Score			
Scotland	*NA*	*NA*	*NA*
Iceland	*2007-2011*	*NUTs 1-2 (1)*	*3*
Basque Country	*NA*	*NA*	*NA*
Latvia	*2012*	*NUTs 1,2 (1)*	*2*
Rep of Ireland	*NA*	*NA*	*NA*
Dependency ratio - % of total population			
Scotland	*2002-2011*	*NUTs 3/LAU 32*	*1*
Iceland	*1998-2012*	*NUTs 1-2 (1)*	*1*
Basque Country	*2003-2012*	*NUTS 2 (1), 3 (3), LAU 251*	*1*
Latvia	*2011-2012*	*NUTs 1,2 (1), 3 (6), 4 (119)*	*2*
Rep of Ireland	2002, 2006, 2011	NUTs 1,2 (2), 3 (8), LAU 3,406	1

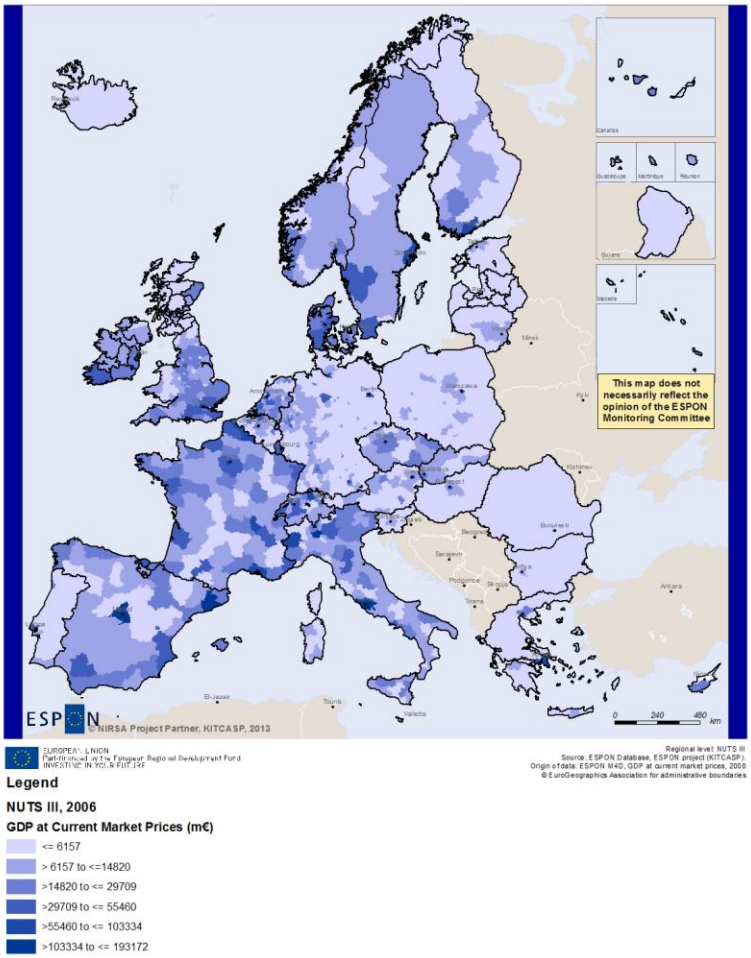
Table C12: Theme 4 Indicators - Availability, Scale and Quality			
Environmental Resource Management (NA = not available)			
Region	Years Available	Spatial Scale	Quality of Indicator Match: 1 (Exact), 2 (Good), 3 (Poor)
Renewable energy production (wind, hydro, biomass, etc.) - Megawatts and % by renewable energy type			
Scotland	*2000-2011*	*NUTS1*	*1*
Iceland	*1990-2011*	*NUTs 1-2 (1)*	*1*
Basque Country	*2000-2011*	*NUTs2 (1)*	*2*
Latvia	*2008-2012*	*NUTs 1,2 (1)*	*3*
Rep of Ireland	1990-2011	*NUTS 1*	1
Greenhouse gas emissions - Tonnes CO_2 eq. per individual			
Scotland	*2005-2010*	*NUTs 1, 3 (LAU 32)*	*2*
Iceland	*1990-2010*	*NUTs 1-2 (1)*	*2*
Basque Country	*1990-2011*	*NUTs2 (1)*	*1*
Latvia	*2008-2011*	*NUTs 1,2 (1)*	*2*
Rep of Ireland	1999-2008	*NUTs 1*	2
Population at risk of flooding (living in flood-prone areas) - % of total population			
Scotland	*NA*	*NA*	*NA*
Iceland	*NA*	*NA*	*NA*
Basque Country	*2008-2011*	*NUTS 2 (1), 3 (3), LAU 251*	*2*
Latvia	*NA*	*NA*	*NA*
Rep of Ireland	NA	NA	NA
Number and status of protected European habitats and species - Number and Conservation Status (EU defined status of Natura 2000 sites - SACs and SPAs and Annexed species)			
Scotland	*NA*	*NA*	*NA*
Iceland	*NA*	*NA*	*NA*
Basque Country	*?*	*NUTs2 (1)*	*1*
Latvia	*?*	*NUTs 1,2 (1)*	*NA*
Rep of Ireland	2011	*NUTs 1,2 (1)*	1
Water quality status - Absolute values on the actual status or objective met/failed (as per WFD for groundwater, rivers, lakes, estuarine, coastal)			
Scotland	*NA*	*NA*	*NA*
Iceland	*NA*	*NA*	*NA*
Basque Country	*NA*	*NA*	*NA*
Latvia	*2007-2010*	*NUTs 1,2 (1)*	*1*
Rep of Ireland	2007-2012	*NUTs 1*	1

C5.4 Mapping the Indicators

A key output from ESPON projects is typically mapping of indicators and trends. A major learning outcome from the KITCASP project is that mapping at NUTS 1, 2 and 3 scale maybe useful for pan-European comparative purposes but is of very limited utility for national level spatial planning. In order to illustrate why a finer spatial scale is required a number of maps have been prepared.

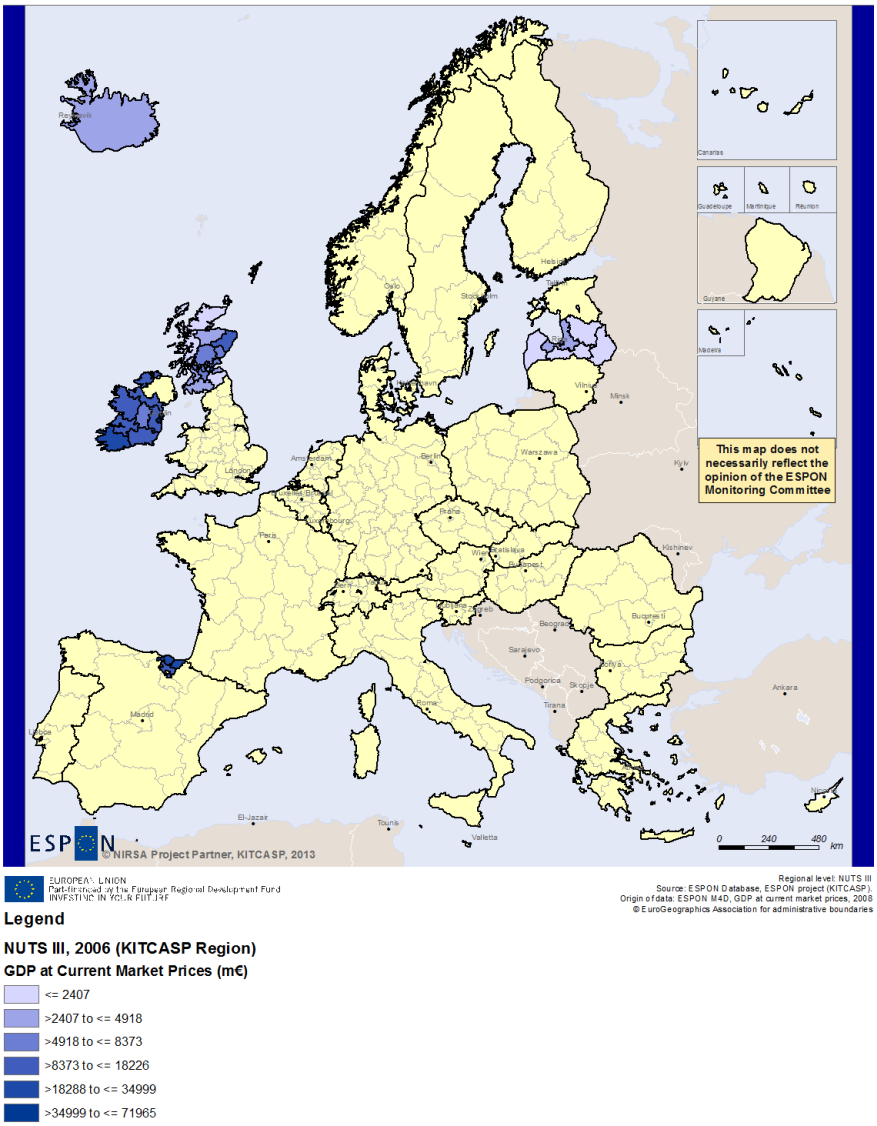
Figure C13 provides an analysis of GDP at current market prices in 2008 and is a useful indicator that is available for all NUTS III areas within the ESPON Area. By using the ESPON Database and ESPON M4D project it was possible to access a time-series set of GDP data for 2001 to 2008. Although useful for setting the KITCASP project partner areas in a wider European economic context, the GDP data is out of date and does not provide an accurate assessment of the current economic health of partner areas. ***Figure C14*** below is a further extraction of this dataset and just provides a thematic analysis of the KITCASP partners in isolation.

Map C13: Gross Domestic Product (GDP) At Current Market Prices At NUTS Level 3



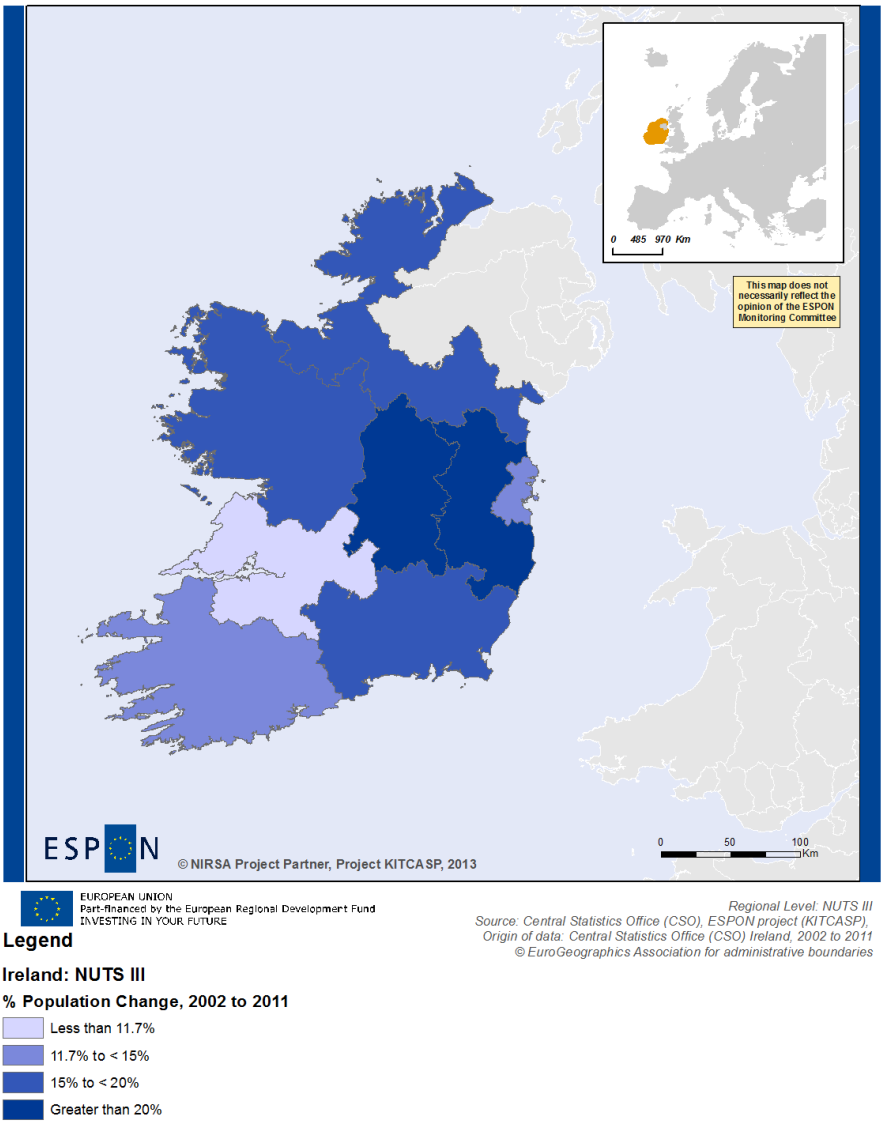
Map C14: Gross Domestic Product (GDP) At Current Market Prices At NUTS Level 3 (KITCASP Study Area)

Gross Domestic Product at Current Market Prices, 2008 (KITCASP Partners)

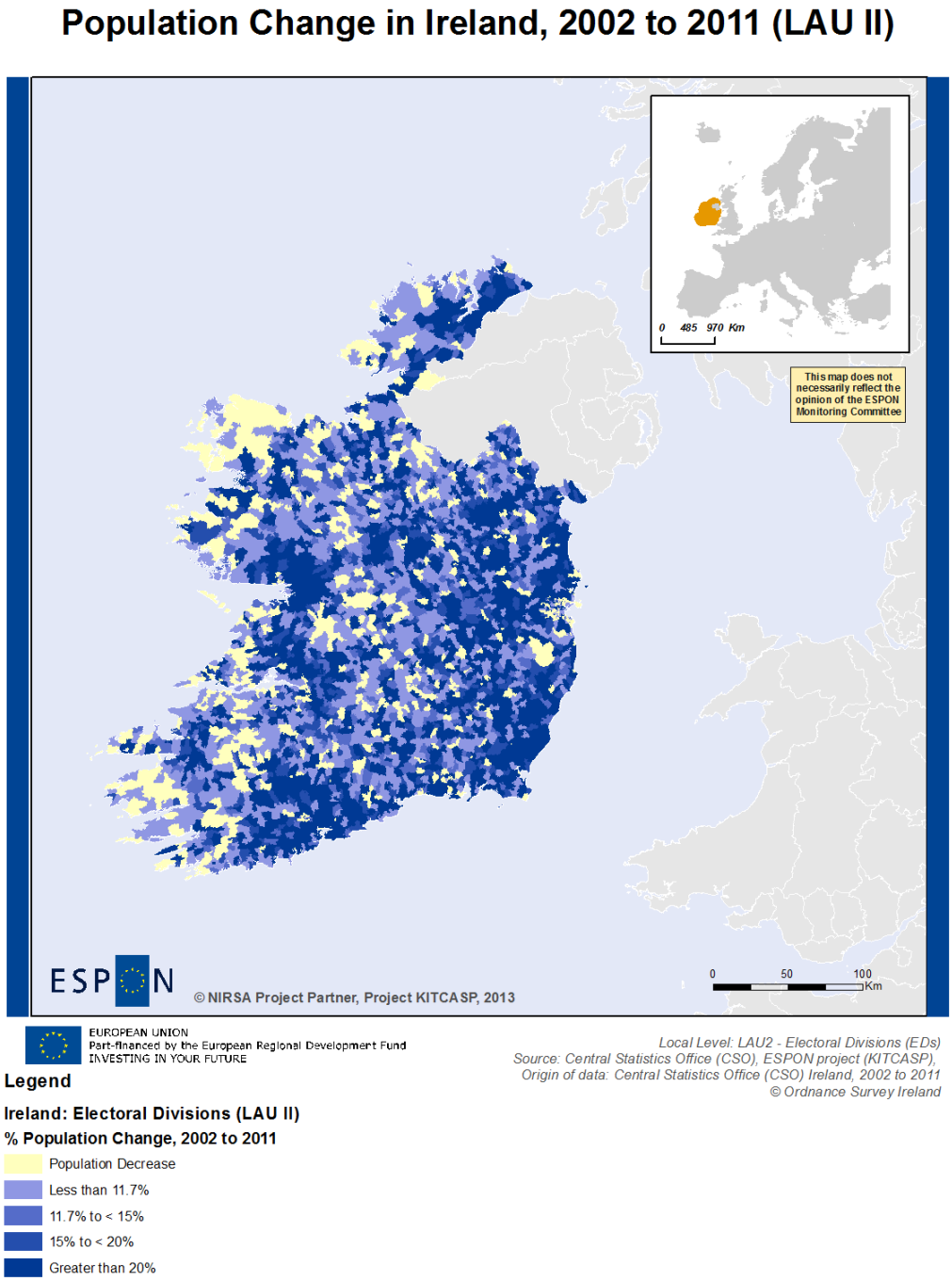


Figures C15 and C16 below highlight the requirement for mapping indicators at a local scale for more detailed than the NUTS III level. ***Figures C15*** provides an analysis of population change in Ireland between 2002 and 2011 at the NUTS III level and suggests that population growth has occurred in all parts of the country with highest rates in the Midlands and Mid-East NUTS III areas. An analysis of ***Map C16*** details that significant parts of the country actually witnessed population decrease between 2002 and 2011 and also shows the major growth that has taken place in the commuter belts of the main cities in Ireland: Cork; Limerick; and Galway. This is the minimum spatial resolution required for spatial planning purposes.

Map C15: Population Change in Ireland, 2002 to 2011 (NUTS III)

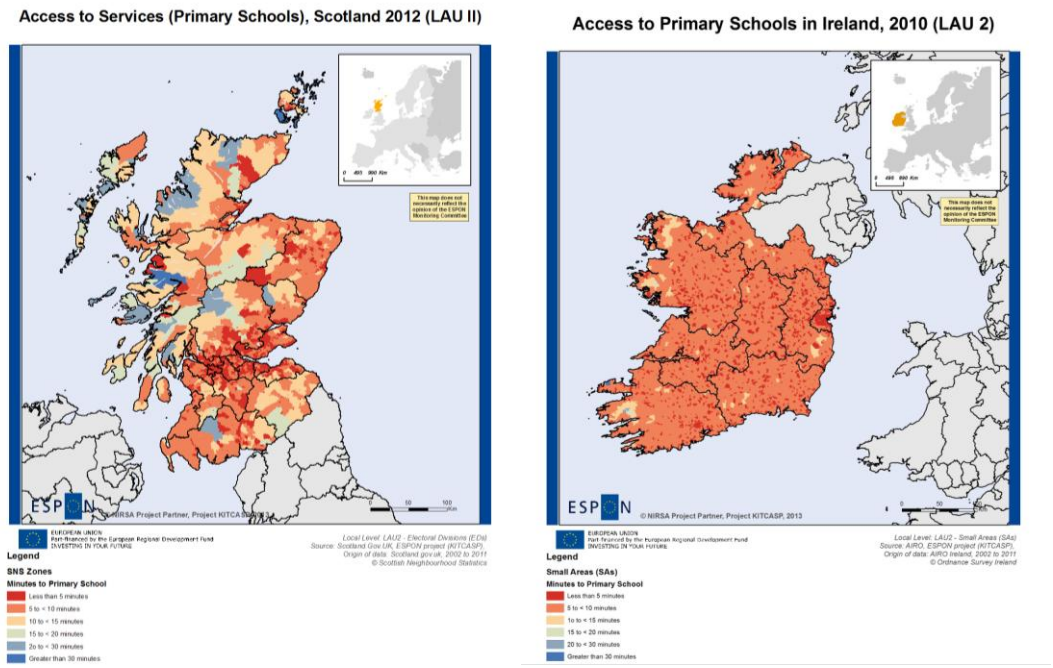


Map C16: Population Change in Ireland, 2002 to 2011 (LAU 2: Electoral Divisions)



Access to services has been highlighted as an important indicator within the KITCASP project. An analysis of available data sources in project partner territories has highlighted that although the indicator may be available in certain locations (Ireland and Scotland as an example) there may in fact be some very different methodological processes behind the generation of the indicator. For instance, in Scotland the access to services indicator is part of a wider Index of Multiple Deprivation and the accessibility domain is developed through a combined analysis of access to services using both private transport drive times and also public transport times. In Ireland on the other hand, the access to services indicator is the result of a one-off research project looking at all-island access to services such as health care, education, transport and retail facilities. Although similar to the Scottish results, the Irish indicator is solely based on average private transport access. As a result of this it is not possible to provide a comparative analysis of these indicators and they must be view in isolation. It must also be noted that the indicators used in both maps are available at different spatial scales - in Scotland the average SNS Zone population is between 500 and 1000 whereas in Ireland the average population within each Small Area is approximately 250 ***(See Figure C17).***

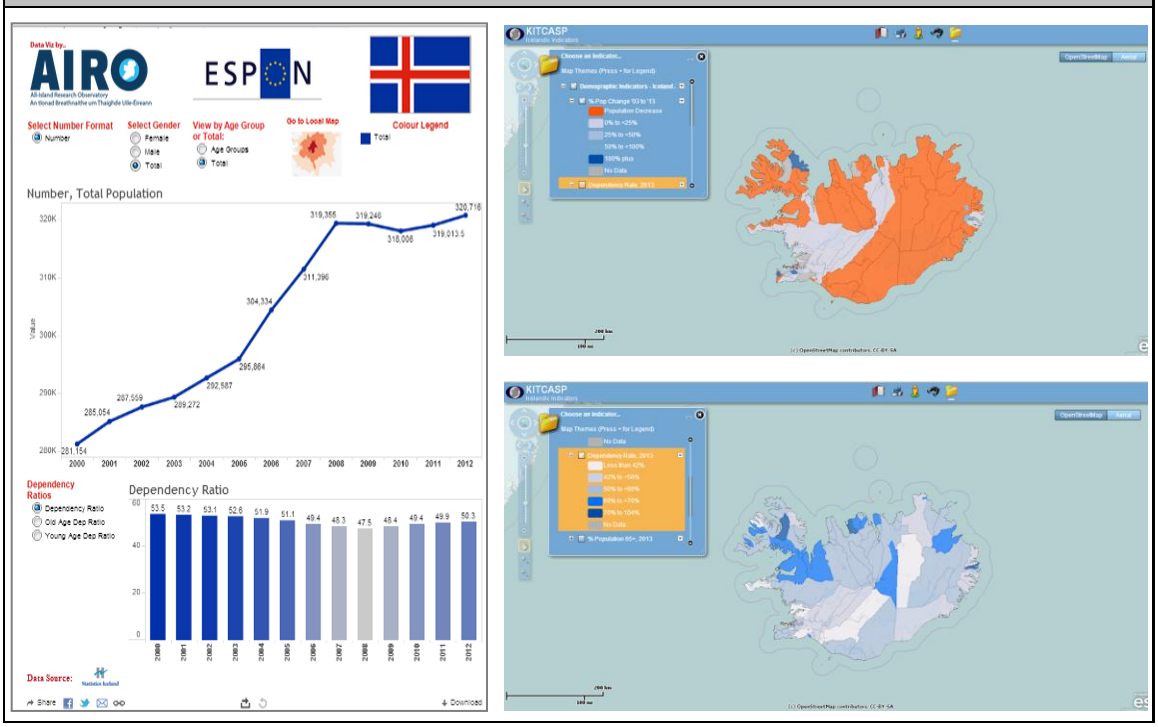
Figure C17: Access to Services (Primary Schools) in Ireland and Scotland



C5.5 Online Indicator Dashboard System

Given the mapping and scale issues described in ***Section C3.8*** above, a key output of the KITCASP project is the development if a web platform to allow the visualization of indicators in mapped and non-mapped formats as appropriate. It is considered that such an approach has greater utility for spatial planning indicators than standalone maps ***(See Figures C18-C21).***

Figure C18: Sample Output Of Time-Series and Mapped Data for Iceland from the KITCASP Web-Tool.



Based on existing technology used by the All Ireland Research Observatory (AIRO) web platform (Tableau, ESRI ArcGIS for Server), a series of data visualisation examples have been compiled in an online indicator dashboard systems for each region. For the purposes of the project the AIRO team have developed a dashboard for 3 indictors in each of the 4 project themes. Depending on data availability, the dashboard system allows a simple and straightforward interactive analysis of the changes and trends in indicator values through time, as well as their spatial assessment (Figure X). The technology used in the development of the system also allows users to share results (email dashboard, embed in blog or website) and download images and data. Although all dashboards are embedded within the AIRO website for illustrative purposes it must be noted that project partners/stakeholders can easily extracting the .html code for the individual dashboards and embed within their own corporate websites. The dashboards are therefore fully accessible and 'open' and encourages the underlying evidence to be used as a basis for discussion and decision making. The KITCASP indicators within the AIRO website can be found at: http://airo.ie/spatial-indicators

Figure C19: Output from the KITCASP Web-Tool Showing Housing Completions in Scotland, 2000 to 2011

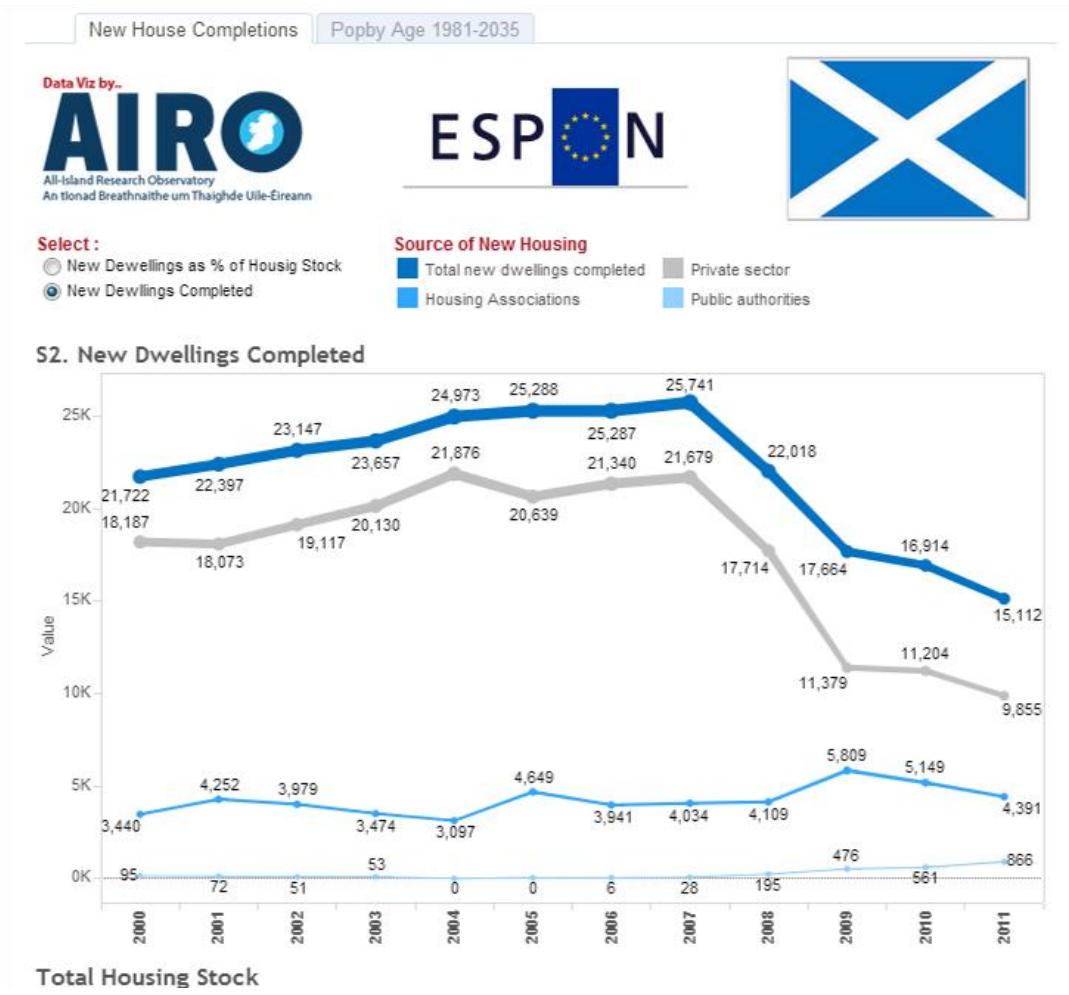


Figure C20: Output From The KITCASP Web-Tool Showing Public Open Space Accessibility In The Basque Country

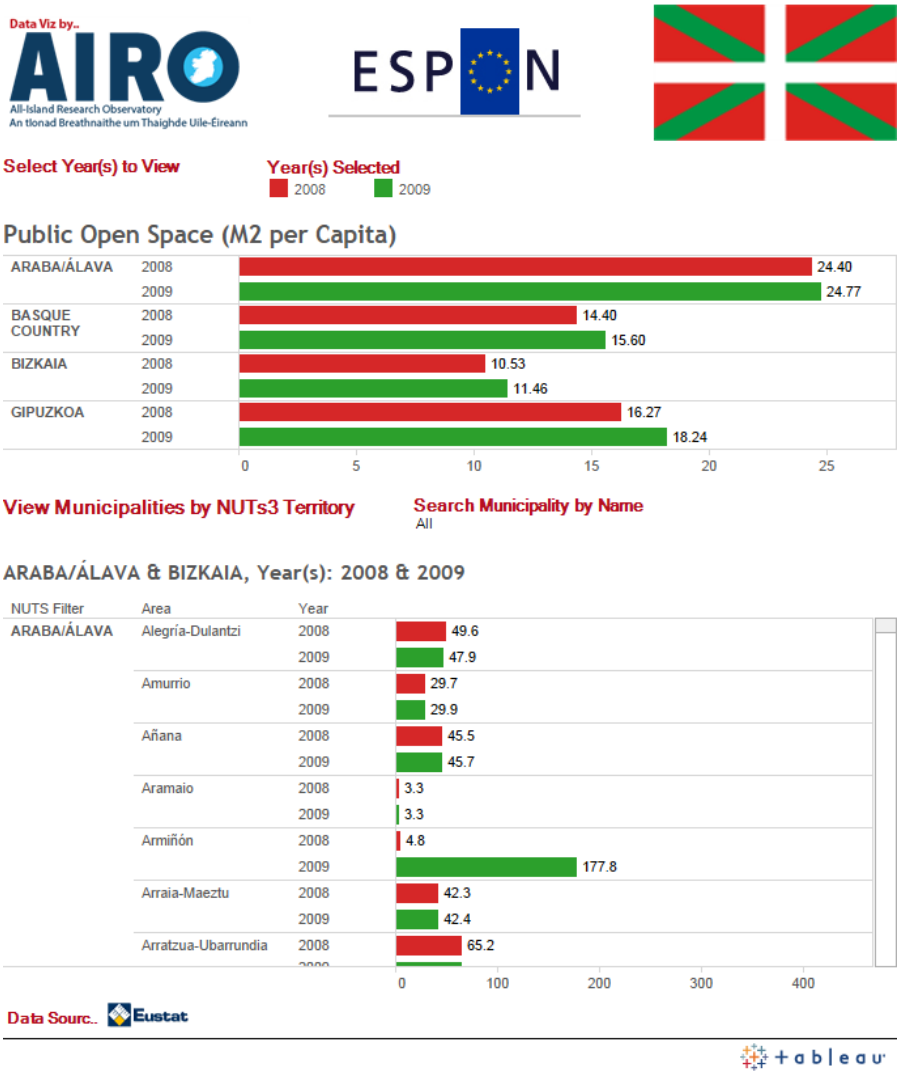
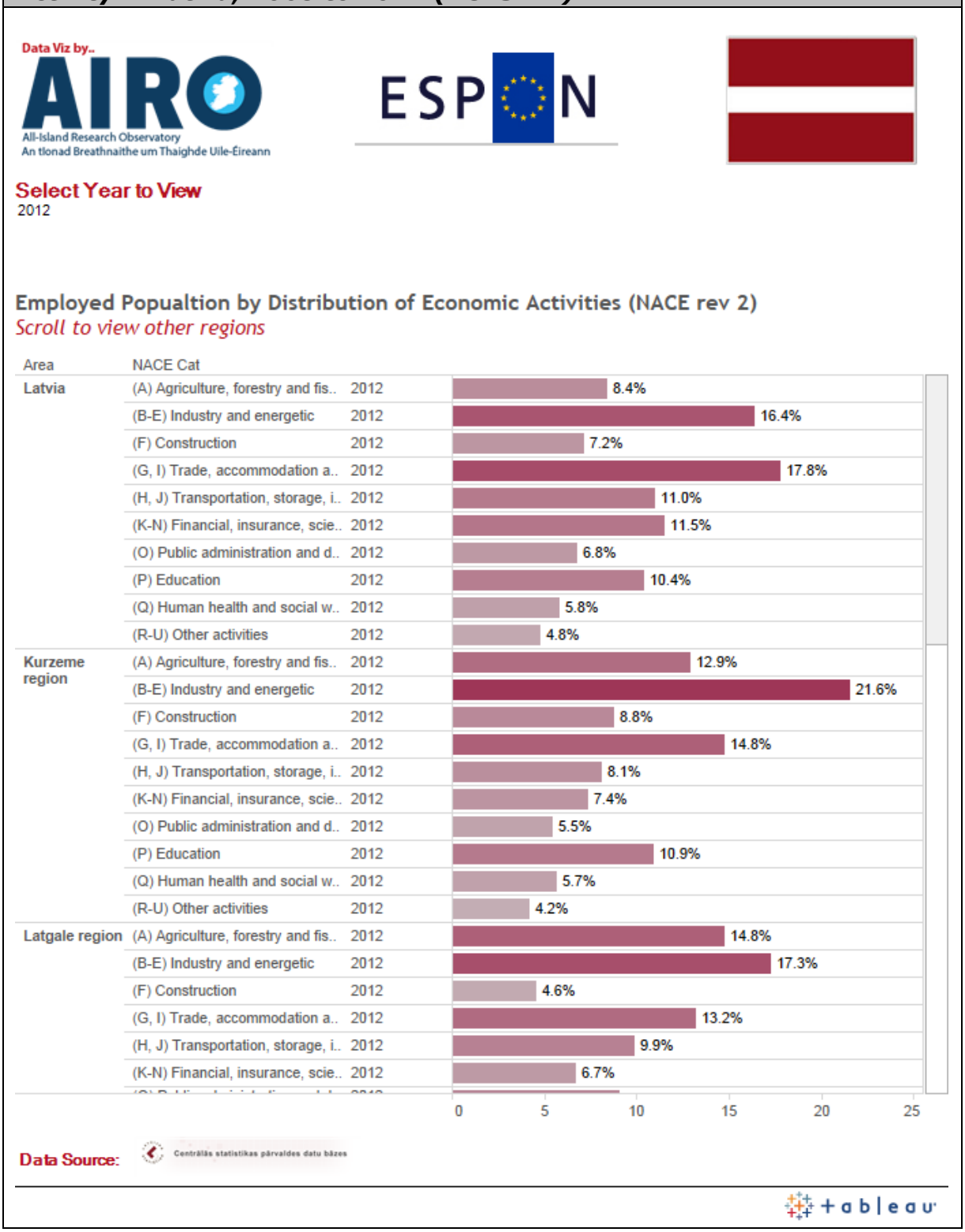


Figure C21: Output From The KITCASP Web Tool Illustrating Economic Activity in Latvia, 2008 to 2012 (NUTS III)



---xxx---

References:

Bohme, K., Doucet, P., Komornicki, T., Zaucha, J., Swiatek, D., 2011. How to Strengthen the Territorial Dimension of "Europe 2020" and the EU Cohesion Policy. Report Based on the Territorial Agenda 2020. Warsaw.

Carlo, L., Demicheli,, L., Ivone Pereira Martins, 2002. Towards an urban atlas. Office for Official Publ. of the Europ. Communities.

CEC, 2010. Europe 2020: A Strategy for Smart, Sustainable and Inclusive Growth (No. COM (2010) 2020 final). Brussels.

CEC, 2011a. Territorial Agenda of the European Union 2020: Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions. Hungary.

CEC, 2011b. The Territorial State and Perspectives of the European Union: 2011 Update - Background Document for the Territorial Agenda of the European Union. European Commission, Presented at the Informal Meeting of the Ministers responsible for Spatial Planning and Territorial Development on 19th May 2011, Godollo, Hungary.

DoECLG, 2010. Implementing the National Spatial Strategy: 2010 Update and Outlook: Harnessing Potential, Delivering Competitiveness, Achieving Sustainability. Department of the Environment, Community and Local Government.

Duhr, S., Colomb, C., Nadin, V., 2010. European Spatial Planning and Territorial Cooperation.

ESPON, 2012. INTERCO - Indicators for Territorial Cohesion.

www.espon.eu

The ESPON 2013 Programme is part-financed by the European Regional Development Fund, the EU Member States and the Partner States Iceland, Liechtenstein, Norway and Switzerland. It shall support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory.

ISBN