Regional Development in the Nordic Countries 2010

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Nordic cooperation

Nordic cooperation
takes place among the countries of Denmark, Finland, Iceland, Norway and Sweden, as well as the autonomous territories of the Faroe Islands, Greenland and Åland.

The Nordic Council
is a forum for cooperation between the Nordic parliaments and governments. The Council consists of 87 parliamentarians form the Nordic countries. The Nordic Council takes policy initiatives and monitors Nordic cooperation. Founded in 1952.

The Nordic Council of Ministers
is a forum of cooperation between the Nordic governments. The Nordic Council of Ministers implements Nordic cooperation. The prime ministers have the overall responsibility. Its activities are co-ordinated by the Nordic ministers for cooperation, the Nordic Committee for cooperation and portfolio ministers. Founded in 1971.

Nordregio – Nordic Centre for Spatial Development
works in the field of spatial development, which includes physical planning and regional policies, in particular with a Nordic and European comparative perspective. Nordregio is active in research, education and knowledge dissemination and provides policy-relevant data. Nordregio was established in 1997 by the Nordic Council of Ministers. The centre is owned by the f ive Nordic countries and builds upon more than 30 years of Nordic cooperation in its field.

Stockholm, Sweden, 2010

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Preface

Nordic policy makers need to have access to up to date and comparable information in order to develop and implement successful regional development strategies. This report is the twelfth volume in the series "Regional Development in the Nordic Countries", which has, since 1981, regularly supplied practitioners with comprehensive analysis of the Nordic regional development scene. It is also the first summary report presented by *Nordregio*, as a result of the ambition to widen the diffusion of results from recent or ongoing research and analysis projects. Overall, input from around twenty different projects has been used in the production of this report. The aspects covered in the report correspond to the three main themes of the *Nordregio* work programme; competitive regions and territorial cohesion; territorial knowledge dynamics and community and environment.

This book has been compiled by a team of *Nordregio* staff members under the editorship of Maria Lindqvist. The first chapter on regional policies in the Nordic countries was written by Lisa Hörnström, with support from Lisa van Well, Rasmus Ole Rasmusen, Petri Kahila, Moa Hedström and Jon Moxnes Steineke. In chapter two, the presentation of cross-border activities influencing the regional development of Nordic countries was coordinated by Lisbeth Greve Harbo, with the assistance of Peter Schmitt and Stephanie Lange. Johanna Roto, José Sterling and Rasmus Ole Rasmusen, were responsible for the third chapter on regional development trends. In this chapter, a state-of-the art look at human resources, the economic situation and labour markets in the Nordic countries is presented. The volume's fourth chapter on innovation and entrepreneurship as drivers for regional development was compiled by Lise Smed Olsen and Katarina Pettersson. Finally, the chapter on the development of policies and initiatives in respect of climate change and energy policy was summarised by Patrick Galera-Lindblom and Asli Tepecik Dis.

The compilation of statistical information and its presentation in tabular and map form was undertaken mainly by Johanna Roto and José Sterling. A more detailed explanation of the statistical issues relating to the data used can be found in the electronic annex. Chris Smith was responsible for language editing. Valuable input to the chapter on regional policies was provided by Sverker Lindblad, Ministry of Enterprise, Energy and Communications (Sweden), Birgitte Sem Whol, Ministry of Local Government and Regional Development (Norway), Snorri B. Sigurðsson, Icelandic Regional Development Institute, Susanne Johansen, Danish Enterprise and Construction Authority and Leif Ehrsten, Ministry of Employment and the Economy (Finland). We would like to thank all of you for your support!

Stockholm, December 2010

Executive summary

Introduction

This report is the twelfth volume in the series "Regional Development in the Nordic Countries", which has regularly supplied practitioners with comprehensive analysis of the Nordic regional development scene. It is a summary report, with the ambition of widening the diffusion of results from recent or ongoing research and analysis projects. Overall, input from around twenty different projects has been used in the production of this report.

The report consists of five chapters beginning with a general introduction to regional policies in the Nordic countries which is designed to provide a framework for the following chapter. In the second chapter, the development of cross-border cooperation between the Nordic countries as well as within the EU more generally is presented. Chapter three discusses regional development trends in terms of human resources; economic development and labour markets. The following two chapters elaborate on questions related to two of Nordregio's core research areas; territorial knowledge dynamics and community and environment. In chapter four, the importance of knowledge and the relationship between innovation and entrepreneurship in regional development is discussed. Finally, chapter five focuses on climate change and energy policy which are seen as central issues for sustainable regional development.

Regional Policies in the Nordic Countries

The general motive behind regional policy is to address the problems emerging from the uneven economic development between regions. At a European level, the purpose of EU Cohesion Policy is to contribute to the Lisbon and Gothenburg objectives for growth, jobs and sustainable development by promoting cohesion across the EU-territory and improving the use of all available resources. Sweden, Denmark and Finland, and to some extent even the non-EU members of Norway and Iceland, are influenced by EU policies and programmes, since they create a framework which impacts on regional policies. For example, in Finland, Sweden and Denmark the EU programming periods are taken into account when forming regional policy at the national as well as the regional level. Norway and Iceland are also affected by strategies formulated at the EU level, not least concerning state aid rules, as they are a part of the EEA.

EU membership has pushed regionalisation processes in the Nordic countries, for example the establishment of regional partnerships for the formulation of regional development policy documents and the allocation of EU funding. Similarly, rural development has traditionally not been addressed as a specific policy field in the larger Nordic countries but after EU accession greater attention has undoubtedly been given to rural development, particularly related to the agri-environmental measures of the Rural Development Programme.

Over the last two decades there has been a discernable shift in focus in regional policy strategies in the Nordic countries from redistribution and state intervention to the promotion of a stronger focus on endogenous growth strategies. Important differences nevertheless remain across the Nordic countries. For example, the shift toward regional growth strategies tends to be most pronounced in Sweden, Denmark and Finland. Innovation and entrepreneurship have been introduced as important mechanisms in regional development policies. However, regional development is a complex issue and it is often difficult to distinguish regional policy from other policy areas such as labour-market policy, research policy and education policy.

During the first years of the new century there seemed to be a clear tendency towards a strengthening of the regional administrative level in the Nordic countries, especially in Sweden and Finland. Since then, developments have taken a different direction

and the role of the regional level is still in question. In Sweden, the regional level was strengthened as the administrative experiments in Västra Götaland and Skåne were formalised and 14 cooperative councils were created to take over tasks related to regional development from the regional state representative. Similarly in Finland, large-scale structural reform and the amalgamation of municipalities began in 2005 and in January 2010 a new regional state administration was established. In Denmark, on the other hand, the creation of the five new administrative regions has in some respects reduced the importance of the regional level. In Norway, a structural reform to strengthen the regional level by creating new larger administrative regions was implemented in January 2010, but very few of the original intentions were realised. In Iceland, a large number of small and often isolated municipalities remain and resistance to merging into larger entities is still significant, while in the Nordic autonomous regions, municipalities still play a strong role.

Cross-Border Interactions

Cross-border cooperation is an important means to achieving the overall EU aim of economic and social cohesion across the EU. The European Regional Development Fund (ERDF) provides the bulk of financing for cross-border activities in the Nordic countries. The European Territorial Cooperation objective is the fourth programme period for what was previously termed the INTERREG Community Initiative. The objective covers three types of programmes: cross-border cooperation, transnational cooperation, and interregional cooperation. Some of these programmes are open also to the Nordic non-EU member countries. In addition, the EU has set up a number of programmes that target cooperation along the external borders of Europe: The European Neighbourhood and Partnership Instrument (ENPI). Three ENPI programmes are applicable to the Nordic region.

In June 2009 the EU adopted a major strategic policy document on the territorial future of the Baltic Sea Region (BSR): The European Union Strategy for the Baltic Sea Region (EUSBSR). This document is important to the Nordic countries, as it sets out the framework for the strengthening of territorial and thus also transnational cooperation around the Baltic Sea. This also marked the beginning of the EUs implementation of a macro-regional strategy, since it was subsequently announced that the strategic policy paper for the BSR may be viewed as a forerunner to the implementation of further macro-regional strategies across the European Union.

Nordic cross-border cooperation has a long history; beginning as early as the 1960s. In 2010, eleven Nordic cross-border committees receive funding from the Nordic Council of Ministers (NCM). These are located throughout the Nordic region and, in spite of differences in organisational structures; similarities exist in terms of aim (regional development of the cross-border region), the thematic areas of their activities, the process of their work and the roles undertaken in this process.

Since the first Nordic commuter map was presented in 2001, cross-border commuting has steadily increased. In 2006, a total of 44 000 individuals were classified as cross-border commuters. Commuting from Sweden to Denmark or Norway is the major commuter flow, making up 75% of total cross-border commuting traffic. Norway has by far the largest number of in-commuters, followed by Denmark. The commuter flows between Sweden and Finland are increasing even if the numbers are not dramatic. With increased cross-border commuting, the demand for statistical data for the policy analysis of the cross-border labour market has also increased. However, national statistics often display significant shortcomings in attempting to gain a clearer picture of the border region and a number of different initiatives have been taken in this light. In 2008 the Nordic Council of Ministers (NCM) decided to give the statistical offices of Denmark, Norway and Sweden the task of constructing a Nordic statistical database with comparable statistics, StatNord. The database was launched in November 2009, but a discussion is still ongoing concerning the development and future financing of the continual updating of the database.

Regional Development Trends

From the middle of 1990s the global economy went through a period of exceptional growth, with the Asian economies in the van. Most Nordic countries saw economic development above the EU average, with Iceland at the top and Denmark slightly below the EU average. During this period, economic development in the Nordic Countries, as in many other advanced economies, became increasingly dependent on innovation and knowledge-related growth, as material investments decreased, while immaterial investments in human capital, R&D, education, organisational development and 'branding' became more valuable. From a European perspective the Nordic countries are performing well. In terms of welfare, measured as GDP *per capita* in PPS, 80% of the Nordic regions have reached a level above the EU average. Still only 60% of the regions scored higher in terms of productivity per employee, indicating a potential for further development.

The economic development of regions is closely linked to the development of a competitive business sector, supply and demand of human resources and a well functioning labour market. When combining total population change, the level of employment and economic performance, large variations emerge between the Nordic regions. The capital regions, together with some larger city regions, are performing well, while a negative development is found in many rural areas. Even if overall regional polarisation slowed during the previous decade the Nordic countries and their regions still display different preconditions in their attempts to meet future challenges.

The impact of the economic crises

The global financial and economic crisis beginning in the autumn of 2008 posed significant new challenges to the Nordic countries. The situation has been particularly severe on Iceland, where three of the largest banks collapsed, leading to a rapid depreciation and a severe downturn in the Icelandic economy. The crises resulted in a rapid increase in the European unemployment rate. In 2009, the annual average unemployment rate of the EU27 was 8.9%. Among the Nordic countries, Iceland, Sweden and Finland were especially hard hit. Iceland suffered the most dramatic change in unemployment. Before the crisis, the country had the lowest unemployment rate in Europe. Since then, the level of unemployment has reached a rate of around 8%. In Denmark, the unemployment rate almost doubled, but still remained well below the EU27 average. Norway had the lowest unemployment rate in Europe in 2009 (3.1%).

The economic decline is also shown in trade statistics and many Nordic regions dominated by export-orientated manufacturing industries were struck hard by the crisis. The most striking example was Finland, were the volume of exports shrunk by 20% and imports by 18%. Norway had the least negative growth; probably due to the stable situation of the petroleum market. At a regional level, Finnish regions relying on the paper and pulp industry were heavily hit and West Sweden experienced a significant negative change due to the downturn in the automobile industry. In regions more dependent on services and on public sector employment, the effects of the crisis have, hitherto, been more limited. As a result, there are substantial regional differences in terms of unemployment. The lowest figures (below 2%) are found in most municipalities in Norway and in the Finnish region of Åland, and the highest figures (above 14%) are found in northern Swedish and Finnish municipalities, in Nordjylland (Denmark) and Trollhättan (Sweden). In Denmark, Iceland and Norway, regional differences are smaller.

In 2010 the global economy was still recovering after the crises. During the first quarter of the year GDP expanded at an annual rate over 5%. With strong public finances, Nordic economies, with the exception of Iceland, had been able to give strong support to the financial sector and were among the first economies to recover.

Development of human resources

Demographic development has a significant impact on society, since human resources are vital for regional development, both as a supply base for labour markets and as a source of economic activities, generating household incomes, taxes and the production/consumption of private and public services. All across Europe, there is a trend towards an ageing population. There are, however, differences between the European Union and the Nordic age structures. Compared to the EU27 average, the age group 60-64 years is significantly larger in the Nordic countries, while the age groups 20-54 years are slightly smaller. At the same time, the Nordic countries have, in general terms, high birth rates and a larger share of children aged 0-19 years than the European average.

The overall population change is a combination of births, deaths and migration to and from the region. Since the end of the 1980s, decreasing fertility rates, and increasing life expectancy has resulted in demographic ageing in Europe and migration has become the major

component of population growth. For example, most Nordic municipalities gained from international migration in the period 2005-2009. However, in Denmark, Norway and Sweden the overall level and share of international migration was much higher than in Finland. During this period, the Nordic countries saw a modest population growth of approximately 0.67% per annum, which was above the average EU growth of 0.40% per annum. At a national level, Denmark, Finland and Sweden had a population increase close to the EU average, while Norway had an annual growth rate above 1%. In Iceland, a rapid population increase was turned into a decrease as a result of the economic crises in 2008, and in the autonomous regions population growth was negative (Greenland) or low (Faroe Islands).

Looking at the population structure by age and gender, regional variations remain. A common trend here is that the population in urban areas is younger than in rural and sparsely populated areas. Generally speaking, the city regions also have the highest share of female population, while in small and medium-sized towns and some more rural regions, especially in West Norden, males predominate. Large variations in population growth are also found between Nordic regions. Over the last ten years the Nordic capital commuter catchment regions and some larger city regions experienced a high annual average population increase, often due to a combination of immigration and natural increase. At the same time municipalities outside the city regions have experienced remarkable population losses, mainly in the Danish, Finnish and Swedish countryside.

A skilled labour force

Unemployment levels are strongly influenced by the economic situation, but a low unemployment rate also indicates an efficient regional labour market, where labour supply and demand are relatively balanced. The increase in unemployment has been affected by an ageing population, population changes (especially in sparsely populated areas) and the marginalisation of vulnerable groups, such as youth, the long-term unemployed and immigrants. The impact of unemployed on vulnerable groups can be expected to vary considerably between regions, due to variations in population structure, growth and skills.

An important asset for the Nordic labour market is its highly skilled labour force, with the highest levels of population with a tertiary education in Europe at the regional level. When it comes to 'life-long learning', the tendency is similar and all Nordic countries have figures well above the EU27 average of 9%, with Finland (29%), Denmark (20%) and Sweden (18%) at the top. Skilled workers tend to be more productive, less exposed to unemployment; more satisfied with their professional lives and they retire at a higher age. The level of education and the quality of the entire educational system are crucial elements in the construction of a skilled labour force. Therefore, many of the measures for countering unemployment in the Nordic countries have focused on education and training. It is also crucial to provide a well-functioning infrastructure and new investment in transportation, housing and education to attract people to and maintain them in a region.

Innovation and Entrepreneurship

In a globalised world, knowledge is becoming an increasingly important factor for innovation and regional competitiveness. The concept of innovation is much broader than inventions or technical development, and includes the implementation of a new or significantly improved product (good or service) or process, new marketing methods as well as new organisational methods. In an increasingly complex world, a single actor seldom has access to all the resources, knowledge and competences required to face global challenges, for example an ageing population, climate changes and the need for energy efficiency. Today, we often talk about systems of innovations, where private as well as public actors from various sectors need to interact.

The knowledge base för innovation

In a knowledge-based economy, a high level of education among the labour force, access to a high quality school system and investments in research and development (R&D) are important resource bases for innovation and development. In a European perspective, the innovation potential of the Nordic countries is high, since both the share of the population with a tertiary education and the level of R&D investment is high. In 2008, the five Nordic countries had the highest public R&D expenditure as a share of GDP in the EU, with Iceland top. Finland, followed by Sweden was ranked highest in terms of private sector R& D expenditure. Still, there are important regional variations, as higher education is clearly concentrated to metropolitan areas in the Nordic countries.

However, a high level of tertiary education or research expenditures may not be enough to stimulate innovation and development. There is also a need for mechanisms to stimulate the exploitation of new ideas, the commercialisation of academic research and the transfer of different types of knowledge between the public and private sectors. Firms delivering knowledge-intensive business services (KIBS) have a central role as integrators of knowledge from various parts of the innovation system, as they tend to have close relations with the knowledge and innovation infrastructure of society, including education and research institutions. The largest concentration of KIBS is found in large metropolitan areas, since concentration offers advantages connected with the production and diffusion of knowledge and with individual and collective learning processes. An essential element for the competitiveness of knowledge-intensive business services is access to highly skilled persons and urban areas tend to have the highest concentration of educated human resources, with a good potential to find relevant employees, partners or customers.

Importance of entreprenurship

Entrepreneurship is another important mechanism to stimulate innovation and regional development. A high level of formal education is not a guarantee that innovation will take place. A strong national and regional entrepreneurship culture indicates a higher potential to create growth in established or new firms. In a global comparison the Nordic countries have not been found among the highest performers in terms of new start-up activities. There are, however, large variations between countries, regions and sectors. In 2009, Finland had the highest share of high-growth entrepreneurs of the Nordic countries, while Denmark was introduced as an example of a country where entrepreneurialism flourishes.

Even if, on average, 58% of all students are female, the levels of self-employed women in the Nordic countries have been relatively stable at around 30% between 2002 and 2008. To increase this level, a strong emphasis has been placed on supporting the development of women entrepreneurs, relating both to women's position in society and the general importance of entrepreneurship in the development of economic growth. All Nordic countries, except Iceland, have a programme or an action plan with the aim of supporting women's entrepreneurship. However, the measures applied vary between the countries concerned and generally consist of a mix of individually and more structurally focused efforts.

Climate Change and Energy Policy

In order to encourage future sustainable development, it is important for both the public and the private actors to address the grand challenges concerning climate change and energy policy. Nordic countries differ in their institutional settings but have similar targets for their climate policies. For climate change adaptation more research and knowledge are needed to set realistic targets. Close cooperation with the private sector is important for utilising the research results. The facilitation of dialogue and the exchange of knowledge and experience between the various levels of public administration are essential in creating synergies and developing effective climate adaptation strategies. The climate change measures taken in the Nordic countries highlight different institutional approaches to climate change adaptation. While Finland considers sectoral adaptation strategies, Denmark and Sweden emphasise the role of local or regional actors in carrying out climate change adaptation efforts.

In terms of climate change mitigation, the Nordic countries are committed to further reducing greenhouse gas emissions by increasing their share of energy generation from renewable sources. Energy policy in the Nordic countries has been influenced by the issues of energy efficiency, security of supply and the environmental impact of energy usage. Over the last three decades, the Nordic countries have sought to respond to economic and environmental challenges through the implementation of various national policy frameworks for the energy sector. Renewable energy sources have progressively substituted coal – mainly with wind power in Denmark and district heating based on biomass in Sweden and Denmark. The success has been the results of various support schemes for these technologies. Progressive deregulation towards the market-based trade of electric power has also been taking place.

Despite the fact that the Nordic countries are generating only moderate emissions of greenhouse gases compared to other developed countries of a similar size, their consumption of energy per capita is among the highest in the world. Relatively high heating demand, due to the cold climate, combined with a sparse population distribution, a greater need for individual transportation, the presence of heavy process industries plus generally high levels of income, are some of the

factors behind this high level of energy demand. In spite of continuous economic growth in the region, however, the demand for energy has remained stable over the last ten years.

The most important energy sources for the Nordic countries, in order of importance, are oil, renewable energy sources (mainly hydro-, geothermal and wind energy), nuclear power, coal and gas. The Nordic region has been privileged to have good access to renewable energy sources as well as a high innovation capacity and efficient national energy policies. On average, the Nordic countries generate electricity from renewable sources at four times the level of the OECD countries. Still, there are large variations concerning access to different renewable energy sources. In Iceland and Norway, almost 100% of all electricity is generated from renewable energy while Greenland, a newcomer to renewable energy, had its first hydropower plant in 1993, and due to the expansion of capacity and construction of additional three hydropower plants during the last years has reached a situation where 11% of the total energy consumption and almost 50% of electricity consumption is based on renewable energy. The Nordic countries have a strong position worldwide in energy innovation thanks to strong national support for this sector, even if energy innovation systems vary with respect to the energy resources available, dominant technology regimes, institutional structures and policy commitments on energy and climate change.

Introduction

Nordregio, the Nordic Centre for Spatial Development, is a European research centre in the broad knowledge field known as regional studies, established by the Nordic Council of Ministers. Its primary mission is to bridge the gap between research and policy making on issues related to regional development. As such, it is important to produce and communicate directly to policy makers at the regional, national and international level relevant research results and analysis from the institute's own research agenda. In the context of this wider process this report fulfils an important function, namely, as the first summary report produced in the attempt to diffuse results from recent or ongoing research and analysis projects. In this report, the results of more than twenty different research and analysis projects have been included. Some have already been concluded while others are still ongoing.

The first two chapters contain a short presentation on the Regional Policies of the Nordic Countries, including reference to the recent structural reforms, a presentation of the development of rural policies and a more detailed discussion on cross-border cooperation. These chapters provide a useful background to understanding the trends and results presented in the following chapters. After a period of strong economic growth all five Nordic countries were hit by the global recession in the autumn of 2008. This, of course, has constituted an important challenge to all countries, but to Iceland in particular. Chapter three, on the Regional Development Trends, presents the recent development of human resources, economic growth and labour markets at national and regional level in the Nordic countries and gives a state-of-the art introduction to the current situation. The two final chapters focus on specific development themes.

The report relates closely to *Nordregio's* own working programme. The working programme for the period 2010-2012 consists of three main research areas. In the context of this report important findings from each of these research areas are presented. The first research area concerns regional development focusing in particular on competitive regions and territorial cohesion. One of the greatest challenges in respect of regional policy is the need to balance the goal of providing inhabitants in all types of regions with good living conditions, with that of ensuring that all regions contribute to national growth and development, based on each region's endogenous potential. Even if the Nordic countries are perceived as relatively homogenous, from a European perspective, important differences continue to exist between regions. Many of the peripheral and sparsely populated areas, for example, can be characterised as small economies facing demographic challenges with an ageing population and the continuing out-migration of young people. At the same time, some of the larger urban regions are struggling to develop an approach to the provision of sustainable living conditions, for example in relation to access to housing and the provision of adequate communication infrastructures. It has also become increasingly clear that different types of regions need to cooperate across regional, national and international borders. It is for this reason that an overview of regional policies and recent regional development trends in the Nordic countries is thus presented in the first three chapters of this report.

A second core area of research concerns territorial knowledge dynamics, including questions relating to entrepreneurship and innovation. In a globalised world, knowledge, in terms of education and experience, becomes an increasingly important factor in the development of regional competitiveness. Through the processes of entrepreneurship and innovation, knowledge can be used to develop new or improved products, services and organisations. Innovation is, however, a complex process, often involving customers and suppliers from the private and public sectors, as well as advanced researchers. An important emerging challenge for regional policy makers then is clearly to stimulate the production of relevant knowledge and to secure networks and linkages for knowledge-transfer between individuals in different organisations, sectors and regions. Data on the educational level of the Nordic labour force is presented in the chapter on regional development trends. The question of knowledge, innovation and entrepreneurship is then further elaborated in the thematic chapter on Innovation and Entrepreneurship.

The third research area in the *Nordregio* working programme relates to the difficult challenges posed by climate change. To develop a sustainable society for the future it is important to include environmental aspects in regional development policies. It is important here to understand the regional consequences of climate policy and green growth strategies, and to develop energy policies to increase energy efficiency and

the use of renewable energy. In the second thematic chapter on Climate Change and Energy Policy, recent climate policies and the challenges concerning energy consumption and production in the Nordic countries are presented.

Regional Policies in the Nordic Countries

Introduction

This chapter focuses on regional policies in the Nordic countries, the impact of EU policies on national strategies for regional development, the formal structures for governing regional policies and the current reform process in respect of these structures. The chapter also contains a description of policies of rural development in the four largest Nordic countries. Regional policy strategies in all the Nordic countries focus on creating the conditions for development to take place across all parts of the country. This implies the need for special incentives in regions that are weaker than the average in terms of economic development and population trends. Regional policy in the Nordic countries has, however, also gone through something of a transformation over the last two decades with the focus now increasingly on regional growth based on endogenous growth strategies and less on state intervention. Important differences, moreover, remain in terms of strategies for regional development across the Nordic countries. These differences will be highlighted in this chapter. When it comes to governing regional development policy, structural reforms have long been and remain an important topic in the policy discourse in each of the Nordic countries. During the last 10-15 years the desire to involve regional actors has become stronger and the division of responsibilities between the state, the regions and the municipalities has changed. In 2007, it still appeared that all the Nordic countries were continuing to strengthen their administrative regional levels, both in terms of size and in relation to the amount of responsibilities given to them, but since then, the picture has become more fragmented.

Traditionally rural development has not been addressed as a separate policy field in the four largest Nordic countries. The strong and redistributive regional policies combined with primary sector support were regarded as sufficient for decades. However, Norway differs to some extent from the other countries. Instead of focusing on regional and rural policies a division is, and has for decades been made between regional and district policy. The later focuses on sustaining more peripheral regions. Development policies focusing on rural areas in specific, looking beyond agricultural activities, gained attention with the EU accession of Denmark and later also of Finland and Sweden as well as with the parallel shift in Nordic regional policies from redistribution to competition. In general in all four countries endogenous development and local engagement have come to be seen as important tools for the development of rural areas. There are however important differences between the Nordic countries which will be attended to in this chapter.

The impact of EU policies

Several EU territorial strategies work as external drivers shaping regional development in Sweden, Denmark, Finland, and to some extent even the non-EU members of Norway and Iceland. The Lisbon Agenda, the Territorial Agenda and Europe 2020 are examples of recent, current and future drivers of regional development policy.

The Lisbon Agenda

The EU Lisbon Agenda, adopted in 2000 had the ambitious goal of making the EU the world's most competitive knowledge-based economy by 2010. It called for the creation of competitive growth throughout the EU territory via efforts to boost technology, knowledge transfer and innovation. In 2005 the Lisbon Agenda was re-launched with somewhat less

ambitious targets but in a version that operationalised the strategy with a focus on national and regional actions for growth and employment, creating more and better jobs, instigating better governance procedures and sustainable development.

At the national level, National Reform Programmes (NRP) in each member state set out the goals to be achieved in relation to the Lisbon Agenda objectives and the Community Integrated Guidelines for Growth and Jobs (2005-2008). An important ambition of the NRPs is to involve national parliaments and other national actors in the implementation process of the Lisbon agenda. Important priorities include:

1. Knowledge and innovation for growth,
2. Creating more attractive places to invest and work, and
3. Creating not just more, but better quality jobs.

Regional policy instruments such as Cohesion Policy funding from the ERDF (European Regional Development Fund) play an important role in achieving the goals of the Lisbon agenda and the EU-15 member states are required to earmark a substantial percentage (at least 75%) of their cohesion policy funding towards achieving the Lisbon goals.

Territoral Agenda

The Territorial Agenda of the European Union was agreed upon at the Informal Ministerial meeting on Urban Development and Territorial Cohesion in Leipzig in May 2007. Strengthening territorial cohesion is the primary goal of the agenda which became solidified when the Treaty of Lisbon entered into force in December 2009. The Territorial Agenda sets the task of achieving territorial cohesion through the setting of priorities which echo those of the ESDP (European Spatial Development Perspective): Development of a balanced and polycentric urban system and a new urban-rural partnership, securing parity of access to infrastructure and knowledge, and sustainable development, prudent management and protection of the natural and cultural heritage. It further adds the promotion of regional clusters of competition and innovation, strengthening and extending trans-European networks and the promotion of trans-European risk management, including the impacts of climate change, to the priorities.

The agenda highlights the importance of territorial governance in seeking to involve all stakeholders (both public and private at national, regional and local level) in an ongoing dialogue process. Regional diversity within Europe is seen as a source of strength. Thus regions are key actors in addressing the challenges illuminated by the Territorial agenda:

1. the regionally diverse impacts of climate change,
2. rising energy prices and the need for new forms of energy supply,
3. increased integration of regions in global economic competition,
4. the impact of EU enlargement on social, economic and territorial cohesion,
5. the overuse of ecological and cultural resources and
6. demographic changes such as ageing, and in- and out-migration.

EU cohesion policy has a spatial focus; it is not about sectors but about places, regions. The important question in the debate of the new territorial agenda has been whether it has an added value as compared to the traditional cohesion policy of the EU; ensuring social and economic cohesion by strengthening the lagging behind regions. The added of value of having a territorial dimension in European policies is considered as 3 E rationales; Efficiency, Equity and Environmental. It is argued that there is a clear link between these rationales and the EU sustainability agenda whose three pillars are economic competitiveness, social inclusion and environmental protection.

The term 'territorial cohesion' is used and interpreted throughout the EU and its Member States (MS) by applying varied meanings. The Green Paper on Territorial Cohesion started a debate among all MS, regional and local authorities, civil society organisations, research institutions as well as individual citizens on how to develop a common understanding on the concept of Territorial Cohesion. Some of the contributions from the Green Paper debate referred to the need for a strict and uniform definition across the EU while others denied this and instead mentioned the need for a common understanding over the key principles of the concept. There are already anchors not debated which reveal that the common understanding of Territorial Cohesion is in place. According to the Green Paper discussion, every place has its own capital which should be used for sustainable development. The common territorial knowledge base, the importance of territorial cooperation, the cross-sectoral coordination aspects and multi level governance attached to this, the territorial content programming documents, the local-regional approach and the functional approach related to administrative borders can be mentioned as the shared anchors which do not need a definition. Briefly, Territorial Cohesion yet encompasses the sharing values among the MS and emphasizes learning how to develop the potential of each region out of their own assets in order to ensure the harmonious and balanced development of the European territory.

The final discussion about the future of cohesion policy is currently under debate and the 5th cohesion report will be published in November 2010. The Territorial Agenda is currently being renewed and will be finalised during the Hungarian Presidency in 2011.

Europe 2020

Europe 2020 is a recent European strategy designed to address the rapid transformations that have hit Europe. It aims to guide Member States in managing the global financial crisis and unleashing the EU's innovative capacities by identifying three drivers of growth: 1) smart growth based on knowledge and innovation, 2) sustainable growth for a more efficient, greener and competitive economy and 3) inclusive growth capable of delivering employment, social and territorial cohesion.

Targets to be achieved include boosting the employment rate of the population aged 20-64 from 69% to 75%, investing at least 3% of EU GDP in R&D, reducing greenhouse gas emissions by at least 20% compared to 1990 levels (or by 30% conditional on similar commitments from other developed countries), reducing the proportion of early school leavers from 15% to 10% and reducing the number of Europeans living below the poverty line by 35%.

The Commission proposes that these targets are translated into national targets and trajectories. Europe 2020 calls for a stronger governance framework at national, regional and local level, but other than specifying that Cohesion policy and structural funds are one of the delivery mechanisms for smart, sustainable and inclusive growth, has thus far little to say about the role of regions and regional development. However, as the strategy is still in the initial stages of development, regions themselves may be able to further define their contribution.

The Structural Funds

The EU Structural Funds are an important part of its Cohesion Policy and the planning and funding of incentives for regional development in the Nordic EU member countries Finland, Sweden and Denmark. During the current programming period 2007-2013 the Nordic countries, and especially the northernmost regions of Finland and Sweden, have seen a significant reduction in funding compared to the previous period 2000-2006. Another important change is that during the current period large city-regions have also become eligible for funding. The objectives of the current programming period are Convergence, Regional Competiveness and Employment and Territorial Cooperation. When twelve new member states entered the European Union in 2004 and 2007 – many of them with a GDP/capita far below 75% the EU25 average which is the criteria for being eligible for the first objective 'convergence - EU regional policy's focus of attention inevitably shifted towards regions in Central and Eastern Europe.

Barca report[1] argues that there has to be a change in the idea of cohesion policy by "shifting away from re-distribution" (the rich giving to the poor) to the notion of a policy that is "place-based". The report further argues that current cohesion policy structure provides an appropriate basis for territorial development. However reforms are necessary for achieving the EU's long-term goals in post-2013 period. Therefore, ten pillars of change are proposed in order to achieve the targets of the cohesion policy.[2] The report states that all regions should be able to realize their potential in terms of their assets in order to improve their economic development and the role of subsidiarity is highly emphasized in this regard. The subsidiarity principle, therefore, needs to manage the re-allocation of tasks accordingly.[3] This principle is also referred as the architecture of modern policy-design; a system of multi-level governance which supports regions to re-arrange the responsibilities between different levels of government and local institutions based on the current development needs. On the other hand, the report criticizes the current cohesion policy since it lacks quantifiable targets and information on how it will make an impact on people's well-being in European regions.[4] The report highlights the primary goal of the EU Cohesion target as the "place-based policy" with greater local involvement in decision making. Mobilizing this local knowledge is taken as a potential instrument for better functioning of policies. Sixth progress report on social and economic cohesion[5] also mentions this point which is favoured due to its likely impact on "innovators" to take up the initiative on economic and social progress in their respective regions.

EU Rural Development Programmes

The EU has a long history of supporting farmers and this financial support continues to make up a large share of the EU budget. Over time however not only agriculture but also the more general development of the

[1] An Agenda For a Reformed Cohesion Policy-A Place-based approach to meeting European Union challenges and expectations, Independent Report , prepared at the request of Danuta Hübner, Commissioner For Regional Policy by Fabrizio Barca, April 2009 Available at: http://ec.europa.eu/regional_policy/policy/future/pdf/report_barca_v0306.pdf Accessed 2010.10.19

[2] Ibid. P. VIII

[3] Ibid. p.41

[4] Ibid, p.121

[5] Sixth progress report on economic and social cohesion. Available at: http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/interim6/com_2009_295_en.pdf Accessed 2010.10.19

countryside has come into focus. EU support to rural development is carried out as a part of the Common Agricultural Policy (CAP). The CAP has two pillars. The first pillar supports farmers directly while the focus of the second goes beyond agriculture. In order to create a coherent programme for the implementation of the second pillar the Rural Development Programme (RDP) 2007-2013 was established. This programme is divided into four axes. Axis I focuses on the competitiveness of the countryside, axis II on the environment, axis III on the diversification of the economy and axis IV consists of the Leader approach which is a way of working with rural development through local engagement in local action groups (LAGs). All three Nordic EU countries carrying out the programme have allocated a comparatively large share of the programme budget to the agri-environmental measures of axis II. In Denmark the share is 45%, in Sweden just over 50% and in Finland the share is almost 70%. On the other hand, the budget for increasing competitiveness is considerable smaller in Finland than in the other two countries. Within the EU as a whole almost 40% of the total budget is allocated to the first axis, 34% to the second, 15% to the third and 13% to the fourth.

Territoral cooperation

Territorial cooperation is one of the objectives of EU Cohesion Policy 2007-2013 which facilitates regions and localities to work together across national borders. There are three different types of programmes within the territorial cooperation objective; transnational cooperation (within the EU-defined 13 cooperation regions), cross-border cooperation (among 52 programming areas between two or more adjacent states) and interregional cooperation (networking areas). The Baltic Sea Region Programme 2007-2013 (sometimes called INTERREG IVB) covers the states of the Baltic Sea Region and indeed this EU grouping of states (since 1994) has helped to define the boundaries of this macro-region. Within the Baltic Sea geographic region there are also 12 EU cross-border regions (sometimes called INTERREG IVA).

National regional policies

Policies for territorial development in Denmark, Finland and Sweden are to a large extent formed according to the different EU strategies and funding programmes. Norway and Iceland are also affected by strategies formulated at the EU level, not at least concerning state aid rules, as they are a part of the EEA. In Denmark, Finland and Sweden the structural funds programming periods are taken into account when forming regional policy at the national as well as at the regional level. The sequencing period of the structural funds programmes is therefore steering the planning of regional policy incentives and national regional aid is aligned with EU funding. EU membership has also pushed regionalisation processes in the Nordic countries, e.g. the establishment of regional partnerships especially for the formulation of regional development policy documents (e.g. regional development programmes in Sweden) and the regional structural fund programmes.

Regional policy is generally understood as policy formulated to solve problems arising due to territorially uneven economic development. Regional policy strategies are difficult, if not to say impossible, to distinguish from other policy areas such as labour-market policy, research policy, education policy etc. Policies for regional development are, however, defined in different ways in the Nordic countries; in Norway, it is regional and "district" policy *(regional- og distriktspolitikk*), in Sweden, the most recent concept is regional growth policy (*regional tillväxtpolitik*); in Finland as well as in Denmark the concept of 'regional development' is used and in Denmark there is also a focus on regional business policy (*regional erhvervspolitik*). These different ways of labelling policies for regional development to some extent reflect the fact that, despite the existing and extensive similarities between the Nordic countries, various ways of handling disparities in development and strategies for striking a balance between the different parts of these countries exist.

The Treaty of Lisbon has institutionalised the principle of territorial cohesion as an overarching goal of the European Union, together with economic and social cohesion. The creation of balanced living conditions across all parts of the territory has been, and to a large extent remains, an overall ambition of regional policy in the Nordic countries and in the European Union more generally. Previously, the main tool to accomplish this was the redistribution of resources between different parts of the country. It will be shown that this ambition still characterises regional policy in the Nordic countries but that there is now a significant national variation in the way in which this is achieved. Differences also emerge in how the various policy areas link to regional policy. To a large extent the Nordic countries face the same challenges, e.g. an ageing population and dwindling labour market participation though the ability to handle these challenges often differs between the countries.

The more traditional way of thinking regional

policy can be characterized as developing strategies that focus on specific parts of the country that need support for development. In Norway, there is a distinction between *regionalpolitikk* which aims at encouraging development across the whole country and *distriktspolitikk* which aims at developing the parts of the country that are facing specific challenges. Regional policy in Norway retains a strong focus on the development of the more peripheral parts of the country. In Sweden, on the other hand, traditional regional policy was de-prioritised in 2001 when regional development policy, *regional utvecklingspolitik* was launched as a new policy area. In 2007, this policy area was replaced by regional growth policy, *regional tillväxtpolitik*. The overall aim of regional growth policy in Sweden is to address initiatives to all parts of the country and not only to the most remote areas. In Finland, the current programmes for regional development focus primarily on city-regions, rural areas and the archipelago. Regional policy in Finland also has a strong focus on innovation and coordination between different stakeholders in the regions. In Denmark, the structural reform in 2007 substantially changed the structure for the governing of regional development. Five new regions, responsible for preparing Regional Development Plans, and six Regional Growth Foras, playing a crucial role in the implementation of policies for regional development, were established.

There has to a large extent been a discernable shift in focus from redistribution in regional policy in the Nordic countries to a stronger focus on endogenous economic growth. First generation regional policy was characterised by state subsidies and centralised territorial planning aiming at striking a balance between different regions within the countries. This view characterised regional policy in the Nordic countries during the 1960s 1970s and 1980s. From the beginning of the 1990s increasing globalisation meant new challenges to the Nordic economies and the second generation regional policy therefore became more focused on the regional level as an appropriate arena for the formulation and implementation of regional development strategies. Third generation policy takes this a step further and focuses on basing strategies for regional development on the characteristics of each region and not imposing one single model for development on all regions (see Box).

Box: Towards a third generation regional policy?

In the study "*Mot den tredje generationens regionalpolitik: Lärdomar från Nordens autonomier och perifera ö-regioner*" (Towards third generation regional policy: Lessons from the Nordic autonomous regions and peripheral island regions) the examples of the autonomous areas of the Nordic countries; Greenland, Åland and the Faroe Islands were used in order to analyse the extent to which a more autonomous system could contribute to and enhance regional development. The objective was to contribute to the discussion on the degree to which the regional level should be more autonomous in order to create incentives for a more flexible and efficient regional policy in the Nordic countries. In order to facilitate the comparison with more "typical" Nordic regions, the Danish island region Bornholm, which does not have autonomous status but maintains a certain regional responsibility with its own Growth Forum, was also included in the study. At the onset of the study it was stressed that a limited institutional capacity to act within a region can be an obstacle to regional development but it must also be borne in mind that the development of regional economies depends not only on responsible regional or national actors but also, increasingly, on the interplay between public and private initiatives and actors.

The authors of the study conclude that there has to be a match between the responsibility given and the capability of regional actors to act and therefore the degree of regional responsibility must be adapted to the economic capacity of the region. Greenland has a weak economic capacity but a significant level of autonomy within Denmark. There tends to be a discrepancy between the responsibility given and the capacity to act in Greenland. Åland, on the other hand, has a relatively strong economy but only a limited level of autonomy. The report concludes that there is potential for stronger development if Åland is given a greater level of autonomy within Finland. In the Faroe Islands, the degree of autonomy corresponds better to its economic capacity level than in Greenland or Åland. The Faroe Islands have a large degree of autonomy and also a relatively high capacity level for innovation.

An important conclusion of the study is that a well-functioning regional policy has, as far as possible, to be adapted to different production conditions in the regions. This also implies that there must be a will to open the way for the creation of a more asymmetric system in the Nordic countries, e.g. it should be possible to have different degrees of self-governance in different regions. There must also be a clearer structure when it comes to who is responsible for what. Another policy implication of the study is that regional reform aiming at the creation of larger regions does not necessarily lead to economic growth.

Source: Karlsson, A., Lindström, B., och Van Well, L. (2009), Mot den tredje generationens regionpolitik – Lärdomar från Nordens autonomier och perifera ö-regioner. Nordregio report 2009:1.

The shift away from the first generation regional policy tends to be more pronounced in Sweden, Denmark and Finland than in Norway where regional policy is still formulated on the basis of the redistribution ambition. In the Nordic countries, innovation has also become a key word in policies for enhancing regional development at the analytical level as well as the political level.

A commonly used way of enhancing coordination between sectors is to gather responsibility for all programmes and instruments relevant to a specific policy field within the same ministry or national authority. The Ministry for Economic and Business Affairs in Denmark and the Ministry of Employment and Economy in Finland are examples of such "super-ministries"[6]. Different policy fields with relevance to regional development are brought together under one "umbrella". As regional policy has many different dimensions and touches upon most other policy areas coordination is a necessity but also a challenge.

The financial and economic crisis beginning in the autumn of 2008 posed significant new challenges to the Nordic countries. The situation has been particularly severe on Iceland while the rest of the Nordic countries have been impacted by the crisis to a much smaller extent. In the other Nordic countries the crisis in the financial sector was relatively limited. Yet, governments in all the Nordic countries gave strong support to the financial sector. Macro-economic instruments have been used to repair the consequences of the crisis and other types of initiatives have also been taken. Export industries across the Nordic countries were also struck by the crisis. Many regions dominated by export-orientated manufacturing industries had been growing rapidly in the years before the economic crisis and were severely impacted by it. In Sweden, for example, the automotive industry and its sub-contractors in the Västra Götaland region were heavily affected by the decline in international demand. In regions more dependent on services and on public sector employment, the effects of the financial crisis have, hitherto, been more limited. Although the issue of public sector debt, and thus of public sector spending and employment, is only now being addressed and this is likely to have an effect on such regions going forward.

Denmark: New regions and Regional Growth Fora

The Danish Structural Reform of 2007 reduced the number of local authorities from 271 to 98 and transformed 14 county councils (*amtskommuner*) into five regions the main task of which, besides health care, is regional development. In April 2006, as a part of the reform process, a regional growth forum was established in each region. A total of six regional growth fora were established, since *Region Hovedstaden* (The Capital Region) also includes Growth Forum Bornholm. The growth fora are organised in line with the partnership principle and include representatives of the following five groups of actors: the region, the local authority, knowledge and education institutions, the business community and the labour unions. The executives and the secretariat of the growth fora are part of each region's Department of Regional Development. The main tasks of the regional growth fora are to formulate a regional business development strategy; to monitor the regional and local conditions for growth; to propose allocation of Structural Funds; and to propose co-financing for regional business development activities. The regional growth fora are also responsible for regional development funding and industrial development[7].

The Danish Enterprise and Construction Authority (*Erhvervs- og Byggestyrelsen*), which is part of the Ministry of Economic and Business Affairs (*Økonomi- og Erhvervsministeriet*) is the responsible authority, on the national level, for regional development. Each year the government publishes a declaration on regional policy for growth (*regionalpolitisk vaekstredegørelse*). In order to control the implementation of the Lisbon Agenda at the regional level, the government has formulated a 'globalisation strategy' which is operationalised through the government's partnership agreement with each of the six regional growth fora.

Thus far, apart from Growth Forum Hovedstaden's and Bornholm's solely focus on regional growth, the Regional Growth Fora's focus has been on both regional growth and on internal regional balance. The latter aspect of the focus has been legitimised by a national policy of distributing a certain percentage of the Structural Funds to the region's rural hinterlands. This two-legged focus has resulted in a wide-ranging implementation of the regional growth fora's business development strategy.

As a consequence of the new political patterns created by the reform process the development of what is called "*Udkantsdanmark*" (Outskirt-Denmark) and concerns over the influence decisions taken in Copenhagen may have in rural areas - a new political party was formed in 2010 which aims to promote greater political and economic support for these vulnerable areas. The discussion related to the special characteristics of the peripheral regions as well as of the smaller islands has been ongoing for some time, among other things in response to increasing old age dependency ratios, the outmigration of young people

[6] Moxnes Steineke, Jon (2009) Mot en mer samordnet nasjonal politikk for regional utvikling? En nordisk erfaringsutveksling og sammenlikning av aktuelle arbeidsmetoder. Nordregio Working Paper 2009:2.

[7] Larsen, Peter Wilgaard (forthcoming) Partnerskab og regional erhvervsfremme i Danmark, PhD dissertation, Aalborg University.

and especially younger women. Representatives for the smaller peripheral municipalities and islands have objected to the characterisation of these regions in the media as being "losers" and as rapidly turning into "reservations for elderly people". The debate subsequently made something of an impression on the Government and in early September 2010 a new proposal aimed at strengthening peripheral areas was presented. The proposal includes a proposal for a radical change to the Danish planning system relating to a suggested amendment to the Planning Act which differentiates the access to conduct planning between the peripheral municipalities and other municipalities in Denmark. This differentiation will give the peripheral areas greater freedom in terms of planning, including in their coastal zones.

Box: The debate on rural areas in Denmark

One incidence triggering the political debate was the location of a hospital in Western Jutland. While the local politicians had agreed upon its location, the Government (headed by "*Venstre*", i.e. the liberal party which has a number of its core voters in that particular region) decided otherwise. Thereby the representatives from "*Udkantsdanmark*" experienced not only a peripheral economic and demographic situation, but also their own politicians overruled by politicians representing "Copenhagen". In a rather short time the new political party was formed around a policy emphasising the need for economic compensations and the transfer of state employment from Copenhagen to the periphery - and first and foremost emphasising a "no interference from Copenhagen" policy. The members were primarily a group of politicians from the right wing spectrum, including representatives from municipal governments in the region, and with pensioners and pre-pensioners (persons with "*Efterløn*") constituting the major group. For some time they managed to create a momentum, and it looked like they might become a new player in the political game. After a while, however, it has become clear that the internal divisions among them are also rather significant as individual interests differ markedly.

Finland: Highligthing regional centres and innovation

Regional policy in Finland combines national incentives for development with EU strategies and aims at giving the regions the possibility to develop on the basis of their own opportunities while also providing for special measures to be taken aimed at less favoured regions. Regional policy is based on the Regional Development Act and the government's decision on national goals for regional development. The overall target of Finnish regional policy is to improve the competiveness of regions to manage increasing international competition and to create a better balance between different regions.

The strategy for Structural Funds 2007-2013 sets out the guidelines for the formulation and implementation of development projects. The goal of the strategy is to strengthen the competiveness of Finnish regions with particular incentives aiming at the development of the parts of the country facing particular difficulties. When it comes to territorial cooperation Finland gives priority to cooperation with Russia, primarily in its northernmost regions and in the wider Baltic Sea area.

The Ministry of Employment and the Economy (*Työ- ja elinkeinoministeriö/Arbets- och näringsministeriet*) is in charge of regional policy at the national level. A number of programmes have been initiated to realise the goals set up for regional development. The Regional Centre programme focuses on creating competiveness in urban regions as a driver for regional development in each region. Regional centres are defined as labour-market and service regions. The programme combines innovation and regional development.[8] Evaluation of the previous programme period 2000-2006 shows that the differences between urban regions in Finland have decreased. The programme has also helped to encourage further cooperation both between municipalities and between other public and private actors within the urban regions. Other programmes include the Centre of Expertise Programme, the Special Rural Policy Programme, and the Island Development Programme. The Regional Centre Programme and the Centre of Expertise Programme are part of a long tradition in Finland focusing on the connection between urban and regional policies.

In November 2009 the Finnish government approved the Regional Cohesion and Competitiveness Programme, 'COCO'. The aim of the programme is to give regions the ability and incentive to develop according to their own characteristics and conditions. COCO commenced in early 2010 and will continue until the end of 2013. COCO covers the entire country, excluding Åland. All regions forming an operative strategic entity are eligible. There are altogether 52 COCO regions covering 322 of 326 municipalities

[8] Moxnes Steineke, Jon (2009) Mot en mer samordnet nasjonal politikk for regional utvikling? En nordisk erfaringsutveksling og sammenlikning av aktuelle arbeidsmetoder. Nordregio Working Paper 2009:2.

in continental Finland. The implementation of this new programme was also a way for the government to simplify the system of regional programmes. The programme should coordinate the work of different actors within the region and between regions while also providing the basis for larger development projects. The municipalities within the 52 programming regions own the projects and can therefore use them in the way that they find most suitable for the needs of their region.

Norway: Local growth and strong belief in the future

One of the strongest ambitions of regional policy in Norway remains the desire to preserve the main settlement patterns in all the regions of the country. In the most recent government's report on regional and rural policies the government states that the citizens should "be able to have real freedom when it comes to choosing where they want to live"[9]. The Ministry of Local Government and Regional Development (*Kommunal- og regionaldepartementet)* is in charge of the coordination of regional and rural policies in Norway. Most resources for regional development are channelled through the county councils (*fylkeskommuner*) and Innovation Norway (*Innovasjon Norge*) which is a public company promoting industrial development through funding, internationalisation and competence development services for SMEs and new business ventures.

Even though the focus in Norway is regions and areas with a low population density and long distances to important markets, the centralisation tendencies have been difficult to stop. Nevertheless, this situation is not dramatic thanks to immigration. Employment is no longer the only decisive factor when it comes to where people choose to live; good living conditions, activities etc., are increasingly important. Infrastructure is considered crucial in securing the possibility to settle down and live in all parts of the country. The local community is given priority and, therefore, the importance of local government is underlined[10]. The responsibility of the county councils as regional development actors has also gained importance in recent years. In 2003 funding were delegated to the 19 county councils for regional development with regional plans and regional partnerships as important elements. The county councils' responsibility for regional development became even more important with the structural reform implemented on 1st January 2010. The reform gave, among many other things, the county councils responsibility for Innovation Norway with a 49% share of the agency. In regional and district policy, North Norway is given priority not only by the Ministry in charge of regional policies, but also by other Ministries. There is an important emphasis now on the exploitation of resources in the North, both off-shore and land-based. Regional policy in Norway tends to have a stronger focus on rural and peripheral areas than is the case in the other Nordic countries. The use of tax incentives and transfer payments to strike a balance between different parts of the country is more common in Norway than in the other Nordic countries. Examples here include differentiated payroll tax and increased child benefits in Nord-Troms and Finnmark, the northernmost parts of Norway.

In the debate on the future development of regional policy in Norway a discussion has been initiated on opting for a stronger focus on centre regions and not only on rural and peripheral regions. Discussion on infrastructure, e.g. high speed trains between the largest cities and enhanced focus on innovation policy are other characteristics of the current debate in Norway.

Sweden: Policy for regional growth

When regional *development* policy was launched in 2001 the focus of regional policy shifted towards the contributions that each region could make to its own improvement though priority was still given to the weaker parts of the country. In 2007, the name of the policy area changed from regional development policy to regional *growth* policy. This further strengthened the focus on local and regional responsibility for economic growth. Actors responsible for regional growth in their respective country such as county administration boards, county councils or regional co-operative bodies are obliged to set up Regional Development Programmes (RDP). The aim of the RDPs is to create strategies for sustainable development in the respective regions. The RDP is the *overall* strategy for one or several regions on which the Structural Fund programme, the Regional Growth Programmes (RGP) and other relevant programmes are based. The process to set up RDPs is continuous and should involve both public and private actors in a broad regional partnership. The actors responsible for regional growth may also develop Regional Growth Programmes (RGP) which are generally more operative programmes focused on promoting business development and growth.

[9] St meld 25. 2008-2009; Lokal vekstkraft og framtidstru. Om distrikts- og regionalpolitikken, p.7

[10] Ibid.

The ambition of the centre-right government during the period in office 2006-2010 to focus on growth is reflected in the reorganisation of the national institutional structure[11], resulting in the establishment of two new state authorities the Swedish Agency for Economic and Regional Growth (*Tillväxtverket),* with responsibilities in the field of regional growth policy, and the Swedish Agency for Growth Policy Analysis, (*Tillväxtanalys*), which is responsible for analysis, statistical studies and evaluation aiming at promoting growth and competiveness in all parts of the country.

The Swedish National Strategic Reference Framework (NSRF) 2007-2013 coordinates the national policy for regional development, the national labour market policy and EU cohesion policy[12]. The NSRF is the overall document for implementation of EU cohesion policy in Sweden and should provide directions for different regional programmes and activities. As a consequence of the economic crisis, the Swedish government named regional coordinators initially in those regions particularly affected by the crisis and later in all regions of the country. The assignment of these regional coordinators was to map the consequences of the crisis in each region, analyse the needs of the region and present this to the government. The task was in most Swedish counties (regions) shared between the county governor and a political leader in the region, such as the head of the regional co-operative bodies.

Iceland: Bank collapse and a renewed discussion on EU membership

During the past two years Iceland has experienced the most severe financial crisis in the country's history. In the autumn of 2008 the three largest banks in Iceland collapsed following a rapid depreciation of the Icelandic *krona* in the first half of 2008. This consequently led to a severe downturn in the Icelandic economy and further depreciation of the currency. Foreign currency transactions were virtually suspended for weeks and capital controls are still in place. In addition to this the market capitalisation of the Icelandic stock exchange dropped by more than 90%. As a result of the crisis, Iceland experienced a severe economic recession. The Icelandic government decided to seek assistance from the International Monetary Fund (IMF). On November 19th 2008 the IMF approved Iceland's request for a two year stand-by arrangement. Iceland will receive USD 2.1 billion (approximately € 1.6 billion) from the IMF. Additional loans of up to USD 3 billion have been secured from the other Nordic countries, Russia, and Poland. The IMF stand-by arrangement has the overarching goal of re-establishing confidence in the Icelandic economy with the main focus on stabilising the exchange rate, rebuilding confidence in monetary policy and enabling the lifting of capital controls while also reviewing and revising fiscal policy and undertaking banking sector restructuring and the reform of the insolvency framework

In April 2010 a two-thousand-page report on the Icelandic crisis was delivered to the Icelandic Parliament, *Althingi*.[13] The report shows that the assets of Icelandic banks were extremely overrated and that the Financial Supervisory Authority FME, the Icelandic Central Bank and leading politicians had failed to take any measures to prevent the banks from collapsing. Due to rising unemployment and overall levels of economic insecurity an increasing number of Icelandic people have opted for migration, a large share of them to the other Nordic countries. The financial crisis has also led to the emergence of a heightened level of distrust among people in the financial and political system. After the crisis report was published the Icelandic government appointed a commission of independent experts to investigate how public institutions should respond to the conclusions drawn in the report.

The debate on joining the EU was also renewed in Iceland with the driving force of the debate centred on the question of joining the euro as a hedge against future financial and economic crises. The two main political parties in Iceland, the *Social Democratic Alliance* and the *Independence Party* represent opposite standpoints on the issue. After an intense debate where the Social Democrats argued in favour of EU membership and the Independence Party against, the Parliament (*Althinget*) decided to apply for membership. At the beginning of 2010 the European Commission recommended that the EU initiate formal talks with Iceland on membership. Even though Iceland already fulfils many of the criteria for membership there are nevertheless a number of problems to be overcome before Iceland can become a full member. The Netherlands and the UK, both of which have large claims on one of the fallen banks, *Landsbankinn* due to retail deposits, are in negotiation with the Icelandic government on the terms of the repayment of the deposit guarantees. This could impact the membership talks.

[11] The Swedish Agency for Economic and Regional Growth (*NUTEK*), The National Rural Development Agency (*Glesbygdsverket)* and The Swedish Institute for Growth Policy Studies (*ITPS*), were closed down.

[12] Moxnes Steineke, Jon (2009) Mot en mer samordnet nasjonal politikk for regional utvikling? En nordisk erfaringsutveksling og sammenlikning av aktuelle arbeidsmetoder. Nordregio Working Paper 2009:2.

[13] Report of the Special Investigation Commission (Chapter 2: Summary of the Reports Main Conclusions), http://sic.althingi.is/, downloaded 2010-07-09

Structures and reforms

Structural changes are generally based on changes in society's demands. It may be changes in the political structure, changes in demographics or economic characteristics, or it may be due to new demands on services. Structural changes, however, can also be based on a conscious process aiming at moving decisions closer to the population, or to centralize the decision processes, in order to enable a situation where more general rules and regulations may apply and be managed unaffected by the local discourse. Finally there is also an economic dimension as administration based on an "economic of scale" approach may provide savings by concentrating the activities on fewer units or levels. Very often the structural reforms are closely linked to a reform of responsibilities and activities.

During the first years of the new century there seemed to be a clear tendency towards a strengthening of the regional administrative level in the Nordic countries, especially in Sweden and Finland. Since then however developments have taken a new direction. In Denmark, the creation of the five new administrative regions has in some respects reduced the importance of the regional level, as tasks have been transferred 'down' to the municipalities and back 'up' to the state. The new regions do not have the right to levy taxes but they do however still play a strategic role in regional development. In Norway, the regional level lost an important part of its portfolio as health care was transferred from the county councils to the state in 2002. The structural reform in 2005 intended to strengthen the regional level by creating, on a voluntary basis, new larger administrative regions. By the time that the reform was finally implemented in January 2010 however the original intentions were not accomplished. In Sweden, the regionalisation tendencies have been stronger, with the formalisation of the regional administrative experiments in Västra Götaland and Skåne *(självstyrelseorgan*) and the creation of 14 cooperative councils (*samverkansorgan*), taking over tasks related to regional development from the state representative in the regions *(länsstyrelser*). The regional reform proposal presented by the Committee of Public Sector Responsibilities (*Ansvarskommittén)* in Sweden in 2007 has been strongly supported by regional and local actors, but less so on the national level. In Finland, large-scale structural reform and the amalgamation of municipalities began in 2005 though the effects of the reform process have not been deemed entirely positive. On the 1st of January 2010 a new regional state administration was established in Finland. In Iceland, a large number of small and often isolated municipalities remain and resistance to merging into larger entities is still significant.

Denmark: A regional reform, reducing the regional mandate

On 1st January 2007 the 14 counties, *amter,* were replaced by 5 new administrative regions. The new regions are directly elected, but do not have tax-raising powers and are thus funded by the state and the municipalities. The main responsibility of the new regions is health care. The reform process implied that several tasks, including secondary education and environmental issues were transferred from the regions to either the state or the municipalities. At the same time, the number of municipalities was reduced from 271 to 98.

The new administrative regions have now existed for more than three years. The Danish regional reform process oversaw *de facto* weakening of the regions, as several tasks were transferred to the state or to the municipalities. The Danish regions also lost their right to levy taxes. The Danish structural reform process was a top-down political initiative and the implementation process was fast. It took less than five years from when the committee was appointed to investigate a new structure in 2002 to the implementation of the reform 1st January 2007. No long drawn out discussion was entered into before implementation. This can also be considered a sign of the consensus that had already emerged around the notion of reform or at least as signalling a basic lack of political opposition to it.[14]

Norway: Debated reform, but an increased role for county councils

In 2005, the left-centre coalition government in Norway launched an ambitious reform project to redraw the administrative map of Norway and transfer responsibilities from the state to new larger administrative regions. The aim was to abolish the county councils replacing them with larger regions with greater responsibility for regional development. The debate on where to draw the new borders between the regions was thus joined. The Norwegian Association of Local and Regional Authorities *(KS)* was strongly in favour of this new reform. However, due to differences of opinion between and within the political parties, both

[14] Aalbu, Hallgeir, Böhme, Kai and Uhlin, Åke (2008) Administrative reform – Arguments and Values, Nordic Research Programme 2005-2008: Report: 6, Nordregio.

on the national and the regional level, the decision was taken after all not to amalgamate counties and draw new borders. On January 1st 2010, the Norwegian regional administrative reform was implemented, putting an end to the 4-year political process. The administration reform maintains the multi-level organisation of the state, with politically-elected bodies at all three tiers. Thus, the county councils are maintained without any alterations to their current territorial division.

The role of the county councils has been, and remains, vigorously debated in Norway. In 2002, when specialist health care was transferred from the county councils to state-owned health care enterprises, its role as a welfare service provider decreased. Following the reform, some additional responsibilities were transferred from the national level to the county councils. Most significantly, the county councils are now responsible for the management and maintenance of the regional road network. In addition, the county councils have taken on coordination tasks in the public health area as well as in some new environmental issues (water and natural resource management). The county councils have also been prepared to take on a more prominent role as a regional development agent by taking a 49% stake in Innovation Norway. In addition, the county councils are coordinating seven newly established regional research funds and will be board members of the regional university colleges. The aim of the regional research funds is to encourage and support research and innovation for regional development. The resources of the funds shall also contribute to the building and strengthening of highly competitive research centres in all Norwegian counties.

Sweden: Experimenting with different regional organisations

In Sweden, the Committee of Public Sector Responsibilities *(Ansvarskommittén)* launched a report on a new regional structure in February 2007. The report suggested a model with new administrative regions (*regionkommuner*) covering a larger territory and new assignments. The experimental projects to develop directly elected regional organisations (*självstyrelseorgan*) in the form of county councils in Västra Götaland and Skåne served as a model for the structural reform proposal. A process began where the government appointed a coordinator who was assigned to probe regional and local actors about how they wanted the reform process to proceed. Support by local and regional actors turned out to be massive but agreement over where to draw the borders between the new regions proved to be rather more difficult to reach.

In January 2009, almost two years after the reform proposal had been presented by the Committee of Public Sector Responsibilities, the government agreed to award permanent status to the two experimental projects in Västra Götaland and Skåne in 2011. In this process, the same status will be awarded to Halland and Gotland. Applications to merge counties in the northern and central parts of Sweden have been set aside for further study. A new committee has now been given the task of looking for geographical solutions for these applications.

In Stockholm there has been some reluctance among local and regional politicians to establish a 'Stockholm region'. The creation of a joint region in the capital area with greater responsibility for regional development tasks has however recently attracted more support.

The Swedish debate on formal structures for regional development issues have been dominated by two different views, one arguing that the state representative on the regional level, in the county administration boards *(länsstyrelser)*, should handle regional development, the other that regional development should be the assignment of a directly-elected regional assembly. A third or intermediate approach was also forwarded when the government made it possible for municipalities to indirectly elected regional co-operative bodies *(samverkansorgan)* designed to assume the tasks of regional development from the state representative in the region. Since 2007, new co-operative bodies have been established and are currently active in 14 counties[15] while in five counties, county administration boards still has the main responsibility for regional development. The current situation in Sweden indicates that the influence of regional directly or indirectly elected assemblies on regional growth policy has increased.

Finland: Reorganising regional state administration

After a period of minor reforms at the beginning of the 2000s, an extensive structural reform process was launched in Finland in 2005. The reform aimed at making the municipal structure more efficient by encouraging municipal mergers. The consequences of the reform process have however been rather variable with the effects generally viewed as not wholly positive. In some cases existing cooperation between pre-reform municipalities has disappeared or been weakened when these municipalities were amalgamated.

[15] In addition, the municipalities and the county council of Jämtland have decided to form a co-operative body for Jämtland from the 1st January 2011.

Notwithstanding this, at the beginning of 2010 the number of municipalities was reduced from 412 to 342.

In 2008 the government launched a reform of the regional state administration. This was known as the ALKU project. As a result, a significant reform was implemented in January 2010, when the provincial offices and other state administrative bodies in the regions were abolished and replaced by two new types of authorities: 15 Centres for Economic Development, Transport and the Environment and six Regional State Administrative Agencies (*EVY*). The overall aim of the reform was to bring assignments related to state control into one organisation, making the regional administration more efficient and client-friendly. An additional aim was to transfer regional development tasks to the indirectly-elected regional councils (*maakunta liitot)*. The Finnish two-level system (state-municipality) is strongly embedded in Finnish administrative culture and even though the issue has been discussed it is unlikely that a third directly elected administrative level will be added. The weightiest argument in this regard is undoubtedly that there is no need for a third level of administration in a country like Finland with only 5 million inhabitants. It took some time before the restructuring reform of National Ministries in Finland settled down and it will now take even more time before the reform of the regional state administration is fully implemented. This might prove to be an obstacle to coordination between the various actors involved

The Kainuu experimental project, which began in 2005, implied that a directly-elected regional assembly could be established in Kainuu, a region in East Finland with high unemployment. The primary aim of the experimental project was to find a solution to the difficulties of the municipalities that are too small to be able to provide welfare services in an efficient way. Evaluations show that the experiment has only had a minor impact on the development of the region. The strengthened role of the regional council when it comes to regional development was not, however, fully implemented. Restructuring of services in the experiment has nevertheless helped keep costs down while spending on health care has actually been lower in the Kainuu region than in the rest of the country.

Iceland: A fragmented structure at the local level

Iceland has a two-tiered administrative system with the state and the municipalities as the only levels of administration. The Icelandic municipalities are generally small in terms of population. The average municipality has approximately 4,000 inhabitants. The smallest are agricultural communities without a village, in some cases with a population of only 50 persons. At the same time, Iceland can be characterised as a highly urbanised country where the capital region's share of population is about 75% when it is considered as a travel-to-work area.

In Iceland, local government tasks are more limited than in the other Nordic countries, as the municipal structure makes it more difficult to use the local government structure as a driver for welfare delivery. The main share of the municipalities' responsibilities involves the management of primary education. In order to strengthen the responsibilities of the municipal level, the Icelandic government has repeatedly encouraged municipal mergers, but until recently only with limited success. The parliament has maintained that amalgamations shall be voluntary and that any merger must have popular support in all of the municipalities involved. In the smaller municipalities in particular widespread resistance to change has meant that it has been impossible to implement any meaningful reform in relation to the current division of responsibilities between central and local government. Meanwhile, in recent years some amalgamations have been carried out, as the 124 municipalities in the year 2000 had been reduced to 78 by 2010, of which 16 have a population of less than 200.

The Institute for Regional Development is the main implementing authority in terms of regional policy in Iceland. The Institute of Regional Development is an independent institution owned by the Icelandic state with the Minister of Industry as its managing authority. The purpose of the Regional Development Institute is to work towards the strengthening of regional and economic development in Iceland outside the greater Reykjavík area.

Greenland and Faroe Islands: New structural focus

In relation to the municipal reform in Greenland the expressed intentions have focused on two overall goals. In order to enable a delegation of responsibility and decisions to the regions, a choice has been made to reduce the number of municipalities from 18 to 4, thus deliberately establishing fairly large units. Secondly, in order to enable the same level of delegation of responsibility to each of the new municipalities, neighbouring units have been merged in such a way that they have become population-wise reasonably similar sized units, with one exception, though: the Sermersooq region encompassing the most populated town, the capital of Nuuk, while also including municipalities in both East and West Greenland. The other overall goal of the structural reform has been a reduction in the economic overhead required by maintaining a large number of municipal governments, and to use the

savings as a basis for new services for the population. Both before and after the reform work has been done in order to generate new structures enabling the delegation of activities, and in terms of planning one of the key issues has been a total re-structuring of the physical planning system, where most of the activities formerly handled by the Home Rule Government have been transferred to the Municipalities. Several of the planning activities were previously duplicated, as the municipalities were generating their own plans, for instance in relation to housing, land use etc. and then submitting them to the central government for approval. Some general control mechanisms are still maintained, but basically it is the responsibility of each of the four municipalities to develop their own plans – of course still in accordance with national rules and regulations. Consequently a new, highly decentralised planning system has been inaugurated, and will be challenged to stand the test of practical use over the next few of years.

While the shift of focus in the planning debate in the Faroe Islands has been moved from *Bygdamening* (development of the villages) towards *Økismening* (development of the regions), and some restructuring of the municipal structure has taken place over the last couple of years, the huge difference in population size between the municipalities strongly limits the possibilities of delegating activities and responsibilities to the municipalities. The smallest municipalities are unable to provide the required skills and knowledge, just as the economic sources needed are also lacking. As such, identifying the proper functions of the municipalities remains a question of creating the proper social framework for the communities and functional management units for local activities, while more overarching planning 'authority' has, to some extent, been delegated to the larger municipalities, while being, primarily, maintained as a centralised activity.

Concluding remarks

The four main drivers of structural reform are given similar expression across the Nordic countries[16]. *Democracy* is being used as an argument both in favour of and against reform. On the one hand it is argued that smaller units are more democratic because decision-making is brought closer to those who are concerned. On the other hand it is stressed that larger municipalities and/or administrative regions are capable of handling more tasks. Larger units will allow a transfer of tasks from the state to the municipalities and/or the regions.

The second main driver behind the reforms is *efficiency*. Larger units are expected to make the provision of welfare services more efficient. The third driver is that larger units may have a positive effect on *economic growth* as larger units in theory have more resources to promote development in the region. The final driver is that – as things currently stand - deficiencies undoubtedly remain in the *reform processes*: there is a need for more time, more actors should be involved and legislation is needed.

When it comes to the division of responsibilities between different levels in the political system the main question is whether the state representative in the region, a regionally elected assembly or municipalities in cooperation should be in charge. This is an ongoing debate, especially in Norway and Sweden. The move towards stronger regions is a general tendency in most West European countries. The Nordic reform processes might be compared to regionalisation processes in other countries. The regionalisation tendencies in France and the establishment of Regional Development Agencies[17] in England in 1999 are closer to the Nordic situation. These processes, as in the Nordic countries, are the result of a policy approach which seeks to strengthen the role of the regions as actors in regional development.

As shown above, the Nordic countries have taken different directions, even though the intentions of the reform proposals were similar - to strengthen the role of the administrative regions. The reform process in Denmark differs from the processes in Finland, Sweden and Norway. In Denmark, a general opinion exists that implementation of the reform has been rather seamless. However, the management of hospitals, the most important task of the new regions, is still criticised. In Norway, Sweden and Finland, the process has been much slower with the ambition being to have a wide-ranging debate, involving different actors.

[16] Aalbu, Hallgeir, Böhme, Kai and Uhlin, Åke (2008) Administrative reform – Arguments and Values, Nordic Research Programme 2005-2008: Report: 6, Nordregio.

[17] The new centre-right government in the UK will abolish the RDAs in England. The argument is that business was more successful in the years before the establishment of RDAs than after but the abolishment of the RDAs is also part of the process of cutting the budget deficit.

The Evolution of Rural Development Policies

Rural development has not traditionally been addressed as a policy field in its own right in Denmark, Finland, Norway or Sweden[18]. After the Second World War, politics in the Nordic countries was dominated by a concentration on building the welfare state while the development of rural areas was seen to be in the purview of 'strong' regional policy combined with policies supporting the primary sector.

With the EU accession of Denmark, and subsequently also some twenty years later of Finland and Sweden, more attention was given to the issue of rural development. Policies affecting rural areas, with a wider focus looking beyond agricultural activities, were implemented. In the same period rural areas were also affected by the shifting focus of regional policy away from regional balance towards a greater focus on competitiveness and regional growth as well as by increased competition between places. This imposed a new set of challenges for policies aiming at the further development of rural areas.

Since 1945 the Danish strategy has shifted from supporting national redistribution and welfare service provision to a greater focus on grassroots developments. Swedish politics have shifted from a focus on regional equalisation policy to the creation of competitiveness based on the endogenous strengths of each region combined with support to the primary sector for securing public goods, such as environmental. In Finland rural development politics have gained acceptance over the last twenty years. Finland is today characterised by a holistic view of rural areas and by the search for a coherent policy covering a number of administrative sectors. In contrast, distinguishing it from the other larger Nordic countries, Norway has attempted to maintain established settlement patterns – and continues to do so.

Denmark

The Danish welfare state developed after the Second World War supported decentralisation and aimed at distributing the wealth of the country evenly between places and people. This idea was further strengthened by national and municipal reforms in the 1970s and, until recently, signs of convergence between the different regions could be seen.

The so-called 'village movement' was first to draw attention to the need for a more explicit rural development policy in Denmark, a policy which went beyond regional and agricultural policies. Local associations mobilised to make the voice of the countryside heard during the 1980s and 1990s. In 1997 the first national rural development initiative was designed to support development initiatives at the local level. Recently the role of the village movement was enhanced when the local action groups (LAGs) were strengthened in the implementation of the EU rural development programme.

The state, the primary sector and civil society have all taken part in shaping the rural development work that today mainly consists of support programmes for local development projects, combined with business and environmental support to the agricultural sector. The content of rural policy in the broadest sense is to some degree formulated through a fundamentally 'agricultural-based' approach. It may be argued that Danish rural policy's aims and approaches are somewhat limited because of this 'agricultural hegemony', but the administrative reform process has undoubtedly brought forth new tasks for the municipalities, including planning responsibilities in respect of rural areas. The ongoing changes in rural areas are no longer exclusively anchored in agriculture, and agriculture is no longer the concentric core of Danish 'rurality'.

The Danish Rural Development Programme now squares with important societal needs and addresses real societal problems. The strategy and goals are also in line with EU priorities in terms of both the Gothenburg Declaration on sustainability and the Lisbon Declaration on economic growth and employment. This is clearly stated in the programme's objectives, which emphasise innovation and promote new earning potential, while still focusing on preserving natural assets. The programme also has the potential to bestow significant economic effects in rural areas in the form of new employment and businesses opportunities and increased innovation. Innovativeness is particularly well presented in most of the measures in the Rural Development Programme.

Finland

The 1960s and 1970s saw a period of heavy urbanisation and structural change in Finland. This gave rise to the first measures directed at peripheral areas, concerning fields beyond agriculture. In addition, a more holistic approach highlighting the desirability of conceptualising rural areas as entities composed of nature, people and different activities emerged in the 1970s and 1980s. These changes also gave rise to the

[18] Hedström, M. (2010), Politics of Nordic rural development. Journal of Nordregio No. 2 September. Volume 10. 2010

Finnish village movement, which remains today one of the cornerstones of the country's rural development policy.

As in Denmark, rural policy emerged as a policy field in its own right in the 1990s; in 1991 a first rural development programme defined the initial tools for rural development. In the same period a national rural policy committee with representatives from a number of different administrative sectors was created. The rural policy system has since then expanded, and today consists of both a broad policy, outlining the direction, and a narrow policy, containing different project support measures. This is designed to ensure cross-cutting territorial rural development at all levels[19].

The key focus here has long been about enabling rural areas, including remote areas, to keep pace with urban areas. Finnish rural policy was outlined within the context of national regional policy, drawing attention to its intersecting dimension and underlining a distinct differentiation with agricultural policy. The strengthened institutionalisation of broad rural policy has been emphasised through regional policy. In recent years, however, regional policy has, as elsewhere, focused increasingly on competitiveness.

On the other hand, narrow rural policy, i.e. development projects implemented through the Rural Development Programme was, on the basis of the implementation of EU rural policy, placed within the Ministry of Agriculture and Forestry. This arrangement has caused some tension between agricultural and rural development policies since they often compete over priorities and resources.

Norway

The Norwegian welfare state was developed after 1945, while the country recovered through economic growth based on the transfer of labour from the primary sector to industries in more urban settings. The first actions to reverse the relative decline of rural areas came in 1961 when a public fund was established to prevent the loss of rural jobs and depopulation. However, the term 'rural' was then, and is still, not used. Instead, such policies used the term districts. Over time specific policies for agriculture, fisheries and businesses were developed with the aim of creating a balance between rural and urban areas.

In the 1960s and 1970s the development of infrastructure and industry, as well as the decentralisation of higher education, was high on the rural policy agenda. Since the 1980s competitiveness, deregulation and the development of regional urban centres once again became the main focus. Compared with the other Nordic countries, Norwegian national policies remain to a greater extent focused on adapting to the situation in the different regions of the country through the strong tools available to it for financial redistribution.

The political debate in Norway has, over the last fifty years, been dominated by two camps; one promoting decentralised growth and local development initiatives, the other promoting policies focusing on the provision of infrastructure and growth centres. Current policies are a mix of the two, but the focus is still to some extent placed on avoiding centralisation and enabling the existing settlement patterns to continue.

Sweden

A strong welfare state policy dating back to the 1950s, a redistributive regional policy and a well developed local public sector have helped for many years to minimise urban-rural disparities in Sweden. Specific policies supporting the primary sector did initially exist, but had been phased out by the 1990s. On reappearing after EU accession in the context of the CAP, public interest in payments to farmers remained low. The policy only gained public acceptance when it was clearly designed to support farming activities with positive effects on environmental and other public goods.

In the 1970s the welfare state model started to weaken, partly in the wake of increased globalisation and the influence of neo-liberalism .One result was a gradual change in regional policies, from redistribution towards competitiveness and endogenous growth. The aim of achieving regional balance in economic development was thus largely superseded. In the late 1980s policy started to attach more importance to local village associations and community initiatives. "Regional enlargement"; increasing labour markets, has also attracted more interest as a tool for sustaining rural areas[20].

The focus of regional policy in Sweden has shifted from equalisation and compensation towards improving regional competitiveness. This is not necessarily negative for agriculture. It may strengthen the competitiveness of rural businesses and thereby contribute to enhancing the economic vitality of the countryside. The Rural Development Programme does not substitute for the absence of rural policy in the Swedish countryside. On the other hand, the stronger position of rural policy has not been regarded as important in Sweden, since regional policy and the distribution of welfare services are expected to provide for all economic and social needs in rural areas. However, regional policy and the distribution of welfare services have not yet converged in terms of rural needs in Sweden. To address these

[19] Kahila, P. (2009), Deliverable Deliverable 1.1 Country profile on rural characteristics, Finland, RuDI project.

[20] Kahila, P., Steineke, Moxnes. J. and Copus, A. C. (2009), Deliverable 2.2 National report on RD policy design Sweden, RuDI project.

needs, in 2009, the Swedish Government presented a Rural Development Strategy with the aim of delivering measures across a wide range of policy areas with the objective being to make it easier for people to live, work and start a business in rural areas.

Concluding remarks

From a broader European perspective, rural policies in the Nordic countries are characterised by an inter-sectoral approach at the regional and, especially also, at the local level. Significant focus remains on the 'bottom up' management of rural policy, based on a strong and powerful democratic local government, a relative equality between citizens and an active process of citizen engagement. Nevertheless two factors continue to complicate the implementation of rural policy in the Nordic countries. Firstly, local government reforms have in some cases weakened local engagement in rural development work. And secondly, the weight of agricultural policy is still stronger than rural policy, i.e. activities and sources of livelihood which are not directly linked to agriculture have not gained more attention in policy making.

Cross-Border Interactions

Introduction

Cross-border cooperation is an important means to achieve the overall EU aim of economic and social cohesion across the EU. At the core of Nordic and European cooperation lies cooperation activities across borders, regional as well as national, and a wide range of programmes are at work in the Nordic and Baltic countries in this respect, some of which have been ongoing for a long period of time (Nordic cross-border cooperation), some which are a continuation of previous programmes (for example the INTERREG Community Initiatives), and others which are of a more recent vintage (the Baltic Sea Region Strategy). These programmes vary in geographic scope, available funding, political grounding and backing, aim, thematic content and desired process.

The large number of programmes and initiatives – often geographically overlapping both in terms of geographic scope and participating actors - might seem to bring about a messy 'reality' for the Nordic countries, but it can also be viewed as a multilevel approach to regional development. One positive outcome of these multiscalar (multilevel) cross-border activities is that there is a multitude of programmes in place to assist the local, regional and national actors in building cooperation and financing their projects, and these programmes are interrelated to the overall aim of enabling regional development in border regions. In this respect, the previous INTERREG-programmes have paved the way for EU level funding for the Nordic cross-border regions, while more recent initiatives, such as the European Grouping of Territorial Cooperation (EGTC), also point to the continuous attention given to cross-border regions. Most recently the working programme of the Nordic Committee of Senior Officials for Regional Policy recognised this interdependent relationship between EU and Nordic initiatives when stating that:

> *"Active utilisation of the old, well-established cross-border cooperation network and the potential for integration should promote the competitiveness and visibility of the Nordic region as a pioneer in EU cross-border territorial policy" (Nordic regional policy cooperation programme 2009-2012, p. 57)*

In this chapter we shall explore some of the major contributions to cross-border organisation-building and activity currently operating in the Nordic countries.

Continuous development of Nordic cross-border cooperation

Nordic cross-border cooperation has a long history; beginning as early as the 1960s when transnational coordination organisations were set up to strengthen the integration of the Nordic region across national borders. Of the current 11 Nordic cross-border committees, eight have previously had the status of being the permanent organisation through which the Nordic Council of Ministers (NCM) carried out their integration work in terms of cross-border territories. Two of these eight cross-border committees can trace their origin back to the 1960s; another four were set up during the 1970s and 1980, while the remaining two – NORA and Øresundskomiteen – were established in their current organisational form in the 1990s. However, both of these base their operations on previous organisations in the cross-border region.

Recently, NCM financing of the Nordic cross-border committees underwent an important change when, in 2009, the Nordic Council of Ministers changed their conditions for cross-border financing in an attempt to open the funding option up for other cross-border cooperation organisations in the Nordic countries. The intention of NCM was to invite new recipients, as well as to induce a more dynamic approach to the available funding, as the funding went from being fixed to being application-based. All cross-

border cooperation organisations now have to apply for funding, at minimum every third year, and in the first application round of the new procedure a total of 11 Nordic cross-border committees received funding. Eight of these were the original Nordic cross-border committees, while another three received funding from NCM for the first time. The 11 current committees are listed in Table 1.

Although three additional cross-border committees were new under NCM auspices only one was an actual new cross-border organisation, namely TRUST Hedmark-Dalarna. Tornedalsrådet and Bothnian Arc were established already in 1987 and 2002, respectively.

Table 1: Nordic Cross-border committees, 2010

Organisation	*Countries*	*Members*	*Established*
ARKO	Norway-Sweden	Municipal actors	1967
Bothnian Arc	Sweden-Finland	Regional and municipal actors	1999
Kvarkenrådet	Sweden-Finland	Regional and municipal actors	1972
Mittnordenkomiteen	Norway-Sweden-Finland	Regional actors	1977
NORA	Greenland, Faroe Islands, Iceland, and west-Norway	National and regional actors	1996
Nordkalottrådet	Norway-Sweden-Finland	Regional actors	1967
Skærgårdssamarbejdet	Sweden-Finland	Regional actors	1978
Tornedalsrådet	Norway-Sweden-Finland	Municipal actors	1987
TRUST Hedmark-Dalarna	Norway-Sweden	Regional actors	2008
Øresundskomiteen	Denmark-Sweden	Regional and municipal actors	1993
Østfold-Bohuslän/ Dalsland	Norway-Sweden	Regional and municipal actors	1980

The 11 Nordic cross-border committees are located throughout the Nordic region (cf. Figure 1) and this, together with differences in organisational structures, makes them quite different from each other. However, since they all work towards the same aim – regional development of the cross-border region – they also have some resemblances in terms of the thematic areas of their activities, the process of work and the roles undertaken in this process.

Geographical differences

The regions that the Nordic cross-border committees cover vary from quite small areas, such as Østfold-Bohuslän/Dalsland at approximately 9 500 km², to vast areas, such as the North Calotte Council, which covers three large regions in the north (310 000 km²), and NORA, which covers a total ice free land mass in excess of 720 000 km², plus an even larger marine area between the Member States.

In addition, the border regions vary from regions dominated by metropolitan areas, such as the Öresund Committee with both Copenhagen and Malmö in its region and a population density of 185 inhabitants/km², to peripherally situated areas with a very low population density, such as Tornedalsrådet, with a population density of only 1.5 inhabitants/km².

Furthermore, the geographical locations of the individual border region committees mean that the number of national administrative systems involved varies from two (e.g. Norway/Sweden in ARKO and Sweden/Finland in the Bothnian Arc and Kvarkenrådet), to three (Norwegian-Swedish-Finnish in the North Calotte Council and Mid Nordic Comitte), to 4–5 for an organisation such as NORA, which has to interact with the administrative echelons of Greenland, Norway, the Faroe Islands, Iceland and, to some extent, Denmark in the course of its work.

These differences in geographical scope have implications in terms of how cohesively the region is perceived – both internally and externally – and also creates different working conditions for a cross-border committee that seeks to serve the entire area it covers. More specifically, these geographical differences affect which problem areas the regions work with. Several border region committees cover peripheral areas (nationally and internationally) and, as a result, topics such as depopulation, lack of educational opportunities and expensive infrastructure projects to service a rather small population characterise the political challenges in the region. At the other end of the scale are the dense commuter belts where a topic such as minimising border obstacles for these commuters is an important work area for the cross-border committee.

Organisational differences

The cross-border committees are also wide-ranging in their organisational structure and history, which affects their traditional areas of operation, and the purpose for which the organisation was set up.

The member organisations in the individual cross-border committees come from different political levels – from purely municipal composite organisations (ARKO, Tornedalsrådet), to committees comprising representatives of both the municipal and the regional administrative level (Öresund, Kvarkenrådet), to cross-border committees such as the North Calotte Council and Mid Nordic Committee which also involve regional organisations, such as chambers of commerce as formal partners within their organisation.

As mentioned, the organisations also vary widely in terms of history. Most of the committees have a long history of collaboration behind them, both the old ones that were established in the 1960 and 1970s, but even those with a more recent start date can often trace their organisation further back. One such example is NORA, which was established on the basis of the earlier "Vestnordensamarbejde" (West Nordic Partnership), another is Tornedalsrådet, which was established in 1987 by amalgamating two earlier organisations in the region. Only TRUST Hedmark-Dalarna is a new organisation that is currently seeking to consolidate its existence, both in its region and within the wider network of Nordic cross-border activities.

The longstanding tradition of cross-border collaboration in most regions means that the cross-border committee has been able to consolidate its position as the natural anchor organisation for the region's cross-border collaboration. Conversely, the long history can also mean that some cross-border committees have had to evaluate their purpose from time to time and perhaps even revitalise collaboration. Revitalisation may be necessary in order to re-engage the member organisations or to identify a new, shared vision of where collaboration is supposed to lead.

Another organisational difference with a very real impact on the day-to-day workings of the cross-border committees is their resources – the number of staff in their secretariats, finances, and opportunities for external project involvement. The size of the cross-border committee secretariats ranges from one-person secretariats (Skærgården, ARKO), to secretariats with a few employees (Østfold-Bohuslän/Dalsland, Kvarkenrådet, Mid Nordic Committe), to NORA which, in addition to a small main secretariat on the Faroe Islands, also has liaison officers in the other member countries. The Öresund Committee has by far the largest secretariat, with a staff of ten, and in addition it serves as the host organisation for the secretariats of INTERREG in the Öresund Region (9 employees) and the Danish part of ØresundDirekt (6 employees).

Secretariat sizes depend to some extent on the finances of the committee in question. One committee operates primarily on NCM funds (the North Calotte Council), whereas the vast majority of committees also receive substantial financial subsidies from their member organisations.

With regard to external project involvement the structure of project management varies widely. NORA and the North Calotte Council have annual grants and dedicated application procedures, and, by prioritising areas for applications, thus influence and also often coordinate activities in the border region. Tornedalsrådet and TRUST Hedmark-Dalarna are currently involved in INTERREG projects while the remaining cross-border committees' project involvement ranges from projects they host to projects they have chosen to co-finance.

Similarities in themes and approaches

Despite the apparent differences described above, the Nordic Cross-border committees also share a number of similarities. First of all, the main purpose of all cross-border committees is to contribute to increased growth and the development of the individual border regions. This concept of development is rooted in the expectation that dynamic and well-integrated regions will be able to retain and attract companies and people, as bigger regions have a better foundation in terms of resources for growth and development, and because each region has the potential for further development. Thus, all border regions have the same overall task: to break down physical and mental border obstacles within their region and to encourage member organisations, collaboration partners, residents, politicians, companies, etc., to look beyond national boundaries when addressing the region's potential for development.

Furthermore, despite the various geographical starting points, there are similarities in the overall themes that are addressed, as well as in the approach to these themes. The way the cross-border committees carry out the work within each theme varies over time. Similarly, not all organisations address the same topics. This depends on the chosen focal areas of the member organisations, as well as other project initiatives in the region. Nevertheless, most of the following themes are addressed by the cross-border committees to a varying degree.

Business development is a natural focus for all cross-border committees, since economic growth is essential to regional development. The individual cross-border committees deal with this differently – depending on the availability of potential and collaboration partners – but job creation is absolutely vital to all eleven cross-border regions. The different approaches include: dismantling the legislative border obstacles that prevent companies and commuters in the border region from being active on both sides of the border; financing product development projects in significant sectors of the region; or organising annual business fairs for companies in the border region.

Since the cross-border committees are themselves a network of their member organisations, network building is an absolutely fundamental activity for all of them. Above all, the existence of cross-border committees means that a political, and often also administrative, network has been created between the member organisations, a network which is used in working on all of the topics that each individual cross-border committee has enshrined in its articles of association and action plans. Secondly, a majority of cross-border committees also regard it as a significant task to build networks among other players on both sides of the border. Often, business networks are formed between companies and business organisations, but also social networks among the youth, networks involving institutions of learning, and networks in the energy sector are notable examples of unifying action areas. These networks may be established as part of a specific project, but all cross-border committees also organise seminars, meetings, conferences, fairs, etc., which serve as meeting platforms for regional actors and thus also serve to create networks.

Expansion of existing, and/or the establishment of new, infrastructure is another theme that is of importance for both peripheral as well as more centrally located cross-border regions. It can involve lobbying for national funding and awareness of the need for improving or establishing roads and railway lines, but priority is also given to maintaining and establishing air and ferry services. Infrastructure also includes IT infrastructure which is a topic of particular importance for the peripheral regions.

The cross-border committees are all situated in part or in whole in scenic regions making nature and tourism obvious focal areas. The activities within this theme range from creating networks among businesses in the tourism sector to participating in development projects with the aim of creating new attractions in order to increase tourism. Some cross-border committees work more generally to protect nature in their region, for example by driving the process of inclusion of valuable areas on the UNESCO World Heritage list.

Reinforcing regional identity and culture is another important function for just about all the cross-border committees while the initiatives for and purposes of the projects are many and varied. This includes strengthening regional minority cultures, such as the Sami culture, or historical ties to Finland; running a complete cultural programme with annual culture days and festivals, or publicising cultural institutions and events on both sides of the border.

Dismantling border obstacles that render cross-border collaboration and mobility more difficult is a vital task for all the border region committees. The committees often refer to the mental border obstacles as the greatest barriers, and all initiatives that involve parties on both sides of the border help to a large extent to remove this blind spot regarding the potential of cross-border cooperation. Border obstacles can also be understood in a more literal sense as legislative or administrative border obstacles that prevent or limit the opportunities of citizens and companies to operate freely across Nordic borders.

Working within these remits contributes overall to the economic and social development of the individual border regions, but several cross-border committees also put a special focus on producing dedicated strategic planning for the region. Several of the cross-

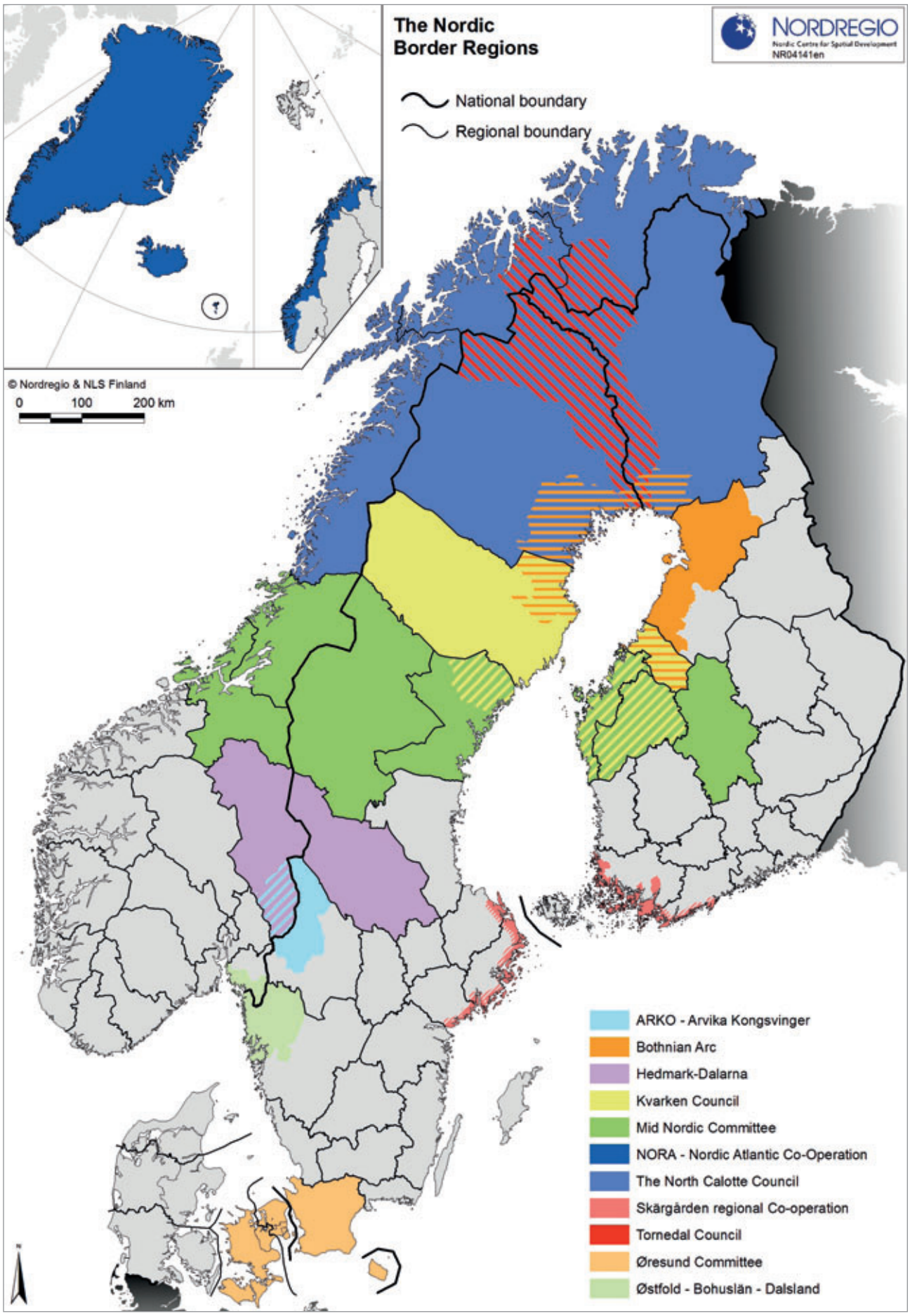
border committees are helping to coordinate local and regional plans at a higher strategic level while most of the infrastructure projects are also closely linked to the strategic potential of border regions.

Changes in the Nordic cross-border committees

What is important to bear in mind is that despite most of the cross-border committees' long history, a cross-border committee is never a stable entity. Building a cross-border region is a constant process where the commitment, and perhaps even the formal membership of the committee, must be reinforced. This of course happens through the ongoing development of and involvement in projects, working groups, political goals etc., but also more concretely when wishing to expand the cross-border committee to neighbouring regions and municipalities. Thus the geography of the Nordic cross-border committees' changes over time, just as a new committee can appear if they have the opportunity to establish a formal cooperation committee.

The partners involved in the Nordic cross-border committees have changed slightly over the previous decades. Where the original cross-border committees often consisted of municipal cooperation actors, a tendency has emerged in terms of the regionalisation of cross-border cooperation – probably due to the strong EU focus on "regional" cooperation. The latest cooperation initiatives that have attained funding for their activities from the Nordic Council of Ministers are TRUST Hedmark-Dalarna; Bothinan Arc; and Tornedalsrådet, all of which cover more extensive areas than, for instance, ARKO which to this day remains a small municipal cooperation organisation. Participation in the INTERREG-programmes has strengthened the cooperation abilities of the regional level just as the specific projects and activities have often had a regional rather than a local focus.

Figure 1: Location of the Nordic cross-border committees that receive funding from NMR in 2009



European cross-border and transnational cooperation programmes

A long-term focus on regional development has been one of the core activities of the EU as it is seen as a means to achieving the overall EU aim of economic and social cohesion across the European Union. Regional policy plays an important role in reducing regional disparities with the European Regional Development Fund (ERDF) making up one part of the EUs Structural Funds. ERDF funding makes up the bulk of financing for cross-border activities in the Nordic countries.

European Territorial Cooperation objective

The INTERREG initiative commenced in 1989 and is financed under the European Regional Development Fund (ERDF). It was launched as INTERREG I for the programming period 1989–1993, and continued as INTERREG II for the subsequent period 1994–1999. It moved on to INTERREG III for the period 2000–2006, with projects from this programming period closing by the end of 2008. The European Territorial Cooperation objective is the new programme period for what was previously termed the INTERREG Community Initiative. This fourth programme, which runs for the period 2007-2013, is currently midway.

The aim of both the previous INTERREG initiatives and the current European Territorial Cooperation objective is to stimulate interregional cooperation in the European Union and, similarly to most Cohesion Policy measures projects within these programmes require co-funding to be provided by the Member States, regional authorities or the project leaders themselves. The amount of co-funding required differs by region, ranging from 50% down to 0% in the poorest regions. The objective involves collaboration among authorities of two or more Member States, and are not only required to demonstrate a positive impact on the development on either side of the border but their design and their implementation must be carried out on a common cross-border basis. The beneficiaries of the objective are usually public authorities, interest associations and non-profit organisations, such as chambers of commerce, employer organisations, unions or research institutes. In the new programme period, private firms are eligible if they apply through a consortium of several firms; in previous programme periods they were not eligible.

The European Territorial Cooperation initiative covers three types of programmes: cross-border cooperation, transnational cooperation, and interregional cooperation.

Cross-border cooperation programmes promote projects whose partnership is constituted by partners coming from two or more member states and who are located in the border area. There are 52 cross-border programmes in Europe, eight of which are located in the Nordic region. Whether the challenges in the cross-border regions relate to infrastructure, to markets and services, or to cultural and linguistic barriers, the cross-border cooperation programmes are intended to address them. Thus the issues dealt with in the programme include encouraging entrepreneurship, the joint management of natural resources, supporting links between urban and rural areas, improving access to transport and communication networks, developing joint use of infrastructure, and promoting employment.

The transnational cooperation programmes aim to promote cooperation and better integration among large groups of European regions which have similar characteristics. The programme enables regions from several EU member states to coordinate a strategic response to, for example, accessibility, the environment, innovation, and sustainable urban development. Thus, issues covered include telecommunication networks, flood management, international business and research linkages, and polycentric development. There are 13 transnational cooperation programmes; 3 of which involve Nordic countries.

Finally, the interregional cooperation programmes aim to promote the exchange and transfer of knowledge and best practices among European regions. As such it functions at the pan-European level, covering all 27 member states. The intention is to build networks to develop good practice and showcase what regions do well for the benefit of those still learning. Under this banner, the INTERREG IV C programme as well as three additional networking programmes can be found. The INTERREG IV C programme enables EU regions to work together on two priority areas: innovation and the knowledge economy; and environment and risk prevention. The three networking programmes are: URBACT II which brings together actors at local and regional level to exchange experience and to facilitate learning on urban themes; ESPON (the European Spatial Planning Observation Network) which provides scientific information for the development of regions and larger territories through applied research, analysis and tools; and the INTERACT II programme which provides training, services and tools to programme managers and administrators of cooperation programmes.

Table 2: European Territorial Cooperation, ongoing programmes, 2010

Programme name	Total programme budget (in millions of €)	Eligible Nordic countries[1]				
		ISL/ FO/ GL	NO	SE	FI	DK
Transnational cooperation programmes						
Baltic Sea Region programme	€ 293		**X**	**X**	**X**	**X**
Northern Periphery programme	€ 59	**X**	**X**	**X**	**X**	
North Sea Region programme	€ 134		**X**	**X**		**X**
Cross-border cooperation programmes						
North programme	€ 57		**X**	**X**	**X**	
Botnia-Atlantica programme	€ 61		**X**	**X**	**X**	
Sweden-Norway programme	€ 68		**X**	**X**		
Central Baltic programme	€ 136			**X**	**X**	
South Baltic programme	€ 75			**X**		**X**
Öresund-Kattegatt-Skagerrak	€ 223		**X**	**X**		**X**
Syddanmark-Schleswig-K.E.R.N.	€ 69					**X**
Fehmarnbelt programme (Denmark-Germany programme)	€ 31					**X**

Source: http://ec.europa.eu/regional_policy/country/prordn/index_en.cfm

European Neighbourhood and Partnership Instrument

In addition to the internal European interregional and transnational programmes the EU has set up a number of programmes that target cooperation along the external borders of Europe: The European Neighbourhood and Partnership Instrument (ENPI). The ENPI targets sustainable development and approximation to EU policies and legislation, and improves the EUs capacity to support cross-border cooperation along the EUs external borders – thus giving substance to the aim of avoiding new dividing lines. The ENPI has replaced the previous instruments of MEDA and TACIS, and the current programme runs from 2007-2013.

The ENPI is a policy driven instrument that operates in the framework of the existing bilateral agreements between the EU and the neighbouring countries. Legislative approximation, regulatory convergence and institution building are supported through mechanisms such as the exchange of experience, long-term twinning arrangements with member states or participation in EU programmes and agencies.

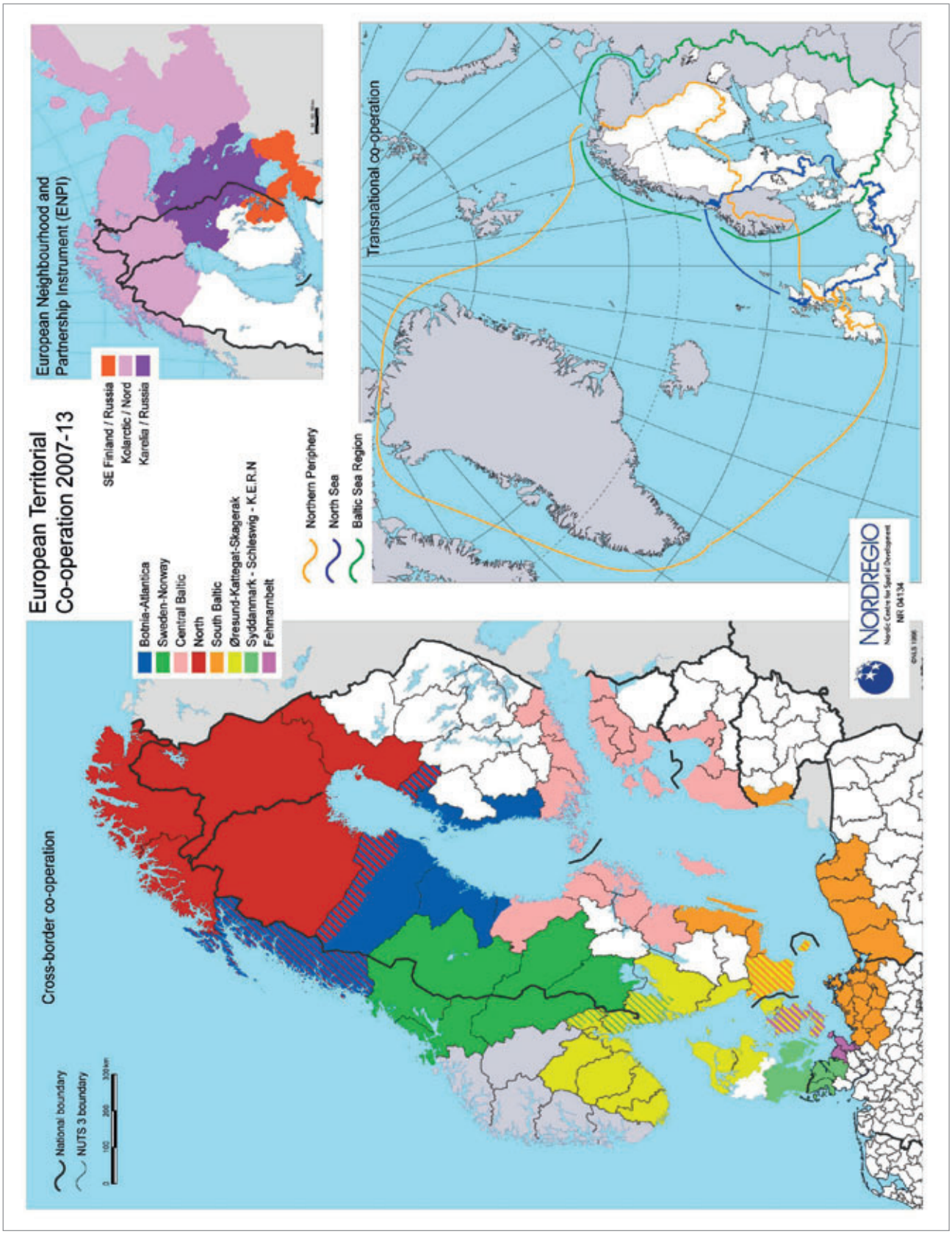
A specific and innovative feature of the instrument is its cross-border cooperation component. Under this component, the ENPI will finance joint programmes bringing together regions of member states and partner countries sharing a common border. The approach used here is similar to that taken within the European Territorial Cooperation objective with partnerships and co-financing. The cross-border cooperation component of the ENPI is also co-financed by the ERDF.

The Nordic countries close proximity to Russia obviously makes this an interesting programme for regions bordering Russia, particularly in Norway and Finland. With a total budget of €12 billion, this programme is yet another way to finance cross-border activities and also enhance the necessity to cooperate with Russia. There are three ENPI programmes applicable to the Nordic region, cf. Figure 2.

Box: European Grouping of Territorial Cooperation

The European Grouping for Territorial Cooperation (EGTC) is a new EU legal instrument established in 2006 to enhance and create better conditions for cross-border cooperation throughout the EU. Partners in an EGTC can be member states, regional and local authorities, associations and any other public bodies. The EGTC instrument differs from previous regulations of cross-border cooperation as it makes it possible to create a legal entity across national borders that can own property and have employees. The establishment of an EGTC must be agreed upon by the national governments of each country from where there are partners. The establishment of an EGTC does not require that an international agreement is made by the national parliaments. An EGTC must consist of partners from at least two EU member countries but partners from non-EU member states can also join in if an international agreement is made in relation to their participation.

Figure 2: Current EU programmes in the Nordic region



The Challenge of Cross-Border Statistics

With the increase in cross-border commuting in recent years an increased level of demand for statistical data on the cross-border labour market has emerged. The local and regional labour markets along the Nordic national borders increasingly spill across those borders creating a need for cross-border statistics on commuter patterns and other basic statistical measures, such as household incomes, that are not registered in the national databases.

National statistics display some often significant shortcomings in attempting to gain a clearer picture of the border regions. A general problem here is that national statistics only register data that occurs within national borders. A cross-border commuter who is registered as living in Sweden will, for example, not have his income from across the border registered in the same register, which results in too low a level of household income.

Since the register-based employment statistics in Sweden, Denmark, Norway and Finland are similarly built up, it is possible to identify individuals that live in one country and work in another by running cross-checks in all national registers. Several initiatives have been taken to shed light on the missing statistical parameters in the border regions. This illustrates how several actors with different funding sources have attempted to solve a common problem.

To be able to follow the effect of the building of the Öresund Bridge, Örestat was one of the first projects to address the topic of cross-border commuting. It originated as two INTERREG IIIA projects (Örestat I during the period 1998-2001 and Örestat II during the period 2002-2005), in a cooperative venture between Statistics Denmark and Statistics Sweden. Region Skåne was the lead partner in partnership with City of Copenhagen and with financial contributions from other regional and local stakeholders. Statistics on cross-border commuting in the Öresund region were produced for the period 1997-2003 and a database – *Öresundsdatabanken* – was set up and made available on the internet. Since the end of the INTERREG project periods, the Örestat database continues to be updated. In Denmark this work has become a permanent task of Statistics Denmark, while the Swedish contribution is seen as a regional responsibility, and thus Region Skåne is responsible for the financing.

A similar project was subsequently carried out in the Swedish-Norwegian border region of Västra Götaland-Østfold, where the outcome of the INTERREG-project 'Gränslöst Samarbete' (running during the period 2004-2007) was a database containing cross-border data for the region from the period 2001-2006. The project owners were the regional planning organisations and it was co-financed by regional organisations as well as municipalities and sectoral authorities. The partners are currently applying for further funding to continue the update and development of the database.

Other work that has addressed the issue of cross-border commuting statistics is the Nordic Commuter Maps (*Nordiska Pendlingskartan*), which describe the commuter flows in all Nordic countries. This project is financed by the Nordic Council of Ministers, and the reports are created in cooperation between the four Nordic statistical offices, with Statistics Sweden as the coordinator. The first report was initiated when it became clear from the first stages of the Örestat project that it was possible to find a method that could illustrate these cross-border patterns. It was published in 2005 – based on data from 2001. The report was followed up with new reports in 2007 (2004 data), 2008 (2005 data) and 2009 (2006 data). Another report is due at the end of 2010, based on 2008 data. However, this last one will not include Finland.

Simultaneously, with the development of the regional databases, a number of regional and local authorities and organisations question why they have to pay for producing statistics needed for planning, which is freely available for non-border regions. In the autumn of 2008, the Nordic Council of Ministers decided to give the statistical offices of Denmark, Norway and Sweden the task of constructing a Nordic statistical database – StatNord – with the aim of presenting cross-border statistics in respect of migration and labour markets in the Nordic countries. The work of producing comparable statistics from all three national frameworks begun in late 2008 and on the 30th November 2009 the new database was launched. Since the launch, further discussion on the development and future financing of a continued update of the database has taken place. Sweden is currently financing the upkeep of the database and is prepared to continue to do so in addition to financing their part of the data development; Norway has committed to finance their data part, while Denmark is questioning their need for additional cross-border statistics other than those that are developed in the context of the Örestat database. Finland was not part of the initial development process and is currently not interested in participating.

The status of the cross-border commuting in the Nordic countries

Cross-border commuting has steadily increased since the first quantification of the total number of cross-border commuters in Norden was made in 2001. In the first Nordic commuter map from 2001, 25 400 individuals were classified as cross-border commuters, defined as having their residence in one Nordic country and their main workplace in another. In 2006, this number had increased to a total of 44 000 individuals[21].

In the period from 2005 to 2006 alone the total number of cross-border commuters in the Nordic countries increased by 23%; representing approximately an additional 8 000 individuals. Swedish commuters accounted for the majority of this increase – 87% or 7 000 commuters – while Danish and Finnish commuters to Sweden made up the remaining 13%.

Commuting from Sweden to Denmark or Norway is the major commuter flow, making up 75% of total cross-border commuting traffic. Norway has by far the largest number of in-commuters, about 19 500 individuals, and relatively few out-commuters, about 2 700 individuals, which results in an in-commuting surplus of approximately 16 800. Denmark follows in second place with an in-commuting surplus of 10 200 commuters. Sweden is the main provider of cross-border labour, with a net surplus of out-commuters of 25 600 individuals, while Finland has only a net total of 1 400 out-commuters, cf. Figure 3.

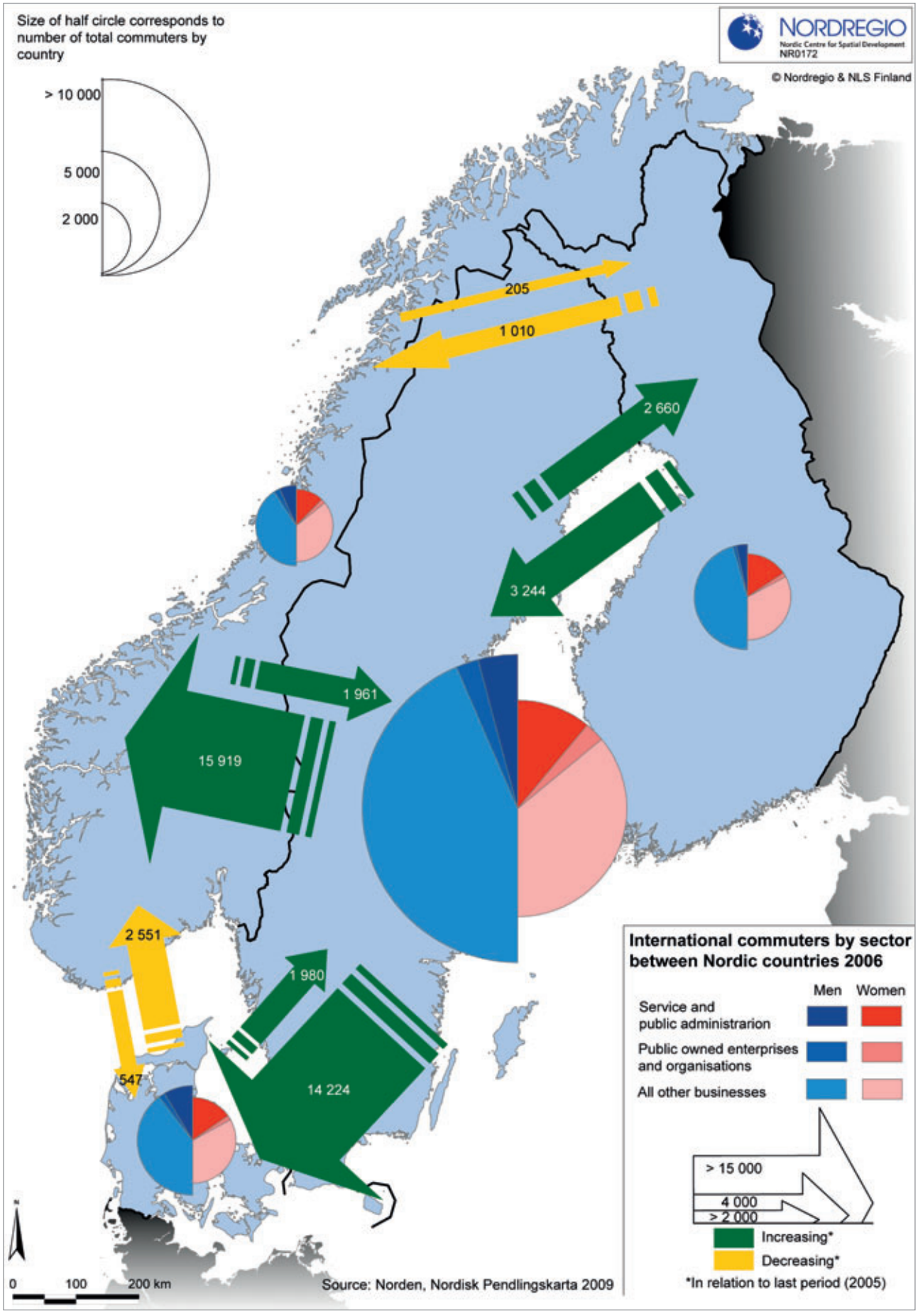
The Öresund region accounts for the majority of Swedish-Danish cross-border commuting and is also the most intensive border region with regard to commuting in the Nordic countries. In 2006 approximately 13 500 individuals commuted across the Öresund, with the flow going from Malmö municipality to Copenhagen municipality being the most intensive, about 4 100 commuters. Another 3 600 commuted from Malmö to other parts of Eastern Denmark.

Between Sweden and Norway the pattern is more complex. Within the region of the 'Gränslöst samarbete' – the region of Västra Götaland in Sweden and some municipalities in Østfold and Akershus regions in Norway – 1 000 individuals commute across the border. Oslo draws commuters from numerous parts of Sweden. Approximately 5 770 Swedes commute to Oslo with the largest flow coming from Göteborg, about 400 cross-border commuters, which means that the Oslo in-commuters originate from a large number of Swedish municipalities.

The commuter flows between Sweden and Finland are also increasing even if the numbers are not as dramatic. In the border area of 'Tornedalen' in the North of Sweden and Finland, approximately 530 individuals commuted across the border in both directions. The flow is larger from Sweden to Finland and the largest flows went between the municipalities of Haparanda in Sweden and Tornio in Finland.

[21] According to the Nordic commuter map 2009

Figure 3: Commuting between the Nordic countries (2006 figures)



A Macro-Regional Strategy for the Baltic Sea Region

June 2009 saw the adoption of a major strategic policy document on the territorial future of the Baltic Sea Region (BSR): The European Union Strategy for the Baltic Sea Region (EUSBSR). This document sets the framework for the adoption of a number of jointly agreed points of departure designed to strengthen territorial and thus transnational cooperation around the Baltic Sea. This marked the beginning of the EUs implementation of a macro-regional strategy, since it was subsequently also announced that this strategic policy paper for the BSR may be viewed as a forerunner for the implementation of further macro-regional strategies across the European Union[22]. At the current time of writing (September 2010) a so-called 'Danube Strategy' is in its consultation and developing phase with the action plan due to be adopted by the end of 2010. This specific kind of a macro-regional strategy is currently also being debated for the North Sea Area, as proposed by the North Sea Commission and the Committee of the Regions North Sea Intergroup. It is, moreover, highly likely that in the future we expect to see more macro-regional strategies, with different geographical scopes and thematic foci. Apparently macro-regions are seen to constitute a new strategic policy arena within the context of transnational cooperation.

One of the most important elements in the EU Baltic Sea Strategy is its 'demonstration effect', where it acts as a 'model' for further macro-regional strategies. However, the critical question remains, namely, do these strategies help to better take into consideration the existing 'territorial diversity' and the enormous socio-economic disparities, on the one hand, and to make better use of the available 'territorial capital' within the EU, on the other?

What is a Macro-Region?

The definition of a macro-region relates to the exercise of how to define a region regardless of the prefixes - macro, micro, meso, sub-national etc - used. Under current usage the term 'region' can refer to anything from an administrative unit to a functional area. Regions are consequently not pre-given as physical objects. Instead they are formed and framed through specific practices. They can be considered as products of intended actions by a set of stakeholders. The process of regionalisation itself can be viewed as a strategic and interest-led articulation of power. The strategies of the stakeholders can, however, change over the course of time, if established attempts at regionalisation are perceived as being no longer successful. This might, at least to some extent, be the case in respect of macro-regional strategies, since they try to introduce 'new regions' by bringing together different stakeholders with an interest in responding to certain transnational challenges (for example polluted oceans, innovation transfer, security issues) with specific pre-defined projects and actions.

With regard to policy it is critical how macro-regions are mobilised to assume (political) power in order to better shape and negotiate 'their futures'. In particular, 'macro'-regions demand the discursive negotiation of the required coordinating and regulatory institutional arrangements as they offer a 'new scale' for territorial governance. In other words, their production as new objects for policy attention challenges the installation of new modes of governance in order to literally 'fill' the organisational and institutional vacuum that emerges once a new 'macro'-region is produced (such as the Baltic Sea Region for instance). This vacuum emerges at least in terms of the need to govern the programmatic focus of such a strategy and to manage the implementation of a specific action.

Such a project - creating a new level of 'actorness' in the multi-level political system - is normally a highly contested process often precipitating a power struggle, which revolves not only around the content of this new level, but also around the relation to existing levels and between different levels (including National States, sub-national regional/district level, municipalities). Macro-regions can thus be considered as a specific interface between different established levels. Once a macro-region that is capable of acting is installed and is used as a new channel to implement policies its maintenance and functioning could consume many resources at the expense of other requirements in respect of politics and planning.

To sum up, regions are 'constructed, deconstructed and reconstructed' through the interaction between various actors in response to changes in their internal and external environments. This implies that there are no pre-given conditions or criteria for what constitutes a region, including macro-regions – even though certain coherent structures and characteristics, be they political, geographical, cultural (or mental in terms of identities), can help enormously in the construction of a macro-region.

[22] Dubois, A./Hedin, S./Schmitt, P./Sterling, J. (2009) EU macro-regions and macro-regional strategies – A scoping study, Nordregio Electronic Working Paper 2009:4, 43 pp. http://www.nordregio.se/inc/openitem.asp?id=88929&nid=2112

Since World War II transnational integration has developed from reflecting a closed intergovernmental and geopolitical interpretation of security and international trading agreements, into a more complex and open multidimensional structure, influenced mainly by the process of globalisation. It has gone beyond exclusive trade concerns and has started to deal with a number of other fields of cooperation, as well as common challenges and joint interests such as environmental protection and economic growth. The macro-region has become a setting in which several actors, state and non-state, public and private are equally interested in the process of transnational integration and cooperation thus forming a new multi-levelled structure of interaction. In this sense we can distinguish at least four different 'reasons' for constructing macro-regions:

1. to foster international relations with the National States as the main actors (e.g. in terms of security issues such as the NATO)
2. to foster functional relations with the National States as the main actors (here in particular trade relations such as EFTA)
3. to utilise cultural and political homogeneity with the National States as the main actors (e.g. the Nordic Council)
4. to utilise cultural and political homogeneity in order to respond to common challenges (e.g. the latest EU macro-regional strategies as discussed in this chapter).

In view of the latter, it has to be stated that macro-regions are not only about the grouping of homogeneous territories. Indeed, this exercise can also be based on heterogeneity, for instance by facilitating a complementary critical mass of stakeholders.

At first glance in a purely EU context, EU macro-regional strategies seem to be very much akin to the transnational cooperation programmes that started in the end of the 1990s under the labels INTERREG IIC 1996-1999, INTERREG IIIB 2000-2006 and finally INTERREG IVB 2007-2013. Having said this, as the potential added-value of macro-regional strategies (corresponding to the EUSBSR-type, see below), we can identify, as a minimum, the following aspects:

- Addressing of joint challenges as a common denominator (such as pollution of the Baltic Sea)
- Promoting transnational and cross-border cooperation
- Establishing a thematically focused process/ dialogues on territorial cooperation
- A new way of thinking about multi-level governance and subsidiarity
- A globalisation strategy for European macro-regions

A EU BSR Strategy – A critical appraisal

The EU BSR Strategy represents a novel approach to the introduction of the EUs territorial policy agenda. It can be viewed as a comprehensive and inter-sectoral inspirational source built on four central pillars: environmental protection, economic prosperity, accessibility and attractiveness, and finally, safety and security. The strategy includes, in total, 15 priority areas, under which 76 so-called flagship-projects are defined plus ten horizontal actions that shall serve the objectives of territorial cohesion. This is important to stress, since the strategy is indeed developed by the Directorate General for Regional Policy (DG Regio), though a number of other DGs have been involved in the elaboration process. Hence it is rather weak in depicting a spatial perspective for the Baltic Sea Region; its central part is the Action plan and the definition of numerous concrete projects. As such it is focused on implementation and visibility rather than on application and symbolism through coordinating the many actors and organisations and their numerous programmes, agendas and available instruments, because the Commission feels that a stronger commitment from the relevant local, regional and national stakeholders is required in future to use the already available financial resources more efficiently.

In this respect, the Strategy has also drawn criticism as some have suggested that the Baltic Sea Region is already overburdened and 'too rich' in its 'organisational capital' due to the existing multiplicity of state and non-state stakeholders (the pan-Baltic organisations, councils, networks and foundations, which have evolved over the past 60 years or so). The argument here is that there is no need for another player such as in this case the EU Commission who advocates the Strategy backed-up by other EU institutions like the European Parliament and the Committee of Regions. Other voices have argued however that the Strategy is to be welcomed, in the hope that it can better coordinate the existing multiplicity of stakeholders and thus can perhaps make better use of this critical mass and its 'organisational capacity' for transnational cooperation.

Perhaps the most eye-catching element in the EU-strategy is a number of proposed actions/projects that will not be followed by new legislation, instruments or institutions. This approach is labelled the three "No's" (no new legislation, no new instruments and no new institutions). Consequently the implementation of the action plan will require a multi-level and cross-sectoral coordination approach, diverse partnerships and functioning programme-based management and assessment procedures. The strategy itself does not propose any new mode of governance concerning the management or prioritisation between the many proposed actions/projects among the participating

actors/institutions – the Strategy relies on a 'learning-by-doing' approach and a strong level of commitment by the responsible stakeholders to implement such proposed actions.

In addition, it neither demarcates the entire macro-region nor proposes 'where' the intended actions/projects might have the largest impact in terms of improving the territorial capital and/or promoting territorial cohesion within this macro-region. In other words, the strategy will challenge the horizontal as well as the vertical coordination between different spatial entities (for example municipalities, planning regions, National States) and sectors.

In sum, macro-regional strategies seem to have become a central pillar in the EU's strategic policy approach to territorial policies. In this sense, such macro-regional strategies can mark a turning point in European spatial policy discourses as other strategic documents such as the European Spatial Development Perspective (ESDP, 1999) or the Territorial Agenda (TA, 2007) have been jointly developed by the Member States. Now it is the EU Commission who 'owns' this new territorial policy approach, although it has been elaborated in close cooperation with some Member States. In this light it is striking that this multi-sectoral strategy with several actions that might have a significant territorial impact are not integrated into any specific European territorial perspective. In the EUSBSR, there are neither explicit references to the ESDP and the TA, nor, what is most notable, to the EUs intrinsic desire for territorial cohesion as manifested in the Lisbon Treaty (art. 3.3). Instead the BSR is treated as a homogeneous area since almost no intra-regional differentiation in terms of territorial characteristics is made (in relation to urban-rural areas, islands - continental areas, dense – sparsely populated areas, level of accessibility to services/ infrastructures/human capital/markets, economic performance etc.,) along with the identification and descriptions of the proposed actions and projects.

From the Three No's then it becomes evident that the elaboration of macro-regional strategies needs to fit into the existing dynamics and initiatives within the macro-region as well as the EUs policy framework. Discussions have now, however, begun in respect of whether a specific budget line in the EU budget can be allocated to macro-regions in the programme period starting from 2014. For the stakeholders concerned this means that a thorough evaluation of the state of affairs in the Baltic Sea macro-region is a necessary first step. Indeed, as the EU Strategy for the Baltic Sea Region exemplifies, one should bear in mind that the most promising 'added-value' of a macro-regional strategy lies not so much in the main lines of argumentation in terms of its 'strategic' focus, but rather in the identification and prioritisation of the concrete actions that would potentially have the biggest impact on the state of the macro-region in general and on its specific local territorial characteristics in particular.

Example: Baltic Sea Region climate change responses

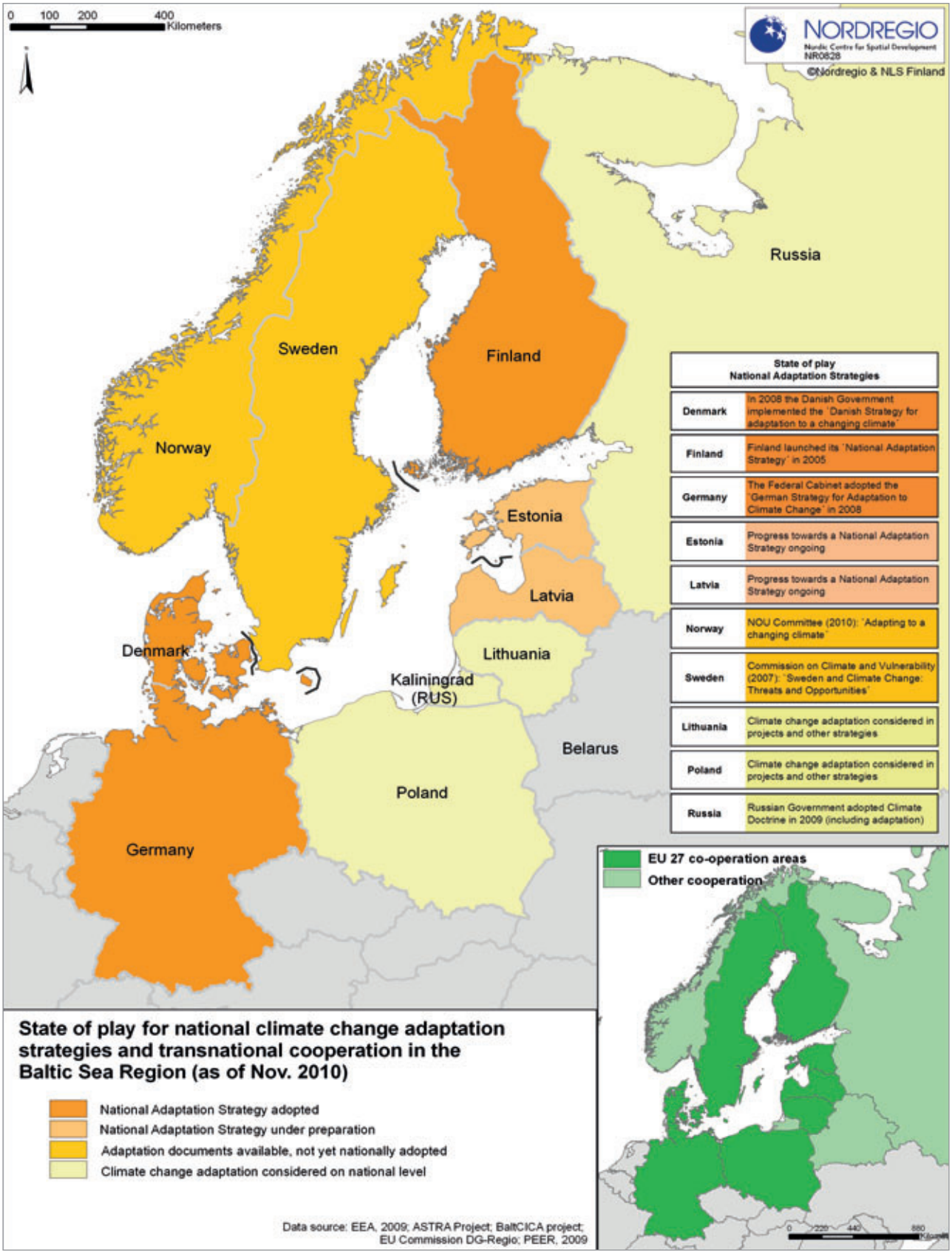
The eleven countries surrounding the Baltic Sea, including Denmark, Finland, Norway and Sweden, cooperate transnationally on various projects on topics related to regional development. One example here is climate change adaptation, which is a particularly demanding topic. This is being reflected in the EU Baltic Sea Region Strategy (EUSBSR) calling for "a regional adaptation strategy at the level of the Baltic Sea Region". The call for action has been converted into a project called BaltAdapt which was approved in June 2010 for funding under the Baltic Sea Region Programme 2007-2012. The Danish Meteorological Institute is leading the process that incorporates all efforts made by the countries involved. The Nordic countries are important partners in the strategy, since all of them have adopted a National Adaptation Strategy (NAS) or a respective document while a number of national projects and research programmes are ongoing.

Transnational learning and governance issues related to climate change adaptation are the focus of the project, "Climate Change: Impacts, Costs and Adaptation in the Baltic Sea Region (BaltCICA)[23]. Through the coordination of 24 partners, including municipalities, regional authorities and research institutes from eight countries, the project is part of the Baltic Sea Region Programme 2007-2013 and aims to support both adaptation processes on the local level in regions and municipalities and pan-Baltic cooperation, for example multi-level and transnational approaches in respect of climate change adaptation. Therefore, the project assesses the costs and benefits of climate change adaptation on both levels. Under the priority "Baltic Sea as a common resource" the BaltCICA project runs from 2009 until 2012 and is led by the Geological Survey of Finland (GTK) with a total budget of €5.3 million.

Within this project a climate change adaptation strategy on the macro-regional level in the Baltic Sea Region is being investigated from a multilevel governance perspective, bringing together "top-down" and "bottom up" approaches to climate change adaptation.

[23] For more information, see http://www.baltcica.org

Figure 4: State of play for National Climate Change Adaptation Strategies in the BSR



Box: Climate Change for the new Baltic 21 Strategic Action Plan for 2010 to 2015

A preliminary version of the Climate Change Actions to be included in the Portfolio of Actions within the Baltic 21 Strategy 2010-2015 has been produced. The portfolio is seen as a major policy input to the Eco-region project funded under the EU BSR Programme 2007-2013 and will be viewed as a 'living' document of actions by which Baltic 21 members and Baltic 21 Lighthouse Projects are committed to implement in the next 5 years.

Baltic 21 was initiated by the Prime Ministers of the Baltic Sea countries in 1996 and is a regional expression of the global Agenda 21 adopted by the United Nations "Earth Summit" in 1992. Baltic 21 facilitates an open and transparent network for cooperation by linking together a wide range of stakeholders in a common venture for regional sustainable development. Comprising a multinational team, its members include various government ministries and agencies from the eleven Baltic Sea States, the European Commission, numerous intergovernmental and non-governmental organisations, academic and financial institutions, as well as local, city and business networks. As of 1 January 2010, Baltic 21 became integrated into the Council of the Baltic Sea States (CBSS) and operates as one of its expert group focusing on the following strategic areas:

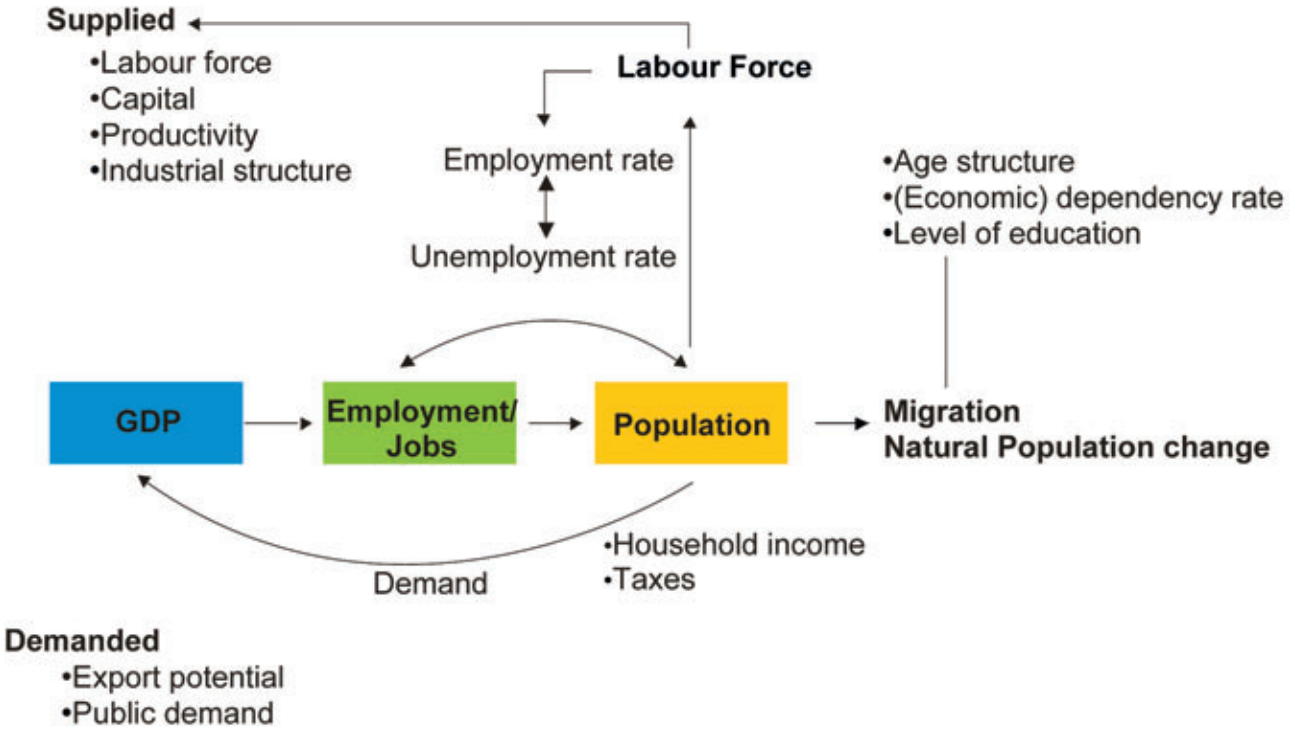
- Climate change
- Sustainable urban and rural development
- Sustainable consumption and production
- Innovation and education for sustainable development

Regional Development Trends

Introduction

Regional development is closely related to a number of economic, demographic, social, and political processes, connected by intimate supply and demand relations as indicated in Figure 5 below:

Figure 5: Relations between GDP, jobs and population



Source: Ponnikas et al 2010 (modified)

affects household incomes and taxes in the region. Similarly, the availability of human resources attracts businesses, and provides a basis for new activities.

On the one hand, the availability of human resources and their characteristics, such as age structure, educational level, mobility, and affinity to the labour market, and on the other, the economic structures and business characteristics of the regions, with a focus on the individual region's ability to respond to global market challenges, and with the question of overall performance, being measured by Gross Domestic Product (GDP) both as a general development over time, and to show the differences between the regions.

Company location and activities influence the demand for employment and jobs in the region. The total number of available jobs affects migration as well as, the regional distribution of population. This, however, has an impact on the age structure, the regional level of qualifications and employment rates. As such it also

In the overview the latest development trends are shown on the national level in order to reflect the most recent economic changes in this economically turbulent period. To provide linkage to labour markets productivity has also been included. Labour markets and population structures follow the same logic, with the general and latest trends on the national level and more detailed information down to the municipal level provided.

And while the main foci lie in the Nordic regions, a more general view of Nordic regions in the European context will be also be provided. Finally it should be noted that the regional divisions are presented as of 2010.

Human Resources as a base for regional development

As indicated above, human resources are a vital component in regional development being a supply base for labour markets and a source of economic activities, generating household incomes, taxes and the production/consumption of private and public services. To attract people to and maintain them in a region has becom a critical issu for many regions, just as a well-functioning infrastructure and new investment in transportation, housing and education are also crucial. In this section, therefore, the main focus is on population characteristics and changes, including also the interaction between urban and more rural/ peripheral regions.

Variations in population change

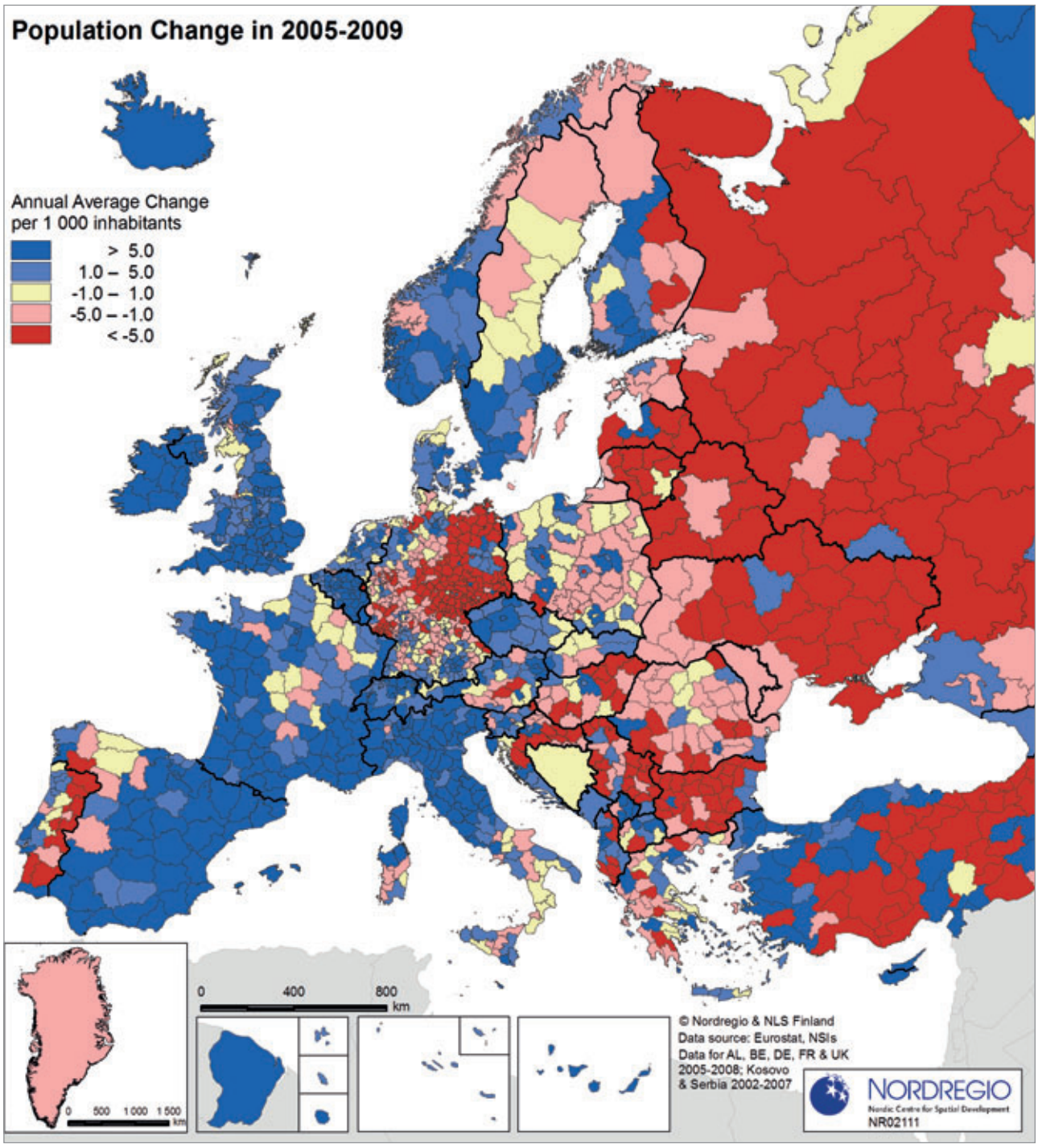
During the period 2005-2010 the Nordic population grew modestly by approximately 0.67% *per annum* or a total of 842 000 persons. This was more than the average in the European Union, which saw a 0.40% growth rate or an increase of 9.9 million persons. At the Nordic national level, Denmark, Finland and Sweden each saw a total population increase around average EU rates, in spite of an increasing growth rate recently in Sweden. Norway had a higher annual population increase, above 1% over the last five years. Nevertheless, it remained below the level of population increase in Luxembourg, Ireland, Spain and Cyprus. From a European perspective, Iceland had the most dramatic development with a population increase over 2% *per annum* in 2005-2008. However, as a result of the more recent economic changes the total population decreased by approximately 0.50% between 2009 and 2010. In the Faroe Islands the population change over the last five years has been modest, with an increase of approximately 0.1% *per annum* and in recent years this has actually changed to a minor decrease, similair to that of Greenland where the total population has been decreasing on average by 0.5% *per annum*.

Delving more deeply into the details at the regional level, however, differences in the rates of change have been much more marked. Between 2005 and 2009 an increase higher than 2% *per annum* was experienced in 30 EU regions, with this group including Oslo and Reykjavík regions (Figure 6). Similarily, 12% of EU regions have experienced a population increase above 1.0% *per annum*. Helsinki and Stockholm regions together with West Norwegian Hordaland, Rogaland and Sør-Trøndelag are in this group. In Europe in general, most regions with rising populations are located in the old EU 15 countries and in major city regions, while many regions located beyond the major cities or transport corridors - especially in Eastern Europe - are losing population. Similar territorial imbalances can, at a lesser scale, be found among the Nordic regions, especially in Sweden and Finland. For example, the sparsely populated Eastern Finnish regions of Kainuu and Etelä-Savo were among the EU regions where population losses were highest – as indicated on the map with losses above 0.5% *per annum*.

The overall population change is a combination of births, death and migration to and from the region. Up to the end of the 1980s, natural population increase was by far the major component of general population increase in Europe. Since then, decreasing fertility rates, increasing life expectancy and the rising importance of international migration have changed this picture. Over the last 20 years migration has become the major component of population growth. Approximately two thirds of the European NUTS 3 regions had a migration surplus in 2005-2009. At a general level, there is a spatial polarisation concerning net-migration, between Eastern and Western Europe, as well as between metropolitan and more rural and peripheral regions. Regions gaining population due to migration are located in northern Italy central Spain, south-west France, England and Wales and some Eastern European capital regions, while regions gaining population due to natural increase are located in more rural and peripheral regions, including the North Calotte region, but also in some more densely populated areas like the Netherlands and the Copenhagen region

In general terms and in a European context, the Nordic countries have high birth rates, and in respect of the West-Nordic region in particular (Western Norway, Iceland, the Faroe Islands and Greenland) they remain very high. The only countries with comparably high fertility rates are France, Ireland and the United Kingdom. Excluding Sweden, a Nordic trend is discernable where high natural increase is in some regions compensating for negative net migration, thus maintaining the trend towards a total population increase.

Figure 6: Population change in the European NUTS3 regions in 2005-2009



Changing population trends in recent years

In the Nordic countries, population development is strongly linked to the urban hierarchy and its functional dimension, gaining population both due to natural increase and to net in-migration. Over the last ten years the Nordic capital commuter catchments areas experienced an annual average population increase of 1.0% or more (Figure 7). The population increase was even higher in several Nordic second-tier metropolises, particularly Stavanger/Sandnes (NO), Malmö/Lund (SE), Reykjanes Peninsula (IS) and some regional centres like Oulu (FI) and Vejle (DK). In Copenhagen, the increase was not as high, with an annual average increase of 0.5%. At the same time municipalities outside the city areas have experienced significant population losses in recent decades, mainly in the Danish, Finnish and Swedish countryside. A few Icelandic and Norwegian coastal rural settlements have managed to increase their populations due to successful tourism and/or fishing and aquaculture activities, but the general development has been more or less like that in the other Nordic countries.

Similarly, many Nordic city areas have

experienced population increases both due to immigration and natural increase. The highest natural increase rates between 2000 and 2010 are found in the Finnish Sievi and Oulu areas (both located in Northern Ostrobothnia), the Reykjavík and Reykjanes regions in Iceland and in the Norwegian Saami Kautokeino-Alta area. The role of secondary *metropoles* and expanded capital labour markets becomes even more visible when looking at those Nordic commuter catchment areas that are gaining most from migration. Reykjanes peninsula, Malmö/Lund, Tampere and the expanded Oslo region were those with the highest in-migration rates.

In contrast to this, rural and sparsely populated areas in the north have generally experienced population decreases. The largest rate of natural decrease was found in municipalities in Norwegian East Finnmark and in north-eastern Finland both of which had experienced significant levels of out-migration. Exceptions to this pattern include places where traditional activities have been supplemented by new initiatives, often in relation to tourism, renewable energy generation, education and other public-sector activities.

While the above description relates to the general development pattern, considerable changes in Nordic population development trends occurred in 2009 due in the main to the economic crisis and to resultant changes in mobility (Figure 8). The effects of this on the various Nordic countries clearly have not however been uniform in nature.

In Denmark the population has become increasingly concentrated to city regions and larger labour markets with the option of commuting. Over the last ten years the whole of Zealand has become a part of the Copenhagen labour market, while the labour market with the highest growth has been in the Vejle-Århus urban area in eastern Jutland. The small islands, especially in the South Funen Archipelago and in the northern part of Jutland have, meanwhile, seen the largest population decrease. Previously, all five Danish regions had a positive population development trend. In 2009, however, changes in this pattern began to occur. Western Jutland which had traditionally benefited from an increasing population, despite out-migration, began to lose population. This is due to declining birth rates in the medium sized cities of Esbjerg, Holstebro and Skjern. Another striking change has been in the Vest- and Sydsjælland region in the capital commuter catchment area, where a previous population increase has turned into a decrease. Among the explanations for this has been the consequences of declining house prices in the Capital area due to the economic crisis in addition to increasing fuel prices and congested roads during rush hour periods. To a more limited extent, the same phenomenon also occurred in the Århus area. Labour market changes relating to the economic crisis have encouraged this development through an increased level of migration of young adults to cities with educational possibilities. This concentration is even clearer in geographical terms: in 2005-2009 72% of Danish land area measured on the municipal level experienced population increase while in 2009 it was only 43%.

In Finland, the polarisation between *metropoles* and regional centres with a university on the one hand, and other labour markets and municipalities on the other from the 2000-2010 perspective, is more striking than in the other Nordic Countries. Outside *metropoles* and regional centres few other municipalities have seen a positive population development in the last ten years. Some of these growing small municipalities are located in the expanded Helsinki commuter catchment area, heading towards Lahti, Tampere and Turku via the main transport corridors. Other growth areas are located along the Ostrobothnian coast between Pietarsaari and Raahe. In this area a high birth rate has kept the total population increasing, and this is even more influential in 2009 as total fertility has risen in ten years from 2.15 children per female to 2.40. The same pattern is seen in Finland more general as the total fertility rate for whole country in 2009 was 1.93, the highest rate since 1969. The only deviators from the above path were some small municipalities with major tourist attractions, such as the northern municipalities of Kittilä and Muonio which have large ski resorts, which experienced a population increase due to immigration last year.

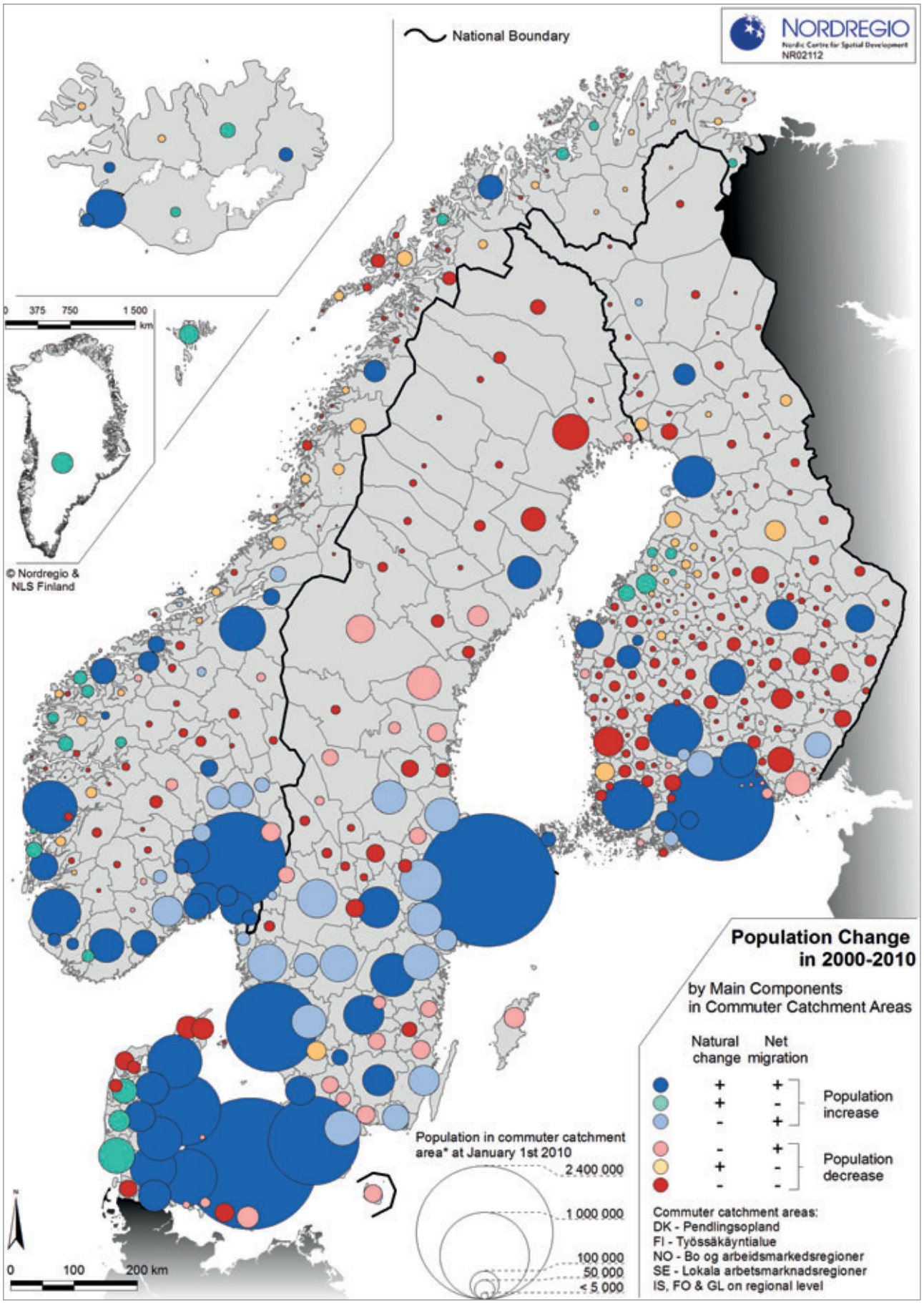
Over the last 20 years the total population increase in the Icelandic regions of Reykjavík and Reykjanes was about 40%, the highest figure among the Nordic labour markets, and with the municipality of Álftanes in the capital region exhibiting the highest Nordic extreme with a 165% growth rate. This population increase was due to both high birth rates and in-migration. Since all regions, and 90% of Icelandic municipalities, have seen a natural population increase, migration has been the most important component in generating regional differences in population. And as a consequence of the migration of the last decade the population had concentrated to the expanded capital region, including the Reykjanes peninsula, Sellfoss and Akranes and the Akureyri region. In addition, construction work in relation to the *Alcoa* aluminium smelter during the 2004-2008 period temporally created a population growth 'spike' in Eastern Iceland. However, the onset of the financial crisis from the middle of 2008 resulted in major changes in population development with Iceland, for the first time since 1889, experiencing a decrease in population. Even though natural population change remained positive at a level of approximately 1%, a negative net migration of as many as 5 000 people in 2009 resulted in an overall population decrease.

Although half of the emigrants were foreign citizens who had been working in Iceland during the 'economic boom' years, the population change map of Iceland was nevertheless turned upside down. The previous growth regions lost population and the few municipalities that did see a population increase in 2009 were mostly tiny rural municipalities with tourism activities.

Over the previous decade the Norwegian population has continued its concentration to major coastal cities, especially the greater Oslo and Stavanger regions, while large land areas in northern Norway and the inland areas of Oppland, Buskerud and Telemark have lost population. Still, compared to the other Nordic countries, the Norwegian population change is more balanced while some small coastal municipalities outside the regional centres have even managed not only to maintain but to increase their populations. This relates to high birth rates, but the role of international migration is also important here. In 2009 the Norwegian population change on the NUTS3 level was positive in all regions for the first time in over twenty years. Notable changes can be seen in northern Norway and Vestlandet in particular, where the decline in domestic out-migration contributed to a population increase. For example, in Sogn and Fjordane region out-migration was at its lowest level since 1971. Bodø, Tromsø, Lofoten and Northern Sognefjord regions, including also some municipalities with a significant Saami population, also saw a very positive population development during 2009. As in Denmark, this shift is even more visible in geographical terms but in the opposite way. When in 2005-2009 38% of the Norwegian land area measured on the municipal level saw a population increase, the share in 2009 was up to 62% of the land area.

In Sweden the population continues its concentration to regional centres and especially to the Stockholm and Malmö-Lund regions. Some minor labour markets in the traffic corridors between Gothenburg – Malmö and Gothenburg-Stockholm have also experiences population increase while small labour markets particularly in northern Sweden have experiences serious declines. In contrast to other Nordic countries, the natural population increase is heavily concentrated to the major city regions of Stockholm, Gothenburg and Malmö. In all other regions, population has either been relatively stable or is decreasing. Population increase in Sweden is heavily related to migration and especially to international migration. The regions that are growing most due to migration are Malmö-Lund, with important commuter flows to Copenhagen, and the municipal labour markets of Strömstad and Årjäng, both located in the expanded Oslo labour market. The role of tourism in some municipalities in northern Sweden and in Dalarna is becoming more and more visible, resulting in positive in-migration.

Figure 7: Population change in the Nordic commuter catchment areas in 2000-2010



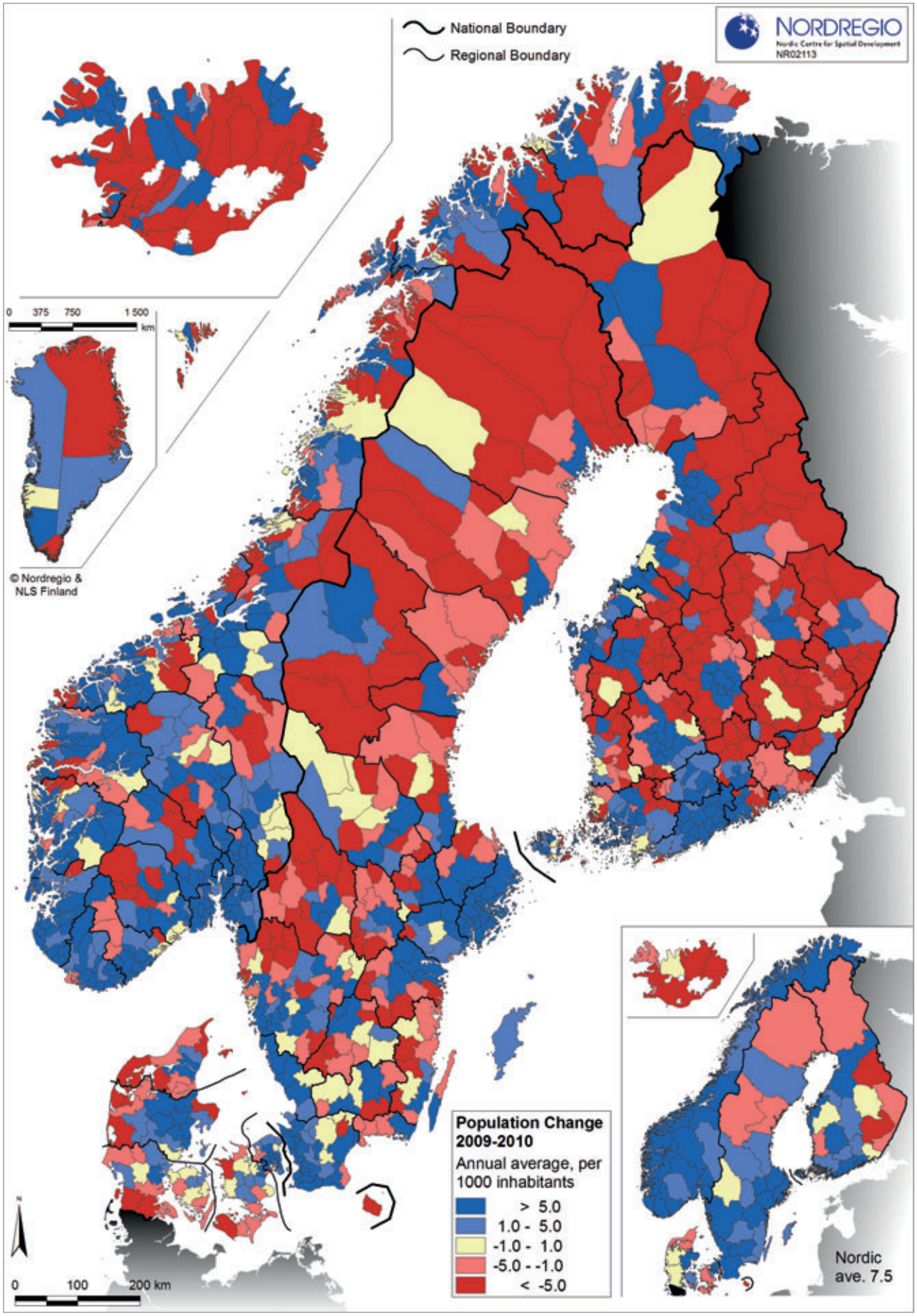
Increasing importance of migration

The share of Nordic municipalities with a migration surplus has been increasing in recent years. Over the last two decades, only 45% of Nordic municipalities saw positive net migration – almost all of which were regional centres or in the commuter catchment areas of such centres. In the period 2005-2009, the share of municipalities with a migration surplus increased to 56%, the most obvious change being in the geographically expanded capital and metropolitan growth regions and in relation to the effects of the tourism industry in northern Finland and Sweden. In Iceland and Norway some small coastal communities saw positive net migration due to the emergence of tourism and various fishing and aquaculture activities. Some isolated municipalities with large multi-year construction projects placed within them have also seen a (temporary) migration surplus, for example eastern Icelandic municipalities with an aluminium smelter, Norwegian Hammerfest with natural gas installations and Faroese Vágar with a underwater tunnel that facilitated commuting between the island and the capital region on the main island. Part of the explanation for this increase is in some cases related to changes in municipal structures where the amalgamation of smaller municipalities more sensitive to changes into larger units – often with a local centre – has provided them with a higher level of stability.

When looking at the main components of migration, domestic as well as international, about one third of Nordic municipalities saw positive net migration on both counts. An additional third saw a migration surplus in respect only of international migration. Most Nordic municipalities gained from international migration in the period 2005-2009, with the main exceptions being the Faroe Islands, Greenland and some smaller Icelandic municipalities. Even while similar in general structure, significant differences remain in terms of intensity. In Denmark, Norway and Sweden the overall level and share of international migration was much higher than in Finland. And the domestic migration patterns follow the overall migration picture, but with an even higher concentration to major city regions. In many rural municipalities, especially in Norway and Sweden, negative domestic migration is compensated by extensive international migration.

In 2009, however, there were some remarkable changes in the migration pattern, especially in Iceland and in the Danish regions of Western Jutland and Zealand. Over 10% of the Nordic population changed its place of residence in 2009. Even if most of these people simply moved to nearby municipalities or to other regions in the same country, 1.6% of the Nordic population, or slightly more than 400 000 persons, nevertheless changed their country of residence. In relation to total population the population in Finland and Iceland were most mobile, and mobility was highest in city regions with universities and in some tourism-oriented rural municipalities. When dividing migration flows after direction, domestic migration flows are highest in the capital regions of Copenhagen, Stockholm and Uusimaa (Helsinki), and in the Finnish regions of Pirkanmaa and Pohjois-Pohjanmaa. International migration flows are most intense in the capital regions of Oslo, Copenhagen-Malmö and Stockholm, Norwegian Vestlandet and Finnmark, Åland and Iceland.

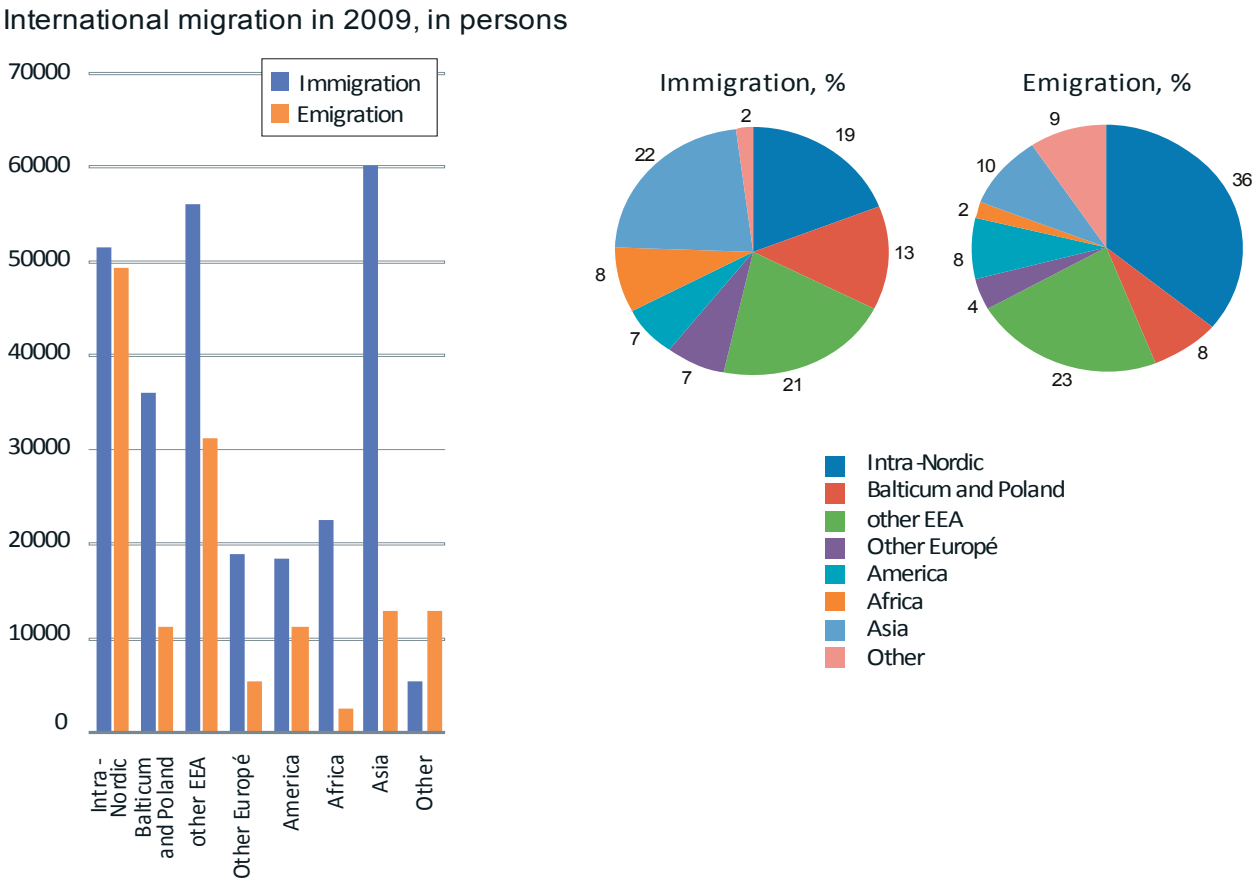
Figure 8: Population change in the Nordic municipalities in 2009-2010



On the Nordic level one third of all international migrants are nationals of the origin/destination country. Significant differences nevertheless exist between immigration and emigration. On average, 23% of immigrants and 48% of emigrants are nationals of origin/destination country. In the Faroe Islands and Greenland, the share of national immigrants and emigrants varies between 85 and 93%. These high figures can be explained by temporary emigration due to studies and other short term activities.

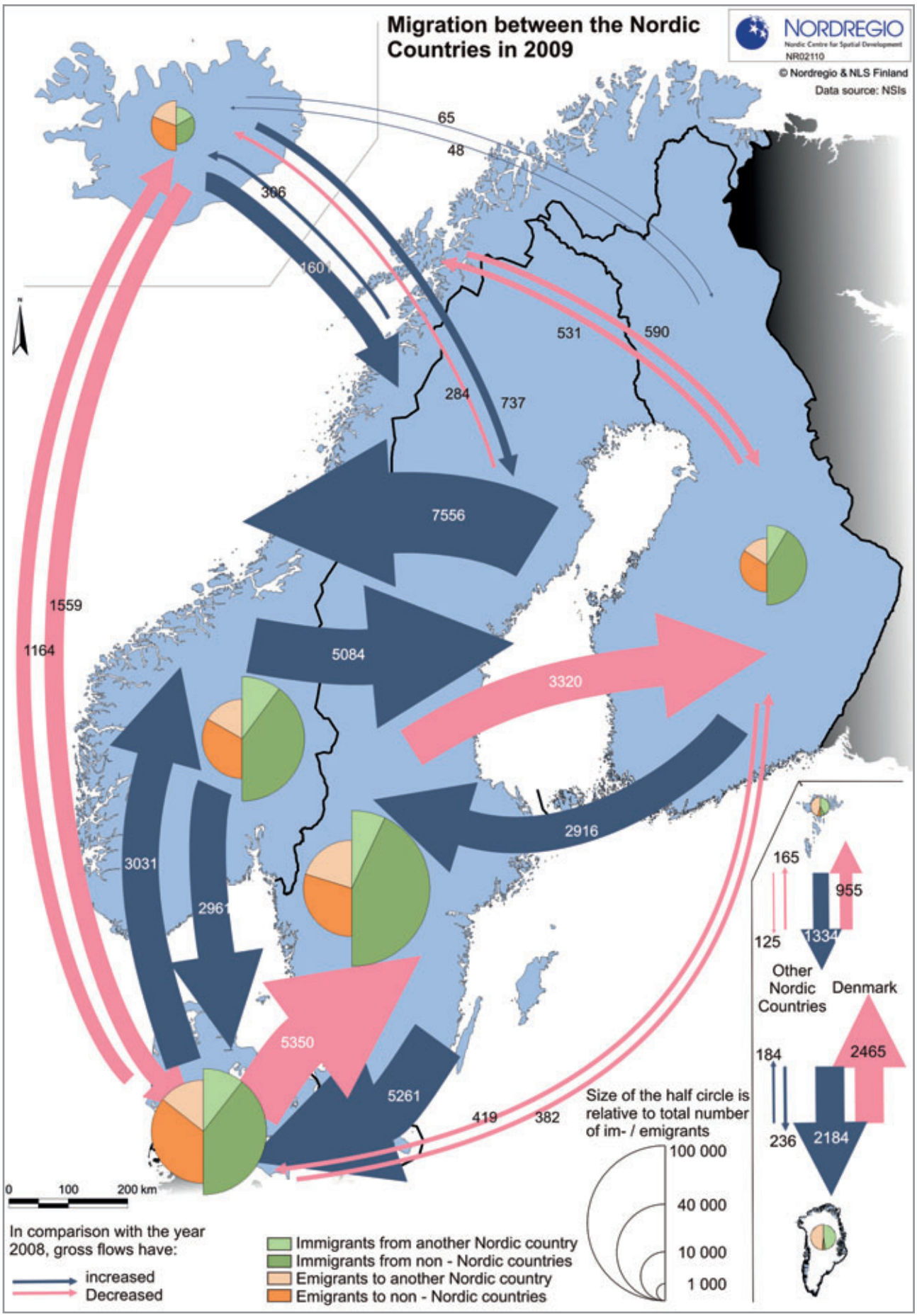
On average 25% of all international migration in *Norden* occurs within the Nordic countries (Figure 9). Internationally total flows are highest to and from Denmark and Sweden, but compared to other international migration flows, people in Sweden move mostly to other Nordic Countries, whereas the relative share of Nordic immigrants is highest in Iceland. More than 40% of all Nordic migration is to and from other European countries (Figure 10). Relatively speaking, non-(intra) *Norden* migration is most important in Iceland and least important in Greenland, the Faroe Islands and Sweden. The main (non-*Norden*) European origin and destination countries are the Baltic States and Poland, and those countries have especially high rates to and from Iceland and Norway. In Finland, the share of Russian migration is also significant. The Nordic share of extra-European migration is around one third, Sweden being the country with the highest extra-European migration rates.

Figure 9: Migration between the Nordic Countries in 2009 (a)



Over half of all migrations in the Nordic Countries occur among population segments aged 20-34 years, the age group of 20-24 years being the most mobile. Different types of regions attract people in different phases of life. The metropolitan core cities and regional centres with a university, for example, are particularly attractive migration regions for young adults in the age range 20-24. Five years later the metropolitan core cities are still maintaining their position, but the regional university cities have lost their position to capital core cities. In the age group between 30 and 50 years the capital regions are the highest gainers, although the age group 30-39 years prefers the capital core cities while the age group 40-54 years prefers the municipalities around the capital core cities. As a result, regions with the relatively highest shares of mobility among children are found in the capital regions outside the core municipalities. A surprisingly high share of child mobility can also be found in medium-sized towns and in non-urban areas, just as non-urban areas are also the most mobile region type for population in their late careers, between 50-64 years. Retired population migrates primarily to metropolitan regions outside the core municipalities and to small cities in rural areas.

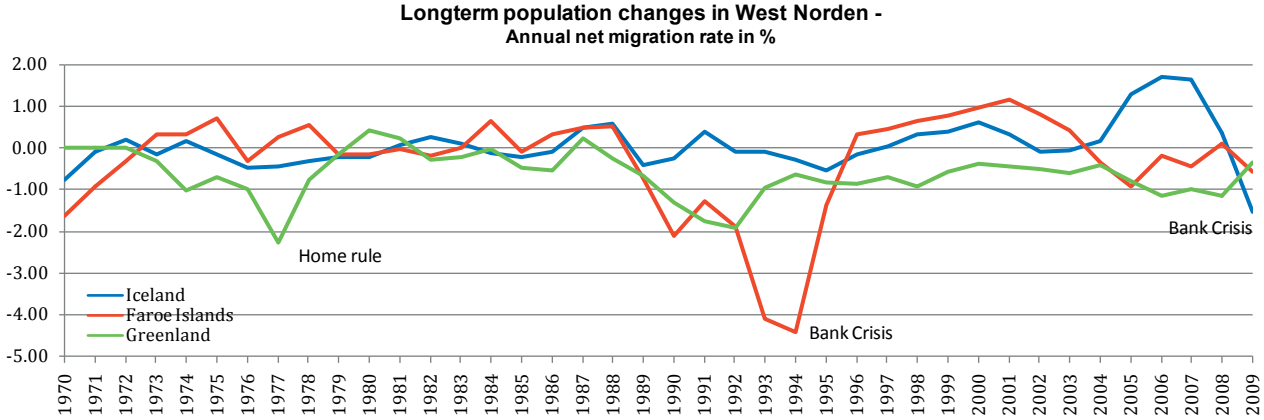
Figure 10: Migration between the Nordic Countries in 2009 (b)



Long term population change in West Norden

Across West Norden recent major political and economic phenomena, in addition to ongoing natural change processes, have had a significant influence on net migration rates. Due to the small size of the domestic markets, such phenomena can clearly be seen to have acted as either 'push' or 'pull' factors in terms of international migration rates where people are either moving (back) to regions in good times or voting with their feet due to rapid and negative changes in their social conditions in bad times. As West Norden is characterised by natural resource dependency, and especially by dependence on fisheries, changes in fish stocks have historically affected migration rates.

Figure 11: Net migration rate in the West Nordic Countries in 1970-2009



When reviewing the last 40 years it can be seen that in the 1970s and 1980s the net migration rate was rather modest, experiencing both net immigration and emigration. In 1973, for the first time in over 35 years, the Faroes experienced a positive net immigration. Some of the major factors in this change were the general increase in the standard of living, very low unemployment (especially compared to unemployment in Denmark), a rise in the number of jobs for women and particularly also in the fishing industry, better educational opportunities for young people, and rising demand for educated people. This precondition was supported in the Faroe Islands as early as 1965 when the University was founded.

The main demographic crisis in the Faroe Islands is thus related to changes in the fisheries sector. During the 1970s successful skippers managed to accumulated capital and invested in new filleting plants, and thus a highly successful fisheries industry was established. This was however soon rocked by a marked decline in resources caused by a combination of over-fishing and environmental variation which led to a drastic decline in fish stocks off the Faroes. At the end of the 1980s and the beginning of the 1990s the fisheries sector not only collapsed (fish made up approximately 90% of exports), but, due to over-investment in new technologies, the major Faroese banks went bankrupt and foreign indebtedness rose sharply. Most of the fish processing plants were closed and the Faroese economy was placed directly under Danish administration. Combined with rapidly increased unemployment up to as much as 20% in Tórshavn, and even higher in the outlying islands, and a growing international boycott of Faroese produce over the pilot whaling (*grindadráp*) issue, many people emigrated. Heavy emigration between 1989 and 1994 saw the population decrease by 10%, from approximately 48 000 to 42 000 persons. Emigration was especially high among young people. The measures used to get the Faroes 'up running again' largely worked, and in 1996 net immigration was once again positive. The following economically positive years kept net immigration positive until 2004, while since then migration has remained rather stable.

In Greenland, before Home Rule was established in 1979, the importation of workers from Denmark was often used to maintain a stable and viable workforce. While the 1950s and 1960s in Greenland were characterised by an influx from Denmark of a short term labour force connected to the building industry, a number of these people got married to Greenlanders leading eventually to the out-migration of both Danes and their Greenlandic spouses during the 1970s. With the establishment of Home Rule in 1979 Greenlanders took over many jobs leading to a massive increase in out-migration of Danes especially prior to the new government, which, by the 1980s had the knock-on effect of a perceptible decline in the volume of international migration. Parallel to this, the establishment of attractive workplaces in Greenland has impacted on migration pattern, as

did major investments in education. This helped to reduce the emigration rate of native Greenlanders, while at the same time there was an increase in the immigration academically trained Danes to Greenland to provide the qualifications needed when management responsibilities moved from Denmark to Greenland. This shift in government change related migration saw a peak in Greenlandic net migration figures. The policy which oversaw native Greenlanders taking over the jobs previously held by former colonial power nationals turned out to be rather successful in the sense that only ten years after Home Rule was established net out-migration had ceased. Most of the jobs, however, were for men, so the migration pattern is highly gender and born-place oriented. For the Greenland born population, a major share of emigrants are female, and the out-migration of younger people – primarily women – looking for educational and job opportunities has led to a continuous outflow since the beginning of the 1990s of both Greenlanders and Danes. This has led to a situation where more than 18 000 Greenlanders (defined as persons born in Greenland) are now living in Denmark, compared to the total number of just below 50 000 actually living in Greenland.

Until recently the population development in Iceland has been rather stable. In the period 1986-2008 up to 79% of Icelandic citizens who migrated returned after an average stay of 2.4 years abroad. This pattern of short term employment and study period 'excursions' kept migration rates rather stable. The diversification and liberalisation of the Icelandic economy after 1994, when Iceland joined the European Economic Area, can clearly be seen as being expressed in an increase in net immigration rates. In the period 2003-2007 Iceland developed from a nation best known for its fishing industry into a country providing sophisticated financial services. Due to the emergence of new business opportunities, beginning in 2004, a huge influx of persons came from abroad into Iceland, with 2005 and 2006 seeing recorded figure which were relatively higher than any other European country. Part of this undoubtedly related to the building activities connected with the *Alcoa* aluminium smelter in eastern Iceland in 2004-2008, with a 1 500 -person foreign workforce, mostly from Poland. Iceland was hit hard by the 2008 global financial crisis, which extended into 2009. The crisis has resulted in the greatest migration from Iceland since 1887. In 2009, net emigration was around 5 000 persons, half of those being foreign citizens. However, between January – June 2010, the Icelandic population increased by approximately 400 persons.

Demographic structure

Demographic trends are significantly impacting the Nordic countries and the European Union more generally. Low fertility rates, combined with increased life expectancy, have resulted in demographic ageing across the EU population. The share of those in the older generations is increasing, while the share of other age categories is decreasing. There are, however, some differences between the European Union and the Nordic age structures. Ageing, in terms of further increase in the number of the group of retirement age, will significantly impact the Nordic countries in the next five to ten years. Compared to the EU27 average, the age group 60-64 years is significantly larger in the Nordic countries while the age groups 20-54 years are slightly smaller. In contrast, the share of children aged 0-19 years is higher in *Norden* than in the EU, which means that relatively large age cohorts are not only currently exiting but also entering *Norden's* labour markets.

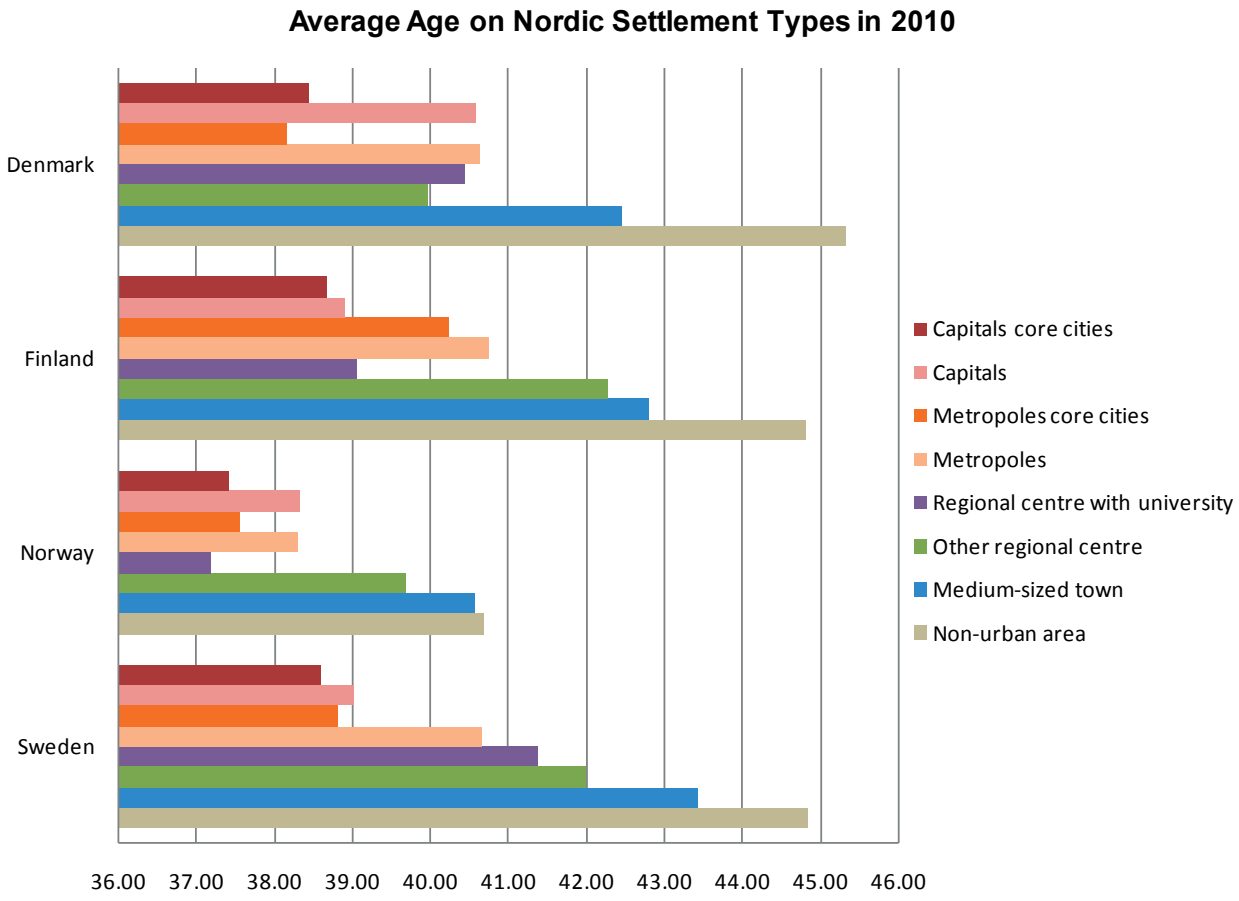
The demographic dependency ratio refers to persons aged 0-14 and to those over 65 years, compared to population aged 15-64. In general, the highest dependency ratios up to 0.90, meaning that 90 persons in the age groups below 15 and above 64 are depending on 100 persons in the age group 15-64, can be found in Finnish Keski-Suomi and in the Swedish Torne Valley and Västerbotten mountain areas. The lowest ratios can be found in capital regions, West Norden, south-east Norway and in some small municipalities in northernmost Norway and Finland with significant Saami populations, the lowest ratios being around 0.35. There is, however, a significant difference depending on whether the high or low dependency ratio is a result of many children or of a high share of elderly people, especially in a long term perspective. In the Nordic countries, regions with, in relative terms, the most children can be found in West Norden, the Finnish Ostrobothnian coastal rim and in some municipalities around the capitals. The lowest share of children can be found in eastern Finland, Lappi and in northern Sweden. The oldest population lives in eastern Finland and northern Sweden.

The average Nordic citizen is 40.2 years old. Looking at the population structure by age, the development is rather cohesive across all Nordic countries. Nevertheless, differences remain between settlement types and countries. A common trend here is that the population in urban areas is younger, while in rural and sparsely populated areas the population is older. Among the larger Nordic Countries, the population in Norway is, in general, younger than in the other countries. In Norway the youngest population can be found in regional centres with a university and in capital core cities. In Denmark, Finland and Sweden the youngest population can be found in capital core cities. This pattern has become even clearer in recent years. Many families with children are currently choosing to

stay in, or move to, the core city areas instead of to the surrounding municipalities. This trend is particularly visible in Stockholm, where the trend has had a significant impact on the housing market. The price gap between one and four-to-five room apartments has become much smaller (per square metre) in central Stockholm. In the West Nordic region, the population is much younger than in other parts of Norden. In Greenland, the average age is 33.4 years and in Faroe Island and Iceland slightly higher at 37.2 and 36.1 years respectively.

In relation to national trends the most noticeable development is to be found in the rural and sparsely populated areas. In addition there is clearly an overall trend towards a relatively older population in the rural and peripheral areas of Finland and Sweden. This development is not only a consequence of an ageing population but also related to the depopulation in these areas. For Norway and Denmark, similar patterns are to be seen although the development here is not so pronounced.

Figure 12: Population change in the European NUTS3 regions in 2005-2009



The gender balance in the Nordic countries is almost equal. On average there are 101 females per 100 males in the Nordic countries. This overrepresentation of the female population is not surprising, since Nordic females on average tend to live between 4 and 6 years longer than Nordic males, the level of difference depending on the place of residence. Considerable regional variations do however exist. Generally speaking, the city regions - with capitals on top - have the highest share of female population. The Nordic capital core cities of Helsinki and Copenhagen are the most female-dense regions. The main reasons for women to move to cities or to the south relate to the existence of educational opportunities and to a lack of advanced jobs in northern and rural regions. The expanded capital regions, together with the Nordic *metropoles* and regional centres, have, in general, a rather balanced gender distribution. In small and medium-sized towns and in some more rural regions, especially in West Norden, males predominate. The most male-dense regions are some of the Greenlandic and Icelandic municipalities, but some striking differences can also be found in some rural municipalities in the North Calotte area and in Kainuu region. The out-migration of female population in the rural areas is even more obvious when looking at the labour force aged population where there is a Nordic average, 97 females per 100 males.

Economic Development and Business

Over the last decade the Nordic countries have experienced a period of significant economical turbulence and of rapid GDP growth between first a minor and then a major economic depression. Clearly the economic performance of the Nordic countries has suffered as a result of the global crisis. The level of prosperity remains high but the reduction both in gross domestic product (GDP) and in labour mobilisation rates has been significant. For the Nordic regions this entails the emergence of new challenges to the maintenance of their hitherto healthy and attractive economies particularly in relation to maintaining local welfare and attracting new people and capital. Economic performance, measured as GDP *per capita* in purchasing power standards (PPS), provides an indication of the value of all market and some non-market goods and services produced within a region. The adjustment to local price differences[24] shows the ability of countries to succeed in the global scenario. The level of production, in turn, sets the sustainable level of prosperity that can be earned by an economy - more competitive economies tend to be able to produce higher levels of income for their citizens.

This chapter will provide an overview of the economic changes that have occurred over the last decade both from a Nordic and from a more general European perspective.

Economic development before the crisis

Global economic growth increased in the middle of 1990s and, after the minor recession at the beginning of 2000, was historically high until 2008. Between 2002 and 2007 the global economy expanded by approximately 5% per annum, the main growth taking place in Asia, principally in China. This economic growth in Asia is mainly related to the expansion of industrial production and Asia's share of global industrial production is now around 40%, with Europe and North America having both around 25%. In the period 2000-2008 the annual European GDP growth rate was 1-3% during the peak years of growth around 2007. This increase was generally shared across all EU countries, despite a period of rather unstable development in some minor economies, such as Malta.

Most Nordic countries, however, have seen – relatively speaking - rather modest economic growth rates, close to the European Union (27 countries) average during the last decade (Figure 13).

Until 2008 the Danish growth rate was on a modest level, slightly below the EU average and following a similar trajectory as countries like Germany and France. Norway was more or less in line with EU average growth, while Finland and Sweden started the decade some 1-2 percentage points above the EU average but during the prosperous years of 2007 and 2008 growth rates here were as high as 7-9 percentage points above the EU average. Between 2000 and 2008 the Icelandic economy grow reached nearly 40%, a rate similar to development in European countries like the Czech Republic and Slovenia.

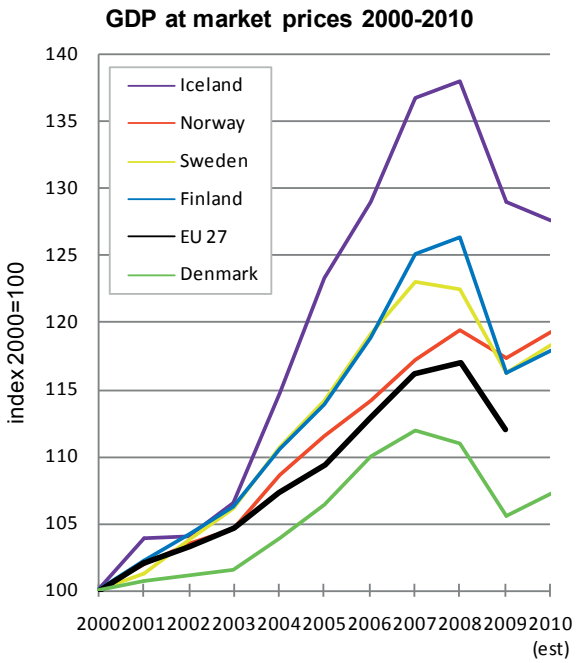
From the 1990s onwards economic development in the Nordic Countries, as in many other advanced economies, has become increasingly dependent on innovation and growth in knowledge-related activities. This is clearly visible in relation to investment patterns, as material investments have decreased, while immaterial investments in human capital, R&D, education, organisational development and 'branding' have become more central.

The main growth engines across all the Nordic countries have been a combination of high domestic consumption, both private and corporate, and high investment rates. The below average growth rate in Denmark and, to some extent, Norway can in part be explained by the existence of almost full employment during these years. Therefore, economic growth could not be easily boosted by an increase in labour intensive activities as was the case in Finland and Sweden. Housing markets, especially in some of the larger metropolitan areas, and increasing stock prices have also affected economic performance.

In 2009, a broad span existed in terms of GDP per inhabitant expressed in PPS across Europe. The national level varied from 43% to 271% of the EU27 average between member states. Norway was at the high end at 76 percentage points above the EU27 average, exceeded only by Luxembourg. The other Nordic countries were in a more modest position. Denmark, Iceland and Sweden were between 18 and 20 percentage ponts above the average and Finland 11 percentage points above, indicating a period of modest growth in most Nordic economies. Even if the Nordic countries have maintained their overall position in European terms, however, their relative scores have decreased and only Norway has increased its percentage point score since 2000.

[24] Purchasing power parity or standard

Figure 13: GDP growth at market prices 2000-2010



Large regional differences

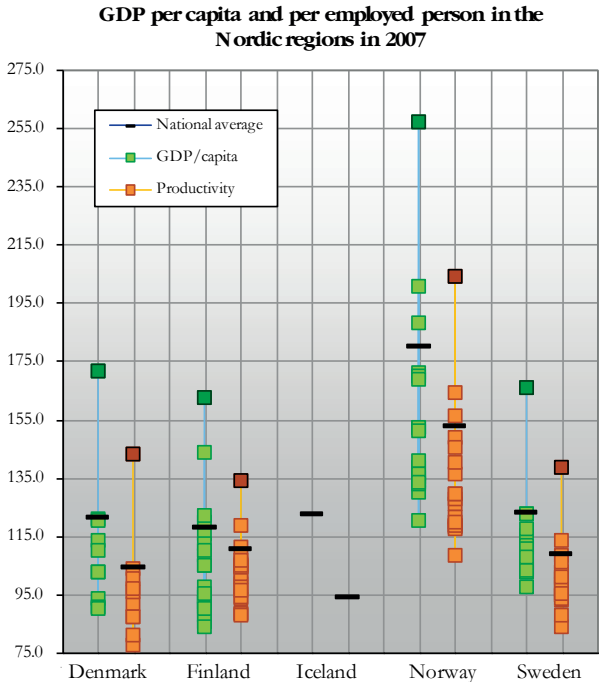
In terms of economic performance on the regional level (Figure 15), significant differences exist between European regions. GDP *per capita* is highest in central and northern Europe, particularly in the capital regions. Major metropolitan regions generally score well in Europe, as all those European regions with GDP *per capita* figures at least twice the EU average are regions such as Paris and Brussels or German industrial centres like Munich and Frankfurt. However, numerous smaller regions in these parts of Europe also score well and altogether 38% of European NUTS3 regions had GDP *per capita* figures above the EU average in 2007.

At the low end of the scale we find mostly eastern European and some southern European regions outside the main cities. Some regions in Bulgaria, Romania and Turkey attained only 25% of the EU average. Countrary to this, however, some metropolitan regions in Eastern Europe, such as Prague, Warsaw and Budapest were actually among the best European performers.

Four out of five, or 60 out of 74 Nordic regions, had a higher GDP *per capita* than the EU average and varied between 84% and 255% of the EU27 average. In all capital regions and in western Norway the rate was even 50% or more above the EU average. The lowest Nordic figures are found in eastern Finland. And as for the rest of Europe, there is a considerable variation in regional performance between capital, industrial and other regions in the Nordic countries. In all countries, the capital region is performing best, followed by other metropolitan regions and industrial areas. The lowest scores are found in primary production dominated rural regions. In Denmark and, to a lesser extent, Sweden, poorly performing regions in terms of these production based GDP figures are also found near capital regions. In these regions, mainly residential, there are no, or very few, industries and a significant share of the population is out-commuting to other regions where the production of goods and services actually takes place.

The economic importance of some Nordic regions has changed over the last decade. Norway and, to some extent, Finland managed to increase their percentage share importance of Nordic GDP in PPS *per capita* during the period 2000-2007. Nevertheless the economic development of the regions tells a number of different stories. Norway has seen increasing polarisation between the regions, whereas in Finland regional polarisation is decreasing due to changes in the economic balance between the regions. At the Nordic level the largest increase in regional economical performance has occurred in the regions of western Norway Rogaland and Hordaland, and in the Finnish regions of Itä-Uusimaa and Keski-Pohjanmaa. The most significant decrease can be found in western Jutland (DK) and in Kymenlaakso (FI).

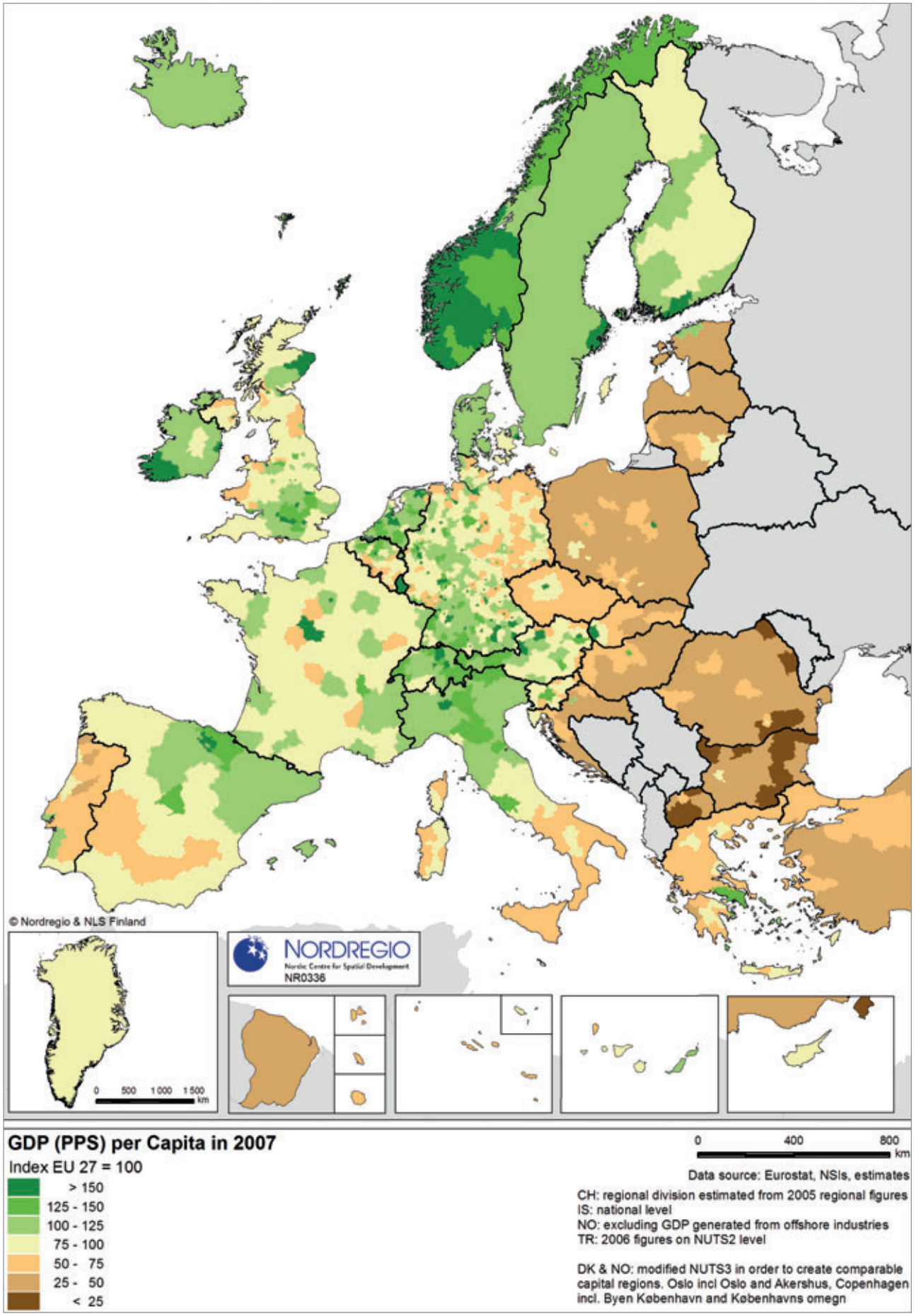
Figure 14: GDP in Purchasing Power Standards (PPS) per Capita in 2007



When shifting focus from welfare, measured as GDP *per capita* in PPS, to productivity per employed, the Nordic map looks rather different (Figure 14). At the national level Iceland, Denmark and Finland are just over the EU27 average, Sweden score a little higher, while Norway together with Luxembourg are in a class of their own.

While 80% of the Nordic regions have higher GDP *per capita* than the EU average, only 60% of regions score higher in terms of production per employee. Even if the *per capita* and per employed person rates correlate a number of important differences nevertheless remain. Beyond the well-performing capital regions and western Norway, significant production *per capita* figures are also found in regions dominated by natural resource industries, like Nordland, Norrbotten and Etelä-Karjala. The lowest productivity rates in *Norden*, apart from those in Greenland and the Faroe Islands, are found in Zealand's out-commuting regions and in the small rural islands of Gotland and Bornholm. Considerable differences also exist between the countries. Lower Finnish GDP *per capita* figures are compensated with higher productivity, whereas in Denmark and Sweden the opposite situation prevails.

Figure 15: GDP in PPS per capita and per employed person in 2007. Index, EU27 = 100



The Financial Crisis

The financial crisis was ignited in 2007, due to a liquidity shortfall in the United States banking system caused by the overvaluation of assets. The immediate cause of the crisis was the bursting of the US housing 'bubble' with subprime loans[25], culminating in a global crisis one year later when the bankruptcy of the financial services firm Lehman Brothers was declared. Questions regarding bank solvency, declines in credit availability, and damaged investor confidence had an impact on global stock markets, where securities suffered large losses, especially during late 2008 and early 2009. The world economy generally shrank by 0.6% in 2009 as a result of the global financial crisis and in European Union by 4.1%.

Consequently, in autumn 2008, Europe (including the Nordic countries) was hit by economic crisis. The effects of the financial crisis were most profound in Iceland. In 2001, the deregulation of Icelandic banks opened up the possibility for banks to finance their expansion with loans on the interbank lending market by attracting deposits from outside Iceland while also encouraging a significant level of domestic household debt (in Iceland). Between 2000 and 2008 Icelandic GDP grew annually over 10%; incomes increased over 70% and the stock market rose 174%. At the same time house prices increased over 70% in the Greater Reykjavík area. While banks and other financial institutes expanded by 554% the increase in industrial production was much more modest. The Icelandic bank 'bubble' lasted until the summer of 2008 when the banks became unable to refinance their debts. In September-October 2008 all three of Iceland's major banks collapsed as a result of their inability to refinance their short-term debt and stem a run on deposits in the United Kingdom. It is estimated that at the time those three major banks held foreign debt in excess of €50 billion, compared with Iceland's gross domestic product of €8.5 billion. Relative to the size of its economy Iceland's banking collapse can be seen as the largest in economic history.

After a period of strong growth in the middle of this decade all five Nordic economies were hit by the global economic crises in 2008/2009. The GDP growth rate decreased in all the Nordic and indeed all EU countries, excluding Poland. In most of the Nordic Countries the decrease followed the EU average trend. However, as the GDP increase before the crisis had been higher in Iceland, Finland and Sweden, the following downturn was more dramatic on average than in the EU more generally. Finland experienced an unprecedented drop to -8.0%, its worst economic performance in over 90 years, and in Iceland the situation was even worse. To a great extent, explanations can be found in the development of the global market. Finland and Sweden each have a large share of capital goods in the makeup of their exports. In Norway, the depression was more modest, with only a roughly 2 percentage point change in GDP. Even if the decline in GDP growth in Iceland and Finland in 2008-2009 was large, it was still relatively modest compared to the extreme changes in the Baltic States. In the Nordic regional context, major centres, depending on external trade and international economic development, seem to have experienced a deeper depression than regions more dependent on domestic trade and services.

[25] A type of loan that is offered at a rate above prime to individuals who do not qualify for prime rate loans.

Recovery and the European Debt crisis

In 2010 the global economy is still recovering from the financial crisis of 2008 and 2009. During the first quarter of 2010 GDP expanded at an annualised rate of over 5%. This - better than expected - result was, in the main, due to continuing robust growth in Asia. More broadly, there were encouraging signs of renewed growth in private demand. In the European Union and in the Euro-area countries the economy has started to recover, although at a moderate pace. In the second quarter of 2010 economic growth was +1.7% higher than in the second quarter of 2009 in both zones[26]. This was the highest quartile increase in the Euro region in three years. A major factor in the general recovery of the Euro area has undoubtedly been the strong German export-led recovery strategy.

The small and open Nordic economies were hit hard by a significant decline in external demand. Given their strong public finances, however, the Nordic economies, with the exception of Iceland, had resources available to cushion their contractions, and to be among the first economies to recover. From a regional perspective, the larger and economically robust metropolitan regions are important Nordic growth engines.

Norway's economy experienced the smallest GDP contraction in the Nordic region in 2009 while Iceland saw the largest contraction. Norway's economic recovery began somewhat earlier than in most other OECD countries. The quick rebound to positive growth was made possible by a strong fiscal and monetary stimulus programme driven by increased household final consumption expenditure and public demand. Sizeable reserves of oil revenues also gave it freedom in economic policy that other countries lacked. In spring 2010, the export-reliant Nordic countries of Finland and Sweden have recovered, mainly as a result of increasing levels of demand for their export products. Sweden has even taken a lead in European economic recovery. In Finland, economic recovery is export-led

[26] Eurostat

with forest and metal products in particular doing well. In Sweden the export sector more broadly has increased with even the hard hit automotive industry reporting unexpectedly strong second-quarter results in 2010. In Denmark GDP increased by 0.5% in the first quarter of 2010 compared to the previous quarter.

Iceland's economy is still in deep recession. According to preliminary figures, GDP decreased by 3.1% in April-June from the previous quarter, and fell by as much as 8.6% units below the second quarter of 2009. It is estimated that the Icelandic contraction will continue in 2010, due in the main to still falling or low private and public consumption and investment. Private consumption has fallen dramatically since 2008 as households have to balance between increasing debt and declining disposable income. Most private loans were indexed to foreign currencies and the dramatic inflation experienced by the Icelandic krona made loans unbearable. High loans together with historically high unemployment at around 9% has led to a situation where, in 2009, almost 40% of all households in Iceland faced some kind of financial problem according to official statistics. Positive GDP growth is expected from 2011, if some large scale industrial investments are begun as planned. The agreement with the government and IMF aims at a positive primary fiscal balance in 2011 and a positive overall fiscal balance in 2013. When looking at specific sectors, the best recovery has taken place in fisheries, tourism and some parts of the industrial sector, especially ICT.

Recent turbulence in the financial markets, with the 2010 debt crisis in some southern European countries like Italy and Greece to the fore, could still slow Nordic recovery. In Italy and Greece the national debt in 2010 exceeded 120% of GDP and in Portugal and Spain the debt was about 94-98% of GDP. Even if the high level of national debt is the biggest problem for Greece, the crisis in Italy is more of a structural problem. Even if the Nordic Countries have more or less avoided the fiscal problems faced by other European nations, allowing their governments to contemplate further stimulus spending, the Nordic region is not immune from the impact of austerity measures by some of its biggest trading partners in the Euro region and beyond. One possible risk relates to the issue of mortgage debt hangover. Interest rates have remained at a record-low level for some time which may eventually contribute to a new real estate 'bubble'. While housing prices are going down in most part of the Western Europe and the US, they are still accelerating in Finland, Norway and Sweden. One explanation for this is that many people borrow money at a floating rate, which makes rate policy an efficient instrument to boost consumption. Sweden is even among the OECD countries with the greatest increase in housing loans. Norway, followed by Sweden, was the first western European country to raise interest rates at the beginning of the global recession. This is suggestive of a strong economic recovery in the country.

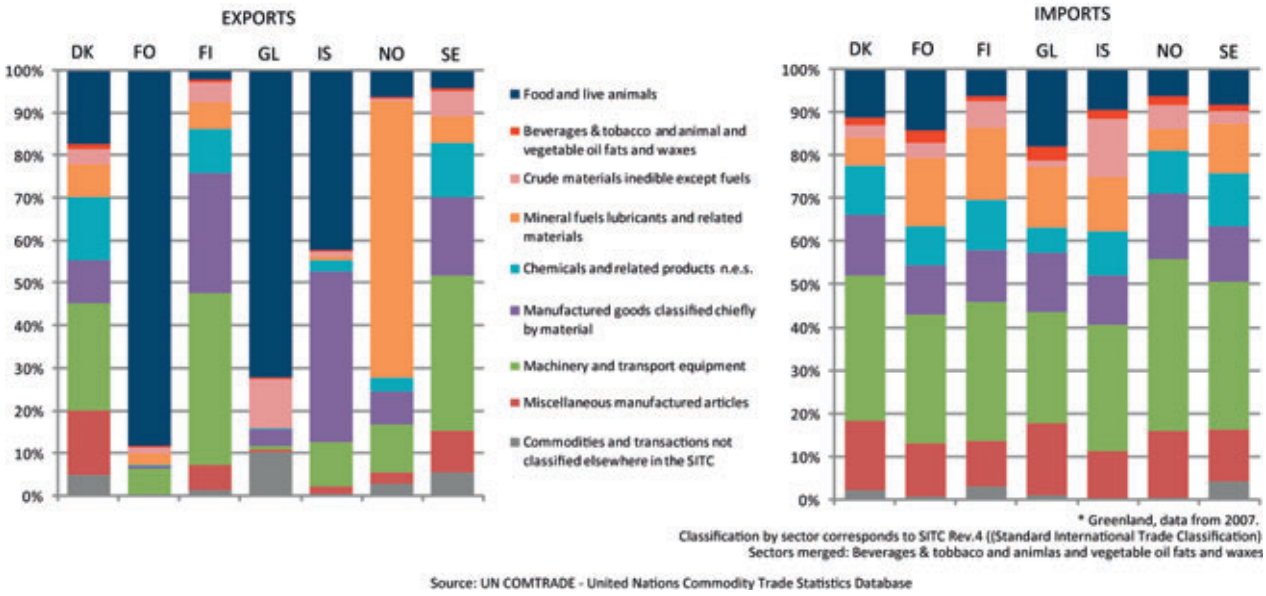
Different trade patterns

One reason for GDP decrease in recent years is perhaps suggested by the trade statistics. In 2005-2008 both Nordic exports and imports increased steadily but in 2009 exports and investment collapsed. The most striking values can be found in Finland where the volume of exports shrunk by 20% and imports by 18%. The Faroe Islands were however the Nordic exception here with an increase in exports to European Union countries.

In 2009 the total value of trade in the Nordic Countries was about €540 billion. Around 20% of this was intra-Nordic trade and around 50% trade with other European Union countries. Geographical location, politics and history affect trade pattern. As such, Denmark and Norway are more connected to Central European markets, such as Germany and France, while in Finland, the role of Russian trade is very important. In terms of exports the Nordic countries are mostly connected to other Nordic Countries and to EU countries like Germany, the United Kingdom and the Netherlands. The United States, China and Russia are other important partners. In terms of in imports, the pattern is similair, although China is also among the Nordic countries main partners. In the small West Nordic Countries the trade pattern is slightly different. Trade connections to North America, and particularly to Canada, are more important, and the role of long distance exports to countries, like Japan and some African countries, is also - relatively speaking - more important.

Differences in trade patterns between the Nordic countries are evident when looking at exports by sectors. All three countries from West Norden show high shares of food and live animals exports, primarily due to products from fishing and the fisheries sector (dark blue in Figure 16) which account for up to 88% in the Faroe Islands, 72% in Greenland and 41% in Iceland of total national exports.

Figure 16: Total exports and imports by sector in the Nordic Countries, 2009

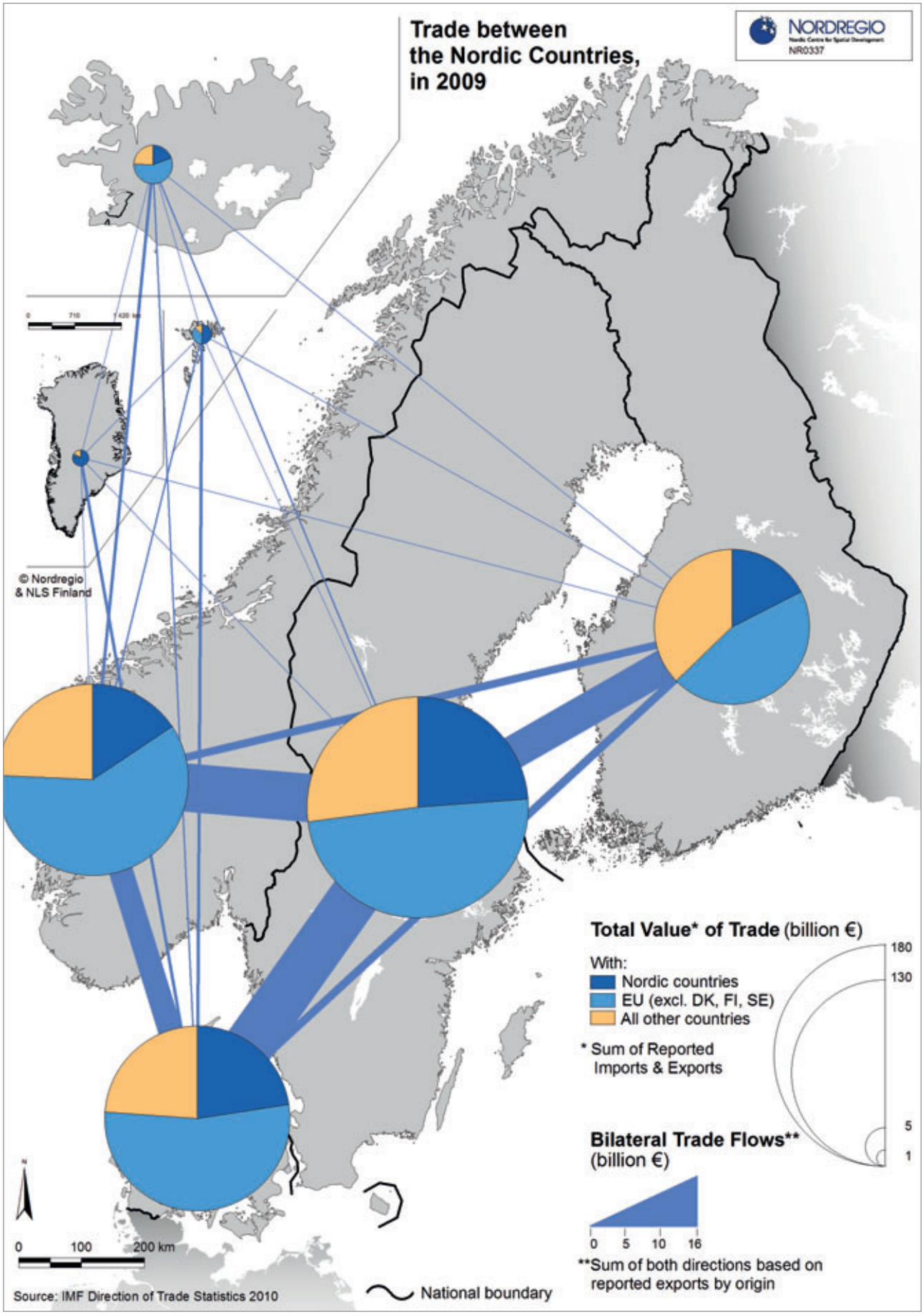


Norway has more or less the same situation, but with the sector including mineral fuels, lubricants and related materiales (related to high levels of oil exportation) accounting for up to 64% of total Norwegian exports. In Finland and Sweden the highest share of exports corresponds to machinery and transport equipment with figures between 36% and 41% respectively,followed by manufactured goods which constitute the second highest share of commodities exported from Iceland (38%). In Denmark the highest shares are machinery and transport equipment, food and live animals and miscellanous manufactured articles each with shares between 15% and 25% respectively.

Differences between countries are less significant when looking at imports by sector. For all countries imports of machinery and transport equipment account for the highest shares varying between 26% in Greenland and 39% in Norway. This is followed by imports of manufactured goods and miscelanous manufactured articles in all countries except Greenland and the Faroe Islands where imports of food and live animals is higher than in the rest of Nordic countries.

Intra-Nordic trade linkages are important for all Nordic countries, each of the countries has at least one other Nordic Country – Sweden or Norway - among its main three most important trade partners, both in terms of exports and imports. Intra-Nordic trade is relatively most important for Sweden (24%) and Denmark (23%), and least important for Norway (16%), while Faroese and Greenlandic trade is heavily depended on trading with the other Nordic countries, at 50% and 81%, respectively. Of this, however, the major portion is due to trade with Denmark.

Figure 17: Trade flows in the Nordic Countries 2009



Labour Market

Despite the remarkable upswing after the economic crisis of the 1990s, where a substantial number of jobs were created in the Nordic labour markets, the global financial crisis of the late 2000s resulted in a new increase in unemployment rates in all countries. Iceland, Sweden and Finland were especially hard hit. Among other factors, the increase has been affected by an ageing population, population changes especially in sparsely populated areas and the marginalisation of vulnerable groups such as youth, the long-term unemployed and immigrants. A strong focus on the need for education and training, further cooperation between companies, the establishment of job centres and educational institutions, as well as new activities and occupations are already initiatives collectively agreed among the Nordic countries, and considered as being the most crucial tools in creating new jobs and reducing unemployment. This section will focus on the state of the Nordic labour force, including questions of unemployment and employment patterns, as well as looking at the various measures used to combat unemployment in recent years across the Nordic countries.

A positive general state

The European Council in Lisbon (2000) set the long-term target for national employment to at least 70% by 2010. This goal was updated in 2010 in the Europe 2020 strategy, which sites that 75% of the population aged 20-64 should be employed. Total employment for people in the EU27 aged 15-64 increased from 62.4% in 2002 to 65.9% in 2008, but decreased again to 64.6% in 2009. The employment rate for women fell to 58.6% after a continuous increase in the previous years. In contrast, the employment rate for people aged 55-64 has continued to rise, from 36.9 in 2002 to 46% in 2009. The global financial crisis of 2008-2009 thus had a significant impact on EU employment rates. Today, the original target of 70% has been achieved in only 8 states, including Iceland, Norway, Denmark and Sweden, with employment rates between 72% and 78%. Finland with 68% is just slightly below the target. Thus the Nordic area is performing well with regard to employment rates in a European perspective.

However, the current status of the labour force is affected by several factors, such as changes in the population, an ageing population, an increment of vulnerable groups in the labour market, youth unemployment and long term unemployment. And as the population of the Nordic countries grows older over the coming years the Nordic labour force will experience a process of ageing which will be characterised by an uneven distribution across the Nordic countries. Similarly young adults tend to move from peripheral areas to metropolitan areas due to the greater availability of 'opportunities', adding to the existing reality of uneven development. Metropolitan areas will thus have a significantly more favourable age structure, while peripheral regions have a larger share of non-active persons over 50 years. As the employment rate among immigrants tend to be lower than the national average, metropolitan regions may have a relatively larger share of non-active persons of immigrant origin.

Variations in unemployment rates

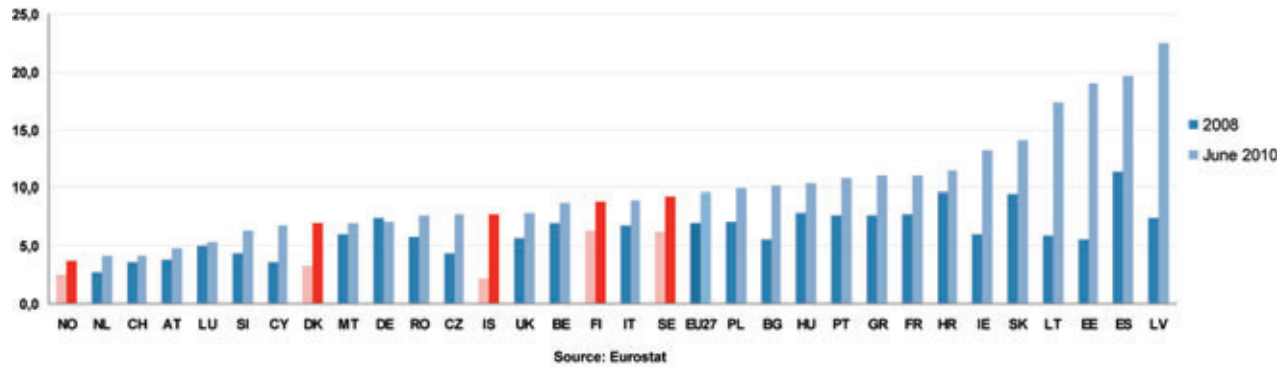
The unemployment rate indicates the efficiency of the regional labour market. In an efficient labour market the supply and demand of labour is supposed to be relatively balanced. The regional challenge is thus to reach a level of unemployment that secures a dynamic labour market, without creating social or economic problems. Often an unemployment rate of 2% is considered necessary in order to be able to respond to structural changes thus keeping labour markets energised.

Unemployment levels are strongly influenced by the economic situation. During the period 2003-2005 the European unemployment rate was around 9%. From the beginning of 2006 unemployment decreased rapidly. Between the summers of 2007 and 2008 European unemployment reached a minimum of around 7%. However, the economic crises in the fall of 2008 resulted in a rapid increase in the European unemployment rate. In 2009, the annual average unemployment rate of the EU27 was 8.9%. According to Eurostat, the rate was still increasing in June 2010 (Figure 18), but remained unchanged to July (9.6%). The Baltic States and Spain were still the most affected,

with rates over 15%. All Nordic national rates remained below the EU27 average, which indicates a modest level. Nevertheless, significant changes occurred between and within countries as a consequence of the crisis.

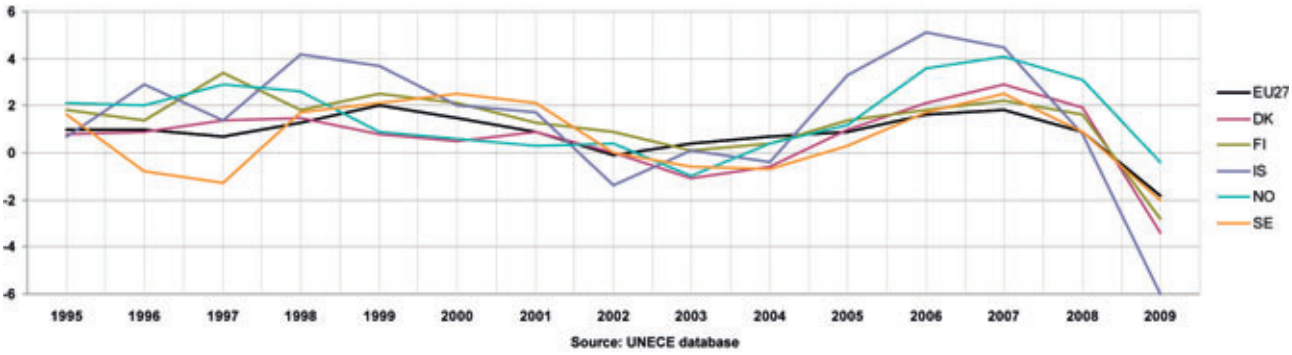
Unemployment is expected to continue rising but it is still uncertain whether it will finally turn down in 2010 or 2011[27].

Figure 18: Unemployment rates in June 2010 compared to 2008 annual rates



As in other advanced economies and in the rest of Europe, the development of employment growth rates in the Nordic countries throughout the global financial crisis experienced a significant negative change. In the first half of the 2000s, weakening economic growth in the EU and the Nordic countries reduced the demand for labour in the first three years of the century, but the emergence of a revitalised economic situation after 2003 shifted the Nordic countries back into growth (Figure 19). Employment growth rates increased at an average speed of 1% per year, but rapidly declined in 2008-2009 reaching levels even lower than those registered in the middle of the 1990s. From a gender perspective, the Nordic female employment rates for 2009 are well above the EU27 average of 58.6%. Iceland (76.5%) registered the highest female employment rate followed by Norway (74.4%), Denmark (73.1%), Sweden (70.2%) and Finland (67.9%).

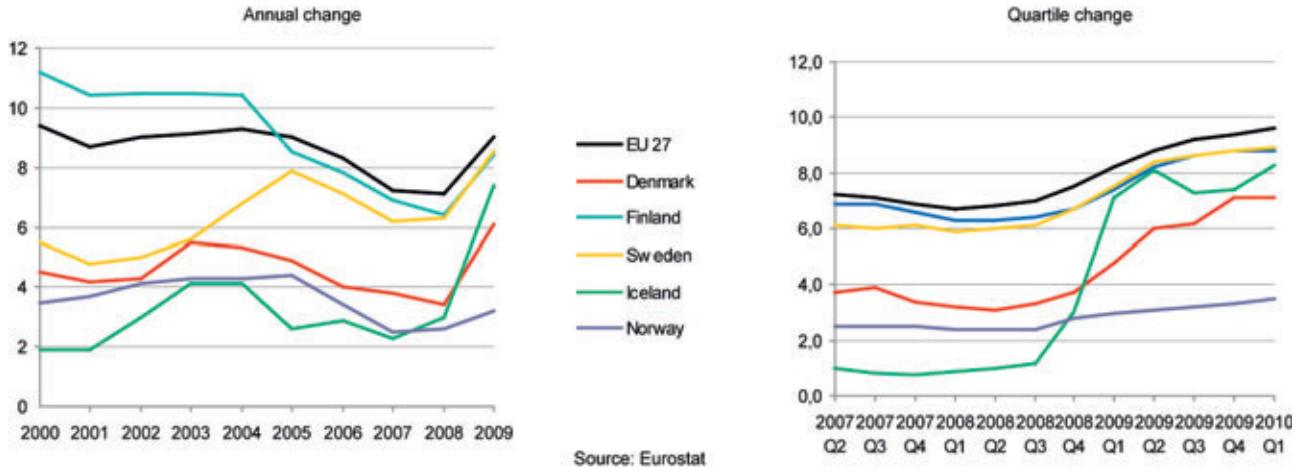
Figure 19: Total employment growth rate 1995-2009



Among the Nordic countries, Iceland has suffered the most dramatic change in unemployment over the last five years. Before the crisis, the country had the lowest unemployment rate in Europe, less than 2% in February 2007. However, in less than three years it reached an unprecedented rate of around 8%. Between March 2008 and 2009, unemployment in Iceland increased by a factor of nine, from 1 600 to almost 15 000 persons. Sweden and Finland had the highest annual unemployment rates at the end of 2009, 8.5% and 8.4% respectively. Unemployment was a problem in both countries already during periods of economic growth. In Finland, after a stable recovery after the 1990s recession, unemployment rates rose again in 2008. In Sweden, the level has fluctuated over the last three years. In Denmark, the unemployment rate almost doubled between 2008 (3.3%) and 2009 (6.0%), though it still remains well below the EU27 average. Norway had only shown a moderate increase in unemployment and has the lowest unemployment rate in Europe in 2009 (3.1%).

[27] SEB, 2009 & Danske Bank 2009

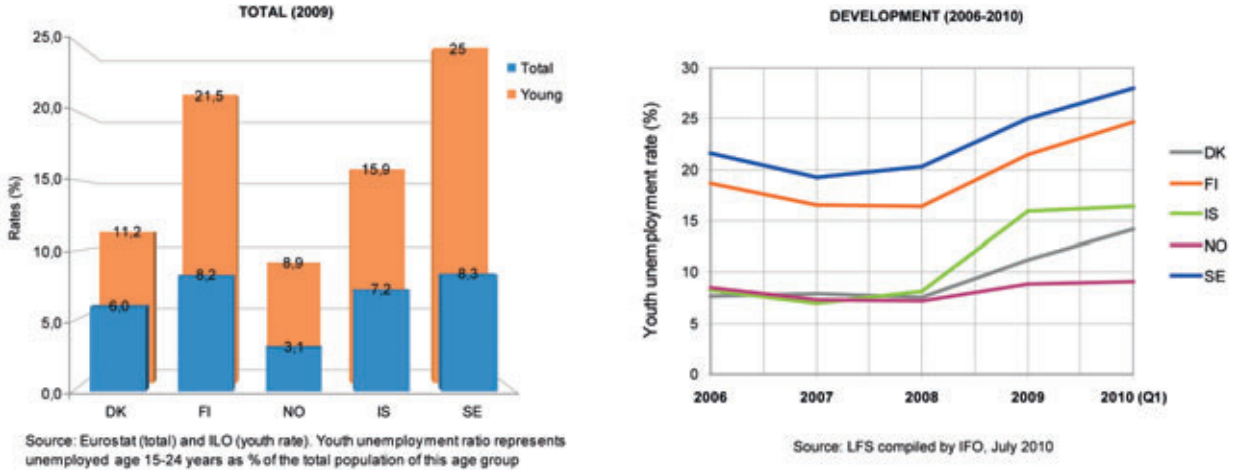
Figure 20: Unemployment development in the Nordic countries in the last 10 years (annual change) and during the global financial crisis (quartile change)



Vulnerability of youth, long-term unemployed and immigrants

Some groups in the Nordic labour force are more vulnerable to unemployment such as youths, immigrants and those already suffering from long-term unemployment. Youth unemployment includes persons aged 15-24 years. In this group, young graduates and others who have not already been in work, such as those who leave education at an early stage, are among the most vulnerable to being excluded from the labour market.

Figure 21: Total and youth unemployment (2009) and youth unemployment development between 2006 and 2010 (first quarter)

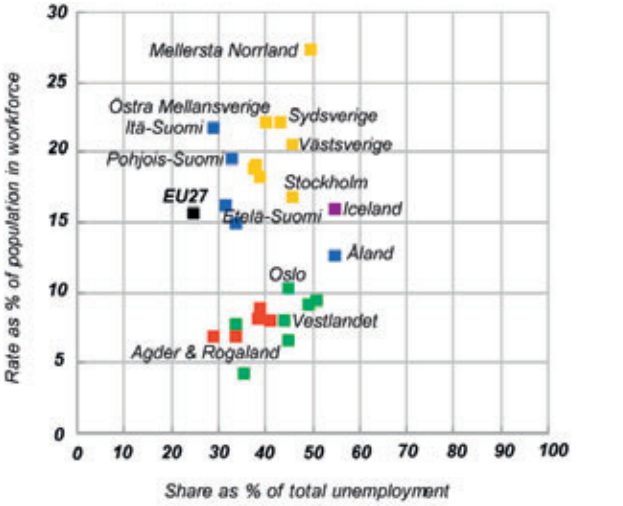


A considerable risk exists that many of these unemployed youths will become marginalised, lacking links to either work or school. Problems often begin before youths are unemployed and several factors, such as family background, income, divorced parents and first generation immigrants, have to be taken into consideration when analysing the risk of marginalisation. Annual averages of youth unemployment rates in 2009 are higher in Sweden and Finland, with rates over 21%, followed by Iceland 15.9%, Denmark 11.2% and Norway 8.9%. National rates of youth unemployment in Denmark and Norway are below the EU27 average, while Finland, Sweden and Iceland register the highest rates in Europe along with Spain, Ireland and the Baltic States. In Finland, for example, problems employing youths after graduation during the current crisis were intensified after the university reform in 2008, when thousands of new students with master's degrees came onto the labour market in search of jobs. This led to a significant increase of the share of highly-educated unemployed, from 18 500 to almost 26 800 persons between the first half of 2008 and 2010. The situation

is most difficult in the technology, social sciences, and commercial sectors.

According to Figure 22, all Swedish NUTS2 regions, as well as three out the five Finnish regions, are above the EU27 youth unemployment average. Danish and Norwegians regions, on the other hand, have the lowest rates and shares, especially in Danish regions with a low number of youths as a percentage of the total workforce. Following these national patterns, there is also a discernable difference between Nordic capital regions, where Oslo and Copenhagen register low rates, while Stockholm and Etelä-Suomi (which includes Helsinki and other adjacent cities) have intermediate figures close to the EU27 average.

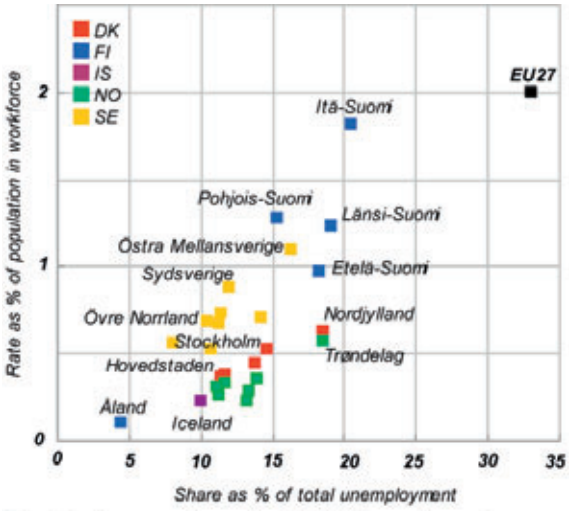
Figure 22: Youth unemployment in the Nordic regions at the end of 2008



Share: youth unemployment as % of total unemployment
Rate: youth unemployed persons as % of total population in the workforce

The category of 'long-term unemployed' includes any person who has been outside the labour market for one year or more. The share of long term unemployment as a percentage of the total workforce in the Nordic countries is well below the EU level. In 2009, the EU27 average was 33.2% and it was higher for women (34.8%) than for men (31.8%). Among the Nordic countries, the highest share of long-term unemployment is registered in Finland (16.8%) and the lowest in Denmark (9.1%). This is illustrated in Figure 23 showing all Finnish NUTS2 regions, with the exception of Åland, with the highest shares. In terms of long-term unemployment as a percentage of total population in the workforce, Nordic regions are located below the EU27 average of 2%, indicating a low level from a European perspective. All Norwegian regions, Åland and some Danish regions have the lowest rates, followed by the Nordic capital areas and some regions in the northern areas of Finland, Sweden and Denmark.

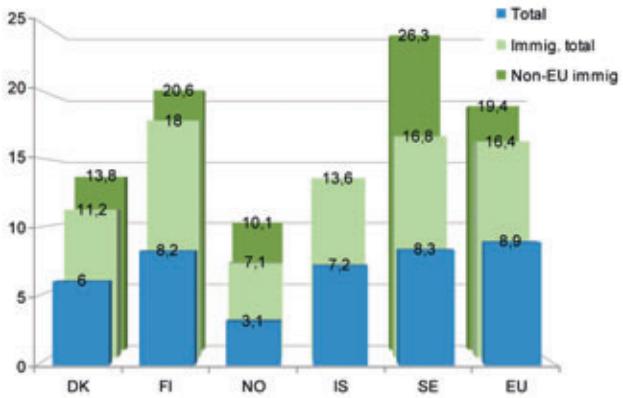
Figure 23: Long term unemployment in Nordic regions at the end of 2008



Share: long term unemployment as % of total unemployment
Rate: long term unemployed persons as % of total population in the workforce

Another vulnerable group is immigrants. Total unemployment among immigrants in 2009 was highest in Finland and Sweden, with rates over the EU27 average of 16.4%. Iceland and Denmark had rates between 11 and 13% and Norway registered the lowest unemployment rate among immigrants with 7.1%. The low number for non-EU immigrants in Denmark relates to the restrictive policies for this group of immigrants. When looking at the origin of foreigners in the Nordic countries, citizens from outside the EU27 have higher unemployment rates than nationals from other EU27 countries. Metropolitan regions tend to attract more foreign labour than peripheral regions and therefore they have relatively larger shares of non-immigrant persons and faster population change patterns.

Figure 24: Total and immigrant unemployment rates in the Nordic countries in 2009



Source: Eurostat. Immigrant unemployment ratio represents unemployed age 15-64 years as % of the total population of these groups.

In terms of numbers, vulnerable groups such as youth, immigrants and the long term unemployed can be expected to vary considerably in different regions. Some regions have business structures that rely more on manual and labour-intensive work, while other regions have business structures that rely on work at the higher end of the production chain. The marginalisation of different groups in a regional context will depend on the existence of such differences across regions.

Regional and municipal unemployment

Substantial regional differences continue to exist in terms of unemployment between the Nordic countries. The lowest figures (below 2%) are found in most municipalities in Norway and in Åland, the only Finnish region with rates below 5%. The highest figures (above 16%) are found in northern Swedish and Finnish municipalities, located in Pohjois-Karjala, Lappi and Norrbotten, in Læsø in Nordjylland (Denmark) and Trollhättan in Västra Götaland (Sweden). In Denmark, Iceland and Norway, regional differences are smaller, with only a few municipalities at the EU average level or above.

In Sweden, more or less all regions experienced an increase in unemployment after the crisis. All municipalities in the traditional manufacturing area of Blekinge, Västernorrland and Gävleborg exceeded the annual EU 27 average of 2009 (8.9%), with a similar situation in other northern sparsely populated areas, such as Norrbotten and Jämtland, and regions adjacent to Stockholm County, for instance Västmanland and Södermanland. Other regions with high unemployment rates above the EU average include Örebro and Värmland, which have suffered from a permanent population decrease in recent years. High rates (above 16%) were also found in municipalities bordering Finland and in Trollhättan in Västra Götaland, the hardest hit municipality in Sweden in 2009 as a consequence of the automotive industry bankruptcy. In total, 10 out of 21 Swedish regions had rates above the 2009 EU27 average. The only municipalities with low rates, about 2-3%, were some high-income municipalities in Stockholm County (Vallentuna, Täby, Lidingö, Ekerö, Danderyd and Vaxholm). According to the Labour Force Survey and Statistics Sweden, 488 000 persons were unemployed in June 2010, of whom 263 000 were men and 225 000 women.

In Finland after the 1990s crisis a constant decline in unemployment was sustained until 2006. After that, the already high rates of employment seen from a Nordic perspective rose substantially. This indicates that Finland has suffered long-term structural unemployment on the labour market[28]. The earlier increase in unemployment was related to problems in the forestry sector, for example concerning tree custom fees with Russia and export markets for paper and pulp. Rates have still not returned to the levels registered before the crisis. The only region with very low unemployment in Finland is Åland, where all 16 municipalities have rates below 3%, among the lowest in Norden. The lowest rates in mainland Finland (between 5% and 6%) are found in south and south-eastern regions such as Uusimaa, Itä-Uusimaa and Pohjanmaa In contrast, some of highest rates in *Norden* (above 12%) are found in north and north-eastern regions such as Pohjois-Karjala, Kainuu and Lappi. Thus a clear regional and geographic polarisation, including both some of the highest and lowest municipal rates in the Nordic regions, is visible in Finland. Additionally 11 out of the 20 regions currently have unemployment rates above the EU27 average. According to the Labour Force Survey, there were 248 000 unemployed in April 2010, which was 15 000 more than in April the year before. The number of male unemployed increased in comparison with 2009 while female unemployment remained stable.

In Iceland, when looking at the 2010 regional and municipal unemployment rates, the country does not have rates as high as those shown in Sweden or Finland. Only 5 out of 76 Icelandic municipalities are above the EU27 average. However, these figures hide the reality of the considerable change in unemployment that the country experienced in the years subsequent to the outbreak of the global financial crisis. Unemployment in 2010 is 8-9 times higher than 2-3 years before. According to Statistics Iceland, in the second quarter of 2010, 16 200 persons were unemployed, representing 8.7% of the workforce. The unemployment rate was higher for men (9.4%) than for women (8%), but highest among persons aged 16-24 years old (21.3%). The highest rates are found in the north-eastern regions and the Reykjavik region with some surrounding municipalities, for example Reykjanesbær and Sandgerði, the only two Icelandic municipalities with rates over 10%. Even though the authorities have allocated hundreds of millions of Icelandic kronor to measures designed to alleviate the situation, the country still has limited resources to fight unemployment, leaving youths, early school leavers, recent graduates and those who have not already been in work very vulnerable[29].

In Denmark, after a long period of falling unemployment which reached the lowest level of recent times in the middle of 2008, rates began to increase and continued to climb throughout 2009. The number of unemployed in 2009 was in comparison double that of the year before. The highest regional unemployment rates correspond to regions in the Danish periphery

[28] Norden, 2010b

[29] Nordic Labour Journal, 2010b

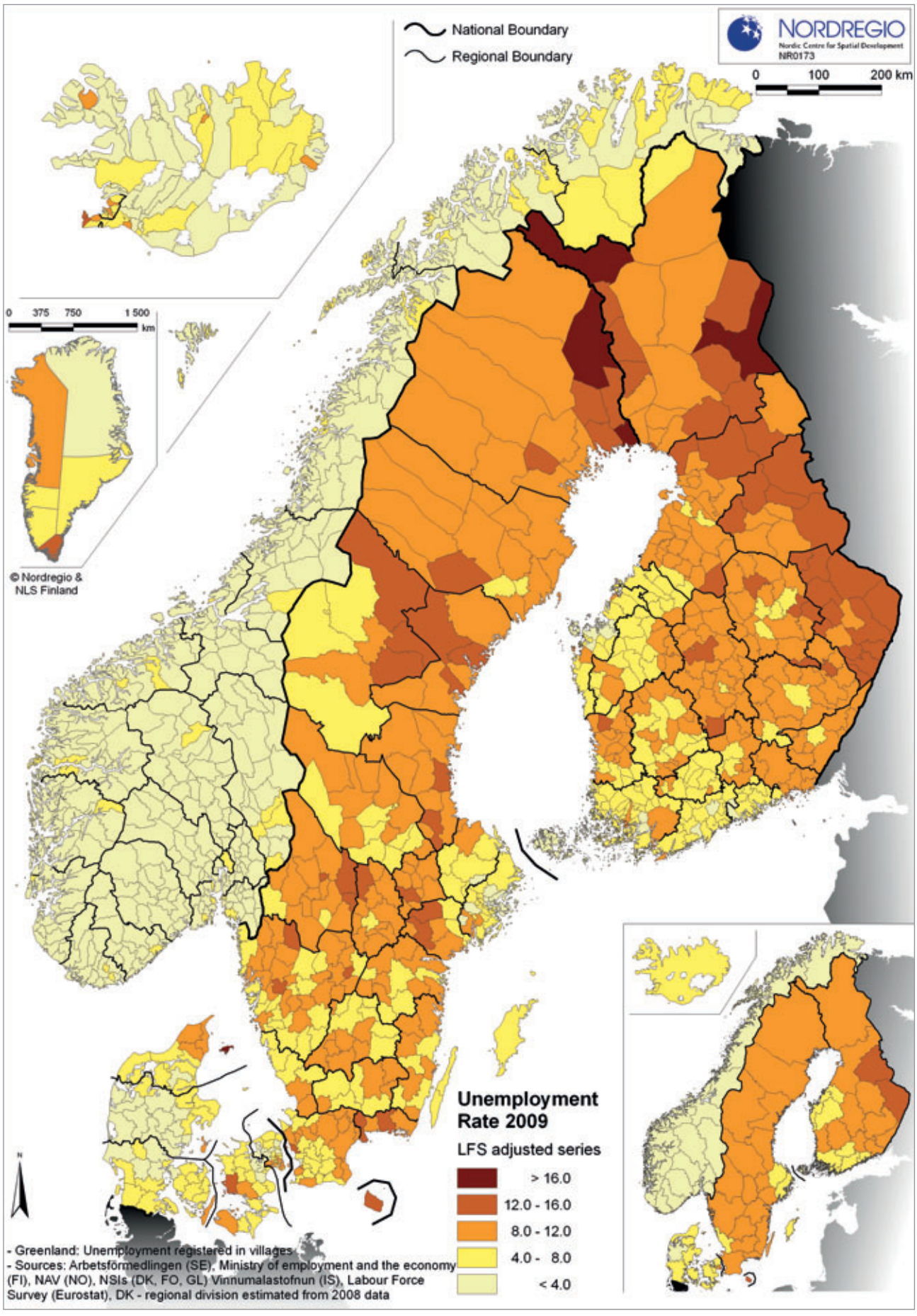
(Bornholm and Nordjylland). A few municipalities have rates over the EU27 average, while the majority of municipal rates fluctuate between 4.5% and 6.5% in 2009. The highest rates are found in the most peripheral islands, such as Læso, Bornholm, Lolland, Samsø and Langeland, but also in some of the municipalities in the Greater Copenhagen area.

Among all Nordic and European countries, Norway was the only economy that managed to exit the global crisis with only relatively minor alterations and the lowest unemployment rate in Europe. In comparison with the rest of Nordic countries, Norway shows a stable and homogenous picture in terms of unemployment. The unemployment rate in Norway rose from 2.3% in March 2008 to 3.2% in March 2009, according to Labour Force Surveys. The 2009 rates in Norwegian regions ranged between 2% and 3.5%, but all municipalities had unemployment rates below the EU27 average and below the rest of the Nordic municipalities. Only a few municipalities, mainly located in northern areas of the country, had rates over 5%. Around three quarters of all Norwegian municipalities had very low rates (0.5-3%). According to Statistics Norway, a high percentage of the adult population in Norway is in employment, mainly due to the high level of female employment. About 7 out of 10 women and almost 8 out of 10 men are currently employed.

In the Faroe Islands, unemployment reached its lowest level around the first half of 2008, but the following year it increased to 5.3%. In Greenland, after a short recovery between 2005 and 2008, unemployment increased to 7.1% in 2009. The high dependence on fishing makes the Faroese and Greenlandic economies very vulnerable to fluctuations in world demand and world market prices, though the periods of unemployment are often very short due to the availability of seasonal jobs. At the same time it may be difficult to determine when unemployment appears in the small scale fisheries sector. This has been a general problem in connection with the registration of unemployment in smaller settlements in Greenland. Regions with the highest unemployment figures include Kujalleq (10%) in Greenland and the Norðoya district (7.3%) in the Faroe Islands.

The geography of the unemployment rate and the labour market situation illustrates the situation of potential labour shortage in the metropolitan and major city regions and the excess supply of labour in the less central regions. The imbalances are particularly large in Sweden and Finland. Regions with a less prosperous development are those that tend to be characterised by an old-fashioned industrial structure based on manufacturing and natural resources-based industries. The labour supply in these regions often simply does not possess the qualities demanded by modern industries in central regions.

Figure 25: Harmonised unemployment rates 2009 at municipal level in the Nordic countries

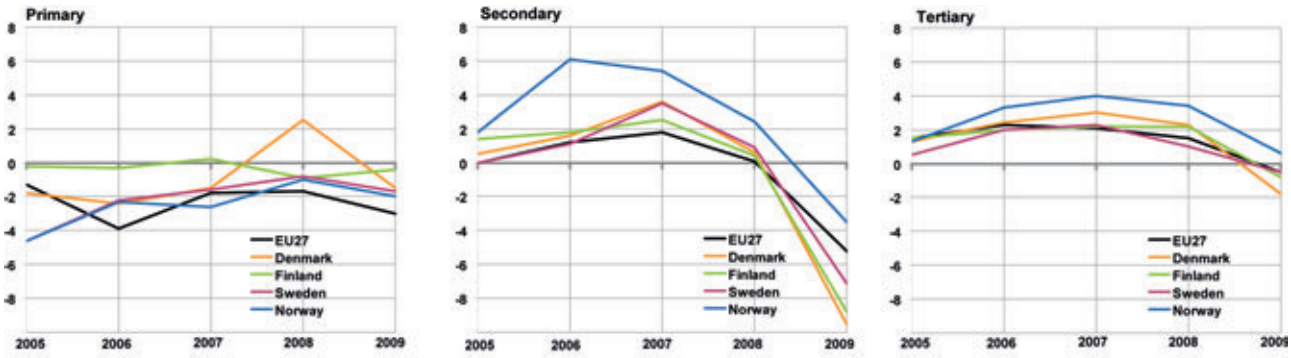


A service-oriented and highly skilled labour force

The sectoral structure of the Nordic labour market has changed considerably in recent decades. The Nordic countries have shifted from agrarian and industrial societies into societies dominated by a large service sector. While the major shift away from being agrarian took place already during the decades after World War II, the shift from industries to services being the major contributor to the economy become even clearer when looking at employment by sector from the beginning of the 1990s onwards. All Nordic countries are characterised by small primary sectors, shrinking industrial sectors and large – and generally expanding - service sectors.

By looking at its development over the last 5 years (Figure 26), all three sectors have experienced a negative trend as a consequence of the global financial crisis. Figure 43 in the Annex shows this situation at the regional level. The secondary sector, including employment in manufacturing, industry, construction and energy has been most affected. After a period of relative growth up to 2007, with rates above 2%, there was a significant drop in 2008-2009, this was primarily caused by the collapse of exports in respect of manufactured goods. This is visible particularly in Sweden, which experienced a significant negative change due to the bankruptcy of the automobile industry, and in Finland, in the paper and pulp industry. Norway suffered least in terms of negative growth, probably due to the stable situation of the petroleum market. The large Nordic tertiary sector also experienced negative growth, although to a much lower extent, while the primary sector, including forestry, mining and agriculture, had already experienced a negative trend as a consequence of the shift in activity across the Nordic economies in favour of the services sector.

Figure 26: Employment growth by main economic sectors in the Nordic countries 2005-2009



Reviewing the various service sub-sectors employment in transport and communication has declined in Denmark, Norway and Sweden, but increased in Finland and Iceland. The finance, insurance, real estate and business services sub sector has, however, seen a moderate increase in the number of employees. In all Nordic countries, between 45% and 54% of all employment is found in these particular sectors[30]. The Nordic countries are European leaders, along with Luxembourg, the Netherlands and Belgium, with regard to persons employed in highly skilled occupations, including highly educated professionals, legislators, senior officials, managers, technicians and other associated professionals. In Iceland 48.5% of the workforce is employed in such jobs, followed by Sweden, Denmark and Finland (46.1%) and Norway (45%), all above the 2009 EU27 average of 39%. The Nordic countries also have the lowest shares of employees working in elementary occupations in the EU27, with Norway (4.5%), Sweden (6%), Iceland 6.2%) and Finland (7.6%)[31].

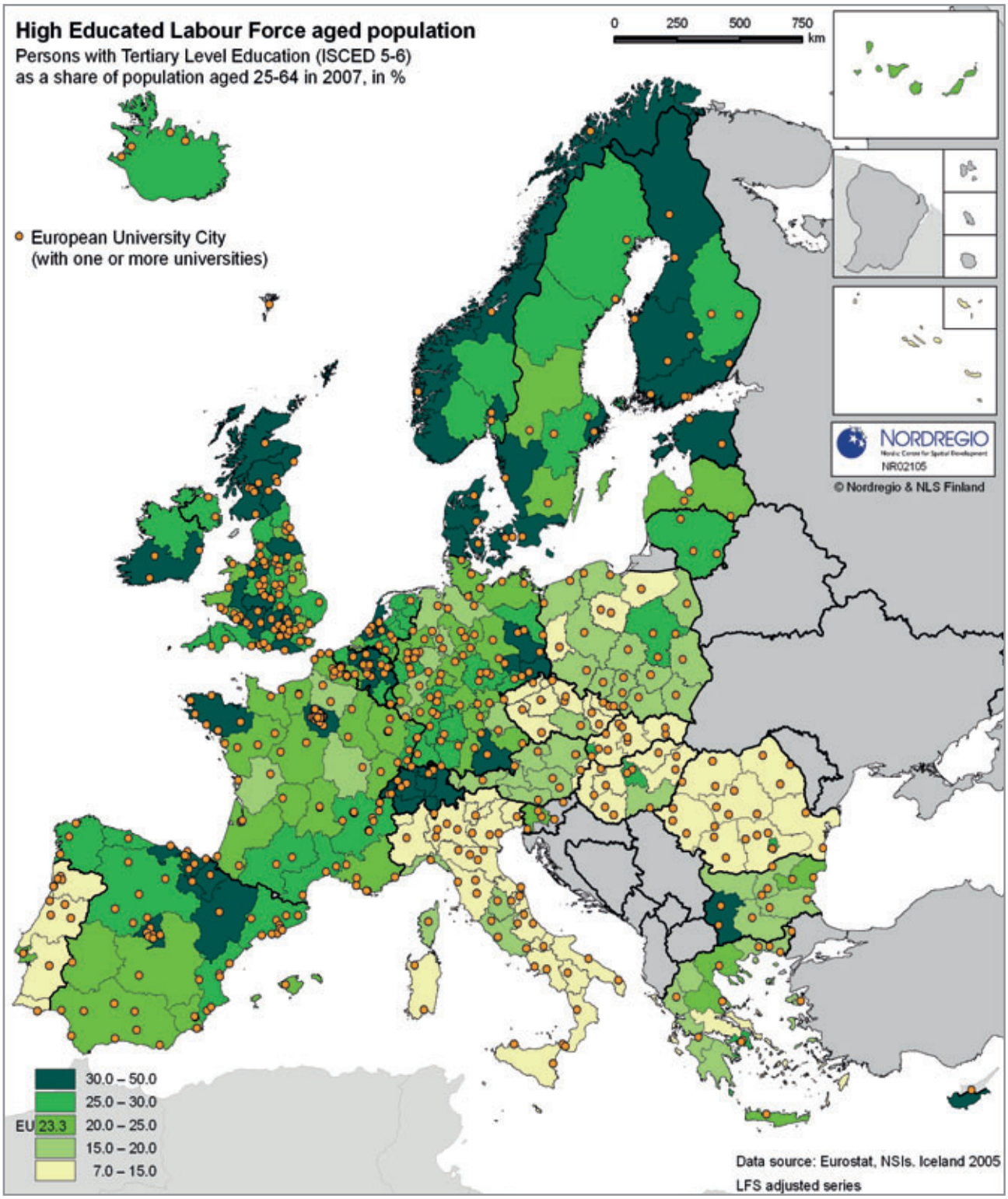
An additional asset for the Nordic labour market is its highly skilled labour force, as the Nordic countries can boast the highest levels of population with a tertiary education in Europe at a regional level. Skilled workers tend to be more productive, less exposed to unemployment; more satisfied with their professional lives and retire at an older age. There is, however, something of a trade-off between immediately exploiting young persons' labour potential and the benefits which accrue with their attainment of a higher education to meet the requirements of the 'modern' labour market. The EU Green Paper on Territorial Cohesion states that the competitiveness and prosperity of territories increasingly depends upon the capacity of the people and businesses located within them to make the best use of all their territorial assets. Therefore, the level of education and the quality of the entire educational system are crucial elements in the construction of a skilled labour force.[32]

[30] Norden, 2009

[31] Eurostat, 2010

[32] Damsgaard, O.; Lindqvist, M.; Roto, J.; Sterling, J. (2009) Territorial Potentials in the European Union, Nordregio Working

Figure 27: Labour force levels of education in the Nordic countries



On average, 23% of the European working age population has a tertiary level education, with in general all Nordic countries being above the EU27 average (Figure 27). At the Nordic regional level the highest percentages are associated with densely populated areas and/or major cities. Oslo (46%) and Etelä-Suomi (40%) are, along with London and Brussels, among the highest skilled regions in Europe. Not only large metropolitan areas but also regions with low population densities in northern Norway and Finland have a highly skilled workforce with a tertiary level educated population above 30%.

When it comes to 'life-long learning', the tendency is similar and all Nordic countries have figures

well above the EU27 average of 9%, with Finland (29%), Denmark (20%) and Sweden (18%) at the top.

Apart from the so-called 'traditional economic sectors', new highly skilled activities and occupations in the Nordic countries are expected to emerge driven by new technologies, innovation and specialisation. A crucial driving force for this is constituted by high schools, universities and other educational or training institutions as they have the potential to find new *niches* in the labour market for which they can offer an education.

Measures countering unemployment: education and training as the main drivers

The Nordic countries have a strong commitment to education and assistance on an individual level to bring the young and long-term unemployed people back into working life. The last Nordic meeting of labour ministers in Reykjavik in November 2009 confirmed this by stressing solutions and measures to fight unemployment among the most vulnerable groups, especially among young persons, with or without education or skills. A big concern regarding the current employment situation in the Nordic countries is the fear of a "lost generation" of young people falling into long-term unemployment[33]. At the same time the issue of gender-bias in relation to education has also become a major concern. There is now a clear discernable pattern developing that a larger proportion of persons with secondary and tertiary level education are women (see section on Education for details). This section describes some of the main measures adopted by the Nordic countries in this regard.

Iceland was perhaps the most unprepared of the Nordic countries to face the change in unemployment as the Icelandic benefits system was designed at a time when unemployment was basically unknown. However, the government has been trying to address the situation. In January 2009 a new regulation on labour market measures, prepared by the Directorate of Labour, was introduced. It included initiatives for the unemployed such as further training subsides, self-improvement courses, job introduction, vocational training, trial engagements, counselling, employment-related rehabilitation, and a further promotion of youth entrepreneurship. There were also initiatives to support companies, such as help with the development of business plans and economic support to firms engaged in innovation projects. Later in 2009, the Ministry of Social Affairs introduced a programme called "Youth Action" oriented towards young job seekers under 25 years of age, without an education and to early college leavers. The purpose was to offer counselling, job training and employment within three months of them losing their previous jobs. The programme is operated in conjunction with colleges and other educational institutions, municipalities, voluntary organisations and some companies. In 2010 the Icelandic Directorate of Labour introduced ThOR (ÞOR in the Icelandic alphabet for *þekking og reynsla*), a programme on knowledge and experience, oriented mainly to the long-term unemployed and offering a variety of activities, including courses, seminars, education and employment-based sessions.

In Denmark measures to counter unemployment are based on cooperation between job centres, companies and educational institutions. In 2009, the Ministry of Employment gathered key social partners, such as trade unions, employers and municipalities, agreed upon the importance of a highly educated and skilled labour force as one of the main measures to combat unemployment. A political agreement in February 2009 defined a number of changes in the rules for active labour market programmes, aimed at targeting the need to re-skill the unemployed. Employees could, for example, receive a training subsidy when they hired unemployed persons with at least 3 months of inactivity. Training can last up to 6 weeks and is provided by an external services provider. In August 2009, a reorganisation of the local job centres took place through the merger of the state and municipal branches. This meant that from 2010 full economic responsibility was given to the municipalities, with a refund from the state. Job centres were to play a more active role and offer courses and training. In January 2010 a joint set of 23 initiatives between the Ministry of Employment and the social partners was presented. The initiatives were oriented to assisting employers that were in the process of restructuring and employees who were about to be dismissed. These measures included extended education and support opportunities for the unemployed even after the person left the firm; counselling and the development of action plans for the newly unemployed. Persons not covered by a collective agreement were to get the same right as those working under such agreements. In the autumn of 2009, a large parliamentary majority voted in a youth plan (the so-called '*ungepakken*') designed to prevent the emergence of a lost generation. In April 2010, the government also introduced an action plan oriented towards increasing the recruitment of foreign workers into the Danish labour market, as part of a long-term effort to improve both the quality and size of the workforce. The Minister of Employment will announce later in 2010 a number of new initiatives oriented towards reducing long term unemployment based on giving education and training a high level priority and improving contact between job centres and the unemployed[34].

[33] Nordic Labour Journal, 2010b

[34] Based on EEO, 2010a

In Sweden the main goal is to keep young people active while focusing on education and re-activation programmes. The measures are conceived within the education system in combination with active labour market measures, giving young people a chance to increase their competences. New tasks have been given to the job centres as they are in charge of executing labour market measures aimed at both the short and the long term unemployed. Already from the first day of unemployment, coaching will be offered and the youth guarantee (which comes into effect after three months of unemployment) will be strengthened while the government has stated that it will also focus on creating new start jobs for the long term unemployed. There is also an increase in the number of education and training places and a modification of some courses in order to re-attract early school leavers to both secondary and college education. As in Iceland, entrepreneurship activities will be used to encourage young people to start their own businesses. Extensive fiscal measures adopted by the Parliament at the end of 2009 were implemented during the first quarter of 2010 as a way of securing the welfare system by maintaining levels of employment in the public sector. A reduction in the tax levels paid by pensioners and an increase in the housing supplement support for people with sickness and activity compensation took effect on 1 January 2010. Additionally, eligibility requirements for individuals who were long term absentees from the labour market were modified and employment offices started a programme oriented to assessing the ability of this group to eventually return to the labour market[35].

The Finnish government has developed an expansive economic programme and introduced tax cuts as its two main incentives to stimulate growth. There is also great interest in the availability of a skilled labour force, including professional skills derived from education, as an increasingly important element of future economic growth. Education remains a top priority in Finland, in line with the rest of the Nordic countries. Finland's main target groups are young people and those who are not in education or work. After overseeing a continuing rise in unemployment, in early 2010, the Finnish government implemented a series of measures including wage subsides targeted at young school leavers and those who cannot find a job, as well as the introduction of subsidised salaries to encourage employers to hire young people. In May 2010, the so-called "*Sanssi kortti*" (Finnish for "Chance card") was launched. This gave employers the right to have some of the employee's salary covered by the state, lowering the threshold for employing young people for both normal jobs and apprenticeships. The main objective was to strengthen employment among new graduates under 30 years of age. Persons under 25 years qualify automatically, but older persons must have been out of work for more than six months. The job centres act as centres for counselling, since every time a card is issued by the Employment and Economic Offices of Finland, a so called 'employment plan' has to be designed for the job seeker.

As noted previously, since the start of the economic crisis Norway has not suffered to anything like the same extent in terms of dramatic changes in employment compared to the other Nordic countries. Nevertheless, labour market measures were implemented to combat unemployment and to help those who were deemed to be at risk of being excluded from the labour market. In general, these measures aimed at improving the individual's chances of finding employment through work training, education and new qualifications. In line with the Nordic trend, such measures prioritise target groups such as youth, the long-term unemployed, those with an impaired work capacity, long-term recipients of social security benefits and immigrants, with emphasis on the newcomers for whom a special introductory programme has been drawn up. The Youth Guarantee scheme is offered to those below 20 years of age who are not in education. Those between 20 and 24 who have been unemployed for more than three months are eligible for additional follow-up assistance and help with job seeking and personal activity.

[35] Based on EEO, 2010c

Combined challenges and future possibilities

When combining the latest total population change in 2005-2010, the level of employment in 2008 and economic performance in terms of GDP in PPS *per capita* in 2007 on the regional level, the Nordic map (Figure 28) shows the existence of a number of rather diverse regional situations.

The capital regions, together with some major secondary city regions are clearly the best performers (dark blue regions). Many of the other regions included in this category with increasing populations, high employment levels and high GDP *per capita*, such as western Norway, Jutland, southern Sweden and Finnish Ostrobothnia, are not however in a similarly favourable situation. They are suffering from domestic out-migration, compensated for by higher birth rates, but with the out-migration eventually posing a challenge for future development as many of the out-migrants are young and skilled persons, often with a tertiary education. In contrast, the Nordic regions with decreasing population levels, low levels of employment and low GDP *per capita* (dark red regions) are found in the most rural regions, like Bornholm in Denmark, Finnmark in Norway and Värmland in Sweden. Similarly in Finland a significant number of eastern and northern regions have to cope with combined risks such as these.

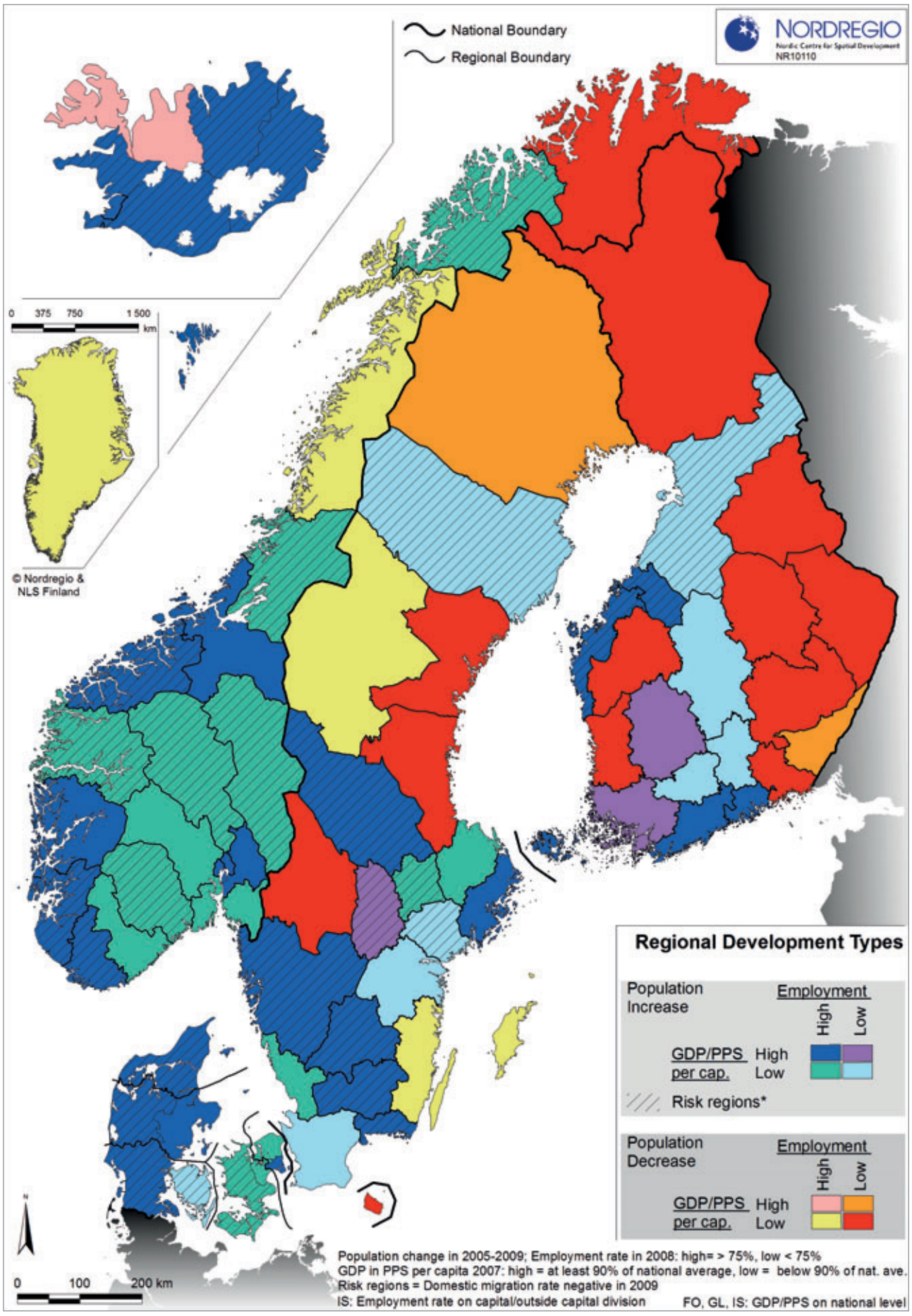
Even if overall regional polarisation in the Nordic countries slowed during the previous decade Nordic regions still display different preconditions in their attempts to meet future challenges. Population and job development is still fastest in the major city regions while domestic migration may alter the picture somewhat - though the net migration gains and losses are smaller.

In recent years, the overall population increase has smoothed while GDP growth has not been that high compared to many other European – or global – regions. The Nordic labour force, moreover, continues to present a number of favourable characteristics when compared to the European average. Achievement of the Lisbon and Europe 2020 targets in terms of employment rates situates the Nordic area in a favourable position among advanced economies, while indicators such as total unemployment and long-term unemployment were below the EU27 average in 2009, even though severe changes in national and regional rates were evident, especially in 2009.

The likely future challenges to the Nordic regions, and their labour markets in particular, relate primarily to the issue of population change. In the coming years the potential labour force will decrease in size in most of the Nordic regions as a result of the retirement of large age-classes - the post-war baby-boomers, worsening the dependency ratio and the depopulation of some sparsely populated peripheral regions. In addition, the number of persons in those groups deemed as being 'at risk' of exclusion from the labour market, such as the young and immigrants with previous experience of unemployment, is still critical in some Nordic regions.

Future economic development and growth must therefore be sought through increased employment and productivity. In that light it looks promising that the overall level of education has risen rapidly in recent decades. This trend is expected to continue, as age groups with lesser training leave the labour market, although the challenge still remains for young people to find employment. The highly skilled workforce, with high levels of education and a high female labour participation rate in the Nordic workforce seems to be both a comparative and a competitive advantage in relation to other regions in Europe. Moreover, the measures related to the ability to adapt to the changes in the global economy should be prioritised.

Figure 28: Regional Development types



Innovation and Entrepreneurship

Introduction

Approaches to innovation by national authorities dealing with the issue in the Nordic countries have been inspired by the definition of innovation used by the OECD. According to the OECD's Oslo Manual (2005) innovation is the implementation of a new or significantly improved product (good or service) or process, a new marketing method or a new organisational method in business practices, workplace organisation or external relations. Similarly, the definition used by the Nordic Innovation Centre states: "Innovation covers a new product, including a service-product, a new process or a new organisational or managerial structure." The Swedish government agency VINNOVA uses a briefer definition: "new or improved services, products and processes." One example shows some divergence from other definitions in its reference to knowledge and society. This definition is introduced by the Finnish Funding Agency for Technology and Innovation (TEKES): "Innovation implies that knowledge and competence is used in a new way either commercially or societally."[36]

Entrepreneurship is, by policy makers, considered an important driver of innovation, economic growth, productivity and employment. This chapter aims to provide an overview of the state of innovation and entrepreneurship in the Nordic countries.

Knowledge as a resource base

In a globalised world, knowledge is becoming an increasingly important factor in the development of regional competitiveness. In a knowledge-based economy, the pressure on the labour force to have a high level of education and for the state to enable the existence of a high quality school system increases. It also becomes necessary to invest in research and development as the primary resource base for innovation and development. However, a high level of research expenditures may not be enough. There is also a need for mechanisms to stimulate the commercialisation of academic research and the transfer of different types of knowledge between the public and private sectors.

Occupational structure

Figure 29 illustrates the differences in occupational structure in the Nordic countries and two of the autonomous territories, Faroe Islands and Greenland.

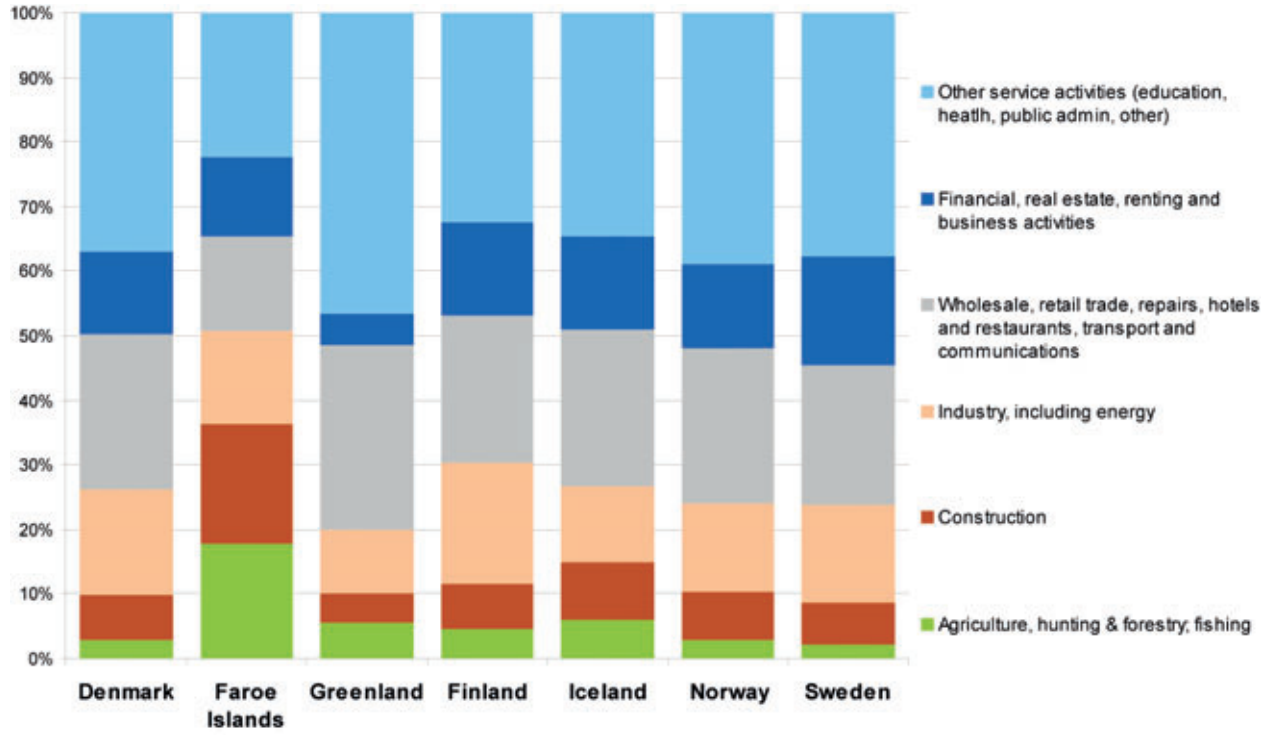
Some variation can be found between the significance of sectors in the different countries. In the Faroe Islands, the share of employment in agriculture and construction is relatively high compared to the other countries, while in Sweden the share of these two sectors is low. The industrial sector maintains the highest share of total employment in Finland, whereas it has the least relative weight in Greenland and Iceland. Financial and similar activities, compared to other countries, have the highest share of total employment in Sweden. Other service activities, including public administration, have a similarly high weight of approximately 40% in Sweden, Norway and Denmark, while this share of employment is almost 50% in Greenland.

Educated human resources

The level of education and the quality of the entire education system are of high importance in the

[36] Hedin, S.; Dubois, A.; Ikonen, R.; Lähteenmäki-Smith, K.; Neubauer, J.; Pettersson, K.; Rauhut, D.; Tynkkynen, V.; Uhlin, Å. (2008) Regionally Differentiated Innovation Policy in the Nordic Countries – Applying the Lisbon Strategy, Nordregio Report 2008:2, Stockholm, Sweden.

Figure 29: Share of employment by sector in Norden 2008



Sectors defined according to ISIC (International Standard Industrial Classification of All Economic Activities).
Data source: UNECE database for all countries except Iceland, Greenland (2005) and Faroe Islands (NSI)

Source: UNECE, NSIs

knowledge-based economy. Figure 30 illustrates the average level of education in the regions of the Nordic countries, and the location of higher education opportunities, providing an overview of the gender distribution at universities and university colleges across the Nordic countries.

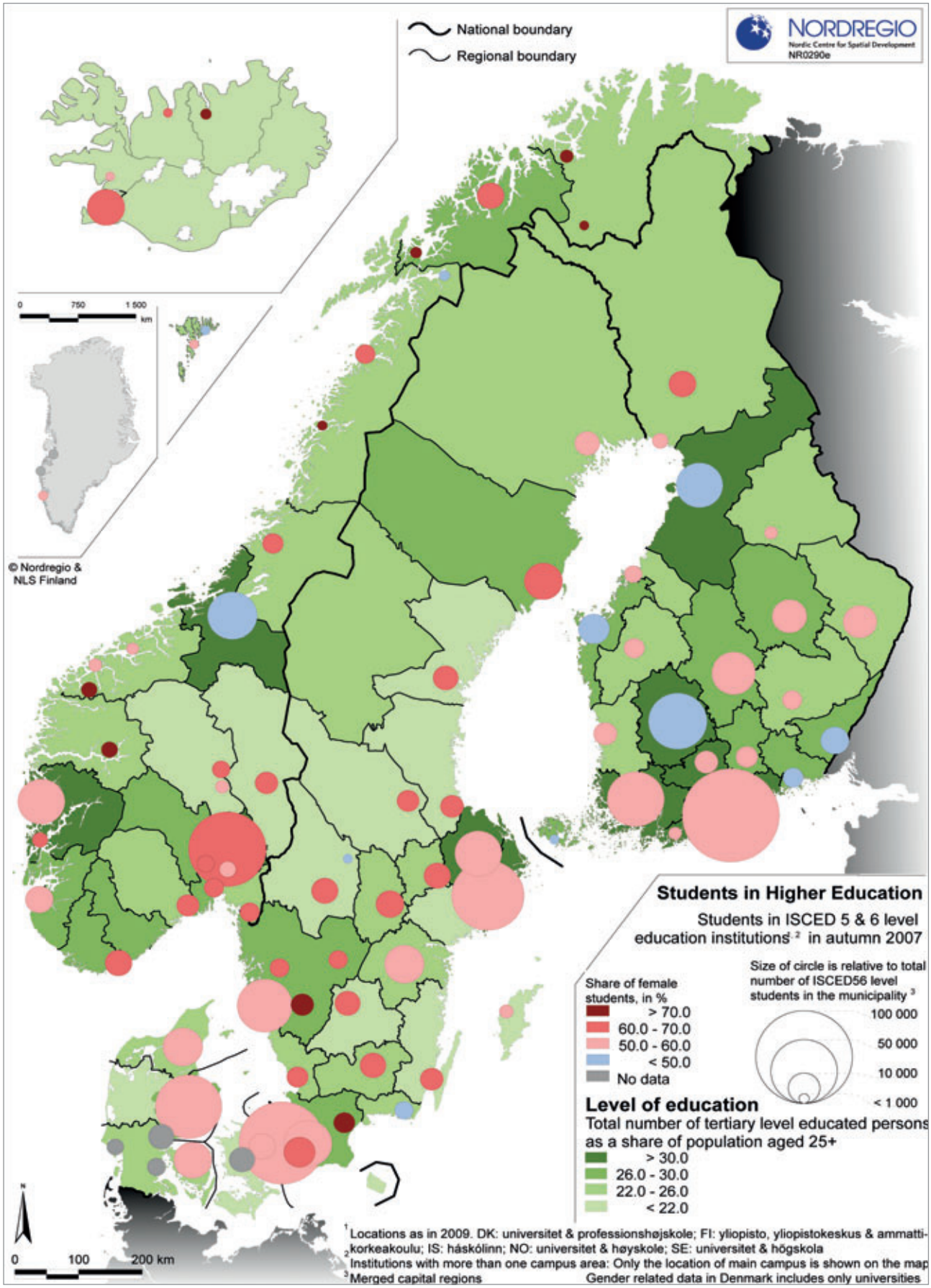
Higher education is clearly concentrated to metropolitan areas in the Nordic countries, as one third of students at higher education institutions study in the capital regions. On average, 57.7% of students are female. As depicted on the map, only ten municipalities, Filipstad (with the lowest share of female students - 16.7%) followed by Narvik, Lappeenranta, Mariehamn, Karlskrona, Vaasa, Tampere, Oulu, Trondheim and Kotka, have more male than female students. They all have either a technical university or a (university) college focusing on maritime or forestry studies. With regard to the level of education in the regions of the Nordic countries, it is clear that the share of the population with a tertiary level education above 30% exists mainly in capital regions.

The increasing significance of knowledge-intensive business services

Firms delivering knowledge-intensive business services (KIBS) are increasingly cited as occupying a central role as integrators of various parts of the innovation system, e.g. through their inclusion in the knowledge and innovation infrastructure of society together with education and research institutions. Research has confirmed that the largest concentration of KIBS is found in large metropolitan areas across Europe. For knowledge-intensive firms, which operate in competitive markets, spatial concentration offers advantages connected with the production and diffusion of knowledge and with individual and collective learning processes. Spatial and socio-cultural proximity make access to information and knowledge easier[37]. As illustrated in Figure 30, urban areas also hold the highest concentration of educated human resources, which is an essential element for the competitiveness of KIBS firms.

[37] Simmie, J.; Strambach, S. (2006) The contribution of KIBS to innovation in cities: an evolutionary and institutional perspective, Journal of knowledge management, Vol. 10, No. 5, pp.26-40

Figure 30: Students in Higher Education in Norden



Knowledge-intensive business services (KIBS) are characterised by employing a large number of highly skilled employees. They operate in sectors such as R&D, IT-consultancy, legal services, management, training, advertising and PR and book keeping and can be defined as follows:

> *"KIBS refer to those services provided by businesses to other businesses or to the public sector in which expertise plays an especially important role*[38]*" (Toivonen, 2004).*

A recent study which explored the significance of KIBS in Stockholm and the two other larger cities in Sweden, Gothenburg and Malmö, found that relative to the rest of the country, the cities have a high concentration of KIBS. Thus, the share of individuals employed in the KIBS sector is twice as large in the three city regions combined. In a comparison between the three cities, however, it becomes evident that the KIBS sector is mainly concentrated to the capital region of Stockholm.[39]

Research and development expenditure

High levels of private and public expenditure in research and development (R&D) is considered another significant precondition for innovation. In 2002, the goal of spending at least 3% of GDP on R&D by 2010 was added to the Lisbon Strategy. In a Europe-wide study however it was clearly evident that only the two Nordic countries of Finland and Sweden have reached this goal[40]. Figure 31 illustrates the position of the Nordic countries relative to a number of EU member states and the EU27 average in the year 2008. The figure demonstrates that the five Nordic countries have some of the highest public R&D expenditure as a share of GDP, of which Iceland takes the lead with an expenditure of 1.26% of GDP. Finland, followed by Sweden is ranked highest, compared to all countries, in terms of private sector R&D expenditure in 2008 with respectively 2.56% and 2.50% of GDP. In a comparison of the Nordic countries, Norway has the lowest expenditure on both public and private R&D expenditure. Its share in private sector R&D expenditure, at 0.80% of GDP, is low compared to both the EU countries in general and the other Nordic countries in particular.

Figure 31: Private/public sector R&D expenditure

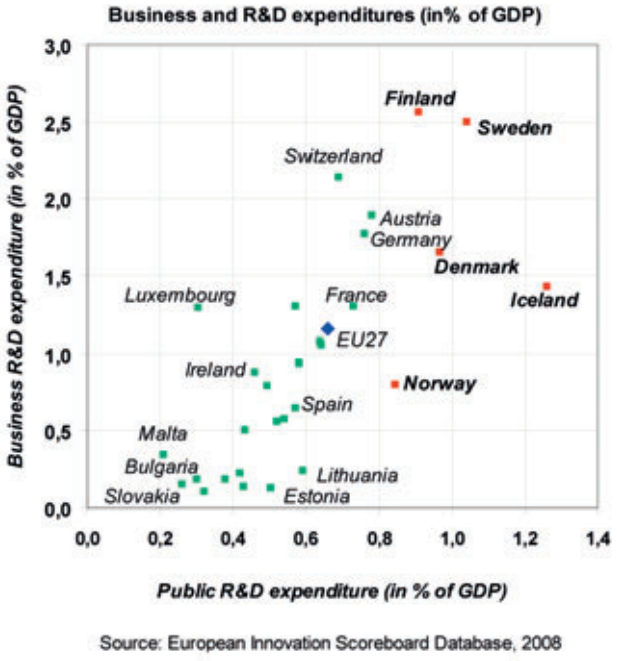
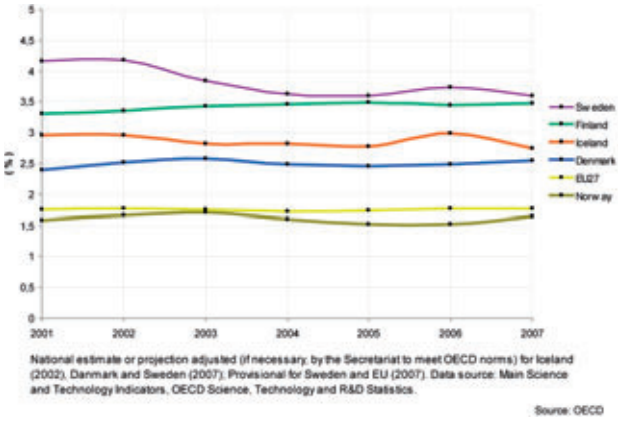


Figure 32 illustrates the development of the total expenditure on R&D as a percentage of GDP during the period 2001-2007 for the Nordic countries and the EU27 average. Throughout the period, Sweden had the highest expenditure on R&D as a percentage of GDP, ranging from more than 4% in 2001 to 3.5% in 2007. Norway is at the other end of the scale with an expenditure rate of approximately 1.5%, which is slightly below the EU27 average.

Figure 32: Evolution of gross domestic expenditure on R&D as a percentage of GDP



[38] Toivonen, M. (2004) Foresight in Services: Possibilities and Special Challenges, The Service Industries Journal, Vol. 24, No. 1, pp.79-98

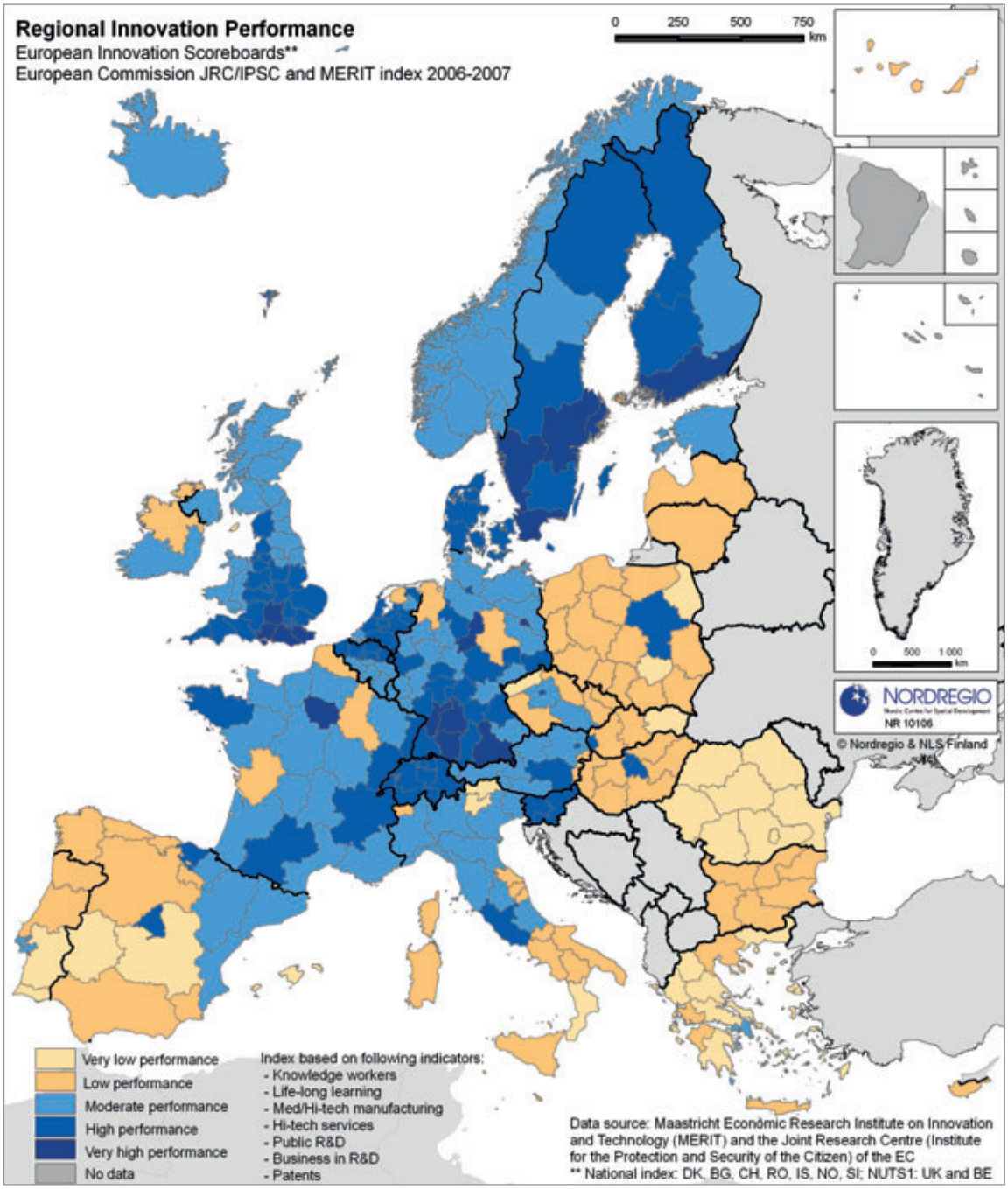
[39] Lindqvist *et al* (2010), Kunskapsintensiva tjänsteföretag i svenska storstadsregioner: regionala utvecklingsstrategier och påverkan av den ekonomiska krisen, Regionplane- och trafikkontoret, Stockholm, (Forthcoming)

[40] Damsgaard, O.; Lindqvist, M.; Roto, J.; Sterling, J. (2009) Territorial Potentials in the European Union, Nordregio Working Paper 2009:6.

Regional Innovation Performance

As indicated above, innovation concerns the transformation of resources, e.g. R&D expenditures and human capital, into commercialised products (goods and services), processes and procedures. Innovations are often created cooperatively between the private and public sectors[41]. Figure 33 illustrates the regional innovation performance of European regions in 2006-2007. The figure demonstrates that the regions of the Nordic countries are not among the lowest performing in Europe. However, Iceland and Norway are categorised as delivering a moderate innovation performance. This is also the case in eastern Finland and the central area of Sweden, while Denmark and the main parts of Sweden and Finland are categorised as high performance regions. Very high performance exists only in the capital regions of Finland and Sweden, also including the city regions of Skåne and Västra Götaland in Sweden.

Figure 33: Regional Innovaion Performance in Europe



[41] Damsgaard, O.; Lindqvist, M.; Roto, J.; Sterling, J. (2009) Territorial Potentials in the European Union, Nordregio Working Paper 2009:6.

The importance of entrepreneurship

Entrepreneurship is an important mechanism in the stimulation of innovation and development. However, a high level of formal education may not be enough to guarantee that innovation takes place. A strong national and regional entrepreneurship culture indicates a higher potential to create growth from new start-up activities[42]. In a global comparison the Nordic countries have not been found among the highest performers in terms of entrepreneurship. The Nordic Innovation Monitor 2009 states that[43]:

> *"In the area of entrepreneurship, the Nordic countries lag behind significantly. The Nordic countries have a weak entrepreneurial culture, and there is a shortage of emerging growth entrepreneurs when comparing against the best performing countries."*

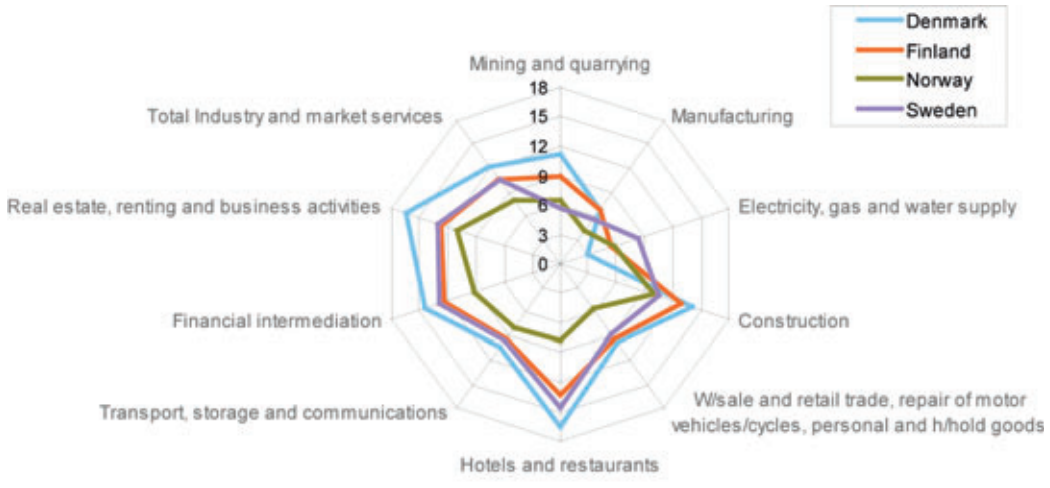
Meanwhile, qualitative differences between the Nordic countries are emphasised. In 2009, Finland had the highest share of high-growth entrepreneurs of the Nordic countries, and Denmark has been introduced as an example of a country where entrepreneurialism flourishes. In 2007, the Global Entrepreneurship Monitor ranked Iceland as the most entrepreneurial nation. Finland, Norway and Denmark were just below the US level of entrepreneurship, and from the Nordic countries only Sweden lagged behind. Figure 34 exhibits the division of enterprise birth rates, by sector, in 2006 for Denmark, Finland, Norway and Sweden.

Based on this figure, Denmark, followed by Finland and Sweden, has the highest enterprise birth rate in all sectors except for electricity, gas and water supply. Norway has the lowest level of enterprise birth rates. The highest number of enterprise births in the three leading countries is in the real estate, financial intermediation and hotel and restaurant sectors. Moreover, all four countries show a relatively high activity rate in the construction sector.

Women's Entrepreneurship Policies

Recent developments within international organisations like the EU, OECD and the ILO have put a strong emphasis on supporting the development of women entrepreneurs. The OECD stresses that women's entrepreneurship relates both to women's position in society and entrepreneurship in general: A weak social position for women combined with a weak general (political) interest in entrepreneurship have a very negative effect on women's entrepreneurship. Recent research overviews made by the international research programme Global Entrepreneurship Monitor also underline the importance of women's entrepreneurship

Figure 34: Enterprises birth rates by sector in the Nordic countries 2006



Sectors defined according to ISIC (International Standard Industrial Classification of All Economic Activities)
Data source: OECD database. No data for Iceland, Greenland and Faroe Islands.

Source: OECD

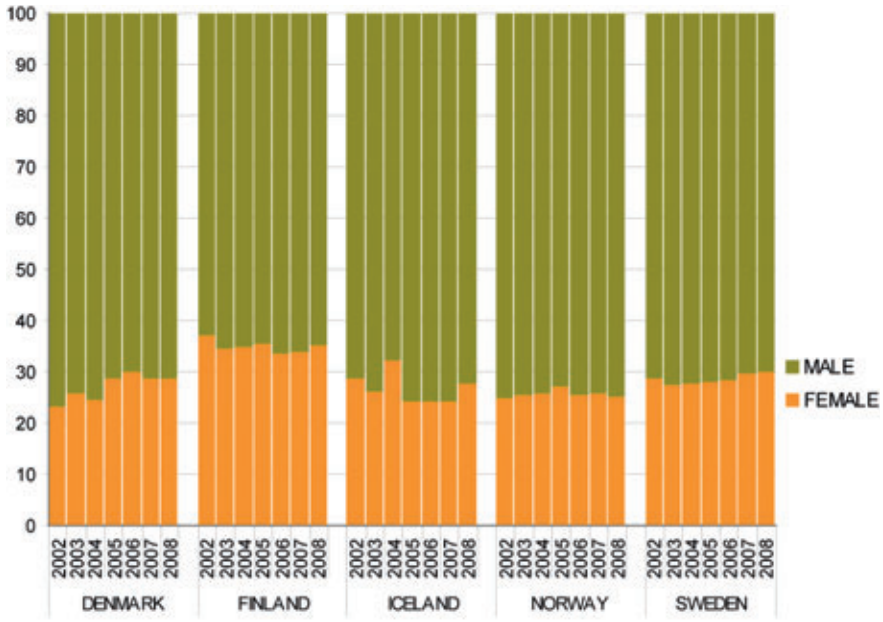
[42] Damsgaard, O., Lindqvist, M., Roto and Sterling, J. (2009), Territorial Potentials in the European Union, Nordregio Working Paper 2009:6.

[43] Andersen, J. B. (2009), Mid-term evaluation of Nordic innovation policy 2005-2010, Nordic Innovation Centre.

in the development of national economies and national economic growth.[44]

Between 2002 and 2008, the respective levels of men and women in the Nordic countries among the ranks of the self-employed were relatively stable at around 30%, except for Finland with approximately 35% (Figure 35). Perhaps this is an indication that the increased support for women's entrepreneurship since the mid-1990s, at least in Sweden and Norway, has had a rather limited impact. Only a short time period is displayed however and the levels of entrepreneurship are connected to certain structural conditions, for instance a gender segregated labour market and education system.

Figure 35: Distribution of self-employed workers in the Nordic countries, 2002-2008.



Own-account workers are those workers who, working on their own account or with one or more partners, hold the type of job defined as a self-employed job, and have not engaged on a continuous basis any employees to work for them during the reference period. (OECD)

Source: UNECE database

Source: http://www.oecd.org/dataoecd/6/13/31919215.pdf

In 2007, the GEM-study revealed that entrepreneurial activity in the working force varies between women and men in the Nordic countries. Iceland has the highest level of entrepreneurial activity among men as well as among women, particularly in terms of early stage companies, while Sweden has the lowest levels.

Table 3: Entrepreneurial activity among men and women in the Nordic countries

Country	Men (%)			Women (%)		
	Total	Established	Early stage (nascent+new)	Total	Established	Early stage (nascent+new)
Denmark	14,75	8,54	6,21	8,00	3,43	4,56
Finland	19,27	10,31	8,96	9,60	4,8	4,81
Iceland	30,83	13,43	17,4	11,42	3,98	7,44
Norway	16,79	8,2	8,59	7,78	3,5	4,28
Sweden	12,65	6,87	5,78	4,95	2,48	2,47

Source: GEM, 2007, Report on Women and Entrepreneurship, p. 12.

All Nordic countries, except for Iceland, have a programme or an action plan with the aim of supporting women's entrepreneurship. However, the measures applied vary between the countries and consist of individually focused efforts, as well as more structurally focused efforts.[45]

[44] Reynolds, P. *et al.* (2001), Global Entrepreneurship Monitor 2001 Executive Report.

[45] Pettersson, K. & Hedin, S., forthcoming, Support for Women's Entrepreneurship – a Nordic Spectrum.

Table 4: Measures supporting women´s entrepreneurship in the Nordic countries

	Denmark	Norway	Sweden	Finland	Iceland
a) **Individually focused**					
networking- and mentoring initiatives	x				
access to financing					x
women role-models (ambassadors)	x		x		
entrepreneurship training and development	x		x	x	
improve the compilation of statistics on women's entrepreneurship and support research	x	x	x	x	
Reinforced prioritisation of women in the existing support system		x			
b) **Structurally focused**					
parental money with 100% coverage for self-employed		x			
increase fathers quota of the parental leave		x			
education of business advisors			x		
Support entrepreneurship and family life development				x	

The programmes vary in their underlying rationales for supporting women's entrepreneurship, from seeing it as a driver of economic growth (*neoliberal market paradigm*), as a way to improve the situation of poor self-employed women and workers in the informal sector (*feminist empowerment paradigm*), or as a tool for socially responsible growth (*interventionist poverty alleviation paradigm).*[46]

The Norwegian policy programme is most clearly influenced by a feminist empowerment paradigm, seeking to transform the existing support system through measures aimed at women. Consequently, Norway most clearly builds on an understanding and recognition of gendered inequalities, e.g. the gender segregated education system and labour market. Norway has launched a policy on parental money with 100% coverage for the self-employed, a budget line of NOK 122 million per year, while also encouraging men to take more parental leave. This seems quite unique in the context of the Nordic countries, as well as in a larger international context. Denmark, on the other hand, focuses more on economic growth among female business owners, while Sweden uses a mixed approach. Swedish policy considers men and women entrepreneurs to resemble each other to a large degree, but still recognises that the gendered labour market and education system segregation influences entrepreneurship and who becomes an entrepreneur. At the same time, it promotes measures to overcome perceived barriers to women's entrepreneurship. In Finland, most of the proposed actions focus on individual women. Women's entrepreneurship is seen as important for national and regional competitiveness, employment and welfare, but also for equality between men and women. Iceland simply lacks a more general national strategy for supporting women's entrepreneurship. However, there are some public policy initiatives to support women's entrepreneurship relating in particular to the establishment of two grant schemes in the 1990s. The Icelandic approach seems to focus on complementing the existing support system with special measures for women.[47]

Clearly also the geographical perspectives, and possible focus on rural and sparsely populated areas, vary in the Nordic countries. Sweden seems to have shifted focus from rural areas in the north[48] to a less geographically centred policy. Still, in the Swedish

[46] Cf. Mayoux, L. (2001), Jobs, gender and small enterprises: Getting the policy environment right, SEED WP 15, International Labour Organization, Geneva.

[47] Pettersson, K. & Hedin, S., forthcoming, Support for Women's Entrepreneurship – a Nordic Spectrum.

[48] Nilsson, P. (1997), Business counselling services directed towards female entrepreneurs - some legitimacy dilemmas, Entrepreneurship & Regional Development, 9, p. 239-258.

programme supporting women's entrepreneurship for 2010, there is a focus on rural areas and farm-related sectors of the economy, possibly in order to compensate for a certain previous bias. Norway has a clear focus on the more peripheral parts. Interestingly enough, it is concluded that rural conditions can be beneficial for entrepreneurs as there are less employment opportunities there. At the same time, financial capital sources may be limited. Iceland, through its system of support initiatives, has put in place some efforts directed at rural areas and with a view to counteracting depopulation. Also in Finland there is a focus on women's entrepreneurship in rural areas. Denmark has no specific focus on spatial variations.

Climate Change and Energy Policy

Introduction

Thanks to the growing collaboration between climate science and policy-makers, governments globally have commenced making plans to secure developments that would contribute to reducing greenhouse gas emissions (GHGs); stabilizing climate change (mitigation) and take into account the unavoidable consequences; (adaptation). In order to reduce vulnerability to climate change, adaptation efforts are considered to be imperative. Thus, the National Adaptation Strategies (NAS) have initiated the start of a new phase in terms of developing new plans and practices for tackling climate change that are currently being discussed more extensively in European and the Nordic regions as general plans of actions (EEA 2008). While sharing similar goals, the strategic approaches to climate change predominantly differ depending on the geographic specificities, the assessments of the current and future vulnerability besides the institutional capacity to adapt to the likely impacts of climate change.

At the international scale, the most authoritative body shaping the climate change discourse is the United Nations´ Intergovernmental Panel on Climate Change (IPCC). The 4th Assessment Report of the IPCC provided a scientific basis for the climate negotiations at the Conference of the Parties (COP) under the United Nations' Framework Convention on Climate Change (UNFCCC). It is stated in Article 4 of the UNFCCC that every effort must be made to adopt national or regional adaptation strategies (NAS).

The development of such strategies corresponds to the countries' individual needs and conditions[49]. They set the scene for the next steps towards the development and implementation of adaptation actions by covering the key issues especially in vulnerable sectors such as agriculture, forestry, water and energy management, health, biodiversity, finance and insurance. Projected climate change impacts indicate that, depending on the geographical characteristics, opportunities might emerge in some countries, while possibilities might be constrained in others. Without adaptation to climate change, projected impacts would likely alter the adaptive capacity of the countries both in institutional and societal terms. The main motivation behind the preparation of the NASs have been the growing amount of data, as acknowledged by the IPCC´s assessments, as well as the impacts of extreme weather events that have been experienced around the world. Furthermore, underlying socio-economic conditions in countries play an important role in providing opportunities to implementearly measures against climate change. In longer-term, these perspectives help to form resilient cities and regions.

In terms of climate change mitigation the Nordic countries share common policy challenges by being committed to further reducing greenhouse gas emissions by increasing their share of energy production from renewable sources and by improving energy efficiency in all sectors. Today, energy and climate change policy in the Nordic countries is strongly influenced by the European energy and climate change package approved by the European Parliament in December 2008. The aims of this policy package are threefold; to reduce greenhouse gas emissions by at least 20% compared to 1990, to increase the share of renewables by at least 20% compared to 1990 and to oversee a 20% reduction in primary energy use compared with projected levels by improving energy efficiency. A central instrument for reaching these targets is the Emission Trading System (ETS).[50] The decision to support a mix of energy sources and their related support mechanisms has however continued to be individually assigned by each country, mainly determined by access to natural resources, industrial structure, political and cultural traditions and contexts, trading opportunities, public attitudes and – last but not least - joint international agreements.

Nordic countries differ in their institutional settings but share similar targets for their climate policies. A clear deduction from the Nordic climate change policies is that more research and knowledge

[49] In the Nordic countries, except Sweden, government authorities have a central position in steering climate adaptation. In Sweden, responsibility is shared between the local and regional authorities.

[50] The EU Climate and Energy Package. European Commission's webpage. Available online: http://ec.europa.eu/environment/climat/climate_action.htm (Accessed 2010-06-3)

are needed to set realistic targets for climate change adaptation since so little is known about the methods of dealing with the ongoing changes in the environment and also coping with the uncertainty of the future. Accordingly, research and development activities are emphasised as the key strategies in coping with climate challenges according to the Nordic Prime Ministers' Declaration on Climate Change[51]. A recent joint research programme entitled "Top Level Research Initiative (TLI)" established by the Nordic Council brought several Nordic organisations and national institutions together in 2008 and the significance of the research programme was highlighted in the Nordic declaration. The programme has its primary focus on climate change, energy and the environment where the development of environmentally-friendly technologies will be at the centre of its activities during the period of 2009-2013. Research investments will be made in topics such as energy efficiency, wind power together with other renewable energy sources as well as carbon capture and storage technology (CCS).

Close cooperation with the private sector will be the key in the utilisation of the research results which may provide international solutions through cross-border cooperation. The facilitation of dialogue and the exchange of knowledge and experience between the various levels of public administration are thus essential in creating synergies and developing effective climate adaptation strategies.

The Nordic response to climate change

Climate change poses a common challenge across the Nordic countries as the regional level will face similar types of problems due the prevalence of similar climatic and geographical conditions. It is projected that with the continuing warming trend there will be a significant increase in winter temperatures with a considerable reduction in the snow cover and also an increase in precipitation which may cause flooding and the intensification of hydrological cycles. In order to avoid the negative impacts of climate change, it is of the utmost importance to integrate these challenges into urban planning.

Nordic cooperation on climate change adaptation and mitigation is well known and is considered to improve the region's ability to cope with these challenges. Similarly, all the Nordic countries started incorporating concerns for climate change into energy policy by instituting a range of relevant policy initiatives such as CO_2 taxes in the context of the environmental tax reforms from early 1990s. In addition, carbon pricing has been considered as a challenging but crucial part of climate policy.

A recent example of Nordic cooperation was launched through the creation of a joint strategy in the field of energy where Sweden and Norway will strengthen their cooperation in relation to climate change with their 'green certificate' initiative. On 7 September 2009, the energy ministers of Sweden and Norway announced their agreement on the establishment of a common market for green electricity certificates. The main goal here is to put in place a tradable green certificate market from 2012 onwards. Cooperation between the two countries is expected to improve their security of energy supply.

The next section sets out the climate change measures being taken in the Nordic countries. In Iceland, however, the focus seems to be mainly on mitigation while climate change is viewed as an opportunity. The strategies point out different institutional approaches to climate change adaptation in the Nordic countries. While Finland considers sectoral adaptation strategies, Denmark and Sweden emphasise the role of local or regional actors in carrying out these climate change adaptation efforts. On the other hand, Norway and Iceland emphasise adaptation by considering climate change as a positive opportunity.[52]

Denmark: Strategies for coordination and information

Denmark, in line with the UN Kyoto Protocol, aimed to reduce its emission of GHGs by up to 21% by 2012 compared to the level in 1990 and its NAS was published through Danish Energy Agency (*Energistyrelsen*) in March 2008. The strategy was initiated by the Ministry of Environment with the Ministry of Climate and Energy subsequently taking up the work.

The main objectives are recognised as the establishment of a platform for the authorities at various levels, industrial sectors and individuals to implement information initiatives and consider adaptation in their planning schemes. The key steps are:

[51] The Nordic Prime Ministers' Declaration on Climate Change was agreed on 16 June 2009, in Egilsstaðir, Iceland.

[52] Planning for Climate Change: The Adaptation Challenge - A Nordic Perspective. Conference Report. Lisa Van Well *et al.* Stockholm 2007. 45pp

- Assigning inter-ministerial working groups to function as a coordination forum on adaptation in assessing the realisation of the strategy by improving the exchange of information on climate change adaptation.
- Establishment of an information tool located under the Ministry of Climate and Energy to inform a wider audience and develop planning tools for governmental authorities to encourage collaboration among national and international research centres[53].

Denmark places emphasis on autonomous adaptation where authorities, stakeholders and communities are seen as the main actors and their initiatives on adaptation will provide the best approach. A "Coordination Unit for Research in Climate Change Adaptation" was founded for better research coordination; to supply the knowledge required on climate change adaptation and to secure a more consistent climate change research output for the NAS.

An Information Centre for Climate Adaptation has been established in the Ministry of Climate and Energy and a Coordination Unit for research in climate adaptation established at the National Environmental Research Institute of the University of Århus. These units are currently working with the challenges posed by the vulnerable sectors. A shared risk system to cover damage from extreme weather impacts such as storm surges and windfalls is now also under debate in Denmark.

On September 26 2009, The Danish Board of Technology and the Danish Cultural Institute organised the first-ever global citizen deliberation "World Wide Views (WW Views)-Global Citizen Consultation on Climate Policy"; an innovative methodology coordinated by The Danish Board of Technology in a network of 44 countries to utilise public participation in climate change discussions. It aims to provide a democratic channel for the involvement of citizens who were asked to share their opinions on climate change. The results were incorporated into the COP 15 sessions[54].

Finland: Exemplary initiative in comprehensive climate change adaptation

The Finnish NAS was prepared by the Ministry of Agriculture and Forestry and published in March 2005. Being the first country in the EU to adopt a NAS, Finland has, to some extent, inspired both the Nordic countries and the other European countries to do more in this regard. The process was supported by the research project FINADAPT (assessing the adaptive capacity of the Finnish environment and Finnish society to a changing climate); a research group coordinated by the Finnish Environment Institute. The key points regarding energy and climate policy in the NAS were presented to the parliament in 2005. Hence, adaptation in Finland has started at the national level with the objectives of reducing climate change impacts and exploiting potentials.

The NAS emphasises the synergy between mitigation and adaptation. Land management and planning are outlined as the most important issues in the adaptation process. The Ministry of Environment, in cooperation with the Ministry of Agriculture prepared a comprehensive plan for the implementation of NAS in various sectors. In November 2008, the government started to revise the strategy to include "planning" as a response to the climate change challenges where the role of planners together with state authorities was to identify the main risks in flood-sensitive areas. Hence, a working group was established under the Ministry of Agriculture and currently the flood protection system is under revision. The Ministry of Transport and Communications and The Finnish Road and Rail Administration worked together on the main adaptation challenges and subsequently provided a set of recommendations. The maritime and the aviation administrations are also at work on the strategy.

In October 2009, the government adopted the Foresight Report on Long-term Climate and Energy Policy: Towards a Low-carbon Finland.[55] The report was drafted, in cooperation with sectoral ministries, within the prime Minister's Office, after a series of consultations with experts, specialists and stakeholders. It defines the goal for this work as enabling Finland to be the leader in climate protection work and setting an ambitious target for reducing Finland's GHGs emissions by at least 80% from the 1990 level by 2050 as part of a wider international effort.

According to a recent report, `Evaluation of the implementation of Finland´s NAS to climate change 2009´ conducted by the Ministry of Agriculture and Forestry (4a/2009) preparatory actions in respect of implementation should be considered. The report also states that the experiences of sector based perspectives such as forestry and agriculture should be vital for improving the adaptive capacity of Finland to climate change while taking advantage of the unique opportunities peculiar to Northern regions.

[53] www.klimatilpasning.dk/da-dk/sider/forside.aspx

[54] www.wwviews.org

[55] http://www.vnk.fi/hankkeet/tulevaisuusselonteko/en.jsp

Iceland: Leader on Climate friendly technology

Iceland's climate change strategy (2007) puts forward the government's long-term vision which includes a primary focus on mitigation plans and a 50-75% reduction in GHG emissions by 2050, compared to 1990 figures. Iceland is a recognised leader in clean technologies, especially regarding geothermal and hydrogen power generation. There are almost no GHG emissions from stationary energy production thanks to the extensive use of renewable energy sources. Currently, the government aims to further prioritise the development and use of renewable energy, while improving energy efficiency and other climate-friendly technologies. The next step involves tackling emissions in relation to the transport industry. The government has set financial incentives for low emission cars.

The Icelandic Strategy has statistical indicators which will work as a registry to monitor the effectiveness of the strategy and the progress made on tackling emissions as well as increasing carbon sequestration. The main objectives are:

- To focus on international commitments under the UN Framework Convention on climate change (UNFCCC) as well as the Kyoto Protocol by improving its infrastructure.
- Further reduction of fossil fuel usage and more emphasis on renewable energy sources & environment-friendly fuels.
- Increasing carbon sequestration through re-vegetation, afforestation, wetland recovery and land use change.
- More investment in climate change research activities. Promoting the transfer of Icelandic expertise in renewables and environmentally-friendly technology.

Despite Iceland's vulnerability to climate change, the melting of glaciers undoubtedly presents an opportunity for the economy as extra water flow will boost the country's hydroelectric industry according to the Icelandic Meteorological Office and the Icelandic Scientific Committee on climate change. This expert committee published its first report, "Global climate change and its Impact on Iceland" in August 2008, stating that climate change is already demonstrable in Iceland as the country has experienced an unprecedented period of warmth during the 20th century (Ministry for the Environment, 2009). The committee will continue its feasibility studies based on the strategy, calculating the cost-effectiveness of different options to reduce emissions, improve carbon sequestration and use flexibility mechanisms[56].

[56] National Energy Authority of Iceland (2009)

Norway: A distinctive energy and industry profile

Norway has adopted a comprehensive approach to addressing the need for energy efficiency. The country has focused on renewable energy sources and also joined the EU's trading scheme in 2008. Energy relevant research and development activities have been prioritised within Norwegian climate policy.

On 15 May 2008, the government presented its report, "Climate Change Adaptation in Norway - A government initiative on climate change adaptation", highlighting common challenges in adaptation. It emphasised that climate change adaptation does not demand changes in administrative setups; each sector and administrative level should be responsible for adaptation within their own areas of responsibilities.

A draft consultation paper "the Norwegian climate change Adaptation Programme" prepared by the Ministry of Environment in 2008, addressed 3 key points to reduce society's vulnerability to climate change:

- Mapping vulnerability to climate change and incorporating climate change considerations into social planning
- Integrating climate change adaptation considerations into research programmes
- Stimulating the exchange of information and capacity building.

Norway's adaptation strategy (Official Norwegian Report (NOU) on climate change adaptation) is still in the process of being drafted by the Directorate for Civil Protection and Emergency Planning (DSB) and is due to be published in the autumn of 2010. The strategy aims at assisting information exchange between different sectors and the state and local administrations, guiding local and regional planners in the utilisation of "*Klimatilpasning Norge* (Climate Adaptation Norway)[57] ".

The Norwegian government has a long-term vision for reducing GHG emissions and considers mitigation an effective instrument for addressing adaptation. Based on the report, "The most crucial adaptation approach for Norway is to reduce the GHG emissions." Accordingly, Norway's climate policy is to reduce emission figures for 1990 by 30% by 2020 and to become carbon neutral by 2050. The Government also seeks the possibility of using other policy instruments such as the promotion of Carbon Capture and Storage (CCS) and hydrogen technologies by setting all new gas plants on CCS technologies, supporting renewable energy development and setting climate friendly building regulations besides improving public transport and railways.

[57] www.klimatilpasning.no

Sweden: A decentralised approach to climate change

The Swedish agenda on climate change was formulated between 1996 and 2003 within the context of the Swedish Regional Climate Modelling Programme (SWECLIM). SWECLIM undertook several regional climate change projections to provide a platform to help planners and decision-makers within industry, public administration and political bodies to assess climate change. The process led to a broad process of communication among Swedish stakeholders. Moreover, the Swedish Meteorological and Hydrological Institute (SMHI) under the Ministry of Environment provided scientific information[58] to the process while the Swedish Environmental Protection Agency (EPA) was responsible for the dissemination of information and for raising awareness of climate change and adaptation[59].

Sweden's approach is not to develop a NAS, but to facilitate adaptation by integrating long-term planning into sectoral responsibilities. The County Administrative Boards were assigned the task of steering climate change adaptation work.

In June 2005, an advisory committee, "*Klimat och sårbarhetsutredningen* - The Swedish Commission on Climate and Vulnerability" was established within the Ministry of Environment to develop assessments on the regional and local impacts of climate change on the society. Its first report "Sweden facing climate change – threats and opportunities[60]" was published in October 2007, presenting the challenges and regional scenarios which emphasised that strategic planning and policy development are crucial in reducing vulnerability. According to the report, Sweden is likely to face challenges in Baltic Sea ecosystems such as the increasing risk of floods, landslides and erosion. However, opportunities may arise from forest growth, improved agricultural production, reduced need for heating and hydropower potential as in Iceland. The report addresses the potential role of each sector in reducing vulnerability.

In 2009, the Swedish Government submitted its proposals in the form of two government bills, the climate policy bill targeting reductions in GHG emissions and the energy policy bill, presenting proposals for the energy sector. These two bills were constituted into "An Integrated climate and energy policy", setting an ambitious target of a 40% reduction in emissions by 2020 (i.e. activities not included in the EU emissions trading scheme). The mitigation-oriented measures proposed for 2020 are as follows:

- 50% renewable energy
- 20% more efficient energy usage
- 10% renewable energy in the transport sector.

The fund allocated to Swedish climate research strategy has been increased and the Swedish Energy Agency[61] assigned to support these research activities.

Energy policy in the Nordic Context

An understanding of the three pillars of energy policy, namely energy efficiency, security of supply and the environmental impact of energy usage has clearly been a part of the discourse in the Nordic countries. Over the last three decades, the Nordic countries have sought to respond to economic and environmental challenges through the implementation of various national policy frameworks for the energy sector. Starting in the 1970s, in the wake of the 'oil crises' security of supply was top of the political agenda, which materialised into power generation from coal in Denmark, while in Sweden and Finland nuclear power was chosen. In Norway, the abundance of hydropower resulted in the extensive use of that resource. During the 1970s, Iceland witnessed an expansion of not only hydropower but also of geothermal energy, a source that has been exploited for district heating since the 1930s. As a result of environmental concerns during the 1980s and 1990s, renewable energy sources have progressively substituted coal - mainly wind power in Denmark and district heating based on biomass in Sweden and Denmark. However, in Finland and Norway, increases in renewable energy usage have been modest during this period, except in heat generation by Finnish industries,

[58] www.smhi.se

[59] www.naturvardsverket.se

[60] *Regeringen* (2007), Sweden facing climate change – threats and opportunities , SOU 2007:60

[61] www.energimyndigheten.se/en/Research/

where biomass became an important energy source. [62]

The success of generating electrical power and heat from renewable sources in the Nordic countries has also been the results of various support schemes for these technologies, for example feed-in-tariffs (Denmark), green certificates (Sweden), taxation of fossil fuels in heat production (Finland, Sweden and Denmark), CO_2 emission trading and R&D support. In Iceland, state subsidies or other support schemes for electricity generation have however not been applied given the abundance of, and easy access to hydro- and geothermal power. [63]

Progressive deregulation towards the market-based trade of electric power has also been taking place in the Nordic countries, a successful process that has received significant political support from the national authorities. The Nordic power sector acts today as a single integrated market and transmission operation managed by independently regulated operators that initially cooperated in Nordel. Since its foundation in 1963 Nordel had a common ground for cooperation between the Transmission System Operators (TSO) in the Nordic countries, and aimed at developing a harmonised Nordic electricity market. This cooperation has undoubtedly enhanced the competitiveness advantages of energy-intensive Nordic industry. In 2009 the European Network of Transmission System Operators for Electricity (ENTSO-E) took over the operational tasks of Nordel together with five other TSO associations in Europe. The ENTSO-E pursues coordinated, reliable and secure operations in relation to the electricity transmission network, and promotes the development of the interconnected European grid and investment to create a sustainable power system. It also offers a platform for the electricity market by proposing and implementing standardised market integration and facilitates the integration of new energy sources, particularly in respect of renewable energy.[64]

Sweden and Finland are the Nordic countries which have nuclear power as a major source for electricity generation. In the last two decades, development in the energy sector in Sweden aimed at the progressive phasing out of nuclear power capacity up to June 2010 when the ban on building new nuclear reactors was removed by the Swedish Government. This decision has opened the possibility to continue operating a maximum of ten reactors in Sweden in the future by replacing phasing out reactors, but only in sites where they currently are located. Nevertheless, new reactors shall be built without government subsidies at the same time as an increased responsibility for damages in the event of an accident shall rest on nuclear plant owners.

In Finland, a new nuclear construction programme has been up and running since 2002, when the building of Olkiluoto 3 was approved in order to complement the already four existing reactors in the country. The construction of Olkiluoto 3 has, however, been delayed by three years, and is currently projected to be completed in 2012. In 2010, the Finnish government also approved the construction of Olkiluoto 4 while an additional reactor is projected for construction in northern Finland.

Energy supply and demand

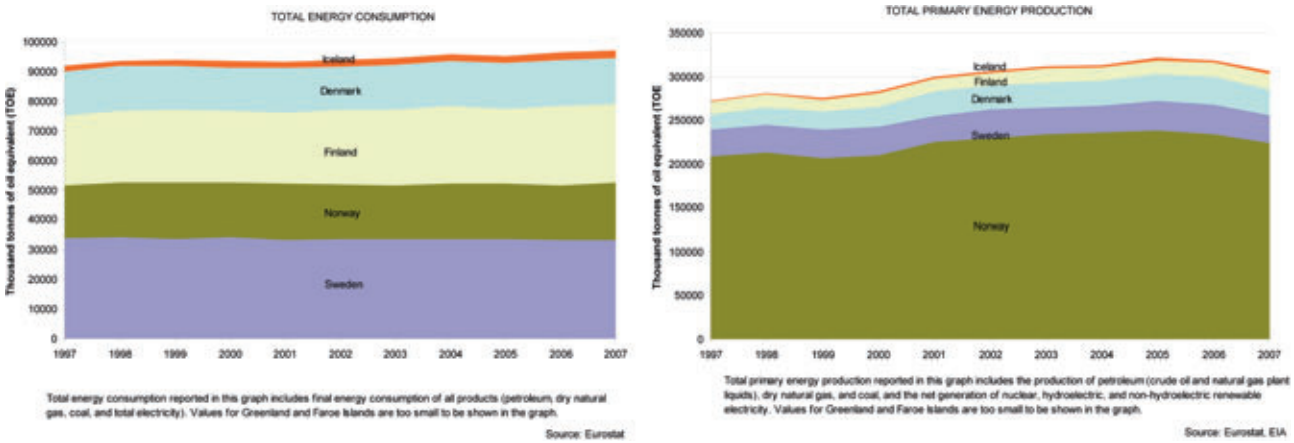
Despite the fact that the Nordic countries are generating only moderate emissions of greenhouse gases compared to other developed countries of a similar size (due to a lower dependency on fossil fuels), their consumption of energy per capita is among the highest in the world. Relatively high heating demand due to the cold climate, combined with a sparse population distribution, greater needs for individual transportation and generally high levels of income are considered the main factors behind this high level of energy demand. In spite of continuous economic growth in the region, however, the demand for energy has remained stable over the last ten years.

[62] Tennbakk Berit, Rydén Bo and Sköldberg Håkan (2006) The energy policies in the Nordic countries. In: Ten Perspectives in Nordic Energy. Final report for the first phase of the Nordic Energy Perspectives Project. Available online: http://www.nordicenergyperspectives.org/Ten%20perspectives%20introd.pdf

[63] Tennbakk Berit, Rydén Bo and Sköldberg Håkan (2006) The energy policies in the Nordic countries. In: Ten Perspectives in Nordic Energy. Final report for the first phase of the Nordic Energy Perspectives Project. Available online:: http://www.nordicenergyperspectives.org/Ten%20perspectives%20introd.pdf

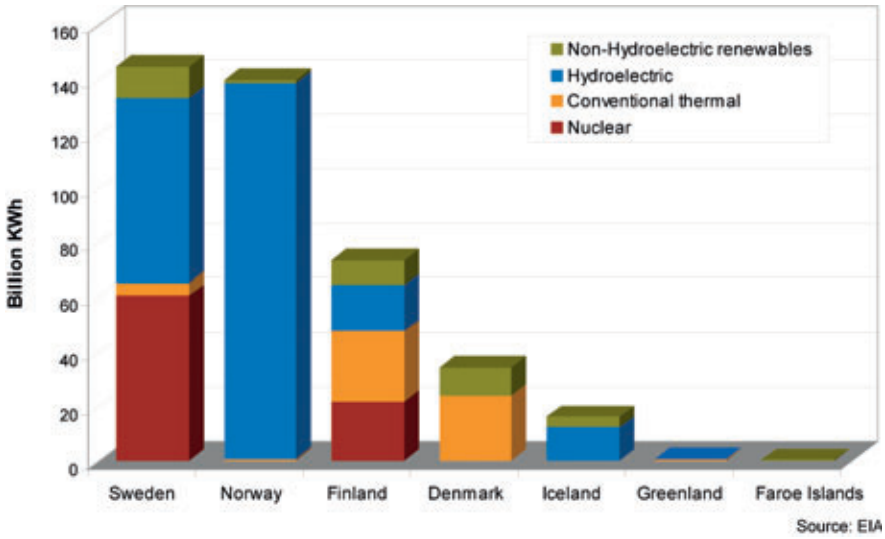
[64] ENTSO-E webpage. Available online: https://www.entsoe.eu

Figure 36: Total energy consumption and total primary energy production in the Nordic countries 1997-2007



The most important energy sources for the Nordic countries, in order of importance, are oil, renewable energy sources (mainly hydro-, geothermal and wind energy), nuclear power, coal and gas. The Nordic region has been privileged to have good access to renewable energy sources as well as a high innovation capacity and efficient national energy policies. This has resulted not only in the region's capacity to supply its own energy needs but has also led to the export of primary energy. However, both at national and regional level, there are important differences in terms of the availability of energy sources among these countries. Norway, and to lesser degree Denmark, are oil and gas exporters. Norway produces over 600% more energy than its domestic demand, while Denmark has a production of approximately 50% above its own demand. Finland and Sweden are however dependent on foreign imports of fossil fuels. Norway, Iceland and Sweden each have a significant ability to generate hydropower. Geothermal energy is also a substantial contributor to Iceland's energy supply, while nuclear power is an important energy source in Sweden and Finland.

Figure 37: Generation of electrical energy by source 2008



At the regional level the differences in terms of the geographical distribution of energy supply and demand become even more pronounced. For the generation of hydropower, the Norwegian regions, especially in the south, are dominant thanks to the availability of large amounts of hydrological sources. Sweden has, on the contrary, a more heterogeneous supply mix, as hydropower dominates in the north, while the major urban regions in the south are supplied by nuclear power plants. In Denmark, thermoelectric generation is the main source of electric energy while wind energy corresponds to a share of approximately 20% of the total energy supply. In Finland, nuclear energy is dominant in the south along with thermoelectric generation from natural gas and biomass. Hydropower generation is however rather modest in Finland and is mainly found in its northern regions.

Figure 38: Electricity generation by source in NUTS 3 regions

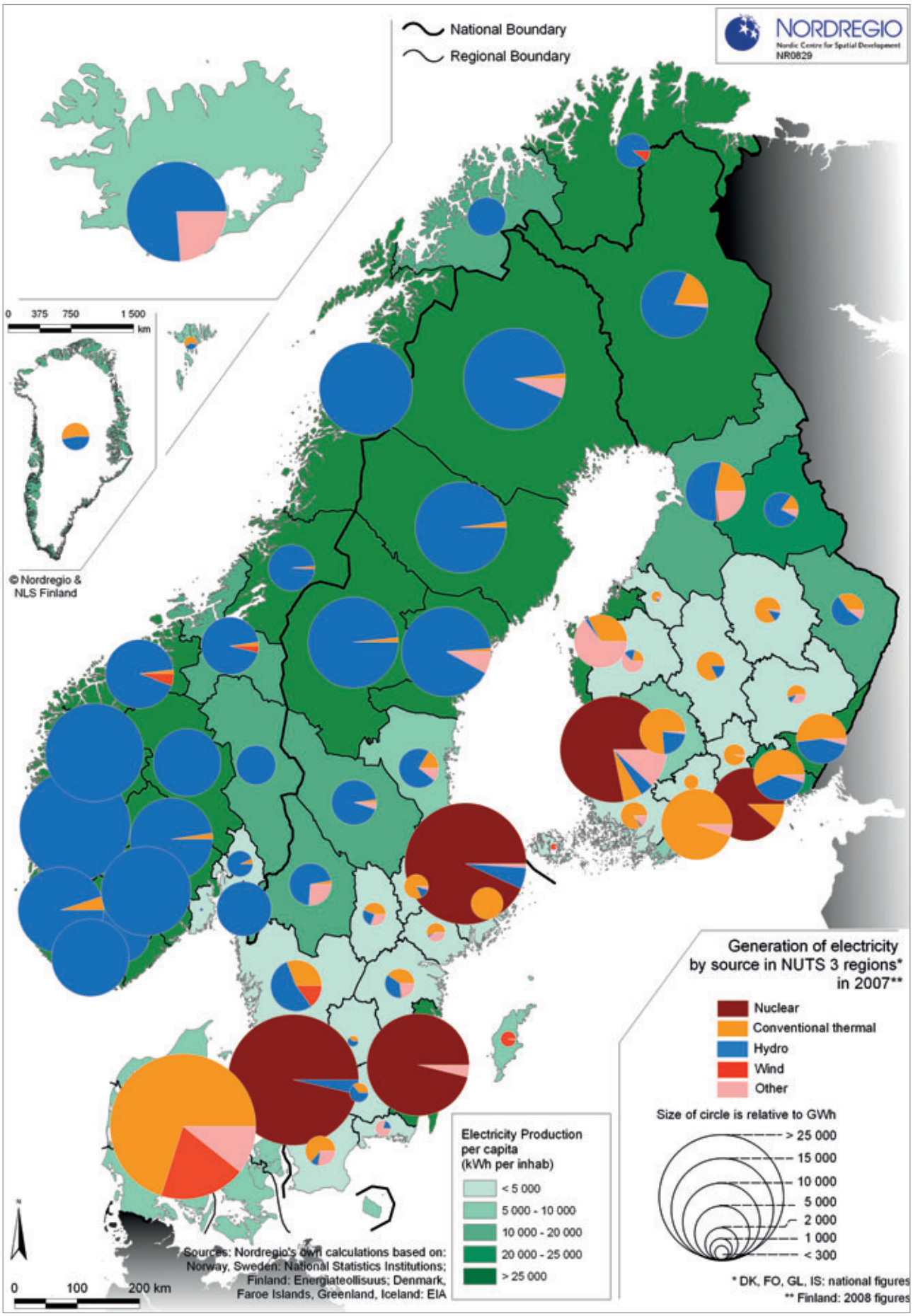
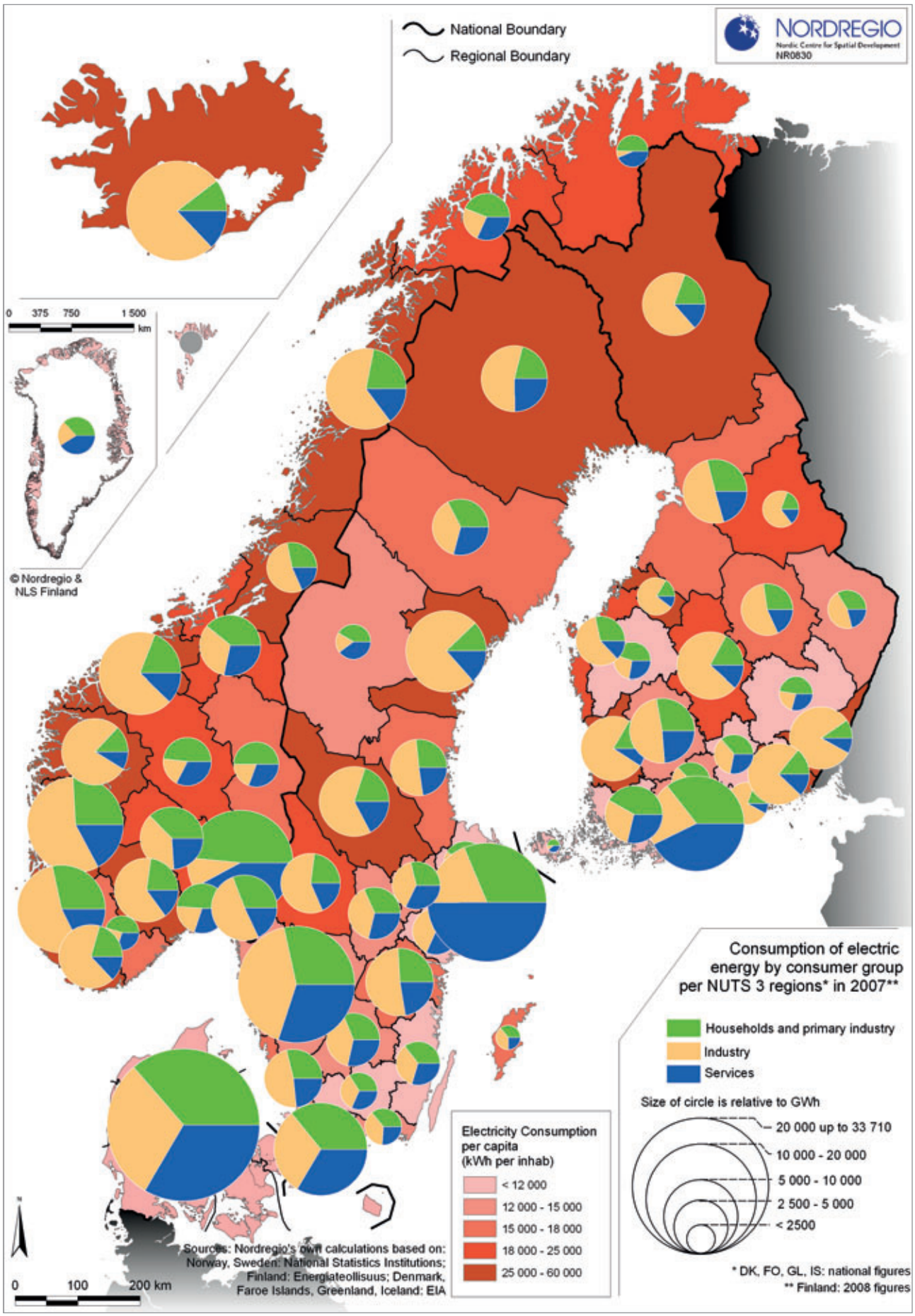
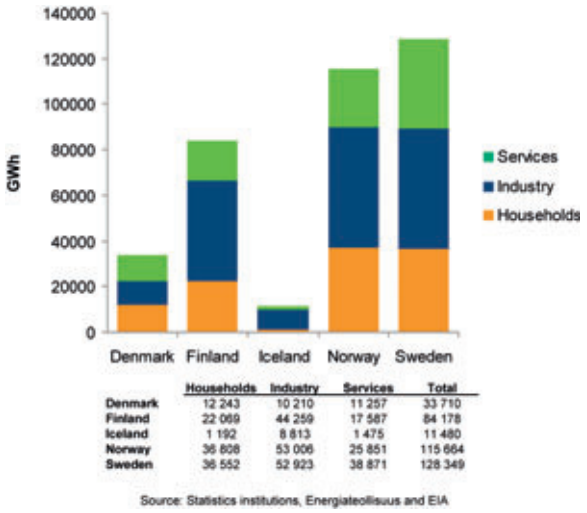


Figure 39: Electricity consumption by consumer group and per capita in NUTS 3 regions



The metropolitan regions in the Nordic countries with the highest level of consumption of electric power are Stockholm (20.5 TWh), Västra Götaland (19.8 TWh), Oslo og Akershus (16.1 TWh), Hordaland (13.4 TWh), Uusimaa (13.2 TWh) and Skåne (12.6 TWh). Services are the most intensive sectors in these regions in particular Stockholm (49.8 %), Oslo og Akershus (42.1%) and Uusimaa (42.7%). Households also stand for a considerable proportion of the total consumption of electricity in the metropolitan regions, primarily Oslo og Akershus (48.5%), Skåne (35.9%), Uusimaa (35.6%), Stockholm (31.5%) and Västra Götaland (28.5%). The industrial sector is the major consumer in Iceland (76.8%), followed by Finland (52.6%), Norway (45.8%) and Sweden (41.2%). The mining industry is among the most energy intensive, particularly in Iceland, but also in Norway and Sweden. The pulp and paper industry also consumes a considerable share of electricity particularly in Sweden and Finland. As a consequence of the availability of natural resources for these industrial activities the regions with high energy consumption patterns by industrial sector are often located in the northern regions of Sweden, across Finland or along the west coast of Norway.

Figure 40: Consumption of electric energy by sector in Gwh.



	Households	Industry	Services	Total
Denmark	12 243	10 210	11 257	33 710
Finland	22 069	44 259	17 587	84 178
Iceland	1 192	8 813	1 475	11 480
Norway	36 808	53 006	25 851	115 664
Sweden	36 552	52 923	38 871	128 349

Source: Statistics institutions, Energiateollisuus and EIA

Renewable energy

The Nordic countries have made considerable progress in the use of renewable sources of energy during the last two decades. On average, the Nordic countries generate electricity from renewable sources at four times the level of the OECD countries. However, there are considerable variations between countries and regions mainly as a result of the availability of natural resources as shown in Figure 41 and Figure 42. Iceland and Norway almost exclusively base their electricity generation on renewable energy sources. While, in Norway hydropower stands for almost 100% of all the electricity generation from renewable, in Iceland hydropower stands for approximately 76% of the total supply of electricity while the rest comes from geothermal power. Denmark produces approximately 30% of its electricity from renewables of which approximately 64% is generated from wind power with the rest coming from solid biomass and municipal waste. In Finland and Sweden biomass and hydropower are the main sources of renewable energy, which combined stand for approximately 35.5% in Finland and 55% in Sweden of the total generation of electrical power. Hydropower in Sweden stands for approximately 84.6% of the total electric power generated from renewables while in Finland this figure is approximately 58%. Considering that its first hydropower plant became operational in 1993 Greenland is a relative newcomer in terms of renewable energy production. Due to the expansion of capacity, mainly through the construction of three additional hydropower plants during the last years, Greenland has reached a situation where 11% of the total energy consumption is based on renewable energy and almost 50% of the electricity generation is based on hydropower.

Figure 41: Share of renewables and non-renewables for electricity generation

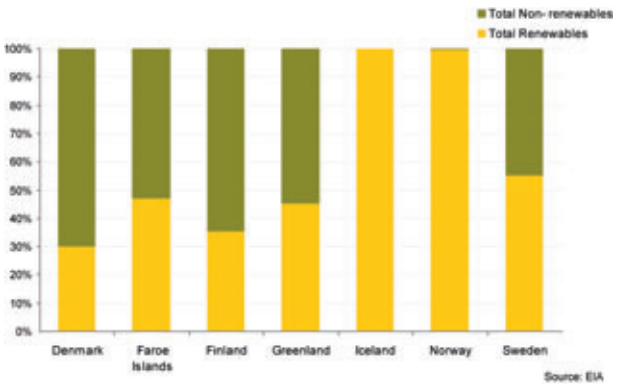
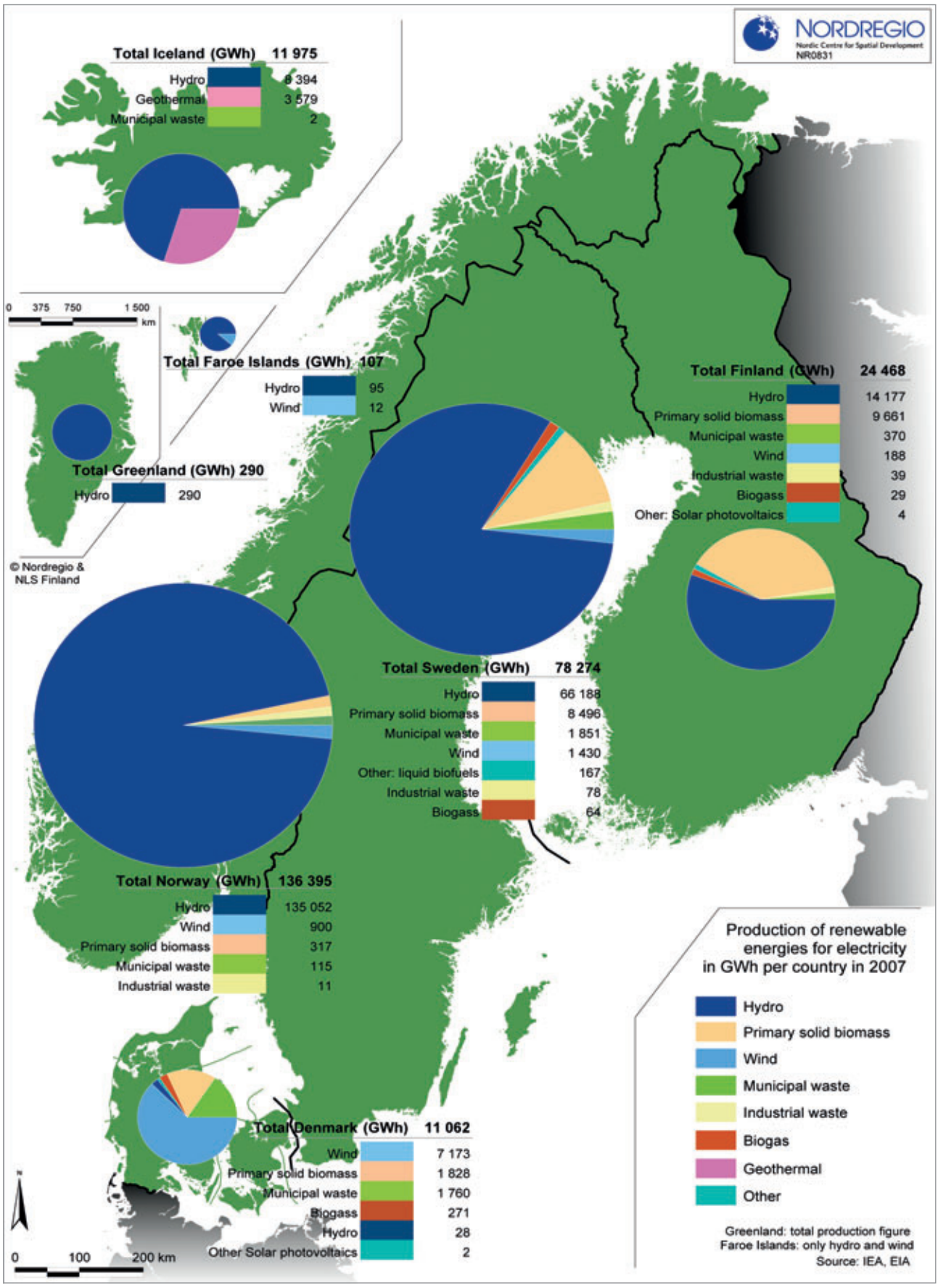


Figure 42: Electricity generation by renewable energy source in the Nordic Countries



In Finland and Sweden, the supply of renewable energy has been fairly stable over the last ten years. Common to all the Nordic countries however is the increase in the use of biomass for heat generation. Denmark has in particular made a significant improvement in this respect by increasing the ratio between the electricity generated from renewable energy sources and the gross national electricity consumption - from 5.8% in 1995 to 28.2% in 2005 mainly thanks to the fast development and deployment of wind energy technologies.

Because certain renewable energy sources have been exploited to the extent that further expansion possibilities are limited, as is the case now in Denmark in respect of wind energy, and in Norway and Sweden with hydropower, future developments in terms of renewable sources of energy are expected to take new directions towards the utilisation of unexploited resources. This is the case in Norway and Sweden, where wind power appears to be the currently preferred option and the one with the highest potential for expansion.

Nordic energy innovation

The Nordic countries have a strong position worldwide in energy innovation thanks to strong national support for this sector. These countries stand for more than 30% of the word's market in the production of wind energy technology. Innovation in bio-energy is also strong with a share of almost 30% of all biomass-based generation of heat and power in the industrialised world and around 10% of the total scientific knowledge production. Energy innovation is a very important economic activity in the Nordic countries assuming approximately 6% of total revenues and employment in the region while exports of energy technology and equipment accounts for approximately 5 to 9% of total industrial exports. [65]

Energy innovation systems in the Nordic countries vary with respect to the energy resources available, technology regimes, institutional structures and the political commitments on energy and climate change. Sweden, Finland and Denmark each exhibit strong positions on bio-energy innovation; particularly in terms of Combined Heat and Power (CHP) technologies. The main reason that Sweden and Finland are strong in bio-energy is their well developed forestry and paper pulp industries, as well as the easy availability of biomass. Denmark is an innovation leader in the wind energy sector which has become an important exporter of technology. Norway on the other hand has gained a reputation in the solar energy industry through the development and production of components. Norway is also stronger in small-hydro technology relative to its Nordic neighbours. [66]

[65] Mads Borup, Per Dannemand Andersen, Steffan Jacobsson and Atle Midttun (2008). Nordic Energy Innovation Systems –Patterns of need integration and cooperation. Nordic Energy Research. Available Online: http://www.nordicenergy.net/download.cfm?file=1240-A9078E8653368C9C291AE2F8B74012E7

[66] Mads Borup, Per Dannemand Andersen, Steffan Jacobsson and Atle Midttun (2008). Nordic Energy Innovation Systems –Patterns of need integration and cooperation. Nordic Energy Research. Available Online: http://www.nordicenergy.net/download.cfm?file=1240-A9078E8653368C9C291AE2F8B74012E7

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Data sources used in maps & figures

NSIs - National statistical institutes:

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Hagstova Føroya (Statistics Faroe Islands) - http://www.hagstova.fo/

Hagstofa Íslands (Statistics Iceland) - http://www.hagstofa.is/

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Technical Annex

The statistical material used in this report was obtained mainly from the National Statistics Institutions (NSIs) of the Nordic Countries and Autonomous Territories. Material from other National Statistical Institutes throughout Europe as well as from Eurostat (the Statistical Office of the European Communities), the OECD and national labour market authorities has also been widely used. In most cases the raw data comes from the stated sources while all of the calculations of indicators, changed rates etc., have been made by Nordregio.

The analysis of regional development trends in terms of population and labour markets is mainly based on the latest available 'state-of-the-region' data and change data on timeframes of long-term changes from the 1990s to the short timeframe changes of last year or the last five-years. In the Nordic countries the change data of five-year averages is provided in order to produce a stable and accurate picture. In the smallest municipalities and commuter catchment areas in particular however annual change rates may vary from year to year and therefore changes occurring within a single year may give an inaccurate impression of the regional state. Additional resources have been used in order to render the Nordic and European-level data more comparable between countries. The change data has, in relative terms, been used in calculating the so-called 'crude' rates. In most cases the data has been related i.e. to the size of the total population.

Regional Divisions

In the Nordic countries four different administrative divisions have been used, namely municipalities, commuter catchment areas, regions (NUTS3) and the national level. All the administrative divisions used in this report are 'as of' 1.1.2010 with the exception of the Icelandic municipality of Arnarneshreppur which was merged into Hörgárbyggð after the Municipality election in June 11, 2010. Changes and mergers between municipalities in recent years across the Nordic countries are therefore already incorporated into all maps and analyses used in this report. In the case of now merged municipalities we have simply added them together for the previous years. In the case of municipalities that have been divided we have used the ratio of them from the first year after the split (separate ratio for each 'item'), and adjusted this backwards for the previous years. In this way we have been able to add change rates over time i.e. for Denmark where the new regional structure was introduced on January 1st 2007.

In the West Norden countries the regional representation varies from the other Nordic countries. The commuting catchment areas are not defined to these regions and regional values have instead been used. In Iceland two regional divisions have been used; one with eight regions (*landafræði*) and another one with two regions (NUTS3), depending on data availability. In the Faroe Islands the six Faroese regions (*sýsla*) are the base unit for the analysis whenever the regional data is available. The municipal division is not used because of data availability issues and the small geographical and demographic size of many municipalities. In Greenland a recent municipal reform in 1.1.2009 reduced the previous 18 municipalities to a total of 4 units. One of these – the municipality of Sermersooq – includes on the one hand the former capital municipality of Nuuk and the two other municipalities on the west coast, and on the other hand the two former East Greenland municipalities, Ittoqqortoormiit and Tasiilaq. The regional differences between the eastern and the western part of Greenland are among the most marked differences in the country – and in the Nordic countries, so it has been advantageous to operate with the eastern and the western part as individual regions in the analysis.

The European regional division is based on NUTS (The Nomenclature of Territorial Units for Statistics) nomenclature. Based primarily on the administrative divisions currently in force in the Member States, NUTS serves as a reference for the collection of regional statistics and for regional analysis. The data and indicators are mainly shown on NUTS3 level (counties in the Nordic context) though the NUTS 2 -level has also been used in some indicators.

Population

Data for population is as of January 1st for Denmark, Norway and Greenland and as of 31st December for Finland, Sweden, Iceland and the Faroe Islands for the respective year. The total population change is a result of two components: the natural change which is defined as the difference between the numbers of live births and deaths, and net migration, which represents the difference between inward and outward migration flows.

The migration data includes all migration over municipal boundaries (intra-municipal migration is not included in the statistics). The international migration data is based on national civil registration systems in each country. To be registered as an immigrant a person is intended to live in the country for a specific time. This specific time is, for Denmark, three months, for Norway six months and for the other Nordic countries 12 months. Due to the existence of these statistical differences between the Nordic countries, migration flows between two countries can appear to be unbalanced. This difference in the statistics is solved in two different ways. In the figure and analysis of intra-Nordic migration flows, the total number of migrants shows the average number of migrants between two named countries. For other international moves the national criteria is used. Another important issue related to international migration is that refugee migration is not separated from i.e. labour immigrants. Therefore some very rural and peripheral areas, like Ånge in Swedish Västernorrland or Kontiolahti in Finnish Pohjois-Karjala appear to be very attractive to immigrants, especially if immigration is measured in terms of immigrants per 1000 inhabitants, while in reality these regions are in fact very unattractive to immigrants. The logic behind this is that when refugees receive their permit to stay, they become registered as immigrants in that municipality/region in which the refugee centre is located. The first thing the refugees do when they have their permit to stay is to move to the larger cities where they can improve their chances of getting a job. It is at that point that they are registered as domestic migrants.

Economic development

Two GDP concepts were used in this report: the first, GDP at market prices, shows the final result of the production activity of all producer units within a certain territory, no matter whether the units are owned by nationals or foreigners (Eurostat, 2010); while the second, GDP in PPS (PPS = Purchasing Power Standards) has been employed to make international comparisons of the national/regional production values and to discern their variations. The Purchasing Power Standard (PPS) is an artificial reference currency unit that eliminates price level differences between countries. One PPS buys the same volume of goods and services in all countries. This unit allows meaningful volume comparisons of economic indicators across countries. Aggregates expressed in PPS are derived by dividing aggregates in current prices and national currency by the respective Purchasing Power Parity (PPP) (Eurostat, 2010). Trade figures were taken from two different sources: in the case of the total value of trade and bilateral trade flows between the Nordic Countries, data was obtained from the IMF (International Monetary Fund) database; in the case of total imports and exports by country by sectors, data was obtained from UN-COMTRADE, the United Nations Commodity Trade Statistics Database which uses the so-called SITC classification, accepted by the UN in the analysis of international merchandise trade. For more information and a detailed structure of the SITC classification by sectors and sub-sectors, visit the following link: http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=28

Labour market

The two main sources used for the labour market section include the European Union Labour Force Survey (or EU LFS) and Eurostat's online datasets and press releases. The EU LFS is a quarterly sample survey across the 27 Member States of the EU and two countries (Norway and Iceland) from EFTA, the European Free Trade Association. It provides annual and quarterly results on the labour participation of persons aged 15+ and also registers persons outside the workforce and their characteristics. The sample covers population in private households and provides data on employment, unemployment and inactivity representing an important resource in respect of the current situation and trends pertaining to the various European labour markets. The national statistical institutions are responsible for conducting the sample, selecting and preparing the questionnaires, driving the interviews among households and forwarding the results to Eurostat in accordance with the common coding scheme. Each of the national statistics institutions publishes the results on a monthly basis. The samples are also published annually in order to make regional estimates even though margins of error might exist.

At the national level, figures were obtained from Eurostat and confirmed with NSIs data. The quarterly EU LFS also forms the basis for Eurostat's own calculation of monthly unemployment figures, complemented either by monthly estimates of the unemployment rates or from additional sources such as the unemployment register. The resulting harmonised figures are published in the form of news releases in the online database[67]. The latest annual figures correspond to 2009 according to Eurostat's newsletter 25/2010 recently published (July 2010). Data on employment and unemployment rates in general, national youth unemployment, long term-unemployment, immigrant unemployment as well as employment by occupation/

[67] Eurostat: http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/introduction

skills was obtained from this source.

Regional figures for Nordic NUTS2 regions regarding youth and long-term unemployment shares and rates were obtained from Eurostat's LFS databases and correspond to the latest annual averages registered in 2008. Regional figures for the qualifications of the labour force (persons with tertiary level education ISCED 5-6) and national figures for life-long learning were also obtained by Eurostat's Labour Force Survey adjusted series.

When it comes to unemployment at the municipal level, data was collected from the Nordic countries' system of register-based labour markets available from the national labour market authorities. This includes public databases from *Arbetsförmedlingen* (Sweden), Employment and Economy Ministry (Finland), regional offices newsletters of NAV or The Norwegian Welfare and Labour Administration (Norway), *Vinnumálastofnun* (Iceland) and the Register-based Labour Force Statistics (RAS) of Statistics Denmark. Data for the Faroe Islands and Greenland was obtained directly from the LFS's registers from the national statistics institutions. In the case of Greenland, unemployment corresponds to figures registered only in villages.

Other supporting sources include the ILO (International Labour Organisation) and UNECE (United Nations Economic Commission for Europe).

With effect from January 2006, some changes were made in the Norwegian Labour Force Survey (LFS) following International Labour Organisation (ILO) recommendations. The changes improve the level of comparability with other EU countries and consist of some minor revisions in definitions, adjustments to questions about working hours, and the classification of lay-offs and of lowering the lower age limit from 16 to 15 years (Statistics Norway). Statistics Denmark adjusted the unemployment statistics as from the publication of unemployment figures for January 2008. The underlying primary data has been edited and changes made to the concept of unemployment, which implies that the Danish concept of unemployment is now closer to the definition of unemployment applied by the ILO. All changes have been backdated to the year 2000 (Statistics Denmark). In October 2007 Statistics Sweden introduced some changes in relation to measuring unemployment in accordance with the international standards of the LFS. Previous to this change, people who have been studying full-time at any time during the three weeks before the reference week have been classified as 'not in the labour force' instead of as simply 'unemployed' (Statistics Sweden). Statistics Finland also revised the data content and data collection method of the LFS from the beginning of 2002 to comply with the EU Regulation concerning the LFS. The data content was extended and some definitions of concepts were revised. For example the definition of 'employed' is revised as regards persons who were absent from work during the survey week (Statistics Finland).

Commuter catchment areas

In Denmark, Finland and Sweden the given regional divisions of commuter catchment areas are based on existing national definitions of the regions. Each of these commuter catchment areas includes simultaneously several municipalities from different NUTS 3 regions (i.e. *län* in Sweden or *fylke* in Norway) including also municipalities not necessarily adjacent to the main regional centre but rather those with a commuting relation with it.

When defining commuter catchment areas a number of important steps have to be followed. In step 1 there is a definition of self-standing or independent municipalities containing a regional centre. Those municipalities should have a) a total share of out commuters under 20% of the total number of employees of the municipality and b) an individual share of commuters to other municipalities under 7.5%. In step 2 there is a definition of which local centre the non-independent municipalities belong to. This is defined according to the municipality to which the largest commuting flow is directed. And in step 3 there is a definition of multi-core areas where more than one regional centre is identified; that is municipalities with connections with several other municipalities. An example of this is the multi-core commuter catchment area of Stockholm-Solna, divided between three different sub-local market areas where Uppsala, Södertälje and Stockholm act as main centres in its respective sub-area with commuting from surrounding municipalities. In total there are 36 municipalities in this commuter catchment area (5 depending on Södertälje, 6 on Uppsala and 25 on Stockholm-Solna). In Norway the commuter catchment areas are defined on the basis of these three steps and commuting data from 2009.

Regional typologies

A Nordic regional typology is used in this report as a spatial analytical tool to distinguish regional development trends between different types of regions in a Nordic comparable manner. The typology includes (1) Nordic capital regions; (2) Other Nordic metropolises; (3) Nordic regional centres with a university; (4) Other Nordic regional centres and (5) Nordic medium-sized towns. The approach is built on the size of the LLM (Local Labour Markets) in population numbers reflecting the range of variation in four Nordic countries leading to a classification of

Metropoles, Regional centres and Medium-sized towns. Factors considered here include population density, the number and density of localities within each of them and distance to neighbouring LLM's.

The location of universities as sources of knowledge production and enhancement of human resources and the primary characteristic function of the region (in terms of the range of services provided) leads to the categories, Nordic regional centres with university and Other Nordic regional centres. To show further results in a more detailed way, some sub-categories were created, including exclusively core areas in the case of capital regions and metropoles as often core areas have different patterns when extracted from their regional surroundings.

Annex of figures

Figure 43: Dominant branch of employment in Nordic Local Labour Market Areas

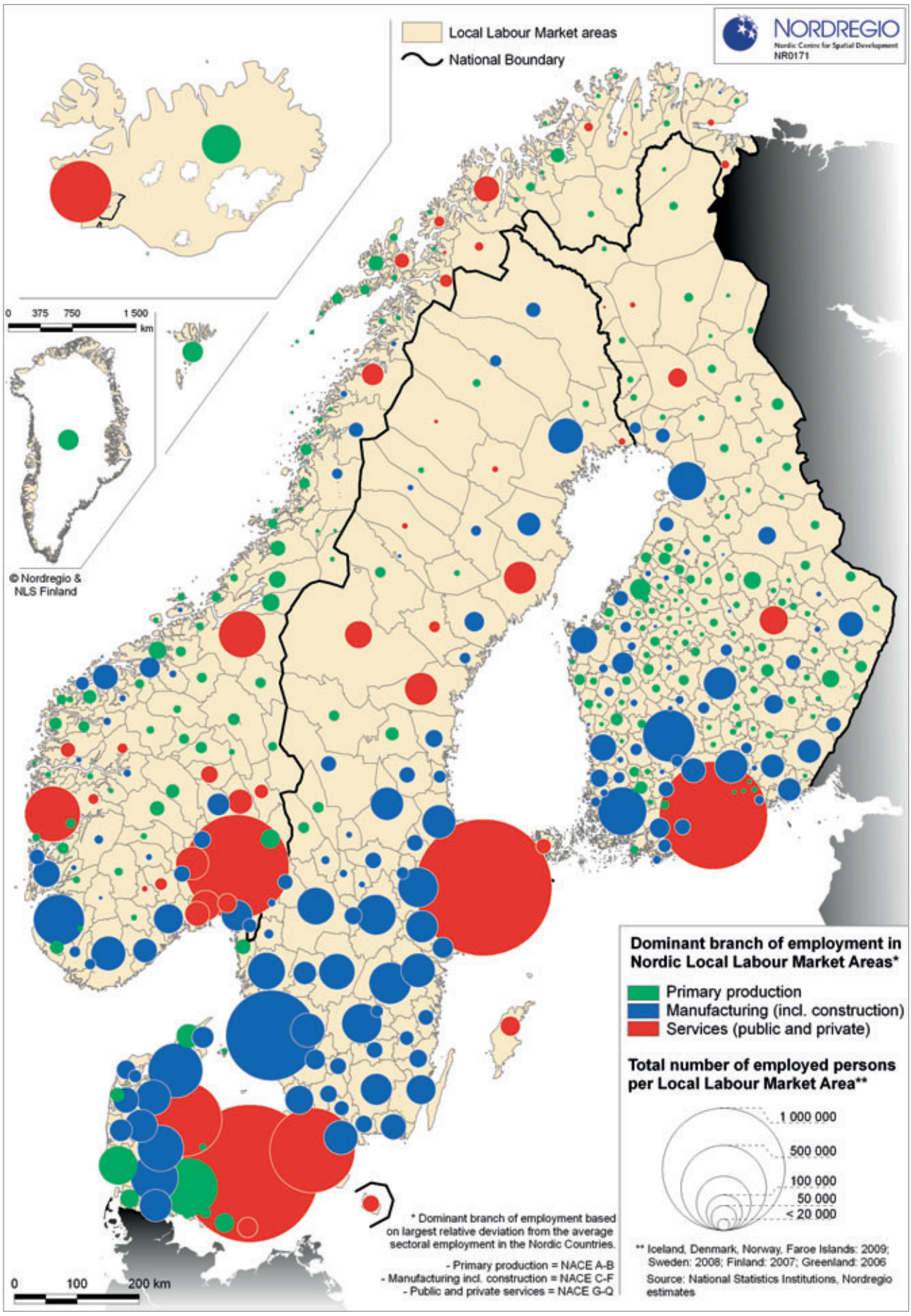

Figure 44: Total age dependency 2010

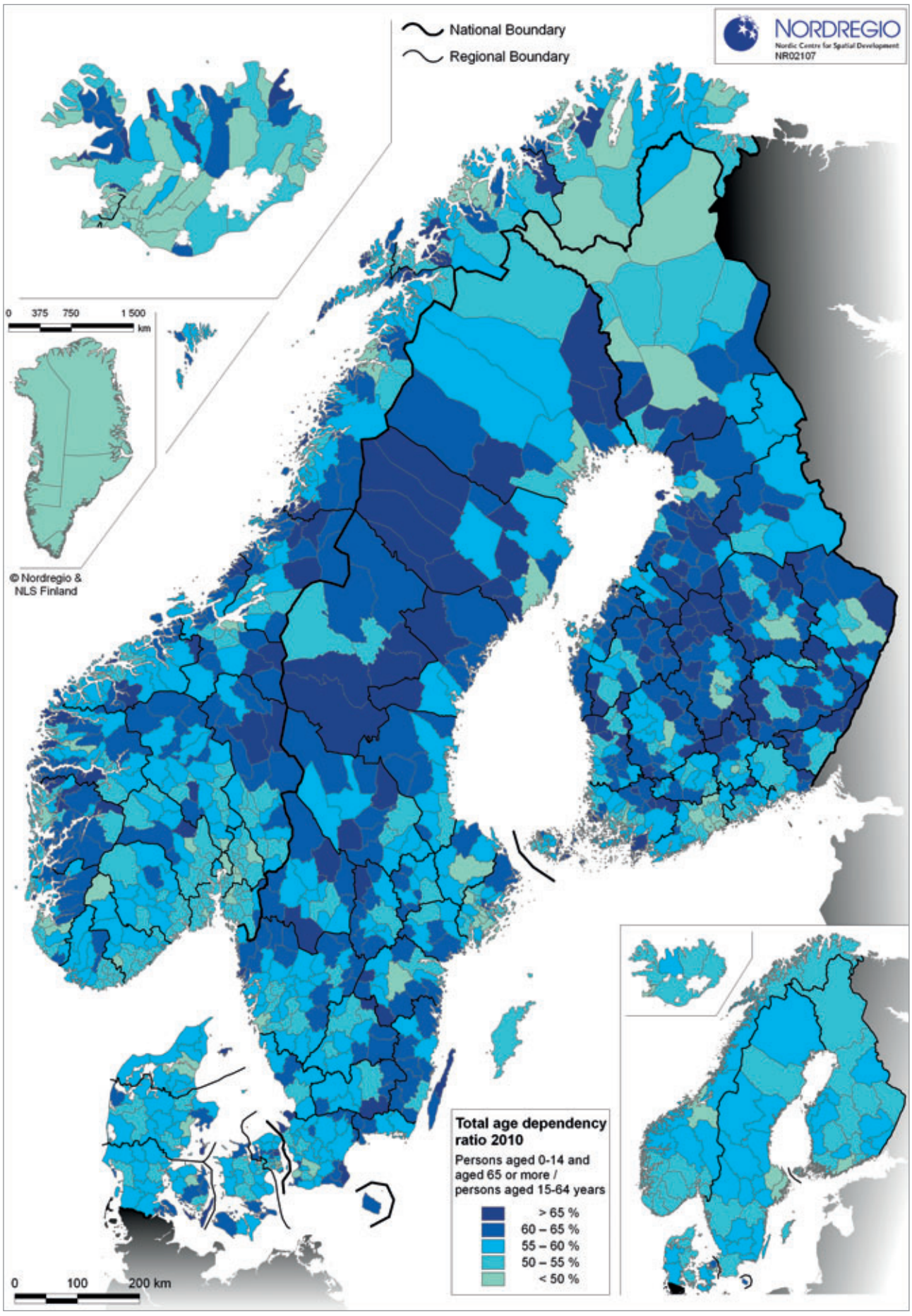

Figure 45: Young age dependency 2010

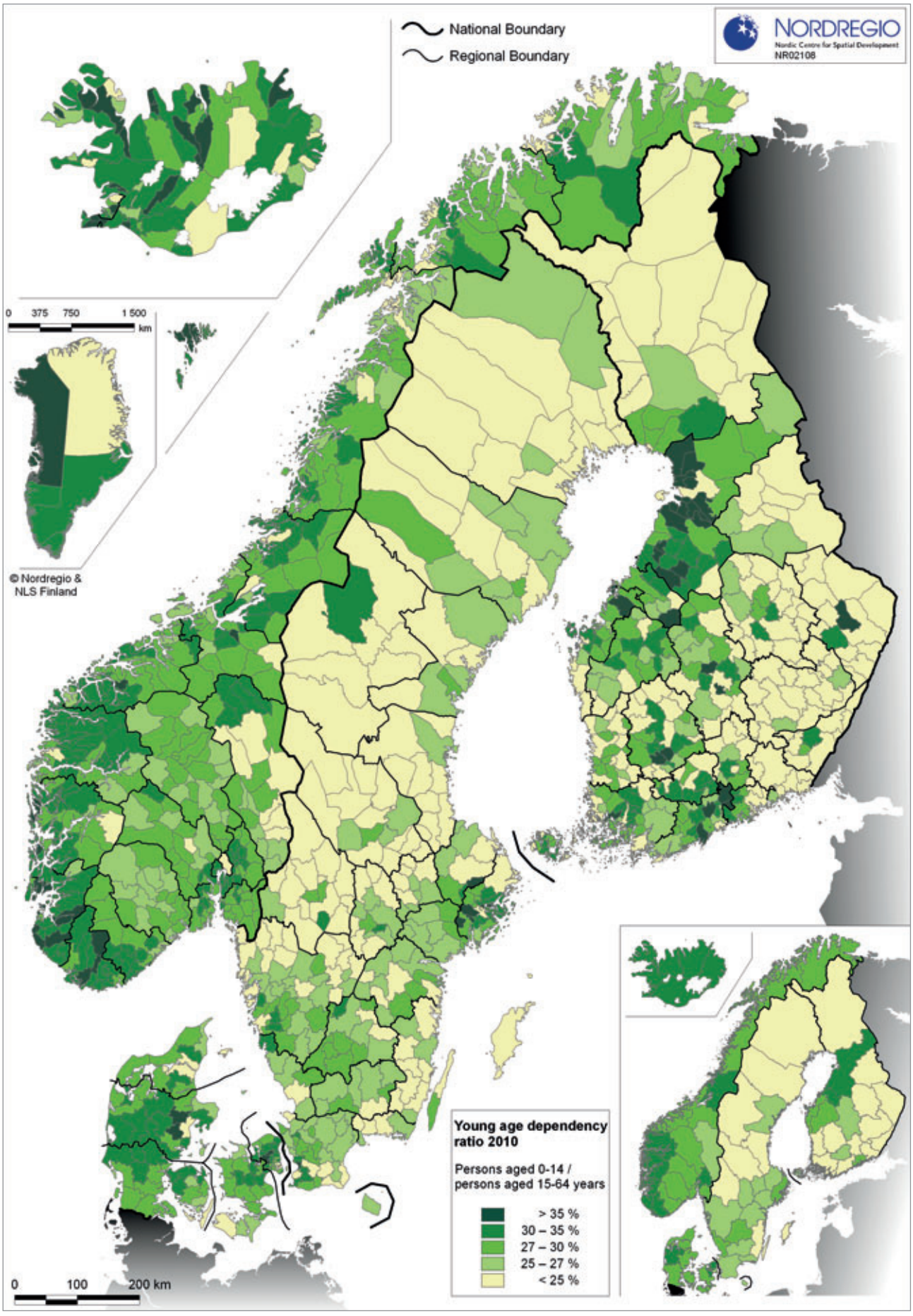

Figure 46: Old age dependency rate 2010

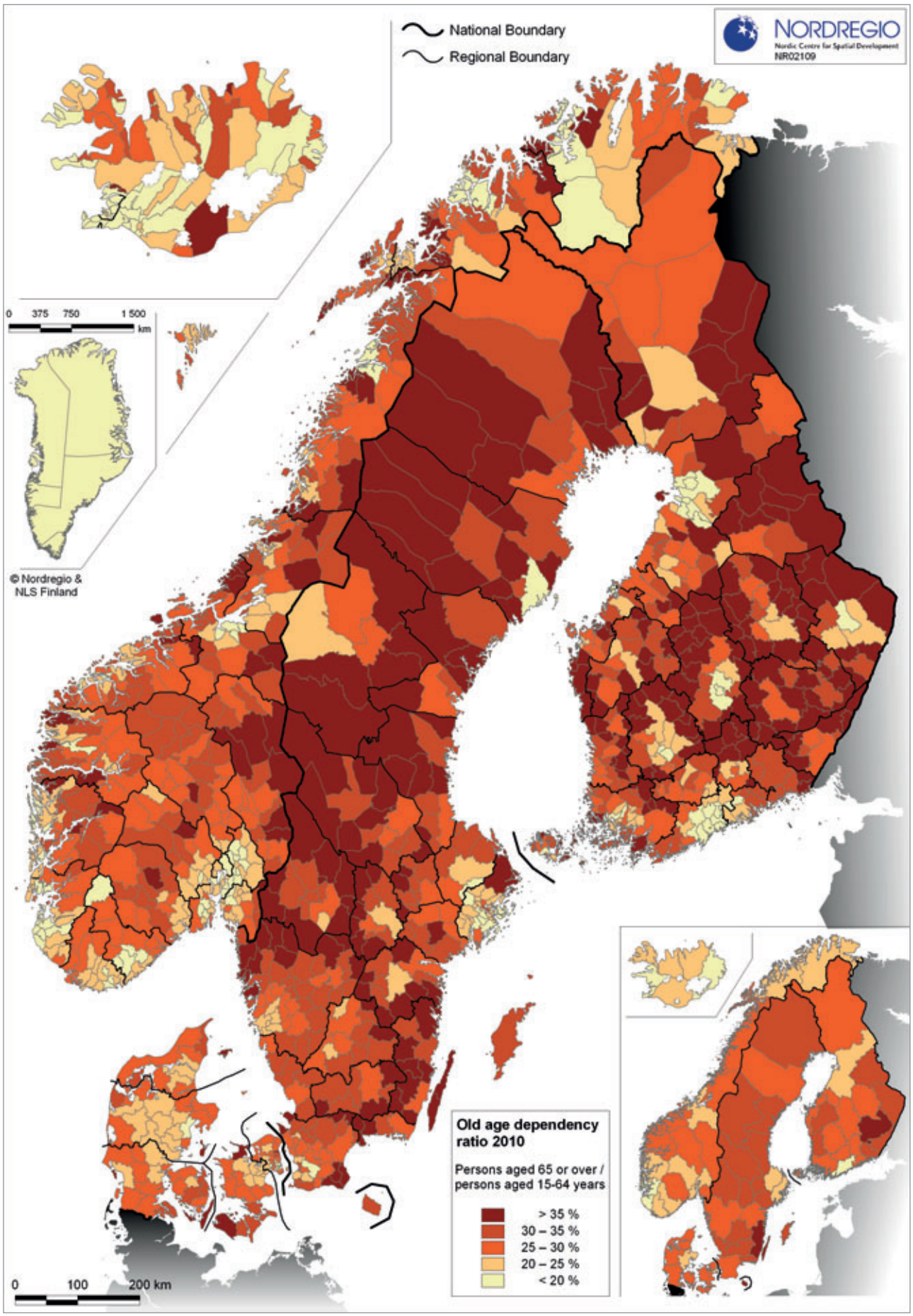

Figure 47: Domestic net migration 2005-2009

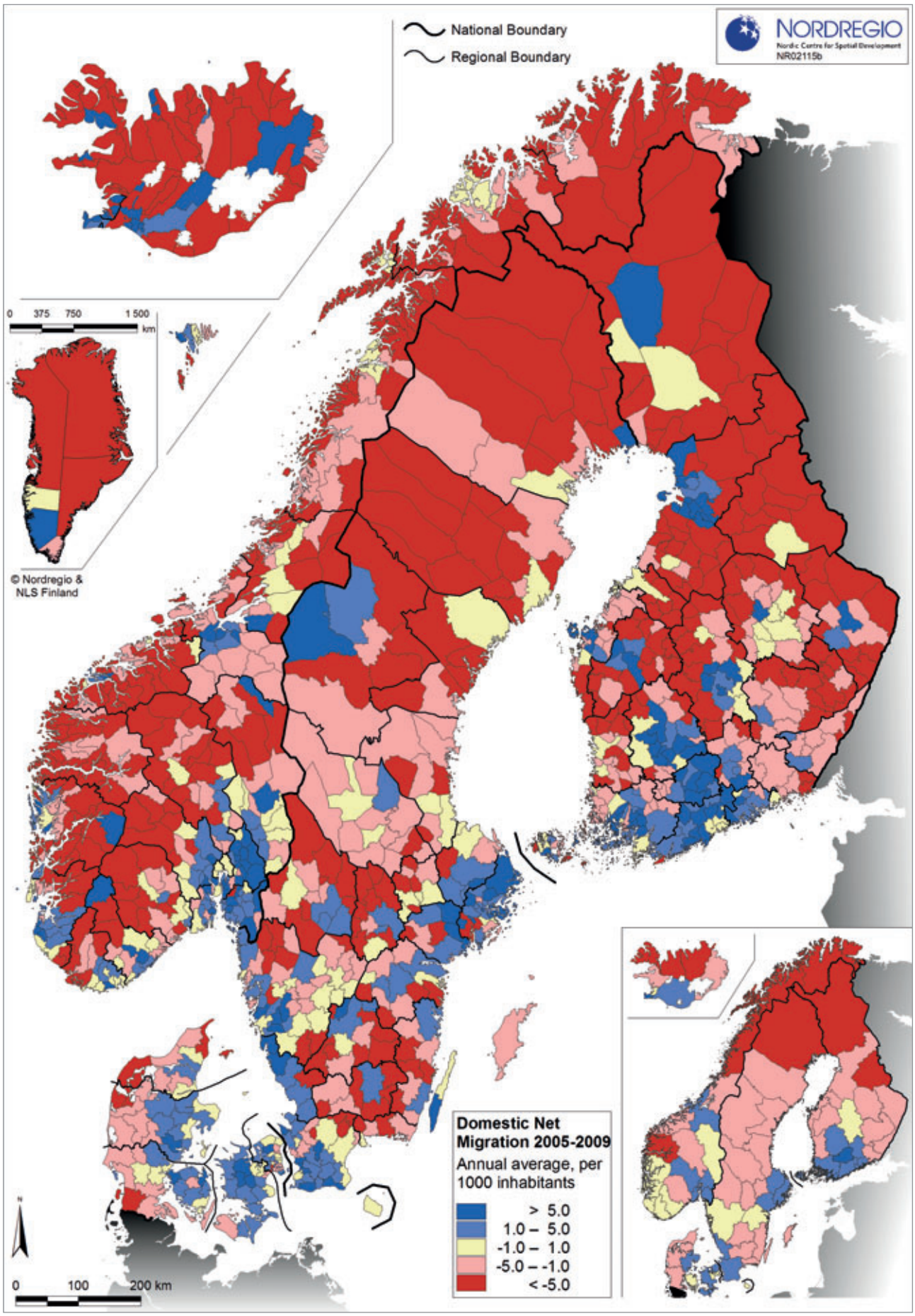

Figure 48: Natural population change 2005-2009

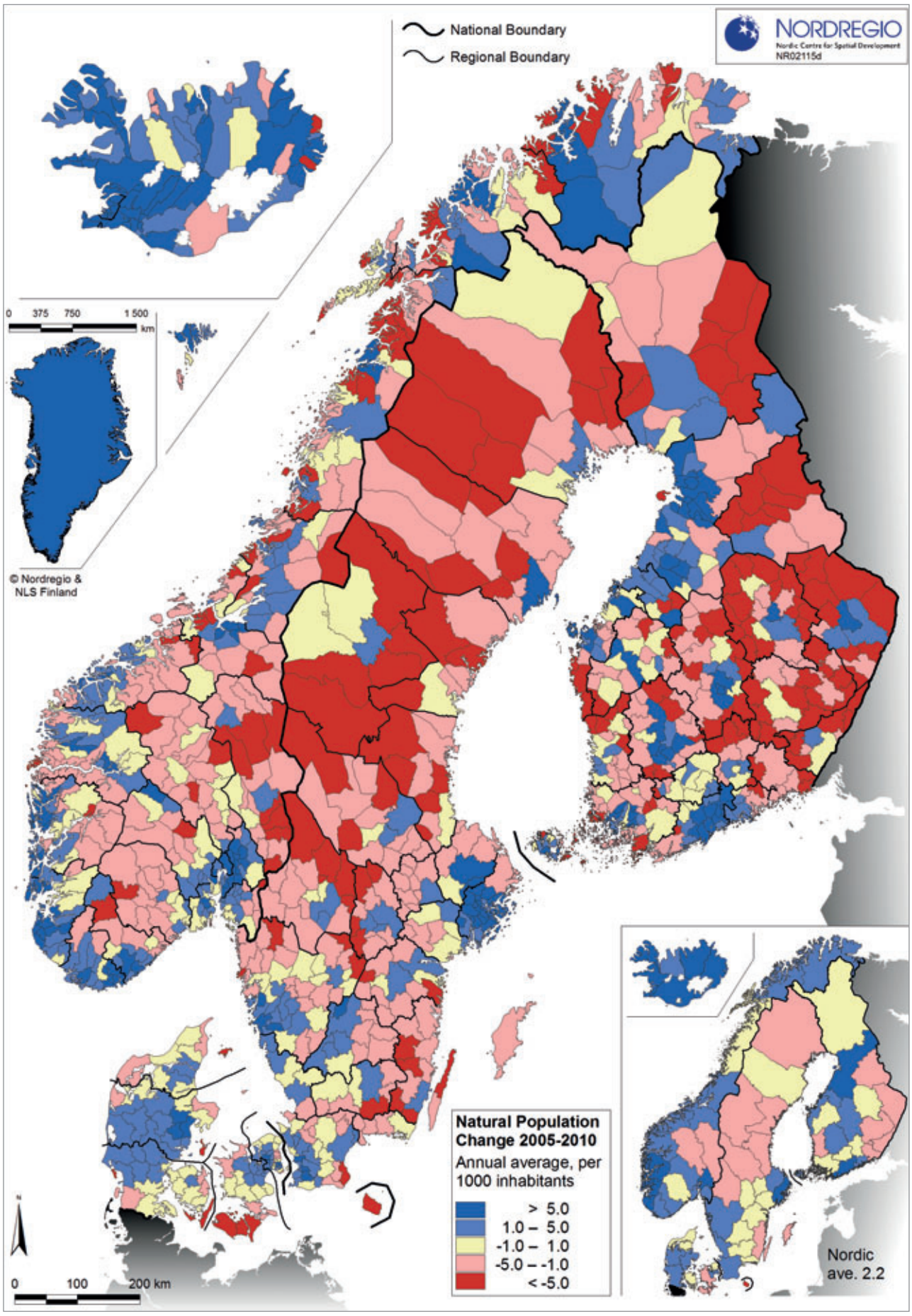

Figure 49: Gross domestic product per capita and productivity in 2007

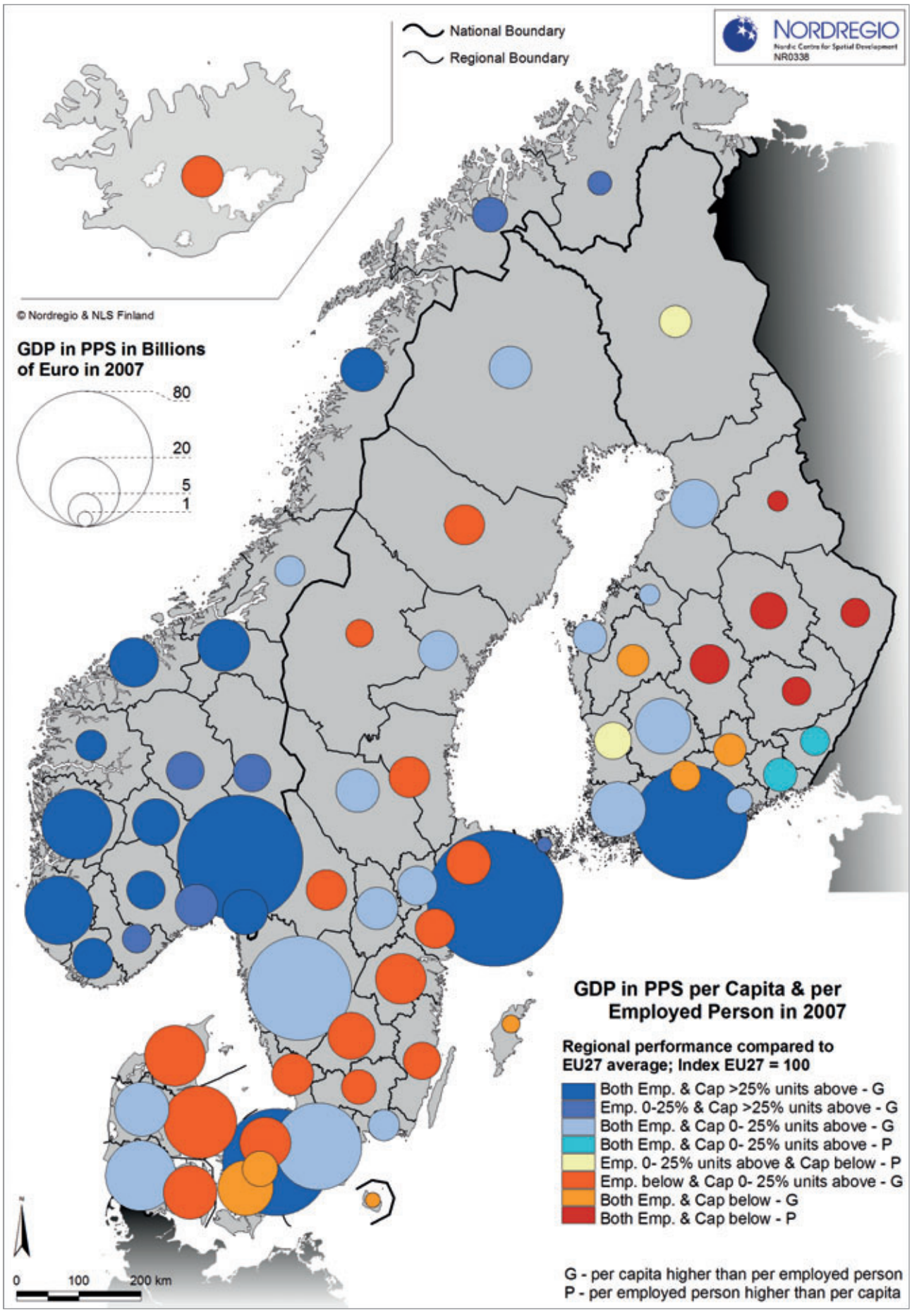

Figure 50: Regions and municipalities in the Nordic Countries in 2010