

Economic growth concentrated in thriving cities

Nordic economies are performing well in the European context, with the strongest growth observed in the largest urban areas. There are a number of regions that are also performing well however it is important to note that the top-performing economies in the more peripheral regions are often thriving due to a large single industry. Private sector R&D investment has seen similar concentration in large Nordic cities, in particular the capitals Stockholm, Oslo and Helsinki. Employment in knowledge-intensive sectors in Nordic Regions has been more evenly distributed with the exception of the northern parts of Finland, Sweden, and Norway, which lag far behind their southern counterparts.

Tourism emerged as a potential new driver of Nordic economies thanks to extensive growth in travel to Sweden and especially to Iceland by a wide range of international tourists in the period 2008-2014. The potential to expand this phenomenon to the whole Nordic Region remains, for the most part, unrealised but increased collaboration on tourism branding between countries would be a good first step. There is also scope for more broadly focused regional development policy to ensure resources and opportunities are distributed evenly between regional areas and their metropolitan counterparts. Eco-innovation is currently “scattered” across the Nordic countries but represents great potential to provide new opportunities both to big city regions and to sparsely populated regions.

Theme 3
ECONOMY

Chapter 8

ECONOMIC DEVELOPMENT:

Economically strong but crisis still shows

Author: **Gunnar Lindberg**

Maps and data: **Linus Rispling, Gustaf Norlén, Johanna Roto and Anna von Zweybergk**

The Nordic Regions have generally maintained their previously strong positions in relation to the EU average when it comes to economic development. Urban and capital city regions show high levels of GRP per capita, as is the pattern throughout Europe. Stockholm, Oslo, Copenhagen and the western Norwegian regions are among the wealthiest in Europe. It is also the case that capital regions and larger cities remain strong economic centres in the Nordic Region. These regions show GRP per capita levels which correspond, or even exceed, most other metropolitan regions in Europe. While southern European city regions have suffered reductions in relative GRP (Gross Regional Product) per capita, Nordic city regions continue to place at the top of the scale. The picture is not however as clear cut as it once was. Helsinki has for instance lost its position among the highest performers in the last 3-years. And in Denmark and Sweden some regions now have a significantly lower GRP per capita compared to previous years; notably Kalmar, Värmland, Hovedstaden, Syddanmark and Östfold; the same is also true for Åland. At the same time other regions are improving and have risen up the rankings e.g. Hordaland in Norway.

In addition to the urban regions referenced above, there are now also a number of peripheral regions displaying high levels of GRP per capita (figure 8.1). The Swedish and Norwegian northern regions are all performing well in relation to the European average. Indeed, some of these regions can even be viewed as 'top performers'. Greenland and the Faroe Islands are also above the European average (for Greenland though, Danish subsidies supply roughly 60% of government revenue and 40% of Greenland's GRP). However promis-

Defining GRP

The indicator Gross Domestic Product measures the overall economic output of all economic activities in a country (measured in terms of purchasing power parity, or standards). The corresponding indicator at the regional level is the Gross Regional Product (GRP). Although these measures are somewhat blunt (for instance they do not consider sustainability) in the assessment of regional performances they are still the most stable and most commonly harmonised measure for economic comparisons. Together with the labour market and other business-related indicators in this report they provide an understanding of regional economic development.

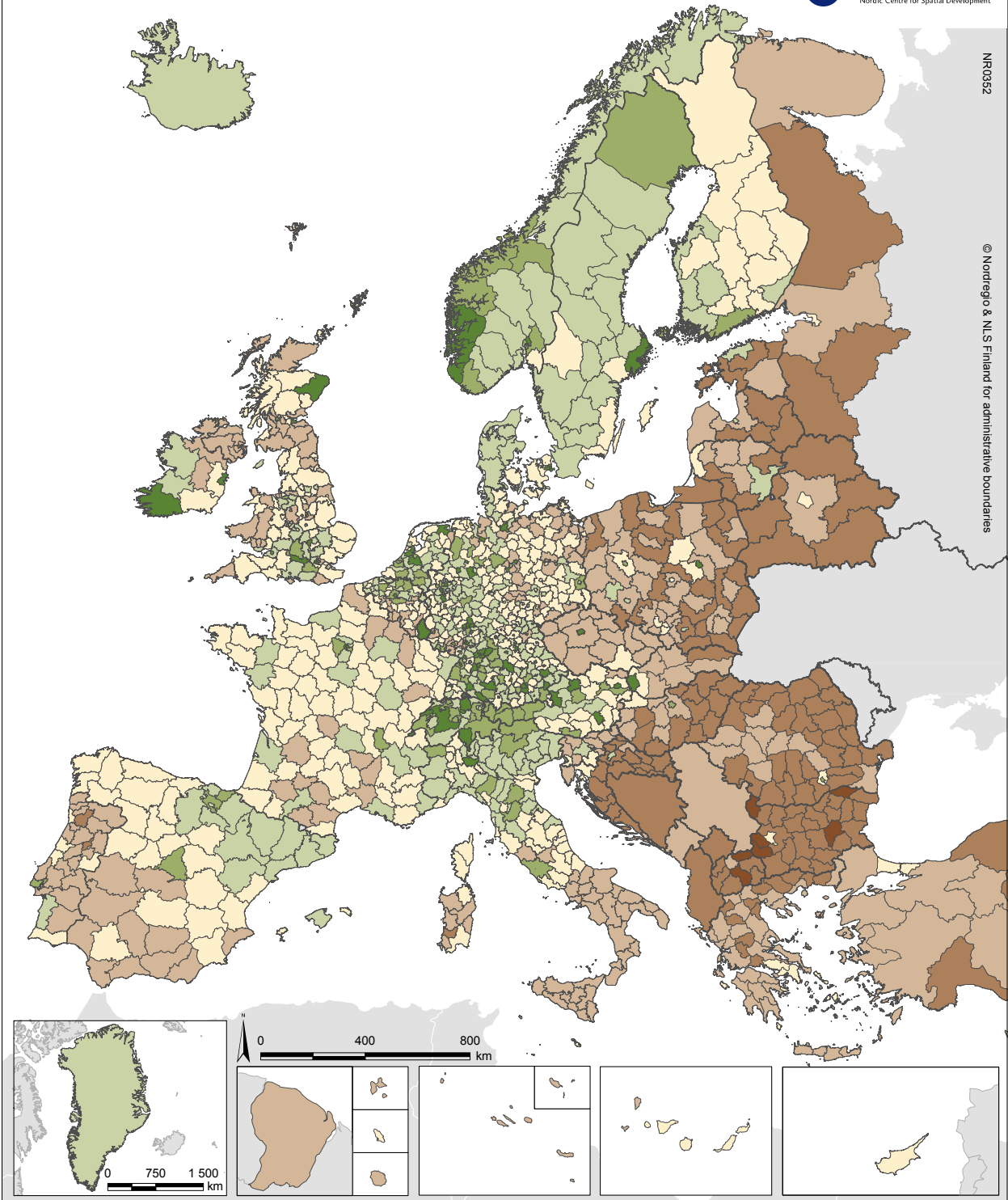
ing these facts may appear, they should nevertheless be seen in the context of the existing economic structures in those territories. Indeed, whereas urban economies are often based on a diverse range of economic activities and benefit from trends in urban growth, the economies in the top-performing but more peripheral regions are usually thriving thanks to a large, single industry often highly specialised internationally: in Åland, the transport sector; in Norrbotten, mining; and in Northern Norway, oil exploitation and fisheries. (For Norway the GRP figures from off-shore activities, including oil and gas extraction, are excluded from our maps at the

GRP (PPP) per capita in Europe in 2013



NR0352

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**Gross Regional Product (GRP*)
per capita in Purchasing
Power Parity (PPP)
for 2013 in Europe:
Index**

Dark Green	> 150
Green	125 – 150
Light Green	100 – 125
Yellow-Green	75 – 100
Yellow	50 – 75
Orange	25 – 50
Brown	25 <
Grey	No data

— EU28 = index 100

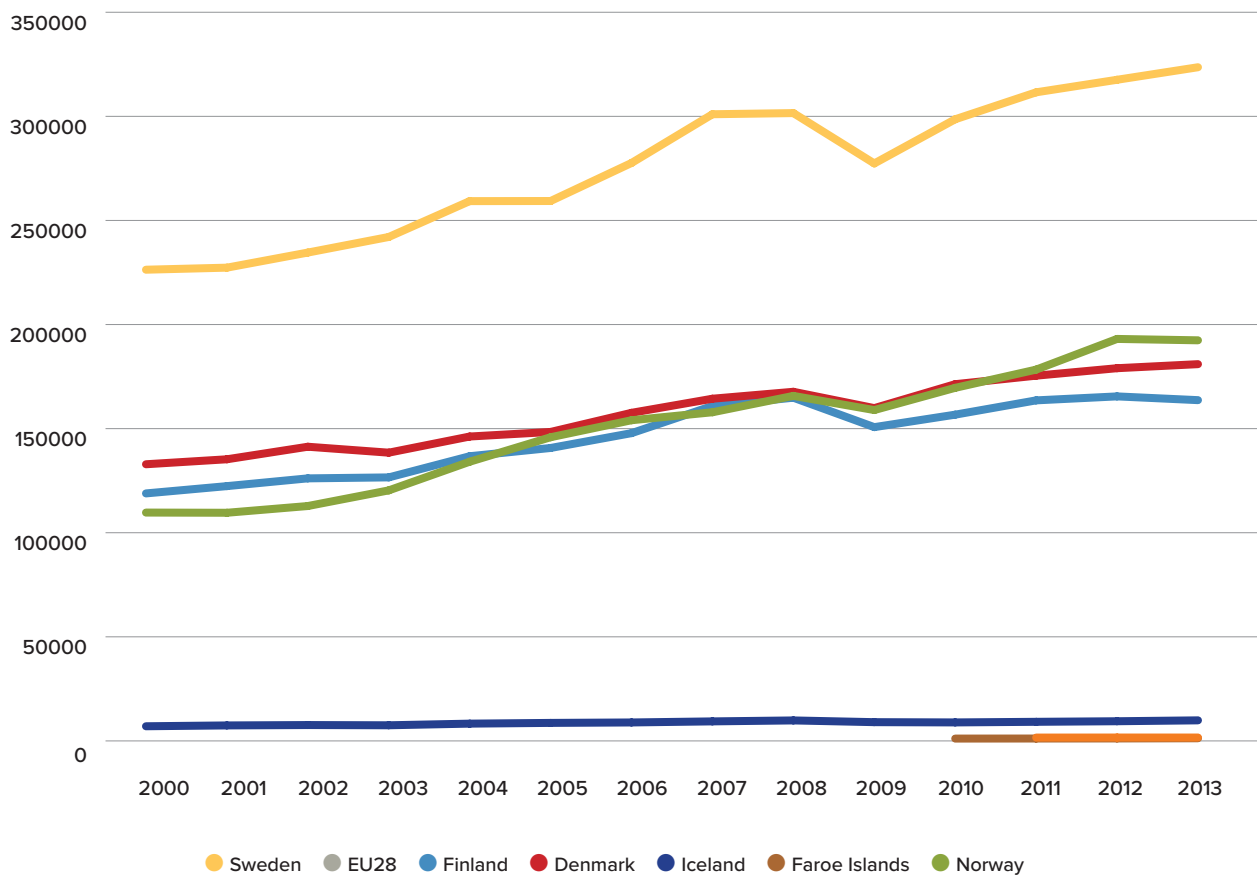
*) NUTS 3 level, except: IS, BA, RS, XK: NUTS 0 (national level). BY, N.W. RU: NUTS 2/SNUTS 2 (oblast level), TR: NUTS 2. 2013 data, except: BY, RU, TR (2011)

PPP conversion by relating data on PPP in international \$ from World Bank (BA, BY, ME, RS, N.W. RU, XK) and CIA Factbook (FO, GL) to EU28 data from Eurostat. IS: Estimate (NSI/Eurostat). NO: GRP from offshore industries excluded

Data source: Eurostat, NSI's, World Bank, CIA Factbook, Nordregio estimates

Figure 8.1: GRP (PPS) per capita in Europe in 2013

Figure 8.2: GDP (Gross Domestic Product) in the Nordic countries, 2000-2013; GDP in million Euro – Purchasing power parity (PPP)



Data source: Eurostat, NSI's, World Bank, CIA Factbook, Nordregio estimates. Note: Finland: Includes Åland; Greenland: 2011-2013; Faroe Islands: 2010-2012

regional scale. Although the vitality of these sectors induces a high level of economic performance for these regions (also related to secondary and tertiary service sectors), it leaves the regional economies highly vulnerable to changes occurring in these sectors which are usually well beyond the boundaries and the control of Nordic Regional actors, both economic and political. In this light one of the most important aspects for regional policy as it relates to these territories is to be able to use, and build upon this growth potential and current growth and wealth. Strategies need to be put in place to develop current productive sectors further, as well as to attract new businesses or sectors of activity with high added value. Although some of the regions mentioned above display strong economic growth they continue to face a number of serious challenges with respect to demographic trends and ongoing developments in the labour market, etc.

The economic crisis of 2008-2009 affected the entire Nordic Region quite severely, with Denmark, Iceland and Sweden suffering GRP decline rates of - 5%, Norway -2% and Finland as high as - 8% (figure 8.2). Most parts of

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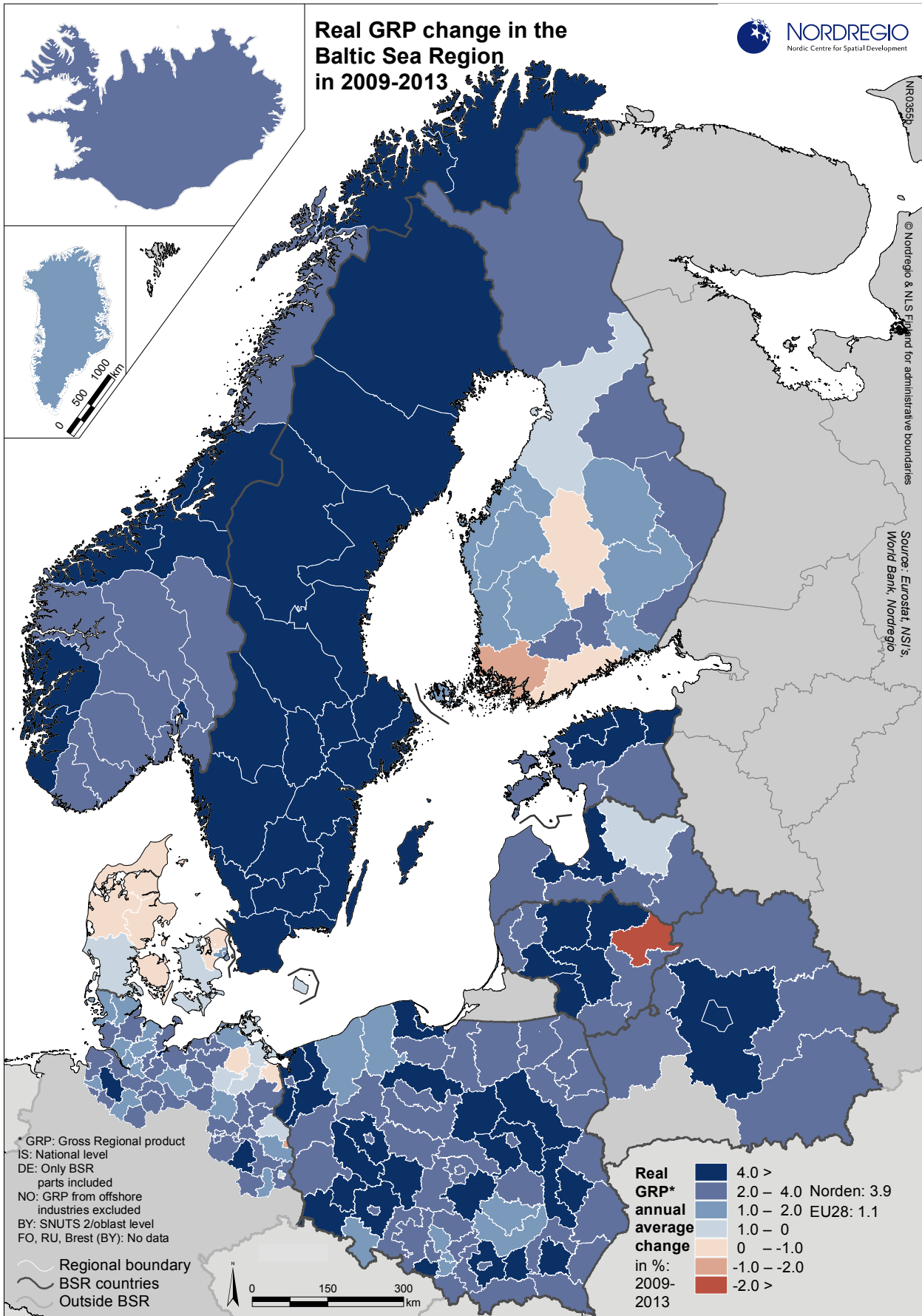


Figure 8.3: Real GRP (Gross Regional Product) change in the Baltic Sea Region in 2009-2013. Note: Faroe Islands: No data

the Nordic Region recovered in the years to come, but in 2014 and 2015 some countries (and regions) have again shown signs of slowing down: Denmark with negative numbers in 2012 and 2013 and Finland more recently in 2012 to 2014. At the finer regional level the picture is rather complex, even in countries with negative development some regions are still doing well. However, only Sweden and Iceland show strong economic growth rates throughout the regions.

Some regions in Finland persistently remain within the category just below the EU average. Most of these regions still show GRP growth rates for the period 2009 - 2013 which are around 2 - 4%, but Keski-Suomi and Pohjois-Pohjanmaa show weak, and in the case of the former, even negative GRP development. Comparing GRP maps with the map in figure 8.5 of dominant economic activities (by employment) it is evident that the regions in these parts of Finland have high shares of people employed in the agriculture, forestry and fisheries sectors.

Examining further the change in real GRP for the period of 2009 - 2013 national figures for Denmark and Finland can be translated into regional stories. In Denmark the regions of Nordjylland, Midtjylland, Sydjylland and Hovedstaden have all suffered from, on average, reduced annual GRP throughout this period (figure 8.3). In Finland the situation is even more serious in Varsinais-Suomi where GRP has on average decreased between 1 - 2 percent. In Helsinki-Uusimaa and Keski-Suomi the reduction is more moderate, between 0 - 1 percent. As already mentioned, Sweden has seen increases in GRP for all regions of more than 4%, but this is sensitive to what years are examined, some regions suffered rather severely from low GRP in 2008 and 2009 and therefore have made great recoveries. In Iceland the picture is equally strong, while in Norway some regions have grown above 4% while others have grown above 2%. Greenland has, on average, seen GRP increases between 1 - 2%, as has Åland.

Broadening the scope and comparing the Nordic Regions with the rest of the Baltic Sea Region (figure 8.4) it is evident that the so called "east-west divide" still persists as the Nordic Region continues to enjoy much high-

Only Sweden and Iceland show strong economic growth rates throughout the regions.

er levels of GRP per capita than their eastern (including north west Russia) counterparts. The exception is the capital cities which have relatively high GRP levels, with Warsaw being particularly strong in this regard. The Baltic States, as well as Poland, also show strong though fragmented growth in GRP and are, together with the Nordic countries, performing well compared to southern, and south-eastern, Europe. Nevertheless, the Nordic average in GRP per capita corresponds to around 125% of the European average; the southern and eastern parts of the Baltic Sea Region have values corresponding, generally, to 25-75% of the EU average. From a European and Baltic Sea perspective, regional disparities among Nordic Regions are clearly less evident compared to what may be found in many larger continental economies (such as France, Germany or Spain, see figure 8.1). As such, the Nordic Region appears to constitute a much more cohesive economic area (with no regions really lagging behind) than is the case in other parts of Europe - even in the face of the past economic crisis.

Urban regions; and urban rural disparities

Urban regions are often highlighted as the major areas for economic performance, although there are well known caveats with this representation; the most important being location of headquarters and economic reporting. With this in mind it is still clear that the major contributors to national GRP are the city regions of Stockholm, Helsinki, Oslo, Gothenburg, Malmö, and Copenhagen. Compared to the economic activities of St. Petersburg, Warsaw, Hamburg and Berlin these regions are small, but the greater region of Stockholm clearly stands out. But again, regional delimitations make a huge difference in representing urban regions (Sweden and Finland have large NUTS 3 regions).

Other places that tend to perform well economically are the regions endowed with second-tier cities: Gothenburg in Sweden, Stavanger and Trondheim in Norway and Aalborg in Denmark. This pattern is much less pronounced in Finland for which the Tampere region performs somewhat averagely in both Nordic and European terms. But in general, metropolitan and city-regions can be viewed as the key centres of economic production in the Nordic Region, not unlike many other European countries.

Urban areas or cities are often centres of economic growth and development. However, it is difficult to acquire economic growth data, such as GRP, at an urban level. And although it is widely acknowledged that GRP is an unnatural growth measure at the urban scale, there is still no simple indicator of economic growth that is tailored specifically to these urban areas. The in-

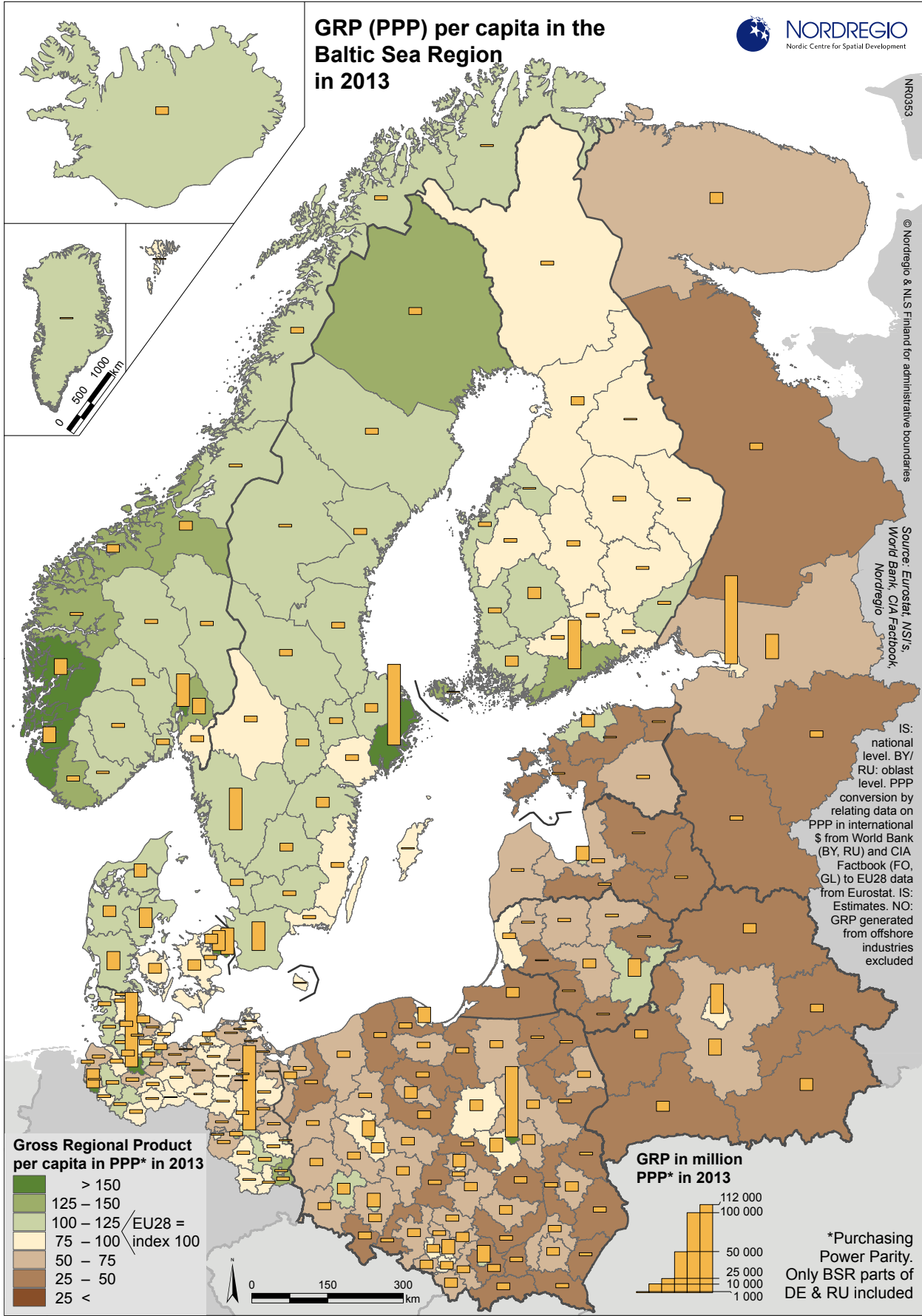


Figure 8.4: GRP (PPP) per capita in the Baltic Sea Region in 2013

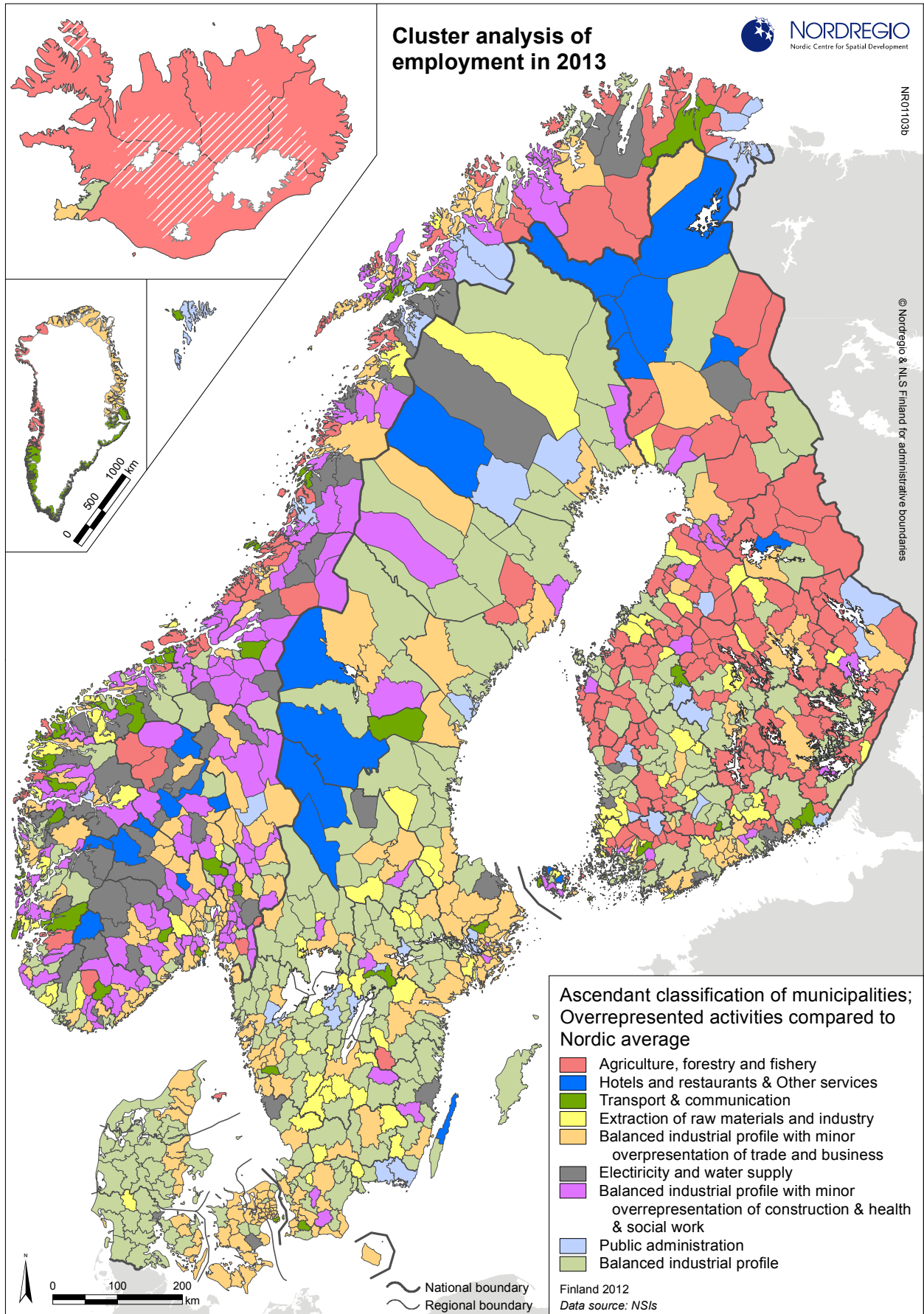


Figure 8.5: Cluster analysis of employment in 2013

terpretation of GRP per capita should be handled with care as it does not take into account the commuting flows that occur across the regional, or urban and sub-urban, boundaries.

Some of the patterns observed at the regional level hold true for cities and urban areas in the BSR. Disparities between cities in the east and west in particular, as well as core-periphery patterns (between large and small cities) can be identified. In general, urban areas stand out as relatively prosperous areas in all countries in the BSR. However, in the most eastern cities, Minsk, St. Petersburg and Polish cities (except Warsaw), the level of urban GRP is far below that in the western cities.

Some regional disparities remain

In the eastern and southern parts of the BSR the metropolitan/non-metropolitan dichotomy prevails, with rural regions showing lower levels of GRP per capita, and urban and accessible regions at the other end of the scale. In the Nordic countries however this picture is not as pronounced; many remote regions show high levels of GRP as well as strong growth, e.g. regions in northern Norway and Sweden. Hence, the prosperity of regions in the Nordic countries does not fundamentally depend on their urbanity while regional inequality is generally at a lesser level.

Indeed, in the light of the economic crisis, larger city regions in Finland and urban regions close to Copenhagen, have grown less than rural regions. Moreover, other regions in close proximity to these capital regions are also growing slower which highlights the influence of capital city regions on a larger geographical area, both in times of growth and decline.

At the same time it is clear that in the Nordic Region, economic growth is increasingly taking place in the capital regions or in the largest agglomerations. It is still unclear how this will affect the structure of regional development in the future, but it might be so that many Nordic Regions simply cannot keep up with the fast pace of development set by the larger urban regions. It is clear then that, as is the case in many other European countries, there is still scope for implementing a regional policy that ensures a more balanced approach to regional development where resources and opportunities are more evenly distributed. The Nordic countries, with their histories of cohesive regional development, have coped rather well with the latest economic crisis. Indeed, it should be highlighted here that balanced regional development seems to provide both the necessary level of resilience and a basis for fast recovery (see for instance the analysis of the ESPON ECR2 project, 2014).

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Nordic regions have different economic structures

There is a rich mix of economic activities at the regional and local levels in most parts of the Nordic Region. Even though economies are becoming more open and global, there is still scope for economic interactions at the regional scale, and different economic activities interact in supply and demand relationships. These are strong to a varying degree, but together they build a fabric of regional multipliers, and sometimes support each other strategically in clusters of knowledge, materials or markets. Some regions have a more diverse economic fabric, while others have more homogeneous businesses. All regions have public sectors, and firms related to public utilities and services, to some extent. City regions are usually the centres of financial institutions, insurance firms, larger corporate headquarters, consultancy firms and firms in the tertiary sector of the economy. Secondary sectors (known as manufacturing, transport and some related service sectors) are found throughout the countries, but are strong in secondary and smaller cities, while the primary sectors of agriculture, forestry and fisheries are prevalent in more sparsely populated regions, and in the northern regions.

A map of the most dominant sector or activity will obviously hide a lot of information; however it is an interesting map to have as a backbone for analysing and discussing regional differences and Nordic Regional heterogeneity. The cluster map (figure 8.5) only shows the dominant sector (or sectors) of employment. Other sectors are of course also important in many regions.

At first glance the map may seem to be just a mosaic of colours showing the overrepresented sectors at the

municipal level, but some clear patterns are discernible. E.g. in the rural municipalities of Finland the agricultural, forestry and fisheries sectors show a strong overrepresentation, much more than can be observed in the other countries; the exception being Iceland, which has a strong focus on fisheries in all but the Reykjavik and Keflavik municipalities. In Norway there is a tendency in many municipalities towards a very balanced industrial profile, but with an overrepresentation of construction, health and social services. In Denmark and Sweden there are many municipalities with a very balanced industrial structure, but also clusters of regions specialised in trade and businesses. In Denmark the very balanced structure seems to be overrepresented by the later (trade and businesses) in the east, and more generally balanced in the west. In some areas in Norway, Sweden and Finland there is also a strong focus on hotels, restaurants and other services – often related to tourism areas in the mountainous regions. The dominance of “electricity and water supply” in Southern Norway is also interesting to observe. In other countries (e.g. Sweden) this dominance is mainly found in municipalities dominated by nuclear power plants.

Turning to the economic interaction between the Nordic countries in terms of trade flows (figure 8.6) it is evident that proximity matters; but this is not the entire story. Russia for instance seems to be an important export country for Iceland, Greenland and the Faeroe Islands. Due to history and proximity, Finland relies more heavily on Russian trade than do for instance Sweden, Denmark or Norway. These countries trade more with Germany and Poland. Norway has strong bilateral trade with Sweden, Denmark and Germany, while Sweden and Denmark have more diverse trade patterns. South Baltic “horizontal” trade is important with strong interactions between Germany, Poland, the Baltic States and Russia. Estonia has stronger trade relations with Sweden and Finland than it does with Latvia and Lithuania. Sweden and Finland do not display as important interactions in trade with Iceland, Greenland and the Faeroe Islands as do Norway and Denmark. Iceland also trades a lot with Germany, a trade relationship which is important from the Icelandic perspective in terms of both imports and exports.

Concluding comments

This chapter has explored economic development in the Nordic Region. It found that Nordic economies are performing well when considered in both the European and the BSR context. Most parts of the region have recovered well from the severe affects of the economic crisis, although it is worth noting that in 2014 and 2015 some countries (and regions) again showed signs

Bilateral trade data

In this map (figure 8.6), which displays trade flows between countries in the Nordic Region and the Baltic Sea Region, we choose to include the largest in-flows and out-flows, respectively, per country based on the value of exports in US\$ (FOB). A high number of flows would have made the map difficult to interpret, while using only a limited number of in-flows and out-flows per country made it possible to also include flows to and from the West-Norden Region (the Faroe Islands, Greenland and Iceland), which in absolute numbers are rather small.

The trade data in the map is derived from the Direction of Trade Statistics of the International Monetary Fund (IMF), providing a standardised and coherent dataset, similar to that published by the United Nations’ Comtrade. It should however be noted here that this data was processed and published as it was received from the reporter country. Thus, looking at the linkage between two given countries, one country might provide different import figures from those provided by the exporting country. Furthermore, there are several independent institutions working globally and producing their own estimated trade statistics.

of slowing. The Nordic countries differ somewhat from other parts of Europe in that strong economic performance is evident in regional areas as well as in the capitals and other large cities. Two caveats become important here however. Firstly, strong economies in peripheral areas are, in many cases, a result of a single, large, high performing industry. Secondly, city regions still dominate as the major contributors to national GRP. As such, scope remains for implementation of a regional policy that ensures a balanced approach to regional development and distributes resources and opportunities evenly. There is a rich mix of economic activities occurring at the regional and local levels in most parts of the Nordic Region. In some cases this mix results in a quite balanced industrial profile. There are other regions where the industrial profile is skewed towards particular industries, which in general makes them more economically vulnerable.

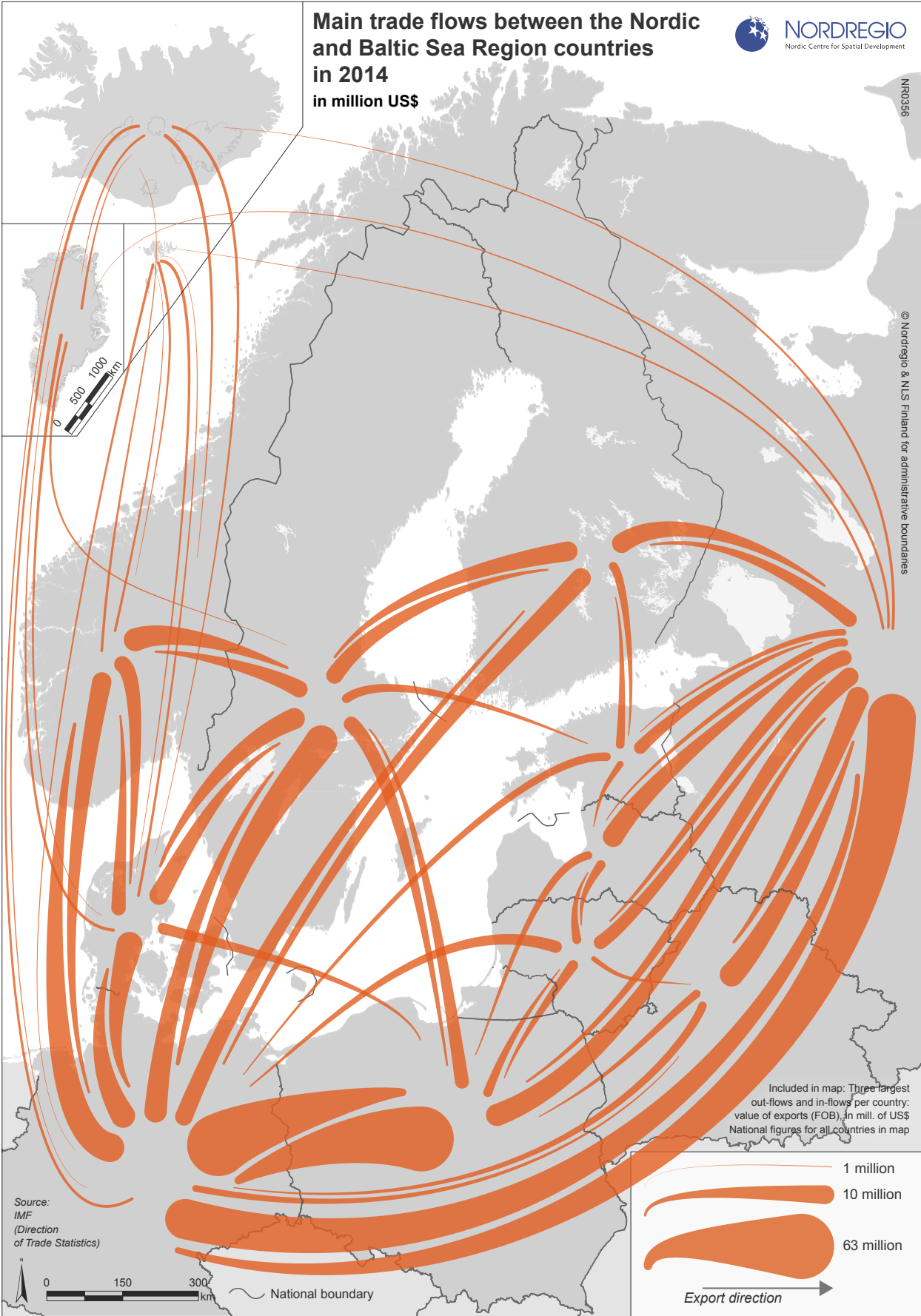


Figure 8.6: Analysis of trade in the Baltic Sea Region in 2014. Largest flows in each direction included

Chapter 9

INNOVATION:

Nordic lead the charts

Authors: **Iryna Kristensen, Jukka Teräs and Linus Rispling**
 Maps and data: **Linus Rispling and Gustaf Norlén**

Existing global challenges and continuing economic pressures place innovation at the forefront of Europe's efforts to transform the economy and stimulate global competitive advantage. The Europe 2020 Flagship Initiative, Innovation Union aims 'to improve conditions and access to finance for research and innovation, to ensure that innovative ideas can be turned into products and services that create growth and jobs' (COM 2010). In the Nordic Region, innovation is also high on the agenda. Sweden, Denmark, and Finland are the top performers according to the European Commission's Innovation Union Scoreboard 2015 and therefore offer interesting examples of how to create conditions that facilitate innovation and contribute to the EU's smart growth strategy.

This chapter explores the current status and the change in innovation performance of the Nordic Region. First, a comparative overview of the Nordic innovation performance along with a reflection on the change in performance levels over time is presented. Second, the chapter reviews some of the primary enabling factors in innovation performance e.g. the availability of a highly-skilled workforce, business R&D investment and employment in the knowledge-intensive sectors of the economy, in a European context. Third, an overview of the Nordic performance on eco-innovation is presented.

Nordic countries among the top European performers on innovation

There is a general consensus in the literature that place matters for innovation and regions play an important role in enabling innovation and in the achievement of national and regional growth objectives (OECD 2013). This section provides a comparative assessment of the regional innovation performance of the Nordic coun-

Regions are classified into four groups showing different levels of regional innovation performance: innovation leaders, innovation followers, moderate innovators and modest innovators.

tries in the European context. The regions' performance is measured by the Regional Innovation Scoreboard (RIS) index which incorporates three types of Innovation indicators i.e. enablers e.g. tertiary education and R&D expenditures as a percentage of GDP; firm activities e.g. EPO patent applications, SMEs innovation/patents and R&D expenditure in the business sector as a percentage of GDP; outputs e.g. knowledge-intensive activities (Hollanders et al., 2014). Regions are classified into four groups showing different levels of regional innovation performance: innovation leaders, innovation followers, moderate innovators and modest innovators. Figure 9.1 illustrates the current position of the Nordic Region in respect to their relative performance on the RIS index compared to that of the EU and highlights changes in performance over the period 2008-2014.

Regional innovation scoreboard (RIS) in 2014 Comparative assessment of innovation performance

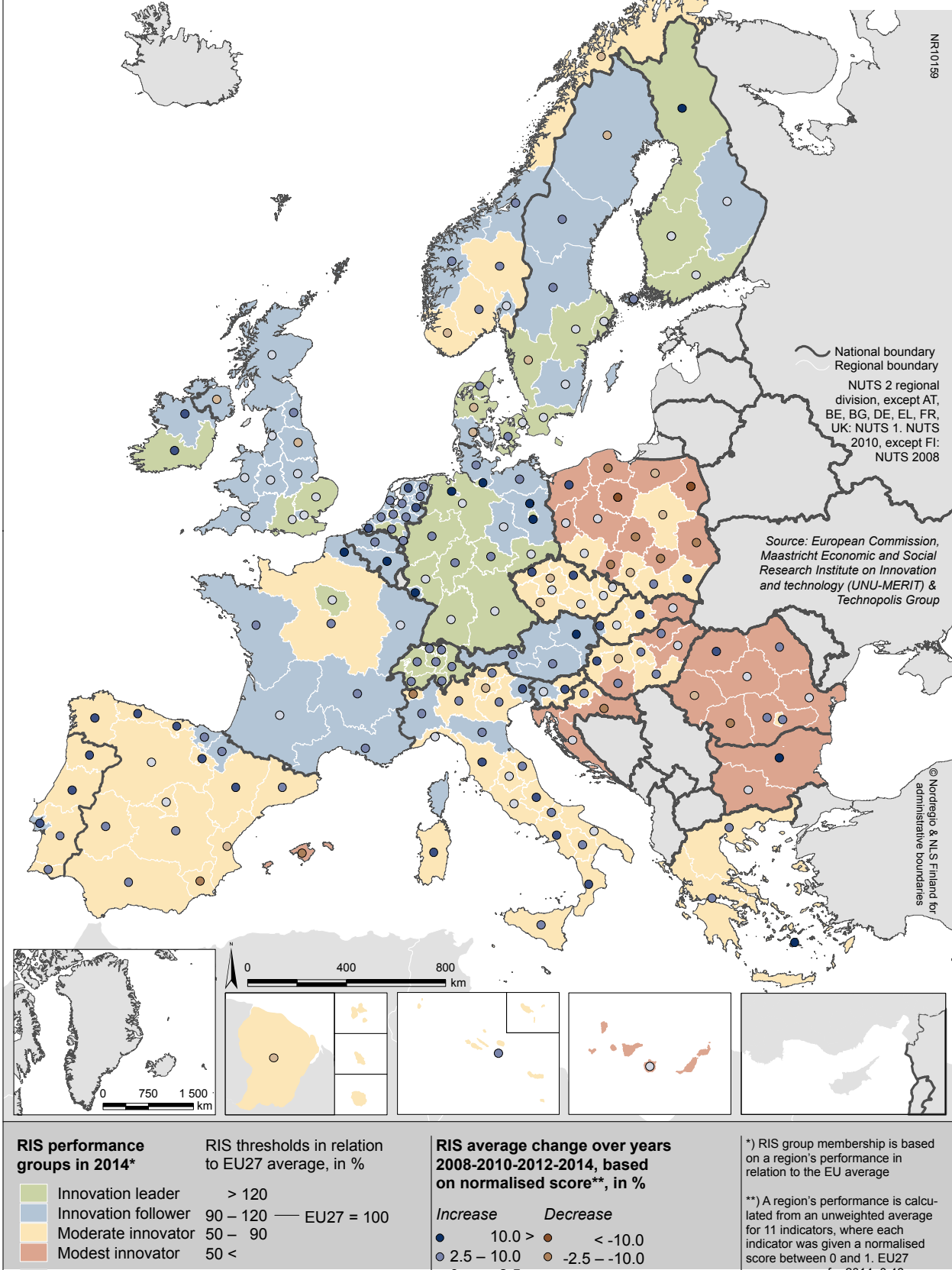


Figure 9.1: Regional innovation scoreboard (RIS) in 2014

The Nordic countries, together with Germany, Switzerland, Benelux countries, the UK and Ireland, come out on top in the RIS rankings, displaying a high level of innovation performance. Both Sweden and Denmark are represented by regions of two performance groups i.e. innovation leaders and innovation followers, whereas Finland shows a relatively homogeneous innovation performance as all regions with an exception of Itä-Suomi (East Finland) are innovation leaders. Over the period 2008 – 2014, the majority of the Nordic Regions have exhibited positive trends in innovation performance. Across all Nordic NUTS 2 regions, the most positive change in growth performance (above 10%) took place in Pohjois-Suomi (North Finland) followed by Hedmark og Oppland and Vestlandet (both in Norway), Norra Mellansverige and Mellersta Norrland (Sweden) and Nordjylland (Denmark) with an average change above 2.5%. In contrast, innovation performance in Midtjylland and Syddanmark in Denmark, Västsverige and Övre Norrland in Sweden, and Agder og Rogaland in Norway dropped by an average of between 2.5% and 10%.

Enabling factors in innovation performance

Advanced research degrees

With a shift toward knowledge-based economic activity and increasing specialisation in science and research, the demand for human resources with advanced research degrees has substantially increased (OECD 2015). In international comparison with respect to the share of individuals with doctoral degrees (out of the population aged 25-64), the Nordic countries, with one exception (Sweden), do not feature in the top 5. Switzerland has the highest share in Europe (27.5%) followed by Austria (15.8%) and Sweden (13.6%). While Switzerland accounts for the largest share of working population holding PhD

Norway has the highest share (36%) of international PhD graduates followed by Denmark (33%), Sweden (29%) and Iceland (26%).

Table 9.1: Number of people who earned a PhD in 2013, by citizenship

Country	Total	Own country	Foreign country	Unknown
Denmark	1 949	1 305	644	0
Finland	1 724	1 420	304	0
Iceland	57	42	15	0
Norway	1 524	972	552	0
Sweden	2 650	1 786	777	87

Data source: NIFU, NSI's. Note: Finland: Includes Åland, Faroe Islands and Greenland: No data

degrees in Europe, Sweden has the highest share among the Nordic countries, with the other four Nordic countries following them in the top half of the list.

Foreign PhD graduates constitute a substantial share of the total number of doctoral graduates in Europe, including the Nordic countries, helping to increase the knowledge potential of the host country as well as building up networks with research and development institutes abroad. Table 9.1 presents the number of doctoral graduates in the Nordic countries, by citizenship. Norway has the highest share (36%) of international PhD graduates followed by Denmark (33%), Sweden (29%) and Iceland (26%). The share of foreign doctorate holders in Finland falls below the 20% margin (18%). It is however worth mentioning that the share of international doctorate holders in Finland has significantly increased in the past decade (as they constituted only 8% of PhD graduates in Finland, in 2000).

Business R&D investment

Figure 9.2 illustrates the change in research and development (R&D) investments in the business sector in the Nordic Regions in the period 2007-2013. It should however be noted here that the map does not depict the current size of the business sector, only the change in R&D investments, both in absolute terms (size of the circles) and in percentages (blue hues for positive change, red for negative). There is a clear difference here in respect of R&D investments in the dominant Nordic cities and

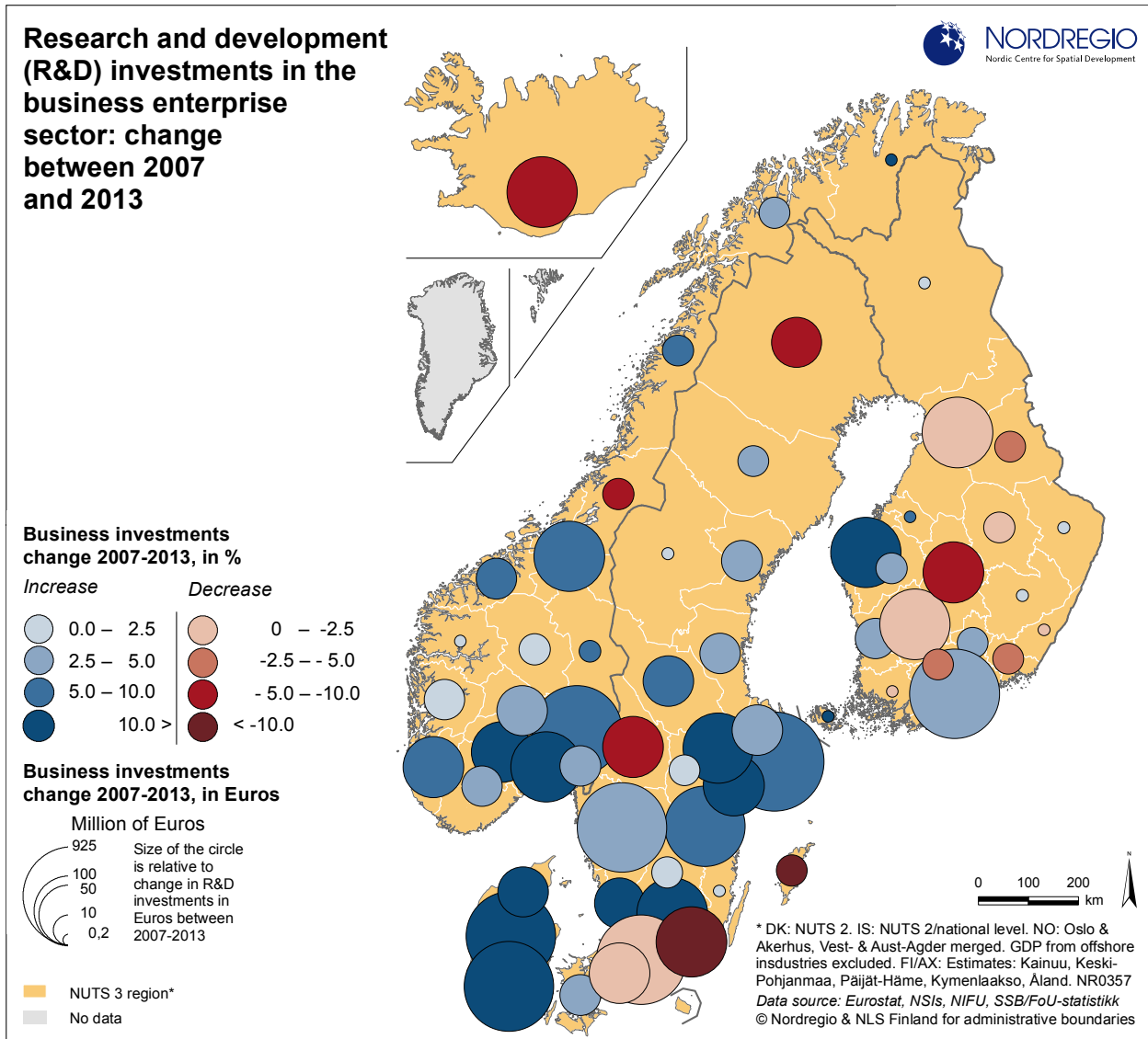


Figure 9.2: Research and development investments in the business enterprise sector: change between 2007 and 2013

regions compared to several peripheral regions; the strong Nordic RDI environments have experienced considerable growth regarding R&D business sector investments (ranging from 5 to 10%) whereas many of the Nordic peripheral regions i.e. Norrbotten, Värmland, Blekinge and Gotland in Sweden, Nord-Trøndelag in Norway, Iceland and Keski-Suomi in Finland have experienced a dramatic decrease (over 5%) in business R&D. In Norway, the more peripheral regions have not suffered significantly compared to their counterparts in Sweden and Finland, which is partially attributed to regional policy differences across the Nordic Regions. As noted previously, in Iceland (in this case measured only at the national level), business R&D investments have decreased significantly (over 5%) during the period 2007-2013. A significant increase in private R&D invest-

ments, both in terms of percentage change and in terms of millions of Euros, has however been observed in Vestfold and Telemark in Norway, in the Jutland regions of Denmark (Nordjylland, Midtjylland and Syddanmark), in Halland and Kronoberg regions in Southern Sweden as well as in Västmanland and Södermanland in Eastern Central Sweden and in Pohjanmaa, in Finland.

The existence of market failures e.g. knowledge spillovers and the lack of certainty over R&D benefits etc., are often suggested as reasons for introducing tax reductions. They are expected to prompt an upswing in private R&D investment and, in turn, to promote the growth of innovation outcomes and long-run expansion. In the Nordic countries however the major portion of R&D expenditure stems from the business sector despite the existence of rather modest (or even disincentives as in the

Figure 9.3: Direct government funding of business R&D and tax incentives for R&D in 2013

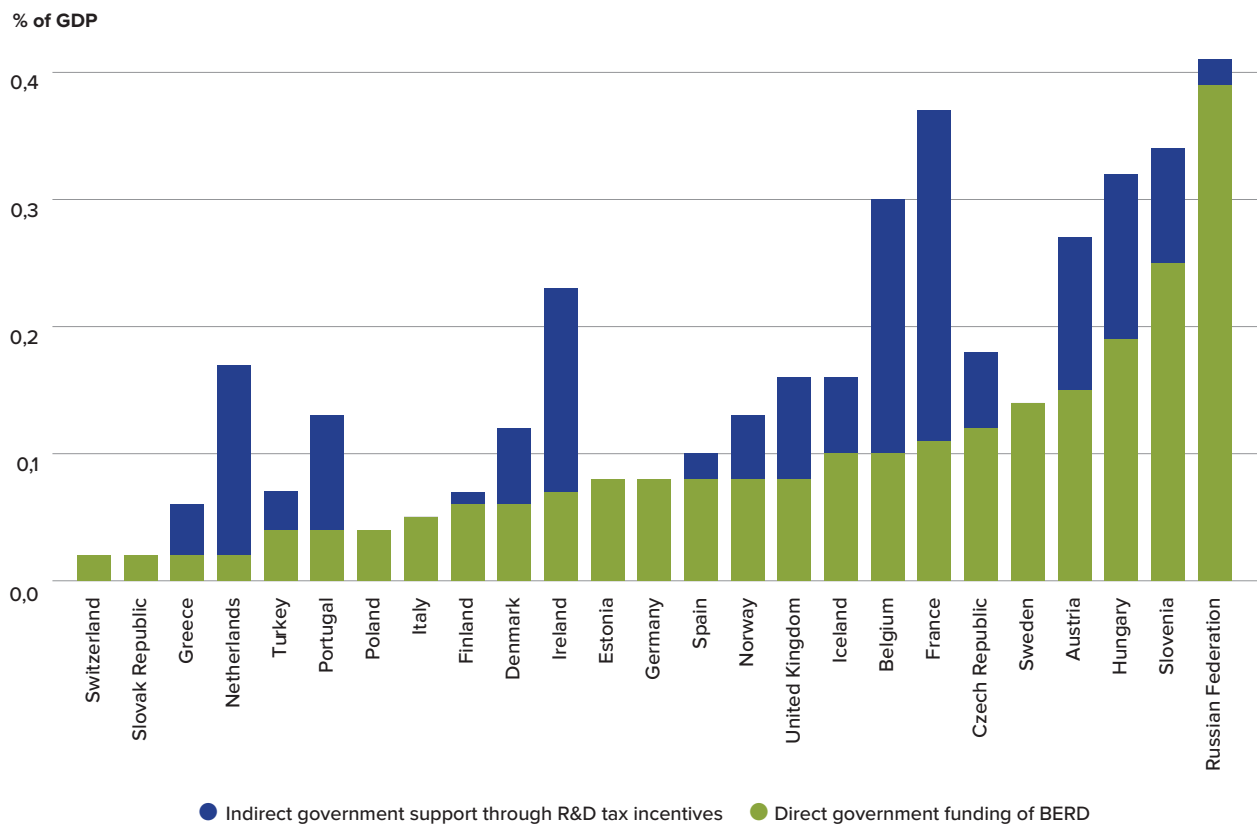


Figure 9.3: Direct government funding of business R&D and tax incentives for R&D in 2013: Indirect government support through research and development tax incentives, and direct government funding of BERD (Business enterprise expenditure on research and development). Selected countries.

case of Sweden) R&D tax incentive schemes. In 2013, Finland introduced a tax allowance as a temporary measure, although its volume was rather small. This supports the idea that tax incentives should be seen more as supplementary tools than as substitutes for the basic 'enabling conditions' such (OECD 2002). The chart contained in figure 9.3 illustrates the existence of a wide variation in R&D tax incentives across Europe. The overall level of government R&D support, which is crucial from the viewpoint of private sector, is a combination of direct government funding of business R&D and indirect government support through R&D tax incentives. In the overall comparison of direct and indirect R&D support, the Nordic countries are positioned in the mid-section of the graph (see figure 9.3). It is clear from the graph, however, that the size of government R&D support does not reflect the country's innovation performance per se; the key to the innovativeness of regional and national economies lies in the existence of favourable framework conditions and well-functioning innovation systems.

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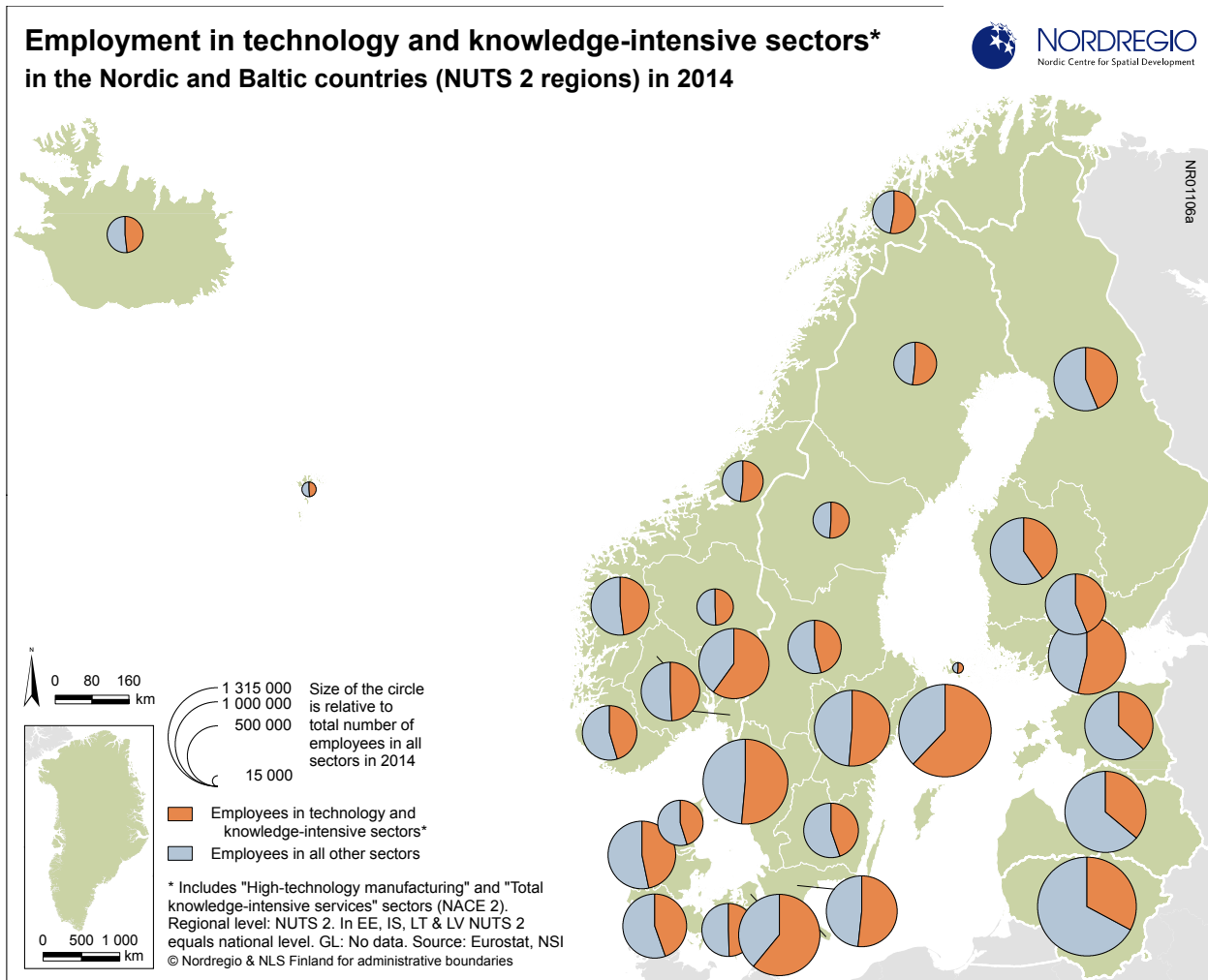


Figure 9.4: Employment in technology and knowledge-intensive sectors in the Nordic and Baltic countries (NUTS 2 regions) in 2014

Employment in knowledge-intensive sectors²

As noted previously, Europe has enhanced its academic tertiary education output in recent years. Moreover, many countries have set up national measures with the aim of attracting a highly qualified workforce and human resources into science and research, including a specific focus on encouraging more women into these fields. Figure 9.4 presents figures for employment in the technology and knowledge-intensive sectors in the Nordic and Baltic countries in 2014. The figure illustrates not only the absolute concentration of Nordic technology and knowledge-intensive jobs to the major cities and regions but also the high share of technology and knowledge-intensive jobs in the leading cities and regions, such as the capital areas. There are, however, some examples of the existence of relatively high concentrations of knowledge-intensive jobs in some Nordic Regions outside the major cities, as figure 9.4 illustrates, among them, in Norway, Trøndelag and Nord-Norge (Northern Norway), and in Sweden, Östra

Mellansverige (East Middle Sweden), Mellersta Norrland (Middle Norrland) and Övre Norrland (Upper Norrland). In peripheral regions, economic diversification into knowledge-intensive activities is often prompted by rather limited venture capital inflow as in the case of Övre Norrland (Upper Norrland). Although medium-low and low-technology industries remain important for employment and value-added generation in Övre Norrland, the transformation of the regional profile towards more knowledge-based industries like life sciences and information and communication technologies significantly increases its potential to attract foreign investors to the region. Within the Nordic Region, the smallest shares of knowledge-intensive jobs are to be found in the three northernmost Finnish NUTS 2 regions, which is partially attributed to their traditional economic structures characterised by a predominance of basic and traditional industries. Moreover, figure 9.4 illustrates the relatively high share of knowledge-intensive jobs in the Nordic Regions compared to the Baltic

² Eurostat defines an activity as knowledge intensive if the tertiary educated persons employed represent more than 33% of the total employment in that activity (http://ec.europa.eu/eurostat/cache/metadata/Annexes/htec_esms_an8.pdf)

countries (which, in this case of NUTS 2 regions, equate to the national level for Estonia, Latvia and Lithuania). The growing potential of knowledge and intellectual capabilities reflected in an increased share of employees in knowledge-intensive sectors, indicates the strong commitment of the Nordic economies to research and innovation for growth and productivity.

Eco-innovation

Given the EU's ambition to establish bio-economy as a cornerstone of the European economy green research is recognised as one of the investment priorities under the Horizon 2020 framework programme for research and innovation. Growing demand for green solutions has provided a niche for competition where the EU has been among the first movers; however, building a green economy requires multidisciplinary innovative solutions, the development of new business models, new opportunities and new skills. The Nordic countries are among the world's innovation leaders, having achieved a significant competitive advantage in the field of green solutions. The Nordic praxis, therefore, can serve as an example of how to create green growth in practice, thus contributing to the EU's market positioning and competitive advantage in the field of green solutions.

Figure 9.5 on Green patents in the Nordic Region illustrates how well the regions of the Nordic countries perform in this dimension of eco-innovation. The situation in 2011 is displayed by pie charts, in which the magenta (purple red) colour represents the share of the total number of patents (magenta colour in addition to grey colour of the pie charts, and the size of circles), while the annual average change over the years 2006-2011 is presented in background colours, i.e. green hues represent a significant positive change, yellow a rather neutral trend (between 5% and -5% annual average change), while orange hues show a significant negative trend. Green patents in

The Nordic countries are among the world's innovation leaders, having achieved a significant competitive advantage in the field of green solutions.

Regions with the largest populations and a large number of total patents generally do not have large shares of green patents.

this map cover patents classified as general environment, energy generation (renewable and non-fossil sources), technologies for mitigation potential, transportation emissions abatement/ fuel efficiency, and buildings/ lighting energy efficiency. There are several methodological issues related to measuring patents since e.g. not all inventions are patented or inventors may protect the inventions using other methods.

A high relative shares of green patents as a percentage of all patent applications, (above 25%) and also a relatively high number of total patents, are found in the Pohjanmaa region on the West Coast of Finland, in several regions in Denmark, e.g. in Østjylland, Vestjylland and Sydjylland, in Norway's Buskerud fylke and in Swedish Kronobergs län and Västerbottens län (see Figure 9.5). The number of green patents here can, in part, be assigned to the concentration of bio-related activities in some of these regions e.g. biorefinery (Västerbotten), green energy (Vestjylland). Moreover, in regions with a very small total number of patents, there are also several cases where the green patent share is above 25%: Kymenlaakso and Pohjois-Karjala in Finland, Finnmark and Hedmark in Norway.

A striking additional feature here is that those regions with the largest populations and a large number of total patents generally do not have large shares of green patents (although the actual number of green patents is likely, by far, to outnumber those of regions with smaller populations). Moreover, Nordic Regions are generally too small to independently secure their global position in the green technology sector. As such, closer cooperation on research and green technology development, as well as the establishment of common frameworks across the Nordic Region, will better enable all five countries to maximise the value of their competitive advantage enabling them to become a major force in the field of green growth.

The Eco-Innovation Scoreboard (Eco-IS) complements other measurement approaches in terms of the innova-

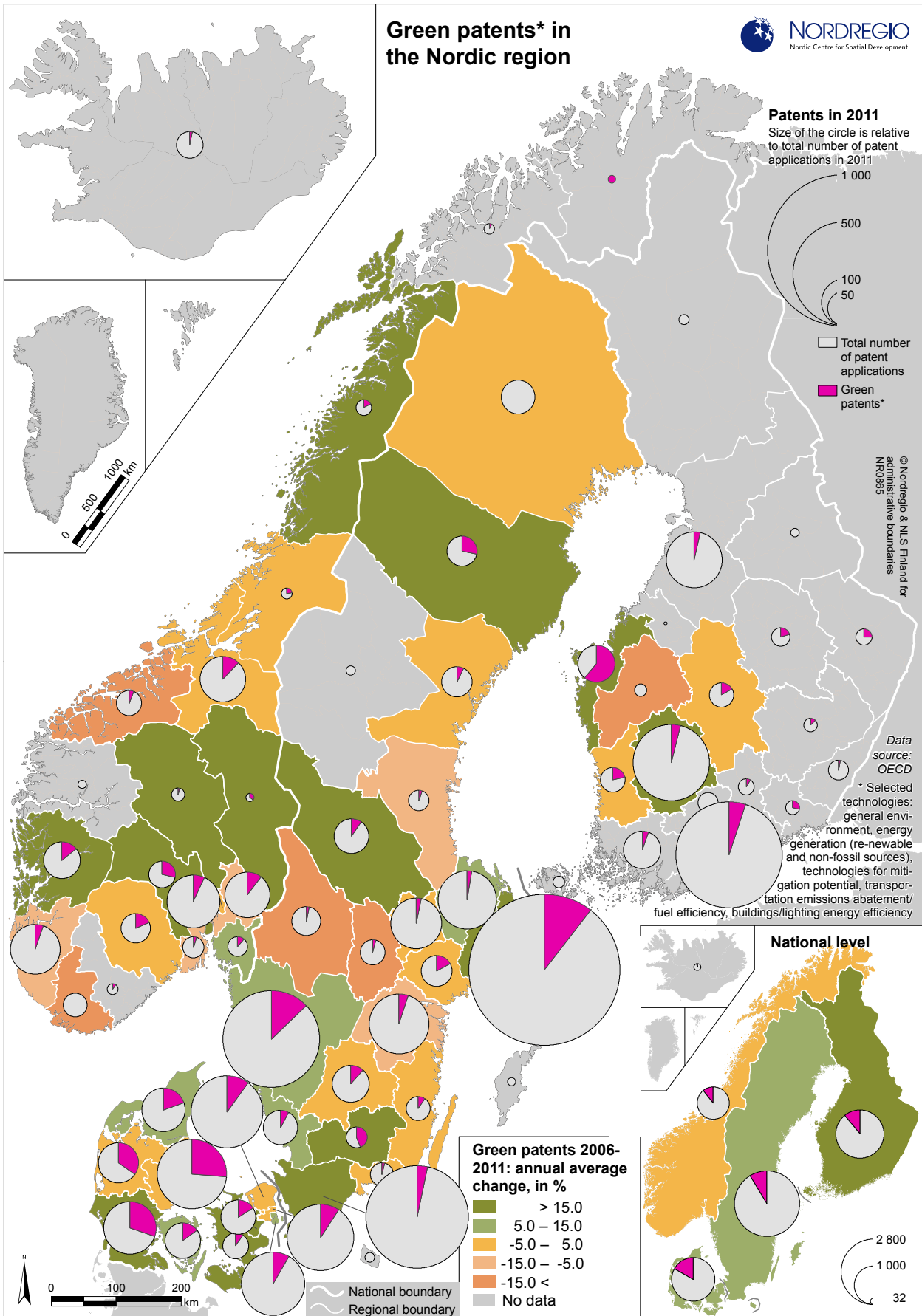


Figure 9.5: Green patents in the Nordic Region. Regions in which the number of green patents has been zero for at least two years during the period 2006-2011, or for which times series data were entirely missing, are coloured grey in the map

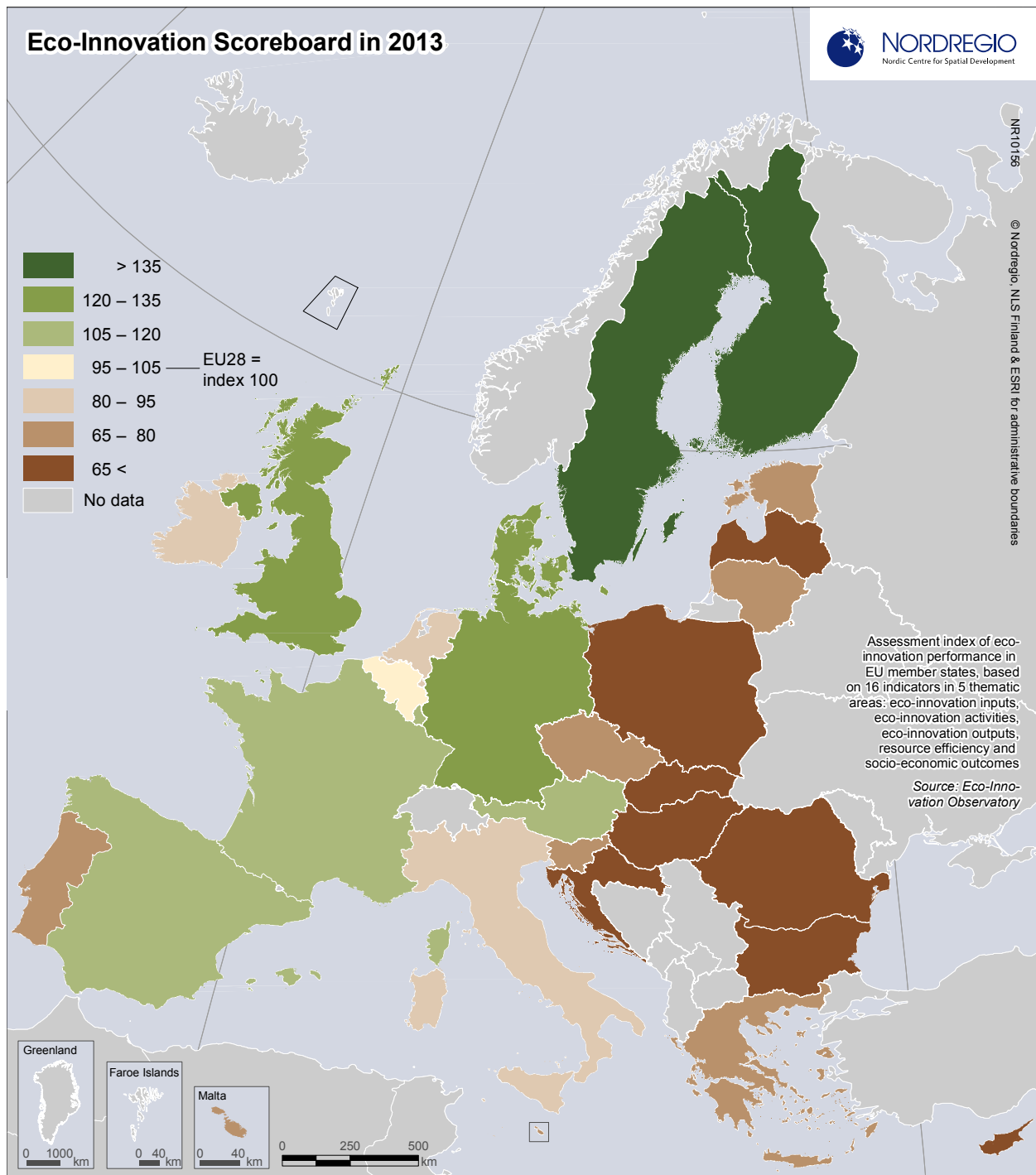


Figure 9.6: Eco-Innovation Scoreboard in 2013. Note: Finland: Includes Åland

tiveness of EU countries and aims to promote a holistic view of economic, environmental and social performance. It covers eco-innovation inputs, eco-innovation activities, eco-innovation outputs and resource efficiency and socio-economic outcomes.

The Faroe Islands, Greenland, Iceland and Norway are not however included in the Eco-innovation Score-

board, limiting the scope of our analysis. As such, the future introduction of a coherent Nordic eco-innovation index covering not just five Nordic countries, but also Åland, Greenland and the Faroe Islands would simplify and enrich the analysis by enabling a comprehensive analysis to be undertaken of the entire Nordic Region.

Concluding comments

In this chapter, we have explored innovation performance in the Nordic countries and regions and analysed the Nordic innovation capacity. Based on the data provided, a few concluding remarks are worth making to reemphasise the key points (note however that our analysis on Nordic innovation largely focuses on Finland, Sweden, Denmark, and Norway due to lack of innovation statistics for Iceland, Åland, Greenland and the Faroe Islands. In consequence, comparability is rather limited. Even for the largest countries in the Nordic Region, innovation data at the regional standard levels and applicable in an international context (e.g. harmonised) can be hard to find).

First, the Nordic countries and regions currently represent a good to excellent level of innovation performance compared to other European countries and their regions. The Nordic Regions in Sweden, Denmark, Finland, and Norway are either innovation leaders or innovation followers. For instance, despite sudden changes in the Finnish ICT sector in recent years, the overall level of innovation performance has not yet been affected during the period covered by this report. In the long-term, however, Finland is likely to face a significant challenge in its attempt to maintain the economic and innovation boost generated by Nokia. The Finnish government has recently proposed cutting state funding for universities and research institutes, something which will, it could be argued, only further deepen the crisis in Finland.

Second, innovation performance and the competitiveness of the Nordic Region is explained by the existence of good preconditions for research and development:

- relatively high workforce share of doctorates (e.g. Sweden ranks third in Europe);
- high levels of direct funding of business R&D. During the period 2007-2013, in the three capital areas of Oslo, Stockholm and Helsinki the level of business R&D investments has continuously increased, and there were several other regions where R&D investments also significantly increased. The statistics on R&D investments in the business sector in Iceland reflect the national economic crisis that occurred during the period peaking in 2009-2010.
- high employment levels in the knowledge intensive sectors (although with some variations across regions). The northern parts of Finland, Sweden and Norway however continue to lag significantly behind their southern counterparts in the respective countries.

Third, eco-innovation seems to be regionally 'scattered' across the Nordic countries. There are numerous regions with eco-innovation potential in Finland, Sweden, Denmark and Norway when measured by green patents. As we have seen, high shares of green patents are found in several regions even outside the big Nordic cities, e.g. Pohjanmaa (Finland), Østjylland, Vestjylland

The Nordic countries and regions currently represent a good to excellent level of innovation performance compared to other European countries and their regions.

and Sydjylland (Denmark), Buskerud (Norway) and Kronoberg and Västerbotten (Sweden). Moreover, in some Nordic Regions with a very small total number of patents, there are several cases where green patents predominate, e.g. Kymenlaakso and Pohjois-Karjala (Finland) and Finnmark and Hedmark (Norway). Regions with the largest population sizes and also a large number of total patents generally however do not have large quantities of green patents.

How does our analysis on innovation capacity and performance in the Nordic countries and regions reflect the Nordic reality in 2016? Despite some differences in economic performance across the Nordic countries, no significant changes in the overall level of Nordic innovation capacity and performance had become evident by the end of 2015. One explanation for this is that the Nordic countries are characterised by a robust knowledge-intensive industrial structure, which appears to be more resistant to crisis than those of some other European countries. Nevertheless, it is still too early to determine any significant long-term trends in this respect.

As for eco-innovation, it opens up new opportunities for both large city regions and peripheral/sparsely populated regions in the Nordic countries. To give an example, it is not economically efficient to transport biomass on long distances. Proximity of the natural resource base and production (MacCormick & Kautto, 2013) creates innovation opportunities for both the regions that are dependent on the natural capital and resource bases and those that are not characterised by the geographic 'immobility' of the primary factors in production. As such, Bio-economy related innovations take place both in the big Nordic cities with universities and research centres and at the sites where raw material is acquired.

Chapter 10

TOURISM:

A new economic driver?

Authors: Lise Smed Olsen & Timothy Heleniak

Maps and data by: Shinan Wang, Linus Rispling, Timothy Heleniak, Julien Grunfelder, Johanna Roto, Hjördís Rut Sigurjónsdóttir & Anna Berlina

Tourism has become big business and a key services export for many economies around the world. Tourism contributes to job creation and regional economic development (OECD, 2014).

The importance of the tourism industry for the Nordic economies has, moreover, mandated the development of national and regional tourism strategies across the region. Most of these strategies incorporate the principle of sustainable tourism development (see box).

The role of tourism in regional development strategies is particularly evident in rural and peripheral areas, where, as a result of the socioeconomic changes taking place, tourism is in many places viewed as a replacement industry for traditional rural livelihoods (Hall et al., 2009), or as a complement to traditional, often male-dominated industries. However, as it is also evident in this chapter, tourism plays a role in both the rural and urban areas of the Nordic Region. The reasons why tourists travel to the Nordic Region are many and include for example – nature-based experiences, coastal tourism, culture experiences, urban tourism, and business meetings and conferences. These types of tourism experiences do however vary significantly between regions.

Current trends in tourism, globally, point towards shorter trips, either domestic in nature or closer to home, and to a search for more ‘authentic’ experiences. Holidays remain by far the main reason for taking an international trip (71%) ahead of business travel and visiting friends and relatives. More people fly than use their cars or other means of transport (OECD, 2014:23).

As will become evident in this chapter, the highest shares of visitor numbers in most Nordic Regions are comprised by domestic tourists and visitors from neighbouring countries. One of the most popular ways of measuring tourism is to count the number of overnight stays. This approach will be utilised in this chapter. In the Nordic context, Iceland has experienced significant

Nowhere else in the Nordic Region have visitor numbers increased as much as in Iceland where the highest average growth of 176% was observed in Suðurnes.

growth in tourism numbers to destinations across the country during the period 2008-2014 while Swedish regions have also seen a remarkable growth in overnight stays during the same period. In 2014 the total numbers of overnight stays were highest in the region of Syddanmark, closely followed by those in the capital regions of Sweden and Denmark.

Iceland the stand-out in a mixed picture for overnight stays

Figure 10.1 illustrates the changes in overnight stays from 2008 until 2014. What immediately stands out on

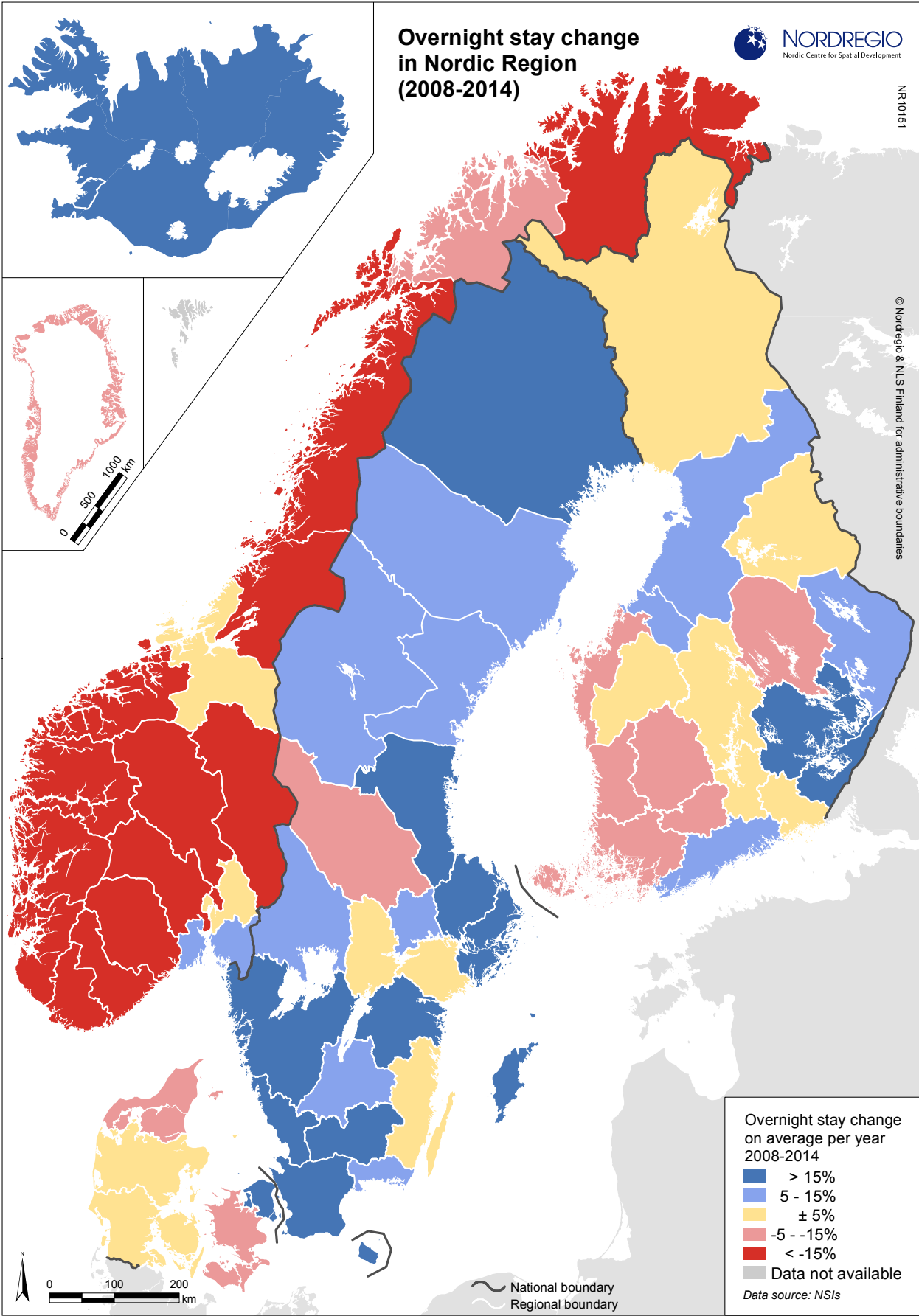


Figure 10.1: Overnight stay change in Nordic Region, 2008-2014. Faroe Islands: No data

Sustainable tourism development

The overall definition of sustainable tourism development as presented by the UNEP and UNWTO (2005) is: "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities." Sustainability principles refer to ensuring a balance between environmental, economic, and socio-cultural aspects of tourism development.

Environmental sustainability refers to development that ensures preservation of biological processes, biological diversity and biological resources. The most significant environmental impact from the tourism industry is caused by transport and energy consumption in buildings. In describing the role of the tourism industry in the green economy, the OECD (2013:7) states: "Due to tourism's cross-cutting nature and close connections to numerous sectors at destination and international levels, even small improvements toward greater sustainability will have important impacts in the shift towards more sustainable, cleaner and low-carbon economic growth."

Economic sustainability involves ensuring that the revenue from tourism activity benefits, as far as possible, the destination itself and the regional economy more generally. The use of local products and the local labour force are important in strengthening the economic benefit from tourism. Socio-cultural sustainability refers to peoples' need to be in control of their own life, culture and the use of their surroundings. With growing tourism numbers the experience of the local population in popular destinations may become increasingly negative. As such, they should be involved as closely as possible in tourism infrastructure and strategy development (Kaae, 2011).

the map is that all of the Icelandic regions have experienced an average increase of 15% or more in overnight stays during the period 2008-2014. In fact, nowhere else in the Nordic Region have visitor numbers increased as much as in Iceland where the highest average growth of 176% was observed in Suðurnes, which is the region

In terms of regional development it is notable that all Icelandic regions have attracted tourists and thereby benefited from increased incomes.

where the international airport and the Blue Lagoon are located. Most Icelandic regions had an increase of more than 100% with the lowest increase of 62% in Vesturland. In terms of regional development it is notable that all Icelandic regions have attracted tourists and thereby benefited from increased incomes. After the Icelandic regions, the region of Etelä-Karjala in Finland has seen the largest increase in visitor numbers with an increase of 35% during the period 2008-2014. Thus, growth in tourism numbers has been substantial in Iceland compared to elsewhere in the Nordic Region.

The Icelandic tourism industry faced a number of significant challenges during the period, from the financial crisis in 2008 to the 2010 eruption of Eyjafjallajökull. These potentially negative events were however turned into a relative success story since the eruption made the news worldwide and fed into the award-winning "Inspired by Iceland" campaign. Further, the high growth of the tourism sector in Iceland is in large part due to the success of the so-called 'hub and spoke' model which was introduced by Icelandair in 1998 using Keflavik airport as its main hub. This has allowed Iceland to attract international visitors from a number of key geographic source markets by offering direct flights to an increasing number of destinations (Promote Iceland, 2013).

In Sweden also a number of regions have seen significant increases in visitor numbers, including the northernmost region of Norrbotten, and the regions of Skåne, Västra Götaland, Halland, Kronoberg and Gotland in the south. Gävleborg, Uppsala and the capital region of Stockholm also experienced an increase of more than 15% in overnight stays. Generally, there has been an upward trend in overnight stays in Sweden. Moreover, although Dalarna witnessed the largest average decline in tourist numbers - some 9% - during the period 2008-2014

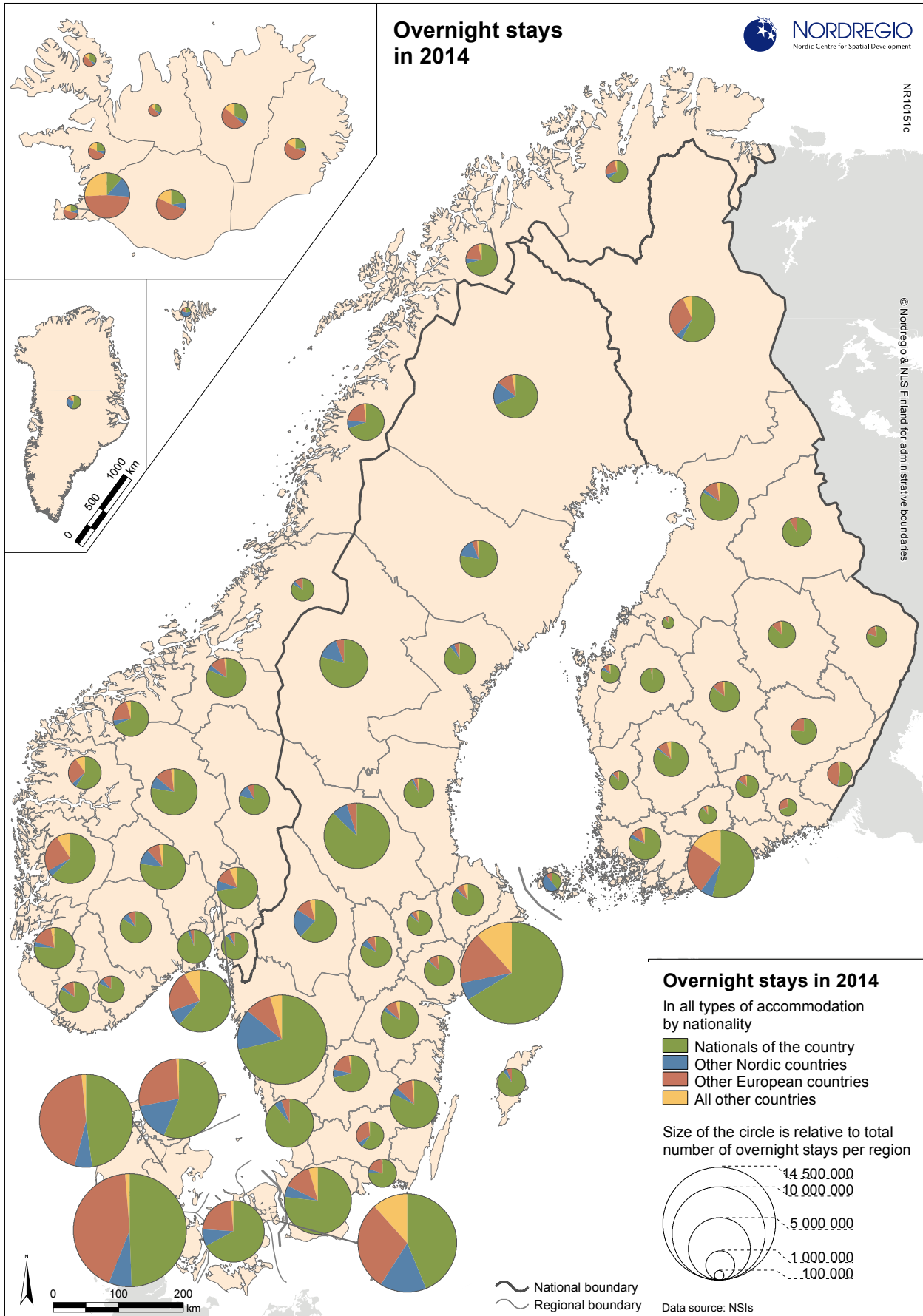


Figure 10.2: Overnight stays in 2014

Looking at the number of overnight stays, the highest numbers are found in the region of Syddanmark in Denmark with more than 14 million in 2014.

it nevertheless remains one of the most visited regions in Sweden. The increasing number of airlines operating routes into the country has been highlighted as one of the primary contributing factors to the growth of tourism in Sweden.

A more varied development is evident in Finland. Here the two regions located in the south eastern part of the country, Etelä-Karjala and Etelä-Savo are the only regions witnessing increases of more than 15% in overnight stays during the period in question. The regions of Pohjois-Karjala, Keski-Pohjanmaa, Pohjois-Pohjanmaa, and Uusimaa saw increases in overnight stays of between 5-15%, while a number of regions had either a small increase or decrease in visitor numbers. The most significant downward trend was seen in Kanta-Häme with -14%. Åland also experienced an average decrease in overnight stays of -14%.

A rather different picture is evident in Norway where the majority of regions have seen an average decrease in overnight stays of more than 15% during the 2008-2014 period, with the most substantial being in Sogn og Fjordane with a change of -48%. Visitor numbers in the capital region of Akershus and Sør Trøndelag have seen a slight decline while Østfold and Vestfold neighbouring Akershus are the only regions that have witnessed an increase in visitor numbers of 14% and 7% respectively over the period. This can in part be explained by the problems caused by the financial crisis combined with high exchange rates for the Norwegian Krone during this period.

In Denmark, the capital region has seen a substantial average growth of 29% in overnight stays during 2008-2014. The regions of Syddanmark and Midtjylland have seen a slight upward trend in overnight stays, whereas the opposite trend has been evident in Nordjylland and Sjælland.

Regional data is not available for Greenland, but from the national average, the country has experienced an average decline of 11% in overnight stays during 2008-2014. Data is not available for the Faroe Islands.

Figure 10.2 provides an overview of the number of overnight stays in all types of accommodation in 2014 and the nationality of the tourists. First, looking at the number of overnight stays, the highest numbers are found in the region of Syddanmark in Denmark with more than 14 million in 2014, where LEGOLAND is a flagship destination, followed by the capital regions of Sweden and Denmark (both more than 11 million). Generally, in national comparison, the capital regions have the highest numbers of overnight stays in the Nordic Region. Particularly high visitor numbers are also found in the region of Midtjylland in Denmark and Västra Götaland in Sweden both with more than 9 million overnight stays in 2014. In reference to figure 10.3 it is interesting to note that although regions such as Finnish Lapland and Dalarna in Sweden, both important winter tourism destinations, have experienced a downward trend in overnight stays in the period 2008-2011, they have maintained high visitor numbers in a national comparison.

Tourist diversity concentrated in hot spots

Looking at the origin of the tourists it is evident that the share of international tourists is generally higher in Iceland compared to the rest of the Nordic Region. The Faroe Islands had the highest share of 72% of overnight stays by nationals from other Nordic countries in 2014. More than half of the tourists with overnight stays in Greenland were Danish nationals. For most regions in Norway, Sweden and Finland the share of overnight stays of nationals from their own country comprised more than two thirds of the totals in 2014. An exception to this is found in the most visited regions that have a slightly higher share of international tourists. In Denmark the three regions with the highest visitor numbers have more than 50% international visitors.

Figure 10.3 shows the number and national distribution of international tourists, excluding, domestic tourists, in 2014. Interestingly, with the exception of the capital region, all regions in Denmark have a dominant share of German tourists, particularly Syddanmark and Midtjylland. Coastal tourism, especially along the west coast of Denmark, is a significant attraction for German tourists. Similarly, a number of regions in Finland had a dominant share of Russian tourists in 2014, particularly Etelä-Karjala and Etelä-Savo which also had the highest growth in visitor numbers in Finland during the period 2008-2014. In the southern part of Sweden, German tourists also comprise a large share of the in-

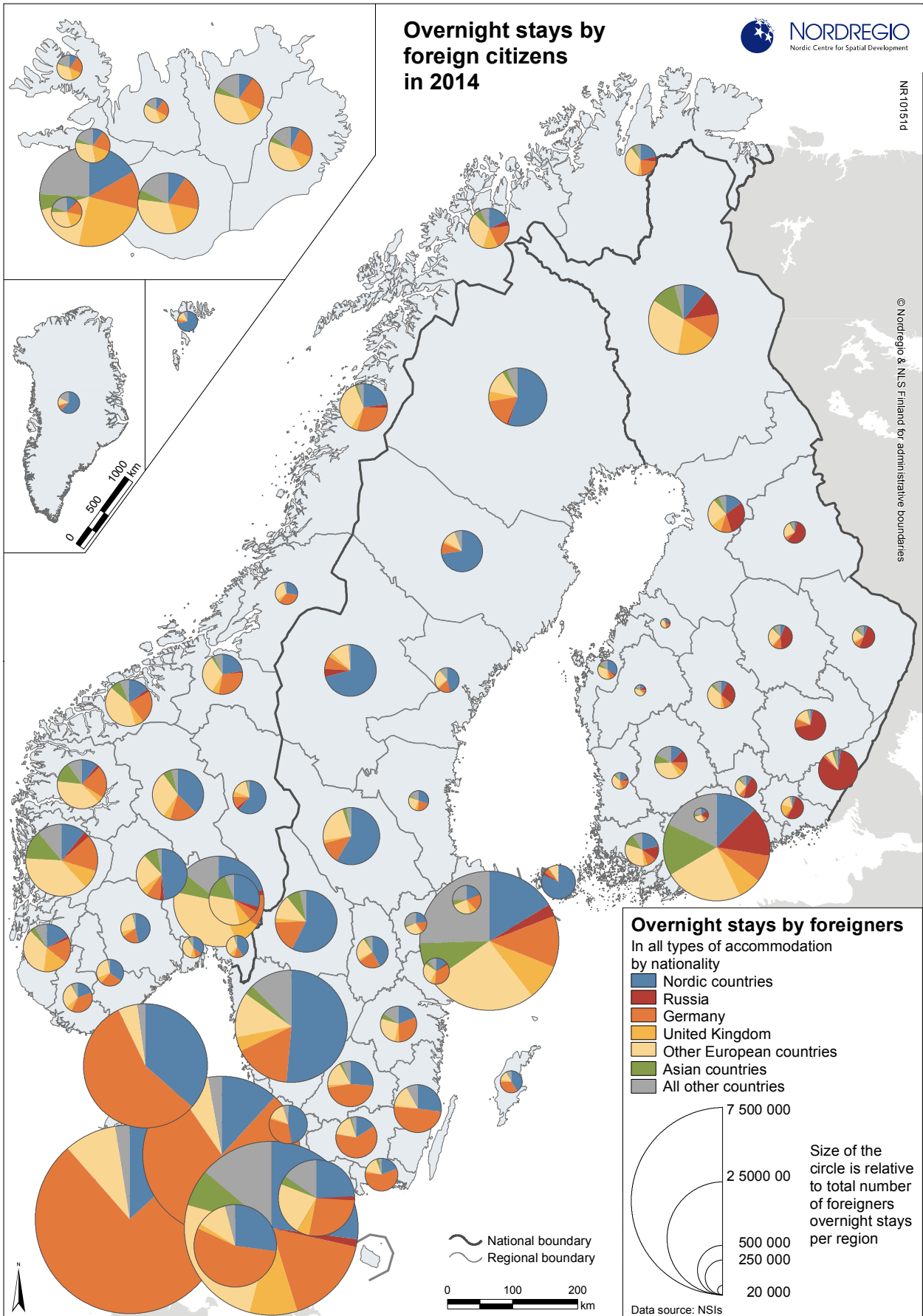


Figure 10.3: Overnight stays by foreign citizens in 2014

ternational tourists, whereas most regions in the rest of the country have a high share of tourists from the other Nordic countries. Norwegian nationals comprised the largest share of international overnight stays in Sweden in 2014, most of them in regions bordering Norway (Tillväxtverket, 2015). In Norway a clear trend is that a large share of the international tourists are from other European countries. The largest numbers of overnight stays are still nevertheless made by visitors from Sweden and Denmark (Innovasjon Norge, 2015). Generally, the capital regions and their neighbouring regions have the most even mix between the different categories of international tourists. Other regions attracting a varied mix of international tourists, including Asian and 'all other' countries, are located either in Iceland, along the Norwegian coastline, or in Finnish Lapland.

Cruise Tourism is increasing in the Nordic Region

Cruise tourism is a form of mass tourism, and as such it has a number of implications in terms of sustainable tourism development, especially in smaller rural destinations. Cruise tourism involves the short-term daily influx of large numbers of people, which can lead to negative experiences for both local residents and land-based tourism. Cruise tourism in a sense is a competitor to land-based tourism because the cruise ships become a substitute for air travel, they provide accommodation, food, and activities. In some cases, because the ships are destinations in themselves, passengers will even choose to stay on board the vessel instead of disembarking. While cruise tourism brings in more visitors the economic impact is relatively small and usually concentrated to a few actors (Brida & Zapata, 2010; Klein, 2011). However, especially in the Arctic, the remoteness, isolation, small populations and lack of infrastructure makes some destinations difficult to develop, and while it can be seen as a competitor to land-based tourism, cruise tourism can also be seen as a supplement to small destinations that are not yet mature enough to fully support land-based tourism (Fay & Karlsdóttir, 2011).

Figure 10.4 shows the number of cruise ship calls to the Nordic and Baltic Sea regions in 2014 and the annual average change in passenger numbers from 2011 to 2014 (with the exception of Greenland where only data from 2015 is available). The map only includes international cruise ship passengers and calls. It does not show regular, scheduled ferry connections such as Hurtigruten in Norway. The development in the Nordic Arctic region is introduced first, followed by the Baltic Sea region (Northern Norway, Norrbotten and Finnish Lapland are here included as part of the Arctic).

Cruise tourism can be seen as a supplement to small destinations that are not yet mature enough to fully support land-based tourism.

Nordkapp in Northern Norway received the most passengers in 2014 in the Nordic Arctic. Nordkapp received 122 000 passengers from 109 ports of call. In Northern Norway, cruise ship tourism is centred on a few ports, the largest, in terms of passenger numbers, also include Tromsø (112 000 passengers), followed by Leknes (60 000 passengers). Longyearbyen in Svalbard had 37 100 passengers in 2014, and is another destination with a clear upward trend in passenger numbers in the period 2011-2014.

In Iceland the largest cruise ports in 2014 in terms of passengers were Reykjavík (105 000 passengers from 91 ports of call), Akureyri (73 000 passengers), and Ísafjörður (40 000 passengers). An upward trend can be observed for all three destinations in the period 2011-2014. A number of other cruise tourism destinations exist around the Icelandic coastline, and most have seen increasing visitor numbers.

In the Faroe Islands, Torshavn is the primary destination for cruise ships with the highest number of the 35 calls in 2014. Passenger data for the Faroe Islands is only available at the national level. The Faroe Islands have seen an average increase of more than 10% in passenger numbers during the period 2011-2014.

Cruise ships visited almost 20 cruise destinations across Greenland in 2015. Major ports in terms of number of calls (above 40) in 2015 were Ilulissat, Maniitsoq and Kangerlussuaq. In addition, Uummannaq, Qeqertarsuaq, Qaqortoq and Nuuk had more than 20 calls per port. Qaqortoq had the most passengers, almost 14 000 from 23 ports of call, while Ilulissat had the highest number of 51 ports of call but a total of 8600 passengers, indicating that Qaqortoq receives larger cruise ships.

In the Baltic Sea region, in terms of passenger numbers, Copenhagen was the largest port in 2014 receiving a total of 740 000 cruise tourists (from 313 ports of call), followed

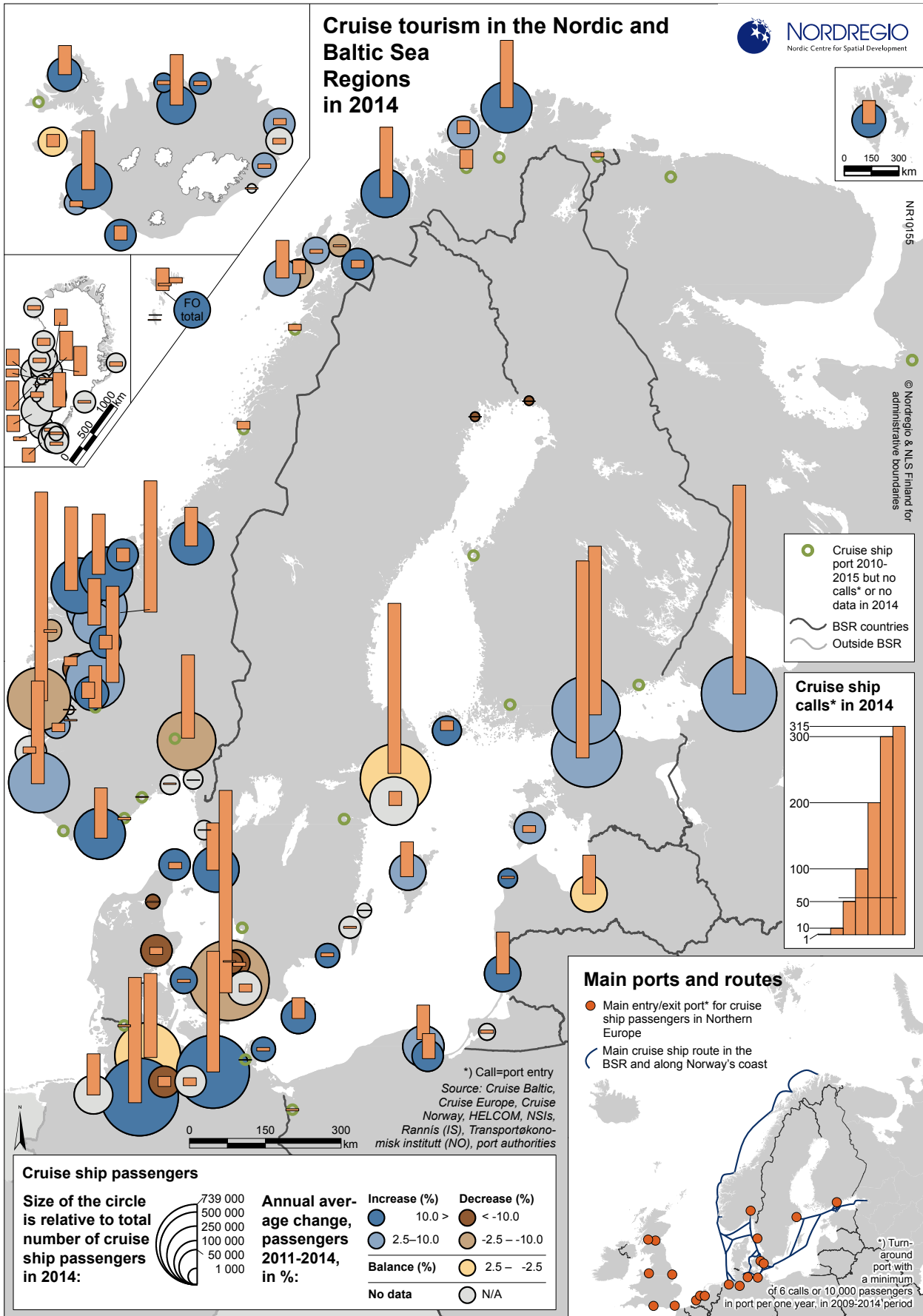


Figure 10.4: Cruise tourism in the Nordic and Baltic Sea Regions in 2014

by Hamburg and St. Petersburg. Stockholm with 470 000 passengers and Helsinki with 420 000 passengers were also popular cruise tourism ports in 2014. In the southern part of Norway the main concentration of cruise calls is to be found along the west coast with Bergen a particularly popular destination with 323 000 passengers in 2014, followed closely by Geiranger and Stavanger. Overall, the highest passenger numbers in the Baltic Sea Region are to be found in the capitals and other urban areas. Most places have seen an upward trend in the period 2011-2014.

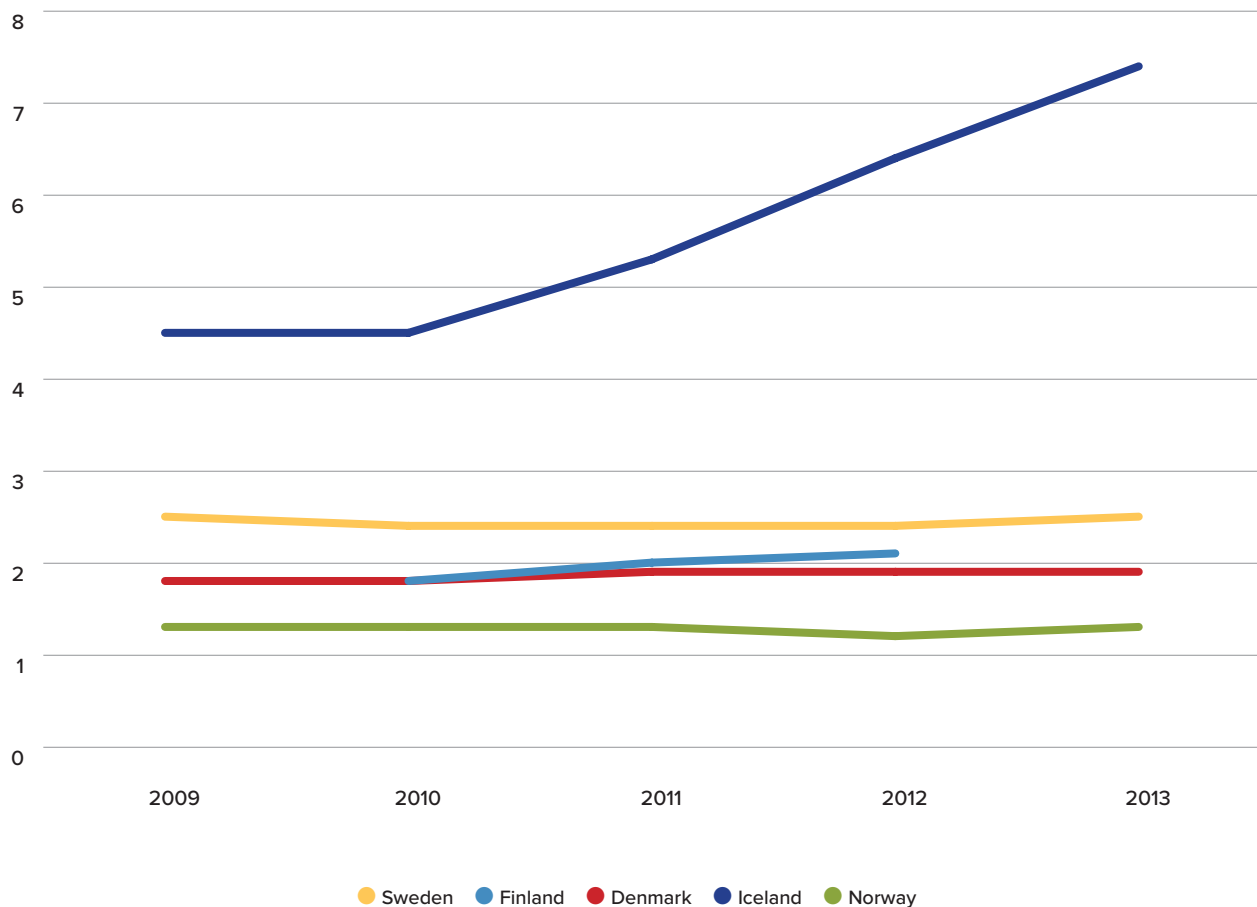
The bottom right corner map of figure 10.4 indicates the main ports and routes in the Baltic Sea region. The ports marked with red are the main entry and/or exit ports for cruise ship passengers in Northern Europe. In these cities cruise ship passengers will often stay for a longer time, and local revenue from cruise tourism will thus also be higher. Several of the most important of these cruise tourism entry/exit points, often referred to as turnaround ports, are located outside the Nordic Region, but serve as a starting or ending point for cruises that include short stopovers in Nordic ports in their itin-

eraries. Although Nordic destinations like Oslo, Gothenburg, Copenhagen, Malmö, Stockholm and Helsinki are also important entry/exit points for cruises in Nordic waters, major turnaround ports in the United Kingdom, the Netherlands or Germany remain the primary competitors to these Nordic ports.

Macroeconomic impact of tourism in the Nordic countries

The Tourism Satellite Account (TSA) is a standard statistical framework and the main tool for measuring the weight of tourism from a macroeconomic perspective. It focuses on the description and measurement of tourism in its different components (domestic, inbound and outbound). It also highlights the relationship between consumption by visitors and the supply of goods and services in the economy, principally those from tourism industries. With this instrument, it is possible to estimate tourism GDP, and to establish the direct contribution of tourism to the economy (OECD, 2014).

Figure 10.5: Tourism as a share of GDP, 2009-2013



The growing importance of tourism for the Icelandic economy is reflected in macroeconomic indicators related to tourism such as inbound tourism as a percent of GDP. For the other Nordic countries, tourism as a share of GDP is between 1.0 and 2.5 percent and has shown little increase. In Iceland, inbound tourism expenditure as a share of GDP increased from 4.5 to 7.4 percent between 2009 and 2013 (figure 10.5). Only in Iceland, is tourism's share of GDP above the average for all OECD countries where in 2012, tourism made up 4.7 percent of GDP (OECD, 2014).

Concluding comments

This chapter has shed light on the development in the statistics on overnight stays in the Nordic Region, which demonstrated that Iceland has experienced an extensive growth in tourism numbers throughout the country in the period 2008-2014. Swedish regions have also seen a remarkable growth in overnight stays during this period.

In 2014 the total numbers of overnight stays were highest in the region of Syddanmark, closely followed by the capital regions of Sweden and Denmark. Tourism numbers in Denmark (with the exception of the capital region) are strongly supported by, and dependent on, the neighbouring German market. Similarly, in 2014 Finnish regions, particularly in the eastern part of the country, saw high visitor numbers from Russia.

Following domestic tourists, who generally constitute the largest group in terms of overnight stays, are nationals from elsewhere in the Nordic Region. This is particularly evident in the Faroe Islands.

In addition to overnight stays, tourism numbers also include cruise tourism, which has been growing in recent years across the Nordic Region. Nordkapp is the most visited destination in the Nordic Arctic region while Copenhagen is the most visited in the Baltic Sea region. Cruise tourism as a form of mass tourism has been noted to have implications in terms of sustainable tourism development, especially in remote, sparsely populated areas. For remoter destinations, for example in Greenland, cruise tourism can however be viewed as a significant supplement to land-based tourism.

Iceland in particular has been successful in attracting a mix of international tourists, which has in part been explained by the launch of its comprehensive branding strategy. The Nordic Council of Ministers has also recently launched a common branding strategy based on the realisation that the outside world defines the Nordic Region as one unit (and one destination), and the further away, geographically, potential tourists are located the more this is the case (Nordic Council of Ministers, 2015). At the regional level, based on a similar realisation about the cross-border region, a common

Iceland in particular has been successful in attracting a mix of international tourists, which has in part been explained by the launch of its comprehensive branding strategy.

branding initiative, co-funded by Interreg, has been initiated by the regional destination management organisations in Northern Norway, Norrbotten and Finnish Lapland called Visit Arctic Europe. The purpose of the project is to develop new "product packaging solutions" across the borders and to develop approaches designed to promote joint marketing (Olsen et al., 2016).

While the volume of tourists visiting a region provides an indication of the implications for local job creation, this chapter has not provided an overview of the significance of tourism for regional economies and jobs. A primary challenge here is the very nature of the tourism industry as it overlaps different economic sectors thus complicating data collection. Another specifically Nordic challenge here is that when using regional data from national statistical institutions this data must either be directly comparable across all Nordic countries or it must allow for data harmonisation. In reality however it is often the case that the regional economic impact of tourism is not uniformly documented across the Nordic countries making direct comparisons problematic. However, in different ways the regional economic impact of tourism is being documented in the Nordic countries (see for example VisitDenmark, 2015).

Those areas that could be highlighted as having specific potential for Nordic collaboration on tourism development include common destination marketing initiatives to attract international tourists and, as tourism grows, efforts to ensure that it does so in an environmentally, socially and economically sustainable manner. In addition, the more widespread use of indicators to understand the regional economic impact of tourism in the Nordic Region may be helpful for future tourism policy development.