

Nordic perspectives on demography

– A background report for the project
on coastal societies and demography

Klaus Georg Hansen, Rasmus Ole Rasmussen
and Johanna Roto (editors)

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Nordic co-operation

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 co-operation between the Nordic parliaments and governments. The Council consists of 87 parliamentarians from the Nordic countries. The Nordic Council takes policy initiatives and monitors Nordic co-operation. Founded in 1952.

The Nordic Council of Ministers

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

Nordregio – Nordic Centre for Spatial Development

works in the field of spatial development, which includes physical (spatial) 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 and analysis. Nordregio was established in 1997 by the Nordic Council of Ministers. The centre is owned by the five Nordic countries and builds upon more than 40 years of Nordic cooperation in its field.

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1. Preface

This report is part of Nordregio's contribution to the project Coastal Societies and Demographic Challenges in the North Atlantic.

The project has been conducted in co-operation between Nordregio in Sweden and NORA on the Faroe Islands and in close co-operation with the Canadian partners at the Harris Centre, Memorial University in St. John's in Newfoundland and Labrador, Canada. The primary contact at the Harris Centre has been Honorary Research Professor Keith Storey.

The project management has been shared between Klaus Georg Hansen and Lars Thøstrup. The project tasks have been divided between Nordregio and NORA with the production of report and policy brief provided by Nordregio as two separate publications and the administration of the project provided by NORA.

The project has been funded by the Nordic Council of Ministers program for co-operation with the Nordic Council's member countries' neighbours to the west and in the North Atlantic.

The funding for the project was allocated in 2010. The project was launched in summer 2011 and finished in autumn 2012.

Except for the production of this report and the policy brief the main outcome of the project has been the workshop at the Harris Centre, Memorial University in St. John's during 17th and 18th October 2011.

A first draft of this report was circulated in hard copy at the workshop in St. John's in October

2011. It served as an introduction to the West Nordic perspective on demography in the Nordic part of the North Atlantic Rim.

At the workshop twenty researchers and policy makers from Newfoundland and Labrador met with eight researchers and policy makers from primarily the West Nordic countries.

The workshop gave the participants an excellent chance to exchange knowledge and experiences in relation to the demographic challenges they are dealing with in the different parts of the North Atlantic.

The outcome of the conference has been published on the website of the Harris Centre, Memorial University. The web address is: http://www.mun.ca/harriscentre/policy/conferencesworkshops/nora_nordregio/index.php

It is not in the scope of this report to include the results from the workshop at the Harris Centre the 17th and 18th October 2011. The results from the workshop have been incorporated into the policy brief published parallel to this report.

Nordregio will like to take the opportunity to thank the Nordic Council of Ministers for the funding for the project and NORA for the co-operation in the project and not least the Harris Centre, Memorial University, in St. John's in Newfoundland and Labrador, Canada, for a very fruitful exchange of experiences about the demographic development in our northern areas.

The editors
Stockholm, July 2012

2. Introduction

The initial focus of this report is on the challenges for the West Nordic area in meeting the on-going demographic changes. These challenges are not special for the West Nordic area. During much of the analysis the focus will thus be just as much on Norden as a whole, and with references to Europe, the Arctic and globally.

It is important to be aware of the fact that these on-going trends in terms of demographic change manifest themselves in different combinations globally. In this context it is quite

relevant to refer to the experiences of the other countries within the Nordic setting as well as those from across Europe, in the Arctic and indeed globally.

Map 1 shows the geographical scope of this report. The North Atlantic Rim connecting Europe with North America is clear. It gives the West Nordic area a geographically strategic position in the relations between Europe, Norden, Canada and the Arctic.



Map 1: The map shows the North Atlantic Rim connecting Europe with North America. The geographically strategic position of the West Nordic area in relation to Europe, Norden, Canada and the Arctic is obvious.

The on-going socio-economic changes in coastal regions all over the world can be characterized as a “double movement” (Holm, 2001; Johnsen, 2005).

On one hand reduced options for access to fishery resources due to shrinking stocks, new technologies increasing harvesting efficiency, and expanding national and international fisheries management systems. In addition, the expansion of fish farming activities should be included, as fish farming today cover around one third of the total seafood production. On top of that recent years has shown an increased focus on local more environmental friendly and sustainable small scale fisheries adjusted to local needs.

On the otherhand, however, the tourism sector has been expanding, leading to situations where communities previously dependent on fisheries are changing their focus towards an emerging recreational potential for coastal tourism. These potentials are primarily based on the specific qualities of the coastal landscapes and the opportunities provided in that connection. At the same time the – otherwise vanishing fisheries communities – provide attractive settings both for short term visitors and for second homes.

These changes involves substantial economic and social processes where issues such as economic, technological, social, political and cultural reconfigurations are decisive, and with demography playing a key role, and in many ways “paving the way” for to what extend plans and ideas may become realities!

In this context comparing the policies, processes, and the results in the North Atlantic rim is considered being especially advantageous due to many similarities in relation to both background and contemporary characteristics, and with demography playing a pivotal role, a natural starting point would be to outline the contemporary demographic challenges

in order to see what constraints these conditions may generate.

As the purpose of this report has been to provide some introductory background information regarding the Nordic countries to the project participants, the publication relies heavily on excerpts from a number of existing reports from Nordregio where minor adjustments have been made in order to comply with the overall theme of this report and its focus on coastal communities. The contributing reports encompass the following works:

- Rasmus Ole Rasmussen and Johanna Roto (2009). Demographic Challenges to the NORA region. An OECD expert report. Nordregio 2009.
- Klaus Georg Hansen, Rasmus Ole Rasmussen and Johanna Roto (2011). Demography in the Nordic countries – A synthesis report. Nordregio Working Paper 2011:9. Stockholm. Nordregio.
- Rasmus Ole Rasmussen et al. (2011). Megatrends.
- Lisbeth Greve Harbo, Rasmus Ole Rasmussen and Freia Lund Sørensen (201x). Selvstyrets interesse i den kommunale planlægning [working title]. Nordregio. Forthcoming.

In chapter 3 the focus is on basic demographic parameters allowing a more general discussion of demography as seen from more overall Nordic perspectives.

In chapter 4 the focus is turned towards the West Nordic area where the demographic parameters are analysed in more detail.

In chapter 5 the focus is further narrowed down on special regional issues within the West Nordic area.

Finally, some general conclusions are made in chapter 6 emphasizing the complexity of the demographic processes and the important role of relevant policy measures to be taken.

3. The Nordic region^A

Many rural areas are exposed to situations where schools are being closed due to the declining number of children, local shops are disappearing in the smaller towns, while local governments are struggling with pressure on the local public budgets. Parallel to this new subway stations and residential areas are shooting up in the urban areas. This is just a small glimpse of the visible consequences of the on-going global urbanisation trends. In the Nordic coastal societies these consequences are often even more pronounced.

Many of these daily life experiences are related to changes in demography. This chapter will identify the major categories of challenges caused by the trends in the on-going process of

demographic change.

These major categories of challenges and the corresponding trends are analysed according to the following set of parameters:

- The characteristics of the trends and how they are challenging society;
- The short-term and long-term potential consequences of the trends;
- The trends viewed in global, European and Nordic settings;
- The major policies which have been developed in the Nordic countries to deal with these trends;
- The possible measures and initiatives relevant in the different Nordic settings.

The major challenges

The range of demographic challenges depends on the extent to which and how a region is affected by demographic change.

At one end of the scale, we may have those regions with a significantly declining population and at the other end we have regions with a dramatically growing population. At both extremes, the changes are striking but in between the extremes many regions experience change at a far lower level of intensity.

Such a superficial description of a region as either being a plus or a minus region is, of course, not enough to identify the real challenges facing a specific region. The specific elements involved needs to be described in greater detail.

The major challenges to the regions, most significantly affected by demographic change can be organised into a typology consisting of six categories based on the components involved in the processes of change:

- Settlement
- Age
- Gender
- Birth and death
- Migration
- Socio-economy

The category of settlements in Norden includes everything from large urban capitals to the most isolated and peripheral, little, coastal settlement. The different types of settlement are not affected the same way by the urbanisation trends. The categories age, gender, birth, death and migration are the basic demographic elements and are measured in numerical terms. The sixth category – socio-economy – is more complex in its nature. The socio-economic elements are thus explained both in terms of numbers and in terms of socio-economic relations.

All six categories will be elaborated in general terms in this chapter. They will be analysed and discussed more thoroughly within the context of a broader set of references to the Nordic countries.

Looking at and discussing each of the six categories independently will not reveal the full picture and thus the true challenges facing a region. It is not until the six categories are combined that a reliable picture of the consequences for a region will become visible.

The combination of the different challenges will create a very complex picture, which only in the prognosis can give us a reasoned scenario of a possible future.

A: This chapter is mainly based on excerpts from Klaus Georg Hansen, Rasmus Ole Rasmussen and Johanna Roto (2011). Demography in the Nordic countries – A synthesis report. Nordregio Working Paper 2011:9. Stockholm. Nordregio.

Demographic matrix		Categories of challenges					
		Settlement	Age	Gender	Birth & death	Migration	Socio-economy
Analytical parameters	Characteristics of the trends						
	Short-term and long-term consequences						
	Global, European and Nordic settings						
	Major policies developed in Norden						
	Possible measures and initiatives						

Table 1: *The matrix of categories in relation to challenges and analytical parameters.*

Based on the matrix broader themes within the context of demographic change can be analysed by

including several of the categories and the parameters

Settlement structure

For settlements, the focus is both the location and the size of the population of the settlement itself and the area around the settlement.

As sparsely populated areas with primarily coastal settlements are so wide spread in the Nordic countries it is one of the main topics. This is, in a European setting a unique challenge to the Nordic countries, but a challenge, which compares very well to the situation in for instance Canada. At the same time the Nordic countries is also characterised by large areas with a high population density. The trend is that smaller places are getting smaller and the bigger places are getting bigger.

The EU defines a region with a population density lower than 12.5 inhabitants per square kilometre as a region with a low population density. It is also referred to as being a sparsely populated region.

In a European perspective, a majority of the NUTS 3¹ regions, which are sparsely populated are found in the Nordic countries. Only a few NUTS 3 regions in Spain and in northern Scotland are also characterised as sparsely populated regions.

The Nordic countries has always been characterised by huge parts being sparsely populated. Over centuries, the core regions have shifted, but the overall image of where people are living in the Nordic countries remains the same.

For the Nordic countries approximately one third of the NUTS 3 regions are sparsely populated. If the population density of 12.5 inhabitants per square kilometre is measured on municipal level, i.e. smaller areas then the NUTS 3 regions then 46 % of the municipalities can be classified as sparsely populated. These 46 % of the municipalities covers 80 % of the ice-free land areas in the Nordic countries but these vast areas are only populated by 10 % of the total Nordic population.

The regions in the Nordic countries with a high population density (defined as a population density over 12.5) are primarily found in Denmark and in the southern parts of coastal Norway, Sweden and Finland and also around some larger northern cities like Reykjavik, Tromsø, Trondheim, Östersund, Sundsvall, Umeå, Luleå and Oulu.

In the sparsely populated areas, two types of urbanity can be found. One type of urbanity in the sparsely populated is areas with one dominating city typically around some kind of real industrial activity. Examples are Kiruna, Rovaniemi and Reyðarfjörður. Another type of urbanity in the sparsely populated areas is rough areas with only a very few inhabited places and almost no rural housing and often dominated by coastal settlements. These areas are mainly categorized as urban, because no real rural activity is possible in these areas. Examples are all of Greenland, the Ísafjörður peninsula and the Varangerhalvøya area.

In each of the four countries Sweden, Finland Norway and Denmark two core areas with both a high population density and a high degree of urbanisation can be identified. They are Oslo, Stavanger, the Stockholm-Västmanland axis, the Øresund region (Skåne and Zealand), Aarhus, the Helsinki-Tampere axis and Vaasa.

¹ NUTS = Nomenclature of Territorial Units for Statistics, a geocode standard for referencing the subdivisions of countries for statistical purposes. It is a standard, which has been developed and regulated by the European Union, including all member states as well as adjacent states such as Turkey, Iceland, Norway and other countries where regional data are considered important for EU. Below NUTS 0 which is registrations at national levels, a hierarchy of three NUTS levels is established, with NUTS 1 at the most coarse and NUTS 3 being the most detailed level.

The sparsely populated areas

After World War II the sparsely populated areas have experienced a general trend of net outmigration. The outmigration has primarily been a response to a combination of a surplus population and a labour market not being able to provide enough job opportunities. Until the end of last century, this outmigration was in general not a threat to the stability of the local communities due to a higher net reproduction rate providing the maintaining of a stable local population.

This situation – a high reproduction rate and a high outmigration rate providing a population surplus affecting the global population – is still the situation in many countries and regions globally, but it is becoming still rarer. China, which used to be referred to as the big challenge due to its large population and population surplus is getting closer to a stable population, and even parts of India are moving in the same direction. Among the continents, only Africa is still considered being a general generator of population surplus.

In the Nordic setting, a similar trend as the European has taken place within the last decades, but in the Nordic countries, the potential consequences can be much more severe due to the vast sparsely populated areas. Left alone the sparsely populated areas are experiencing a situation where the outmigration is draining the areas for younger generations and people in the productive age.

In spite of the many years with a dedicated policy to enhance development in remote and rural areas, i.e. “Distriktspolitikk” the trend is also a challenge in Norway. The four largest cities in

Norway are thus experiencing the highest growth of citizens in the age group 15-24 years.

Thus as an overall conclusion can be pointed at, the prospect of the sparsely populated regions in the Nordic countries through a step stone process probably will go from sparsely populated to almost or completely depopulation in the next 40 years – and probably with many coastal settlements completely abandoned.

This is the situation that local, regional and national policy-makers are facing at the beginning of the second decade of the 21st century.

If the policy-makers do not intervene, the net outmigration will most likely continue until many regions are more or less abandoned, in terms of ‘normal’ civil societies. The areas might still have isolated camps around extraction industries and some recreation activities going on. It will in any way be a challenge for the administrations to adjust the surrounding society and its services to a constantly and not regulated changing situation.

If, on the other hand, the policy-makers decide to act and to facilitate the demographic changes, then the policy-makers are facing, basically, two very different options. Either they can decide to support a structured and organized closing down of (parts of) a region, or – if the political strategy is to keep a region viable with the hitherto structures – the authorities can make a dedicated effort to revitalize that specific region. A range of options for stimulating the vitality and societal sustainability of a region or an area is discussed in further details in chapter 5, 6 and 7.

National and international setting

Migration is one of the five basic categories when studying demographic changes. Among these five categories, migration seems to follow more or less its own pattern.

When analysing settlement structures, age pyramids, gender distribution and the natural population change through birth and death – what could be characterized as the four basic demographic categories – it is striking how close connected these four categories seem to be.

The reason for the category of migration not to follow the pattern of the other four is the dynamic nature of migration contrary to settlement, age, gender, birth and death, which are of a more static structure.

In that way the trends in migration might to some extent reveal itself as a foretaste of which way the demographic trends in general might turn. Analysing the category migration trends gives a picture of, how the other basic categories might develop over the coming years.

Migration and the mechanisms behind are both of an economic nature and of a more social and cultural nature and the mechanisms can be of both structural and cyclic character.

Some of the dominating economic push and pull elements are respectively demographic pressure and tough living conditions versus better paid jobs and prospects for economic wealth. Some of the dominating social and cultural push and pull elements are respectively political oppression versus better conditions for education.

Even though the push and pull mechanisms are evident for many there are conditions, which will make people refrain from moving anyway. Some of the intervening elements are poor health, emotional affiliation, social network, and cost of travelling, distance to destination.

Migration is often divided into national, or domestic, migration (people moving from one place in a country to another place in the same country) and international migration (people moving from one country to another).

The pattern of national migration shows only partly the same trends as the other four basic demographic categories (settlement, age, gender and natural demographic change), but the pattern of international migration shows a very different pattern all on its own as it is driven by other preferences and variables.

Besides, in it influencing on the other basic categories net migration contributes in general the same as the net natural population change to the total population change in an area when looking at a period of a year or more. This means in a region the total population change in general is equally influenced on one hand by in- and out-migration of a region and on the other hand the birth and death rates in the region.

Net out-migration in 2010 is seen in less than 10 % of the NUTS3 regions in Denmark, Norway, Sweden and Finland (i.e. Kainuu, Norrbotten, Bornholm) while net out-migration is dominating in the Faroe Islands, Iceland and Greenland. This illustrates well the step stone process on a Nordic level. The regions and countries with a smaller and more isolated population are in the migration competition losing to the larger Nordic regions and countries.

<i>In-migration matrix</i>		<i>Destination</i>	
		<i>Rural</i>	<i>Urban</i>
<i>Origin</i>	<i>National</i>	Age Social service	Gender Education
	<i>International</i>	Gender Settlement	Emigrant type Settlement

Table 2: A generalised illustration of the challenges caused by in-migration. The type of challenge is varying depending on type of origin and destination of the immigrants.

Looking at in-migration at least two parameters are of vital importance: Where are the newcomers settling and how old are they?

An illustration of some of the challenges in relation to in-migration is shown in Table 2.

Older or early retired people no longer active on the labour market, who move to rural areas, are moving to an area with a much more fragile infrastructure in respect to the needs these older citizens might require. This is a major challenge to the administration in such rural areas. Several strategies have been tested. The main focus in dealing with this challenge has been higher efficiency and cross-sector cooperation.

Another group of in-migrants very different from the first is the young people moving to urban areas, which provide educational opportunities. These young citizens are requiring a different type of facilities and infrastructure, which typically easier have been met as the urban areas have a wider range of possibilities.

These two groups of in-migrants are predominantly domestic migrants, thus they know the basic structure of the social and educational systems, and they tend to be integrated in relatively uncomplicated ways.

When looking at the international in-migration we see migration both to smaller coastal settlements, to other rural areas and to urban areas. Typically migration to smaller coastal settlements or to other rural areas are in relation to major industrial activities and megaprojects such as mining, oil and gas off-shore fields, and huge processing facilities like aluminium smelters, but to some extend also to low paid jobs in relation to primary production (fish processing, seasonal jobs in farming) and services. These migrant workers in the rural areas are often living more or less isolated from the local communities, and they are almost exclusively male. They will not have much affiliation to the local civil society and they tend to stay in the area only as long as there are the special jobs available. Thus the primary consequences for this type of migration is the short term consequences related to the period of time these migrants are in the area before the activity moves to another site.

Migration workers to urban areas – especially the international migrants – are creating yet another set of challenges.

Historically the international migration to the urban regions has been a response to a demand of unskilled working force from labour intensive industries. Consequently the influx has been dominated by people with limited education. Larger influxes of certain groups of immigrants have resulted in long term experiences such as immigration of older family members and eventually ghettoization and segregation of these

migrants. Consequently, the ghettoization and segregation has been a focus theme for both national and local policy making for decades. It is recognised as a very complex theme cross-cutting several issues, especially in relation to the socio-economic aspects involving questions related to housing as well as social welfare, education and labour market structures and development.

The international immigrants can roughly be divided into three types. The first type – dominating the example above – is the passive. They are typically less integrated; they have only a weak affiliation to the labour market and the surrounding society. These immigrants are typically the less educated even illiterate and older generations constitute a significant challenge.

Another group of immigrants is the instrumentally adapted to the labour market in their new country. They might offer a special challenge in the educational system. The third group of immigrants is the focused innovators. They typically have an education and they are to a quicker and to a higher level getting integrated into the society in their new country. This group is not demographically challenging the society in any significant way.

A trend in the policy in the Nordic countries – as well as in the EU – has in the recent years been to focus on attracting international migrants with higher education. Thus, the value of the international migration is seen more and more as an investment in the human capital in the same way as the investment in education itself.

For international migration, the picture for Denmark, Norway, Sweden and Finland shows that no single NUTS3 regions have had a negative international migration. Only the three West Nordic countries, Faroe Islands, Iceland and Greenland, show a negative trend for international migration in 2010 with more people leaving than moving into these countries.

Ageing

Ageing has for several years been considered to be among the most important demographic challenges in Europe in general and definitely also in the Nordic countries. In EU in general the total population has increased by 6.5 % during the last twenty years, but the number of persons aged 65 years or more has increased by 34.8 %.

The process of aging is not a new phenomenon. Since the beginning of the industrialisation in the 18th century average age of the population has steadily increased, and it still

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Again, this is a strong evidence of the effects the globalisation even that the three smaller and remote Nordic countries (Greenland, Iceland and Faroe Islands) are experiencing. So far the four major Nordic countries have been on the winning site of globalisation with more people entering than leaving these countries. Since 2001, this trend of international in-migration to the four major Nordic countries has even been increasing.

A special trend in migration is the counter-urbanisation. One type of counter-urbanisation is caused by economic recession. Most recently, it has been observed in direct connection to the economic crises in Greece. Mostly young people no longer perceive an immediate future in the urban areas and reacts with violent protests to the skyrocketing unemployment rates and hence the growing challenges in maintaining a normal life. A similar situation has to some extent been observed in Iceland after the 2008.

Another type of counter-urbanisation is also relevant to deal with. It is more related to periods with economic boom. Here housing prices and other living conditions are becoming too heavy a burden for, again, mostly young families, and they therefore tend to move away from the core urban areas and into the suburban areas. Similarly, many new businesses experiencing the economic challenges of crowded urban environments are seeking more affordable conditions in suburban environments and nearby settlements. Therefore, also the commuting catchment areas are increasing especially around the larger cities and metropolises.

While The Greater Copenhagen area used to be Central Copenhagen and adjacent municipalities, today it includes most of Zealand in Denmark and most of Skåne in Sweden as its suburban areas. People are moving to the near-urban areas with good infrastructure so travelling to the attractive leisure facilities down town still takes up only a minimum of time.

does. Death has been postponed to higher ages due to better hygienic and social conditions and above all due to better disease control. Parallel to the increased average age the fertility rate has dropped. This process is called the classic stages of demographic transition.

The total population divided into age groups is illustrated in a population pyramid, also called an age structure diagram. The general diagram has changed from low and wide at its base to higher and narrower at its base.

This change has several implications for the society as such. Minor generations of children give a smaller natural influx to the labour force and hence fewer people to generate the societal wealth. In the other end – at the top of the pyramid – the percentage of people belonging to the old generations is growing. In the long term perspective the retirement age have not followed the increased average living age. This discrepancy alone is contributing heavily to the elderly dependency ratio.

In Norway the regional differences in the overall age level is clearly seen with the far north and the far south characterized by a lower relative number of old age persons compared to the regions in between. Outmigration of persons for education and jobs is a common characteristic for all the Nordic countries, and in a later chapter, examples from the Nordic countries are brought forward as issues in connection with the development of prognoses of anticipated population development.

In the Faroe Islands, a pattern of ageing in the remote and rural regions is quite clear, while the capital region has maintained a relatively low level in a West Nordic perspective due to high in-migration of younger persons. Three regions, however, have experienced a clear process of ageing: Austurland, Vestfirðir and Norðurland Vestra.

In Greenland, the ageing process is also ongoing, but the changes are not too apparent yet due to the previous low number of old persons

compared to younger age groups. One of the reasons for this is of course the relatively younger age characteristics of the country due to a marked higher proportion of young people compared to the rest of the West Nordic region. Another reason is an out-migration of older people to Denmark, which generally reduces the older age group, and this trend has been increasing during the last decade. When retiring many Greenlanders choose to move to Denmark because many of them have children and grandchildren in Denmark, whom they prefer to be closer to in their old age.

Usually the dividing age regarding the old age group in a Nordic setting is set to 67 years, but due to early retirement arrangements in Denmark the general age level of retirement is lower, which has become an important issue in the political debate.

Due to the relations between legal arrangements in Denmark and Faroe Islands and Greenland, Greenland it is possible to retire at the age of 60 years, and special arrangements for women means that it can even be possible to retire at the age of 55. In the case of Iceland, the general retirement age is 67, but seamen may retire at the age of 60 years, and in as well Greenland as Faroe Island the Danish system of early retirement from the labour market at the age of 62 can be applied.

In Finland, as in the other Nordic countries, the share of elderly people will increase remarkable during the coming years, when the large age groups born in the 1950's will retire in their 60's.



Age sttructure

Regarding age structure, two groups (young and old) are generally viewed as incurring an economic expense for society expenses, which must be covered by the age group 15-64 years, who are viewed as contributors, economically, to the society.

In terms of the coastal communities, it is of interest to know the distribution between the different age groups, as they make different use of society's institutions. Obviously, the young use kindergartens/schools etc., while the elderly use geriatric care services. In addition the very young and very old are often the heaviest users of routine healthcare services.

There are at least two reasons for a region to have a high share of the youngest group. Either fertility is high which means more children per fertile woman, or the share of fertile women is higher in an area than in other areas.

Both of these scenarios can be found in the Nordic countries. The higher fertility rates can be found in rural areas in Denmark, Norway and Finland and also in general on the North Atlantic islands; Faroe Islands, Iceland and Greenland. The higher representation of fertile women is primarily visible in the capital areas of Helsinki, Stockholm, Copenhagen, Oslo and Reykjavik.

Regarding the productive generations, the image of the Nordic countries shows a generally older labour force in Finland and a generally younger labour force in the West Nordic countries.

For the older generations there is a tendency towards a higher share in the rural areas. This however goes for all countries.

For planning purposes, the balance between young and old (non-productive) part of the population on

the one hand and the productive part on the other is also of interest.

Region	Share 0-14/65+	Ratio
<i>The Nordic countries:</i>		
Average	26.4/26.2	1.0
<i>Capitals (= among the highest):</i>		
Reykjavik	30.5/17.7	1.7
Oslo	27.4/18.8	1.5
Helsinki	25.6/20.2	1.3
Copenhagen	24.3/20.4	1.2
Stockholm	27.0/22.3	1.2
<i>Lowest ratio:</i>		
Hedmark (No)	26.2/29.6	0.9
Bornholm (Da)	24.6/36.8	0.7
Kalmar (Sv)	23.6/35.7	0.7
Etelä-Savo (Fi)	22.2/37.2	0.6
<i>West Norden + Åland:</i>		
Greenland	31.7/9.9	3.2
Iceland	31.3/18.4	1.7
Faroe Islands	34.2/23.6	1.5
Åland	25.1/28.1	0.9

Table 3: Young-old balance ratio as of 1 January 2011.

These young-old balance ratios show a young population in the West Nordic countries compared to the rest of the Nordic countries, while the capitals of the four major countries also have a relatively young population.

Gender

On average, 100 girls are born for every 106 boys, but the boys are a little more fragile as infants leading to a rough gender balance established during childhood.

However, for many regions, imbalances in gender distribution do exist, and there are at least two different reasons for this. One reason can be that more women than men are moving to a region. The reason for this may typically be connected to education. More women are taking a higher education and thus we must expect to see this in the statistics with more women in regions with universities. This is the case in the five Nordic

countries. It is most visible in the Helsinki and the Copenhagen regions.

Another reason for a region having a majority of women can be explained in reference to regions with a high average age. As women live longer than men, a majority of the old aged population will be female. This is seen on a local level seen in some rural areas and on islands and indeed uniformly across the Nordic countries.

Research points to both pull and push factors in terms of women leaving sparsely populated areas and men deciding to stay. The pull comes from a desire for a pleasant life in the national metropolis

with a broader supply of facilities and choices in respect of education, jobs and leisure.

For women the push factors relate to the fact that there are only a few interesting job opportunities for educated women in rural regions,

so in order to get a job they must seek work elsewhere, which typically means in the major cities.

The labour market in rural and sparsely populated areas typically favours men and often unskilled men. Thus, it is often possible for men to remain in these areas when women cannot.

Total population change

In order to be able to understand the process of change in the size of the population in a region two measures are required. On the one hand, we need to look at the characteristics of natural population change, which is determined by the number and rates

of births and deaths. On the other hand, we need to look at the migration characteristics, i.e. immigration – the number of persons moving in – and emigration – the number of persons moving out of the region.

Region or municipalities	1990-2011	2001-2011	2006-2011	2010-2011
<i>Norden (average):</i>	4.8	5.7	7.3	7.4
<i>Finland:</i>	3.8	3.7	4.6	4.5
Uusimaa – Nyland	10.8	9.9	11.0	10.0
Pirkanmaa – Birkaland	6.6	9.1	9.0	8.0
Kainuu – Kajanaland	-1.9	-8.6	-7.6	-7.0
Etelä-Savo – Södra Savolax	-4.1	-6.7	-7.2	-6.0
<i>Sweden:</i>	5.0	6.0	8.1	8.0
Stockholm	10.8	9.9	11.0	10.0
Skåne	6.6	9.1	9.0	8.0
Västernorrland	-1.9	-8.6	-7.6	-7.0
Norrbotten	-4.1	-6.7	-7.2	-6.0
<i>Denmark:</i>	3.9	4.0	4.9	5.0
Copenhagen	4.7	11.2	10.4	16.0
Østjylland	6.7	8.0	8.8	9.0
Vest- og Sidsjælland	2.9	3.1	1.4	-3.0
Bornholm	-4.4	-5.3	-6.6	-8.0
<i>Norway:</i>	7.7	9.3	12.1	12.8
Oslo and Akerhus	12.9	16.7	20.2	19.0
Rogaland	12.0	15.2	19.4	19.0
Nordland	-0.4	-0.4	0.8	4.0
Finnmark	-0.5	-0.9	1.4	8.0
<i>Iceland:</i>	12.1	12.4	12.4	2.6
Höfuðborgarsvæði (Reykjavík)	16.4	15.3	16.0	7.0
Suðurnes (South-West peninsula)	16.7	27.6	35.0	-13.0
Austurland	-3.1	4.5	-20.4	12.0
Vestfirðir	-16.5	-12.0	-11.0	-31.0
<i>Åland:</i>	6.9	8.7	9.2	10.0
Jomala/Lemland/Mariahamn	8.8	11.5	12.9	10.4
Kumlinge/Kökar/Sottunge/Brändö	-6.8	-8.3	-10.6	-20.6
<i>Faroe Islands:</i>	0.8	5.3	1.6	0.0
Streymoy/Vágar	4.5	9.7	6.1	3.1
Sandoy/Suðuroy	-10.6	-5.0	-9.5	-9.4
<i>Greenland:</i>	0.6	0.1	-2.2	-3.0
Nuuk district	13.0	15.1	16.5	23.3
Kommune Kujalleq	-6.7	-9.1	-14.3	-42.2

Table 4: Regions in each country with highest positive population change and highest negative population change. Two positive regions and two negative regions from the five big countries. One positive region and one negative region from the three small countries. All numbers are per 1,000 inhabitants per year.

When looking at total population change all the Nordic countries show the same overall pattern. All countries have areas experiencing a negative population change i.e. a decline in the number of citizens and areas experiencing a positive population change i.e. a growth in the number of citizens.

Indeed, a clear 'stepping stone' process can be identified here on both the domestic and the Nordic levels. This means that people tend to move from smaller or more rural places to bigger or more urban places and often do so in stages.

Births and deaths

In Table 5 it is interesting to note that having a young/old ratio below 1.0 does not necessarily equate to negative natural population change as for Åland it is 1.9. On the other hand, the regions performing the least well in terms of natural population change all have a young/old ratio below 1.0.

Region	Natural Population Change 2010 in ‰	Ratio Young /old (Table 5)
<i>The Nordic countries:</i>		
Average	2.6	1.0
<i>Capitals (= among most positive):</i>		
Reykjavik (Is)	9.8	1.7
Oslo (No)	7.6	1.5
Stockholm (Sv)	6.9	1.3
Helsinki (Fi)	4.8	1.2
Copenhagen (Da)	5.0	1.2
<i>Most negative trend:</i>		
Hedmark (No)	-2.3	0.9
Kalmar (Sv)	-1.5	0.7
Etelä-Savo (Fi)	-5.2	0.7
Bornholm (Da)	-6.1	0.6
<i>West Norden + Åland:</i>		
Iceland	9.1	3.2
Greenland	6.5	1.7
Faroe Islands	5.8	1.5
Åland	1.9	0.9

Table 5: Natural population change in 2010 for selected regions in Norden. All numbers are per 1000 inhabitants per year.

Migration

Table 6 shows that the capitals are among the regions with the highest positive net migration in 2010. But rather differently from the young-old ratio and the natural population change it is, in part, another group of regions that are seeing the most negative trend in 2010. These regions constitute another group of peripheral regions.

Region	Net Migration 2010 in ‰	Ratio Young /old (Table 5)
<i>The Nordic countries:</i>		
Average	5.0	1.0
<i>Capitals (= among most positive):</i>		
Copenhagen (Da)	12.2	1.2
Oslo (No)	11.5	1.5
Stockholm (Sv)	10.4	1.3
Helsinki (Fi)	4.8	1.2
Reykjavik (Is)	-2.9	1.7
<i>Most negative trend:</i>		
Troms (No)	2.4	(1.2)
Norrbotten (Sv)	-0.6	(0.7)
Bornholm (Da)	-1.6	(0.6)
Kainuu (Fi)	-4.7	(0.8)
<i>West Norden + Åland:</i>		
Åland	8.0	0.9
Greenland	-2.8	3.2
Faroe Islands	-5.8	1.5
Iceland	-7.0	1.7

Table 6: Net migration in 2010 for selected regions in Norden. All numbers are per 1000 inhabitants per year.

As an illustration of the complexity of migration, Norrbotten is the region in Sweden with the highest negative net migration. However, when looking at the level below the net migration, i.e. the national and the international migration, this reveals a remarkable contrast as the national migration is minus 7.2 % while international migration is plus 6.6 %.

Wishes, needs and possibilities

It has been stressed time and again: better educated citizens are one of the main keys for societies to be able to play an active role in the modern, globalised and knowledge based world! This definitely also applies to the Nordic countries. As in many other parts of the developed world, it is assumed that the

Nordic countries are among the best educated nations in the world. This would of course be a good position, even if the perception would have to allow for improvements in order to ensure a proper response to the constant focus on improving the educational system and opportunities.

The reality, however, is that the Nordic countries are not undisputed in this assumed position. They are when focussing on the Nordic countries in only a European setting as they here are positioned in the better half according to OECD. But going beyond Europe and for instance taking a quick glance at the most recent statistics from OECD (2008 data published in 2010) regarding education among the 30 OECD and 6 partner countries it reveals a somewhat different picture.

In the OECD ranking, the five Nordic countries are listed as number 7, 9, 11, 18 and 19 in the list of the 36 countries regarding percentage of adult population in 2008 having attained tertiary education. A position just around (Iceland and Sweden) or a little above the OECD average is probably deviating from what is the general perception.

The top-Nordic country is Finland situated as number 7 with 37 % of the adult population (age 25-64 years) in this category, but is surpassed by countries such as New Zealand, USA, Japan, Israel, Canada, and Russia being on top with 54 %.

It is also considered that the Nordic Countries have the high participation rate of women in the educational attainments. As will be discussed later, this is definitely an important issue, both nationally and regionally. But the reality may again come as a surprise.

In relation to males and tertiary education, the Nordic countries are positioned as number 1, 12, 14, 21 and 22 in the list of the 36 members and partners of OECD. Denmark is in top, sharing the first place with Russia due to a level of 50 %, of the adult and males having attained a tertiary education, while Sweden is number 22 in the list with only 27 %, which is clearly below the OECD average.

In relation to female's rate of tertiary education the five Nordic countries are positioned as number 8, 9, 11, 13 and 14 – with Iceland as number 14 and Denmark as number 13. Best among the Nordic countries is Finland with 41 % and worst is Iceland with 34 %. So, all the Nordic countries are surpassed by countries such as Estonia, Japan, USA, New Zealand, Israel, Canada – and once again with Russia on top with a staggering 59 %.

Besides the lesson that reality often differs from perceptions, at least three angles on education are important to be aware of:

- First question is about what is mostly needed of educational skills on the labour market and where are they needed.
- Secondly, there is the question of what are the wishes from primarily the young generations to study.

- The third question is about how these needs and wishes can meet, and where the possibilities of getting an education are located.

The combination of education and sparsely populated areas poses a special multi-level challenge. The initial questions are plenty – like: What types of jobs are in the region? Who are expected to fill out the jobs? Can education for the specific jobs be offered in the region? Does the region have enough qualified and proper aged citizens to go through the education and apply for the positions? Does the local population wish the local educational opportunities? To what extent should a region aim at being self-sufficient? To what extent should a region aim at attracting work force supply from outside the region? Where should they come from?

The questions are easy to list, but the appropriate answers are difficult to find. There are no absolute right and absolute wrong answers, and many different circumstances must be taken into consideration for each region in question, as the regions differ always to some extent.

The questions to ask for sparsely populated areas are in principle the same as anywhere else, but the challenges are expanding, as the infrastructure in these areas is more fragile and weak.

The first angle is about the needs of educational skills, and the options of providing these skills locally. Traditionally an important part of providing opportunities at the regional level was the establishing of vocational training schools within the region. These schools are still an important part of the educational system, and to some extent providing semi-skilled work force for the traditional industries connected to resource extraction. But it may not be enough to ensure the needs in connection with the on-going changes of the economy with innovation as a key issue.

At the same time, many of the large scale extractive companies are providing their own special training and work force needed in connection with their own activities, and this specialised work force operates on a global scale and they are thus typically not provided from local societies.

This challenge at the same time connects very closely to the second angle, namely the question of wishes, individual needs and perspectives from the young generation in search of educational opportunities. While attending vocational training schools and becoming a skilled worker previously was an obvious way of developing skills needed locally and in order to qualify for the local job opportunities, these paths are changing, as new types of jobs are becoming attractive among the young generation and neither

the education, as they are not available through the local training system, nor the jobs are accessible in the local areas.

In this connection, it is important to address the question of gender. Looking at who are wishing which education if any at all, gender is playing a significant and growing role. In spite of the general male dominance among the educated part of the population it is now a general trend that women are getting more and better educated than men. Even the traditional division between male dominated technical educations and female dominated service educations is no longer evident.

This trend is seen with remarkable gender differences with women as the dominating part in groupings with no long tradition in the families for education. It counts for social groups like second and third generation immigrants and in traditionally small and isolated populations like Faroe Islands and Greenland.

It can be illustrated by looking at all the 18 NUTS3 regions in Norway, Sweden and Finland with a population density lower than 12.5 people per square kilometre. These 18 regions, which constitute 31 % of the 58 regions, occupy a huge part of the territory of these countries, but they are only inhabited by 17.2 % of the population in these countries.

All 18 regions are characterized by having a female-male ratio below 1, indicating that there are more males than females in the regions. Further, 11 out of the 18 regions have a female-male ratio lower than 95 % in the age group 15-64 years old. In other words, for each 100 men in these areas there are less than 95 women in that age group. It is a clear sign of some kind of mismatch, and one of the main reasons is the lack of education opportunities and for job possibilities for women in these areas in those areas of education and jobs the women feel attracted to.

When the educational opportunities the young women are looking for are not in the region they come from, they often will move to areas offering these educational opportunities. When in the first place they have left the region, it is unlikely they will return after having finished their education.

The big challenge in this context is related to the third question, namely how can these wishes and needs be met?

This raises for instance the question of how do we adjust not only to the long term planning horizon related to expectations regarding needs for education. Maybe even more difficult question is of how do we adjust to short term demands related to conjunctures and crises combined with the fact that adjusting the educational opportunities to demands from industries and business by providing technical and natural science educational opportunities does not necessarily meet the expectations among the youth.

Both when it is about gender differences, encouragement to seek education, type of education chosen and even place for education among the young generation it is influenced by both cyclical fluctuation and trend oscillation. What is being hyped among one group of young one year might have changed a few years later.

The youth may be more focussed on what are popular choices presently related to mass media, communication and 'soft' sciences than on what – from a planning perspective – would be considered being more durable alternatives.

A few examples can illustrate this. By 2011, it has become more attractive to study at the smaller universities in the province of Denmark than ever before, and on a more general level as a response to the effects of the 2009 crises a growing part of the young generation is now beginning to study at the universities to get a higher education.

Similarly, it raises the question of accessibility of local educational opportunities that might keep the youth in sparsely populated areas versus having to leave the region in order to attain higher education, often resulting in the risk of not returning again.

Historically the Nordic authorities have used the establishing of the higher educational institutions as an instrument in their regional policy strategies. This regionalisation of territory education was especially used by all the Nordic countries to boost the educational capacity of a region from the 1960's to the 1980's. From mid-1990's territory education institutions have been merged on the administrative level, but they have kept their physically decentralised structure.

It is evident that higher education institutions can play a considerable role in relation to regional development. These higher education institutions often play the role as "knowledge bridges" in their local region.

4. The West Nordic area^B

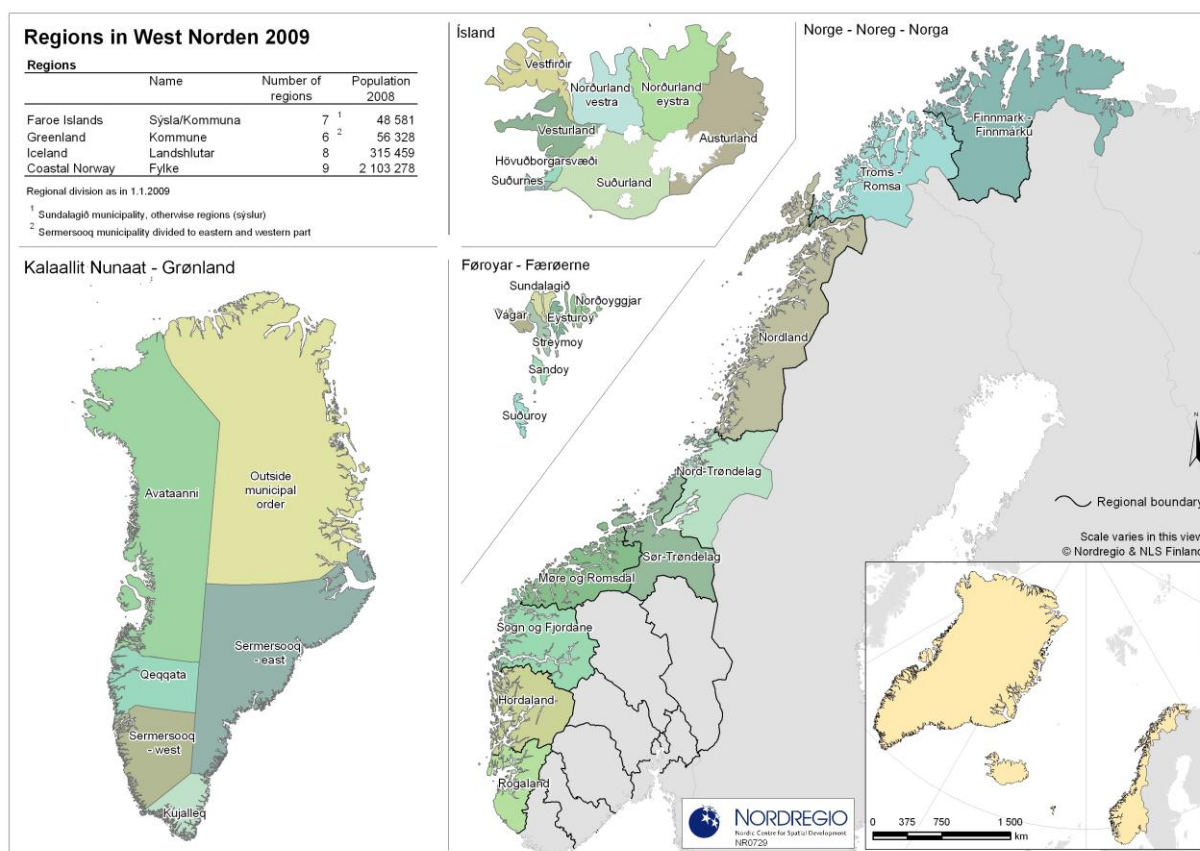
While the previous chapter focussed on the Nordic countries in general, this chapter is designated to outlining the situation in what is generally characterised as West Norden or the West Nordic area. The concept of West Norden encompasses the countries of Faroe Islands, Greenland, Iceland and coastal Western Norway. The special cultural and geographic conditions of the Faeroe Islands,

Greenland and Iceland were subject to political discussions of the early 1980s. Subsequently, the West Nordic Countries established a joint parliamentary organisation. The chief aim is to cooperate on common problems and to conduct positive and constructive cooperation regarding West Nordic, or North Atlantic, issues with various countries and organisations.

The regional structure

For the purpose of the present analysis, the regional structure of the four countries has been established in such a way that it on one hand would be fairly easy to work with and overlook, i.e. not with too many entities. At the same time, however, as the

analysis should reveal important trends in regional differences, a level of details enough to characterize the regional differences within the countries would be required. Consequently, the result has been the following map:



Map 2: Regional structure of the analysis.

B: This chapter is mainly based on material from Rasmus Ole Rasmussen and Johanna Roto (2009). *Demographic Challenges to the NORA region. An OECD expert report. Nordregio 2009.*

Faroe Islands

In the case of Faroe Islands, the existing regional and municipal structure does not automatically generate suitable units. Consequently, a structure of 7 regions has been established, first of all based on existing administrative structures. The six Faroese regions are the base unit for the analysis. One of the

FO1	Streymoy
FO3	Sunda
FO5	Vágar
FO7	Suðuroy

biggest Faroese municipalities, the municipality of Sunda is anyhow stretching across vast areas of the two islands (and regions) of Streymoy and Eysturoy. Therefore, Sunda is separated as a region of its own in this analysis:

FO2	Eysturoy
FO4	Norðoyar
FO6	Sandoy

Iceland

In the case of Iceland, the existing regional structure has been maintained.

IS1	Höfuðborgarsvæði (Capital region)
IS3	Vesturland
IS5	Norðurland vestra
IS7	Suðurland

Eight regions reflect the regional variations in the country:

IS2	Suðurnes
IS4	Vestfirðir
IS6	Norðurland eystra
IS8	Austurland

Greenland

A recent municipal reform has reduced the previous 18 municipalities to a total of four units. One of these – the municipal of Sermersooq – includes on one hand the former 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 Tasilaq. The

GL1	Avataanni
GL3	Sermersooq- west
GL5	Sermersooq- east

regional differences between the eastern and the western part of Greenland are among the most marked differences in the country, so it has been advantageous to operate with the eastern and the western part as individual regions in the analysis. Consequently, the following five unites are operated with:

GL2	Qeqqata
GL4	Kujalleq

Norway

In the case of Norway a very clear delineation of what would be a reasonable regional structure in relation to both functional relations and

N11	Rogaland
N14	SognogFjordane
N16	Sør-Trøndelag
N18	Nordland
N20	Finnmark – Finnmarku

administrative units has led to a division based on the existing county structure which include the following 9 units:

N12	Hordaland
N15	MøreogRomsdal
N17	Nord-Trøndelag
N19	Troms - Romsa

Settlement structure

The settlement structure with small, often isolated villages, larger regional towns, and a capital city, has been a pattern that has characterized the West Norden region for centuries, and resembles in many ways the situation in other parts of the North Atlantic rim where fisheries and hunting has been the mainstay of both livelihood and economy. This pattern, however, is in a process of changes, with increased population in the larger centres, and a marked reduction in the population size of the villages.

Typology

As mentioned above, three levels of settlements are often identified.

The villages are typically small settlements of up to 1,000 inhabitants, but usually in the smaller end of the scale. Many of the villages have been established in connection with the development of fisheries or agriculture, and this will often still be important activities, even new things such as tourism may have become even more important for some of the places. Due to the connection to the local resources some jobs for instance in processing industries may be available. Some of the villages may be able to provide different kinds of services such as a convenience store, a nursery home and sometimes also a kindergarten. If there is a school it would typically provide teaching up till 6th or 7th grade. A nurse and/or midwife could be available, but it would depend very much on the accessibility to a nearby centre. Sometimes there may be homes for elders, and in many villages in Greenland there are service houses providing facilities for laundry, bath, and other communal facilities.

The towns, often a settlement with a population of one to ten thousand inhabitants, and often situated as a hub connecting a number of villages. It provides a varied number of services, nurseries, kindergartens, schools, in Greenland often with a dormitory where the children from the villages can stay, vocational training schools and in the larger places also high schools. Health and social services include a branch of a regional hospital, nurses, doctors etc., and homes for the elders. In many situations the towns are also the regional centres with administrative functions providing a number of jobs as well. In the case of Greenland

the administrative restructuring after Greenland became a county within the Danish administrative structure resulted in the identification of 19 municipalities, each with a settlement appointed as “the town”, and making them the administrative hub for the municipalities. In connection with a recent municipal reform where the 19 municipalities were reduced to 4 a restructuring of the duties of the towns will take place. In as well Iceland and Faroe Islands a number of municipal reforms during the last 20 years have resulted in situations where the precise identification of an administrative hierarchy connected to specific places cannot be given in the same way, even the functionalities have been more or less the same.

The cities are usually identified as the capital areas of the countries, and have similarities in relation to administrative functions in Iceland, Faroe Islands and Greenland. But they differ markedly in size, and in that connection also in relation to the level of functions available. In this connection the regions from Norway being included in the West Norden region differs much from Reykjavik, Tórshavn and Nuuk due to the fact that the latter places are government cities at the same time as they are regional hubs, while there are several places in the West Norden part of Norway, like Bergen, Stavanger and Trondheim, that may earn the title of being cities, but having administrative duties at a lower level.

It is important to emphasize that besides this very general description of how the structure of a settlement might look like, there are marked differences both between the countries and between regions inside the countries. Decisive for the services and the role the settlement plays in a hierarchy is the question of accessibility to the place. Greenland is by far the most extreme case as there are none of the settlements that are connected through road connections. Access is limited to helicopters and in summer most places by boats, while wintertime may enable access by means of skidoos or by dogsleds on the ice, if the ice conditions permits it. On contrast all the main islands or over 85 % of the population in the Faroe Islands are connected through roads with of bridges and tunnels. In that sense, most of the Faroe Islands are one commuting catchment area.

Urbanisation and density

The Nordic Countries are home for 25.6 million people, who are unequally inhabiting a land area corresponding a quarter of the whole Europe (excluding Greenland). At the Nordic level about 65 % of the people live on 10 % of the land. At the one end of the scale, there are 82 municipalities mostly in the northernmost and westernmost parts of Norden with a population density below 1 inhabitant per km². These municipalities cover altogether 25 % of the land area. On the other end of the scale there are some 30 municipalities in the Nordic metropolitan areas with population density above 1000. These metropolitan municipalities cover less than 1 % of the Nordic land area but 18 % of the total population.

The 2.6 million West Nordic inhabitants show even higher concentration as most of the population is living on the coastal areas and only a small number of settlements - mostly in Norway, but also a few in Iceland - do not have a coastline.

From the European point of view, the West Nordic Countries are sparsely populated. Based on the delineation of 12.5 inhabitants per km² that the European Commission, in its Green Paper on Territorial Cohesion, uses as a criterion for a sparsely populated region, half of the West Nordic regions are sparsely populated. In the municipal level the situation looks different – 63 % of Coastal Norway, 99 % of Iceland and whole Greenland can be classified as sparse, but only Sandoy region in the Faroe Islands is sparse.

From the Arctic point of view, the European Arctic is the most densely populated area surrounding the arctic Sea.

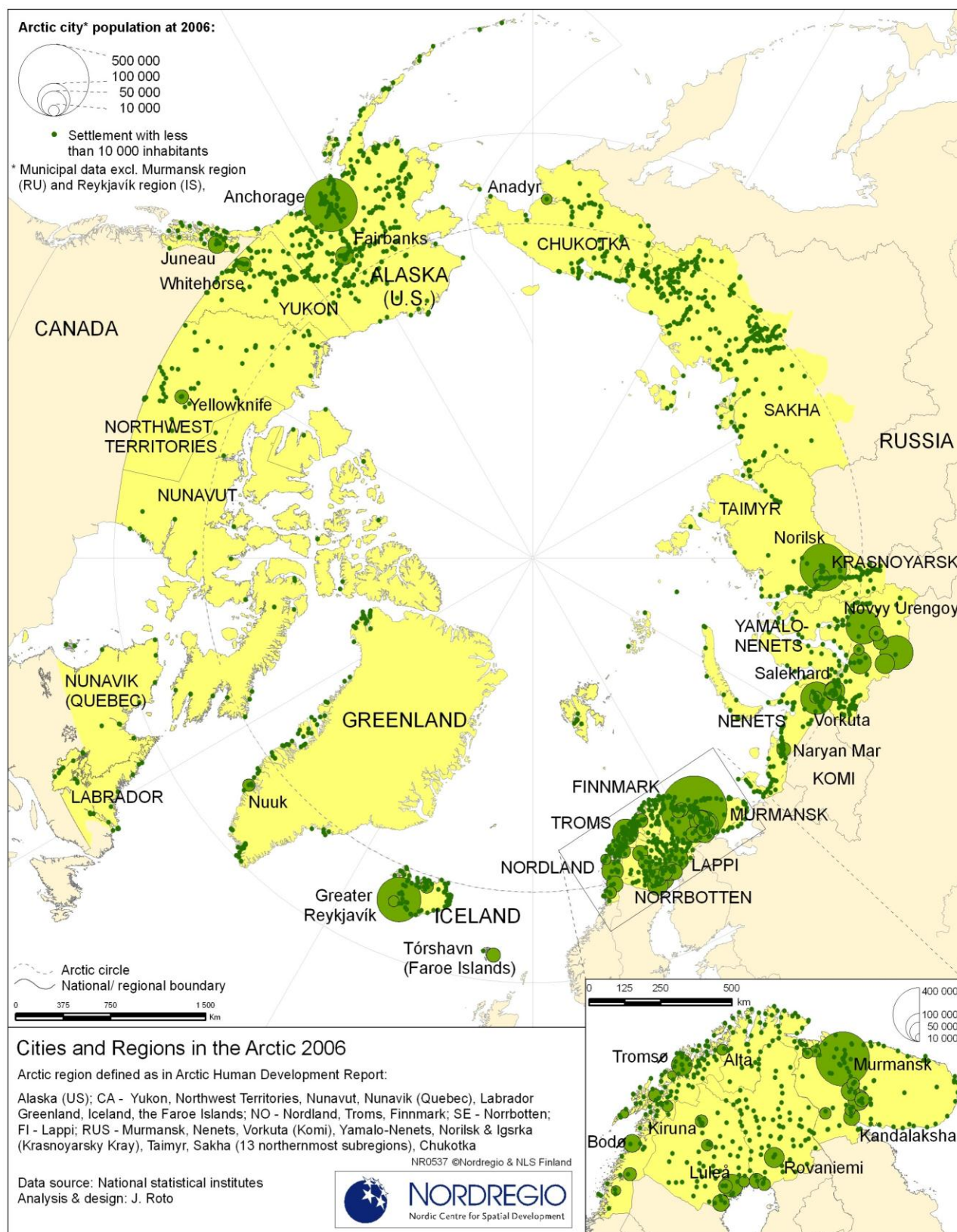
The administrative division of municipalities is anyhow not always giving a right picture of the settlement pattern. Due to differences in the size of the municipalities and the differences between urbanized and rural municipalities, the comparison between the countries is not unproblematic. In the Faroe Islands, Iceland and Norway the

municipalities are in most of the cases rather small, whereas the structural reform in Greenland on 2009 created the world largest municipalities.

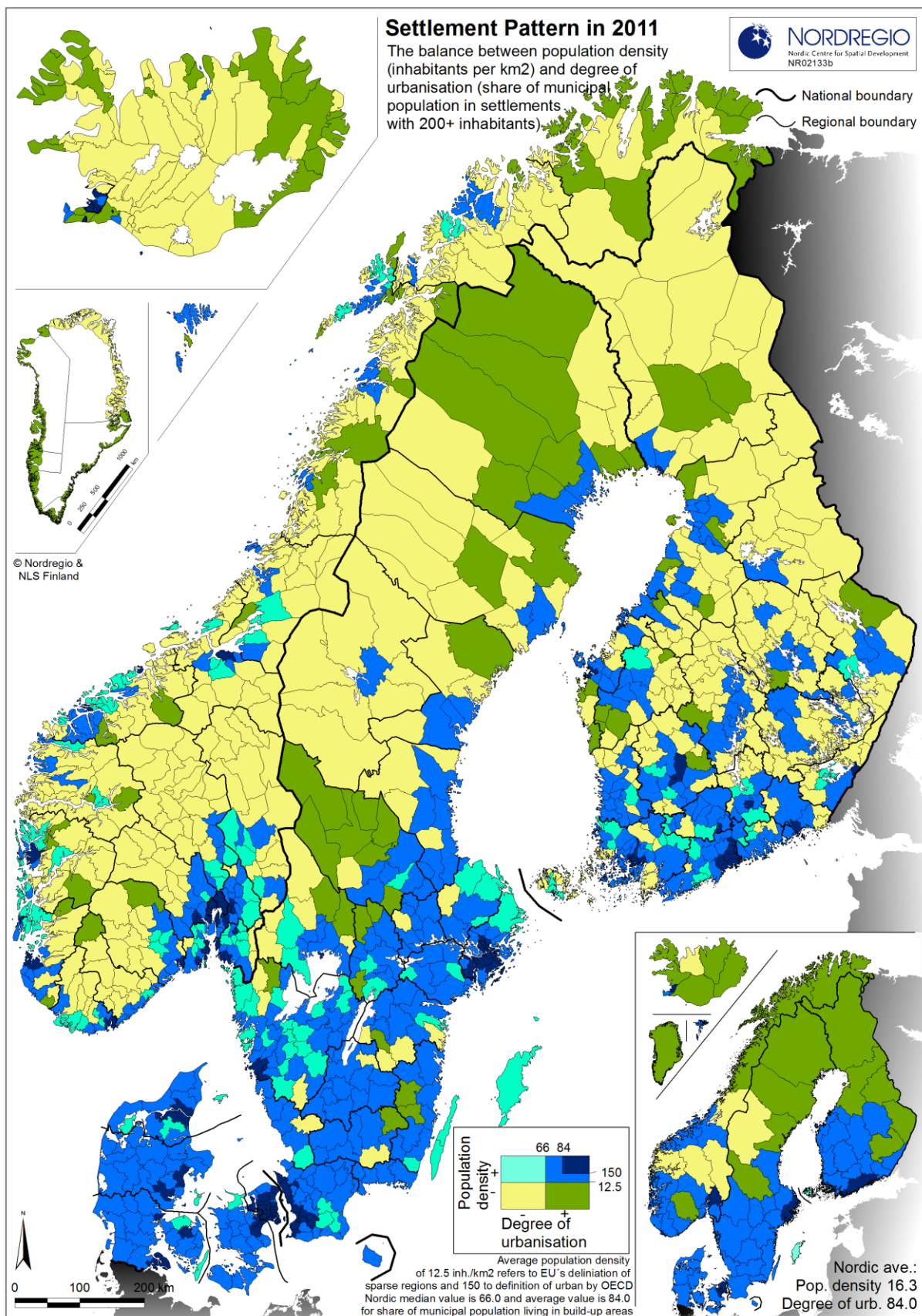
In total 77 % of the West Nordic population is urbanized, living in the settlements with more than 200 inhabitants which is the official divide between rural and urban population. Several of the most densely populated municipalities share a relatively small land area and a high urbanization level, but that is not always the case. The southern parts of coastal Norway have plenty of densely populated small municipalities with low degree of urbanization around the centres. Many of these small municipalities have good connections to regular but looser system of cities. The other parts of the West Norden have many extremely sparsely populated areas are nonetheless extensively urbanized, with most of the population concentrated in a number of isolated towns.

The maps on the following pages illustrate the settlement patterns from two perspectives. Map 3 provide a circumpolar perspective on the settlement structure showing how the North Atlantic rim basically show the same structure with coastal communities being a common main characteristics. In other parts of the Arctic – as well Russia, Alaska, as partly also Western Canada – the river systems are similar important as the coastal areas in determining the settlement structure. The main common characteristic of the Circumpolar North, however, is the dependency on water.

Map 4 on the subsequent page show the degree of urbanisation and population density in the Nordic municipalities and regions in 2011, showing a clear North-South divide in Fennoscandia, with clear similarities between Iceland, Greenland and the northern part – large areas with low population densities and a sprinkle of more densely populated areas, while the size of Faroe Islands results in a settlement pattern resembling the more densely populated parts of Westnorden.



Map 3: Cities and settlements in the circumpolar Arctic.



Map 4: Degree of urbanisation and population density in the Nordic municipalities and regions in 2011.

Demographic characteristics

The demographic transition

As prescribed through the model of Demographic Transition, the West Norden region is clearly on its

way into the last stages of the process, with decreasing mortality, as well as decreasing births, eventually leading to a low natural growth rate.

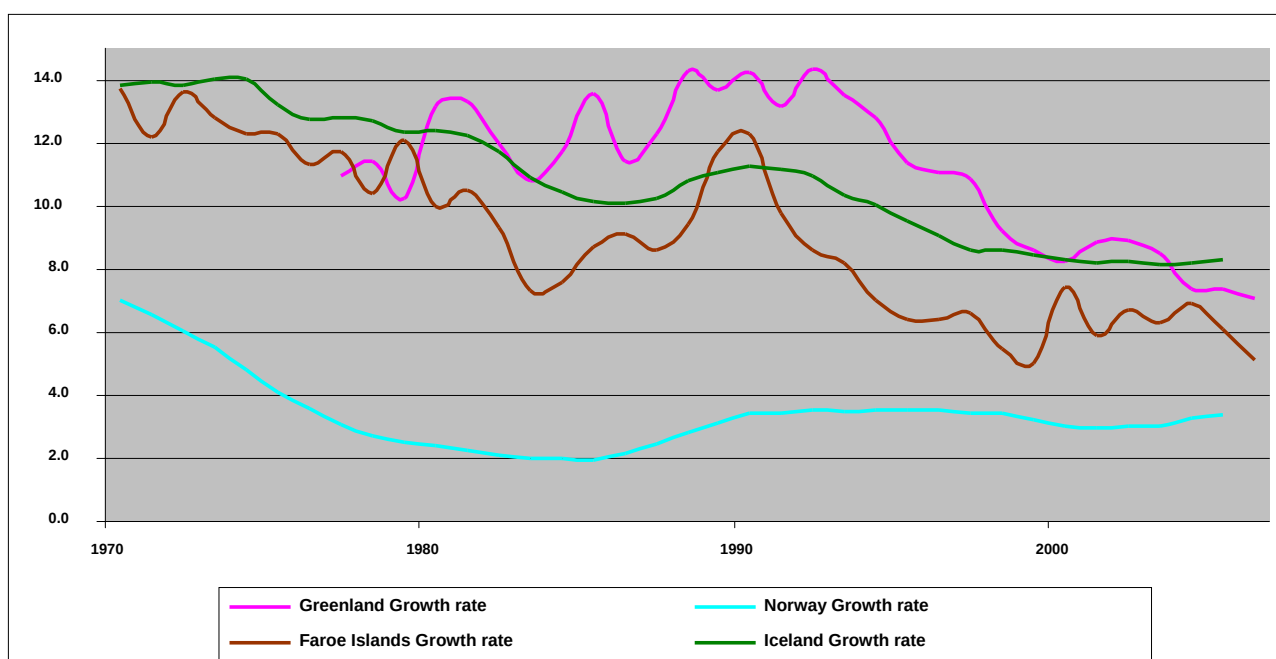
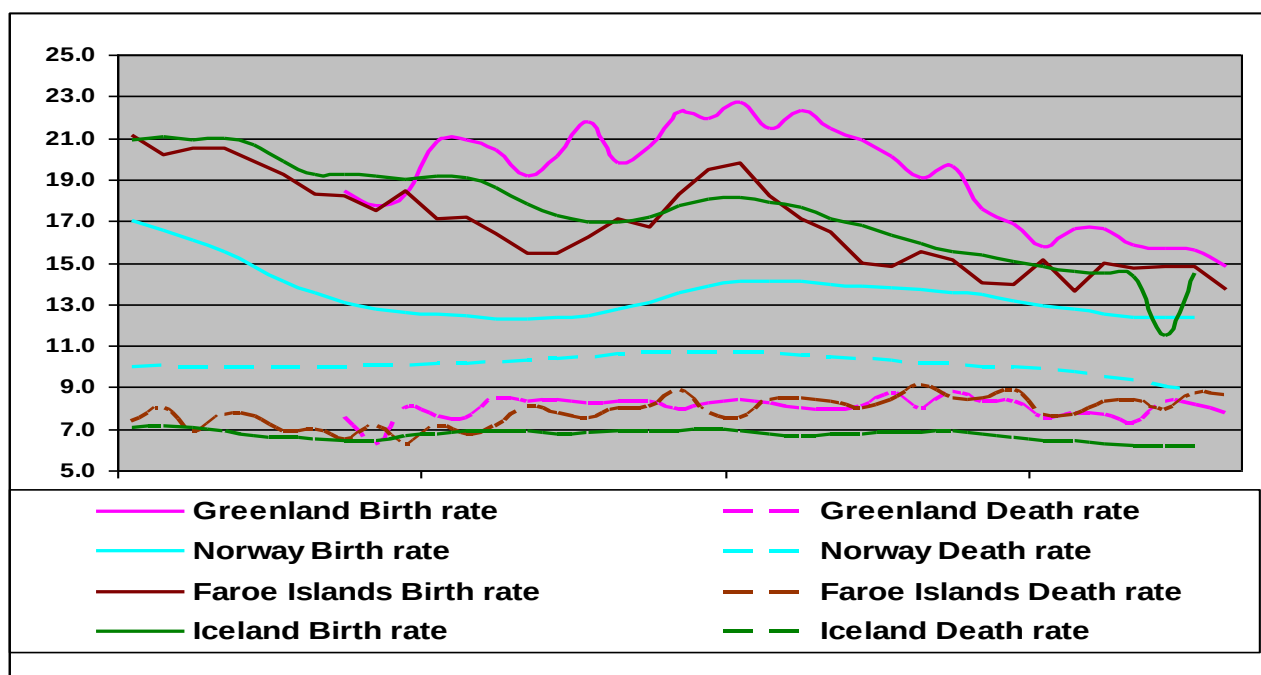


Table 7: The population development in the perspective of the Demographic Transition.

As indicated above, however, the region is not only characterized by the fact that there are marked differences between the countries, but also that the fluctuations over time within the countries has had a marked impact on the population structure. Differences in level of fluctuations between for instance Greenland and Faroe Islands on one side, and Norway and Iceland on the other, has to do with the differences in population size. In the larger countries regional variations are evened out, while small changes in a smaller population turn out as marked variations.

It is quite clear that Norway has been in the latter stage of the transition process for longer time than the three other countries. The closeness of the birth and death rates indicates this, just as the role of lifestyle diseases in combination with an ageing population maintains the death rate at the highest average level of the four countries. As a consequence, the natural growth rate for Norway is at the lowest level, and maintained quite stable during the period of time from 1970 to today.

While Iceland has a birth rate which is more or less averaging the situation in Greenland and the Faroe Islands, the death rate is the absolutely lowest in the Nordic countries, comparable to the situation in for instance Japan. It has been maintained throughout the whole period shown. As a consequence, the natural growth rate in Iceland is again averaging the situation in Greenland and the Faroe Islands.

The situation in the Faroe Islands resembles Iceland when it comes to birth rates, while it resembles Greenland in relation to death rate. As a consequence it has a lower natural growth rate than any of the two countries. At the same time there are close relations between the general population development of Faroe Islands and crises in the fisheries that can account for some of the most marked variations, especially during the late 1980's and the beginning of the 1990's. This will be explained further later in the report.

Finally, Greenland has maintained the highest birth rate, combined with a death rate similar to the situation on the Faroe Islands, leading to the highest natural growth rate among the four West Norden countries.

For both Greenland and Faroe Islands the lifestyle diseases in combination with an ageing

population increases the death rate so that it during the last years has become at level with the Norwegian. Similarly, the birth rates are moving the four countries closer together.

The basic regional parameters

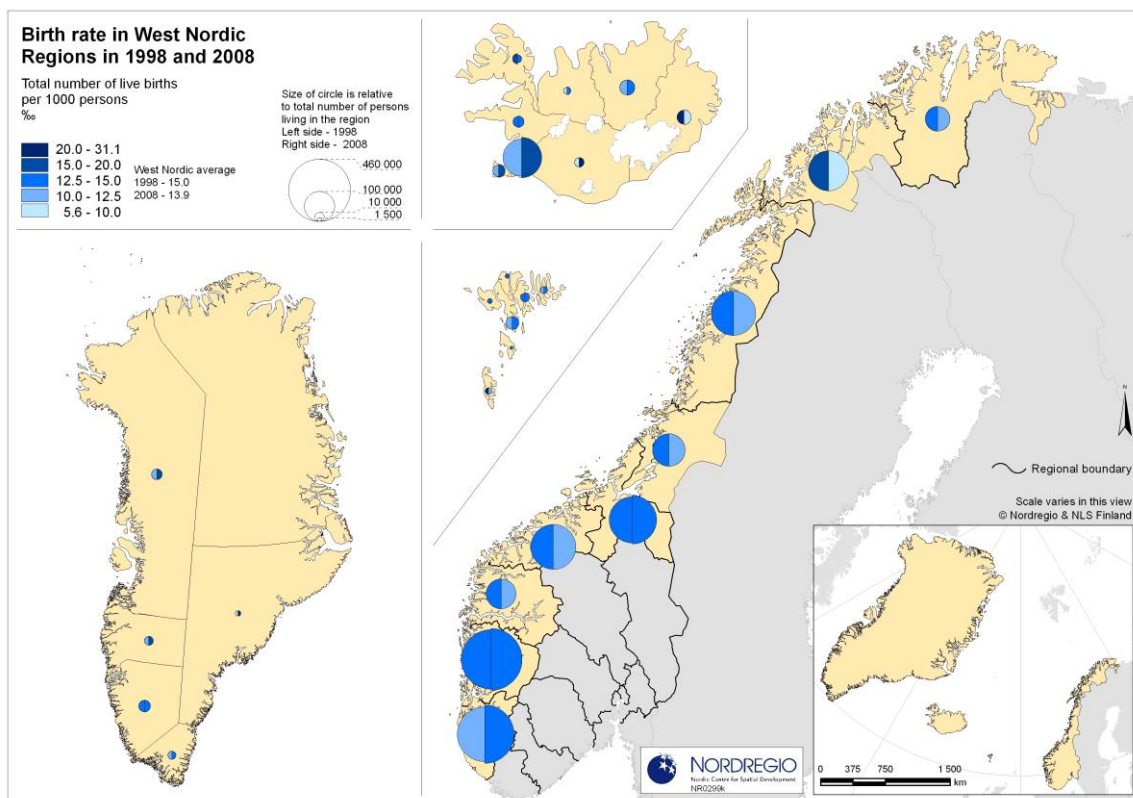
While the similarities between the countries are obvious, the internal regional differences in the development path are becoming still more evident. On the maps 5-8, the regional characteristics and components of natural population change are depicted. The maps are showing the situation both in 1998 and 2008. This same pattern – showing the 1998 data on the left hand side of the regional circle, and 2008 data on the right hand side is typical for all the maps in this report. The size of the left hand side of the circle indicates the size of the population in 1998 and the right hand side the population in 2008, while the colours are showing the rate or change in population respectively. Additional data tables and maps with details for 1998 and 2008 are available in appendix I and II.

Fertility

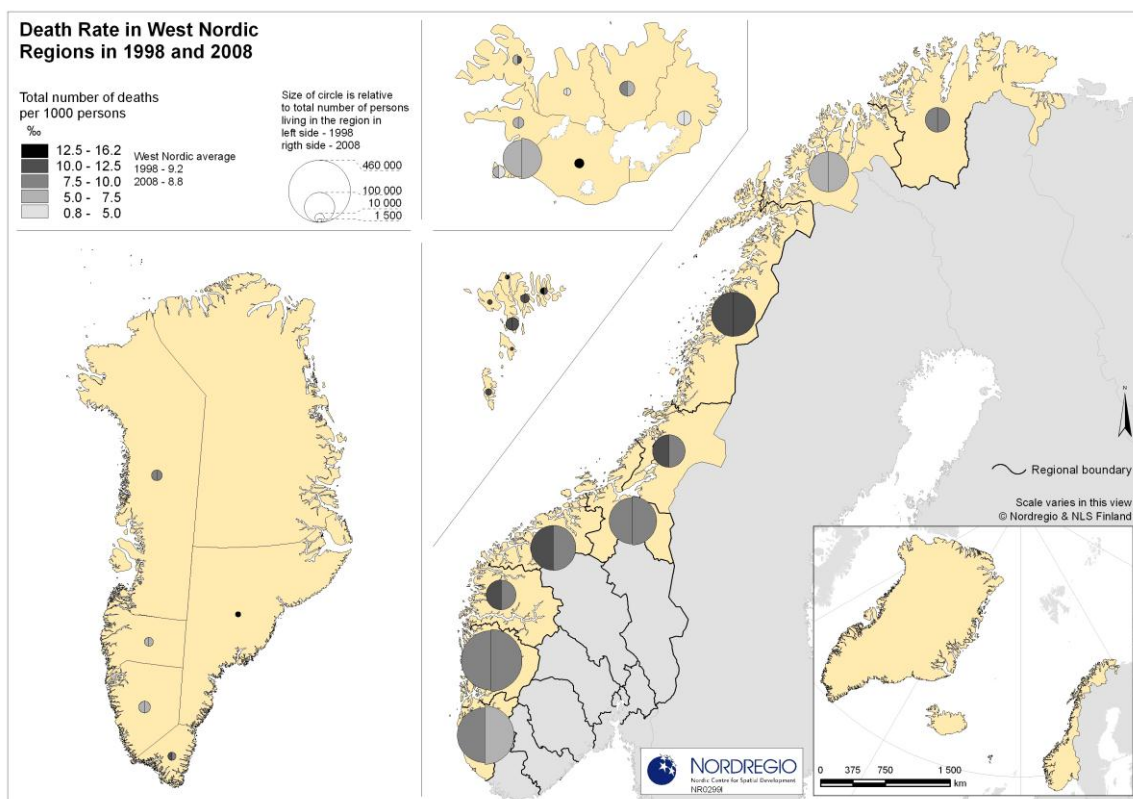
In general, high fertility is based on a number of socio-economic processes, and high birth rates often relates to three main factors. One factor is a situation where a relatively high proportion of the population is in the most fertile age groups. This is clearly the situation in the case of Greenland, just as it is the case in the more densely populated areas of Iceland. Regionally it is the situation in what could be characterized as “the periphery”. Another important factor in creating this situation is the influx of population in the fertile age group, usually looking for work or educational opportunities.

Consequently, there is a close connection to the general migration pattern. Also here the regional centres turns out to be in the high end, while regions characterized by out-migration show the reverse pattern. A third factor relates to specific regional characteristics connected to, for instance, cultural or religious traditions. These situations are especially significant in “the periphery” where local traditions are maintained, while the processes of globalization are influencing the central places.

The extremely low birth rates in Iceland in Austurland (1998: 7.1, and in 2008: 5.6) has to do with the high influx of a temporary workforce in connection with the large constructions there – first the building of a power station, and subsequently the establishing of an aluminium smelter.



Map 5: Birth rates in 1998 on the left hand side of the circle, and in 2008 on the right hand side of the circle. The circle size indicates the population size of the region, while the colour indicates the level of birth rate.



Map 6: Death rates in 1998 on the left hand side of the circle, and in 2008 on the right hand side of the circle. The circle size indicates the population size of the region, while the colour indicates the level of death rate.

Mortality

High mortality rates are generally related to the ageing characteristics of the population, and therefore high values are closely connected to municipalities, which are stagnating. The stagnation could be generated due to different situation. For instance low reproduction rates or to situations where migration patterns are showing preferences for out-migration of young people. This pattern is also clearly shown in the West Norden region in general, and in relation to specific regions. The highest level of mortality rates are clearly found in the peripheral regions, on Faroe Islands on Norðoyar and Vágar, while the level in Iceland is generally at a much lower level, but very high in the Vestfirðir and the Suðurland regions, both

characterized by stagnation and an ageing population. In Greenland it is first of all East Greenland that show a very high mortality, but also the two other regions often characterized by peripherality – North and South – show a higher death rate as well as high birth rates.

Net reproduction rate

The natural reproduction rate in this connection (birth rate – death rate) gives an idea about the ability of a region to reproduce itself, and in the European setting, the Nordic countries in general are positioned very differently, as illustrated on the figure below.

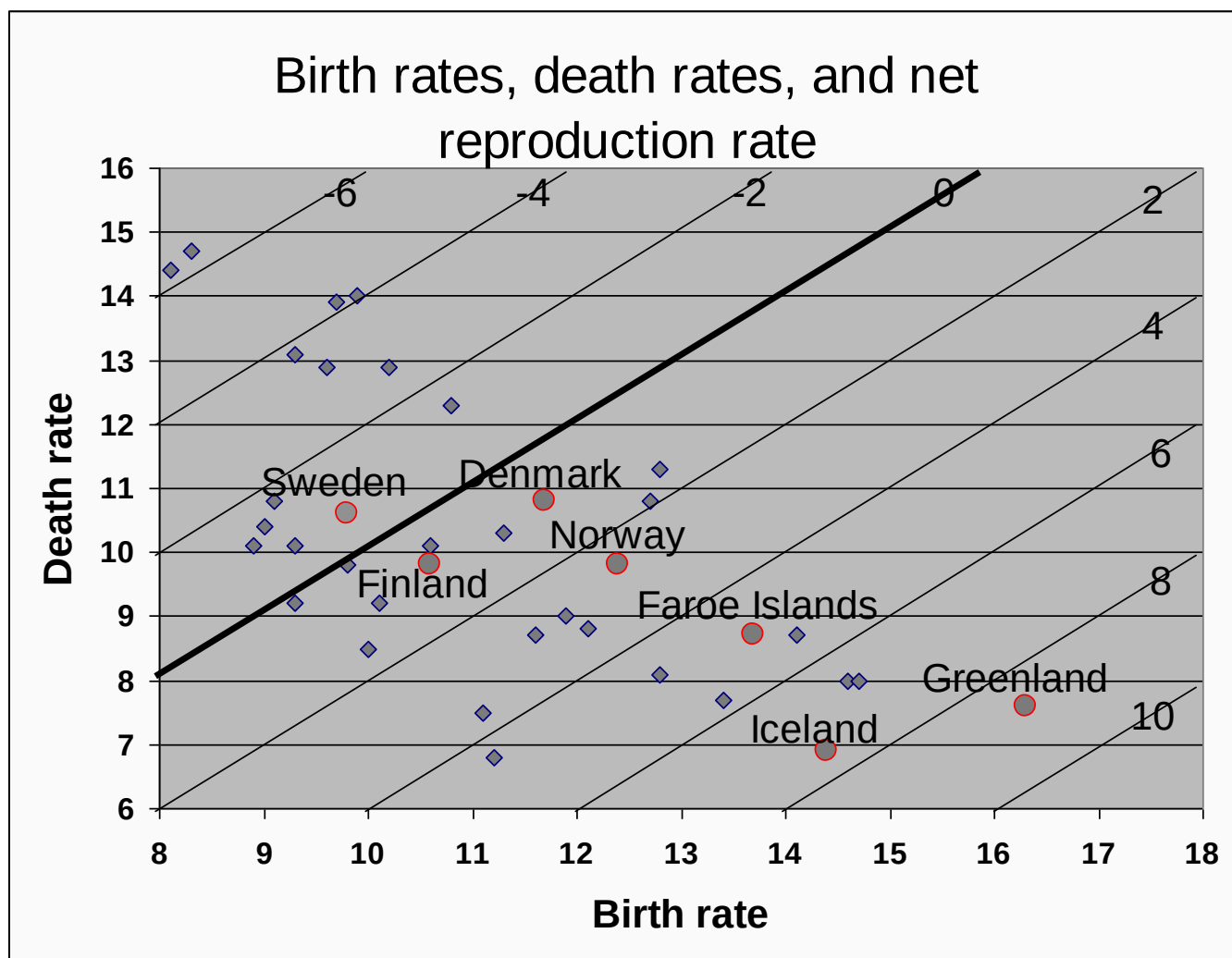


Table 8: The Nordic countries in a European setting in relation to birth rates, death rates, and reproduction rates.

The figure illustrates the situation of all European countries (the blue diamonds) in relation to birth rates and death rates, and on top of these two dimensions, the net reproduction rate has been superimposed, with negative reproduction rates in the upper-left corner, and positive reproduction rates in the lower right hand corner. The data used is from 2006, and at that point of time Sweden (-0.4 ‰) was the only Nordic country with a negative reproduction rate, with Denmark (0.9 ‰) and Finland (0.8 ‰), however, very close to a situation of balance. Norway (2.6 ‰) shows a situation with a positive reproduction rate as already emphasized above, and the West Norden region are positioned quite far from the European trend due to high birth rates. The Faroe Islands (5.0 ‰), Iceland (7.5 ‰) and Greenland (8.7 ‰) show reproduction rates in the absolutely highest positive part of the European setting. So in the European context, the West Norden turns out to be in a group which population-wise can be compared to Montenegro, Ireland and Macedonia, but also with the USA, while Norway is situated on a level with France.

Changes over time

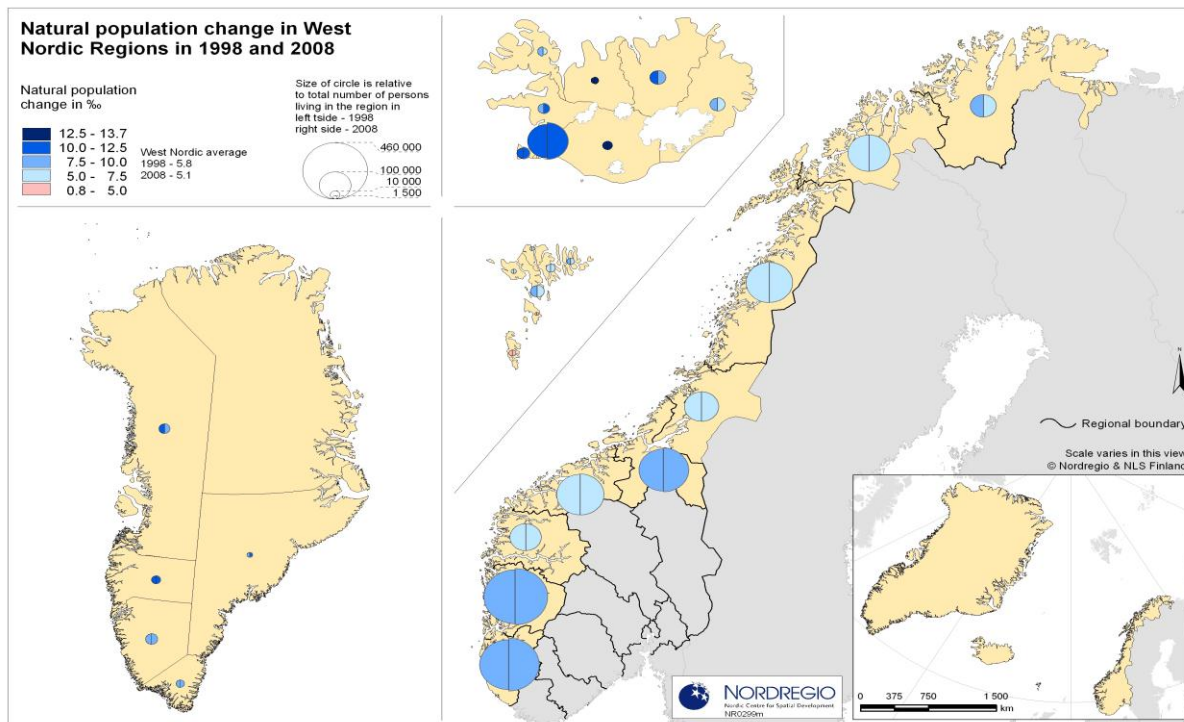
The maps 7-8 show the natural population change in 1998 and 2008 in the region.

Map 7 shows the natural population change based on per cent change from 1998 to 2008 in absolute numbers. In general, most regions turn out to show same level of natural reproduction rates, and the regions showing differences are generally

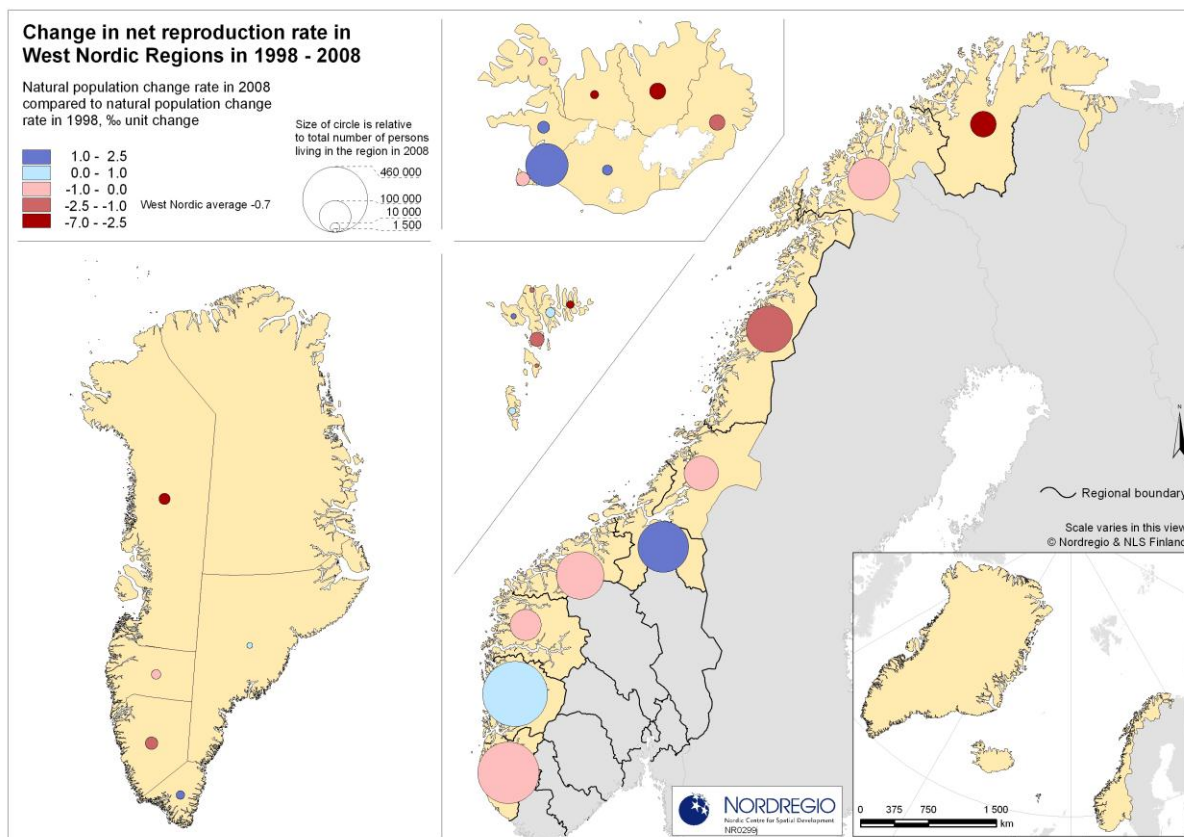
moving from a higher to a lower level. In Norway it is the case in Troms, in Iceland in the eastern regions, and in Greenland in the northern region. But there are a few exceptions, and due to very different situations. One of the exceptions is East Greenland - Sermersooq East – where the increase is connected to a marked decrease in death rate, partly related changes in hunting and fishing practice, which has been limiting accidents. The other exception is Vesturland in Iceland where a marked increase in birth rates has a positive influence on the natural growth. New activities and better infrastructure has led to more young people settling in the area, and contributing to this natural growth.

Map 8 is even more important, as it show the change in net reproduction rate from 1998 to 2008, with blue colours indicating growth, while red colours are showing decline. In general, a positive development in net reproduction rate would be interpreted as an indication of a younger population, more child births and therefore linked to growth. And it is definitely the case in Iceland and Norway. But in the cases of both Greenland and Faroe Islands the situation is quite different. In east and south Greenland, the blue colour relates to decline in death rates even the population are ageing. And in west Greenland the indication of a decline in the net reproduction rate is due to a marked decline in births connected to the positive consequences of better economies.





Map 7: Natural population change from 1998 shown on the left hand side of the circle, and in 2008 on the right hand side of the circle. The circle size indicates the population size of the region, while the colour indicates the natural population change in‰.



Map 8: Change in net reproduction rate from 1998 shown on the left hand side of the circle, and in 2008 on the right hand side of the circle. The circle size indicates the population size of the region, while the colour indicates the natural change rate in 2008 compared to the natural change rate in 1998, showing the change in rate in‰.

Structural characteristics

A number of structural characteristics that are crucial for both the present situation and the future development path have been taken forward. In this section the focus is on the age structure, and in that connection with that the question of ageing and dependency characteristics. In the next section the question of gender characteristics and the consequences of differences in gender preferences and perspectives for the regional development. And

subsequently the question of labour market characteristics in relation to demographic development has been the key question in the following chapter. In the case of Greenland, the question of “place of birth” is a special topic, which is relevant when analysing characteristics of the population, and this topic therefore is dealt with in a section of its own.

A: Age

Age structure

A general characteristic of the West Norden region, which often has been emphasized, is the relatively high proportion of children and young persons in the region. When depicted in the traditional graphic representation the age structure in West Norden still have some resemblances with the classic pyramid or cone shape, which has been emphasized as being quite different to the Nordic box shape with tendencies towards an upside-down cone shape. And as already indicated in the previous section, the birth rates are still higher in West Norden compared to the rest of the Nordic countries. But this pattern has experienced marked changes during the last decade, and indications on this process are shown on map 6 on the following page.

The young group

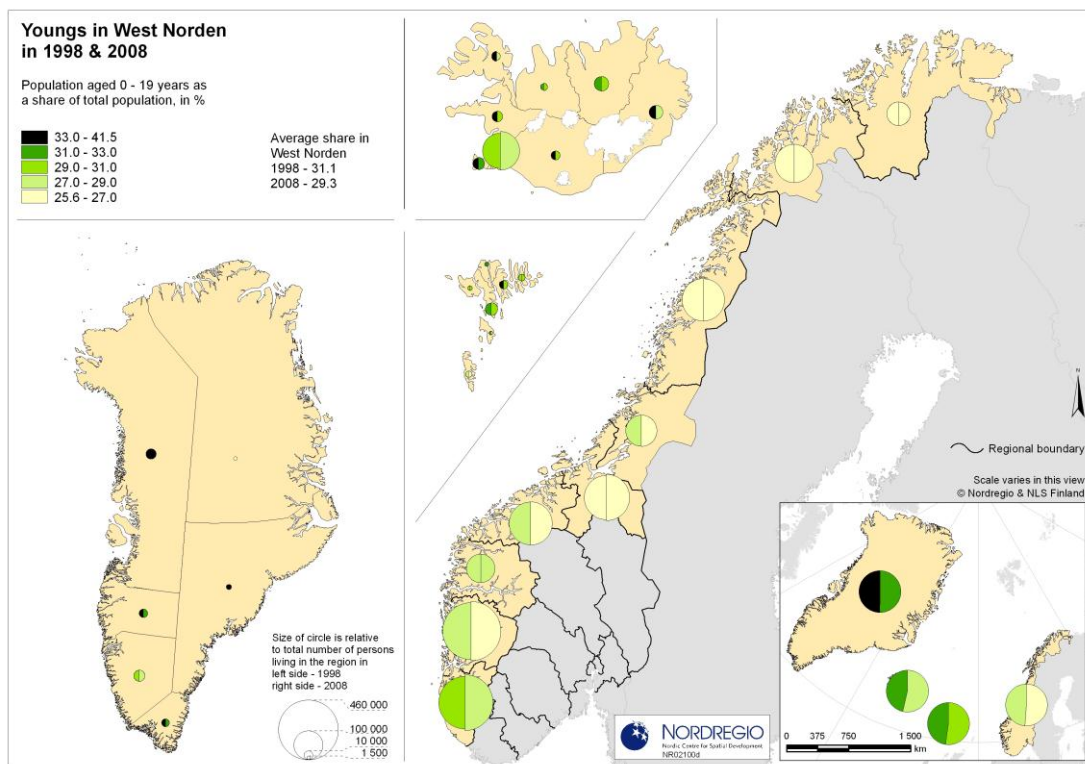
In this analysis the concept of “young” include both children and adolescents up till and including the age of 19. The rationale for this is that young age dependency no longer stops at the age of moving from child to adolescent, usually counted at the age of 15 years, but due to the educational and vocational training system the dependency of the parents continues in several years after that. Even public support, for instance in connection with vocational training, is often the case, the grants given are usually not sufficient to become self-reliant. This situation usually appears when a job is attained or studying at universities and higher education units take off, both usually around the age of 20, and continuing for the next 10 years until

the person becomes a general member of the working force.

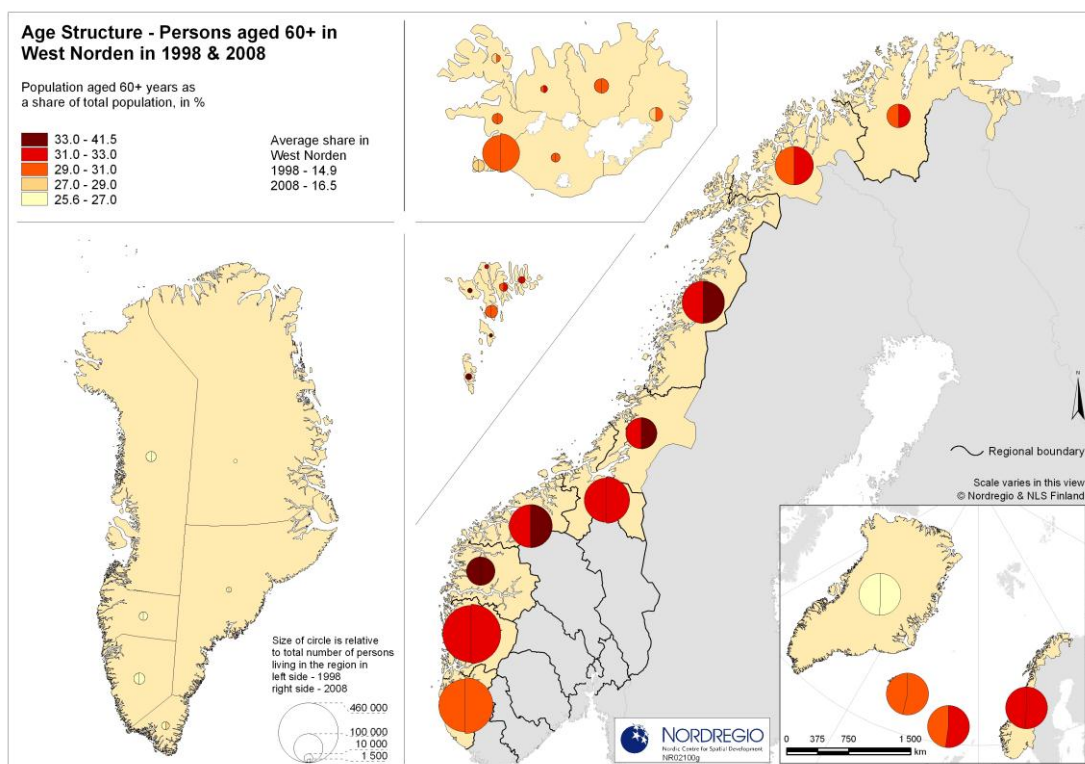
While the high proportion of young people is quite clear in 1998, i.e. on the left hand side of the circles, with percentages above 30 and in Greenland even markedly above 35 %, the level has dropped markedly from 1998 to 2008. In most of Norway to a level below 27 %, in Iceland and Faroe Islands to a level below 29 %, and in Greenland to an average between 31 and 33 %. A part of the explanation is of course the general ageing of the population, which is also the case in the West Norden region. But one of the most important factors in this process has been the process of moving towards family structures similar to the rest of the Nordic countries, with one to two children instead of the former situation with 3 or more as a general pattern.

The regional differences within West Norden are quite marked. First of all due to differences in the level of the young age group proportion between the countries, as well in 1998 as in 2008, and then due to marked regional differences within the countries, especially difference in relation to rurality/urbanity.

In the case of Greenland the central region in West Greenland, especially the capital region, which is by far the largest urban area the family structure is quite similar to what is the average situation in the Nordic countries. The youngest population can be found in both years in Eastern Greenland where the share of young people where in both time periods over 40 %.



Map 9: Level and change of the young age group (0-19 years) from 1998 shown on the left hand side of the circle, and in 2008 on the right hand side of the circle. The circle size indicates the population size of the region, while the colour indicates percentage of the young age group in the two years respectively.



Map 10: Old age group (age 60 and above) in 1998 shown on the left hand side of the circle, and in 2008 on the right hand side of the circle. The circle size indicates the population size of the region, while the colour indicates the natural change rate in 2008 compared to the natural change rate in 1998, showing the change in rate in 0/00.

In the Faroe Islands, the process of de-populating several of the rural areas has taken its toll especially on the young group who have moved to the capital region, Streymoy. So in contrary to Greenland, the more rural areas are experiencing a comparative reduction in the young age group compared to Greenland where the decline is most marked in the capital area.

In Iceland, the drop in the number of young people is substantial all over the country, but especially in Austurland and Vestfirðir. The reason for this is similar to the situation in the Faroe Islands, the out-migration of the younger persons, while the older persons stay. Instead the young group move to the capital region, especially Reykjavík, where a relative decline in the young group has been registered as well, but not comparable to the situation in the more remote regions.

In Norway, the northern regions have for quite many years had a situation where outmigration of the group of young people and a general ageing of the population led to a low proportion of persons in the age group below 20 years. Further south, however, and especially in the growth regions due to the oil industry in and around Stavanger and the knowledge industries in the university towns the attractiveness used to be resulting in a relatively high proportion of young people. This is, however, no longer the situation. The general pattern of ageing combined with a marked growth activity in the larger towns and especially the capital region shows its effects!

Ageing

Usually the dividing age regarding the old age group in a Nordic setting is set to 67 years, but due to early retirement arrangements, the general age level of retirement is lower than that. At the same time there are differences in the West Norden region which has to be considered. In Greenland, it is possible to retire at the age of 60 years, and special arrangements for women means that it can be possible to retire at the age of 55. In the case of Iceland the general retirement age is 67, but seamen may retire at the age of 60 years, and in as well Greenland as Faroe Island the Danish system of early retirement from the labour market at the age of 62 can be applied. Due to these differences the dividing age of 60 has been chosen, and is shown on map 7 on the previous page. Again the left part of the circle is showing the percentage of the population 60 years and above in 1998 while the

right hand side of the circle show the situation in 2008. And the general pattern of ageing is obvious in the case of Norway and Faroe Islands, while the general pattern is less obvious in Iceland and in Greenland.

In Norway the regional differences in the overall age level is clearly seen, with the far north and the far south characterized by a lower relative number of old age persons compared to the regions in between. But in most cases the general pattern of ageing is quite obvious.

In the Faroe Islands, a pattern of ageing in the remote and rural regions is quite clear, while the capital region has maintained a relatively low level in a West Norden perspective due to high in-migration of younger persons. It is also remarkable that the Faroese regions of Sunda and Vágur have actually lower share of elderly people in 2008 than in 1998. This can be explained with outmigration in general but in the case of Vágur also the development in infrastructure can be crucial. In 2002 a new underwater tunnel connected Vágur to main islands making daily commuting to capital region realistic.

In Iceland, the share of elderly people is on modest level and has not change that much during 1998 and 2008 on national level. Three regions, however, have experienced a clear process of ageing: Austurland, Vestfirðir and Norðurland vestra.

In Greenland, the ageing process is also on-going, but the changes have not been registered on the map because the changes are at a relatively low level. One of the reasons for this is of course the relatively younger age characteristics of the country due to a marked higher proportion of young people compared to the rest of the West Norden region. Another reason is an out-migration of older people to Denmark, which generally reduces the older age group, and this trend has been increasing during the last decade. When retiring many Greenlanders choose to move to Denmark because for many of them they have children and grandchildren in Denmark, which is attractive for them.

Life expectancy

The life expectancy in Iceland, Faroe Islands and Norway, is higher than in Europe on average. Even these three countries are showing marked similarities, the last West Nordic country, Greenland, differs remarkably. The following list shows the differences:

Country	Male life expectancy	Female life expectancy
Iceland	78,4	82,8
Faroe Islands	76,8	82,3
Norway	78,3	82,9
Greenland	66,3	71,3

Table 9: Life expectancy in the West Norden region.

The marked differences between Greenland and the other countries in relation to life expectancy are reflected in a number of important demographic issues and closely connected to the social and economic regional characteristics of Greenland.

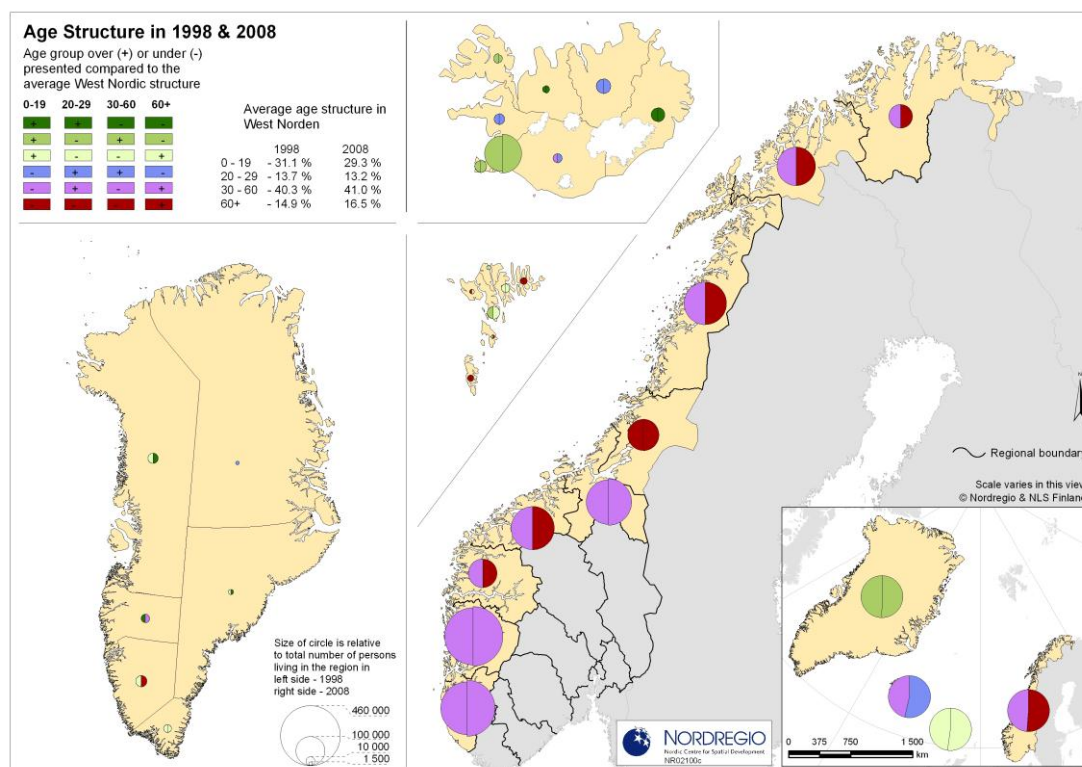
There is a clear divide between life in villages and in the larger towns. Due to the insularity of the settlements, i.e. none of them are connected through roads or other land based transportation systems, the access to hospitals, doctors, nurses etc. are much more difficult and consequently influential on and reflected in the differences in death rates and infant mortality.

Quick access through helicopter services may provide instant help, and with a well-functioning communication system, this may be available within few hours in most places. This type of services has evolved in many of the communities in the North Atlantic rim. But in spite of increasing efficiency its limitations, however, influences the survival pattern in towns and villages only depending on these

services, and therefore shows to some extent in the general age structure of the population.

Age structure

The differences in changes in age characteristics within the West Norden region is summarised on map 11. The circle shows the population in 1998 to the left, and in 2008 to the right. The regional age profiles are depicted against the West Nordic average. The colour coding is defined according to the relative shares of the age groups 0-19, 20-29, 30-60 and 60 and above. Within each colour category a specific combination of the age groups have been selected, a plus (+) indicate a situation over and minus (-) under the average West Norden age structure. The groups represent very different demographic dynamics, and thereby very different development potentials, as well as marked challenges.



Map 11: Age structure classification in 1998 and 2008. The circles indicate the population in 1998 and 2008 respectively, while the colour code indicates the situation of the regions in a West Norden context. See the text below for further explanation.

- Dark green show levels above the average for young persons in the age group 0-19 and 20-29. This represents a very young population, for instance North Greenland, Avataanni in 2008.
- Light green show regions with above levels in the age groups 0-19 and 30-60, but low levels in the age groups 20-29 and 60 and above. This represents a situation where children and adolescents are living with their parents, while the group of young people looking for education opportunities and first jobs are partly absent, similarly to the old age group.
- Very light green show a situation with above levels in the groups 0-19 and the group of persons 60 and above. This could be characterized as a “grandparents taking care of the children” while students and working age persons are partly absent.
- Blue indicates a situation where students and working age persons are abundant but old age persons and children are at a low level.
- Purple indicates a situation where a combination of students and young workers are abundant together with persons age 60 and above, while

children and working age persons are at relatively low level.

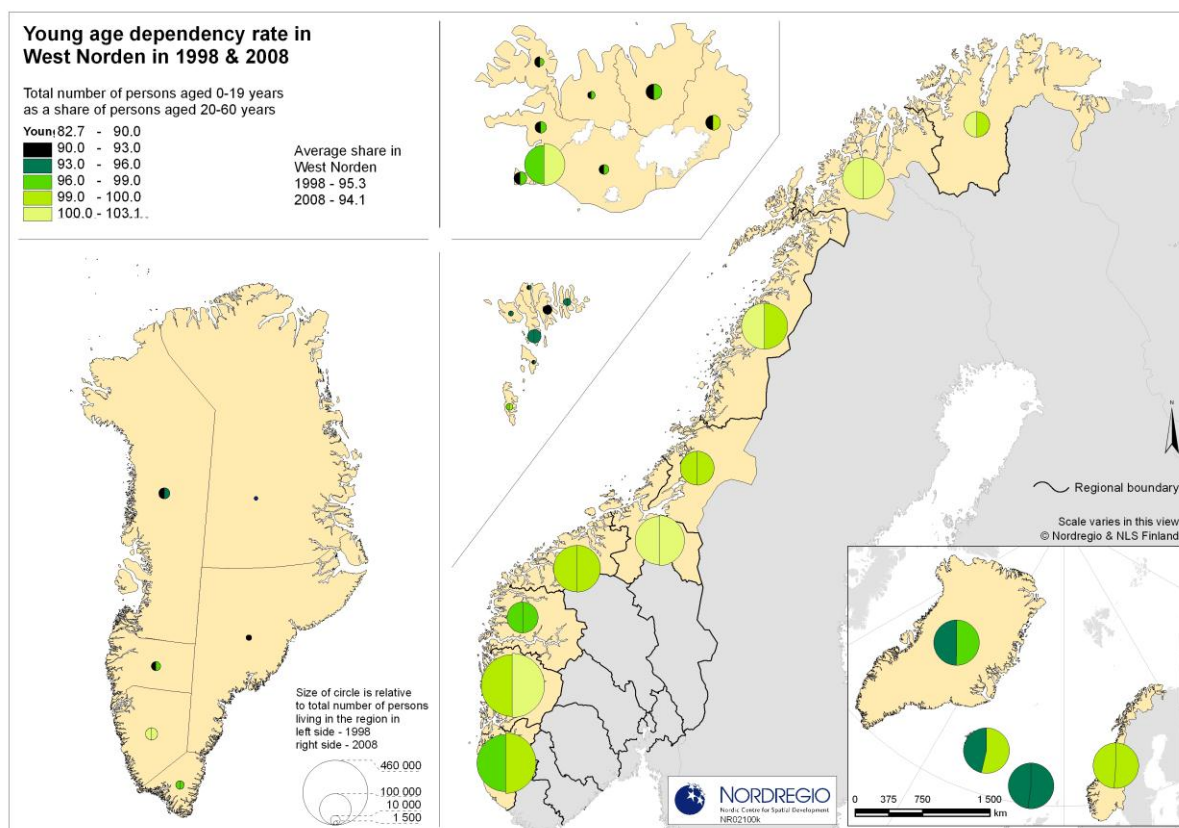
- Red indicates a situation where the age group 60 and above are above average level, while all other groups are below.

Some of the challenges are as indicated above connected to the migration patterns, which are presented in map 17. The data are presented at the municipal level in order to show the marked differences between municipalities. At the same time it is presented for the Nordic countries in general, to show how the patterns in the West Nordic region points towards some general characteristics of development processes in rural and urban areas.

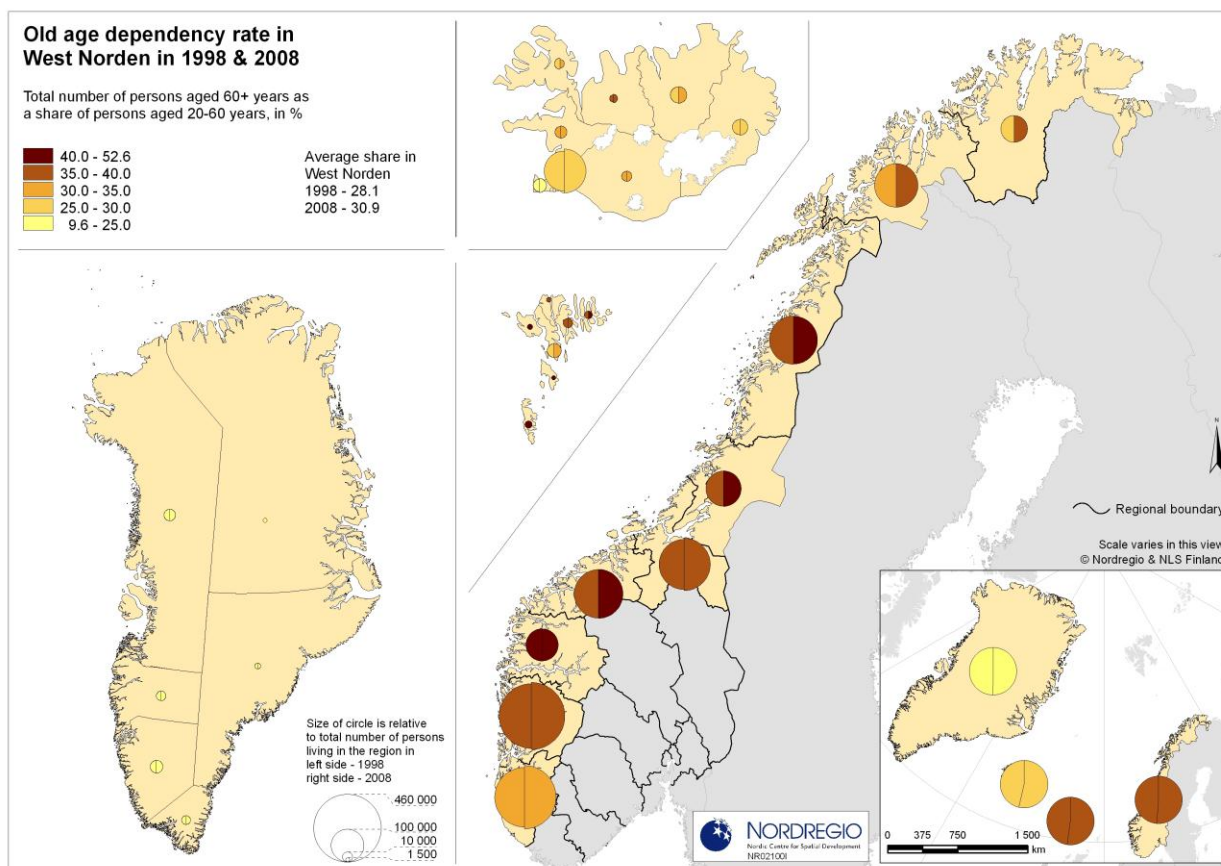
As shown on the map the red colours indicate regions characterized by net outmigration, while the blue one indicates net in-migration. And in this setting the general pattern of West Norden is a region of net outmigration.

Dependency characteristics

The two maps below show the two dependency characteristics, young age on map 12 and old age on map 13 respectively.



Map 12: Young age dependency rates in 1998 (left) and 2008 (right). Total number of persons aged 0-19 years in percentage of persons aged 20 to 60 years.



Map 13: Old age dependency rates in 1998 (left) and 2008 (right). Total number of persons aged 60 years and above in percentage of persons aged 20 to 60 years.

Situations with high young age dependency reflect two very different situations. On one hand stagnating or declining regions where high birth rates in combination with high out-migration of younger persons aiming at education opportunities show a relative high number of children, and thereby a high dependency rate. In some situations the children are left behind with their grandparents while their parents – some time single mothers – are looking for better opportunities in another region, and then later on brought together with their parents when they have settled with jobs, housing and suitable social conditions to take care of the children.

On the other hand a high young age dependency rate also includes regions with high in-migration of young parents and their children to regions with economic expansion. It can be confusing with a situation where one dependency characteristic, being indicating two different situations. In order to differentiate between the two situations the old age dependency rate adds some possibilities, as high levels on both indicates the first

situation described above, while a high young age dependency and a low old age dependency rate indicate the latter situation.

Map 12 on the previous page show the pattern of old age dependency rates with marked differences within the West Norden region, from a relatively low level in Greenland through higher level in Iceland, an even higher level in the Faroe Islands, to the highest levels in Norway, and especially in the middle part of Norway from Sogn og Fjordane in the south to Nordland in the North.

As mentioned previously the limited change in Greenland has less to do with stagnation in old age characteristics, and more to do with outmigration as a strategy for many older persons, eventually leading to the maintaining of the dependency rate. The situation in Iceland has for many years been more or less the opposite, namely an influx of young Icelanders which to some extent has compensated the general ageing pattern in the country.

B: Gender

Gender structure

One of the most striking features of most of peripheral and semi-peripheral regions in the Nordic countries, and especially the West Norden region, is the deficit of women, the balanced or declining population due to outmigration of especially women, and the very high proportion of women with higher education.

Gender differences

A clear indication of these patterns is shown on map 14 on the following page. The map is based on municipal data from 2006 covering the Nordic countries, and in yellow is shown all municipalities with a balanced gender structure ($50 \pm 0.5\%$), while red colours illustrate a female surplus (more than 50.5%), and blue colours a female deficit (less than 49.5%). In absolute numbers, there are a total of 606 or 42 % of the municipalities with a balanced gender structure, while there are 526 or 37 % with a female deficit and only 298 or 21 % with surplus of women.

What is noticeable however is the regional distribution, with northern and rural areas dominated by a medium to high deficit of women, while the municipalities with a surplus of women are predominantly to be found in urban areas and in the more densely populated areas, primarily in the south.

The very extreme female deficit areas are usually those connected to highly specialized, male activities, previously fisheries, agriculture, forestry and mining, but also activities related to military installations. During the last decade, especially males from Poland have contributed substantially to some of the new extraction and processing industries such as oil, gas and aluminium. Some of the northern municipalities with an even distribution or even a female surplus, on the other hand, benefit from a marked influx of women, especially from Russia, but also from South East Asia, for instance Thailand, which for a period of time compensates for the general pattern of female out-migration.

Gendered out-migration patterns

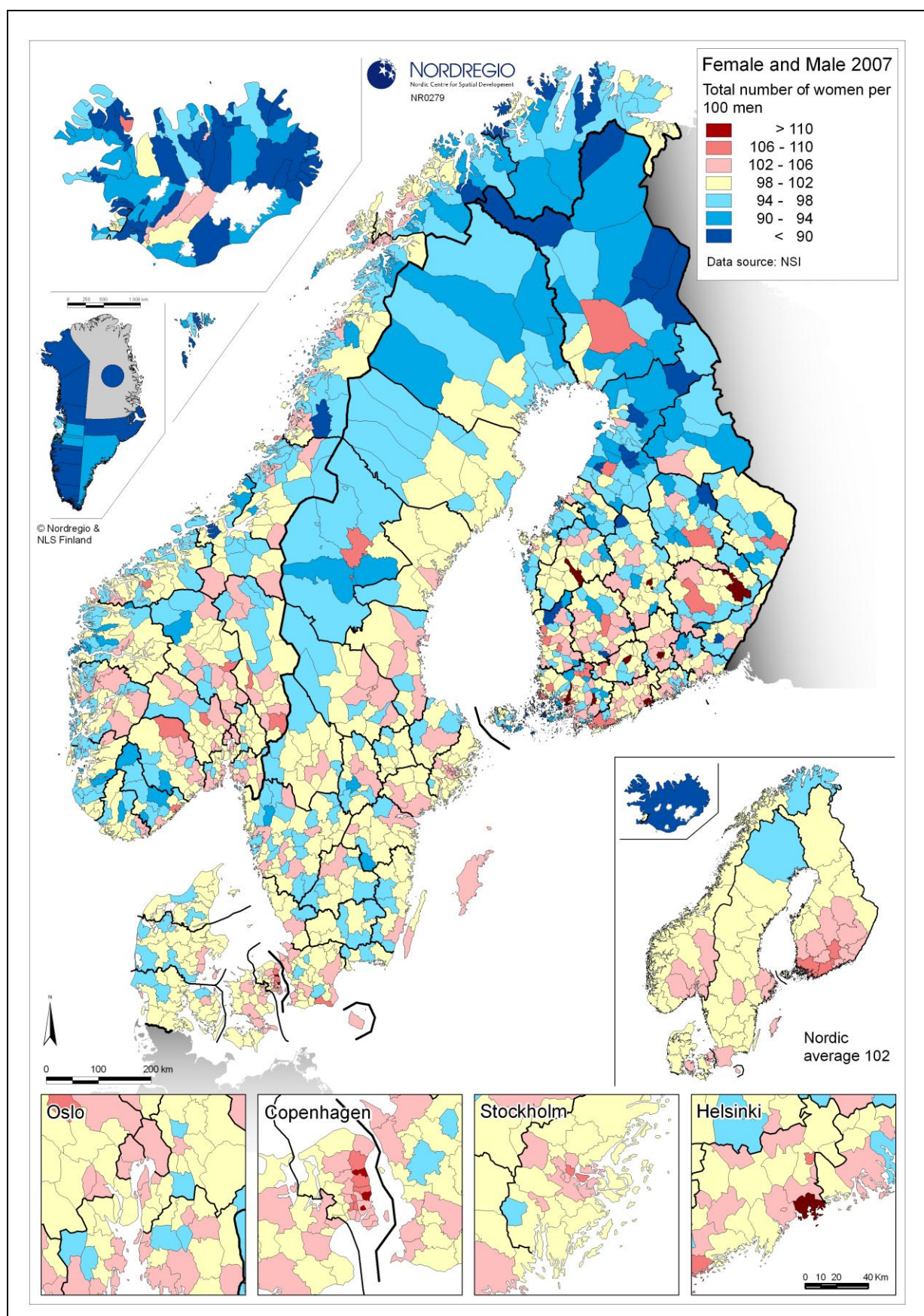
These marked regional gender differences have been a characteristic of the region for several decades, but has evolved further over the last 10-15

years, characterized by an out-migration of women especially from rural areas. Among the consequences is a situation where women have become dominant in relation to high and higher education. This is not a situation only characterizing the Nordic countries. It is a pattern, which has emerged in most of the developed countries, and relates to some general tendencies in relation to the gendered division of labour. It is, moreover, a situation, which requires a new typology emphasizing the two components, out-migration and education, each requiring more in-depth attention.

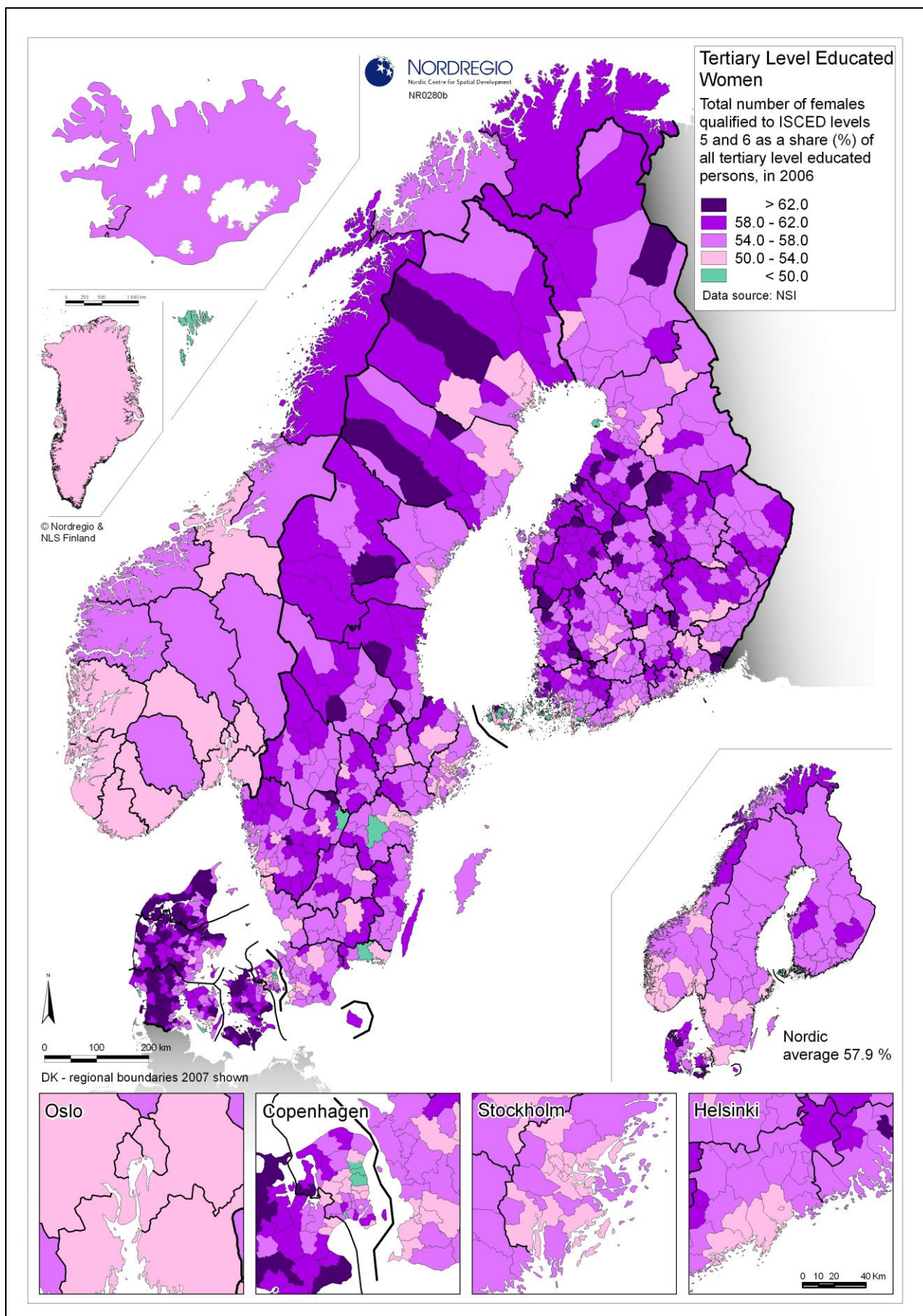
Comparative research from a number of northern regions (Alaska, Greenland, the Faroe Islands, Newfoundland and Iceland) seems to indicate very similar patterns regarding affinity to rural community life. Compared to males, more females consider, and also eventually tend, to migrate permanently away from their home community and region, first of all to look for job opportunities which better fit their qualifications, and provide opportunities outside those traditional economic activities in these communities.

This, however, is not only a “northern” issue. Even though the processes of globalisation have different effects on various rural areas, a general pattern has emerged in the context of the restructuring and decline of the agriculture sector, the growth of the service sector and increased emphasis on technology. These undergoing economic and social changes fundamentally affect women. Indicators from EU research reveal that the employment rates of both men and women are lower in rural areas, just as unemployment combined with a lack of diversification in employment is more common for women than for rural men.

As a consequence, rural areas experience marked demographic, social and cultural changes, and as the process of change in the dependency structures becomes still more evident throughout Europe, especially affecting predominantly rural areas, where women dominate as the providers of primary care for children and other dependent people. As another consequence, women tend to experience negative short-term and long-term consequences in terms of careers, earnings and pensions, and this has severe consequences for migration patterns.



Map 14: Gender structure in the Nordic countries as of 2006, based on municipal data. Blue colours indicate deficit of women. Yellow colours a gender balance. And red colours surplus of women. Due to women generally living longer than men a small surplus of women would be expected.



Map 15: Gender structure in relation to tertiary level education. The map shows women's share of persons at the municipal level with tertiary education.

These changes contribute to a continuing out-migration of young and well-trained persons from regions, which are predominantly rural. As a majority among those who leave are women, there are negative effects on the social life of that rural area and on the rural economy for instance through opportunities for marriage, the maintenance of family life and family structures, while it also has an influence over cultural activities. Furthermore, it contributes to the deterioration of the institutions of social infrastructure and to the decline of services of public interest, eventually leading to a loss of population, observable lower fertility rates thus endangering the medium to long-term development of these regions. The relatively high number of women employed in the service sector has been argued to represent “an escape valve” away from the traditional rural structure based on agriculture, which has become highly mechanized and masculine, towards a new, more diversified socio-economic structure in which women participate in and receive both a salary and social protection. Furthermore, it is stressed that women often initiate the diversification of the rural economic realm by creating businesses, thereby generating both income and jobs.

These patterns can be seen as connected to a number of gender-related differences in aspirations and approaches to change. Firstly in relation to the question of work and work-related activities the perception of customary male activities related to renewable resource exploitation seems to be “sticky”, in the sense that the male discourse – or perhaps the prevailing discourse in respect of males – has difficulty in moving on from what once were key activities, but now constitutes only a miniscule percentage of the available jobs. Contrary to this, the females in their upbringing are socialized into collective activities, more attentive to other’s needs, and consequently much more open to change. As a result of this, they become less limited by specific job characteristics, determined by what may be considered as being “traditional” and “acceptable” activities.

To use an analogy, males seem to be socialized into path-dependency, creating difficulties in accepting other paths and changes, while females tend to be socialized into situations where adjustment and change are required leaving them prepared to move between job categories and job

options. Only jobs related to (new) technology have become status-providing alternatives for males.

Consequently, the adaptation to change through the educational system fits much better with the socialization of girls, even in spite of the fact that girls are constantly underrated and underrepresented when it comes to filling high ranking positions, both in academia and in administrative affairs. Finally, the economic needs of the family and also their greater need for social recognition motivates women to look for work within the rural area, which creates social networks more frequently than in larger urban centres, and when this is not possible, the only option will be starting to look for opportunities outside their communities of origin.

All in all, the fact that women, due to longer life expectancy (men: 77 years, women: 82 years), actually are 50.5 % of the total population in the Nordic countries is hidden by the dominance of women in the densely populated areas, obviously offering better opportunities and perspectives. So it is quite clear that national averages do not provide a reasonable background to understanding the on-going processes, and subsequently the relevant policies needed to cope with these changes.

Gender and education

The question of “better opportunities” mentioned above has very much to do with the marked changes in patterns of education, which have taken place during the last 10-15 years. The figure below shows the female share of the number of persons with bachelor level and master’s and PhD-level higher education. Already in the 1990’s women had become a majority group in relation to higher education, but by the late 1990’s basically all Nordic countries had moved into this situation. The only reason for the Faroe Islands not being in the same situation is, that many of the women when they finalize their education tend to emigrate, predominantly to Denmark, in order to pursue a career where they are able to take advantage of their acquired skills. This has also been the pattern in Greenland, due to a limited acceptance of women with higher qualifications, although in recent years an increasing number of positions requiring higher education have been taken by women.

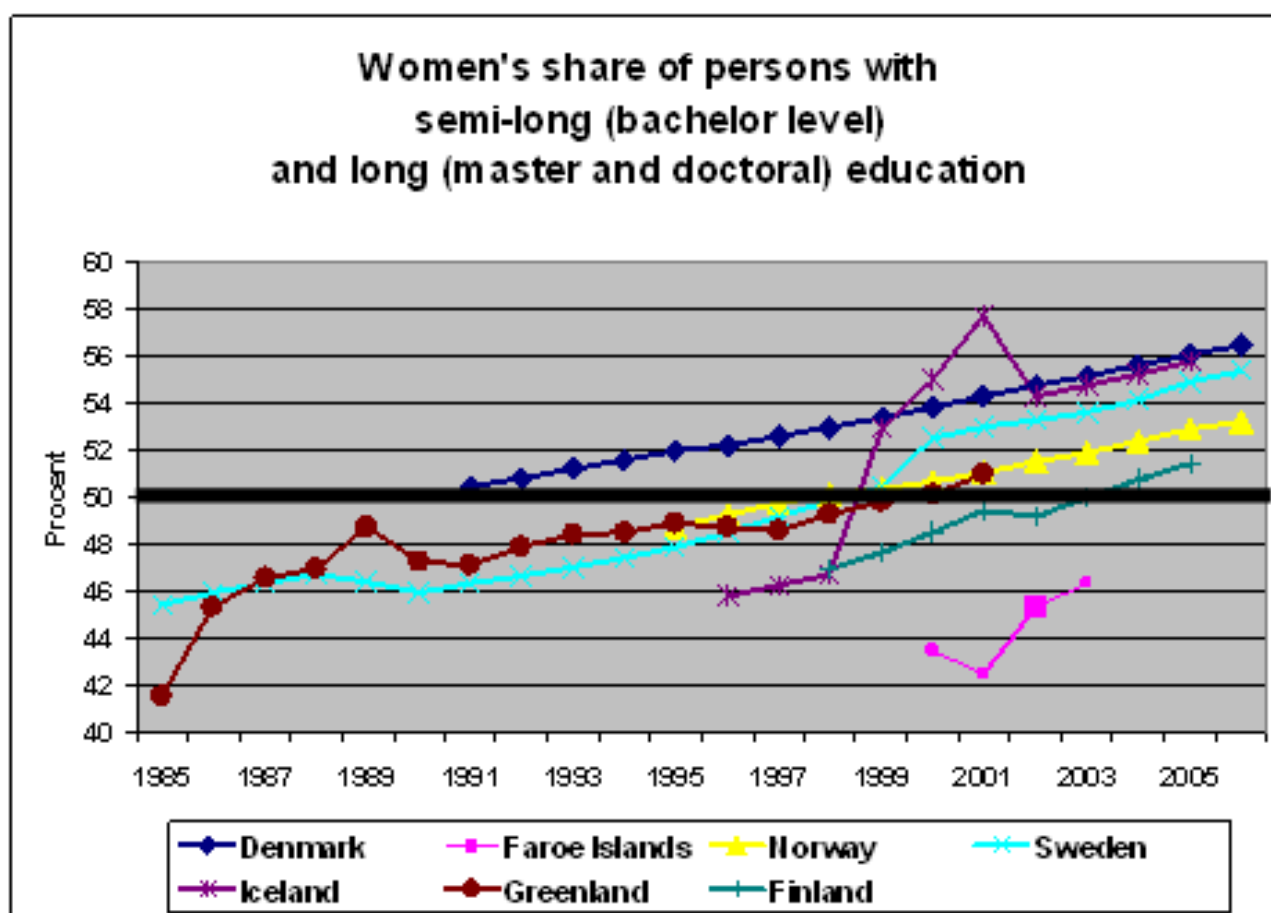


Table 10: Gender structure in higher education in the Nordic countries as of 2006.

In absolute terms on country scale there is no doubt about female dominance in relation to the regional consequences of this development becomes quite clear when looking at map 15 showing some of the consequences of the increasing number of women with higher education. The most obvious characteristic is that there are very few municipalities with a majority of males with higher education, marked in green on the map. And in many cases this has to do with the existence of specific male activities, for instance in relation to the military, heavy industry, resource extraction, or the existence of a technical university dominating the community. In communities with a generally high level of persons with high and higher education – first of all the urban areas with one or more higher education institution - female dominance is limited to a few percentage points. The high level of dominance, i.e. a women's share of 56 % and more, appears in municipalities representing small town and urban settings, which is quite obvious when looking at map 13 above. This is the case in spite of the fact that it is in these same communities where the highest deficit of women appears.

Education is a key qualification, and the pattern is quite clear, as the general level of education is closely connected to two factors, on

the one hand to the population concentration offering qualified work opportunities, and on the other hand to towns and cities offering higher education opportunities. These places are “sticky”, tending to be attractive to industries relying on access to a continuous supply of qualified persons. And as women as described above have become dominant in medium-high and high education this has important regional consequences.

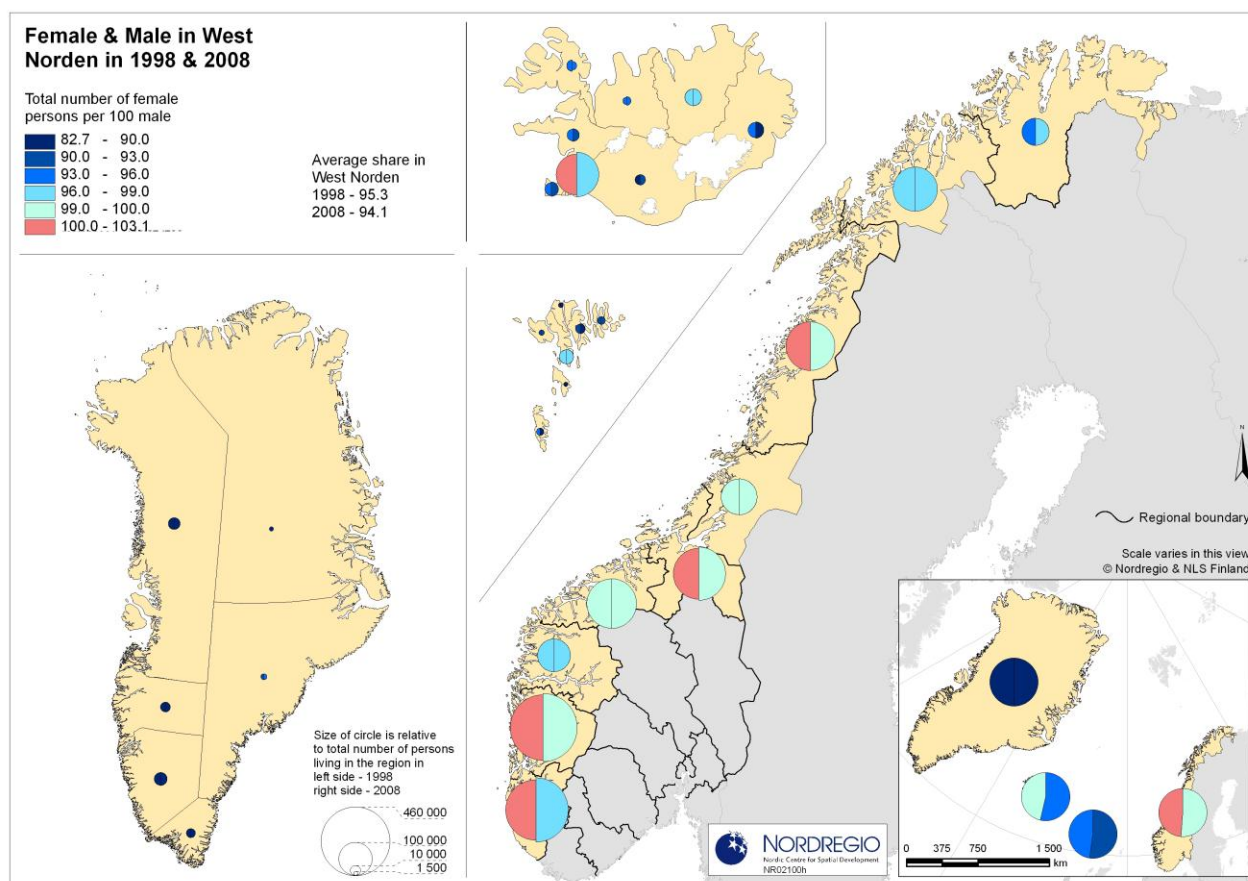
It has been argued that the tendencies towards gendered regional structures might be diminished over time, and that the high level of migration of women to urban areas which has increased their involvement in jobs requiring this level of qualification, eventually might be reversed or at least evened out. The development within the West Norden region during the last decade, however, does not indicate such a change. The two maps 16 and 17 on the next page clearly show this.

In 1998, several regions were in a situation where a small surplus of women enabled the regions to be at a level which should be expected due to the longer life expectancy of women, for instance the capital region in Iceland and Rogaland, Hordaland, Sør-Trøndelag and Nordland in Norway. As indicated by the colour shift, however, all these regions have moved into situations with a general

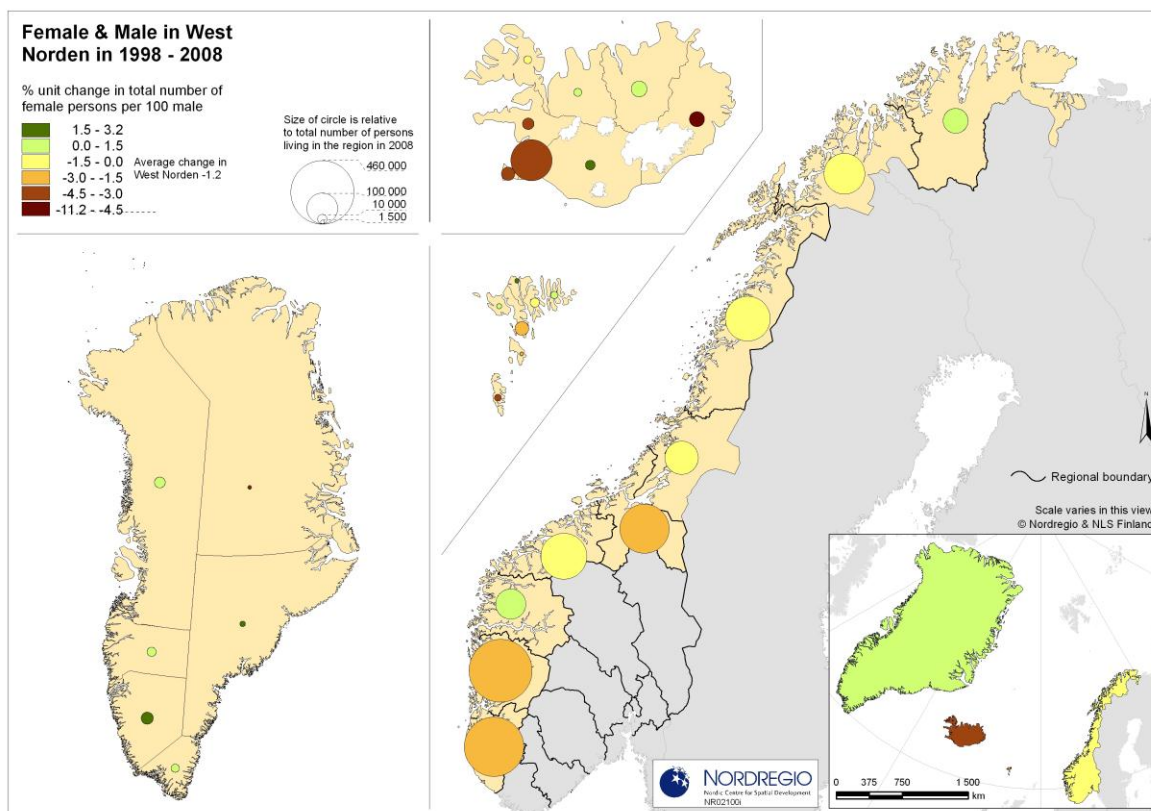
deficit of women. And for most other regions on the map a general deficit of women has either been maintained or worsened. The only exception of this pattern has been Finnmark in Norway, experiencing a minor improvement in the situation. One may argue that a situation with a minor deficit such as 99 to 100 females per 100 males would be insignificant. In reality, however, the situation is much worse than indicated by the number, as a much more marked deficit in most cases will be found in the age group from 15 to 35 years, and then compensated in the regional average through a small surplus of women in the age group 50 and above. The important age group which should secure reproduction and maintain a high level of skills and knowledge is diminishing, while the old age group depending on social services and pensions tend to increase. And

when it comes to Greenland, Faroe Islands and Iceland, almost all regions are showing very bad situations. The only exceptions are the capital regions, and in the case of Iceland also the north east region where the University town Akureyri manage to maintain some activities of interest for women.

When changes are calculated in per cent change, as shown on map 17, a few places seems to be able to show improved conditions. This is indicated by the light green colour. This minor increase, however, just reflect the consequences of the ageing process where the surplus of women become still more evident. Another factor that can be argued adding to some minor changes has been the development of a new focus on tourism.



Map 16: Gender distribution in the West Norden region in 1998 (left) and 2008 (right). Colours indicate total number of females per 100 males.



Map 17: Changes in the female/male ratio from 1998 to 2008. Colours show level and direction of change. Green show reduction in deficit of women while brown show increase in deficit of women.

The tourism industry is markedly dominated by women, and this adds to a small improvements in the number of jobs available, for instance as tour guides, tour arrangers, company managers etc., which combines social skills, language knowledge and education, something characterizing many of the ambitions and qualifications available among

women in the middle size towns and communities. Many of the routine jobs such as servants and housekeepers at the hotels and restaurants, however, are instead increasingly taken over by immigrants or temporal workers from Asia, predominantly Thailand and Philippines.

C: Migration

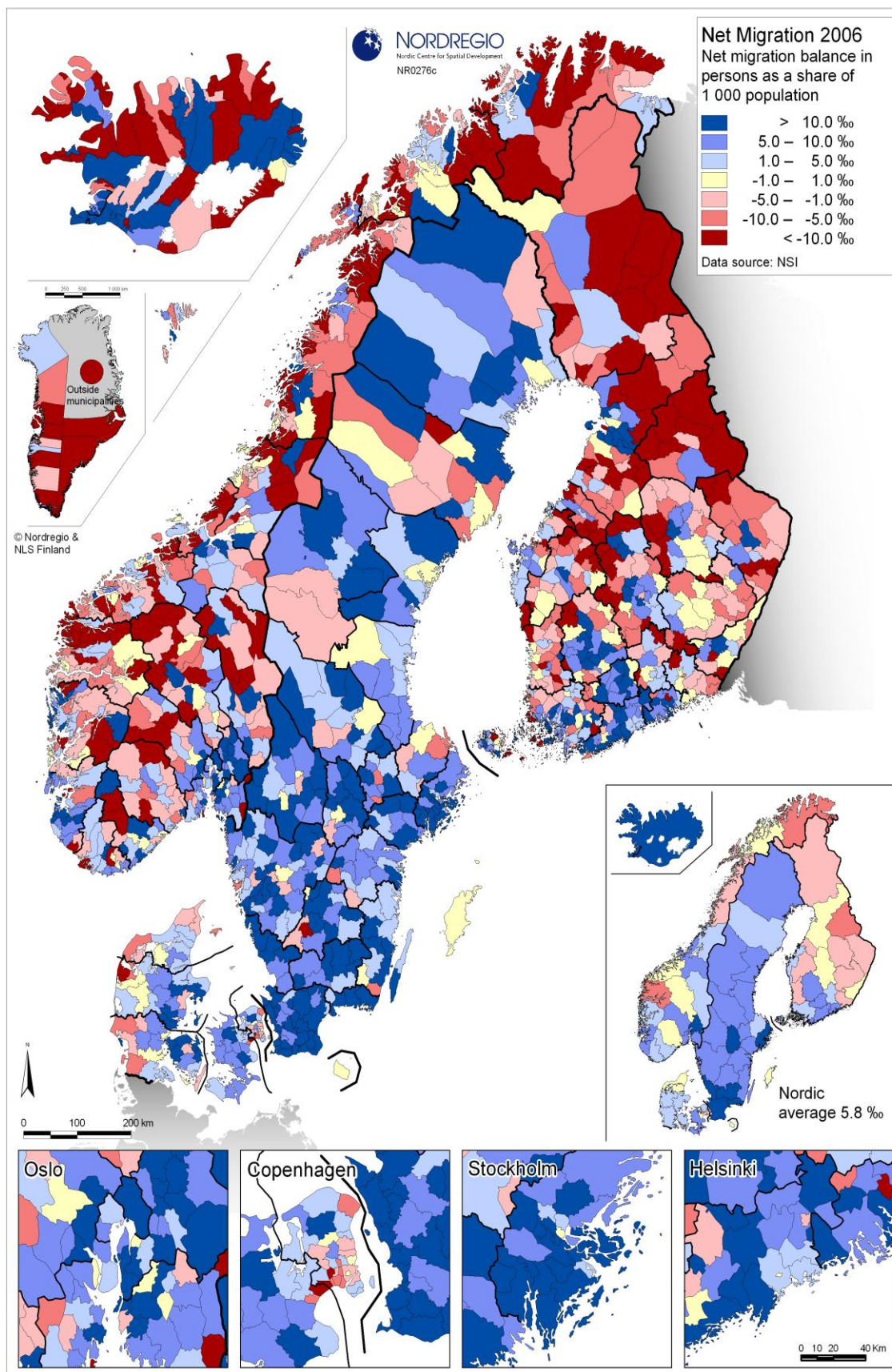
A few municipalities can show a positive net in-migration, most of them in relation to either new economic activities creating jobs, or educational opportunities attracting the youth. But the general trend is clearly outmigration. And in general the out-migrants are either younger people looking for, or already possessing skills and qualifications relating to new economic opportunities, or persons in the working age looking for jobs.

Due to the age structure of the migrants the dependency characteristics will be emphasized accordingly, typically enhancing the trends that have already been mentioned in connection with the age structure. Some of the challenges are, as indicated above, connected to the main components of the population change, namely earlier presented natural population change and migration. These two components are presented in map 18 on the

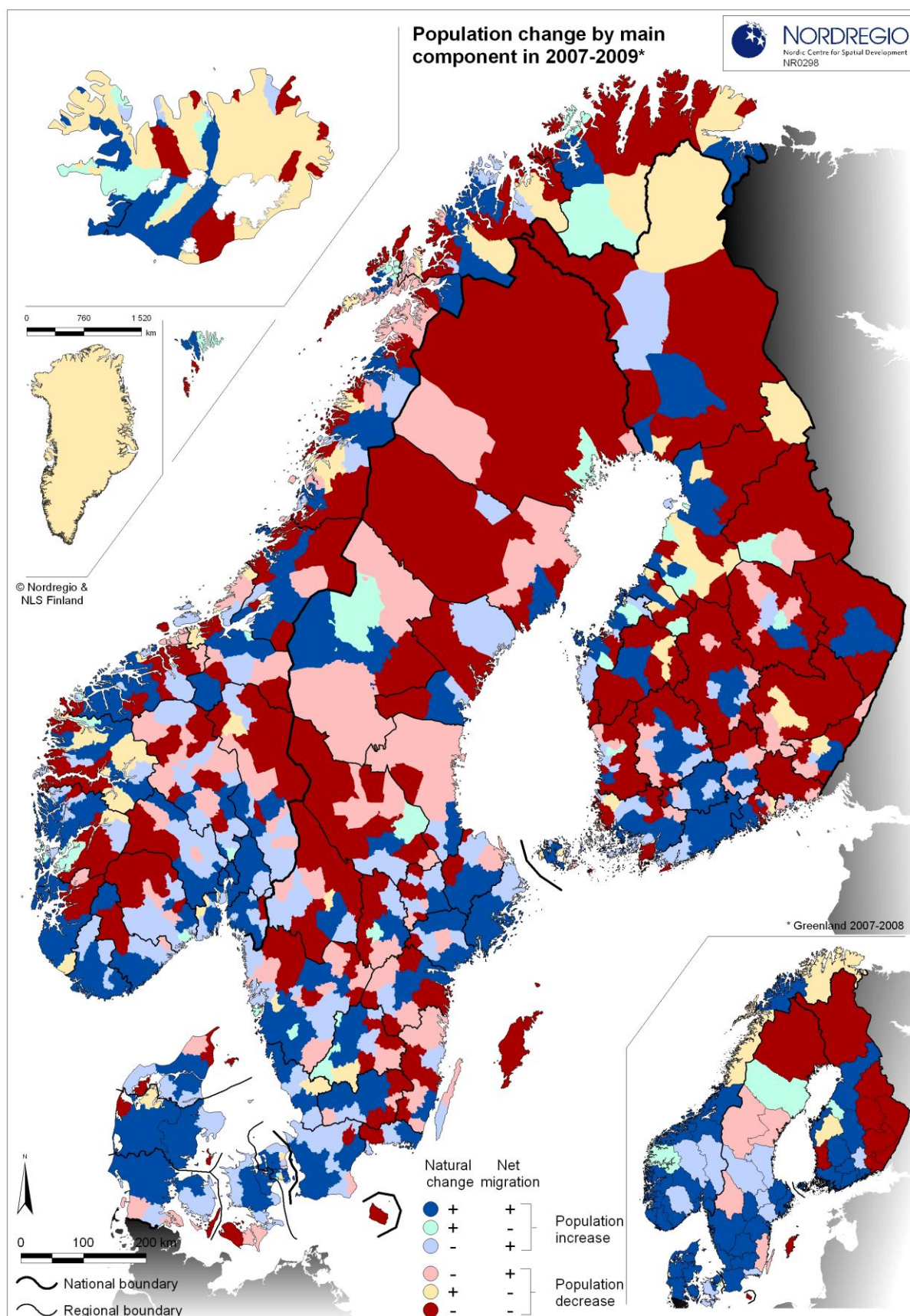
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following page. The data are presented at the municipal level in order to show the marked differences between municipalities. At the same time it is presented for the Nordic countries in general, to show how the patterns in the West Nordic region points towards some general characteristics of development processes in rural and urban areas.

As shown on the map the red colours indicate regions characterized by overall population decrease while light orange indicates population decrease because of outmigration, and light red population decrease as a result of low birth rate. The blue colours indicate population increase. Dark blue is overall population increase; light blue indicates regions with in-migration; and light blue-green regions with high birth rates.



Map 18: Net migration pattern in 2006. Red colours indicate net outmigration, while blue colours indicate net in-migration. Numbers show net migration balance in persons per 1000 inhabitants.



Map 19: Population change by main components in 2007-2009. Red colours indicate population decrease, while blue colours indicate population increase. DRAFT MAP / GREENLAND ON NATIONAL LEVEL

In this setting, the general pattern of West Norden is a region of net outmigration. A few municipalities can show a positive net in-migration, most of them in relation to either new economic activities creating jobs, or educational opportunities attracting the youth. But the general trend is clearly outmigration. And in general the out-migrants are either younger people looking for, or already possessing skills and qualifications relating to new economic opportunities, or persons in the working age looking for jobs.

Due to the age structure of the migrants the dependency characteristics will be emphasized accordingly, typically enhancing the trends that have already been mentioned in connection with the age structure.

Domestic migration

Some of the major characteristics in relation to migration patterns have already been discussed in relation to the general migration pattern shown on map 9. As indicated, the difference is partly due to the attraction of larger urban centre – first of all the capital areas – and a clear pattern of rural or “peripheral” and urban or “central” municipalities emerge, the former characterized by out migration, and the latter by in-migration. The larger towns and cities in particular are decisive as regards this pattern. This is in special the case in Norway where most of the coastal regions have a major city of its own, like Bergen and Stavanger. Also the larger communication lines seem to influence the migration pattern.

Also differences in gender migration patterns have been emphasized. Males migration often characterized by shorter distances, and more

often returning to the place of origin, while females usually follow the “step-stone” pattern of migration, from smaller places to local centres, to regional centres, to the capital region, and eventually out of the country.

A general characteristic, however, of the mobility in the region is, that it is substantial higher than the average situation in the Nordic countries as such. This has partly to do with the limited services available in the smaller communities, for instance access to education opportunities or special medical services, and partly to the accessibility of the communities where commuting may be limited due to distances and quality of infrastructure.

Inter and intra Nordic migration and mobility

The mobility between the countries is very much influenced by the history and traditions established during centuries of colonial and semi-colonial relations. As a consequence it is difficult to look at migration within the West Norden region without at the same time include Denmark. The migration statistics in West Norden are based on national civil registration systems in each country. To be registered as an immigrant request that a person intends to live in the country for a specific time. This specific time is for Denmark three months, for Norway six months and for Iceland 12 months. Due to these statistical differences between the West Nordic countries, the migration flows between two countries can be in two different levels. The table 11 below shows the pattern of migration in 2008:

2008		To					Total	Net migration
From		Denmark	Faroe Islands	Greenland	Iceland	Norway		
	Denmark		1181	2 074	1551	2058.5	6864.5	1060
	Faroe Islands	1359		17	68.5	49	1493.5	-159
	Greenland	2839	50		21		2910	-816
	Iceland	1717	64.5	3		335	2119	-261.5
	Norway	2010	39		217		2266	176.5
Total		7924.5	1334.5	2094	1857.5	2442.5	15653	

Table 11: Migration pattern within the West Norden region. The figures between Greenland and Norway are not available separately but are included to Norwegian Danish flows. These cases are marked with yellow. The numbers for Norway includes not only the West Norden region, but Norway in general. Due to statistical differences between the countries, the total number of migrants shows the average number of migrants between two named countries.

Besides some general characteristics of mobility within the West Norden region, the table reveals two important issues. On one hand the role and importance of demographic mobility between Denmark, Faroe Islands and Greenland. As will be discussed below, the connection to Denmark is crucial in many relations: education, family relations, retirement, etc. As a consequence there is a relatively close relation between the labour markets of Greenland, Faroe Islands and Denmark. Another issue shown in the table are the consequences of the crisis in Iceland, leading to a general out-migration

pattern which also shows within the West Norden setting, as well as in relation to Denmark.

International migration and mobility

Global migration is having an increased influence on the region, and a number of groups are presently becoming key persons in the development process. Among these groups two should be emphasized. On one hand the Thais, predominantly females, and the Poles, predominantly males.

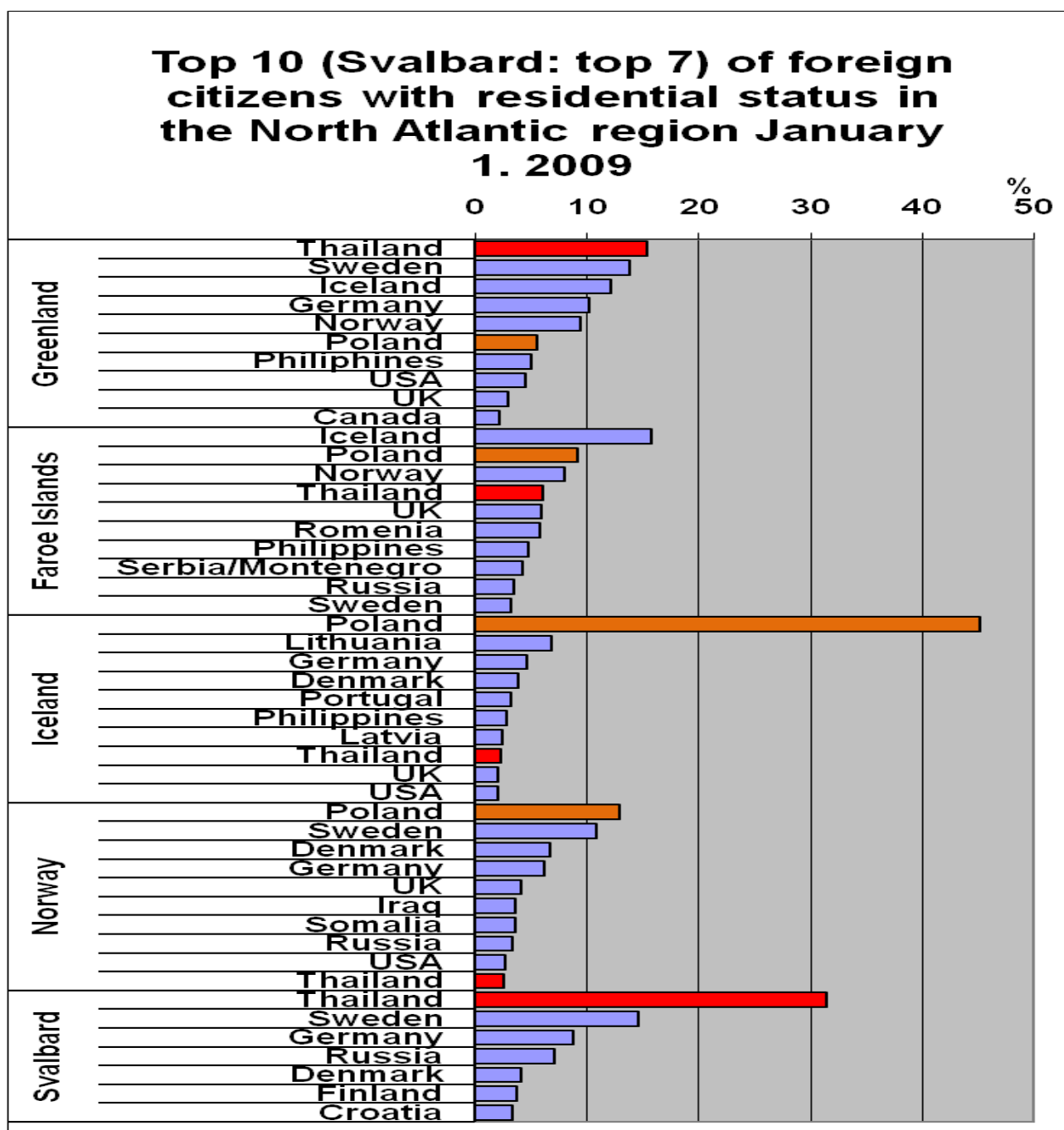


Table 12: Top 10 of immigrants to the West Norden region

From 1998 to 2009 the total number of Thai citizens settled in the far north, i.e. Greenland, Iceland, Faroe Island and Svalbard has increased from 356 to 824 persons – a total increase of 131 % over 11 years! In relation to Norway it is not possible to provide information for the regions included in the West Norden region but only general numbers for Norway. In the case of Norway Thais are number 10 on the list, with an increase from 1987 persons in 1998 to 7884 persons in 2009 – an increase of 297 %! To get an indication of what trend might be in the West Norden regions of Norway the data from Svalbard has been included. And in as well Greenland as on Svalbard the Thais are the largest groups of persons with foreign citizenship, while they are number 4 in the Faro Islands and number 8 in Iceland, as shown in the top-10 list on the graph above.

In both Iceland and Norway the Poles are by far the largest group of immigrants. It has to do with the foreign labour force involved in the major

construction of industrial and energy sites in both countries. In Norway for instance in connection with the Snøhvit gas project in the Barents Sea, and in Iceland in relation to the construction of a large aluminium smelter in East Iceland. In both cases more than 2/3 is males, and most of them single.

The pattern with the Thais in the North Atlantic region is more or less the reverse pattern. The graph below shows the percentage of women in the group of Thai citizens. And with almost 60 % in Greenland to 85 % in Norway women are by far the largest groups. In the case of Norway the role of marriages with Norwegian men is a key factor in the high female ratio. This is a pattern that resembles the other Nordic countries, where in-migration of women from Thailand also has contributed to a certain compensate for the general pattern of out-migration of women from the rural areas.

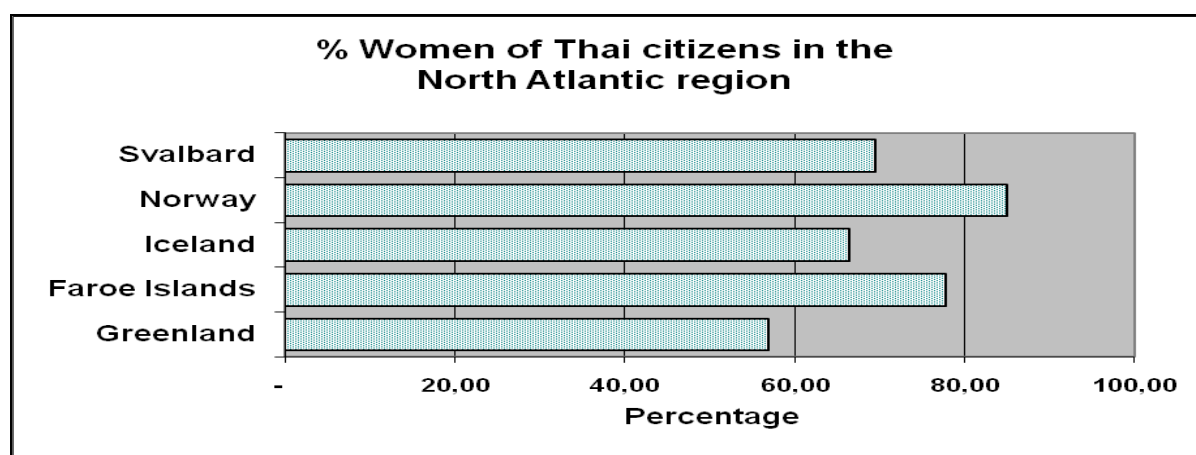


Table 13: Per cent women in the group of Thai citizens in the West Norden region.

Similarly, marriages have been an important element in the general increase in the other parts of the North Atlantic, at least as an initial situation. But a number of other issues are at stake in this connection. Through the network back in Thailand possibilities of getting good jobs in the service sector – hotels, restaurants, hospitals – are very often one of the main reasons for a continued influx of women. In Longyearbyen on Svalbard a large proportion of the service activities are taken care of Thai women.

Quite often the influx of women at a later stage is supplemented by males. And very often leading to new business activities, still connected to the service sector. Thai restaurants are becoming a general element in most of the larger places in the North Atlantic region. In Nuuk, the capital of Greenland, with a population around 15,000 inhabitants the Thai restaurant employs 16 persons

and is among the most popular restaurants in the town. In addition, the town has two shops with all kinds of Thai products – from furniture to clothes and food, first of all servicing the group of 100 Thais in town, but increasingly becoming an important supplement to the shopping opportunities in town. And the Thais are recognized as being not only good workers but also a very stable work force. In the case of the restaurant, the Chef has been there in 14 years while two other cooks have been there for more than 10 year.

While the question of integration in the community is often a major factor when it comes to newcomers decisions about staying or leaving, the question of networking within the Thai community is a major factor in stabilizing the community. Interviews with Thais in Longyearbyen, Svalbard, indicate that integration in the local community is not necessarily an issue. None of the interviewed

persons had any expectations regarding becoming integrated in the community. Those married to Norwegians of course were expected to become involved in community activities, especially in case of children. The question of integration and the question of long term community involvement, however, did not appear to be decisive in relation to staying or leaving. But the little “enclave” served as a cultural setting for them, and turned out to be decisive regarding whether or not to be staying. They had no specific strategy regarding leaving as long as they had good income opportunities and felt accepted by the community.

The situation is quite opposite when it comes to the male groups, such as for instance the present groups of Poles involved in the construction of large scale projects. Usually they are there on contracts that are clearly temporary and usually living in camps that are established as temporary or semi-temporary units. In the case of the

construction of the alumina smelter Fjarðal in East Iceland 2,200 workers from Iceland (20-25 %), Poland and other countries (approximately 75 %, hired directly from various countries, most notably from Poland). At one point of time the town of Reyðarfjörður had the highest concentration of foreign residents of any community in the country. To house employees, the company erected a large team village near the existing village of Reyðarfjörður, about three miles from the smelter. The village had its own recreation area, dining area, gym and internet café. After the construction has ended most of the workers have left again, and it is not clear what the buildings will be used for. In connection with the possible establishing of a similar smelter close to the town of Maniitsoq in Greenland a similar model will probably be considered.

5. Special regional issues^C

People in the regions – gendered and aging reality

A median West Nordic citizen is a male in his late thirties. Compared to other Nordic Countries there are two remarkable differences. People in West Norden are in average a couple of years younger than in the other Nordic Countries. And in the other Nordic Countries there is a clear female dominance on the national level.

Low fertility levels, combined with increased life expectancy, have resulted in demographic aging. The share of the older generation is increasing, while the share of other age categories is decreasing. Aging in terms of fast growing groups in retirement ages is as the existing share of elderly people is low in the West Norden, aging as such will not yet have same effects. In contrast, the share of children aged 0-19 years is higher in West Norden than in the other Nordic Countries.

When looking at the population structure by age, there are some differences between settlement types and countries. A common trend is that the population in urban areas is younger, while relatively fewer people of working age and more elderly people are living in rural and sparsely populated areas. It is notable that the population in Iceland, Faroe Islands, Greenland and Norway is in general younger than in Denmark, Finland and Sweden. At the regional level, the largest shares of children can be found around the largest cities, in the West Nordic region and Finnish Pohjois-Pohjanmaa. Municipalities with low number of children are especially dominating the northern part of Sweden, but also parts of interior Finland. The pattern of old age persons is to a certain degree a reversed picture. Rural areas generally are characterized by the relatively high proportion of old age persons.

As the West Nordic Countries have a high share of children compared to other parts of Norden the level is more similar to other Arctic regions, but the on-going changes at the same time indicating what may be a general situation in the future.

A common classification regarding age structure is the grouping in three major classes based on

dependency. Age-dependency ratios relate to the number “dependent” individuals – youths and the elderly – to the number of those individuals who are capable of providing such support. In generally the comparison is done among persons aged 0-14 and 65 years and over, related to population aged 15-64. The maps 19 and 20 provide some details in this connection. First that most places showing relatively high levels of children are generally to be found in the coastal regions in urban regions where non-traditional activities outside the primary production are expanding (map 19). Second that the situation where the population pyramid showed a broad base in the Arctic is obviously moving towards a much more narrow base covering the whole Circumpolar North (map 20).

The replacement ratios (map 21) show an interesting East-West structure in the Nordic setting with severe problems in especially Finland, while a better situation exists to the west, and again with the coastal areas being in the most positive situation. It should, however, be noted that especially in the West Norden the lack of training and study activities has led to outmigration of the age group between 15 and 24 - future contributors to the productive age group – and thus the traditional demographic dependency ratio may not provide the full message.

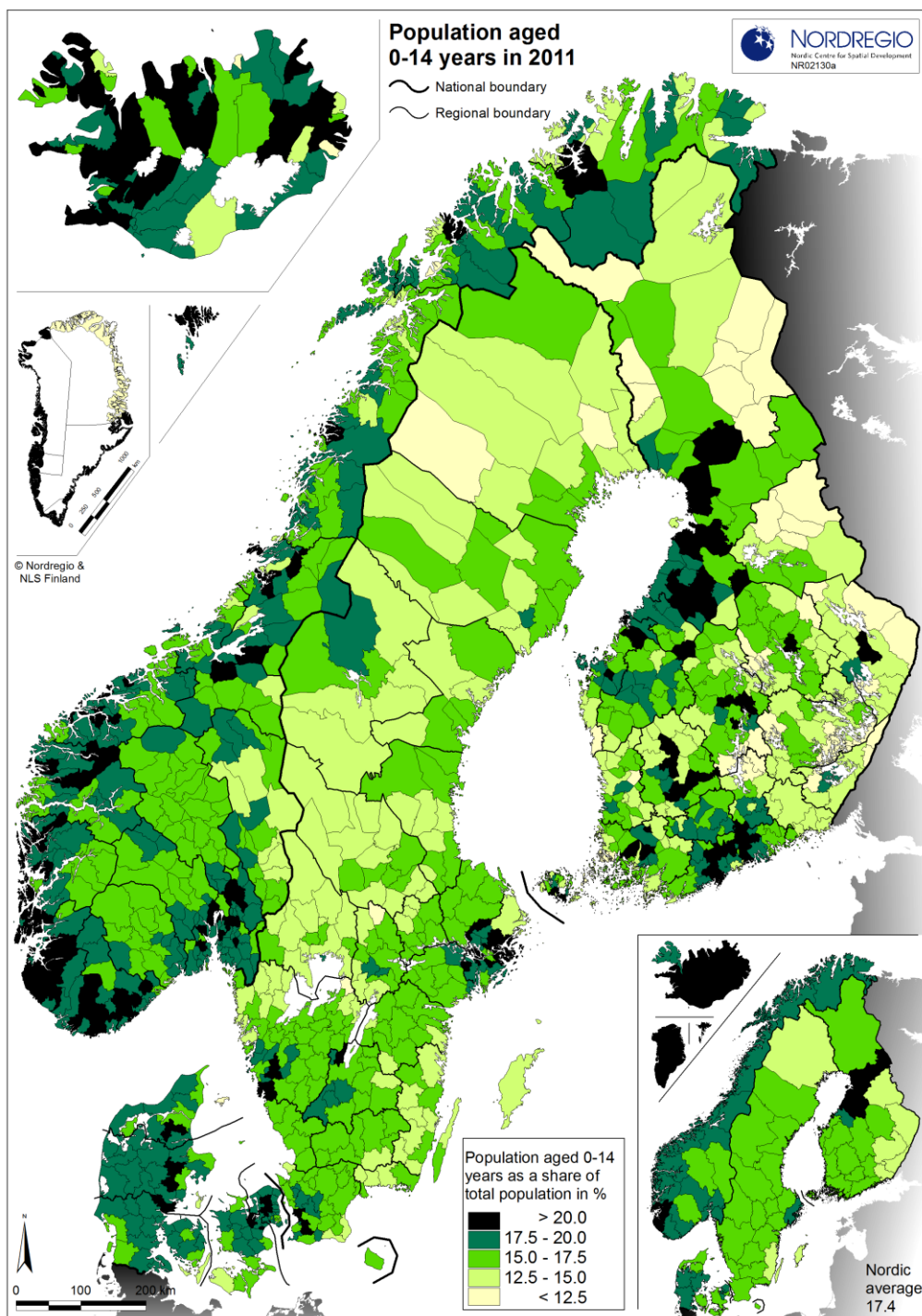
As the labour force as such is relatively young in West Norden, this is not yet a challenge for the main labour force which is indicated when looking at the demographic labour force replacement ratio, i.e. population aged 15-24 compared to population aged 55-64. Such a comparison is however hiding the fact that limitations to access to education, and especially the high level of centralisation of education possibilities in the West Norden adds to the risk of out-migration at a relatively early point of time, and further problems expected in the future as birth rates are moving towards the same patterns in Westnorden as in compared to other regions in the Nordic Countries.

C: This chapter is mainly based on material from Rasmus Ole Rasmussen and Johanna Roto (2009). Demographic Challenges to the NORA region. An OECD expert report. Nordregio 2009, and on material from Klaus Georg Hansen, Rasmus Ole Rasmussen and Johanna Roto (2011). Demography in the Nordic countries – A synthesis report. Nordregio Working Paper 2011:9. Stockholm. Nordregio.

There are 101 female per 100 male in the Nordic countries. This overrepresentation of the female population is not surprising, since Nordic females on average tend to live a couple of years longer than Nordic males. However, there are considerable regional variations (see map 22 for details), both between cities and sparsely populated areas and between eastern and western Norden. Generally speaking, the city regions - with capitals on top - have the highest share of female population. The main reasons for women to move to cities or to the

south are related to education possibilities and a lack of advanced jobs in rural regions. In some smaller town and rural regions, and especially in the West Nordic region, there is a male dominance. The most male dense regions are some Greenlandic and Icelandic municipalities.

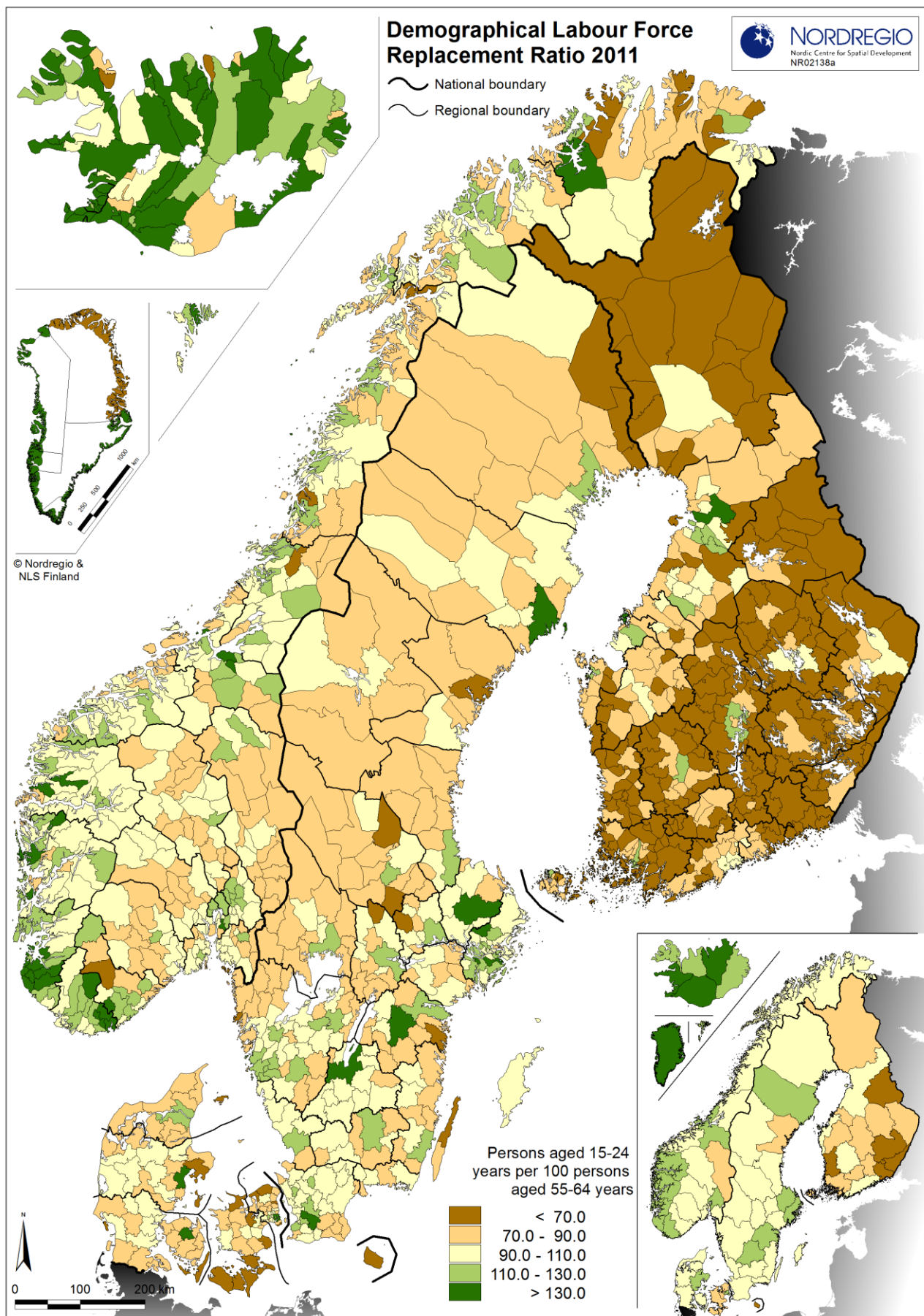
The gender balance is even more interesting among the labour force aged population. The out-migration and lack of working-age women is especially striking in Greenland and Faroe Islands where there are less than 90 female per 100 male.



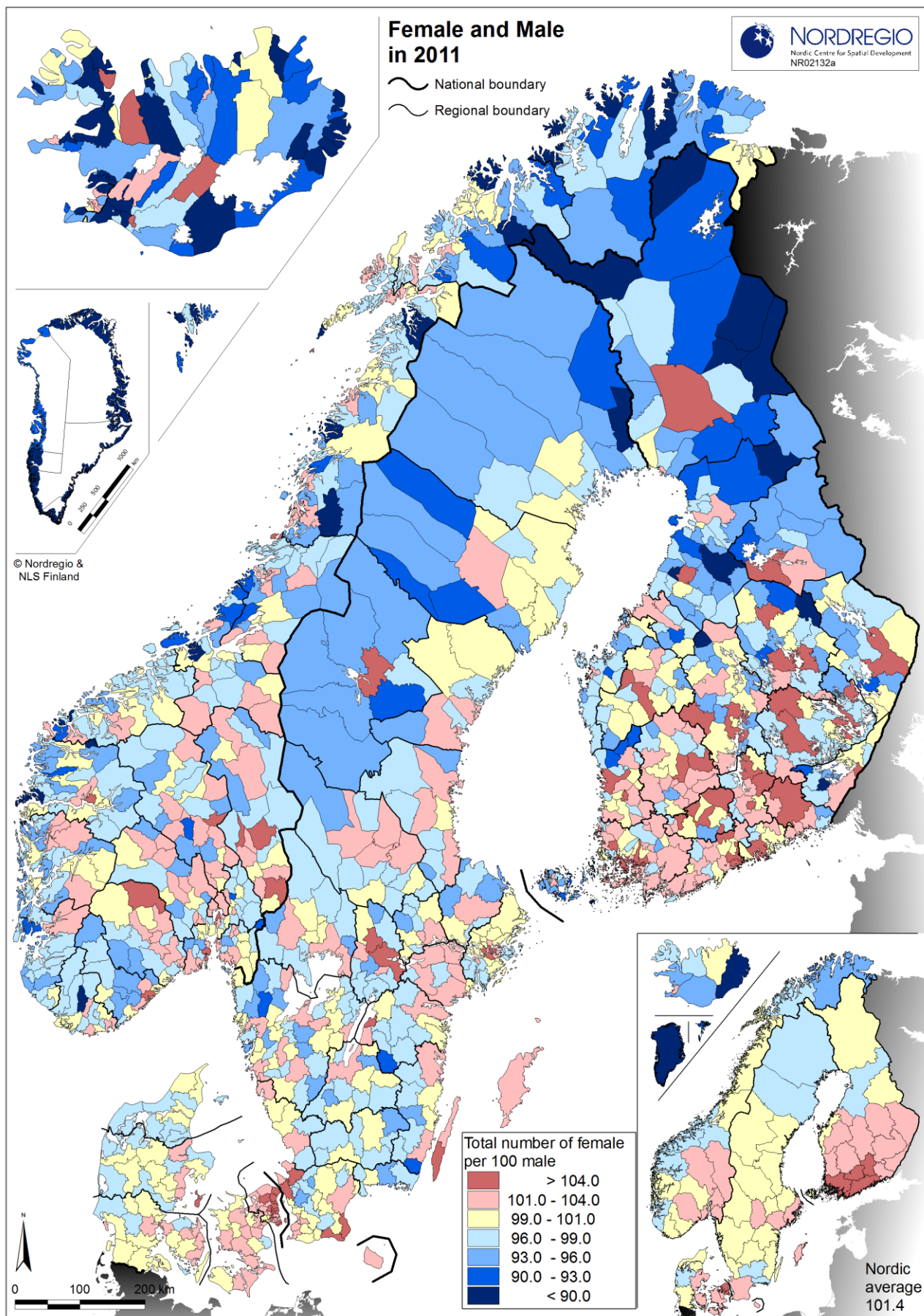
Map 20: Share of population aged 0-14 years in the Nordic Countries.



Map 21: Share of population aged 0-14 years in the Arctic regions.



Map 22: Demographic labour market replacement ratio in 2011.



Map 23: Total number of female per 100 male.

Growing cities and regional variations

The increase in population in West Norden during the last ten years was 8.0 %. At the same time the overall population in the Nordic Countries increased with 5.6 % and in the European Union with 3.8 %. At the regional level (see map 24, 25 and 26 for further detail) we can see a wide spectrum of development trends. In the Faroe Islands and Greenland, the overall population development was rather stable whereas in Iceland and coastal Norway there are large differences between the growing and shrinking regions.

In the Nordic level, almost all the Nordic capital regions including Oslo and Reykjavík, and Rogaland were among the fastest growing 130 European regions where the population increase during the last decade was over 1 % per annum.

In the Nordic countries, population development is strongly linked to the urban hierarchy and its functional dimension. In all the Nordic countries, the capital regions and second tier city regions, like Stavanger (NO) and Reykjavík (IS), were the best performers in the population increase. Also almost all the university cities and their labour markets had an increasing population. Regions with population increase outside the capital and metropolitan regions are growing mostly just because of one or two very fast growing municipalities in their area, like Tromsø and Troms (both NO).

At the same time approximately half of the Nordic municipalities experienced a decline in population during the last two decades. The deepest decrease can be found in small municipalities outside the city regions, mainly in the Danish, Finnish and Swedish countryside. Still, some Icelandic and Norwegian coastal rural settlements have managed to increase their population mostly due to successful tourism and fishing and aquaculture activities.

In a European perspective, Iceland had the most spectacular population development with a

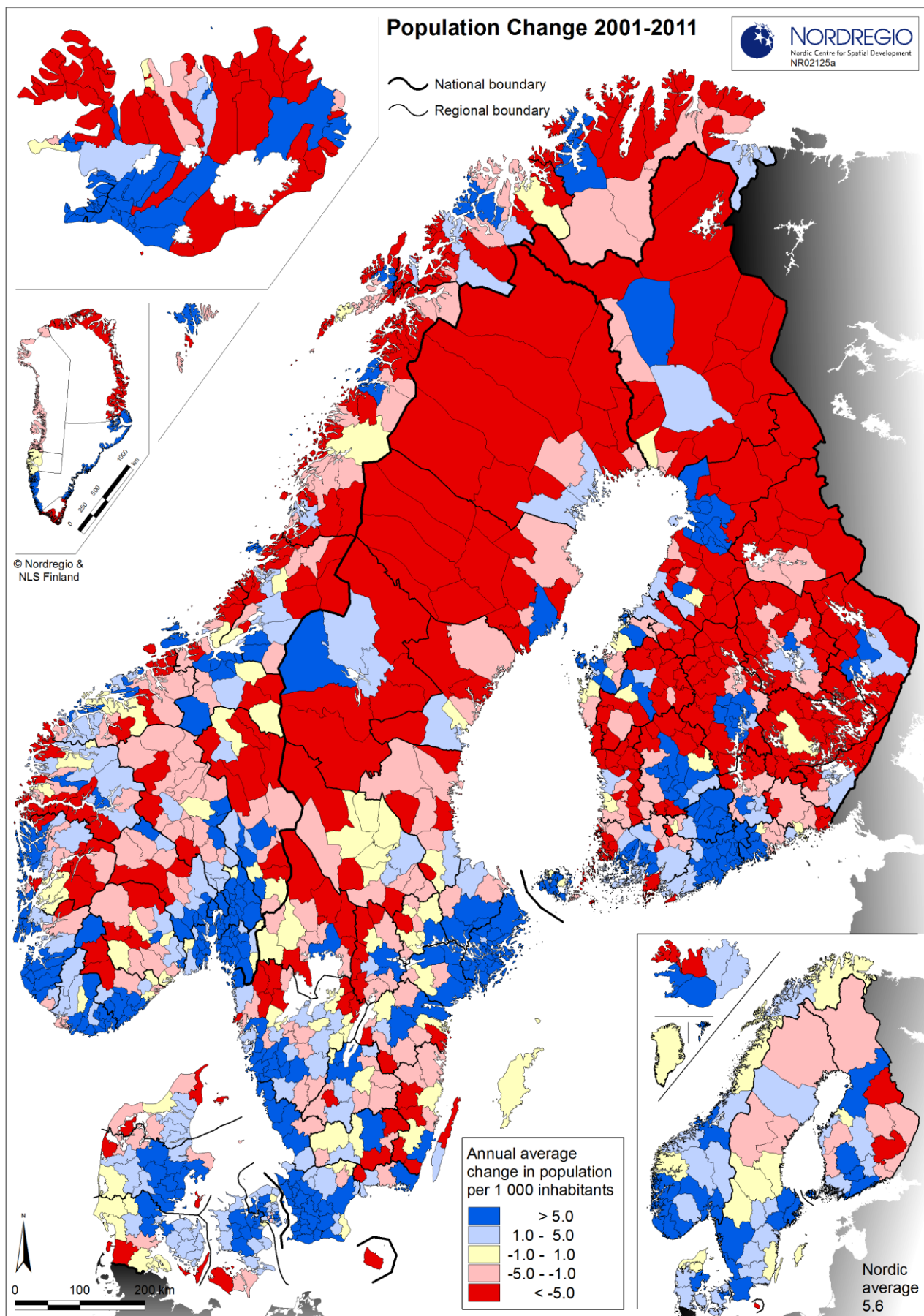
modest population increase in the 1990's supported by both high birth rates and in-migration, over two per cent per annum in 2005-2008 and finally a population decrease in 2009 as a result of economic changes. In 2010, the total population was going up again. The main population increase – and concentration – occurred on the expanded capital region.

During this decade, the Norwegian population has continued its concentration to major coastal cities, especially Stavanger region, whereas large land areas in Northern Norway have lost in population. Still, compared to other Nordic countries, the Norwegian population change is more balanced and even some small coastal municipalities outside the regional centres have managed not only to maintain but also to increase their population. From 2009 the Norwegian population change on regional level was, for the first time in over 20 years, positive in all regions.

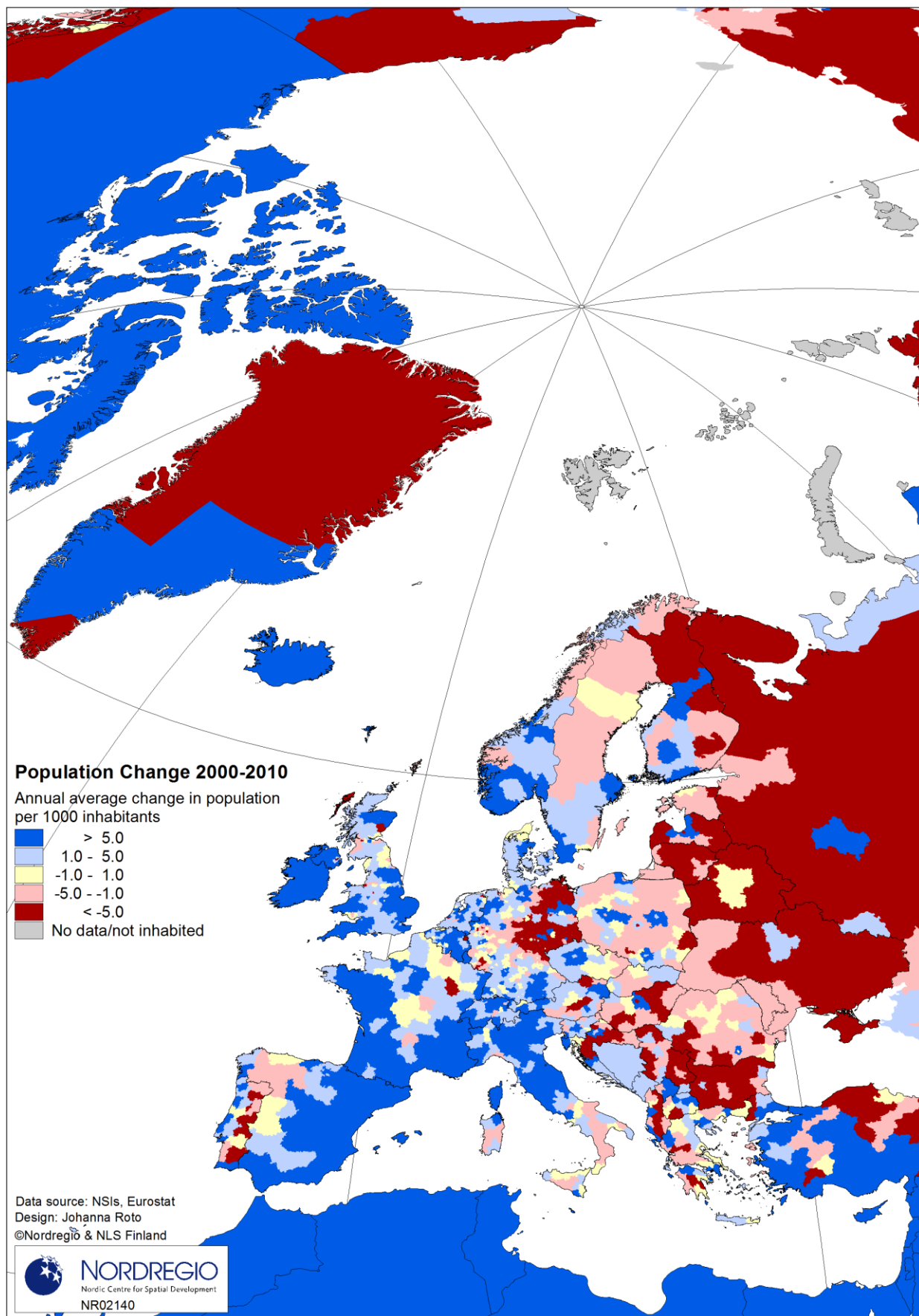
In the Faroe Islands the main population increase is taking place on the main islands of Streymoy, Eysturoy and Vágar, Tórshavn being the fastest growing node whereas the smaller islands are losing their population.

In Greenlandic the population is increasing in the municipalities of Sermersooq and Qeqqata with the largest cities of Nuuk respectively Sisimiut.

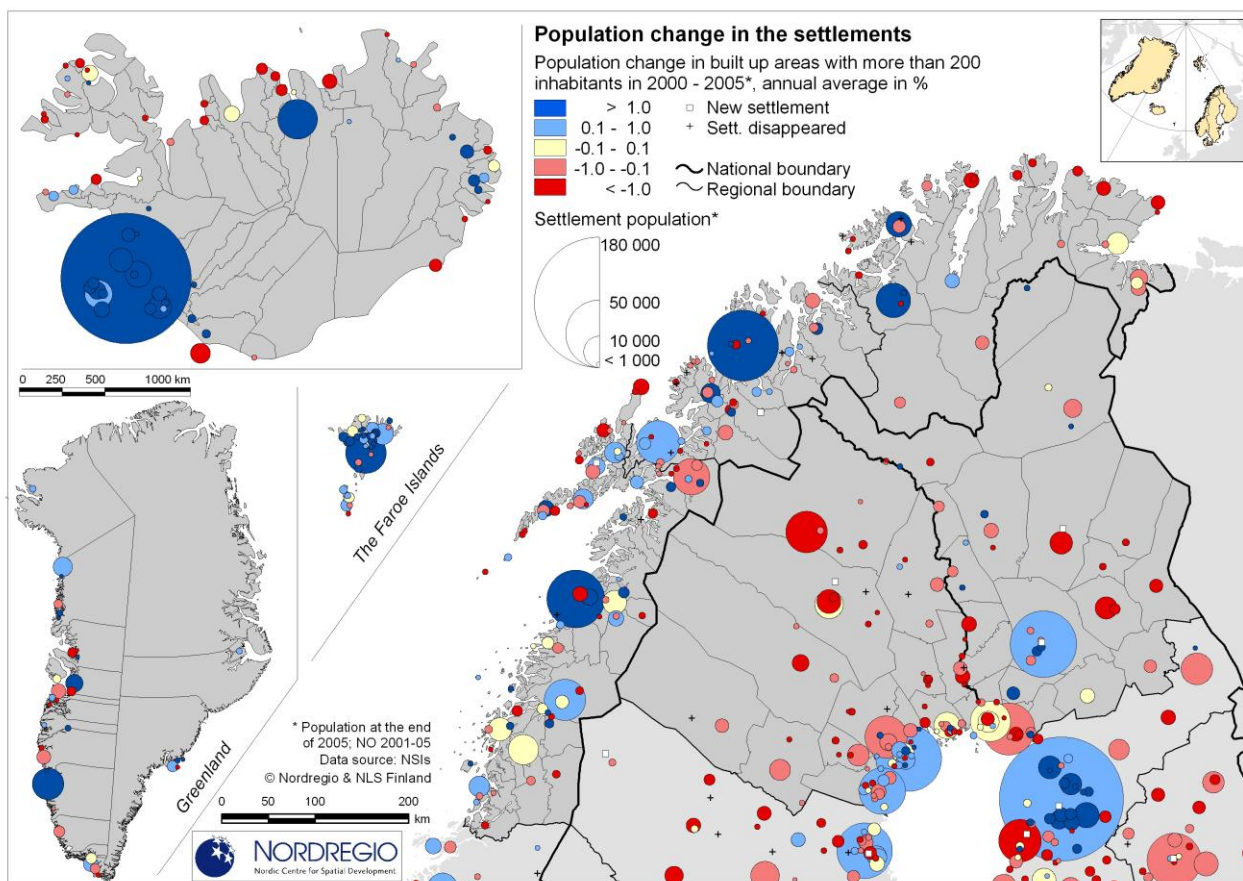
The centralisation of the population is even more visible when looking at the population development in the settlements defined as being build-up areas with more than 200 inhabitants (map 25), where it becomes quite clear how the smaller places generally become smaller, while the larger places increase in size. In addition, several of the smaller places disappear as urban areas (marked as black dots) when the total population decreases below 200 inhabitants, a fate that may be experienced by more places in the future.



Map 24: Total population change 2001-2011 in the Nordic Countries.



Map 25: Total population change in the European and Arctic regions 2000-2010.



Map 26: Total population change in the settlements in the Northernmost Europe in 2000-2005.



The main drivers behind the change

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 population increase in Europe in general. Since then, decreasing fertility rates, increasing life expectancy and an increased importance of international migration have changed this picture and migration has become the major component of population growth. A large share of major Nordic city regions experienced population increase both due to in-migration and natural increase. The different regional patterns in the Nordic countries are shown on map 27.

In a European context, the Nordic countries in general have high birth rates, and even very high in West-Nordic region. There is a West Nordic trend, where high natural increase is in some regions compensating for negative net migration, keeping the total population either balanced or increasing. The high birth rate basically indicates about a relatively high proportion of the population in the most fertile age groups. This can be a result of a general age structure in a region that is the case in several small municipalities in the rural areas. Another important factor is an increase of population in the fertile age group like in several growth centres. The highest natural increase rates in the last decade were found in larger Reykjavík area in Iceland and in some municipalities in northernmost Norway.

Although 3 out of 5 Nordic municipalities experienced net migration surplus (see map 28 for details) the different characteristics of the migration pattern between the countries should be stressed. On the one hand, the overall pattern is similar to the total population change but the role of second tier cities and expanded capital labour markets becomes even more visible when looking at the areas that are gaining most from migration. On the other hand, there are remarkable differences between the domestic and international migration. A bit over one third of the Nordic municipalities had a positive domestic migration balance whereas almost all of the Nordic municipalities had a positive international migration balance, with the main exceptions of Faroe Islands, Greenland and some smaller Icelandic municipalities.

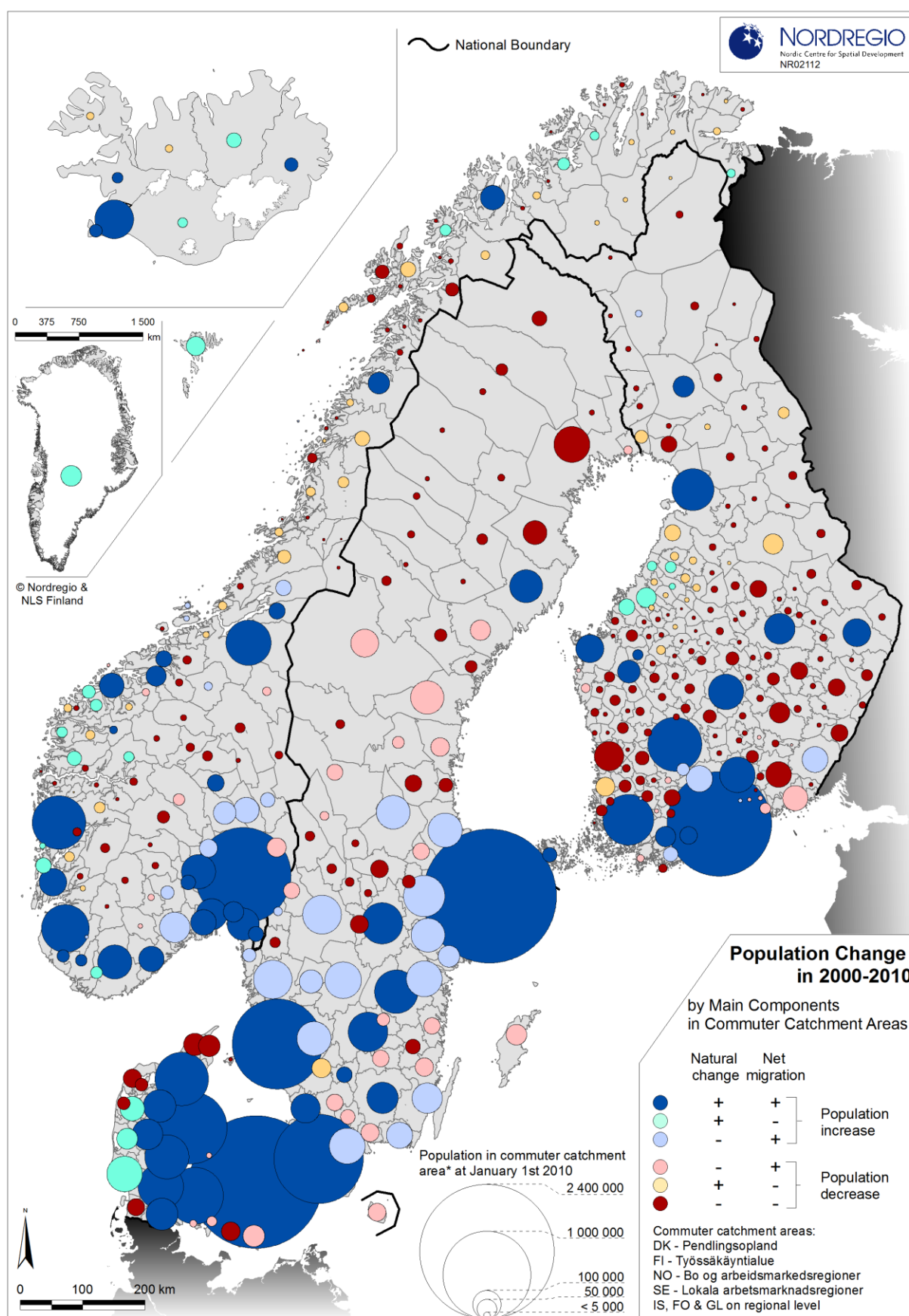
In some areas mostly in Norway and Sweden, a negative domestic migration was compensated by an extensive international migration.

While the Nordic countries have attracted immigrants from all parts of the world during the last decades, the flows are still relatively modest compared to those in South and Central Europe. Even the migration from non-European countries has increased faster, the intra-Nordic migration is still covering 25 % of the total international migration and additional 40 % is coming from other European Countries. In the Faroe Islands and Greenland the migration to and from Denmark is in the class of its own, which has been shown previously in chapter 4.

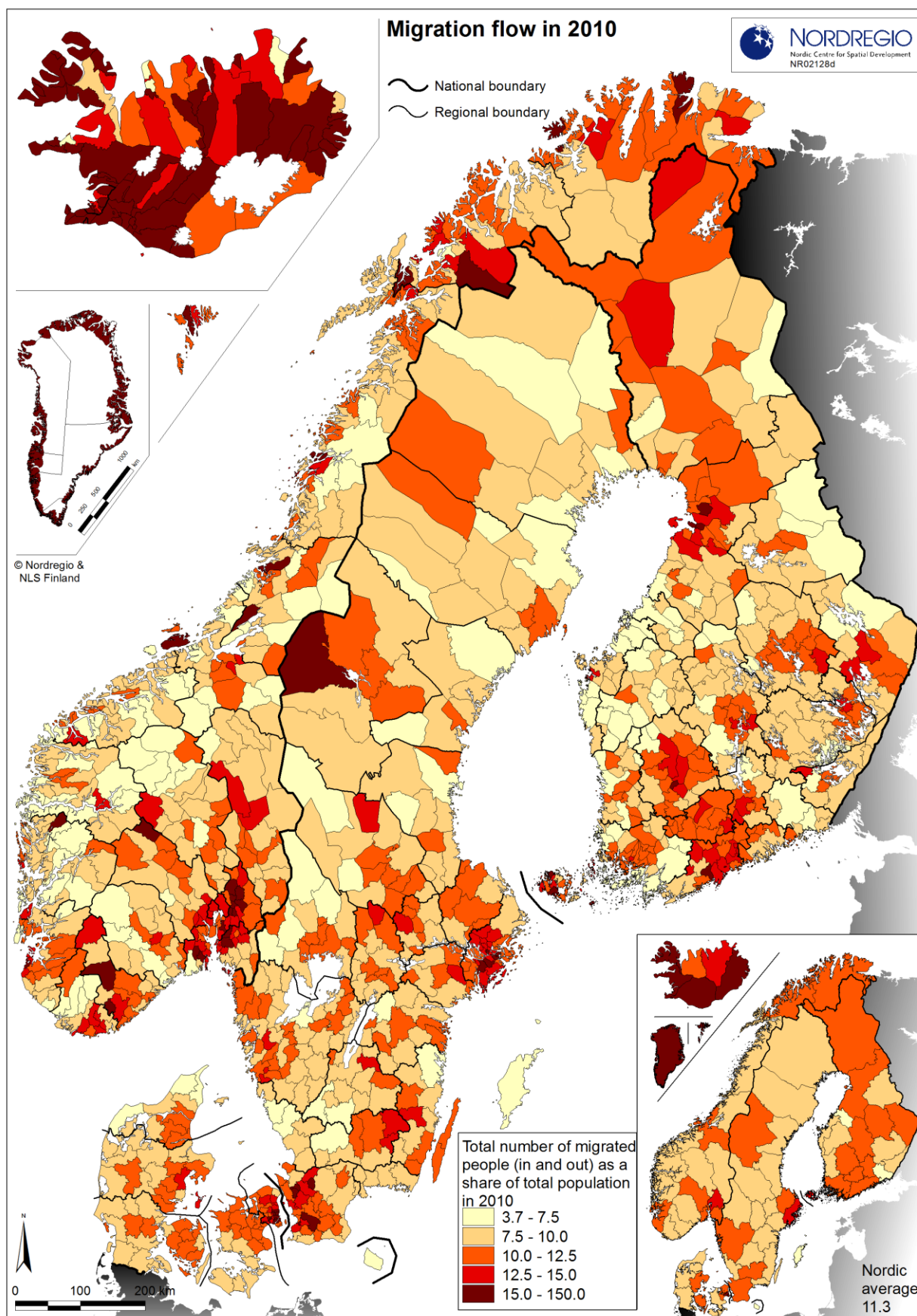
The increasing movement toward major cities and other regional centres is in general most striking among the young population who is moving towards education and more interesting jobs. Over half of all migrations in the Nordic Countries occur namely among population aged 20-34 years. This process has both direct and indirect effects to the geographical division of population. Every person who is moving is directly affecting to the number of people living in the region, but in a longer run, these movements have effect to the age and gender structure of the population. Therefore – and especially in policy context – it is important to look at the total migration flow to and from the regions and not just the net flows that are showing just a small part of the picture of changing population ; hiding the migration related changes in settlement, age and gender structure.

Over ten per cent of the Nordic population changed its place of living in 2010. Even if most of the people moved to nearby municipalities or to other regions in the same country, some 430,000 persons moved internationally. The total mobility was highest on city regions with universities and in some tourism oriented municipalities with season related jobs. Nordland region in Norway is a special case, since the region includes both the most mobile and the most stable municipalities of the Nordic Countries.

In the West Norden the high mobility is also related to education activities and a high number of seasonal jobs.



Map 27: Population change by main components in 2000-2010.



Map 28: Migration flow to and from the municipalities and regions in 2010.

The West Nordic islands

While the previous discussions have been focussing on the general characteristics of demographic changes in the West Norden islands (Faroe Islands, Iceland and Greenland), a number of deviations from the general patterns are important in order to understand the dynamics of the region as such. The following discussions will outline a number of cases where special conditions are resulting in specific response patterns.

Response to Resource Fluctuations

As the West Norden region is characterized by natural resource dependency, and especially on fisheries, an important question arises when the resource becomes depleted or just reduced due to natural changes in the environment. Often when fisheries decline, outmigration becomes one of the first options identified by individuals, or considered as a family strategy. This may solve the problem for the smaller group, but at the same time outmigration reduces options for the communities they leave behind. Communities usually are including complex structures and networks, so migration affects most other social dimensions.

Case Faroe Islands

The above description fits very well into the situation which happened in the Faroe Islands during the late 1980's and the beginning of the 1990's. During the 1970's successful skippers managed to accumulated capital and invested in new filleting plants, and very successful fisheries and fishing industry was established, but was met by a marked resource decline caused by a combination of overfishing and environmental variation which led to a drastic decline in fisheries on the Islands.

Before the crisis took off major (over)investments in new trawlers and processing facilities had resulted in a very high level of efficiency, and a boom in the economy. When the resource declined it became quite clear that the sector no longer was able to support the same number of people. And without alternatives many saw the only option of migrating away. Even attempts to look for alternatives, for instance

alternative fisheries, or diversification to other species, did not succeed.

The important fishery sector not only collapsed (fish makes up approx. 90 % of exports), but due to over-investments in new technologies, the major Faroese banks went bankrupt and foreign debts went up skyrocketing. Most of the many fish processing plants were closed and the Faroese economy was put under Danish administration, resulting in the concentration of most fish processing plants in one company, the United Seafood. And during these years, the population of the Faroe Islands declined from 48,000 to 42,000 (approx.) due to net outmigration.

As shown on the graph below, the population in general had been increasing quite stable since the 1970s, based on a natural population increase due to high birth rates and low death rates. As also shown a balance between immigration and emigration existed since the mid-1970s. But when the first signs of crisis appeared in the late 1980's marked changes took place.

In the beginning by a balanced migration but at a higher level than previously, indicating some concern for the situation. But when the crisis really hit in 1990 a drastic increase in emigration appeared simultaneous with a decline in immigration. After a couple of years which included negotiations with the Danish government regarding securing the economy, the total chaotic situation resulted in a massive emigration from 1992, peaking in 1994, and then slowly taking off until it reached its initial level around 2000.

Most of the people leaving Faroe Islands went to Denmark. Partly because they had relatives there who could provide them with a much needed network, for instance when looking for jobs. And partly because some of them who had connections to fisheries and the fishing industries in the Faroe Islands saw an opportunity to look for similar jobs in Denmark. The fisheries town of Esbjerg in Southwest Jutland became the preferred place, again because they already had a network there, some had professional training from the local fisheries college, and the region provided some attractions to them.

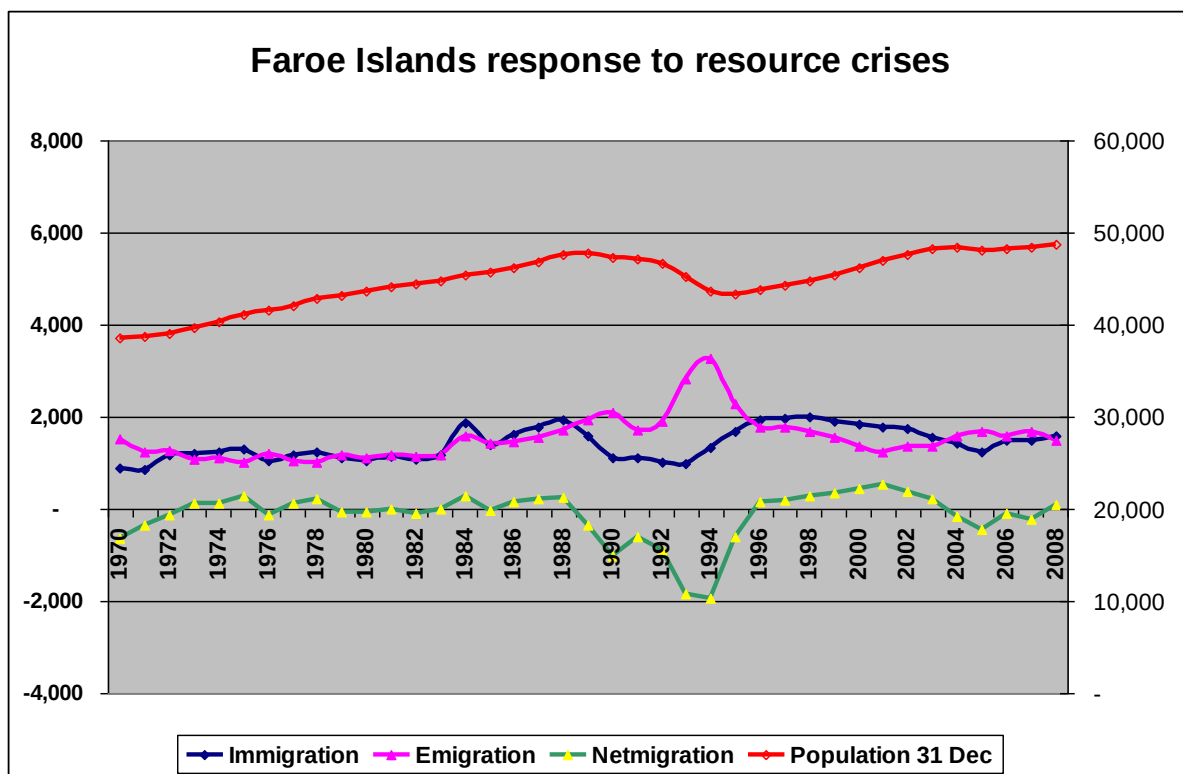


Table 14: *The Faroese migration in the aftermath of the fisheries crisis in the 1990's for explanation, see text.*

A reconstruction of the fisheries was initiated during the crisis. Several fishing plants were merged, several closed, and United Seafood became the single largest industry in the country. The national restructuring policy was supervised by Danish authorities, and as a part of the reconstruction process many trawlers were sold, some of them to private owners. A very slow recovering of parts of the fishing industry has resulted in the returning of a part of the emigrated group. As indicated above, however, the slow reconstruction did not bring the population back totally. While situated in Denmark many young Faroese created ties to their communities in Denmark, so it was predominantly the older age groups who returned. Consequently, the long term result has been an extra contribution to the ageing of the population, as well as adding to the net outmigration of young people and especially women.

Due to local differences in handling the consequences of the crisis the outcome differed regionally and illustrates the complexity of the problems.

In Vagur in the south the closure of the local fish processing plant meant an overnight loss of 450 out of 800 jobs in the village, as seamen and shipyard workers were also affected. Some people left the place, but today the total workforce has risen to a total of 700, due to new jobs that have been created in 6 smaller new salt fish plants, where fishermen can land their fish. The local involvement

has been crucial for the community, and local entrepreneurship based on knowledge and relations to specific markets for salt fish on the European continent has been an important contribution to a relatively positive outcome. The region, however, is nevertheless suffering severely due to the worked so far.

In Klaksvik in the north the major fish processing plant managed to stay independent and outside of United Seafood and its restructuring plans under Danish control. This was possible due to extended local ownership and capital, including the local saving bank, the local trade union, two local men managing the new firm, as well as 598 local individual shareholders controlling 17 % of the total capital stock. They developed a strategy focussing on specialised products and building relations to important customers, and one of these - Marks and Spencer (UK) - took over the company later on.

Case Iceland

A similar history can be told in relation to fisheries in Iceland.

When Herring fishing recovered with warming conditions during the early part of the 20th century it resulted in a remarkable climb from poverty to affluence. Larger vessels using the new purse-seine technology explored offshore feeding grounds and brought back unprecedented catches.

Total catches reached peaks above 200,000 tonnes several times in the 1930s and 1940s, and these good herring seasons are often referred to as important contributions to Iceland's achievement of economic, then political independence in the 1940s. Strong markets, improving technology and increasing effort led to rising success in exploiting the stock throughout the north eastern Atlantic.

Total catches exceeded one million tonnes per year during the 1950s, but was followed by a collapse as catches fell below 100 000 tonnes in 1969 and 10,000 tonnes in 1973.

The initially labour-intensive fishery made substantial cash wages available to many people for the first time, and a marked population development became the result. Previous young male workers from the farms went to the towns in order to become fishermen, and the young Icelandic women, the herring girls, moved there as well. Some of the town's year-round population increased as much as tenfold, and a seasonal workforce, arriving with the herring from May through October, doubled or even trebled this.

With the crash of the stock, however, most jobs were lost, and during relatively short time a massive outmigration – primarily to Reykjavik and other larger settlements – added to the well-known situation today where more than 60 % of the population has been concentrated in the capital region. In addition, a substantial out-migration from Iceland turned out to be a consequence.

A new chapter of the out-migration story in Iceland is in its writing right now due to the aftermath of the financial crisis. During the last years, three trends have been visible in this connection.

First, that Polish workers who have been working on contracts with for instance Alcoa on the Alumina smelter in east Iceland based on Icelandic salaries have chosen to withdraw and return to Poland. The salary reduction did not enable them to maintain their relations back to Poland, so they simply had to return back. Even the salaries in Poland are lower the living costs are similar low.

Second, that younger people have chosen to look for jobs outside Iceland and that especially younger women have been quite successful in finding job opportunities.

And third that the net migration pattern within the West Norden region has been in disfavour for Iceland so that there has been a net outmigration, as shown earlier.

Case Greenland

Step-stone mobility and outmigration

As has been mentioned previously, two issues are very important mobility characteristics in the West Norden region. On one hand, the step-stone mobility where the general movement pattern is from smaller towards still larger places. And as a possible last step, the outmigration, usually to countries where there exist some institutionalized activities relevant for the migrating persons such as education opportunities, or where there exist family ties attracting the migrant.

Step-stone mobility

The following graph is based on a register based accounting of a cohort of Greenlanders age 16-20 in 1977, where they have been at any point in time, and summarized in a number of simple categories.

As clearly indicated on the graphs in Figure 16 there are marked differences in the status of males and females through the 30 years' time span.

One very clear gender difference is the marked higher mortality in the male group. While less than 8 % of the women have died during the period, more than the double has died among the men. Partly due to a higher risk exposure due to the conditions connected to hunting and fishing, but also due to a marked higher suicide rate among men than women in Greenland.

There are some differences in the initial stage as more women below the age of 16 have moved from villages to towns in their region. Similarly, more women than men have left the relatively isolated sheep farms.

According to the numbers, a relatively large proportion of the men choose to remain in the villages of their region. When looking at the movement patterns it shows that they during the period can have shorter stays at other places, for instance in connection with temporary work in a nearby town, but in most cases they return to their village. In contrary to this the women tend to leave the villages quite consistently. Those who choose to stay in the village often spend a longer period of time in a nearby town for some periods, for instance in order to get trained in a kindergarten, practising office work which enables them to take care of the administration of the village shop etc. But most of them choose to move further ahead when opportunities appear.

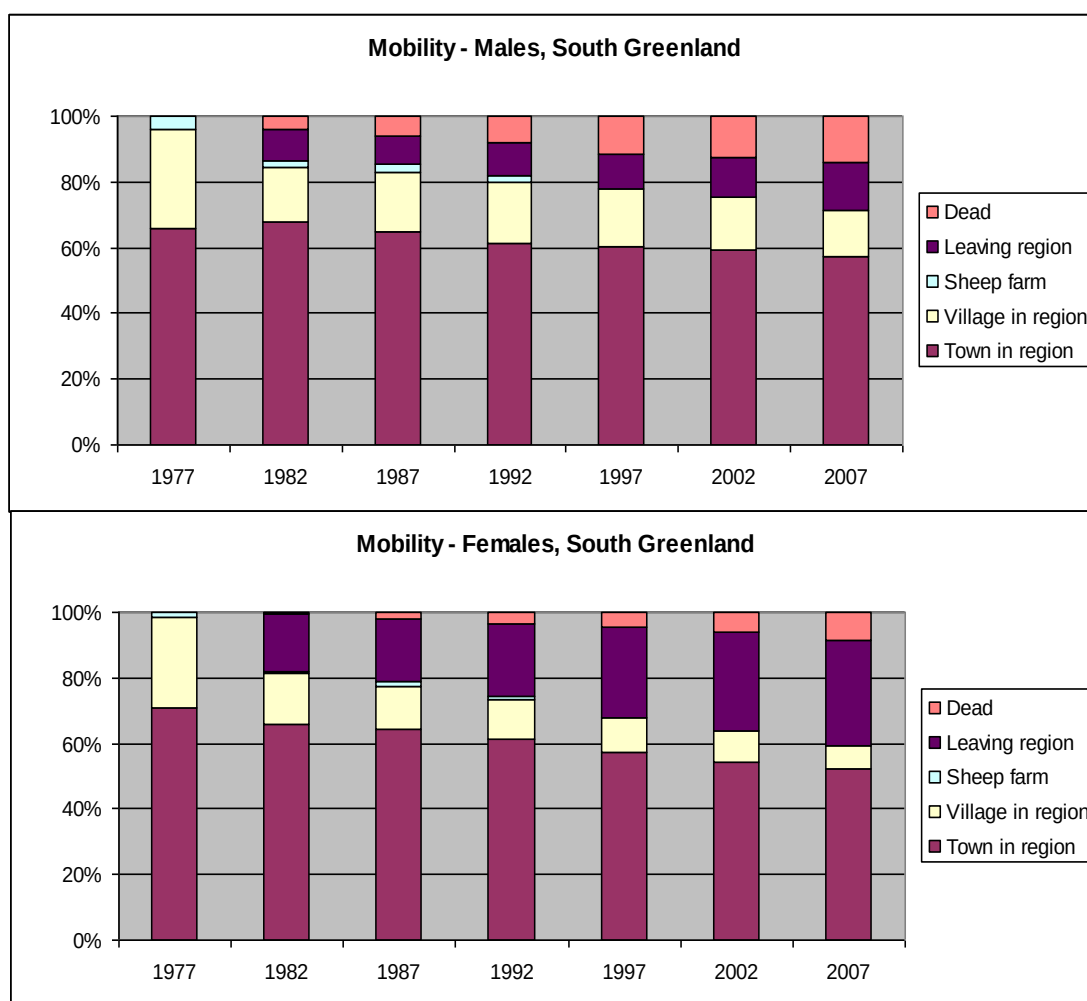


Table 15: Differences in mobility pattern between males and females. A cohort in the age group 16-20 years in 1977 have been followed in order to see their moving characteristics and the outcome is outlined above.

A quite consistent group of men choose to stay in the town in the municipality they are born. Again, sometime may have been spent in other towns, and thereby acquired both training and business experiences, but most of the group nevertheless choose to stay in their town of origin. For many women the town in the region is just considered to be a stepping stone towards more wide ranging opportunities in larger places. And even the percentage of women remaining in the town in the region – from 70 % in 1977 dropping to 50 % in 2007 – the fifty per cent group would typically not necessarily be the same persons as in the original group, as the mobility among women between towns is marked higher than what is the case for men.

While less than 20 % of the men eventually leave the region, around 35 % of the women are moving out of the region. And typically the men

will be looking for basically any type of job available, the women will move in order to get better qualifications and better qualified jobs. And a choice may eventually be to leave the country.

Outmigration patterns

Until Home Rule was established in Greenland in 1979, an influx of workforce from Denmark had been on-going, attempts to maintain a stable workforce in Greenland. This has been done through on one hand the taking over by Greenlanders of jobs previously held by Danes, and on the other hand through establishing attractive workplaces in Greenland. The following graph shows the net outmigration pattern by Greenlanders since 1980.

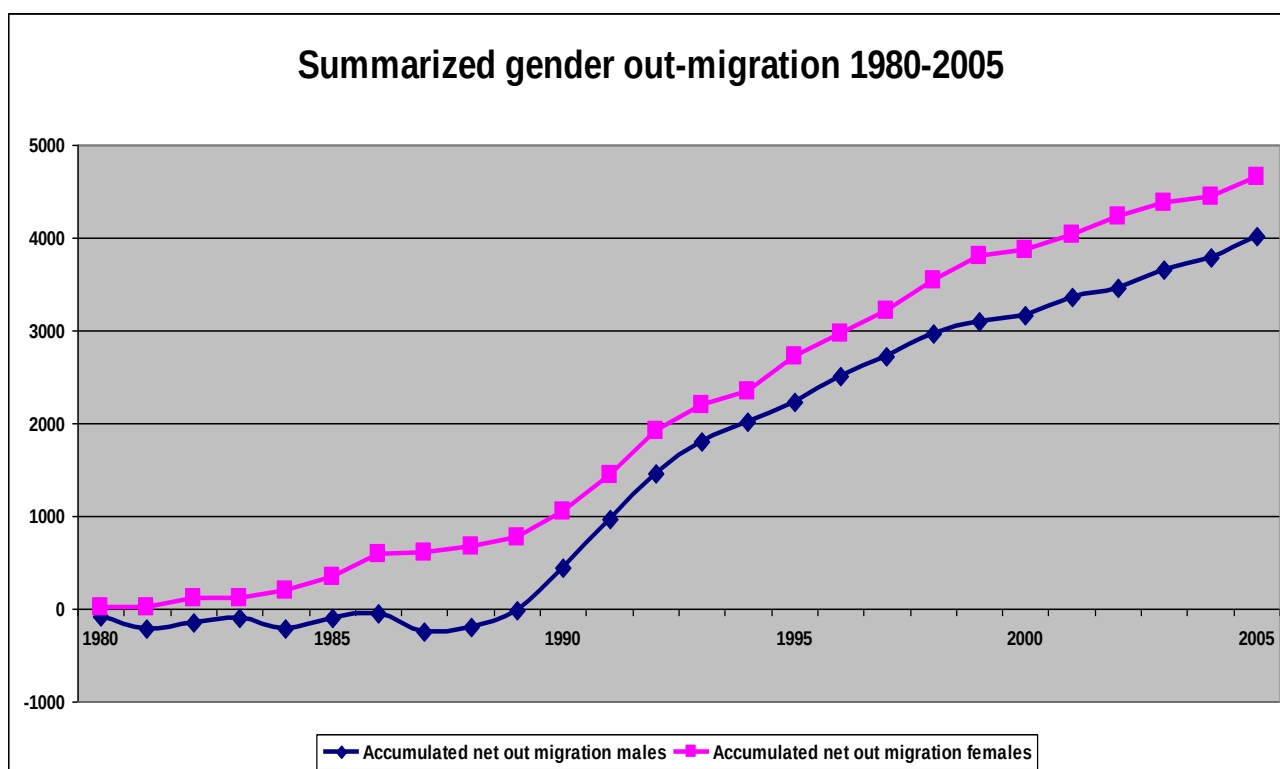


Table 16: *Summarized gender out migration from Greenland 1980-2005*

As indicated on the graph the policy of taking over jobs by Greenlanders turned out to be rather successful in the sense that until 10 years after Home Rule was established the outmigration of men had ceased. As shown, however, this was only applied for men.

The situation, however, did not apply to Greenlandic women. Even women have been quite consistently available for the labour market since fisheries was introduced in the beginning of the 20th century they had primarily been given unskilled jobs in spite of a marked increase in the level of qualifications among women. This discrimination of women in relation to access of women to higher positions added to the strengthening of the path

shown on the graph. A continuous out flux of women has been established, and seems to continue further on. It goes for both gender that the group of out-migrants are usually with good educational background, and many of the persons in the group choose to settle permanently in Denmark while they are pursuing a higher education. Previous policies of offering special employment conditions in order to attract them back to Greenland after finalized their education had some success. But in order to limit discriminative measures on the labour market such offerings are rare in connection with employment in the public sector, while they appear quite frequent on the private labour market.

6. Complex demographic processes and the political consequences^D

The Basic statistics on the demographic parameters are important as empirical evidence of changes or stability in relation to the demographic characteristics. However to understand what leads to these specifics, it requires an in-depth understanding of the inter-relationships between the parameters and their relations to the general drivers of societal changes.

A key issue here is the change in itself and the dynamics causing the changes. The classic demographic transition model has until recently described the demographic changes related to the era of industrialisation as going from high birth and

death rates to low birth and death rates. Now, statistical evidence from the basic demographic parameters shows that some groups – especially the more well off groups – have begun to have more children again. This is a change in habits based on prestige and both economic and social capital. These kind of changes are very difficult to predict and thus to incorporate into the strategic planning.

Never the less, they are on the other hand important to include because they are decisive on both short term and especially long term trends in development. A few examples will illustrate it.

The dynamics of settlements

Most people tend to assume the number, the size and the location of settlements, towns and cities is 'as it always has been', but history tells differently.

On the small Island Stora Hestnacken in the archipelago east of Stockholm in Sweden a ordinary local society was established around a brickyard for about 100 years from around 1730. Today no one is living on the island and the former activities are hardly visible.

Larry Hamilton, Oddmund Otterstad and Helga Ögmundardóttir show how booms and busts in fish stock around Iceland have resulted in the establishing and disappearance (Hamilton, Otterstad and Ögmundardóttir).

Many similar places can be found all around in the Nordic countries, based on fisheries, brick production, lumber rafting and so forth. These communities existed over a period of from a few to many years – in some cases even for centuries. And while they were still viable probably no one dreamed of that "their" place eventually becoming a part of the surrounding nature again some hundred years later.

These communities were most likely to disappear if they were relatively far away from other local communities, and thus this dynamic has

historically been more wide spread in the sparsely populated regions. The modern economic driver for communities to emerge or to disappear is predominantly industrial extraction industry and activities relating to fishing. If a mine were to be opened to extract a local mineral deposit most likely a full town with schools and all would have been established surrounding the mine to support the mining activities with a labour force and the societal needs.

That has changed dramatically as today new mining activities very often will be based on a working force living in a camp while working and then leaving the area and go home in periods they are not working. And very important, "going home" can be almost anywhere in the world because of the shift in the nature of the working force from coming from a local working force to coming from a national and even an international working force.

Part of the reason for this change in the nature of the working force is due to a combination of several issues such as constant reduction in manual work involved due to technical changes, a much higher specialisation of the work, and the fact that most new mines are expected to have a life lasting less than 30 to 50 years.

D: This chapter is mainly based on material from Klaus Georg Hansen, Rasmus Ole Rasmussen and Johanna Roto (2011). Demography in the Nordic countries – A synthesis report. Nordregio Working Paper 2011:9. Stockholm. Nordregio.

The ghettORIZATION process in many cities is in a way part of the same new settlement pattern. The groups of immigrants most likely to form the ghettos which have been created since the 1960's are the groups which can be described as modern diaspora groups, i.e. populations geographically dispersed but associated by some common tie or occupation and regarded as an entity. They have in general still their identity as coming from their country of origin. Some Somali and Turkish immigrants are examples of groups settling according to cultural parameters and thus not only strictly determined according to economical parameters.

This type of settlement pattern is relatively complex to deal with in strategic regional planning, and most often strategies addressing this demographic challenge have been primarily economically founded.

The diaspora process also works the opposite way. The out-migration from the sparsely populated areas and other isolated regions especially in the West Nordic countries has peaked from time to time. It is last seen in Iceland in relation to the Icelandic economic crises. But also both the Faroe Islands and Greenland has witnessed peaks in the out-migration such as in the 1990's. Some years later there seems to be a counter-migration into the regions which were left. This counter-migration can be explained as a consequence of that the out-migrating group has kept its mental identity and social networks and social ties connected to the place they had left and then – when it becomes opportune – they are in less numbers moving back to the old region, and typically it will be the older generations who mentally and socially are most attached to the region they had left, and thus it will typically be the older generations who will return. The younger generation often establish new networks locally in their new home region, through the educational institutions, through marriages etc., which eventually becomes what in demographic terms is characterized as “intervening conditions”.

There are indications of the counter-migration being of varying nature in different regions. While it for counter-migration to the Faroe Islands is characterised almost solely by age the lesser counter-migration in Greenland also has a touch of

social bias as it is the less well off part of the older generations who is most likely to move back whereas the more well off part tend to be staying in the new region.

Yet another logic behind settlement patterns can be found in the perceptions of the attraction a specific region can be attributed with. These perceived values might not be of any economic nature in the first place, but they can in a longer term perspective actually add to the economic development of a region.

Stockholm has for years launched itself as the capital of Scandinavia. This label in itself can not be said to have any value. Only when it more generally begins to be perceived as a true statement it will possibly be able to show a difference. This is what might be the case now with Stockholm recently for the first time having a higher growth rate than Copenhagen when looking at international companies settling in the Nordic countries.

This is one of the mechanisms the tourist industry is using in its strategies when promoting a region with a potential of capacity building. An example of this kind of regional development strategy is found in Northwest Jutland in Denmark where the special wave formations in the North Sea outside of the village of Klitmøller has a reputation among surfers of being in world class – like in Hawaii. So what can be more natural than developing the concept of “Cold Hawaii” which is exactly how the tourist industry is advertising the region. Some large winter tourist resorts in the sparsely populated parts of Finland (i.e. Levi) and Sweden (i.e. Åre) have become regional growth nodes in terms of population increase and new companies.

If industrial clusters are in a region, they will also have an effect on the settlement structure. Well known clusters are the pharmaceutical industry in the Øresund region and the ‘new’ media industry in South West Sweden.

Even though it is a complex task the dynamics of existing settlement structure in a specific region must be accounted for in the strategic regional planning.

Drivers and indicators in the process of demographic change

More than 275 years ago Carl von Linné in 1735 published his *Systema Naturae*. He thereby became the Father of modern taxonomy. But what is little

known is the fact that for Linné both nature and society were static, unchangeable and “created by God”.

Socio-economic parameter	Driver	Indicator	Demographic policy implication	Policy tools
	Process of analysis		Process of policy development	
<i>Ageing</i>	Longevity Declining birth rate Out-migration ...	Decline in the percentage of the population in the labour force	Change in retirement age Stimulation of birth rate Reduction of out-migration Increasing in-migration ...	Higher retirement age Birth bonus Easy migration Protective measures ...
<i>Family structure</i>				
<i>Education</i>				
<i>Employment</i>				
<i>Income</i>				
<i>Housing</i>				
<i>Health</i>				

Table 17: Examples of socio-economic parameters. The Socio-economic parameters can be attributed drivers, indicators, demographic implications, policy tools and much more. The attributes to the age structure in the table are only illustrations of possible attributes. The first suggested policy tool assumes a positive response to increased immigration. In case a negative attitude was assumed, the policy response could be measures to limit and even prevent future immigration and instead point to the postponing of pension age to a level above the present.

If so, predictions would probably be easier, but the knowledge regime of today first of all perceives the nature of nature and society as everything else but static. Secondly when analysing the changes in the society it will on the empirical level be insufficient only to count on one single driving force.

Driving forces are usually the result of interaction between several components, some being interdependent – for instance longevity due to improved health conditions – other being independent, for instance the choice of number of childbirths in relation to longevity. All three elements are, however, important in relation to for instance the evaluation of the future available labour force at a specific point of time. Therefore it is most preferably that data on all three variables should be available when decisions on future policies in relation to ensuring a sufficient labour force being available in the future. However, as soon as we move into more complex problems the possibility of providing sufficient and detailed data would be limited. Instead a number of indicators might be able to do the job. A good indicator is expected to be able to reflect the dynamics of the interaction between several socio-economic components, and

therefore not only reduce the complexity for the analyst but at the same time also ensure a proper reflection of the dynamics behind.

In Table 17 above a matrix illustrates how to proceed from the complexity of describing socio-economic parameters to the identification of possible policy tools.

The starting point to the left is the dynamics connected to the socio-economic processes of change, here just identified by a simple concept, but often described through a more complex description of on-going processes of change.

If we assume that the challenge to deal with is to ensure an accessible labour force, one of the socio-economic parameters could be the ageing of the population.

Among the drivers listed above is on one hand the longer life due to better health and on the other hand the reduced birth rates leading to fewer newcomers to the work force. Several other drivers could be mentioned, for instance the role of national migration patterns leading to regional outmigration of younger members of the labour force.

If our concern is only the question of ensuring a sufficient labour force, an obvious

indicator could be – as mentioned – the decrease in labour force.

Among the implications to such a situation might be a situation where the labour market becomes attractive for outsiders, for instance on the international labour market, and one consequence could be – as shown in the “Demographic implication” column – an increase in in-migration from other countries due to the availability of jobs.

More international immigration could be needed both to supply the labour force by replacing the retired citizens and to assist in the health care system and in the elder care system which will need extra capacity.

Several other implications may follow, and each of them would require considerations regarding possible policy measures.

The example above may look trivial, and it has been kept simple for the sake of argument. The table is not generated with the intension of becoming a matrix of all possible combinations of socio-economic changes and potential policy measures. The idea is to provide an approach where a complex reality through subdivision into a few drivers may point to a limited number of simple indicators which, when presented, may become useful in relation to the identification of possible policy measures and tools. An important message in this connection is that it is essential to select indicators, which are measurable.

In the example, one of the outcomes would be a growing pressure on the existing welfare system and the age structure can therefore be seen as an indicator to the socio-economic parameter “welfare system”. However, in all the Nordic countries there are also other drivers and indicators putting pressure on the welfare system as it is not only due to age, that people are losing contact to the labour market. A growing group of people are being registered as early retirees. It can be caused by attrition from hard physical work, but increasingly people are leaving the labour market also because of many years of stressful working conditions. Another group of people who loses contact to the labour market is the long-term unemployed and the long-term sick leave.

All together, they are challenging the Nordic welfare system, as they are today. All the Nordic welfare systems are to some degree based on the principle that all citizens are entitled social services on the basis of need. The Nordic welfare systems are tax financed as distinct from welfare systems which builds on individual insurance systems. Thus benefits from the Nordic welfare system are not depending on a person’s attachment to the labour market. This leads to a higher pressure on systems like the Nordic when the pressure from retired citizens grows.

In spite of the similarities between the Nordic countries’ welfare systems the drivers and the indicators are not always the same from one Nordic country to the other. In Denmark, a special indicator could be the number of people on “*afterløn*”. This is an indicator that does not exist in the other Nordic countries, and equivalent regimes exist in the other Nordic countries. Thus the policy-tools as answer to the pressure on the welfare systems have i.e. been different combinations of cost savings, increased efficiency, and restrictions on the access to services.

As already mentioned one of the indicators referring to the age structure is the decrease in the labour force. If the policy is to maintain the same productivity then, again, increased efficiency is one of the tools, but that will not be enough.

Another tool is to ensure an increased inflow of people to replace those who leave the labour force. Stimulation of the birth rate is one way to plan for increased inflow, but that will be a long term planning as a new born citizen will not join the labour force until the age of 25 years.

Then there is the possibility to encourage migrants to move to the country, and the challenges with migration have already been discussed in this report.

All together, this shows major and diverse challenges the Nordic countries are facing when looking on several of the socio-economic parameters.

Future studies

However, when the guessing gets more speculative regarding possible future drivers and indicators, support can be found in disciplines like futures studies. Here qualified guessing is put on formula. This report will not pretend being able to analyse the weak images in the crystal ball, but some qualified pinpoints will be made to initiate further discussions.

When working with regional planning one must ask not only what happens if the largest workplace in the region closes down or another workplace just as big were to be established, what happens if the out-migration doubles, or what happens if educational system is being restructured. These are important questions, but sometimes we need to be of another character.

Climate change has been on the agenda for some time. Development plans are beginning to include such challenges which obviously also have a clear demographic dimension. For example are the development plans focusing on low areas and areas having flooding problems when it rains heavily.

Just as Climate change also green growth has become a new theme on the agenda. It emphasizes that economic growth and development should continue to provide the resources and environmental services on which our well-being relies, meaning investment and innovation should be catalysed towards sustained growth and new economic opportunities without jeopardizing opportunities for the next generations to come. It is generally agreed that this approach opens up new opportunities for not least rural areas.

But *what if* the green growth trend becomes dominant and it starts an unforeseen counter-migration from the urban regions to the rural regions? It might even be reinforced by the new critical global economic situation. Furthermore, *what if* the emerging trend among industry to withdraw from Asia and again having industrial production in Europe, might that be of any comfort to depopulating regions? Another question could be *what if* we see sudden changes in international

migration flows? Today the biggest Nordic international migration flows are between the Nordic countries themselves and secondly the flow to and from the neighbouring countries like the Baltic States, Poland and Russia.

Naturally, not all wild assumptions must be taken into account. Some of the scenarios are more likely to happen than others.

Back to the real world, not everything has to be guessing. Some elements can be influenced politically on a regional or a local level. One of these elements is the range of services offered. It has been used strategically to attract specific fragments of the population. One example has been to offer guaranteed room for children in day care for families moving to a region.

In that way, local or regional policy-makers can aim at stimulating the demographic development in a certain direction, which is in line with the political planning for the region.

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