AGEING AND GENDER IN THE NORDIC ARCTIC

Shahnaj Begum

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Ageing and Gender in the Nordic Arctic

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ABSTRACT

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In this thesis I undertake to determine how considerations of equality and social justice shed light on the challenges facing older people in the Arctic at large and the Nordic Arctic in particular. My specific aim is to investigate ageing and gender in the Nordic Arctic with a view to addressing gaps in the scope and depth of the present knowledge on these issues. To this end, the main research question is how ageing and gender in the region interact with equality and social justice.

The thesis brings various strands of research together: Arctic studies, human rights and ageing studies and gender studies. In addressing issues such as human rights, human securities and gender equality, the study shows how the ongoing transformation in the Arctic has influenced the wellbeing of the region's older population. It also illustrates how the focal issues are interconnected.

The work consists of five articles and an introductory synthesis. It work draws on qualitative methods applied to two sets of data: 1) published scientific literature and relevant policy reports and 2) interviews carried out in Finnish and Swedish Lapland between 2011 and 2017, the latter designed in keeping with the ethical guidelines provided by the University of Lapland and experts on ageing-related ethics. A thorough initial study of the two sets of data provided an analytical framework for the research proper. Using this, I examined the phenomena descriptively and critically through the lens of equality and social justice, drawing on human rights and feminist standpoint approaches. Specifically, I analyse the concerns of the older population in the Nordic Arctic and address salient issues of equality and social justice that challenge older people as the region confronts climate change, environmental change and changes in sources of livelihood.

The research findings reveal and address gaps in our knowledge of the specific vulnerabilities facing older persons - vulnerabilities that play a part in the social context of the region. I present the marginality of the older population as connected with age, gender, functional capacity and indigeneity. In addition to highlighting the importance of older persons' concerns, the research produces new knowledge offering

insights to policy makers and stakeholders and potentially enabling older people to gain more control over their lives. The principal claim put forward in the study is that the transformation of the Arctic at large is increasing inequality and injustice for the older population in the Nordic Arctic.

Keywords: Arctic transformation, Nordic Arctic, ageing, gender, equality, social justice, Human Rights Approach and Feminist Standpoint Approach

TIIVISTELMÄ

Shahnaj Begum
Ikääntyminen ja sukupuoli Pohjoismaiden arktisella alueella
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Väitöskirjassani tarkastelen iäkkäiden ihmisten kohtaamia haasteita arktisella, erityisesti Pohjoismaiden arktisella alueella tasa-arvon ja sosiaalisen oikeudenmukaisuuden näkökulmista. Tutkimus täydentää erityisesti ikääntymistä ja sukupuolta koskevaa tietämystä ja syventää näiltä osin Pohjoismaiden arktista aluetta koskevaa ymmärrystä.

Tutkimus yhdistää monia tutkimusaloja: arktisen tutkimuksen, ihmisoikeuksien tutkimuksen, ikääntymisen tutkimuksen ja sukupuolentutkimuksen. Tutkimus tarkastelee ihmisoikeuksia, inhimillistä turvallisuutta ja sukupuolten tasa-arvoa sekä näiden välisiä yhteyksiä ja osoittaa tapoja, joilla arktisen alueen muutos vaikuttaa iäkkään väestön hyvinvointiin.

Väitöskirja koostuu viidestä artikkelista sekä yhteenvetoartikkelista. Laadullisia tutkimusmenetelmiä käyttäen tarkastelen kahdenlaisia aineistoja: 1) tutkimuskirjallisuutta ja poliittisia selontekoja sekä 2) Suomen ja Ruotsin Lapissa vuosina 2011–2017 tehtyjä haastatteluja. Haastattelut toteutettiin Lapin yliopiston ja ikääntymisen etiikan asiantuntijoiden eettisten ohjeiden mukaisesti.

Tutkimuksen analyyttinen viitekehys perustuu molempien aineistojen perinpohjaiseen tarkasteluun. Analysoin erityisesti iäkkäiden ihmisten elämään liittyviä haasteita, jotka liittyvät tasa-arvon ja sosiaalisen oikeudenmukaisuuden ajankohtaisiin kysymyksiin. Tarkastelun kehyksenä on arktisen alueen muutos, joka koskee ilmastoa, sosiaalista ja luontoympäristöä sekä elinkeinoja. Tasa-arvon ja oikeudenmukaisuuden näkökulmat ohjaavat aineiston deskriptiivistä ja kriittistä tulkintaa. Analyysissa sovellan kahta lähestymistapaa: ihmisoikeusperustaisuutta (Human Rights Approach, HR) ja feminististä lähtökohtateoriaa (Feminist Standpoint Approach, FS).

Tutkimus täydentää pohjoista arktista aluetta koskevaa tutkimustietoa osoittamalla arktisen alueen yhteiskunnalliseen kontekstiin liittyvät, ikääntyneiden haavoittuvuutta tuottavat tekijät. Tutkimustulosten perusteella iäkkäiden ihmisten marginalisoituminen on yhteydessä ikään, sukupuoleen, toimintakykyyn ja alkuperäisväestöön kuulumiseen. Tutkimus korostaa iäkkäitä ihmisiä koskevien kysymysten tarkastelun tärkeyttä

ja tuottaa tietoa, jonka avulla on mahdollista kehittää toimintamalleja ikääntyneiden ihmisten elämänhallinnan ja hyvinvoinnin tukemiseksi. Väitöskirja tarjoaa uusia näkökulmia päättäjille ja sidosryhmille. Sen pääviesti on, että arktisen alueen muutos vaikuttaa iäkkään väestön asemaan Pohjoismaiden arktisella alueella epätasa-arvoa ja epäoikeudenmukaisuutta lisäävästi.

Asiasanat: arktinen muutos, Pohjoismaiden arktinen alue, ikääntyminen, sukupuoli, tasa-arvo, sosiaalinen oikeudenmukaisuus, ihmisoikeuksien näkökulma, feministinen lähtökohtateoria

To my family

PREFACE

My academic background lies in the disciplines of law and the social sciences. Having completed a master of laws degree in Bangladesh, when I moved to Finland, my initial plan was to do a master's in Public International Law at the University of Helsinki. However, I soon realized that my interests lay more in the social sciences than in law, as the former field affords a more comprehensive picture of world. Accordingly, I changed to a degree programme on human ageing and issues affecting older people. After completing a bachelor's in Social Sciences, I started working at a care home for older people that was owned by the City of Helsinki, an experience that then inspired me to do research on issues concerning the older population. Most of the workers and clients at the care home were women, a fact that prompted me to include a gender dimension in my research. At this stage, I became interested in a research career focusing on gender in the context of the older population. Given my background in law, I chose to investigate the applicability of a human rights (HR) framework, in particular the international norms on social justice and gender equality. Furthermore, since 2008, when I moved to Finnish Lapland, I have had the opportunity to engage with a community of people doing research on the Arctic. This in turn prompted me to sharpen the focus of my research to the challenges facing older people in the Arctic region, in particular older women.

Being a mother of three children, and with a long gap since my master's degree, I found it challenging to start work on a PhD. However, the more I delved into my topic, the more interested I became. The task was a demanding one indeed, which helped me to grow as a researcher. A number of people have figured significantly in this process, supporting me in one way or another, directly or indirectly, in reaching my goal.

Clearly, the first that merits thanks is my supervisor, Professor Päivi Naskali. Throughout the research process, Päivi has been supportive and encouraging. She has been a wonderful advisor, who has always looked out for my wellbeing, brought me closer to my goal and helped me to develop personally. She always patiently read my manuscripts and commented on them, providing very insightful suggestions. Her dedicated guidance has brought me to where I am now, celebrating a significant accomplishment. Without her support this would be absolutely impossible.

I would also like to extend my warmest gratitude to my other supervisors, Professors Marjaana Seppänen and Timo Koivurova, who provided important advice and comments during the process of writing the articles as well as in the final stages of the work on the synthesis. Professor Heli Valokivi also contributed through detailed comments on the structure of the synthesis. The final version reflects their suggestions, which most certainly have improved the quality of the work. I am grateful to them.

Sincere thanks are also due to my pre-examiners, Professors Eva-Maria Svensson and Gudmundur Alfredsson, who offered concrete recommendations on how to improve the thesis. I found their suggestions extremely salient and have incorporated them in this final version.

Financial support has also been of vital importance during what has been a long-term project. I am grateful to the Nordic Council of Ministers, which provided long-term funding. Thanks are also due to the Faculty of Education at the University of Lapland for providing me not only financial support when needed, but also a perfect and supportive research environment. Another valuable source of support was the grant provided by the Rector for finalizing the thesis. I would also like to acknowledge the grants received from the Lapland Regional Fund (Finnish Cultural Foundation), the Niilo Helander Foundation, Kansansivistys Foundation and OLVI Foundation, as well as travel support from the Graduate School, International office of the University of Lapland and from TUARQ-network.

In recent years, I have had the good fortune to be part of an inspiring research community. Special thanks here are due to Kirsti Lempiäinen, Suvi Ronkainen, Leena-Maija Rossi, Heidi Sinevaara-Niskanen, Sofia Kari and Seija Keskitalo-Foley. I am particularly grateful to Seija for her motherly support. I would also like to thank Virpi Vaattovaara, Pälvi Rantala, Sari Viden, Hanna Peltomaa, Mervi Löfgren, Hanna Mustajärvi and other colleagues from the gender research group. I have learned a lot from them and feel fortunate to have such a circle of remarkable colleagues and co-workers, who have had a profound influence on both my academic career and personal life. On the one hand, as mentors and colleagues, they offered their guidance and insightful comments on my work – privately as well as in seminars organized within the Gender Studies Unit. On the other, their heartfelt acceptance of me - as a colleague and as a friend - made me feel so included that I have developed a sense of belonging to the community. This feeling always makes me proud and I am extremely grateful to all of them.

I am indebted to the whole staff of the Faculty of Education for their help and support in practical matters during all these years. Special thanks go to Pirkko Niemelä, Helena Juntunen, Pia Satta, Hanna Vuojärvi, Katja Norvapalo, Minna Körkkö, Leena Tähtisaari and Tarja Tuisku. I am also grateful to the colleagues who gather in our coffee room for offering a relaxed atmosphere conducive to lively discussions on not only academic but also other issues. The fun and laughter we regularly had were crucial, often doubling my enthusiasm. These sessions were always a source of inspiration.

I would also like to thank Professor Emeritus Simo Koskinen, Tarja Orjasniemi, Minna Nousiainen, Heli Niemi and Enni Mikkonen from the Faculty of Social Sciences, who gave me a great deal of mental support in many practical things in the university research environment and helped me to find other researchers on ageing issues. I am also proud to be a member of the research group on ageing in the Faculty. I would like to extend my warmest thanks to my colleagues from this group: Marjo Outila, Eva Rossi, Kirsi Päykkönen, Arja Kilpeläinen and Satu Peteri. I have received enormous support from them both academically and personally.

I am very grateful to Lecturer Richard Foley for proofreading the texts produced for both the articles and the synthesis. The quality of the texts reflects his kind efforts, which included not only language editing but also other valuable comments and suggestions. Thanks are also due to Translator Sari Kokkola and Lecturer Maija Paatero for translating the abstract into Finnish.

My sincere thanks also go to researchers Anne Nuorgam, Liisa Holmberg, Tiina Seppälä and Terhi Vuojala-Magga; it would not have been possible to find my informants without their co-operation. I am grateful to my all informants, in particular those older people who were so nice to me and so cooperative when I interviewed them. I am thankful to my cousin Sumaya Afroza, who designed the cover for the book, and to Paula Kassinen for the attractive layout and other technical help in the publishing process. I would also like to express my appreciation to peer scientists, especially Åsa Gunnarsson, Lena Wennberg, Monica Burman and Joan Harbison from the *TUARQ network* and *Arctic Change* networks, for their feedback on my articles, which allowed me to make steady progress in my research.

I am fortunate to have friends both in Bangladesh and in Finland with whom I was able to share both my joys and sorrows. Special thanks go to my friends from the University of Dhaka - Ruma, Taposhi, Nira, Beauty, Kusum, Sarwat, Khuku, Shelly and Shumi. I am also grateful to other friends from Helsinki and Rovaniemi. They include Laura (from Italy), Minna, Paula, Riikka, Zeba, Liza, Shumi, Poly, Muunmun, Chanda, Jesmin, Ruma, Shelly, Tani, Naima, Lipi, Shuborna, Shadona, Chamely and their families. I would also like to thank to Jenni, Anniina, Paula, Mikko, Nabila, Riad, Maria, Masud, Jeseya, Rinku, Litu, Shima, Shumi, Kanak, Kamal, Kachi, Shabab, Afroja and Punam for our many joyful occasions together, which certainly created welcome spaces when I was stressed.

I am deeply grateful to my parents, especially my mother, Anowara Begum, whose blessings were with me from childhood. I would also like to thank my sister Shumi and her husband Tipu, who have been very supportive. Welcome support has also come from my brothers' and members of their family, my grandmother, maternal-uncles' as well my aunt Nurjahan Begum and members of her family. I also would like to thank my parents-, brothers- and sisters-in-law for their constant encouragement.

Finally, my deepest and sincerest gratitude goes to my lovely family – a source of constant inspiration and motivation. My most heartfelt thanks are due to my husband, Kamrul Hossain, who has guided me as a mentor and supported me as a friend throughout this journey. His support created a balance allowing me to combine an academic career with a wonderful family life. Without his support, I cannot think of being where I am at this moment. I am also grateful to my dearest children, Ifti, Prioti and Shaianta, who are blessings from God! They were so lovely and patient, and generally accepted my absence with no complaint when I was traveling to conferences and research meetings.

1. INTRODUCTION

1.1 Background and settings of the research

The Arctic region is undergoing a transformation, one more rapid than that any in the other part of the globe. While a number of reasons can be cited for the transformation, the most important is climate change. Accordingly, the thesis set out to examine an extensive range of literature – both academic and non-academic – in order to look for challenges to the older population caused by climate change and its consequences. However, a review of studies in the area of climate change reveals that most focus on the impacts of climate change on the natural environment, examples being the melting of permafrost and sea ice. Also highlighted are new forms of on- and off-shore human activities (Johnson, 2008; AHDR-I, 2004) and geopolitical tensions (Backus and Strickland, 2008) connected to these developments. Some significant research has been conducted on the effects of the changes in the Arctic on human health (Parkinson, 2010; Young *et al.* 2012; Young, and Bjerregaard, 2008; Rautio, 2015). On the one hand, climate change and its consequences are likely to bring new opportunities for the region; on the other, it is likely to result in numerous socio-cultural, economic and environmental challenges for the population. Globalization as well is producing stressors that affect the people in the Arctic.

The transformation of the Arctic noted above affects the region's entire population – older people included – either directly or indirectly (Kukarenko, 2011; Prior *et al*. 2013). I discovered that no comprehensive research had been done highlighting ageing and gender in the context of the transformation and thus found it essential and timely to carry out my research in this particular area. In the course of the work, I have drawn upon a number of relevant political documents in which ageing and gender are referred to – albeit sporadically – such as the Arctic Human Development Report (AHDR-I, 2004). The AHDR-I (2004) identifies children, women and older persons as the three most vulnerable groups in the Arctic. However, comparatively little substantive research has been done on these issues, in particular the situation of older people and the role of gender. Indeed, one can speak of a gap in our knowledge on the consequences of climate change for the older population in the region.

Within this context, the present thesis brings together elements and illustrations from a range of academic disciplines, namely Arctic research with a focus on human rights, ageing research and gender studies. The benefit of an interdisciplinary approach is that it combines components of two or more disciplines in the creation of new knowledge, allowing researchers greater flexibility (Nissani, 1997). Such an approach is important, because it offers the chance to delve into multiple features of a given topic

(Jacobs and Frickel, 2009). For example, researchers in different disciplines can meet at the interfaces and can cross the boundaries of the disciplines involved to form new knowledge (Rijnsoevera and Hesselsc, 2011; National Academies, 2005, p. 16).

In this research, I use the term "vulnerability" to describe feelings of insecurity among older person in the region. Vulnerability of an older population can be described with reference to poverty, lack of access to services, lack of an age-friendly environment or like circumstances. A number of indicators of vulnerability in this sense can be identified in the case of older persons in the Arctic, examples being social isolation, financial insecurity and lack of access to adequate services. Another concept which I draw on is intersectionality, which informs efforts to investigate how social inequalities of class, gender, age, ability and ethnicity shape one another (Collins and Bilge, 2016, pp. 25–30; Collins, 2017, p. 19; Crenshaw, 1991). Kimberle Crenshaw (1989, pp. 149–151) has shown that people's experiences are ignored when they face inequalities and injustice on several fronts. The present research embraces the importance of an intersectional perspective (Aléx, 2016, p. 1750; Hernández-Avila, 2002; Östlin *et al*., 2006), as it shows the complexities of culture, age, gender, socio-economic status and place. These factors and their interplay often result in vulnerability, a mechanism which to date has not been examined in the context of the Arctic (Articles 1, 2, 3, 4 and 5).

The gap in our knowledge of the connection between climate change, human health and gender is cited by, among others, Natalia Kukarenko (2011), who asserts that climate change, human health and gender have been inadequately explored in research on the Arctic. Another issue to note is that the responses to the threats posed by the changes under way in the Arctic have ramifications for gender inequality (Gunnarsson and Svensson, 2017; Ingólfsdóttir, 2016; Lahey *et al*., 2014; Prior *et al*. 2013; Artazcoz and Rueda, 2007, pp. 466–467; Kukarenko, 2011 and Parbring, 2009). Ageing and gender issues are infrequently cited in the different reports and publications, such as *Gender and Climate change* (NCM, 2009), *Megatrends* (2011) and the Arctic Climate Impact Assessment (ACIA, 2004). The publications only sporadically make specific mention of issues such as women's lower participation in the labour market, out-migration in the north, climate change, health concerns and other vulnerabilities affecting women, older persons and indigenous peoples in the Arctic. Rapid socio-cultural change is affecting the health of the Arctic population (Young *et al.*, 2012), a trend cited in several articles published in the *International Journal of Circumpolar Health* for example.

The volume entitled *Health Transitions in Arctic Populations*, edited by Young and Bjerregaard (2008), describes changing patterns of health and what can be done to improve the health of Arctic populations in the region's northern periphery. Although their research addresses the vulnerable situation of the Arctic population in general, it highlights the perspectives of indigenous peoples. While the dimensions of ageing and gender do not receive much attention in the work, the research does take up some considerations relevant to my focus: for example, it highlights the connection between the environment and living conditions in the Arctic and the population's health and wellbeing (Bjerregaard *et al*., 2008, pp. 173–191), a significant concern as regards the older population. The book also analyses changes in health status in relation to major

environmental, social, economic, and political changes (Young and Bjerregaard, 2008, pp. 23–38), an important line of inquiry in examining the circumstances of older persons in the region.

Other literature, such as the *Circumpolar Health Atlas* (Young *et al.*, 2012), also focuses on health in the case of older persons and on gender, with explicit reference to the vulnerability of the Arctic population in settings with fragile systems of support (Parkinson, 2010; Jorgenson and Young, 2008). The existing literature and research, or paucity thereof, motivated me to focus on climate change and related changes affecting older people in the Arctic and, furthermore, to examine their situation in relation to the standard set by human rights norms. AHDR-II, endorsed in 2015, makes rather clear reference to the gap in knowledge of the living conditions of older persons as well as the dimension of gender in the north:

> The population is aging in many parts of the Arctic, triggering the need to better understand the social, cultural, economic and political role this segment of the population does and could play. Qualitative research is needed to investigate both the needs of older people, including their gendered dimensions, and available capacities of regional policy-makers to respond to those needs (AHDR- II, 2015, p. 23).

Recent research (AHDR- II, 2015; Gunnarsson and Svensson, 2017) addresses a number of issues while presenting knowledge gaps regarding the gendered nature and dimensions of a number of issues, such as contemporary cultural practices and expressions, decision making on resources, ageing in the Arctic, food and other (in) securities, and Arctic geopolitics (AHDR-II, 2015, p. 24; Gunnarsson and Svensson, 2017). These studies also make reference, although far less frequently, to experiences of change in the Arctic in relation to indigeneity, geography, age and gender (AHDR-II, 2015, p. 45; Gunnarsson and Svensson, 2017), dimensions which I found relevant for my research.

The striking "silence" in these areas prompted me to undertake the thesis described here, in which I examine the circumstances of the older population from the viewpoint of social justice and explore gender inequality, especially when it occurs along with the other vulnerabilities facing people in old age. As the existing knowledge in this particular context was not organized in any comprehensive manner, I set out to build a knowledge base on ageing and gender research in the Nordic Arctic context. Informed by this background and motivated by the gaps in knowledge noted above, I proceeded to write and publish five scientific articles and chapters in edited volumes. In the articles, I investigate the implications of the ongoing transformation in the Arctic for the region's older population with particular reference to gender equality and social justice.

My first article, *Impact of Climate Change on Elderly People in the Arctic, with Special Focus on the European High North: A Human Rights Perspective* (Article 1), focuses on several of the threats to older persons' human rights posed by climate change. The article examines the challenges these threats entail for the older population and illustrates that the impact of climate change is not the same on older men and older women.

In the second article, *Effects of livelihood transformation on older persons in the Nordic Arctic: a gender-based analysis* (Article 2), I evaluate, in the light of human rights, how (in)equality is embedded in the ongoing transformation of livelihoods in the Nordic Arctic. In this context, my analysis invokes the principles of equality set out in General Recommendation 27 of The Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW).

In the third article, *Gender differences of older people in the changing Arctic* (Article 3), I describe how gender differences have been taken into account in the Arctic region. The research also examines the intersectional nature of marginality among older people, pointing out that social contexts and the resulting power relations are intertwined and mutually constructing. With reference to some specific yet entangled themes, I critically analyse how the changes occurring in the region impact older men and women. I bring in and examine a number of themes that contribute to understanding inequalities and producing knowledge on them.

In the fourth article, *Challenges to the Human Security of Elderly Sámi in Finnish and Swedish Lapland* (Article 4), a co-authored publication, Päivi Naskali and I analyse how the concept of human security is connected with the wellbeing of older Sámi in Finnish and Swedish Lapland. Specifically, using empirical data, we show that the Arctic environment, food, economy and health are interconnected and illustrate how they pose different challenges to older Sámi people than to the region's older population at large. Finally, in my fifth article, *Exploring Age-friendly Environments in Rural Settings: a case study from Finnish Lapland* (Article 5, *forthcoming*), I highlight the features of an age-friendly environment, that is, one which older people prefer as a place to enjoy old age.

The direct and indirect consequences of climate change influence the Arctic in different ways that impact the rights of the older population (Article 1). These impacts affect older men and women, poor and marginalized people in a range of ways (Articles 2 and 3). The structural settings of the region impose limitations on the availability of formal work (see Chapters 4 and 5 below). In this context, women suffer the most because of their position in society, which may mean lack of access to the formal job market. Another, related consequence is their lack of voice at different levels, societal as well as family. These disadvantages create inequality and at times result in social injustices for women in their old age (Articles 1, 2, 3 and 4). The present work provides relevant information and insights into the discussion on the positions of older people in the Nordic Arctic (Articles 4 and 5). Given that these issues have not been properly and sufficiently addressed in the extant literature, the contribution of my study is to address the gap identified above.

My aim is to produce new knowledge by applying principles of equality and social justice in examining the challenges, problems and blind spots which older people in the Nordic Arctic region face. This work shows how the ongoing transformation of the Arctic influences the wellbeing of the region's older population by addressing issues such as human rights, human securities and gender perspectives. The research also points out how these issues are interconnected. At the end of this synthesis, I present

recommendations, formulated in the course of the research for the articles, based on what can be considered a new, more profound understanding of the multifaceted situations facing older people in the Arctic.

1.2 Discussing ageing and older people

There is no universally accepted definition of the terms 'older person' and 'older people'.[1] The World Health Organization (WHO, 2002) has stated that "[m]ost developed world countries have accepted the chronological age of 65 years as a definition of 'elderly people' or 'older person'". In the Nordic countries, several researchers refer to 'older people' or 'older persons' to mean people who have reached the age of 65. Old age does not refer exclusively to ageing; the concept is subject to interpretation and it is relative. Although ageing is a natural process, biological age is not always equal to social age (Giustini *et al*., 2009, p. 68). Laslett (1989, p. 24), for example, notes:

> [a]n individual may be thought of as having several ages, though not entirely distinct from each other, and related in slightly confusing ways, because they differ somewhat in character: a chronological age, a biological age, a personal age, a social age or even ages, and a subjective age.

Chronological age is a numerical index that normally means years measured since birth to the current length of one's life (Uotinen, 2005; Marin, 1996). Chronological age is often used as a marker of old age, which is a poor indicator of health, activeness and functional capacity. It is also often used for defining eligibility for benefits, such as social security (Quadagno, 2009, p. 6). Chronological age is typically used in many education-, research-, family- and work-related contexts. Biological age depends on an individual's physical status, which includes changes in health, functioning and appearance (Laslett, 1989; Uotinen, 2005, p. 11).

Indicators of subjective age include chronological age, education, health, self-esteem, financial satisfaction and job satisfaction (Steitz and McClary, 1988). In this regard Barrett has noted that education, socio-economic status and health are important indicators of subjective age (Barrett, 2003). In the case of subjective age, life satisfaction is used as an explanatory outcome. Hence, there are different approaches for determining when someone is considered old. The difference between subjective age and chronological age may depend on the personal experience of ageing that people have (Knoll *et al*., 2004). Many researchers have seen ageing as a complex relationship between chronological and subjective ages (Naskali *et al*., 2016, p. 3; Tulle, 2008, p. 8; Laslett, 1996).

1 In the articles I have used the term 'elderly people' but have subsequently used 'older people', which better reflects the terminology currently used in the literature.

Older people are often considered a homogenous group (Keskitalo-Foley and Naskali, 2016, p. 30). In feminist age studies, old age is defined as a social and cultural category. Old age or ageing is "like gender, to be something that becomes intelligible and meaningful through culture and discourse" (Sandberg, 2011, p. 45). It is not seen "only as a social process" (Keskitalo-Foley and Naskali, 2016, p. 33), but is also a matter of social positioning (Sandberg, 2011, p. 45).

Chris Gilleard and Paul Higgs (2005, p. vii) state that ageing can be viewed from two distinctive perspectives: one is a process of biological change, whereas the other "concentrates on the social and cultural position that later life and ageing occupy within society". They also assert that our understanding of ageing changes over time, shaped by social relationships comprising a "combination of population, social and cultural change" (Gilleard and Higgs, 2000, p. 2).

There is a trend towards using the terms 'third age' and 'fourth age' to identify and differentiate the needs of people in older age groups (Amans, 2013). These consider the social dimension of age, which today is seen as referring to social age and functional age (Laslett, 1989; Uotinen, 2005). 'Third age' describes the situation of older persons who are physically and mentally very active and still independent. It is "a period of opportunities and freedom from obligations related to work and family" (Uotinen, 2005, p. 12). 'Fourth age' refers to the circumstances of those who have many limitations on being active. It has been used to mean dependency, or has been defined as the oldest age, or stage of frailty (Laslett, 1989; Tikka, 1991; 1994). Indeed, the principal characteristic of fourth age is frailty, which is a social concept (Higgs and Gilleard, 2015; Higgs and Gilleard, 2016). In everyday life, old age is framed and represented "less as a status and more as a state of being, one that is typically envisioned through discourses about the costliness, the frailty and the indignities of old age" (Higgs and Gilleard, 2014). Such conceptions exclude older people from everyday life in society.

Both Pirjo Nikander (2009, p. 877) and Justin Coupland (2009, pp. 852–853) have noted that age-related social categorization is changing. In this regard Nikander states that "[d]espite the range of analysis of social, cultural and biological aspects of human ageing, we do not yet have a...concept for age [analogous to that for gender]". As in other cultures, culture in the Nordic Arctic exhibits material elements which influence each other; these encompass the human-built environment, physical objects, resources, and spaces that people use to define their culture, such as homes, areas, cities, schools, churches, offices, shops, factories, flora, means of production, goods and products. In short, cultural and material expressions of ageing are formed based on social relationships (Gilleard and Higgs, 2000, p. 2).

In ageing research and discussions, gender has not been considered an important issue and often remains insufficiently acknowledged. Older people are often considered gender neutral (Ojala and Pietilä, 2010; Keskitalo-Foley and Naskali, 2016, p. 30). One trend in ageing research views gender as concerning women only (Arber and Ginn, 1995; Calasanti and Slevin, 2001; McMullin, 1995). Seija Keskitalo-Foley and Päivi Naskali (2016, p. 33) have shown in their study how gender is "easily connected only to women". Therefore, examining gender together with ageing is a relatively recent development

(Nikander, 2009, p. 650). Finnish researchers have studied gender and ageing primarily in relation to working life (Nikander, 2002; Vakimo, 2003; Julkunen, 2003). Toni Calasanti (2010) has outlined a framework for improving the lives of older people, women and men alike. She explores conceptions of gender that better allow us to frame related research, policies and practices that are effective and equitable. In a relevant observation, Julia Twigg and Wendy Martin (2015) have noted that "the categories of age—like those of gender and sexuality—are subject to fluidity and cultural constitution".

Working from a critical and feminist perspective, Martha Holstein (2015, p. 3) has asserted that lives are intensely situated and that age, like gender, is a social category that affects our status and our everyday interactions with others. Julia Twigg (2015, p. 58) argues that "age - like gender - is seen as something that is repeatedly accomplished or performed by an individual, though it is at the same time something that is collective and interactive". Age and gender are intertwined systems and a more nuanced understanding of them or their interaction is required (Krekula, 2007, p. 155). Many researchers in the fields of law and gender have found that unequal power is most often rooted in age, gender, ethnicity and class (Gunnarsson and Svensson, 2017; Ylöstalo, 2012; Svensson and Gunnarsson, 2012; Stenström, 1997, p. 45). This state of affairs is visible in the basic structure of society, for example, in the home and at work, the result being inequality (Calasanti, 2010; Calasanti, Slevin and King, 2007; Ylöstalo, 2012, pp. 277–282).

In this study, I do not adhere to any particular theory of ageing or gender but rather study ageing and gender in relation to factors of subjective age and consider the implications of social, cultural and material elements as well. Geographical location, as well as social, historical, and biological considerations, are interconnected with age and gender, posing a challenge to researchers exploring the interactions. Both ageing and gender are socially and culturally constructed. I support the view suggested by Finnish researchers that ageing and gender must be analysed within their social, cultural, local and historical contexts (Keskitalo-Foley and Naskali, 2016, p. 30; Irni, 2010).

1.3 Research questions, objectives and the structure of the thesis

The thesis undertakes to explore the position of older people in the Nordic Arctic with a view to understanding their position in the light of gender equality and social justice. The main question addressed in the research is how ageing and gender in the Nordic Arctic interact with equality and social justice. This can be articulated in terms of the following, more specific questions:

How does change in the Arctic affect the region's older population? How have equality and social justice been perceived by older people amid the changes taking place in the Nordic Arctic? How does the position of older persons intersect with age, gender, ability, indigeneity and geographical location?

These are supplemented by other questions, presented in the published articles, relevant to intersectionality involving age, gender, ability, indigeneity and locality. The particular questions addressed in each of the articles are as follows:

How does the older population experience climate change and other changes in their everyday lives? What are the important elements identified by older people for age-friendly environments? How is gender positioning perceived and evaluated in the context of old age? What is the nature of the interplay between age, gender, ability, indigeneity and locality? Where can ageing and gender perspectives be found within the formal structure of the human rights framework? What role do they play in the promotion of human rights norms and human security for older people in the Arctic?

The central interests of my thesis are the challenges, threats, insecurity, vulnerability, social injustice and inequality confronting older people in the changing Arctic. In this synthesis, I analyse older people's positions and the challenges they face in the context of climate change, transformation of livelihoods and other changes in the Nordic Arctic. In producing new knowledge reflecting the experiences of older people living in the Arctic, the research also pursues a broader aim of promoting equality and social justice.

This synthesis comprises eight chapters. The present chapter, the introduction, describes background studies as well as the research questions and objectives of the study. The following chapter details the research methods, data and data collection processes. Chapter 3 presents a summary of the main findings of the published articles, reflections on which are then presented in the following three chapters (Chapters 4, 5 and 6). Chapter 4 describes salient geographic and demographic characteristics of the Arctic and Chapter 5 illustrates contexts that illuminate different facets of the position of older people in the region. Chapter 6 articulates the human rights and feminist standpoint approaches and their applicability in analysing equality and social justice practices in the Nordic Arctic. Chapter 7 provides an overview of the published articles and Chapter 8 concludes with recommendations.

2. RESEARCH PROCESS

At the end of 2011, I collected several academic articles and other literature, such as policy reports, statements produced by local municipalities, popular news articles, and policy briefs published by relevant institutions, to investigate what particular challenges older people face in the Arctic region. I looked at a number of databases, such as the *Arctic database*, to gather relevant academic materials. In addition, Google's search tools helped me to create a preliminary knowledge base structured around particular key words. I then categorized these materials under several academic disciplines. While most of the literature I gathered addresses Arctic climate change and its impact on nature and the natural environment, some deals with the impacts of climate change on the health and wellbeing of the region's population, quality of life and livelihoods. I complemented these sources with empirical materials, gathered in field studies in Lapland, in which I interviewed older people, relevant professionals and activists.

Research processes can take a researcher in unforeseen directions (Berg, 2009). Initially, it was my intention to investigate older people's concerns throughout the Arctic region. In the course of my reading, I soon realized this would be a daunting task, particularly as I would not be able to conduct field studies across what is a vast region. Thus, I narrowed my focus to the Nordic Arctic - primarily the northern parts of Finland, Sweden and Norway - although my findings will be applicable to an extent beyond this context. The Nordic Arctic is an area that enjoys relatively similar kinds of infrastructure and is one where people share largely the same sets of socio-cultural norms and values. Another common characteristic of the three countries is the presence of an indigenous Sámi population. I found these commonalities helpful in designing data collection.

My research questions centre on what the challenges are that older persons face in the region, how these challenges are shaped and what they mean for individuals in their daily lives. While my initial research interest was the impact of diverse regional stressors on the older population in the Nordic Arctic, I found that such stressors are in one way or another also connected to the changes impacting the Arctic region at large. In short, I set out to study the Arctic, the Nordic Arctic, older people – older men and women – in the light of equality and social justice.

2.1 Systematic literature reviews

My research employs qualitative approaches with due consideration of the aim of this study. I have used two sets of data, one comprising scientific literature and policy reports, the other research interviews. The research methods can be best described as interpretive and critical examination of systematic literature reviews and interview data.

I have opted to make use of systematic literature reviews (SLR), as they provide synopses of the state of research on a given topic and enable an assessment of the quality of individual studies (Ressing *et al*., 2009). In the present study, the SLR procedure is used to establish the background and importance of the relevant studies. A systematic review is:

> [a] review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review (Ham-Baloyi and Jordan, 2016).

Interview questions were formulated based on a review of the literature related to a range of topics: Arctic change and older people, transformation of the Arctic and ageing, gender equality and older people, climate change and its impacts on the ageing population, and challenges facing the older population. Using these as keywords I searched for and selected literature using both the AND and OR operators from specific databases, such as the *Arctic data base* and *PubMed*. The search results included many documents dealing with Arctic climate change and its impact on nature and the natural environment. I left out natural science-related articles, which were not relevant to my research interests. In addition, I used Google and Google Scholar, which are reasonably effective in locating theses and work by academic societies. I also carried out advanced searches and international e-material searches that yielded online links to peer-reviewed scientific studies, articles, monographs and e-books from many different publishers.

Following are the keywords used in the searches: Arctic, ageing, older people, climate change, Arctic change, livelihood transformation, disparity, gender equality, gender dimension, age-friendly environment, older person's wellbeing, older men and women, older person's health, human security, equality, inequality, social justice and Nordic Arctic.

Figure 1. Search tools and types of documents

Reviewed documents	Number
Arctic database *PubMed database*	35 20
UN reports, regional and other relevant reports	10
Total number	**65**

The literature chosen for the study includes relevant international and regional legal instruments; regional and policy reports, such as the ACIA; UN conventions and UN reports; AHDR-I and II; and several documents and reports published by the Nordic Council of Ministers. In the course of the systematic literature reviews, I first observed that climate change exacerbates the different challenges to the older population in the Arctic. After that I went on to investigate the impact of challenges that result in different positions for older men and women in the region (Articles 1, 2, 3, 4 and 5). The literature review also paved the way for examining issues of security with regard to older Sámi in Finnish and Swedish Lapland. Following is a brief description of the interviews, which were designed in part to identify knowledge gaps in previous studies and to forge a dialogue between the interviews and literature. The interviews either supported or challenged the previous knowledge on the issues.

2.2 Interviews

Participants

My interviewees comprised older persons as well as experts. The latter group included researchers; older adults engaged in Arctic research on topics such as environmental issues, indigenous knowledge and culture, wellbeing of the Arctic population; a local politician; managers of a care home for older people; and local people actively involved in issues relating to northern wellbeing generally. Hence, the respondents include older people, researchers, local people and professionals providing services designed to further northern culture and older persons' wellbeing in the Arctic. All of them also live in the region. To conduct interviews, I collected information about potential respondents from researchers at the University of Lapland, researchers at the Arctic Centre and a researcher at the University of Umeå. I then applied Kumar's (Kumar, 1996) snowball sampling technique to select interviewees. A qualitative research interview seeks to describe the meanings of the central themes of the research interest, and the main task in interviewing is to understand the meaning of what interviewees say (Kvale, 1996). I carried out interviews on the focal topics and followed as a guideline in interviewing the principle that "information collected by interview must be as relevant, reliable and valid as possible" (Millar *et al.,* 1992, p. 82). My interview procedure can best be described as a discussion between the interviewer and the interviewees that focused on the topics underpinning my research interests.

The interviews of older people and experts were conducted on several occasions between 2011 and 2017. As indicated earlier, my field studies took place in Finnish and Swedish Lapland, regions which are home to local as well as indigenous Sámi populations. The respondents were from Rovaniemi, Ivalo, Inari, Angeli, Peltovuoma and Hetta in Finnish Lapland, and Jokkmok and Tärnaby in Swedish Lapland. Most of my respondents were women.

Figure 2. Synopsis of interviews

Respondents' home village/community	Total Number	Women	Men
Set 1 Rovaniemi ***Set 2*** Inari, Ivalo and Angeli ***Set 3*** Hetta and Peltovuoma	14 14 18	10 9 (5 Sámi women) 15 (1 Sámi woman)	4 5 (4 Sámi men) 3
Total: Respondents from Finnish Lapland	**46**	**34**	**12**
- Jokkmokk ***Set 4*** - Tärnaby	8 1	6 (5 Sámi women) 1(Sámi woman)	2 (Sámi men)
Total: Respondents from Swedish Lapland	**9**	**7**	**2**
Set 5 Researchers from the Nordic Arctic (NA)	3	2	1 (Sámi men)
Set 6 Activists, managers of care homes for older people and older local politicians (NA)	7	6 (3 Sámi**)**	1
Total	**65**	**49**	**16**

I interviewed a total of 65 respondents, including 10 experts (8 women and 2 men). Although my principal focus was older people, information gathered from researchers, managers of care homes for older people, local politicians and activists helped me to find the similarities and differences in the situation of older people, which in turn helped me to put my background data on a more solid footing. My field studies indicate that of the 46 older respondents (34 women and 12 men) in Finland, 14 were able to live in their own homes with the help of relatives. The other 32 respondents were living in care homes, where they received several forms of assistance. In Sweden, nine (eight women and one man) respondents were still living in their own homes. The older respondents whom I interviewed were born between 1925 and 1956. The village of Peltovuoma is located 30 km from Hetta, the centre of the municipality of Enontekiö. Angeli lies 62 km from Inari and 100 km from Ivalo, these last two being the location of most of the services in the municipality of Inari. In Sweden the distance from Kallak to Jokkmokk is some 60 km. One interviewee was from Tärnaby. I did not visit Tärnaby personally, but rather interviewed the respondent first in Umeå and later in Rovaniemi.

Data collection process

In preparation for the interviews, I paid particular attention to the central considerations put forward by Dörnyei (2007): "(a) it flows naturally, and (b) it is rich in detail" (Dörnyei, 2007, p. 140). I conducted the interviews in several settings, engaging with older people in care homes or in their homes and with researchers in rooms close to workshop and conference venues. I sent a sample of the research questions via e-mail to residents of the care homes (in Finnish Lapland) and to other individuals. I also called respondents on the telephone to explain more about the aim of the interviews. I received permission for the study by e-mail from the managers of the care homes (Rovaniemi, Ivalo and Hetta) in the locality and obtained permission before conducting the interviews (see Appendixes A, B and C). It is essential to have informants' express consent to participating. In the present case, their consent was wholly voluntary and were all competent to give their consent. Interviews were arranged in places suggested

by the interviewees (Kuula, 2006). Older respondents first gave their permission by telephone and I secured permission again before starting the interviews. The languages used in the interview were Finnish and English. Finnish was used when I interviewed older people in Finnish Lapland. Finnish is not my mother tongue and it was not easy for me to understand everything, but body language on the part of both interactants helped in understanding the relevant issues. Respondents also talked slowly so that I could understand them. All respondents were physically and mentally competent to express their opinions.

I used both semi-structured and open-ended questions (Elo and Kyngäs, 2008; Neuendorf, 2002). All discussions were recorded using a tape recorder and transcribed verbatim. The duration of the interviews varied from 30 to 90 minutes. I noticed that 30 minutes was the norm for respondents at the care homes and for men, and 90 minutes for respondents living in their own homes. To protect the confidentiality of the respondents, I do not use their real names. During the interviews, I wrote down rele-

Figure 3. Summary of the research design of the articles, including data collection and data analysis

Aims	**Summary of the questions**
Article 1 To address the challenges facing older people as a result of climate change, and to integrate human rights perspectives on the issues identified.	How are older people affected by climate change? What are the particular provisions in the human rights instruments applicable to older people? How do consequences of climate change affect the human rights of older people in the Arctic?
Article 2 To examine how equality and non-discrimination, as understood in General Recommendation 27 (CEDAW), are perceived by older persons in the context of changing livelihoods.	In what ways do older people understand the relation between changes in their livelihoods and wellbeing in northern communities? My focus here is on investigating the specific impacts on older women.
Article 3 To identify inequalities between men and women that have been exacerbated by the rapid transformation affecting older persons in the Arctic.	How do the changes in the Arctic influence gender positioning among older people? What implications does this societal positioning have from the viewpoint of gender equality?
Article 4 To examine how the concept of human security applies in assessing the wellbeing of older Sámi in the Nordic Arctic and to pinpoint the benefits of promoting their wellbeing in response to the challenges they face.	How are the concepts of wellbeing and human security interconnected in the circumstances of older Sámi in Finnish and Swedish Lapland?
Article 5 To identify the characteristics of age-friendly environments in rural settings, as described by older people.	What elements are important in a community to promote a good life? What kinds of changes and challenges have older people experienced? What are the expectations of older people with regard to an age-friendly environment?

vant points in the form of notes, and immediately after they ended I summarized them. Later I wrote down and saved conversations as text on my computer after listening to all the interviews several times.

Data Analysis process

The questions which I presented to the respondents were formulated on the basis of the literature reviews and were related to Arctic change, Arctic transformation, climate change, environmental change, out- and in-migration, the notion of an age-friendly environment, transformation of livelihoods, population dynamics and changing culture in the Arctic. These topics were chosen in light of the aims of the study, discussed in the previous chapter, that is, how the Arctic is changing and how the changes impact the older population in the region. I chose to use qualitative approaches that best articulated my descriptive, interpretive and critical research interests (Elliot and Timulak, 2005, pp. 147–149).

Data	Qualitative Method	Publications
1) Review of the appropriate literature 2) interviews of 14 older people Rovaniemi**,** Finnish Lapland and 10 experts, researchers from the Nordic Arctic and one from Russia.	Content analysis	**Peer-reviewed international scientific journal** Begum, Shahnaj (2013). "Impact of Climate Change on the Elderly People in the Arctic with special focus on the European High North: A Human Rights Perspective". *The Yearbook of Polar Law*, vol.5, pp. 571 – 602. Publisher: Brill Academic Publishers, the Netherlands.
Interviews of 14 older persons in Finnish Lapland (9 women and 5 men from Ivalo and Inari), 8 older people from Swedish Lapland (Jokkmokk, 6 women and 2 men), and 3 researchers from the Nordic Arctic.	Thematic analysis	**Peer-reviewed book chapter** Begum, Shahnaj (2016). "Gender Difference of Older Persons in the context of Arctic Change.", Routledge – Earthscan, pp. 110–130.
1) Arctic and PubMed databases 2) reports such as AHDR, 2004, ACIA, 2005, WHO 2009 (gender and climate change), IPCC, 2007 (climate change and its effects on health).	Content analysis (Interpretive and critical interests)	**Peer-reviewed international scientific journal** Begum, Shahnaj (2016). "Livelihood transformation in the Nordic Arctic (Finnish Lapland): Effects on older people from a gender-based perspective" Polar Record, Cambridge University Press (UK).
Interviews of nine older Sámi people, 3 active members of the communities, 1 healthcare professional and 3 researchers working on indigenous issues.	Thematic analysis (Descriptive and critical interests)	**Peer-reviewed book chapter** Begum, Shahnaj & Naskali, Päivi (2016). "Human security challenges to Sámi elderly in Finnish and Swedish Lapland." Brill Academic Publishers, pp. 211– 229.
Interviews of 19 respondents – (15 women and 4 men). 17 older people (between the ages of 61 and 85 years), two other informants (including the director of a care home and relatives of the older persons).	Thematic analysis	**Peer-reviewed book chapter** Begum, Shahnaj (2019). "**Exploring Age-friendly Environments in Rural Settings: case study from Finnish Lapland**", Springer Nature (forthcoming).

The analysis of the interviews was carried out in light of these interests and with a focus on the geographical characteristics and demographic dynamics of the region in order to understand the ongoing transformation. Using an SLR and interpretive–critical analysis, I examined how the transformation has introduced threats affecting the older population. These have materialized in socio-economic, environmental and cultural contexts as well in as the area of health and wellbeing. I put together a descriptive overview (Tseng *et al.,* 2008) and, based on the research questions, created an overview of relevant themes (Smith *et al.,* 2003). This contains a variety of information on the focal studies (Ressing *et al*., 2009). In my analysis, I have abided by a guideline emphasizing the importance of the use of quotations to indicate the trustworthiness of results (Polit and Beck, 2012; Sandelowski, 1995). The findings of the research can thus be seen as reflecting the voices of my respondents, in particular those of the older persons I interviewed.

Proper descriptions of the culture, place, context and characteristics of the participants (Elo *et al*., 2014) are all facets of knowledge production. An SLR brings together and critically analyses various research problems by identifying, critically evaluating and integrating the findings of all relevant research (Baumeister and Leary, 1997). My analysis is descriptive, thematic and critical and I decided on the research framework based on my own understanding of the relevant theory (Kyngäs and Vanhanen, 1999; Tuomi and Sarajärvi, 2004). While analysing the research data, I recognized different kinds of changes, challenges and threats to the human rights of older people that result in inequality and insecurity. I have used these categories to understand the vulnerabilities, inequalities, disparities and injustices found in the Nordic Arctic and have illustrated these in the articles through specific cases of inequality and injustices (Elliot and Timulak, 2005, p. 149; Elliot, 2000).

2.3 Research ethics

I agree with Sandra Harding's (1993) view that in carrying out research one cannot avoid one's own values and attitudes. In feminist standpoint theory, research objectivity is treated in terms of 'situated knowledges', meaning that knowledge is partial, situated, power pervaded and relational (Hesse-Biber, 2012, p. 9). My research is based on situated knowledge and my interest is in the experiences of older people. Particular ethical principles apply in research with vulnerable social groups, such as frail, lonely, older people, and such research is subject to distinct ethical and methodological requirements (Russell, 1999), of which I am aware.

In research, the risks depend on the different social and cultural environments in which the research is carried out (REC, 2009, pp. 33–35). I have respected the rights of my interviewees to confidentiality, anonymity and privacy. In conducting my research, I asked permission from the relevant institutions and individuals in order to adhere to all ethical rules and procedures. First, the consent processes and issues of anonymity and confidentiality were fully explained to participants. I first explained the aim of

the interviews and each respondent was given the opportunity to ask questions before answering any. The atmosphere during the interviews was very welcoming. My being a foreigner did not introduce any complications; rather, I received special care and attention. At both locations (care homes and respondents' homes) respondents talked freely with me, which is very important (Alshenqeeti, 2014, p. 41).

It is essential to mention that the discussions during the interviews were more open with the respondents who were living in their own homes. Respondents living in the care home pointed out that they did not know about their rights, such as how much they could speak regarding their needs and expectations, problems and other issues. It may be the case that if older people are afraid to open up about the quality of the services they are receiving, their situation might sooner be worsening than improving. I have used the real name of the villages and names of the care homes. However, in the field of research "there is no such thing as zero risk" (REC, 2009, p. 30). I did not use respondents' real names. I am aware that it might be possible to identify the respondents from the name of the villages and name of the care homes. Respondents were aware that in this type of research there are no risks of their being harmed. The respondents' felt that the research questions did not concern their personal, intimate or family carers and this might be the reason why they gave permission to use the real names of the villages.

I have adhered to age ethics, which sets forth ethical considerations when doing research on older people as a vulnerable group (Nikander and Zehner, 2006). In collecting the data, special attention was paid to the challenges that old age may bring during the research process. Older persons living in care homes are often the oldest and may have memory problems. Permission for the interviews was requested from the managers of the facilities. Moreover, I discussed the research with the caregivers, who determined which residents were capable of understanding what a research interview and being interviewed entail. I did not interview respondents who might have had memory problems. In my assessment of respondents' ability to speak openly, I realized that staff at the homes for older people selected the persons whom I ultimately interviewed. This may have led to the respondents not being willing to speak very openly. Such difficulties may arise when people are in care homes. It is also a fact that I do not have the medical expertise necessary to determine who have might have memory problems or dementia.

In this study, the youngest respondent was 61 and the oldest 92. Though the age difference is over 30 years. It does not mean the oldest one was the most vulnerable; while a great deal of ethical sensitivity is needed, an entire category of people should not be assumed beforehand to be vulnerable (Calasanti, 2004, pp. 1–7). A person's age as such does not reveal anything about the state of his or her health. In doing research among older persons, I did not assume that they are incapable of understanding social issues (Helander, 2001). I did not patronize them but rather avoided stereotyping. I was aware that the respondents might treat me as a visitor or an official, towards whom they would want to be so polite as to not share their problems. I was also conscious of respondents' possible sensory problems, such as poor hearing. However, I have valued the older people's conversations, dialogues and consents.

In this study, I used 35 documents from the Arctic database and 20 documents from PubMed health stored in the archives (both electronic and non-electronic) of the library of the University of Lapland. I have stored all data in PDF format, which I can access with a variety of word-processing software. All the data are stored in secure folders on my personal computer for use in my future research. I have also used open-access reports and interview data. The recorded interviews are stored as .mp3 files, which can be accessed using media players. I will destroy these recorded files and verbatim transcriptions immediately after my thesis is published.

3. FINDINGS ON THE INTERACTION OF AGEING AND GENDER IN THE NORDIC ARCTIC

This chapter summarizes the findings of the present research, presented from the viewpoint of equality and social justice. These concepts are treated in detail in Chapter 6.

A first observation is that climate change poses significant challenges to older people as regards their enjoyment of their fundamental human rights. Their right to life and healthy living conditions is threatened because of socio-cultural and environmental changes. These often have adverse impacts on their right to access to unpolluted, affordable and good-quality food with proper nutritional value. For the older population of the Nordic Arctic these rights are interconnected. For example, the right to food is connected to the right to health and a person's right to life is jeopardized when he or she cannot be ensured the opportunity to live in an age-friendly and healthy environment. Moreover, the particular circumstances prevailing in the region demand the protection of the population's mental wellbeing as well as protection for some groups, for example indigenous peoples, of the right to exist as distinct entities. The right to enjoy a specific culture within society is increasingly threatened and this affects the mental wellbeing of many older people. The concepts of equality and social justice are intertwined as they relate to the enjoyment of these basic human rights. While older people are generally threatened in terms of the enjoyment of these basic rights, in most cases it is older women who are disproportionately affected.

In the Nordic Arctic, men and women have different social positions, as in any other society. Age, gender, physical and mental ability, socio-economic position and geographical circumstances are factors that create differences among individuals in societal roles. Many such differences in the Nordic Arctic are driven by prevailing societal conditions, such as out-migration, in-migration, lack of age-friendly environments and limited access to resources, all of which adversely impact the older population in particular. Better socio-economic circumstances strengthen a person's position in old age.

In another principal finding, this study suggests that structural inequality exists within the regional settings, with the prevailing inequalities entailing vulnerability for older women in particular. In most cases, inequalities are perceived as invisible or unspoken, and are often referred to as '*hidden*' inequalities. Nevertheless, they exacerbate unequal social practices. For example, most poor older people are women who have a poor socio-economic status and fragile health. In such circumstances, living longer does not bring a healthy and happy life. In this particular region, women are treated as subordinate, if not legally at least in their everyday lives. They have a relatively lower share of active participation in the labour market, which prevents them receiving equitable pensions in old age.

Older women are considered socially inferior in terms of economic security. Economic insecurity leads to other consequences, such as a lack of empowerment in the socio-political context. Older women have a position and status that are less valued than those of their male peers. This study argues that situated knowledge is socially structured and, based on the experiences of the older respondents themselves, reveals a structural inequality that stands to undermine social justice. Drawing due attention to this, the study highlights the transformation of livelihoods affecting the region's older people and points out disparities between older men and women in that connection.

The physical and mental wellbeing of older persons in the Nordic Arctic is mostly dependent on, and connected to, the provision of an age-friendly environment. The changes occurring in the physical, social and infrastructural environments affect the unique features of the Arctic environment, making older people feel insecure in many respects, such as in their socio-economic position. Feelings of insecurity and suffering from unfairness are more common among women, who are multiply vulnerable – being women, older, and in some instances members of a particular ethnic group, such as the Sámi. The findings also highlight the importance of the human-built and socially built environments in considering the region's geographic, demographic and physical infrastructure. Geographically, the Nordic Arctic is remote, although it is rather well connected compared to other Arctic regions. However, demographically the region is sparsely populated, with many small, remote communities, including the Sámi communities. As a result, the human-built environment, which should provide essential services such as health care, transportation and physical communication, as well as educational, social and leisure activities, lacks what could be considered adequate infrastructure. In the light of this shortcoming, one can conclude that in the case of older people the spirit of equality and social justice is not realized as it ought to be; if implemented, it would ensure them access to services that are readily available to their peers in other parts of the country.

Having said this however, challenges specific in degree to the region, such as the effect of climate change, result in disproportionate threats to the region's older population as a whole. The regional specificities prevailing in the Arctic parts of the three Nordic countries examined here are often ignored in national regulations and policies. Equitable allocation of resources, as well as promotion of awareness through training, education, and social activities, may narrow the gaps caused by inequality and social injustice. Therefore, positive measures must be implemented in order to change the stereotypes embedded in the societal structure. Such efforts would help transform social and institutional structures to facilitate participation, in the form of both political participation and social inclusion of older people. There is also a need to create an age-friendly environment in the Nordic Arctic region. In other words, different policy measures, for example a targeted allocation of resources, should be promoted for older persons living in regions where an age-friendly environment is not as likely to be created as in other regions. While such measures may well create discrimination in the strict sense that different groups within the population are treated differently, they will result in broader social justice and fairness. At times the concept of equality needs

to be judged from the point of view of social justice, where it is the end result that has to be given more importance than strictly equal treatment. In this connection, the findings presented in the thesis serve to inform researchers, policy makers, politicians and government officials of the regional differences peculiar to the Nordic Arctic that have the above-mentioned impacts on older persons.

I proceed in Chapters 4, 5 and 6 to broaden the discussion and open up the relevant contexts, concepts and theoretical approaches. In the following chapter, I discuss the transformation of the Arctic in some depth with a focus on its ageing population.

4. AGEING AND TRANSFORMATION OF THE ARCTIC

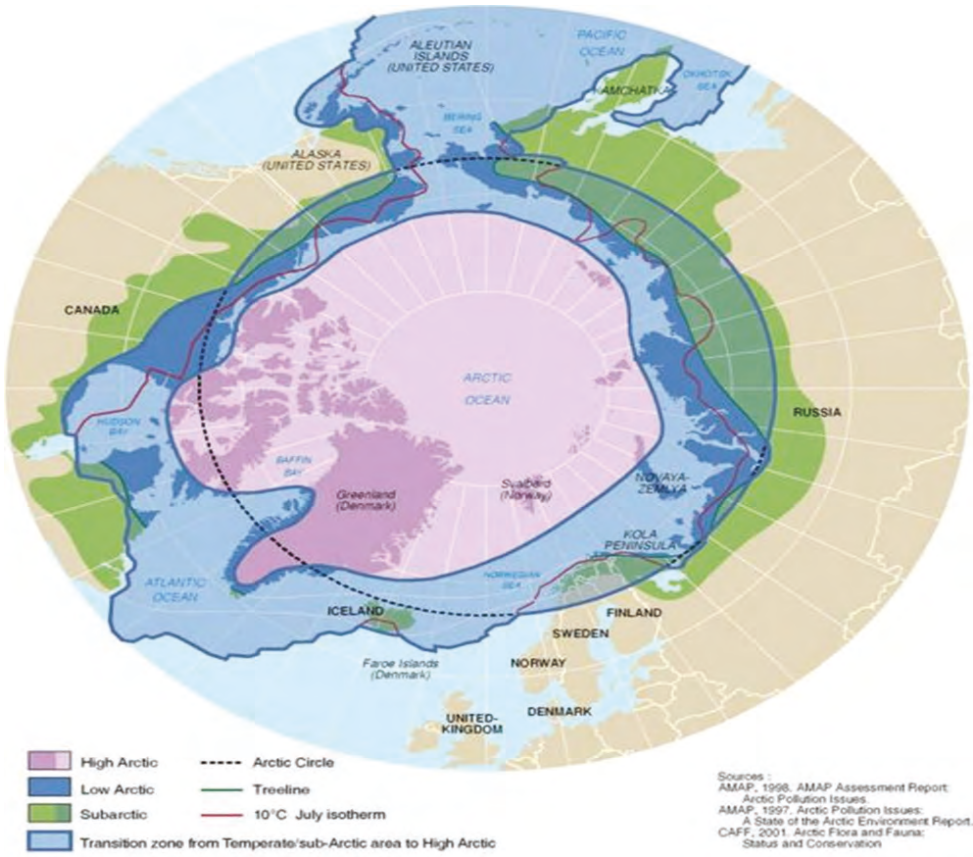
4.1 General characteristics of the Arctic

The word "Arctic" comes from the Greek word '*Arktikós*', the land of the North (Huntington, 2001), also widely referred to as one of the Polar Regions (Keskitalo, 2004). The Arctic accounts for more than 10 per cent of the earth's total land area, covering some 14 million square kilometres consisting of the northernmost territories of the eight circumpolar states, namely, Finland, Canada, Denmark (Greenland), Iceland, Norway, Russia, Sweden and the United States (Alaska). While in the past only the northern parts of Canada, Alaska, Russia and Greenland were considered 'the Arctic', the geographical scope of the region has since been expanded for political and environmental reasons and due to the presence of indigenous communities in the general geographic region (Keskitalo, 2004, p. 2). The Arctic is often referred to in academic and policy documents as 'the circumpolar North,' 'the Northern regions,' and sometimes just simply 'the North'. For example, Lassi Heininen and Chris Southcott (2010) use 'Circumpolar North' at times to refer to the Arctic. However, the Arctic cannot be defined by any single or uniform criterion. In general terms, it is defined as a treeless, remote area with cold winters and cool summers (Svensson, 2017; Nuttall, 2005; Koivurova, 2001; Huntington, 2001; AMAP, 1998).

At times the Arctic is defined as anything north of the Arctic Circle (above 66° N), whereas in political formulations it includes a rather broader area (Ingólfsdóttir, 2016, p. 75). The delineation of the Arctic varies depending on different perspectives and scientific disciplines (Arctic-definitions-and-boundaries, 2016). For example, within the framework of the Arctic Council – the high-level cooperation body of the eight Arctic States – the various working groups have developed their own definitions in order to delimit the scope of their work, two such groups being Conservation of Arctic Flora and Fauna (CAFF) or The Arctic Monitoring and Assessment Programme (AMAP).

In my research, I have chosen the description of 'the Arctic' given by AMAP, which encompasses the northern parts of Norway, Sweden, Finland, Canada, Russia, the United States (Alaska) and the whole of Greenland and Iceland (AMAP, 1998). For present purposes, I suggest that 'Nordic Arctic' be defined as the northern parts of Finland, Sweden and Norway, even though in the publications for this thesis I frequently use the terms 'Nordic Arctic[2]', 'European High North', 'European Arctic', 'Northern Region' and 'North' interchangeably to refer to the region.

2 In my research, the Nordic Arctic includes only the northern parts of Finland, Sweden and Norway. Finland defined the whole country as belonging to the Arctic in its 2013 Arctic strategy.



Source: AMAP 1998

Compared to other regions on the globe, the Arctic has unique characteristics: distinct climatic conditions, a sparse population, the presence of indigenous peoples and traditional ways of practicing livelihoods. One of the singular features of the Arctic is its connection with nature. In terms of its climatic features, the region exhibits very cold winters and even the average summer temperature remains below 10°C. As the region's climate is changing rapidly, its extreme weather renders it an unfavourable and challenging place to live. Although people have come up with ways to be more resilient, at present the recent anthropogenic transformation and the harsh environmental conditions pose various challenges for them in their everyday lives at different levels. In the articles for the thesis, I have concluded that the Arctic's remoteness, the long distances between its component regions and lesser connectivity in terms of physical infrastructure expose its population to a wide range of serious threats (Articles 1, 2, 3, 4 and 5). The communities are widely scattered, and life in small communities with small populations results in both physical and social isolation (Articles 1, 2, 3, 4 and 5). However, the picture varies in different parts of the Arctic (Ingólfsdóttir, 2016, p. 78). While the Arctic as a whole shares certain characteristics, the Nordic Arctic is relatively

more advanced (PMOF, 2015) and well connected in terms of both its infrastructural network and the living conditions of its population.

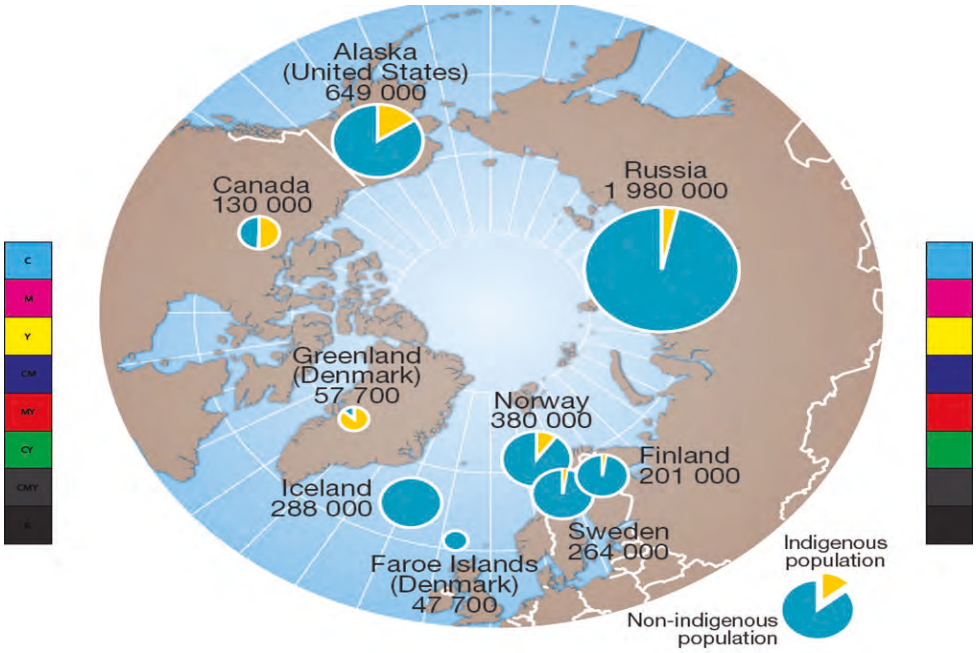
Another interesting feature of the Arctic is the presence of over 40 different ethnic indigenous groups (Hossain, 2016), accounting for a population of approximately 400,000 persons, or 10 percent of the region's total population (Svensson, 2017; Ingólfsdóttir, 2016, p. 78; ASI-I, 2010, p. 51). Known also as aboriginal peoples or native peoples, these groups maintain certain traditional practices forming part of their culture and Arctic identity (FSAR, 2013; SSAR, 2011, p. 43; Article 4; Huntington, 2001). Chief among these practices are hunting, fishing, herding, traditional handicraft, farming, gathering wild plants for food and picking berries in the forest. Older people (research conducted during the period 2011–2017) want to keep their societal norms and values as intact as possible. The more significant among the various indigenous communities are the Sámi living in the northern parts of Finland, Sweden, Norway and on the Kola Peninsula of Northwest Russia, the Inuit living in Alaska, Canada, Greenland and Russia, and the Nenets, Khanty and Evenk living in northern Russia. The Sámi are the only indigenous community in the Nordic Arctic and are recognized as the only indigenous people in the European Union (Kenrick, 2016; Articles 1 and 4; Seurujärvi-Kari, 1995, p. 83). Being Sámi means living close to reindeer, mountains and being part of traditional Sámi culture (Aléx, 2016, p. 1744).

4.2 Population dynamics and ageing

Given that the Arctic as a whole is changing, one sees an ongoing change in demographic structures as well (Articles 1, 2, 3, 4 and 5). This change will impact the region's future through its effects on the region's communities (Rasmussen and Hovelsrud, 2015). At present, the Arctic has a total population of some 4,053,055 people (Heleniak and Bogoyavlensk, 2015, p. 53–101). Hugo Ahlenius (2008) has depicted the distribution of the population on a map showing the number of people living in the Arctic region of each country: some 130,000 in the Canada; 201,000 in Finland; 57,700 in Greenland; 288,000 in Iceland; 380,000 in Norway; 264,000 in Sweden; 1,980,000 in Russia; and 649,000 in Alaska.

The graphic below shows the population distribution in the circumpolar Arctic by country.

The total population of the Arctic declined by 1.4 per cent between 2000 and 2013, whereas the global population increased rapidly during the same period (Heleniak and Bogoyavlensk, 2015, p. 54). Although the population of the Arctic has decreased overall, the trend is not the same in all of its component sub-regions (ASI-I, 2010, p. 36). Where population increases have been seen in Alaska, Iceland and the Canadian Arctic (Emelyanova, 2015; Heleniak and Bogoyavlensk, 2015, p. 54), a decrease has been recorded in the northern parts of Finland, Sweden and Russia in the course of the last 10 years. The research conducted by Emelyanova, (2015) shows that the population has declined by approximately 5 to 10 per cent in these regions in varied contexts.



Source: Hugo Ahlenius, UNEP/GRID-Arendal

However, in the Norwegian and Greenlandic Arctic, population figures have remained the same.

As regards the older population, the Arctic is experiencing ageing along with the globe at large (Emelyanova, 2015, p. 17). Various regions within the Arctic see dynamic patterns in terms of the distribution of their ageing populations. A study carried out by Rasmussen and Sterling (2006) presents the distribution of the percentage of the population above the age of 64. According to the research, the Finnish and Swedish Arctic are home to 14 per cent of the countries' populations at or above the age of 64. The same figure applies to Nunavik in Canada. In Norway this figure ranges from 12 to14 percent. However, for most of the Russian Arctic, as well as Greenland, Alaska and the Canadian Yukon, this figure varies between 5 and 10 percent. In Iceland the figure ranges from 10 to 12 percent. In Swedish and Finnish Lapland, the proportion of the population aged 64 and above is sometimes even higher than in that age group at large in these countries. The latest AHDR-II mentions that the average men's life expectancy in Russia is below 64 years of age (AHDR-II, 2015, p. 64; OECD (Economic Surveys: Russian Federation) 2011, p. 30). Between 1987 and 1994 men's life expectancy decreased by approximately 8 years. This situation indicates that 5 to 10 per cent of the older people (from Rasmussen and Sterling's Map) in Russia are women. According to Anastasia Emelyanova (2015), "there are significant variations among Arctic territories in terms of share of older persons. ... By 2010, the Arctic Prop 60+ rates rose to a rate of 17% as the average for the region" (Emelyanova, 2015, pp. 44–46). The AHDR-I (2004, p. 37) notes: "[T]he greatest shares of seniors are in Norrbotten [in Sweden]

and in Lapland, where they are even higher than in the total populations of Sweden [and] Finland. The smallest shares of seniors are in the Arctic regions of Canada and Greenland." Demographically, all the Arctic countries elsewhere on the globe have much older age patterns with lower fertility rates (Heleniak and Bogoyavlensk, 2015, p. 56; Hassler *et al*., 2008, p. 106).

Life expectancy is high, and fertility and mortality rates low, for both men and women in the Nordic Arctic. According to life expectancy at birth data (Bjerregaard, 2008, p. 107), on average in Norway men live 77.5, and women 82.3 years; in Sweden, men live 78.4 years on average, whereas women live 82.7 years; and in Finland, the average for men is 75.3 years and for women 82.3. Thus, it is apparent that in Norway and Sweden women live on an average five years longer than men. However, in Finland the gap in life expectancy in favour of women is seven years. Even though older women outnumber older men in the population (Kukarenko, 2011; AHDR-II, 2015; Articles 2 and 3; Young and Bjerregaard, 2008, p. 113), the male population overall in the Arctic is relatively larger than the female.

Also characteristic of the Arctic is that it is undergoing an intensifying transformation. This entails rapid changes in climatic conditions, an expansion of commercial activities resulting in changes in the livelihoods, the introduction of new life styles and changes in demographic structure, all of which make the region challenging to its traditional communities, including the older population in them (Articles 1, 2, 3, 4 and 5). Climate change is perhaps the most prominent change in the Arctic; the temperature in the region is rising twice as fast as in other parts of the world (Ingólfsdóttir, 2016, p. 19; Hassol, 2004; Gurdian, 2012; AHDR-II, 2014). It is anticipated that the impact of climate change will accelerate, contributing to major physical, ecological, social, and economic changes in the Arctic (ASI-I, 2010; ACIA, 2005). As a result, the "resource base is changing, just as the climate" (Rasmussen, 2007, p. 20). In addition to causing physical changes, climate change directly or indirectly influences a number of other trends (Articles 1, 2, 3 and 4). The melting of sea ice and thawing of permafrost offer easy access to many parts of the Arctic and shipping routes are accessible for longer periods of time (Svensson, 2017, p. 28). Easy access to remote areas offers new opportunities, one can see an increase in extractive industrial activities, tourism and various forms of land use in the Nordic Arctic in particular (Articles 1 and 3). Such developments are leading to changes in lifestyles among individuals and groups in society from traditional to urbanized (ASI-I, 2010, pp. 51–55; Rasmussen, 2007, p. 16), with consequences for the preservation of traditional values and cultures (Seurujärvi-Kari, 1995, pp. 83–88). These changes are expected to have a major impact on the population of the region.

Irene Dankelman (2010) has suggested that climate change is a major societal challenge that negatively impacts efforts to build a just and sustainable society. In this regard, she advocates gender-specific approaches in climate change policies (Dankelman, 2010, pp. 1–2). Climate change is one of the key challenges which affects everyone but is not gender neutral (Ingólfsdóttir, 2016); it affects women and men differently (Articles 1, 2, 3 and 4; Gunnarsson and Svensson, 2017; Naskali *et al*., 2016; EIGE reviews,

2012), with women's voices being neglected. In the EIGE report, it is suggested that "to develop and maintain a sustainable and effective response to climate change, a gender approach and gender-sensitive indicators must be an integral part of all policies and actions at all levels" (EIGE reviews, 2012, p. 3).

Climate change affects older people and "indigenous women more strongly" than other segments of the population (Tovar-Restrepo, 2010, pp. 145–150; Carter *et al*., 2016). Globally, it has consequences for poverty and gender equality (Climate Festival, 2011). In addition, it stands to exacerbate existing inequalities such as the disparity in socio-economic positions between women and men. Furthermore, it impacts individuals' ability to cope with what is a global phenomenon. Many studies show that more women than men die of causes connected to climate change (Neumayer and Plumper, 2007, pp. 551–566). For instance, "[t]he heat-wave in France in 2006 killed around 1 % more older women than men due to cardiovascular disease, respiratory disease and directly heat-related deaths" (EIGE, 2017, p. 7; Fouillet, *et al*., 2008, pp. 309–317). Climate change does not affect everyone in the same way (Article 1; Rocklöv and Forsberg 2009; Åström *et al*., 2013). The poor, for example, are affected more severely than the rich, and women are affected more than men.

In another trend, changes in population dynamics due to in- and out-migration are altering the demographic structure in the Arctic. People in rural areas are moving to bigger cities in search of better job opportunities, education and training or simply a better quality of life (Articles 1, 2, 3, 4 and 5). Research conducted by Rasmussen (2007) indicates that young female upper secondary graduates tend to move out of their home communities and the region permanently. Recent studies show that out-migration is common among women (ASI-II, 2014, p. 67; ASI-I, 2010, pp. 72–74; Hamilton and Rasmussen, 2010) and young people. The last several decades have seen consistent research on in- and out-migration of men and women. While more males are moving north than women (AHDR-I, 2004, p. 37), the proportion of women migrating from the region is greater than that of men (AHDR-II, 2014, Naskali *et al.,* 2016; Rasmussen, 2009). In recent years, any migration into the region has been largely due to new industrial activities. However, the balance seems to be varied and unstable. In Arctic Norway, a balance obtains between in- and out-migration, whereas in the Swedish and Finnish Arctic out-migration has resulted in an imbalance in the population composition. As a result, what is an overall imbalance in "gender, age and ethnic composition of the population" (Heleniak and Bogoyavlensky, 2015, p. 69) makes particular population groups in the region vulnerable, one such group being older people (Ahlenius, 2008; Articles 1, 2, 3 and 4). The changing population dynamic in the Arctic renders older populations vulnerable in Swedish Norrbotten and Finnish Lapland (AHDR-I, 2004, p. 36), which have a comparatively high proportion of older residents.

5. THE SOCIAL POSITION OF OLDER PERSONS IN THE CHANGING ARCTIC

5.1 Determinants of the social position of older persons

In the preceding chapter, I presented geographical and physical features of the Arctic and described the ongoing transformation of the region, which, among other developments, includes climate change, changes in sources of livelihood and an altered demographic; research for the articles shows that these all influence the lives and livelihoods of the Arctic population (Articles 1, 2, 3, 4 and 5) and by extension their overall wellbeing. Against this background, the overall objective of this chapter is to explore the social positions of the region's older population (both indigenous and non-indigenous) in light of the challenges resulting from the threats detailed above. The changes noted have both positive and negative impacts on the different population groups in different ways. They affect certain groups in particular, such as the poor, the young, women, as well as older and ill people. While the transformation exacerbates the vulnerabilities facing these different groups to different degrees, in some instances, especially in the North, men experience environmental changes more dramatically than women (see Begum, 2013, pp. 575–577). For example, men face more accidental injuries when engaged in outdoor activities, such as reindeer herding. However, I present only those impacts that threaten to the older population of the region in different contexts, such as socio-economic, environmental and cultural threats and threats affecting health and wellbeing. These have been documented for the entire Arctic in the scientific literature but in disparate sources, meaning that a systematic treatment is lacking.

Significantly, the threats or challenges identified in my research are interconnected; each influences the others. They also vary from region to region even within the Arctic and depend on the prevailing circumstances. The threats that generally impact the region determine the position of individuals in a given community (Article 3). The older population in rural areas is among the most vulnerable. Its members require age-friendly infrastructure to ensure favourable conditions for their survival (Article 5). Whether the infrastructure is age-friendly in Arctic conditions is influenced by three factors: a. the *natural environment* (good air, water quality), b. the *human built-environment* (accessible and affordable housing, services and public and private transportation) and c. the *social environment*, which includes opportunities to keep up relationships with family member and friends and to maintain better health and social wellbeing (Eales *et al*., 2008). Inclusive opportunities for older people, such as opportunities for local, cultural and educational involvement, create socio-environmental conditions in which they enjoy a better life with sound health (Keating, 2008; Plouffe and Kalache, 2010, pp. 733–735). Fresh air and good water quality are crucial components for healthy

ageing in the Arctic. In the rural Arctic, it is also important to have a house with a good heating system and, for those with poor mobility, to have enough space indoors to accommodate a wheelchair. In addition, it is desirable that healthcare and other relevant services are available within a reasonable distance. Moreover, family members, relatives, friends and neighbours generally play an important role in maintaining the social wellbeing of older people.

5.2 Socio-economic positions

My findings suggest that the Arctic is shaped by new socio-economic structures that present stressors as well as new opportunities for its population. In other words, challenges and opportunities co-exist in the context of the ongoing socio-economic transformation. Climate change is accelerating globalization in the region, which is causing unprecedented changes in the practice of traditional livelihoods (Articles 1, 2, 3 and 4) given that the social economy has traditionally been dependent on maintaining the stable, pristine Arctic environment. In terms of livelihoods, the region enjoys a structure known as a mixed economy (Aarsæther and Bærenholdt, 2001, pp. 15–17), that is, a combination of formal and informal economies, such as commercial harvesting of fish and collecting and gathering of renewable resources from the land and sea (Articles 2 and 3). However, factors such as the thawing of permafrost, changes in vegetation and wildlife and the rapid melting of sea ice in coastal areas have prompted reorganization of local economies. While this brings benefits for some communities, for many others it results in adverse economic and societal impacts (Articles 1, 2, 3, 4 and 5).

In many parts of the Arctic, climate change is creating opportunities to expand economic activities, such as mining and oil and gas drilling in both offshore and onshore areas (Tol, 2009). Tourism is also on the rise, particularly in the Nordic Arctic. These activities bring in revenue but also replace traditional livelihoods (Articles 2 and 4; Nuttall *et al.,* 2005, pp. 650–651; Nutall, 2005, p. 656; ASI-I, 2010, pp. 51–54). It is argued that while some communities benefit from these new economic activities, nearby communities may not see any real economic benefit. It has been shown that subsistence harvesting is at risk as climate change intensifies: whaling and caribou and reindeer herding, notable traditional activities, face significant challenges with the environment undergoing rapid changes (Articles 1, 2, 3 and 4).

As noted, the socio-economic transformation impacts population dynamics. The gaps in the population are mainly due to out-migration of the young population, including young women (Articles 1, 2, 3, 4 and 5; HDR-II 2015; Rasmussen, 2009; Aarsæther and Jørgen, 2001, p. 15; Tuohimaa *et al.*, 1995), who have traditionally played a key role in caring for the region's older population. The articles argue that the change in population dynamics has resulted in social and other services, such as educational facilities, being cut back, especially in remote regions (Articles 2 and 5).

My findings indicate that the transformations bring with them some positive economic impacts; for example, people involved in agriculture are benefiting from the

extended summers. Warmer winters and longer ice-free periods improve access to many parts of the coastal areas for fishing (Articles 2 and 4); thus, coastal fishing is seen as an opportunity. However, the challenges for local populations, including indigenous peoples with traditional lifestyles, lie in competing interests with other groups involved in commercial fisheries (Articles 1, 2, 3, and 4). Moreover, as sea ice in the coastal areas disappears, many coastal communities - mostly indigenous groups relying on the hunting of marine mammals using ice as a platform - find subsistence hunting difficult. Although locals in the fishing industry or in mining and resource extraction industries seem to be benefiting economically to a certain extent, the changing weather conditions, with impacts such as the thawing of permafrost and erosion, are expected to increase costs for industrial activities in the future (Eskeland and Flottorp, 2006, p. 86).

While the socio-economic transformation thus offers some benefits in terms of economic development, Arctic society as a whole faces an imbalance in the fair distribution of these benefits. The replacement of traditional activities by others has had consequences for both the environment and the socio-cultural spheres, which are constitutive of the identity of the Arctic population, in particular its indigenous peoples. Moreover, the poor availability of traditional local resources, the declining population of young persons and limitations in the availability of and access to relevant services combine to create unstable socio-economic conditions for the region's population (Articles 1, 2, 3, 4 and 5; Duhaime and Caron, 2008).

My research suggests that the transformation plays a key role in the population's overall socio-economic status (SES) and health status (HS), which in turn determine older people's positions and conditions in society (Articles 1, 2, 3, 4 and 5). The socio-economic circumstances prevailing in the Arctic vary from region to region and, what is more, are changing constantly. However, the social and economic changes have intensified in the region overall since the 1950s, with notable implications for its population (Articles 1, 2, 3, 4 and 5). The present changes are alarming, as shown in the previous chapter. The overall consequences for older people of the ongoing changes depend on a number of factors, including the *literacy rate or level of education, level of income or employment, social security (pension), life expectancy and the general physical infrastructure in a given region*. In broad terms, indicators of SES are useful in providing information about individuals' access to social and economic resources (Duncan *et al*., 2002, pp. 1151–1157; Mos and Krieger, 1995, pp. 302–305; Silventoinen and Lahelma, 2002; Keating, 2008; Mondal and Shitan, 2014).

Social and economic factors are the focal considerations where older people are concerned and are the basis for evaluating their situation. As noted above, education, personal financial situation and social security networks figure significantly in evaluating SES (Articles 3 and 4). Education plays an important role in determining both the SES and HS of members of the population. For the older population, education has been found to be an important factor for the promotion of knowledge and awareness on a number of issues: for example, choosing a healthy and nutritious diet and remaining aware of new diseases coming into the region due to climate change are directly or

indirectly connected to a good level of education. Education includes both formal and non-formal learning (Dib, 1988). Formal education is regulated by states within specific settings and adhering to structured curricula and a systematic education model. Non-formal education is carried out in a wide range of settings, which include learning in training centres, schools, the home, workplaces and social, cultural and sport-related settings. In general, the literacy rate indicates the proportion of the population that has received formal education. Education plays a vital role in equipping older people with knowledge and confidence to adapt to the transformation occurring in their society. For older persons, particularly in the Arctic, both formal and non-formal education are key factors in promoting social awareness. It has been argued that good health is connected to good education (Zimmerman *et al*., 2015), meaning that the better the education a person has, the better his or her awareness to make choices for a better life. Since the position of a person is influenced not only by his or her individual circumstances but also by the conditions prevailing in society at large, I have found that both the SES and HS of older individuals are linked to their surrounding circumstances, from which they learn constantly (Articles 1, 2, 3, 4 and 5).

In the context of the Canadian and Russian Arctic, as well as Greenland, studies show that the level of education among older people is lower as compared with the Nordic Arctic (Megatrends 2011, p. 112; Aarsæther and Jørgen, 2001, p. 17). To be sure, traditional knowledge plays a significant role, in particular among indigenous groups and in relation to the surrounding natural environment (Articles 1, 3 and 4). Yet, the accelerating transformation of the region seen today offers these groups fewer options when it comes to adapting to various socio-economic stressors. In the Nordic Arctic, conditions are far better, as suggested by the literature (AHDR, 2015) and findings from my studies (Articles 1, 2, 3, 4 and 5). The older persons whom I interviewed in northern Lapland – both in Finland and Sweden – all have a level of education above elementary school. They mentioned that although basic schooling was not compulsory in their childhood, they were able to complete at least their elementary education. Moreover, they were able to explore their living environments and learn about the changes throughout their lives from their experiences and traditional knowledge. Knowledge gained this way has provided them with a richness enabling them to promote their socio-economic circumstances and health. For example, in my empirical studies I found that female informants were rather knowledgeable about their particular needs and rights in the face of the changes in their living environment, showing an awareness of contaminated food and the importance of nature-based activities for example (Articles 1, 2, 3, 4 and 5). In Sámi communities, it is mainly women's responsibility to transmit traditional knowledge to the next generation (Olsén *et al*., 2018; Seurujärvi-Kari, 1996, p. 85).

In comparisons of the level of education among men and women, it has been argued that in the Nordic Arctic women are better educated than men and women have a greater awareness of climate change than men (EIGE, 2017, p. 4). One study asserts that in Finland "educational equality between genders has been achieved in the age groups born after the Second World War", (Stenström, 1997, p. 48). The same research

states that among people over 50 years of age men have a better education, whereas among those under 50 women do. During the1980s women were relatively more educated than men (Valkonen *et al*., 1997). It has been claimed that women, in particular older women throughout the Arctic, serve as the custodians of traditional knowledge, which helps other members of the community to adapt to changes (Articles 1, 2, 3 and 4). It has also been argued that women are more capable of adapting to societal changes in the region (Hassler *et al*., 2008, p. 109; Bjerregaard *et al*., 2008, p. 177; Seurujärvi-Kari, 1995, pp. 83–88). These assertions are supported in the views presented by my interviewees (managers of care homes for older people and informants from Inari and Enontekiö). According to my findings, women in the region are more aware than men where the elements of a healthy environment and health-related issues are concerned, for example, food contamination and the effect of various diseases (Articles 1, 2, 3, 4 and 5).

A person's SES also depends on his or her *strength, capability, vigour, resilience* in terms of wealth. The wealthier an older person is, the better-positioned he or she is financially to maintain a better societal status. Better health outcomes and greater health satisfaction do not come from a better level of education and knowledge alone; they also require financial resources (Articles 1, 2, 3 and 4). A well-off older person with a better education enjoys a better societal and health status than one less well-off. In other words, earnings also play a role in the socio-economic position of older people in the region (Articles 1, 2, 3, 4 and 5).

Generally speaking, Arctic populations in remote regions are less involved in the cash economy because of the limited availability of formal employment. Traditionally, people living in such areas make their living in subsistence livelihoods (Fyhn, 1995). One result of the lack of formal employment is that, when older, people do not receive adequate old age pensions. Moreover, pension systems and pensionable age vary from region to region, with the latter being different between men and women. In the Nordic Arctic, the average pensionable age is between 65 and 67 years (NSSC, 2008, p. 17). The older population in the region is relatively well protected as the social security network provides social support for older people.

However, some of the views elicited as part of the field studies for the thesis were pessimistic: when asked about the sufficiency of available economic resources, most older women respondents from Finnish and Swedish Lapland answered, '*The support provided is in most cases insufficient*'. Thus, income from a pension or from other sources of support (i.e., family support) does not necessarily allow one to maintain a sufficient quality of life (Articles 4 and 5). Generally speaking, in the Arctic the relatively poor availability of wage work adversely affects people's financial security. Research conducted in Greenland revealed that the distribution of income levels has resulted in inequality (Bjerregaard *et al*., 2008, p. 176), which affects old age pensions and has negative impacts on health, particularly in the indigenous population. In the Nordic Arctic, gainful employment is available more readily than in other Arctic regions, but compared to the southern regions of the countries, proportionately fewer such jobs exist and these are typically less formally structured.

Women who work mostly in the home are in a relatively vulnerable position as their everyday work is regarded as non-formal; there is no official record of it nor is it seen as a contribution in labour market terms (Articles 2, 3, 4 and 5). Women usually have lower earnings-related pensions since they typically have shorter careers than men do (NSSC, 2008, p. 50). This was the conclusion drawn from the interviews conducted with older women respondents from the villages of Ivalo and Inari, who mentioned that they have been, and still are, contributing to their families all the time in different ways. This includes caring for their families and children (Articles 3, 4 and 5), but this work is not always recognized as proper work; for example, work managing a household is not taken into account for pension purposes. This situation has negative repercussions for them in the old age pension system. In most cases, this sort of officially unrecognized work results in hidden or invisible inequality and injustice between men and women in old age. In sum, in the Nordic Arctic, socio-economic status and health status are dependent on the even distribution of resources (Articles 1, 2, 3, 4 and 5). In the Arctic, perhaps more so than elsewhere, imbalances in this distribution have led to injustice, albeit in contexts that vary from one region to another.

Life expectancy is another factor influencing the SES of older people. It has clearly increased throughout the Arctic (Articles 1, 2, 3, 4 and 5), with the exception of Russia (Heleniak, 2014, pp. 64–65). The longer life expectancy of the older population becomes depressing when other socio-economic conditions relevant for a better life, discussed above, are not met. While a high level of education and technological development in medical sciences contribute to longer life expectancy, they do not ensure a happy life when one's socio-economic, environmental, cultural and health conditions are not favourable (Articles 1, 2, 3, 4 and 5). As the level of income is low and the rate of unemployment high, particularly in the rural Arctic (OECD Rural Policy Reviews, Finland, 2008, pp. 30–65), an extended life with ill health (Artazcoz and Rueda, 2007, pp. 466–467) and with insufficient resources brings suffering to many older people in the region. Poverty in old age is a curse. In the Arctic generally, the risk of poverty is high for old men and old women alike, especially for those who live alone. Women are generally poorer than men, however, and less economically able to secure the services they need to meet the conditions for a better SES (Articles 1, 2, 3, 4 and 5). According to Ahonen and Bach-Othman (2010, p. 21), the poverty rate among older people at the age of 75 and above is highest compared to the population at large in both Finland and Sweden. While this applies to both men and women, Ahonen and Bach-Othman suggest that the rate of poverty among older women is higher. This is a surprising assertion given that the Nordic countries are usually considered 'egalitarian societies' (Ahonen and Bach-Othman, 2010; Silventoinen and Lahelma, 2002, p. 253; Articles 1, 2, 3, 4 and 5).

To sum up, whereas in the Canadian, Alaskan and Russian Arctic the socio-economic status of the older population is relatively lower than that in the Nordic Arctic (Bjerregaard *et al*., 2008, p. 176), even in the latter the socio-economic situation has been found to be comparatively weak in Finland, or at least was until the 1980s (Valkonen *et al.*, 1997). The older population all across the Arctic, either directly or indirectly,

suffers from multiple socio-economic threats, discussed above, that impact their ability to maintain a sufficient quality of life. Older women in particular suffer from multiple vulnerabilities as a result of the interaction of factors such as age, poverty, gender and ethnicity (Articles 1, 2, 3, 4 and 5).

5.3 Environmental change and its implications for older people

The Arctic traditionally has had a unique environment supportive of its natural ecological processes, which in turn sustain its living organisms. The transformation taking place in the region adversely impacts this life support system, with diverse implications for the human communities (Articles 1, 2, 3, 4 and 5). The uniqueness of the Arctic environment figures in the culture, cultural tradition and traditionally held knowledge of its local and indigenous communities. Environmental impacts are driven by global warming resulting from the rather rapid changes in the Arctic climate. It is suggested that the rate of change is two to three times faster than elsewhere on the globe (Article 1; Rosentrater, 2005, p. 4; AMAP, 2002) The rise in temperature causes melting of both terrestrial and maritime ice sheets, resulting in numerous impacts, including loss of biodiversity (Shah, 2014), changes in physical infrastructures and changes in the health and wellbeing of the region's population (Articles 1, 2, 3, 4 and 5). For example, the shrinking of the sea ice and thawing of permafrost hamper traditional means of transportation, which have relied on predictable ice conditions.

Melting ice and more open waters, for example in the Arctic Ocean, offer new sea routes, a development that is giving rise to new forms of maritime economic activity. Extraction of oil and gas along with an increase in ship traffic not only brings pollution to the region, but also introduces invasive species detrimental to human health (Articles 1 and 2). Other sources of environmental concern are human activities such as mining and increased tourism. The environmental integrity of the Arctic is jeopardized by these various sources of pollution, which have other consequences as well, such as contamination of the food supply chain and food production (Articles 1, 2, 3 and 4). The articles point out that environmental change in the Arctic is affecting food harvesting areas, restricting the supply of traditional food. In regard to human health, traditional food forms part of a healthy diet; it is a cultural product as well and in some indigenous cultures has a spiritual function (Articles 1, 2, 3, 4 and 5). A constant lack of traditional and locally harvested food increases consumption of imported western food, which in turn increases the incidence of cancer, obesity, diabetes and cardiovascular diseases among the population (Hossain *et al*., 2018; Beaumier, 2011; Bjerregaard and Jørgensen, 2008, p. 194; Jorgenson and Young, 2008, p. 291). The health of the Arctic population is also greatly influenced by broader environmental changes. For example, climate change gives rise to both extreme cooling and extreme warming circumstances, which result in an increase in diseases, the most common of which are bronchitis, pneumonia (because of extreme cold) and other vector-borne infectious diseases, as well as hypothermia (Articles 1 and 2). Moreover, negative changes in in-

frastructure increase injuries and accidents among the population (Parkinson, 2010, p. 10; Mäkinen and Rytkönen, 2008, pp. 254–255). At the same time, infrastructural changes affect sanitation systems, which also has consequences for human health. Pollution from increased human activities not only results in chronic diseases, but also causes psychological stress, which may be manifested as social isolation and depression (Young *et al.*, 2012; Haq *et al*., 2008, p. 19; Geller, 2005, pp. 1257–1262; Parkinson and Berner, 2009, p. 84).

As noted elsewhere in this chapter, creating age-friendly infrastructures in the Arctic relies on a number of factors. These include not only the presence of a suitable natural environment but also suitable human-built and social environments. Degradation of the natural environment, a frequent trend in the Arctic today, creates incentives to improve the human-built and social environments (Article 5).

My findings suggest that uncertainty concerning climatic conditions in the Arctic often creates vulnerability in the older population, as older persons tend to be relatively frail and are susceptible to health-related risks. Sparsely populated northern regions have traditionally benefitted from having a pristine environment. The population density varies from county (municipality) to county, and it is estimated that in the rural areas of those counties it is less than one person per square mile (OECD Territorial Reviews: Sweden 2010; Young and Bjerregaard, 2008, p. 107). In Finland, Norway and Sweden only about 3.5 per cent of the total population live in the Arctic.

The lives of older people in the Arctic are greatly impacted by the social and human-built environments (Article 5). Often, lack of access to suitable and affordable housing undermines the needs of older people when it comes to maintaining healthy living conditions (Wennberg, 2017, p. 185). My research suggests that the built environment is part of society's infrastructure, which provides readily accessible and affordable services that allow older people to gain opportunities to retain relationships with family, friends and neighbours (Article 5). Such an environment also ensures interactions and networks among older people so that their involvement in local and cultural activities is guaranteed for their social-cultural and psychological wellbeing. Unfortunately, there is a housing problem for older persons living in sparsely populated northern regions (Wennberg, 2019, *forthcoming* and 2017).

In the Arctic, poor societal and physical infrastructure jeopardize the development required to ensure proper access to public services; hence development in the Arctic in general falls short of the OECD standard, according to which promotion of public services is a precondition for development in rural settings (Articles 2, 3, 4 and 5). Having said this, it is notable that the older population in the Nordic Arctic is privileged compared to that in other Arctic countries: it is well connected in terms of physical infrastructure/the human-built environment (Silventoinen and Lahelma, 2002, p. 253; OECD Rural Policy Reviews, Finland, 2008, pp. 14–30 and p. 147) and provided with relatively better public and social services. Nevertheless, small communities – and particularly the older people in them, who tend to live far away from service centres – face vulnerabilities because of the lesser availability and greater expense of services.

Public services have been shown to be less available in the north than in southern parts of the country. For example, health centres, post offices, supermarkets and care homes are usually situated in the main administrative centres, sometimes beyond the reach of many older persons (Articles 1, 2, 3, 4 and 5). A recent study on northern Finland, Sweden and Norway stated that living should be secured in the north by enhancing accessible health and medical services (Article 5; Prime Minister's Office Finland, 2015, pp. 24–25). The research recommended creating a monitoring framework for "new solutions based on telemedicine and e-health, the division of labour between central hospitals in the North, and the freedom for patients to go to the nearest hospital regardless of borders".

My observations as well suggest that there should be readily available medical services. In interviewing some of the older respondents, I noted the need for more accessible services. For example, respondents from the village of Angeli (an older couple) mentioned their limited access to the health centre, post office and other services, which are situated in Ivalo, around 50 kilometres from their house. However, the couple expressed their happiness at being able to live in their own home with their eldest son, who was a reindeer herder. Their daughter lives in Inari – around 65 kilometres from the village - and often visits and takes care of them. Similar opinions were expressed by an informant living with her son in the village of Peltovuoma, which is 35 kilometres from the area's central town, Hetta. However, most of the respondents from care homes in Rovaniemi, Ivalo and Hetta mentioned that they had to move to the facilities because their children had moved away to other cities (Articles 1, 2, 3, 4 and 5). Respondents from Sevettijärvi, 160 kilometres from Ivalo, mentioned that many of their neighbours have moved to Norway for work. Respondents in Jokkmokk, Kittilä, Sevettijärvi and Inari said that they were concerned that their villages are almost dying without young people, whose leaving forced them to move into care homes.

Older people, especially women, who tend to live longer than men, "have difficulties accessing services important for their wellbeing since there is no transport to the places where commercial and social services of various kinds could be provided" (Wennberg, 2017, p.185). If they opt to make use of non-residential services and facilities, however limited, older people must rely on others, either relatives or the home help provided by the municipalities. Maintaining proper services for older persons becomes expensive in the Arctic compared to other regions in the countries. Furthermore, as indicated above, demographic changes adversely affect infrastructural conditions, one example being out-migration of the young generation, which is threatening older people's care in the Arctic as a whole (Articles 1, 2, 3, 4 and 5; Hörnström and Roto, 2013; OECD Rural Policy Reviews, Norway, 2007; OECD Rural Policy Reviews, 2008, p. 147).

5.4 Transformation of traditional culture

Culture plays an important role in and for Arctic communities. As discussed earlier, the Arctic is home to a significant number of indigenous peoples. These groups of people provide cultural diversity, an important characteristic of the region. However, transformation of the Arctic poses serious threats to the maintenance of this cultural uniqueness (Articles 1, 2, 3, 4 and 5). Generally, the culture and cultural identity of the Arctic population are connected to land and traditional resources (Dankelman, 2010, p. 146), which have offered these communities not only subsistence but also a cultural survival supportive of their mental wellbeing. Traditionally, people in the Arctic are engaged in largely similar activities for their livelihood, of which reindeer and caribou herding, fishing, hunting, trapping, berry picking and small-scale farming are among the most notable. Some of these activities are regarded as emblematic of cultural identity, one example being reindeer herding among the Sámi people in Fennoscandia (Articles 1, 2, 3 and 4).

It should be noted, however, that reindeer herding in Northern Finland is not practiced by the Sámi only, but by other locals as well, whereby it has a cultural significance for both the indigenous and non-indigenous populations. Moreover, the Arctic and its environment benefit from the knowledge traditionally possessed by both populations, which they transmit to future generations so that they might take a stewardship role for the protection and preservation of the Arctic environment (Articles 1, 2, 3, 4 and 5). The knowledge is connected to the land, land-based resources, conservation of biodiversity and the like. It has been claimed that older people - in most cases women, particularly in Sámi indigenous communities - are the primary holders of traditional knowledge (Articles 1, 3 and 4; Olsén *et al*., 2018; Dankelman, 2010, p. 146). Connectedness to and being part of a culture are associated with experiences of wellbeing (Aléx, 2016, p. 1750). However, today's transformation of the Arctic is so rapid that in many cases traditional knowledge is not the detailed, reliable guide it used to be.

The transformation of the Arctic has brought new economic activities that are replacing traditional ones, new life styles that are supplanting traditional, collective community life (Aarsæther and Jørgen, 2001, p. 15; population; Milazzo, 2014; Parkinson, 2010, p. 9) and the encroachment of previously alien cultures as a result of both globalization and socio-cultural changes. Thus, overall the traditional local life is challenged, threatening the culture and cultural identity of the region.

Among the Nordic Arctic population, traditional culture and beliefs play a very significant role in the way of life. Such beliefs bring cultural and spiritual sustenance; the older population, along with indigenous groups, is in many ways affected by the changes occurring in cultural practices (Articles 1, 2, 3 and 4). Culture is shaped by the practices of various rituals and customs, including those related to food, as well as traditional activities practiced not only for physical sustenance but also for cultural survival. For example, reindeer are herded not only to meet the need for food but as a cultural practice, in particular among the indigenous Sámi communities. Some of the older population are involved, either directly or indirectly, in the promotion of the

practice of culture through such activities. For older persons, engaging in such activities strengthens social relationships rather than serving cultural purposes (Articles 1, 2, 3 and 4). Moreover, making traditional handicrafts, which provides income for many while promoting cultural identity, plays a significant role among local residents all across the Arctic. These practices are also connected to traditional knowledge and in most cases that of indigenous groups. For example, respondents from Inari in Finland and Jokkmokk in Sweden highlighted that transmission of knowledge and traditional practices through such activities, including the maintenance of food habits, contributes to promoting healthy older communities in the region.

Many older people, especially women, perform spirituality through traditionally developed rituals and regional practices (respondents from Inari). These reinforce certain fundamental values rooted in Arctic societies and are mostly engaged in by older persons. Conflicts between modern and traditional values give rise to vulnerability among those who are already considered vulnerable, that is, the region's older population, indigenous peoples and women (Articles 1, 2, 3, 4 and 5). My empirical studies indicate that having to cope with modern culture as modified by, for example, new forms of activities is upsetting and stressful for older people (Articles 2 and 4); not only are they concerned about losing their traditional cultural identity but changes in cultural practices are detrimental to their psychological health, causing isolation. A number of older respondents indicated their support for safeguarding traditional culture to prevent it disappearing. For example, an 80-year-old woman from the village of Tärnaby in Sweden mentioned her fight to re-establish Sámi culture and cultural rights in her community. She is fighting to revitalize the Sámi language through her activities and by implementing locally supported projects (Article 4). While talking about the importance of culture, she related the following, referring to a friend who had passed away:

> She moved to the care home at the age of 99 since her house is located far away from the facilities. At the home she missed traditional food and the chance to speak Sámi, her own language. She wanted to listen to Sámi music, be in nature as often as possible and eat traditional food. While it is hard to live at home at that age, it is also understandable that the unavailability of those elements that shaped her identity would make her sad and depressed.

Practicing culture this way is also connected to the availability of resources. Thus, the respondent expressed her dissatisfaction, highlighting the authorities' failure to fulfil the needs of older people efficiently and to ensure their cultural wellbeing. According to her, regional differences amount to different needs. For example, an older Sámi person at a care home deserves to have a caregiver with a basic knowledge of the Sámi language.

To sum up, the overall poor socio-economic status of the older population hinders maintenance of a healthy and quality life. The discussions above show that the picture is not the same throughout the Arctic. Various aspects of the process of ageing differ in

different parts of the region even though the implications of Arctic changes as regards environmental impacts on the older population are broadly similar. However, the impacts on older people are addressed in varied contexts and a varied manner in each of the eight Arctic countries. The features of what are distinct and peripheral locations and disparate administrative structures make it impossible to create a common process that would mitigate the older population's concerns. Thus, the position of older people in the region reveals an unfair standard as regards guaranteeing social justice and equality in the Arctic in general as well as in each individual Nordic Arctic country. The situation is greatly worsened when old age-related vulnerability is connected to gender, ethnicity and ability since the effects of the ongoing changes in the Arctic in general result in disproportionately adverse consequences for women vis-à-vis men. In this regard, Lena Wennberg has suggested the following:

> In-depth analysis of the intersection of gender, age, ethnicity and social class ... in rural, depopulated and multicultural contexts should aid a better understanding of the living conditions of the elderly in northern and Arctic Sweden and contribute to the development of alternative policy interventions on relational, institutional and structural levels (Wennberg, 2017, p. 187).

Accordingly, I will proceed in the next chapter to focus on gender equality as it is understood from the Arctic point of view with the aim of offering a descriptive and critical analysis. I discuss equality, social justice and gender equality and analyse approaches relevant to the study of the Nordic Arctic. The analysis undertakes not only to show the connection of these approaches to old age vulnerability, but also to highlight the prevailing gender perspectives in this context and further the understanding of gender in the region.

6. AGE AND GENDER AS FACTORS INFLUENCING EQUALITY AND SOCIAL JUSTICE

6.1 The human rights and feminist standpoint approaches

I analyse equality and social justice based on a combination of two different approaches to my data: the human rights (HR) and feminist standpoint (FS) approaches. These together define my position as a researcher in this study.

There are two approaches within the HR framework. One, the mainstream approach, highlights the rules and regulations to be found in specific HR instruments and / or national constitutions (Seymour and Pincus, 2008, p. 390); these rules and regulations create a process of interaction in decision-making involving actors and institutions, broadly providing a framework of governance. The other is the ethical and philosophical dimension embodied within the normative structure of HR. The normative dimension goes beyond the general trend of analysing human rights from the concrete viewpoint of legal rules, and hence is not connected to governance structures. It finds ethics in the application of human rights norms. The ethical dimension of human rights can be defined as a system highlighting endorsement of normative guidance rather than the concrete implementation of precise rules. In the present case, I have opted to highlight ethical and social aspects of human rights rather than their concrete legal implications. Since human rights are expressions of social justice, values, ethics and beliefs (Freeman, 2011; Sen, 2004, p. 319), they offer moral and ethical arguments for actions (Cameron, 2011, p. 1).

The general claim is that equality is rooted in the HR framework. The rule-oriented approach suggests that in the eyes of the law everybody is equal; this can be described as formal equality (Fredman and Goldblatt, 2015). Formal equality demands that women be treated in the same way as men (Fredman, 2013, p. 223). It does not guarantee social justice unless an environment provides equal opportunity for receiving equal treatment under the law (Nousiainen *et al.,* 2013, p. 44). A precise rule can be enacted and applied indiscriminately without looking into the real conditions of individuals. The ethical dimension, on the other hand, urges fairness, whereby a system is introduced to guarantee "equality before the law" in a concrete sense. The right to food, for example, means not only ensuring availability of food for all but also creating possibilities for individuals or communities to have access to food of their own preference and the means to acquire it. For certain communities, such as indigenous peoples, the right to food includes the creation, or safeguarding, of an environment for traditional foods capable of meeting the people's dietary needs, such foods being viewed as healthy and conducive to survival. Thus, in a normative sense equality also refers to recognition of distinctness in a different context.

In a similar vein, when equality in the HR approach is viewed from the point of view of gender, invoking equality "regardless of gender" does not guarantee equality in its true sense if societal structures do not provide equal end results. Achieving equal end results is the purpose of what is known as a substantive norm (Fredman and Goldblatt, 2015). In the case of substantive equality, the norm requires changes in social institutions and consideration of existing power structures and of the role of gender within those structures (Fredman, 2013, p. 225). Only when both men and women – and other possible genders – are ensured equal end results in a given context and a given region do they benefit from the law's equality provisions. In the Finnish legal tradition equality is understood as equal treatment (Fredman, 2013, p. 223; Pylkkänen, 2004, p. 63). According to Anu Pylkkänen (2009, p. 10), "[i]n the Nordic countries, substantive equality can mean just as much as the equality of outcome". Therefore, creating social justice requires creation of a social structure that takes into consideration particular societal norms and values, where both men and women can enjoy equality fairly and with full satisfaction. For example, equal opportunity for men and women to participate in the labour market or in decision-making will only be meaningfully achieved when social structures allow them a satisfactory atmosphere regardless of the law's rule-oriented prescriptions.

The other approach I employ in my study is the feminist standpoint approach, sometimes also referred to as feminist standpoint theory. The theory appeared between 1970 and 1980 as a feminist critical theory emphasizing the relationship between production of knowledge and practices of power. It is argued to be both valuable, if somewhat controversial, because of its contribution to both feminism and contemporary scientific and political discussions in general (Harding, 2004, pp. 1–2). The theory provides a distinct approach, often used in the social sciences, which reveals the societal features that prevail in a given context (Harding, 2012, p. 46). One of the essential points of departure when applying the theory is that individuals' daily activities and lived experience help them to construct their understanding of the social world around them (Hesse-Biber, 2012, p. 10).

Elizabeth Anderson has described feminist standpoint theory as "the branch of social epistemology that investigates the influence of socially constructed conceptions and norms of gender and gender-specific interests and experiences on the production of knowledge" (Anderson, 1995, p. 54). This description is supported by a number of other scholars, who articulate it to the effect that all knowledge production is socially situated (Lempiäinen and Naskali, 2011, pp. 195–205; Harding, 2004, pp. 132–136; Ronkainen, 2000; Tanesini, 1999; Haraway, 1991; Harding, 1991) and that knowledge is shaped by social circumstances (Rose, 1997, pp. 305–307), with women's reality in particular argued to be socially constructed (Hekman, 1997, p. 361). The feminist standpoint approach illuminates how, in specific ways, everyday experiences of marginalized groups create new realities with regard to power relations and domination.

I have been motivated particularly by the understanding of FS forwarded by Sandra Harding, who emphasizes the importance of detecting knowledge in the lived experiences of the subjects in a specific regional context. According to Harding, history

is important in understanding the politics influencing the production of knowledge which is deemed relevant (Harding, 1991, p. 244). This is the reason why later in this chapter I examine the historical development of gender equality and its influence on the Nordic Arctic countries (Finland, Sweden and Norway). In this context, need to be added I also discuss the general development of gender equality in the European Union (EU) in order to show the influence of European values in the region. The key elements of FS include identifying socially situated knowledge, creating consciousness among the subjects (Harding, 2012, p. 45) and restructuring power relations based on such knowledge (Hesse-Biber, 2012). These processes offer important considerations for promoting social justice because of their inclusiveness in analysing real situations prevailing in a particular region. The approach provides resources for the empowerment of marginalized and oppressed groups. Harding takes the view that gender analysis, social relations and gender identities are dynamic, which is reflected in an individual's thinking (Harding, 2006, p. 68–69). In another work, she argues that FS allows one to keep her or his eye open on particular issues (Harding, 1991) in order to point out contradictions leading to inequalities and injustices (Scott, 2008, p. 7).

The salient strategy informed by FS which I have adopted is to raise consciousness based on situated knowledge with the aim of enabling marginalized persons or groups to share their experiences (Collins, 2000). These experiences in turn make it possible to identify challenges, take action for social change or make plans to reduce disadvantage and vulnerability that might lead to inequality if not addressed. This potential has prompted me to examine age, gender, ethnicity and other factors in intersectional perspective, for they are interconnected (Naples, 2007, p. 580).

The interconnectedness of the ethical dimension of the human rights and feminist standpoint approaches is apparent. Both approaches deepen our understanding by leading us to look into the root causes of inequality, embedded in how society is constructed. The normative understanding of the HR approach suggests analysing ethical aspects based on the findings of an individual's or group's position in a given context and region rather than on neutral application of legal rules or principles. Similarly, the FS approach yields findings based on the experiences of the groups themselves, which pinpoints vulnerabilities in a particular context. I have always been inspired by the different forms of social action for development, for which I find the FS approach to be particularly applicable, as it offers critical perspectives, challenges mainstream theories and leads to a close relation between activism and researchers. As such the approach challenges dominant ideas, values and power structures. Since I also want to explore equality and social justice from a gender-based perspective and produce new knowledge for social change, I have tried to identify some 'blind spots' (Scott, 2008, p. 7), or gaps, to show how perceptions of inequality and social injustices are embedded in a given societal context. Identifying these brings broader consciousness in a specific context, allowing one to recognize cases of vulnerability that need to be addressed. Such consciousness then influences the existing power relations, eventually leading to broader social justice.

6.2 Equality and Social Justice

The term "equality" is defined in a number of academic disciplines, examples being philosophy and the social and legal sciences. It is a normative concept referring to special respect for all human beings as equal in a broad sense (Capaldi, 2002). The concepts of equality and social justice are associated with human rights norms, which offer normative and ethical perspectives, at least in philosophical terms. A norm is an overarching framework which gives validity to rules, and normative ethics is the part of philosophy that includes social justice. While equality is the basis of justice, injustice arises when equals are treated unequally (Večeřa, 2012, p. 51). This assertion goes hand in hand with British philosopher H.L.A. Hart's (1961) interpretation of the notion of justice in his book *Concept of Law*, where he suggests that justice prevails in situations where like cases are treated alike and different cases differently. Hence, equality and justice may yield different meanings in certain situations. For example, what is right or wrong depends on the expectations of the individual, specific groups or cultural or ethnic communities. Yet, there is factual equality, which refers to protection through special treatment – known as positive discrimination – ensuring either identical treatment or differentiated treatment for achieving broader equality and social justice (Capaldi, 2002).

In legal science, the concept of equality has been developed as a core principle of law; it entails protecting all people equally without any discrimination whatsoever. In most legal literature, the concept is integrated within the framework of human rights, in which equality "opens a new space for a standard" (Petrova, 2008, p. 58). This standard offers values by which individuals within a given society are treated, generally ensuring non-discrimination based on race, age, gender, ethnicity and the like. Yet the application of this general notion of non-discrimination falls short of ensuring broader equality. The Declaration of Principles on Equality (DPE, 2008), agreed upon by a group of experts at a conference entitled *Principles on Equality and the Development of Legal Standards on Equality* (organized by The Equal Rights Trust on 3–5 April 2008 in London), suggests that the notion of equality goes beyond a narrow definition of the non-discrimination principle.

The Declaration sets out a broader perspective on non-discrimination, describing it as "... a free-standing, fundamental right, subsumed in the right to equality" (Principle 4). According to the Declaration, discrimination refers to broader elements, including not only race, colour, ethnicity, descent and gender but also "... pregnancy, maternity, civil, family or career status, language, religion or belief, political or other opinion, birth, national or social origin, nationality, economic status, association with a national minority, sexual orientation, gender identity, age, disability, health status, genetic or other predisposition toward illness or a combination of any of these grounds, or on the basis of characteristics associated with any of these grounds" (Principle 5). Equality is also jeopardized where discrimination causes or perpetuates systemic disadvantage, undermines human dignity, or adversely affects the equal enjoyment of a person's rights and freedoms (see Principle 5). In the Declaration, equality refers to "full and effective

equality", cited in its Principle 1, which is richer than the mere notion of equality before the law and equal opportunity. Principle 1 reaffirms the interrelatedness of equality and dignity asserted in the Universal Declaration of Human Rights (UDHR, Article 1): "All human beings are born free and equal in dignity and rights".

Principle 1 of the Declaration of Principles on Equality implies a vision of a just and fair society in which all persons participate on an equal basis with others in economic, social, political, cultural and civil life. Petrova (2008) asserts that Principle 1 includes the following:

> (i) the right to recognition of the equal worth and equal dignity of each human being; (ii) the right to equality before the law; (iii) the right to equal protection and benefit of the law; (iv) the right to be treated with the same respect and consideration as all others; (v) the right to participate on an equal basis with others in any area of economic, social, political, cultural or civil life. (Petrova, 2008, pp. 34-35).

This notion of equality coincides with the concept of social justice. In social justice theories, inequality occurs when the status, rights and opportunities of persons or groups are not equal (Alkire *et al*., 2015). Robinson (2011) has defined social justice as "... promoting a just society by challenging injustice and valuing diversity." Thus, the notion is connected to fairness, but what is fair depends on maximization of happiness in the experience of the majority of people. At the end of the day, there is no explicit definition of social justice; it is context dependent. The issue of justice can be argued realistically (Weinberger, 1994, p. 247) based on surrounding circumstances that prevail in a region. In this regard, the prominent legal theorist Hans Kelsen (1971) has stated:

> Indeed, I don't know, and I cannot say what justice is, the absolute justice for which mankind is longing. I must accept a relative justice and I can only say what justice is to me. (Kelsen, 1971, p. 24).

Social justice, as noted earlier, is connected to equality in a broader sense, which includes, among other elements, a fair distribution of resources and opportunities. There is a need to change rules and laws in a way they include different perspectives, not only the dominant views and experiences or those of the majority); this would eventually create another form of equality, which can be called "transformative equality" (Fredman *et al*., 2016; Fredman, 2016; Fredman, 2013). To achieve transformative equality in the case of older people, positive measures must redress the social and economic disadvantages they are burdened with: address stigma, stereotyping and prejudice; enhance participation and voice of older people and accommodate difference by achieving structural change. Transformative equality offers scope for social and political participation in the creation of norms within social and institutional structures. My research indicates that inequalities in distribution of resources create problems in any society and in any development scenario, which eventually affects the vulnerable groups of population in the particular society (Articles 1, 2, 3, and 4). The discussions on equality and social

justice are strongly integrated in development theory, which focuses on inequalities in income, wealth, education, health, nutrition and the like. The debate in this vein highlights two perspectives: one is inequality in terms of opportunity, such as unequal access to employment or education; the other is inequality of outcomes, such as the level of income, educational accomplishment, health status and so on (Afonso, LaFleur and Alarcón, 2015). It is possible to provide equal opportunities in a community when the surroundings do not determine the differences in life outcomes (Paes de Barros *et al*., 2009).

In the case of older people, it is evident, and has been shown, that those in a weak position socio-economically - for example, those who live far from services, alone, isolated and/or receive small pensions - are relatively more vulnerable and face more unequal treatment (Articles 1, 2, 3, 4 and 5). At times vulnerability among older people caused by this sort of unequal treatment is not properly presented or understood. As a result, it is difficult to identify the social circumstances in a particular region that perpetuate such inequality. In order to identify a source of vulnerability, we need to know the reasons that create inequality; only then can specific problems attract the attention that might lead to their solution (Sen, 2004).

Knowledge from research serves to reveal the reasons for inequalities or obstacles creating inequality in the course of changes occurring in a society as perceived by its citizens (Articles 1, 3, 4 and 5). Establishing the problems or challenges this way helps understand the needs of specific groups of people, including disadvantaged ones (Sen, 1981), which then creates room for promoting social justice. For example, the mobility of the average person is not the same as that of a disabled person who uses a wheelchair; or the mobility of an older person in an urban setting differs markedly from that of an older person living in a remote and rural setting with relatively fewer services available. Social justice can only be guaranteed when such circumstances are brought into context and a proper and fair opportunity is created for the latter individuals in the above example because of his or her less privileged status.

Being one of the least privileged groups in global perspective, older people have increasingly attracted attention with a view to furthering equality and social justice and promoting their wellbeing. For example, in the fourth meeting of the UN Open Ended Working Group on Ageing, held on 13 August 2013 in New York, Israel Doron emphasized "the need for social justice for older persons around the world" (Doron, 2013, p. 52). In his view, social injustice facing older persons can be redressed by promoting greater social security and by taking positive measure to change social structures based on their essential needs (Article 4). While old age inequality is sometimes connected to an individual's childhood experiences, it has been said that the likelihood of inequality in old age depends on an individual's health and social and economic resources in midlife. The better a person's status is at that time, the better ageing proceeds later. I have taken this observation into account in examining the range of factors affecting equality and social justice in the case of a given individual.

6.3 Gender equality in the Nordic Arctic

Gender equality is argued to remove any unfair obstacles and to ensure that everyone, regardless of gender, has the same opportunities (Bettio and Sansonetti, 2015, p. 11). As discussed in the previous section, justice and equality are not detached notions, and gender equality is a matter of social justice among the genders. The rule of law is the source of gender equality (World Development Report, 2012). However, as illustrated through the notion of equality in the previous section, gender equality is context dependent despite homogenous legal prescriptions of equality before law. Hence, for meaningful gender equality, one needs to invoke the concept of gender justice. Social justice contributes to equality a particular emphasis on fairness and change (Kalsem and Williams, 2010). Rules and principles can be said to be fair, and hence to offer social justice, only when they reflect the unique characteristics prevailing in a specific social and geographical context.

However, there are varied opinions on gender equality, held by different schools of thought. The traditional concept of gender equality emphasizes women's equal participation in social action. Applying a feminist approach, many argue that gender equality means equal access to resources, whereas other feminists argue that gender equality is to be understood as equal opportunities and equal treatment for each and every person regardless of gender. Differences in gender roles and unequal treatment create discrimination against women (Svensson and Gunnarsson, 2012; Parvikko, 1992, p. 93). One group of feminist scholars has argued for gender-neutral equality by stating that women and men are more alike than different and should be treated alike (Segal and Chow, 2011; Bergstrøm, 2013; Keränen, 1992) within the social sphere in order for women to attain social justice. However, this view has been contested by other scholars, who note that the concept of equality has often been used to denote the relations between men and women (Holli, 2003, p. 8). Tuija Parvikko (1992, p. 103) suggests that equality should not be seen as a part of gender relations but rather should be understood as a general principle of justice.

According to Pateman, gender is a socially created division leading to women's subordination (Pateman, 1988, pp. 222–223). Gender equality has been seen as a social issue and the notion of gender equality is distorted by what is a patriarchal society. However, it is possible for men and women to be equal in every sphere of life, for example in employment, education and political participation. Hanna Ylöstalo (2012), also mentions that very often the attention paid to gender equality is based on gender differences and the focus is on social power relations (Ylöstalo, 2012, pp. 33–41). These power relations are often referred to using the concept of patriarchy. In this perspective, patriarchy is considered a male power system in which men and maleness represent the norm and women and femininity deviation or deficiency in relation to that norm (Calás and Smircich, 2006; Korvajärvi and Markkola, 2009; Liljeström, 1996; Walby, 1986, 1990). My findings suggest that opportunities for gender equality based on economic dependence are hampered by lingering unequal power relations between men and women. In one example, a finding supported by other researchers

(Wennberg, 2008; Svensson, 2001), women with lower socio-economic status do not have proper access to the requisite resources or enjoy adequate opportunities (Articles 1, 2, 3 and 4).

Some feminists emphasize the positive redefining of womanhood and gender difference. Women's experiences are seen as valuable and gender difference is regarded as a source of joy and pride (Benschop, 2006, p. 279). Accordingly, feminist scholars have underscored the importance of gender equality as the primary axis of suppression in patriarchal cultures (Scambor *et al*., 2012). Liberal feminists have claimed that "female subordination is rooted in a set of customary and legal constraints that blocks women's entrance to and success in the so-called public world" (Tong, 2014, p. 2). Some scholars have argued that the meaning of gender equality depends on the context; it is more than justice and fairness (Magnusson, Rönblom and Silius, 2008, p. 8). Equality and inequality are both matters of the power possessed by the law. The possession of power allows one to formulate, to include and exclude within the power structure. Power also relates to representing and giving a voice to, or to subordinating and silencing (Pylkkänen, 2009, p. 14). Pylkkänen highlights the following factors for gender equality: political rights, education and wage labour (Pylkkänen, 2009, p. 11). In the context of the Nordic Arctic, the feminist legal scholars Åsa Gunnarsson and Eva-Maria Svensson (2017) have pointed out that "researching gender equality in the Arctic region produces unique knowledge with the potential to have an impact among stakeholders with an interest in how this geopolitical area is governed and developed" (Gunnarsson and Svensson, 2017, p. 9). Hence, gender equality is closely linked to a given country's politics, policies and practices (Sinevaara-Niskanen, 2015 and 2012; Magnusson, Rönblom and Silius, 2008).

There is no absolute definition of gender equality and the meaning of equality is changing. In the Nordic model of equality, it is based on the ideology of sameness (Svensson and Pylkkänen, 2004, p.17). In the traditional viewpoint, the concept was based on the fundamental sameness of genders, that is, the notion that women and men are similar as human beings. In this perspective, they should have the same human rights (Holli, 2001 p. 249; Benschop, 2006, p. 279). To have equal rights, gender discrimination should be eliminated with the help of the law. Nordic feminist legal scholars have asserted that "gender equality and women's human rights law and policies are blind spots in the geopolitics of the Arctic" (Gunnarsson and Svensson, 2017). Legislation is the main means to pursue women's rights (Ylöstalo, 2012, pp. 33–37). The public sphere, for example sectors such as politics and working life, is seen as the central forum for this work but, as Ylöstalo has noted, structural obstacles in society prevent women benefitting from the possibilities available to them (Ylöstalo, 2012, p. 33). In the Nordic countries, the perception of gender equality is largely homogenous; alternative approaches adhered to among ethnic groups or indigenous populations are ignored.

In the discussion relating to the north, Yvonne Hirdman's (1990) gender-system viewpoint has been central. According to Hirdman, gender is based on two principles: separation and hierarchy. By separation, she refers to the distinction between feminine and masculine characteristics as well as the division of tasks according to gender. By

hierarchy she refers to the greater value attached to the masculine, a man's standard and the related material, cultural and symbolic power. Hirdman also refers to the power dimensions in social citizenship and gender equality, which have a great impact on gender policies. The state should take every initiative to achieve equality of outcome by establishing an equal distribution of power and influence, economic equality, equal responsibility and the sharing of unpaid and domestic care work (Wennberg, 2008, pp. 339–343; Svensson and Gunnarsson, 2012). Hanna Ylöstalo (2012, pp. 44–50) also refers to the concept of diverse equality, asserting that it is not enough to concentrate on gender when analysing gender identities and power relations but rather other differences must be taken into account as well.

Equality does not require sameness but rather the acceptance of different as equal; it is not a question of focusing on differences for certain purposes and certain situations. Equality would not be needed if people were similar. On balance, my perspective on equality in this thesis is connected to FS, which is context dependent and which highlights knowledge based on both the lived experiences of the older people whom I interviewed and the power relations that prevail in their societal context. FS suggests that equality and inequality are connected with the exercise of power, which can be both visible and hidden (Article 3). In line with this view, I argue that gender inequality is a socially structured problem, one influenced by the mindset of the subjects, which reflects subjugation by certain forms of domination – either visible or hidden. This domination result in injustice, where "... pragmatics of injustice have much more to do with power and force than with the playful recognition of differences" (Flax, 1992, p. 200). In effect, socially situated knowledge and power relations take the form of treatment that can be interpreted as not equal or unfair as it relates to gender equality. Knowledge building in this study has been stimulated by the expression of the lived experiences of older men and women in the particular regional settings of the Nordic Arctic.

Drawing from the beginning of this analysis (section 6.2) of the concepts of equality and social justice, I investigate how gender equality is perceived in general, and in the Nordic Arctic countries in particular, in order to examine in detail the context as it relates to the older people of the region. Generally speaking, gender equality is a matter of treating men and women equally so that neither groups is considered inferior to the other.

While equality is a precondition for fairness in gender relations, the notion of justice concerns society's basic organization. This basic organization includes society's main political, constitutional, social, and economic institutions. It is important to see how they together construct an integrated arrangement of social support over time. I therefore argue that although rules of law are the basis of justice and equality, *allocating rights proportionately and equitably with a view to achieving equal outcomes in the end and taking proper measures to change societal structures based on essential needs make it possible to attain gender equality and justice in any sphere*. As discussed earlier, the framework of human rights includes norms of equality and social justice, as well as norms of gender equality.

Influence of European values and gender equality

Gender equality is one of the fundamental values of the European Union (EU). In terms of gender equality, the Nordic Arctic strongly embraces common European values in addition to its own. I find it relevant to first discuss how gender equality is perceived in the European context, as this perception is also endorsed in the Nordic countries. Secondly, I explore the concurrent development in the perceptions of gender equality and social justice prevailing in the Nordic countries of interest in the thesis. Finally, I examine, based on the discussions in previous chapters, how older people experience equality and social justice. In this context my analysis follows the approach I have described above and applied in the articles comprising the thesis, namely, a combination of feminist standpoint theory and human rights in ethical perspective. In the following section, I start with a brief discussion on the historical development of gender equality in Europe and the Nordic Arctic, for I find it important that older persons of today, men and women alike, are directly or indirectly influenced by that history.

The European Union (EU) is a supranational institution which provides regulations, directives, policies and strategies. While Finland and Sweden are members of the EU, Norway has remained outside of the Union. However, the country is a member of the European Economic Area (EEA), whereby in terms of legal obligations most EU standards are applicable in Norway as well. Moreover, culturally the Nordic countries share what may be seen as common European values, gender equality being one of the most important. As a result, these countries are influenced not only by European rules, regulations and policies that promote gender equality, but also by the values, ethics and the principles of human rights as they relate to gender equality.

In Europe, the struggle for gender equality and social justice started mainly in the 1960s (Pylkkänen, 2009, p. 26; Holli, 2003, pp. 7–10; Parvikko, 1992, p. 90). In the early 1960s, sex or gender was distinguished by specific roles in which men and women were the actors (Svensson and Gunnarsson, 2012). Both moderate and radical sex role ideologies have brought important considerations to the issue of assessing gender equality and gender relations. The moderate ideology envisioned a compromise, with a woman having a role both as a mother and as a working person. On the other hand, the radical ideology insisted on absolute equality between the sexes, such as the acknowledgement of equal opportunity to work outside the home (Pandey, 1989, pp. 62–64). The boundaries between the moderate and radical sex role ideologies lie in their position on work in the household, the moderate view suggesting that housework should be acknowledged as work and the radical that both sexes should have equal opportunities to work outside of the home (Parvikko, 1992, p. 93).

In the EU, the approach to gender equality has been formally rooted in the 1957 Treaty of Rome. In its Article 119, the Treaty highlights equal pay for men and women for equal work (TR, 1957). The Treaty of Lisbon (2007) highlights that the EU should "...combat social exclusion and discrimination, and shall promote social justice and protection, equality between women and men..." (Treaty of Lisbon, 2007, Art, 2). The EU agreed on promoting social justice, gender equality, which is reflected in Article 3 (39) of the EU Treaty (TEU). Solidarity between generations is one of the

goals of gender equality (Wennberg, 2017, p. 182). Gender equality in Europe has been presented as 'ideological cleavages', with a special focus on the North-South axis (Verloo and Lombardo, 2007, p. 30). Women's equality includes participating fully in social action (Parvikko, 1992). The majority of women's work is related to education, health care and social services (Ingolfsdottir, 2016), while men mainly work in private sectors, banks, industry sectors and other prestigious fields (Holter *et al*., 2009, p. 29).

Although women dominate the age pyramid among European Union (EU) countries (Walker and Naegele, 1991), relatively few studies have been conducted addressing the multiple meanings of gender equality in terms of geographical context (Verloo and Lombardo, 2007). There is very little research that has studied intersectionality across gender, age, ability and indigeneity in a particular geographical context. For several decades, feminist researchers have started emphasizing the issues of intersectionality and multiple discrimination in their efforts to produce knowledge from a social justice point of view (Kantola, 2014, p. 8; Lombardo and Verloo, 2009; Kantola and Nousiainen, 2009; Crenshaw, 1989). Whereas the issues related to this multiple discrimination have been extensively articulated for inclusion in policy making, little progress has taken place (Verloo and Lombardo, 2007, p. 25; Verloo, 2006; Bell, 2004). Colonial regimes negatively affect indigenous rights as well as underprivileged women's economic and political status (Lahey *et al*., 2014). The EU is playing an important role in the area of political and legal progress in regard to multiple discrimination. Views have been voiced that there is a need to develop new tools to "tackle intersecting inequalities" by implementing positive measures (Kantola, 2014, p. 8; Fredman, 2008).

It is surprising that the Arctic Council, a high-level intergovernmental forum established in 1996, did not initially prioritize gender equality in its policies and activities (Lahey *et al*., 2014, p. 4). Historically, the Nordic Arctic has been much more progressive in addressing gender equality compared to the other European nations. Efforts to address gender perspectives across these countries began more or less in the same period. The gender equality policies in these countries were elaborated in considerable detail and implemented rather explicitly. In the 1960s, the feminist movements in these countries went further to include broader sex roles in the societal context. During the end of twentieth century, improvements in gender equality took place "in terms of education and government posts, voting and political position" (Melby *et al*., 2009, p. 1). In the 1980s, feminist legal studies focused on the gendered structures in the welfare state and in the wage market (Pylkkänen, 2009, p. 26). The equality debate is unique in the Nordic countries compared to that in the Anglo-American world or France (Ylöstalo, 2012, p. 21). Nordic equality is considered to be marked by women's extensive participation in working life and strong representation in the Nordic parliaments (Liljeström 2008, p. 224). In her historical analyses, Pylkkänen discusses theoretical dimensions and understandings of equality (Pylkkänen, 2009). Nordic gender equality strongly upholds equality of outcomes in gender relations. According to feminist scholar Johanna Kantola (2014).

> [t]he so-called Nordic discourse of gender equality – is firmly intertwined with the policies and institutional practices of the welfare states. Ideologically, the discourse has promoted equality of outcome as opposed to more liberal notions of equality of opportunity. This sets the Nordic ideas about gender equality apart from many other European countries and the European Union (Kantola, 2014, p. 2).

The equality debate involves many paradoxes. For example, Raija Julkunen (2010, p. 15) has pointed out with reference to equality that, while they emphasize equality, ordinary Finns talk about the equality already achieved, whereby equality is considered a tedious topic. However, a researcher working on gender equality has noticed a full range of powerful emotions; the issue of equality is surrounded or characterized by self-awareness and a controversial atmosphere (Ylöstalo, 2012, p. 15). 'Equality of outcome' is also occasionally mentioned in the same vein as equality of results and substantive equality (EIGE, http://eige.europa.eu/rdc/thesaurus/terms/1108). In countries such as Finland, Sweden and Norway, the concept of gender equality is used in many different ways "to refer to issues concerning gender and gender relations" (Holli, 2003, p. 8). Very often, the debate on the concept of equality focuses on women's position in the labour market. Gender relations and participation in the labour market are connected to equality of outcomes.

Based on earlier discussions, it can be stated that there is no fixed definition of equality or that we cannot define equality in simple terms. It is based on justice and fairness, with this basis in turn being context dependent. Indeed, my findings suggest that any discussion of equal resource distribution must consider the circumstances of the older population and the respective situations of men and women in their context. Their voices must be heard in any planning and development affecting their overall wellbeing or living environment. Resources should be distributed by identifying the position of older people in the region and observing the norm that like cases are to be treated alike and different cases differently.

Country-specific development of gender equality in the Nordic Arctic

Before moving on to the specific differences in gender roles and inequalities, in particular as regards the older population of the Nordic Arctic, it is important to illustrate country-specific developments in gender equality. Gender equality developed apace in Finland, Sweden, and Norway and Denmark in the 1960s and 1970s (Liljeström, 2008, p. 231; Ylöstalo, 2012, p. 16). In Finland, the concept of gender equality has been articulated by many feminist researchers and legal scholars (Pylkkänen, 2009; Maria Holli, 2003; Eeva Raevaara, 2005 and 2007, Johanna Kantola, 2005, Tuija Parvikko, 1992). According to Parvikko (1992), Finland is treated as a pioneer or leader when it comes to gender equality. She mentions three things to be considered in the kind of assumptions made concerning gender equality in Finland: First, in the year 1906 Finland (an autonomous duchy of Russia at the time), became the first country where women received the right to vote; second, a goodly number of women have been working outside of the home rather longer compared to other Western countries; and,

finally, the Finnish social security system is comparatively better than that in many countries in securing and supporting maternity-related issues and activities applicable to women. As a result, it has been argued that the struggle for equality for Finnish women has not been harsh (Holli, 2003, p. 12). What is more, men have participated in feminist movements, which has granted the fight for equality an important status (Parvikko, 1992). Finnish women were also the first to be eligible to run for parliament (Pyllkkänen, 2009, p. 10). Despite these developments, women in Finland are strikingly less visible at higher levels in the economic and political spheres.

The situation was more or less the same in Sweden. Women's entrance into politics, and acceptance as eligible political representatives became easier after 1945. As their representation in politics increased, their involvement in the labour market has also become easier, especially since 1971 (Sjögren, 2013, pp. 33–34). Interestingly, female representation in the Swedish parliament today is substantial, recently reaching 45 per cent (GGGR, 2013). However, the situation still does not reflect a balanced society. According to Åsa Karlsson Sjögren (2013), women's situation or status is still questionable from the viewpoint of "democracy, social justice and gender equality" (Sjögren, 2013, p. 34). Indeed, feminist legal scholars have voiced the criticism that although the Swedish policy of gender equality is progressive, the country's gender equality policy and laws are still not radical enough (Svensson and Gunnarsson, 2018). My empirical study suggests that the reason for this imbalance is that economic power relations between men and women have not changed. Socially subordinated people are not politically active and their participation in political decision making, for example in exercising their right to vote, is comparatively lower. It is argued that women constitute the majority of this subordinate group (Sjögren, 2013, p. 33) despite the increase in their numbers in representative institutions. In this regard, legal scholar Åsa Gunnarsson (2013) has critically stated that "Swedish welfare and gender equality reforms have left the economic power relations between women and men relatively unchanged" (Gunnarson, 2013, p. 52). In 2018, the Swedish government established the Gender Equality Agency (Svensson and Gunnarsson, 2018), whose function is to coordinate, follow up and provide relevant support in regard to gender equality. These efforts will likely lead to differences in the practice of equality among the countries.

Norwegian history shows a strong precedent of endorsing gender equality in many spheres of life, including political participation and empowerment. It may be noted that women in Norway received the right to vote as early as in 1907, and in 1911 Anna Rogstad became the first woman to take office in the Norwegian parliament. Kristofferson, a right-wing Norwegian mayor (from Longyearbyen on Svalbard), has claimed that gender equality is not yet a salient issue for everyone. She points out that municipalities need to deliver "100% nursery coverage to enable all those women who want to play an active part in the labour force to do so" (Kristoffersen, 2015, p. 22).

As noted, the EU has already made significant progress in some areas of gender equality, for example, equal treatment legislation, gender mainstreaming (integration of the gender perspective into all other policies) and specific measures for the advancement of women (EU, Gender Equality). For example, in the EU, women's participation in the

labour market increased from 58 to 63 per cent between 2002 and 2008 (Nordström, 2015, p. 45). However, there is still much more that needs to be done with regard to work, health, resources, knowledge, time, power and other concerns (Liebert, 2015, pp. 75–78). According to the Gender Equality Index Report (EIGE, 2013).

> [d]espite 50 years of gender equality policies and actions at the European level, Member States have not yet managed to overcome gender gaps, thus there is a need for further efforts.

Significantly, there remains discrimination between men and women in labour market participation where equal opportunities and level of wages are concerned. Women are still overrepresented in lower-paying sectors and underrepresented in decision-making positions (NGE, 2015; EU Gender pay gap, 2014). On the subject of equal pay, former EU Justice Commissioner Viviane Reding made the following statement in 2014 on European Equal Pay Day (February 28): "Equal pay for equal work is a founding principle of the European Union, but sadly is still not yet a reality for women in Europe" (Perrons, 2015). Another issue is that women work fewer hours in the labour market compared to men, which results in lower pensions at old age. With pension gaps wider than earning gaps (Tinios, 2015, p. 36), poverty among women is more common than among men, and women whose socio-economic status is poor yet who live longer with frail health are more vulnerable in old age.

While the Nordic Arctic countries are often regarded as societies where people of different genders are treated comparatively equally because of the legal safeguards in place, in practice there are also divisions, mainly created by socially constructed norms and particularly prominent in rural settings. For example, women are found to be mostly involved in household work without having been provided formal means of gainful employment (Articles 1, 2, 4 and 5; Tong, 2013, p. 107). Even when, at times, they have the opportunity to work outside of the home, there are many other social factors that hinder their doing so, such as their roles as wife, mother and grandmother. One study suggests that an employed woman spends 26 hours per week on unpaid caring work whereas men do such work for an average of 9 hours (Nordström, 2015, p. 46). In rural Arctic communities, it is still expected that women should spend most of their time taking care of their children, parents and household duties. Given the demanding nature of this kind of socially unrecognized work, women do not have time of their own to rest, which sometimes causes them to fall ill (Articles 2 and 3; Kristoffersen, 2015; Svensson and Gunnarsson, 2012).

To give an example, in Sweden today older people's care often ends up being the responsibility of relatives, in most cases middle-aged daughters. As a result, some of them have to reduce their working hours and others have to give up paid work altogether (Nordström, 2015, p. 45-48). This clearly occurs in the other Nordic Arctic countries as well. As a result, when these middle-aged women grow old, they receive lower pensions than others, who have worked full time (Article 5). For example, in Norway nine out of ten people who receive low pensions are women (Kristoffersen, 2015, p. 23).

Emma Domínguez-Rué argues that older women are marginalized because they are not able to fulfil the patriarchal society's wishes (Domínguez-Rué, 2012, p. 429). To sum up, it can be said that the position of women is often affected by pre-existent societal practices, making them vulnerable and showing that the Nordic societies are not as yet perfect. In old age, poor, frail women, who often live in rural areas far from services, suffer from multiple vulnerabilities. Living longer cannot bring them happiness unless their surrounding environment is supportive.

The development and the perspectives of gender equality in the countries of the Nordic Arctic region show a similar picture. The countries are in the forefront of promoting women's rights. Whereas globally women have gained the right to vote and to be elected to political office only relatively recently (HDR, 1995, p. 41), the Nordic countries granted the same right already in the early twentieth century, Finland in 1906, Norway in 1907 and Sweden in 1918 (HDR, 1995, p. 41). Overall, extension of such political rights prompted positive developments in the promotion of gender equality, such as in participation in gainful employment and the labour market. The equality policies in these countries have been motivated by non-discrimination principles. In Finland, equality policy was established in 1972 (Holli, 1992, p. 69), in Sweden during the 1970s and in Norway in 1978 (by adoption of an Equality Act). In 1974, Sweden was the first country "to introduce a gender-neutral paid parental leave benefit" (GOS, 2016).

However, the concept of equality in the Nordic countries has been based on formalistic structures, without much attention to the prevailing socially constructed situations, particularly in the northern regions of the countries. For example, the Finnish feminist legal scholar Kevät Nousiainen has stressed the importance of gender equality as an inalienable right to non-discrimination rather than as merely a right to labour market participation or social welfare (Nousiainen, 2008). While gender equality policies absolutely require support in the form of anti-discrimination or non-discrimination laws (Nousiainen and Niemi-Kiesiläinen, 2001), I suggest that many of the consequences of gender inequality in the Nordic countries, in particular among older people, are products of economic factors; for example, the labour market is highly gender segregated (Gunhild, 2016; Elwér *et al*., 2012; Holter *et al*., 2009; EC, Gender pay gap) and thus results in discrimination at several stages, although this is sometimes unspoken or hidden. Thus, I would emphasize economic considerations, including unequal distribution of resources driven by disadvantageous regional features, as among the factors contributing to gender inequality in old age. Åsa Gunnarsson (2013) has stated:

> History has shown that there is a thin line between the social and economic mechanisms that close the door to autonomy, self-support and full membership in society for women, and those that open the door (Gunnarsson, 2013, p. 13).

However, this "thin line" offers motivation "to succeed in the struggle for equality" (Hirschmann, 2015, p. 12) as it relates to diversity of gendered experiences in different cultures (Bettio and Sansonetti, 2015, p. 12). In Sweden, older Sámi women have cited

the existence of gender inequalities in Sámi culture (Aléx, 2016, p. 1750), ones borne out by my research findings (Articles 2, 3 and 4). An increase in women's participation in the labour market requires that men take part more in family life (Parvikko, 1992, p. 94) and that we forget the traditional division of labour (Gunnarsson, 2013, p. 12). Regardless of the policies promoted in the interest of equality, such factors are often rooted in a socially constructed mindset. However, the more a woman is empowered, the more she benefits from equality policies.

While promoting gender equality policies is one of the common values in Europe, in the Nordic welfare states it is regarded as "one of the most prominent hallmarks" (Kantola, 2014, p. 6; Nousiainen *et al.,* 2013, p. 41; Melby, *et al*., 2009, p. 4). In addition to benefiting from European values in terms of gender equality (Kantola, 2014, p. 2), the Nordic states have contributed to policy in that their gender equality policies have been found to be relatively better democratized. Research carried out on Finland and Sweden has claimed that these countries are pioneers in gender equality (Korkut *et al*., 2015; Parvikko, 1992). Gender equality can be studied as the absence of discrimination in relation to allocation of resources, benefits and access to opportunities or services. According to the EU Gender Equality Index, Sweden holds the top position in gender equality (EIGE, 2017).

In any case, despite this long-standing tradition of gender equality policy in the Nordic Arctic, I have pinpointed certain gaps that reflect and underscore the conditions prevailing in remote parts of the region. In these settings the prospects for gender equality are affected by elements of what is a deeply rooted mindset regarding how society is structured. The condition of the older population can be examined from the viewpoint of social justice, an example being the studies in which I examined gender (in)equality, especially when it occurs along with the vulnerabilities facing people in old age (Articles 1 and 2).

In this thesis, I have created knowledge by integrating older persons' lived experiences in the Nordic Arctic as a primary source of knowledge. I identify and describe the social situations and tensions as they relate to older people in the region (Articles 1, 2, 3, 4 and 5), for it is important to emphasize that experience is formed by one's particular context (Scott, 1999, pp. 79–99). In the study, the concept of intersectionality has been used to show the multiple marginality of the individuals or group. It is evident that marginality can arise on the basis of several factors, among them age, gender, ethnicity, disability and place (Articles 1, 2, 3, 4 and 5). In the case of service and healthcare providers, there is a tendency to ignore the cultural background or origin of individuals in framing structures for accommodating disability (Fredman, 2016, p. 28; Olsén *et al.*, 2018).

I approach older people as a single, general group and as intersecting groups and examine their marginality when adopting the latter perspective. My research shows that older women, as well as the older population at large within the indigenous groups of the Arctic, face multiple vulnerabilities. It has also revealed that the marginalities intersect because of structural inequality or the existence of socially constructed inequality. I have identified this inequality based on the experiences of the persons whom

I have interviewed (Articles 1, 2, 3, 4 and 5). I also claim that these experiences and realities are socially structured, having realized that inequality and discrimination in the case of older persons in the Arctic are constructed and structured within the society in which they live.

While one may find criticisms claiming that FS puts all women's experiences on the same line and gives less attention to the variety of women's lives, I do not find that this is the case. Generally, FS has been used in the case of extreme vulnerability, which is a particularly common picture in research focusing on issues in developing countries. While the Arctic countries, especially the countries in Nordic Arctic, are assumed to implement equality on all levels, my research reveals that there are invisible and hidden inequalities. The older people who I have interviewed are uniquely situated in that they stand at the focal point where different systems of oppression come together, such as age, gender, ability, culture, indigeneity and place. An intersectional perspective serves to reveal the connections between these elements (Hernández-Avila, 2002; Östlin *et al*, 2006; Gutiérrez, 2007; Ramirez, 2002). By understanding how they are interlocked (Hesse-Biber, 2012, p. 12; Crenshaw, 1991; McCall, 2005) in the Arctic context, I have endeavoured to show that the older population as a whole, and groups within it, faces vulnerabilities resulting from these interconnections, which in turn impact older persons' possibilities to enjoy the equality and social justice to which they are entitled (Articles 1, 2 and 3).

As a researcher on the Arctic, ageing and gender, I attempt to create knowledge with which marginalized groups may "gain the power to control their own lives in solidarity with a justice-oriented community" (Kinchole and McLaren, 2000, p. 282). This ambition is reflected in my published articles. Having illuminated salient issues such as the position of the older population in the changing Arctic, gender discrimination and the practice of equality, and having studied the experiences of older persons empirically, I put forward the conclusion that equality has to be implemented through social re-structurization based on situated knowledge (FS) rather than using the mainstream, rule-oriented legal approach adopted in the HR framework.

7. OVERVIEW OF THE ARTICLES

This chapter provides a summary of the articles comprising the thesis.

Article 1: Impact of Climate Change on People in the Arctic, with Special Focus on the European High North: A Human Rights Perspective (The Yearbook of Polar Law V (2013): pp. 573–602).

The culture, traditions, knowledge and lives of Arctic people have developed in harmony with their surrounding environments. Because of climate change, the sea ice is shrinking, permafrost is melting, and vegetation and wildlife are changing. These changes are effectively altering the inhabitants' livelihoods and together with migration - both in and out of the region - are altering the structure of local communities. These are merely a few examples of the environmental, social, cultural and economic problems stemming from climate change.

In this article, I examine how climate change creates different challenges among older people in the Arctic region. Climate change causes a variety of environmental, social, cultural and economic problems. Older people are the most vulnerable group and these impacts are not gender neutral. In the research, I explore older people's rights within the framework of human rights. I also discuss human rights for older people to raise awareness on those particular rights that are affected by climate change. Climate change affects the health and wellbeing of older persons, as well as their livelihoods and social lives, and this as a whole affects their human rights. For example, their right to health is affected by new viral diseases that enter the region because of climate change. Food security in the region is also threatened.

I employ a content analysis based on a review of the appropriate literature and on field research. I use data from the years 2011–2012 comprising informal and formal interviews of fourteen older people (n= 14) as well as ten researchers from the Arctic (Finland, Sweden Norway, Iceland, Russia). The article highlights the significance of a broader awareness of human rights issues that the older population faces as a vulnerable group.

The degree of an individual's or group's vulnerability depends on the individual's or group's socio-economic status. In this study, I claim that development and other transformations in the Arctic, for example socio-economic changes, globalization and out-migration, have serious consequences for older people. Challenges for older people from diverse experiences are analysed as a multiple marginality. Age, gender, ability, indigeneity and geographical features are connected to pinpoint these challenges. The article also brings out provisions in the human rights instruments applicable to older people. I do not talk about violation of laws or of the people's rights under internation-

al human rights law but do show that when the situation of older people is assessed in terms of social justice, climate change is a source of several threats to their human rights.

Article 2: Effects of livelihood transformation on older persons in the Nordic Arctic: a gender-based analysis (Polar Record, Cambridge University Press 2015: pp.1–11, doi: 10.1017/S0032247415000819).

The Nordic Arctic's population includes the Sámi, an indigenous people whose livelihood has traditionally relied on activities such as reindeer herding, making handicrafts, farming, fishing, hunting, trapping and gathering. In recent years, with the rapid transformation of the region, these practices have faced enormous challenges. Overall, a variety of intensifying socio-economic, cultural, environmental and infrastructural changes are transforming the local economies and severely impacting older people in particular. This article addresses the transformation that has occurred in livelihoods in the Nordic Arctic, showing how it affects gender equality among the region's older people.

The article draws on interviews of fourteen older persons in Finnish Lapland (nine women and five men from Ivalo and Inari), three researchers and eight older people from Swedish Lapland (Jokkmokk six women and two men) and three other researchers from Nordic countries. I examine these data using descriptive and interpretive (thematic) analysis.

I analyse the principles set out in General Recommendation 27 of the CEDAW Convention, by claiming that there are many ways in which equality can and should be promoted for older women in the Nordic Arctic. The objective of this recommendation is to promote the human rights of older women in the region. With this as a starting point, I discuss how transformation of livelihoods in the region affects gender equality among older people. The emphasis is on exploring the specific effects on older women to reveal the vulnerability caused by the transformation of livelihoods.

Article/book chapter 3: Gender Differences of Older People in the Changing Arctic (Routledge – Earthscan, 201), pp. 110–130. ISBN: 978-1-138-89190-6 (hardback).

In this article, I examine consequences of climate change and other anthropogenic changes as a result of which the Arctic region is undergoing a dramatic transformation. These transformations and changes are posing challenges to the region's society, economy, culture, environment and infrastructure. Older people are particularly affected by these challenges. Differences in gender roles among older people suggest that the changes in the Arctic will impact men and women differently. Older women are disproportionately vulnerable to climate change, because vulnerability depends on individuals' socio-economic status. For example, although women have traditionally worked hard, and still do, their work has never been fully recognized as equivalent to paid work. Moreover, although women are in many cases more educated, they have been, and still are, less visible in the labour market. As a result, the amount of pension they receive in old age is not sufficient. Looking at this from the perspective of social

justice, the smaller pensions that older women receive in comparison to their male peers create inequality.

I have used interpretive and critical analysis (content analysis) and drawn on data from the Arctic and PubMed databases and reports such as AHDR-I & II, 2004 & 2015, ACIA, 2005, WHO 2009 (gender & climate change), IPCC, 2007 (climate change & its effects on health).

At least in the Arctic context the gender dimension of climate change and its effects on older persons have not been adequately addressed. In the research, I explore how gender positioning manifests itself among older men and women. The study also shows how the anticipated differences stem from inequality between the genders.

Article/Book chapter 4: Challenges to the Human Security of Elderly Sámi in Finnish and Swedish Lapland, (Brill Academic Publishers, 2016, pp. 211–229). ISBN: 978-90-04-31438-2 (hardback).

In the northern parts of Finland and Sweden, the Sámi have a traditional way of living and a distinct culture connected to their natural surroundings, which together form a unique cultural identity. Consequences of climate change and of industrial activities, such as mining, cause significant socio-environmental changes affecting the older Sámi population. In the book chapter we examine how the concept of human security applies in the context of older Sámi in Finnish and Swedish Lapland.

The study draws on interviews of nine older Sámi from Finnish and Swedish Lapland, three active members of communities, one healthcare professional and three researchers working on indigenous issues. We use thematic analysis, which is an independent qualitative descriptive approach. We sought to investigate older Sámi people's culture and other important aspects of their lives in order to gain insights into the human security challenges facing them. The particular challenges to the older Sámi populations in the two countries can be seen in access to health care facilities, availability of traditional food, secure livelihood practices, preservation of cultural identity and environmentally sound developmental practices. In order to guarantee equality and social justice, the threats that these challenges pose need to be mitigated.

Article/Book chapter 5: Exploring Age-friendly Environments in Rural Settings: case study from Finnish Lapland (Springer, (forthcoming 2019) chapter-7).

In this piece of research, I explore the experiences of older persons from the region of Enontekiö, located in the Finnish North, in order to understand their perceptions of what constitutes an age-friendly environment (AFE). Age-friendly communities are believed to be a promising way to help older people to lead healthy and active lives. It is anticipated that in an age-friendly environment in rural communities all services, policies and the physical and social environment as a whole should be structured in such a way that older people can live safely, securely and actively and enjoy life in good health.

I use thematic analysis to examine data comprising 19 interviews of informants living in the villages of Hetta and Peltovuoma. The themes of the analysis emerged from the interviews and the ideas developed by Eales *et al.* (2008). The analysis draws

on research that has identified three domains for an AFE: a) the natural environment, such as favourable climatic conditions, availability of fresh air, clean water and adequate waste removal systems; b) the human-built environment, encompassing conditions relating to housing, roads, market facilities, health services and accessible public and private transportation; and the c) the social environment, comprising availability of sufficient opportunities to maintain relationships with family members and friends, opportunities to maintain local, cultural, educational and voluntary activities, as well as programmes and information to promote health, social and spiritual activities.

The components of an AFE that figure prominently in the respondents' perceptions were a supportive neighbourhood and good connections to family, neighbours and community. Also crucial were nature, community support and the availability of local transportation and health services; these are features of the environment that keep older people active and make them feel secure. Additional considerations are public transportation, affordable and accessible health care and social services, facilities to meet neighbours, friends and family and opportunities to take part in different social activities and cultural events. The expectation is that services and facilities should be available near older people's own homes. Older people feel comfortable in their own environment, but do not feel safe there if there is of a lack of people around them.

8. CONCLUSIONS AND RECOMMENDATIONS

The ongoing transformation of the Arctic is an ever-increasing threat to the everyday life of older men and women in the region. One salient consideration in assessing the resulting vulnerabilities to be addressed is inequality. In the Nordic Arctic, there are gaps in our knowledge of the particular social circumstances that contribute to inequality for the older population at large, between older men and women and among the indigenous older Sámi. Accordingly, it is difficult to identify the inequalities leading to social injustice in a very concrete sense. One of my main claims in this study is that inequalities and injustices shape the vulnerabilities that older people face in the Nordic Arctic; other such factors include age, gender, ability, ethnicity and place. Equality and social justice can thus be viewed as tools to reduce the vulnerabilities of older people as a population and gender-based vulnerabilities within that population.

There are no international or regional human rights instruments for the protection of the rights of the older population at large. While most international human rights instruments can be applied to protect the rights of the older people, their needs should be more specifically recognized and given due attention. Existing human rights mechanisms do not properly protect the rights of older people (HelpAge International, 2015). Although there are soft-law texts with a highly relevant human rights focus (HelpAge, 2015), for example in 1982, the World Assembly on Ageing adopted the Vienna International Plan of Action on Ageing, which has been endorsed by UN General Assembly (UNGA) in resolution 37/51. In 1991, in pursuance of the Plan of Action, the UNGA adopted resolution 46/91, which presents a set of principles entitled "The United Nations Principles for Older Persons".

Nevertheless, even in the absence of concrete realization of older people's rights in the contexts studied, it should be pointed out that the general welfare rules and regulations applicable to the Nordic Arctic offer somewhat better protection than elsewhere in the Arctic. Also promoting the wellbeing, health, functional capacity and independent living of the ageing population in the Nordic Arctic are specific pieces of national legislation: in Finland *The Act on Supporting the Functional Capacity of the Older Population and on Social and Health Care Services for Older Persons (*MSAH); in Sweden *The Social Services Act* and *The Health and Medical Services Act* (HSL); and in Norway, where primary care is organized at municipal level, the Municipal Health and Care Act of 2011, (NOMESCO Nordic, 2017).

Quite often, efforts to ensure equality and social justice are promoted with reference to and an emphasis on the human rights framework. Generally cited human rights documents, such as the ICCPR, ICESCR, CRPD and CEDAW, set out provisions applicable to persons belonging to the older population. However, the specific geo-

graphical context, such as the changing Arctic presented in this study, entails particular circumstances requiring actions at local, national and regional levels. Only then can the spirit of equality and social justice embodied in the human rights framework be realized. Thus, the spirit of human rights, which aims at ensuring equality and social justice, requires attention based on the particularities of each region.

Accordingly, the present study urges that attention be drawn to addressing the special needs of older people in the Nordic Arctic stemming from regional particularities. To these ends, the research suggests a number of improvements, one being to better society's structural conditions and enhance the natural and human-built environments to a standard that is age friendly. On the one hand, such improvements will facilitate promotion of fairness and, on the other, will further the enjoyment of human rights, leading to equality and social justice for the older people of the region. Mere enactment of regulations at national, regional and international levels will not solve the problems unless specific societal conditions, framed with due consideration for the regional context, are addressed within the relevant legal and policy frameworks.

It is also important to note that the status of older people, and the relative position of the genders within the group, depends on the role of individuals and on their social, economic and environmental standing. Promotion of the status of individuals in any given context, as well as promotion of socio-cultural, environmental and economic conditions in which individuals thrive, provides an opportunity to create a society that is age-friendly.

This study is thus an endeavour to bring out hidden aspects of structural inequality based on experiences of socially situated circumstances. I believe that the research will help to understand the inequalities and social injustices to be confronted in the course of Arctic changes, its particular contribution being the knowledge produced based on the experiences of the older interviewees. This knowledge provides an understanding of the specific challenges that the older population faces and of their needs and expectations in light of the changing circumstances in the region. By addressing the needs and expectations identified in the findings (Chapter 3), it will be possible to promote older people's wellbeing, contributing to a more equal and socially just society in the region.

This study can be seen has having had a twofold purpose: it set out not only to highlight the importance of older people's concerns in the regional context but also to produce new knowledge, as has been presented in Chapters 3, 4, 5 and 6. This will contribute to filling the gaps which the component articles and synthesis have identified. Moreover, it will facilitate adoption of appropriate policy measures, that is, ones responding to the challenges facing older persons – men and women alike – in the region, including older Sámi, and enabling the older population at large to gain control over their lives. Based on the findings presented in Chapter 3, I have drawn up several recommendations for researchers, policy makers and stakeholders, the aim being to promote equality and social justice for the older population in the Nordic Arctic. The recommendations, presented below, might be applicable to the other Arctic regions as well.

Recommendations:

- For the promotion of equality and social justice, it is necessary to create awareness of the effects of the Arctic transformation and its possible impacts on older men and women. The concrete knowledge developed in this study can be integrated in future policy developments, with policy measures as well as strategies drawing on the findings presented. This in turn will serve to improve national and regional institutional mechanisms and increase the efficiency of existing institutional bodies, making it easier to implement policy measures and promote further research to identify future needs and expectations.
- Establishing an age-friendly environment by allocating sufficient resources, as well as empowering older people by promoting their capacities and capabilities, will aid in mitigating many of the socio-economic, cultural and environmental challenges identified. Without promoting quality of life for older people, it will be challenging to reach the goal of establishing broader equality for them in the sense of social justice. A better quality of life would enable older people to tackle the threats they face more independently; at the same time, they would become more resilient. Therefore, the national and regional policy framework must include relevant strategies to this end, and to realize this goal policy makers, researchers, relevant stakeholders and older people themselves should work together.
- Particular needs of the older persons belonging to intersectional groups, such as the indigenous Sámi people, have to be addressed within existing policy tools and institutions. When needed, it is also important to establish bodies for the promotion of the wellbeing of the older people belonging to this ethnic group. In particular, traditionally held culture and cultural rights give the Sámi a unique identity. Many older Sámi, who transmit their tradition-rooted values, norms and knowledge to the next generations, are depressed because the Arctic transformation threatens their ancestral identity. Therefore, particular measures have to be undertaken by integrating the norms of human rights as well as by using institutions, such as the Sámi Parliament, to protect and promote the identity of the Sámi and other traditional ethnic groups.
- As part of an age-friendly environment, health care facilities need to be made more readily available. Given the challenges posed by a lack of resources, which makes services poorly structured in the region studied, it is important to develop alternative mechanisms. Telemedicine services, already in place to some extent, have to be improved further so that they become more widespread and familiar. In this regard, it is also important to promote training and education for older people themselves so that they can gain maximum benefit from such services.
- Older women in the region generally live longer than men and in old age suffer from frail health. In this respect, they can be regarded as marginalized due to age and gender. It is important that policy makers acknowledge this situation and help to promote resource allocation and services for older women.

- The participatory rights of older men and women need to be ensured so that they become actors in the policy-making process. Their opinions should be taken seriously in policy making and in implementation as well. Therefore, it is important to develop mechanisms for consultations with older people to learn about their everyday problems at the local level.
- A community-based monitoring strategy should be implemented so that any emerging threats and their potential effects on the older population can be identified and mitigated. Local authorities should be strengthened, both economically and strategically, to ensure facilities providing safer, healthier and environmentally sounder living conditions for older people.
- Additional research on the interconnection of ageing, gender and indigeneity could better clarify the understanding of inequality and injustice in regard to the Arctic transformation.
- In-depth research should be initiated to identify the special risks facing older people so that they may live healthy and full lives. In this regard, states should not only promote policies, but also undertake efforts to implement those policies with adequate monitoring mechanisms.

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APPENDIXES

Appendix A: An informed consent sent to manager of a care home for older people.

5.07.2013
Hei!
Olen Shahanj Begum, ja olen Lapin yliopiston tohtori-koulutusohjemassa, Valmistelen artikkelipohjaista väitöskirjaa Suomen vanhusten huollosta. Tutkimusaiheenani on vanhusten hyvinvointi ja ihmisoikeuskysymykset. Kerran työskentelen Rovaniemellä olen luonnollisestikin kiinnostunut pohjoisen ihmisistä ja pohjoisuudesta. Olen työskennellyt vanhusten huollossa Helsingissä kuusi vuotta (vuosina 2004-2010). Toivomuksenani olisi, että pääsisin juttelemaan vanhustenne kanssa – niiden jotka ovat kiinnostuneita kertomaan omasta elämästään ja vanhuksena olostaan. Olen tietysti kiinnostunut myös siitä, mitä vanhuus tarkoitti ennen muinoin ja peilaamaan tätä aikaa menneisyyteen. Ilmaston muutos ja naisen sekä miehen asema vanhuudessa kiinnostavat myös.

Olisiko mahdollista, että voisin tulla vierailemaan työpaikallanne. Ja kertoisin asiakkaillenne työstäni ja kiinnostuksesta keskustella heidän kanssaan esim. ruokatunnilla. Ja jos kiinnostuneita olisi, voisimme kahvitunnilla jutella ryhmässä. Luulen, että tämä voisi olla heille virkistävä tapahtuma, jossa he voisivat peilata menneisyyttä ja nykyisyyttä.

Olen Ivalossa 17-20.7. 2013 Minulle voi soittaa puh. 050-4635987, tai vastata sähköpostiini sbegum@ulapland.fi

Ystävällisin terveisin,
Shahnaj Begum
Sukupuolentutkimuksen yksikkö,
kasvatustieteiden tiedekunta
Alla on kysymykseni, joista keskustelisin.

Field work (Inari, Ivalo), interview questions:
Keskusteluni teemoja:

A) **Vanhuus ja elämä vanhuudessa (sekä hoitohenkilökunta ja asiakkaat**)

1. Onko vanhuus ja vanhojen elämä muuttunut viimeisien vuosikymmenien aikana. Apukysymyksiä: Oliko vanhainkoteja? Millaisia paikkoja ne oli verrattuna nykyisiin? Elikö vanhukset enemmän yksin, vai lastensa parissa? Saivatko vanhukset enemmän apua aikaisemmin kuin mitä nyt?
2. Jos on vanhusten asema on muuttunut, miten sen kuvaatte? Millaisia esimerkkejä annatte?
3. Mikä oli paremmin vanhaan aikaan? Mikä on paremmin nykyajassa?
4. Oletteko sitä mieltä että ilmasto muuttuu, eli elämme ilmastonmuutoksen aikaa?
5. Jos olette sitä mieltä että ilmaston muutos on tapahtumassa, vaikuttaako tämä mitenkään perheiden elämään, ja vanhuuteen.
6. Onko vanhusten asemassa eroja, kun puhutaan naisista tai miehistä? Vanhaan aikaan tai nykyaikaan.
7. Mitkä ovat tärkeitä asioita tietää, ja ymmärtää kun tarkastellaan vanhusten asemaa pohjoisessa.Onko elinikä noussut huomattavasti, ja mitä uusia ongelmia korkea ikä tuo hoivatyöhön? Onko erilaisia tarpeita suomalaisilla/saamelaisilla? Onko erilaisia tarpeita naisilla/miehillä? Onko hoivapaikkoja tarpeeksi tulevaisuutta ajatellen? Onko kotona hoivaaminen vähentynyt vai onko se lisääntymässä?
8. Miten nykytilannetta pitäisi parantaa, eri toiveita tulevaisuuteen?

B) Q**uestions regarding traditional knowledge/ local knowledge**
vanha-aika ja nykyaika

1. Vietettiinkö entisaikaan vapaa-aikaa? Jos oli vapaa-aikaa mitä tehtiin?
2. Mitkä olivat teidän työtehtäviä, erosiko ne eri vuoden aikoina? Naisten työt ja miesten työt, lapset?
3. Mitä vanhat ihmiset tekivät työtehtävinään kun ruumiillinen kunto alkoi heiketä?
4. Onko täällä hoivakodissa semmoista elämää kuin haluatte elää vai kaipaatteko lisää vanhan ajan työtehtäviä?
5. Miten terveydenhuolto pelasi ennen, onko tullut muutosta vanhaan aikaan?
6. Miten metsässä voitiin hoitaa vaikeita terveysasioita?
7. Voiko kysyä vanhan ajan uskomuksista? Jos voin, niin oliko enti aikaan pyhiä paikkoja? Onko niitä vielä? Oliko vallalla uskomuksia, jotka eivät tavallaan kuulu kirkkouskontoon? Jos oli, niin mitä muistatte?
8. Onko vanhan ajan asioita paljon hävinnyt? Jos on, niin miksi? Miltä se tuntuu?

C) **Questions regarding reindeer herding**

1. Kuinka paljon vanhat ihmiset osallistuvat poronhoitoon? Onko naisen asema muuttunut poronhoidossa, nyt ja ennen?
2. Onko ikäihmisillä helpompaan nykyisin poronhoidossa kuin vanhaan aikaan?
3. Onko tekniset vempaimet tehneet hyvää poronhoidolle vai huonoa? Miksi

Appendix B: Informed consent request sent to the Sámi Parliament, Sweden

06.05.2014

Dear Authority,
I am Shahnaj Begum, PhD student at the University of Lapland. Here you will find my academic details from this link: http://www.ulapland.fi/ShahnajBegum

I am planning to come to Jokkmokk for a research visit for 5 days in the beginning of June. According to our university rules, I have to stay a minimum of 5 days in a place. I have to come on 1 June and stay in Jokkmokk for 5 days. I will gather knowledge on Sámi people of Sweden and the Sámi Parliament of Sweden. I will visit library archives. I am also planning to visit the community and talk to some local people, whom I hope you will suggest. Last summer, I made similar visit to Inari and Ivalo (Finnish Lapland).

The aim of this research visit is to get to know Sami culture and traditional activities. I am working to identify the effects on livelihood changes (fishing, reindeer herding, making handicrafts etc.) occurring in the northern parts of Finland, Sweden and Norway, with focus on the gender dimension. I would like to learn how transformation of the region due to climate change and other human activities, such as mining and increased industrial activities, affect the socio-economic, cultural, environmental and infrastructural aspects of the region.

If you need to know more information concerning this research visit, please let me know. I am looking forward to your co-operation in this regard.

Thank you very much for your co-operation!

Kind Regards,
Yours sincerely,
Shahnaj Begum
Researcher (PhD student),
Unit for Gender Studies,
University of Lapland.
sbegum@ulapland.fi

Sample interview questions:

1. What are the changes happening in this community that affect people's everyday lives?
2. How have the lives of women and men changed?
3. What about the population structure? How are older people are doing (in their role)?
4. What are the identifying socio-economic, cultural and environmental features of the Jokkmok region or community?
5. What kinds of changes -especially in livelihoods - have taken place in this community?
6. What are the consequences from a gender perspective?
7. Do people feel that their voices have been heard and taken into account in political decisions? Is their knowledge/opinion valued?
8. How do they tackle the issues (changes- adaptation-mitigation)?
9. What kind of changes have taken place in the last few decades/years in these local areas?
10. How do these changes affect their lives, especially their (special focus on older people) wellbeing?
11. How is climate change affecting the wellbeing o folder people in this area?
12. Does it affect men and women differently? If yes, then how?
13. What kind of things are important for the wellbeing o folder people in the community?
14. What is your suggestion about the improvement of the present situation?

Questions regarding traditional knowledge/ local knowledge

1. What kind of changes have taken place in traditional knowledge? Is it disapperaring or still being transferredto the younger generation? Who are the holders of traditional knowledge or taking care of it?
2. What kind of activities are traditional activities for men and women?
3. What kind of role do older men and women have in maintaining these traditional activities/values, identities, sacred places and issues?
4. How do you see the sacredness, sacred place or sacred as object?
5. How has local knowledge played an important role in health and identity? Has the situation changed compare to what it was earlier? If yes, then why? What are older people's expectations and suggestions concerning this matter?
6. Does the effect on traditional knowledge threaten your cultural identity
7. What kinds of rights are getting threatened because of different changes (health rights, cultural rights, social rights etc)?
8. How do different changes including climate change affect men and women activities with special focus on elderly men and women ?

Questions regarding reindeer herding

1. How many people are involved in your area at the age of 65+ with this Reindeer Herding profession? How women are contributing in this profession- earlier women role and present women role?
2. What kind of difficulties they are facing (social, environmental)?
3. What are the cultural changes that affect reindeer herding?
4. How elderly see the use of technology?
5. What do you think about future reindeer herding?
6. How the society has changed? Changes in the livelihood, changes in the everyday life? What about the structure of the population? Men and women life?
7. Why mining is important? Discussion and conflict.
8. Specifying some example and give one example concerning their future expectation
9. Changes in two cultures- how they described from their lived experience?
10. How everyday life changed? Movement, migration..etc
11. How gender agency attached in these community?

Appendix C: An informed consent request sent to managers of care homes for older people.

30.3.2017
Hei!
Olen Shahanj Begum ja olen Lapin yliopiston tohtorikoulutusohjemassa. Valmistelen artikkelipohjaista väitöskirjaa Suomen vanhustenhuollosta. Tutkimusaiheenani on vanhusten hyvinvointi ja ihmisoikeuskysymykset. Koska työskentelen Rovaniemellä, olen luonnollisestikin kiinnostunut pohjoisen ihmisistä ja pohjoisuudesta.

Olen työskennellyt vanhustenhuollossa Helsingissä kuusi vuotta (vuosina 2004–2010). Toivon, että pääsisin juttelemaan vanhustenne kanssa – niiden, jotka ovat kiinnostuneita kertomaan omasta elämästään ja vanhuksena olostaan. Olen kiinnostunut myös siitä, mitä vanhuus tarkoitti ennen muinoin, ja tämän ajan peilaamisesta (tai vertaamisesta) menneisyyteen. Yhteiskuntan muutos sekä naisen ja miehen asema vanhuudessa kiinnostavat minua myös.

Meille oli aika sovittu keskusteluaika 30. maaliskuuta klo 10.30. Olisiko mahdollista, että samana ja mahdollisesti seuraavana päivänä voisin esimerkiksi ruokatunnilla tulla kertomaan asiakkaillenne työstäni ja siitä, että haluaisin keskustella heidän kanssaan. Ja jos kiinnostuneita olisi, voisimme kahvitunnilla jutella ryhmässä. Luulen, että tämä voisi olla heille virkistävä tapahtuma, jossa he voisivat peilata menneisyyttä ja nykyisyyttä.

Olen Hetassa 28.–31.3. 2017 Puhelinnumeroni on 050 463 5987 ja sähköpostini sbegum@ulapland.fi.

Ystävällisin terveisin
Shahanj Begum
Tutkija
Liitteessä ovat kysymykseni, joiden pohjalta kävisin keskustelua.

30.3.2017
Kysymykset haastattelua varten:

1. Mitä teille merkitsee hyvä elämä?
2. Miten nämä muutokset ovat vaikuttaneet teidän hyvinvointiinne?
3. Voisitteko kertoa, minkä takia muutitte tänne tai miksi muutitte pois kotoa?
4. Millaisia erilaisia syitä teillä oli muuttaa pois kotoa?
5. Mitä ajattelette tasa-arvosta? Onko yhteiskunta tasa-arvoinen ikäihmisille ja millaisia kokemuksia teillä on tasa-arvosta ja epä-tasaarvosta?
6. Minkälaisia olivat aikaisemmin perinteiseen elämäntapaan kuuluvat naiset työt ja miesten työt?
7. Miten naisten ja miesten elämä muuttunut?
8. Ruoka palvelu ja muu palvelusta...
9. Saitko kunnalta apua? minkälaisia se ollut?
10. Minkälaisia muutoksia yhteiskunnassa on tapahtunut teidän elämänne aikana?
11. Millaista elämä oli omassa yhteisössänne? Kuvailkaa joitakin ikäihmisille mukavia tai myönteisiä yhteisön piirteitä sekä myös kielteisiä piirteitä. Kertokaa sekä positiivisia että negatiivisia muutoksia, joita olette kokeneet elämänne aikana tässä yhteisössä.
12. Kertokaa ympäristön muutoksesta (ilma, sää, ? vesi, jätteiden kierrätys, puhdas ilma eli asioista, jotka ovat tärkeitä maaseudulla ja erityisesti ikäihmisille)
13. Kertokaa rakennetun ympäristön muutoksista eli taloista, teistä, kauposita ja palveluista sekä julkisen ja yksityisen liikenteen saavutettavuudesta (= kuinka hyvin julkinen liikenne palvelee ikäihmisiä? Entä yksityisautoilu?)
14. Kertokaa sosiaalisista suhteista, esimerkiksi mahdollisuudesta ylläpitää kanssakäymistä perheen ja ystävien kanssa.
15. Kertokaa, millaisia mahdollisuuksia on olla mukana paikallistason kulttuuri-, koulutus- ja vapaaehtoistoiminnassa?
16. Kertokaa, millaisia mahdollisuuksia on olla aktiivinen ja saada tietoa sekä osallistua tapahtumiin oman terveyden, yhdessäolon ja henkisen hyvinvoinnin vuoksi.

THE ARTICLES

The Yearbook of Polar Law V (2013): 573-602

Impact of Climate Change on Elderly People in the Arctic, with special focus on the European High North: A Human Rights Perspective

*Shahnaj Begum**

Abstract:

Elderly people face increasing challenges in the Arctic region, with global warming figuring prominently among these. The rising average temperature in the region is causing not only the rapid melting of sea ice, but also a range of environmental, social, cultural and economic problems. While the population at large in the region suffers from these problems, the elderly are the most vulnerable. Climate change has affected their lives in different ways – physically, socially, politically, culturally and psychologically – and the impacts have serious implications for their human rights. This is an issue that has not been adequately researched, particularly in the context of the European High North, and this paper undertakes to present the salient concerns in this regard.

Key words: Elderly, climate change, human rights, Arctic region, European High North, vulnerability.

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1. Introduction

An extensive body of research has indicated that the Arctic and its population face drastic changes because of climate change.[1] While a number of studies have been conducted in this vein on older people in the Arctic and their vulnerability, these have primarily dealt with the North American Arctic, for example Canada and Alaska. No research has been done linking climate change, human rights and ageing in the context of the European Arctic. The most recent report of the Intergovernmental Panel on Climate Change (IPCC) clearly acknowledges that impacts of climate change are likely to be felt most intensely by certain segments of the population, such as the elderly,[2] the powerless, indigenous peoples and recent immigrants. The warming climate will affect the health and well-being of the elderly, as well as their livelihoods and social lives,[3] and this as a whole will affect their human rights. It should be noted that other developments as well are under way in the Arctic, such as socio-economic changes and globalisation, which will have serious consequences for older people. The Arctic Human Development Report (AHDR) also states that climate change is a challenge for the Arctic region, with children, women and the elderly being particularly vulnerable.[4] In the European High North,[5] elderly and indigenous people have been identified as the most vulnerable social groups.[6] Even though all groups mentioned here are considered vulnerable, the essential question remains to evaluate which of them is the most vulnerable. We cannot regard all these groups as equally vulnerable. My initial working assumption in this study is that the elderly are the most vulnerable. The rationale here is that children have their parents to take care of them and young women can take care of themselves, but people at an older age become helpless because of their loss of physical strength, loss of psychological strength, and limited income. These factors greatly limit their capacity for self-protection.

This article focuses on the elderly in the European High North, a population segment which has been under-researched to date. A report published by the Nordic Council of Ministers states that the elderly population has become a demographic

1 Nuttall, Mark. "The Arctic is changing," (Stefansson Arctic Institute, 2000), http://www.thearctic.is/articles/overviews/changing/enska/index.htm (accessed October 1st, 2012) web resource on human-environment relationships in the Arctic; See also http://archive.greenpeace.org/comms/97/arctic/library/region/people.html (accessed September 19, 2012).

2 'Elderly' in this paper refers to 'elder persons', 'elder', 'old people', and 'senior persons', including 'elderly men and women'. Since in Finland people who have reached the age of 65 are counted as 'elderly' in research, I take that as my definition here.

3 Parkinson, Alan J. "Arctic Human Health Initiative," Circumpolar Health Supplements 6 (2010): 9, http://www.circumpolarhealthjournal.net/public/journals/32/chs/CHS_2010_6.pdf (accessed November 12, 2012).

4 Young, Oran R., and Niels Einarsson, "Introduction", in Arctic Human Development Report, (2004), 15-25.

5 By the term "European High North," in this paper I refer to whole of Greenland, the northern parts of Finland, Norway, Sweden, and the northwestern part of Russia.

6 Rakkolainen, Maria, and Monica Tennberg, "Adaptation in Russian Climate Governance," in *Governing the Uncertain*, ed. Monica Tennberg, London: Springer, 2012, 42.

challenge, especially in the European High North.[7] The proportion of people in the region who are 65 years of age and over is approximately fourteen per cent and this will increase significantly in the future. According to the predictions prepared by Finland's Demographic Statistics, the number of people in this age group in Finland will increase by 26 per cent to some 600,000 persons by 2030.[8] Such a prediction was already supported in 2002 by Jutta Järvelin's report titled "Health Care Systems in Transition".[9]

The Arctic population is distributed mostly among local and coastal communities, some of which include indigenous people. Most of these people are marginalised because of past colonisation, the harsh climatic conditions of the region, and climate change. While the effects of climate change are considerable for marginalised people all across the region, it is the region's elderly and indigenous communities who suffer most significantly. These communities have historically had to face changes such as those that are now rapidly occurring in the region, must deal with them today.[10] In all these communities, elderly people are the most vulnerable groups: they must confront a range of problems stemming from the adverse consequences of climate change.

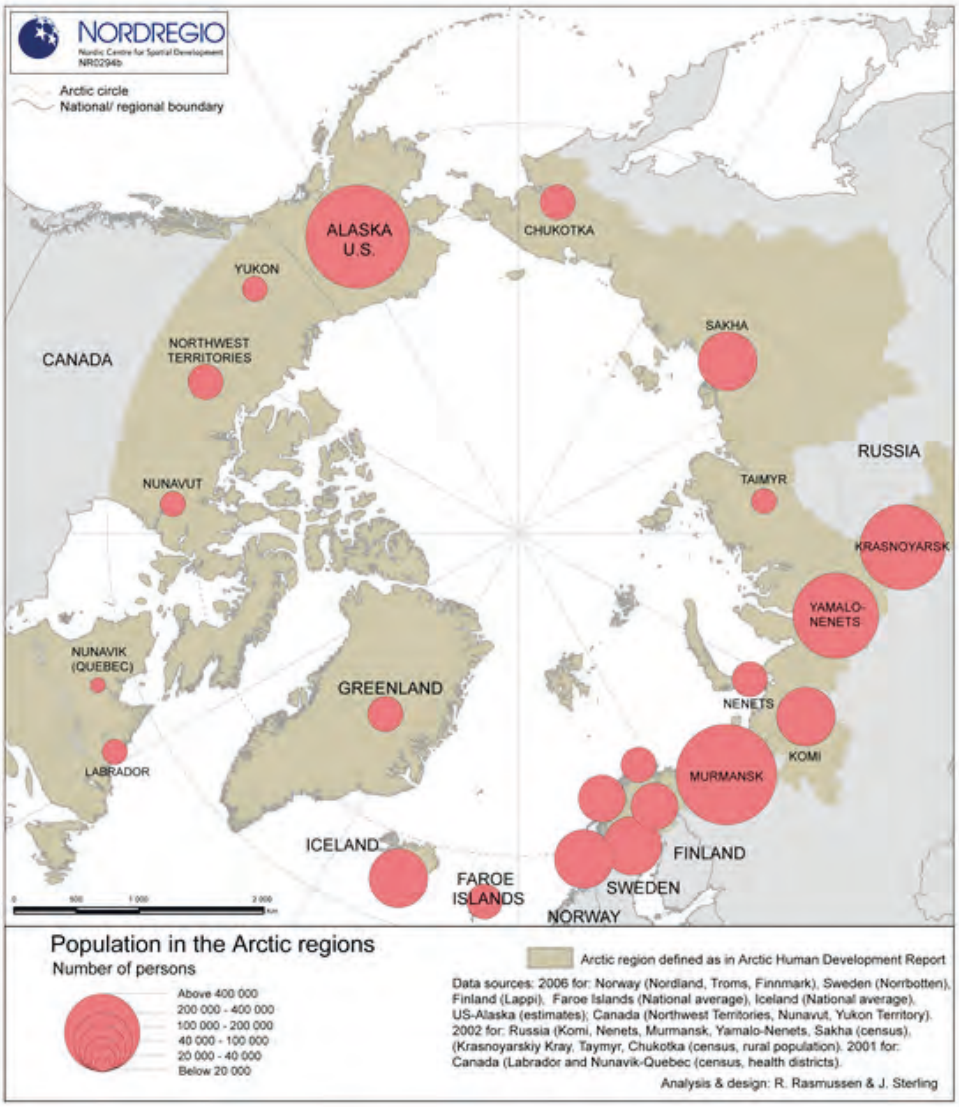
7 "Gender and Climate Change," (Nordic Council of Ministers Copenhagen, 2009), 10, http://www.equalclimate.org/filestore/Pdf/DeskstudyGenderandccreport.pdf (accessed October 19, 2012).

8 Patosalmi, Mervi, *The Politics and Policies of Reproductive Agency*. Helsinki: Unigrafia Oy, 2011, 1, http://vnk.fi/julkaisukansio/2004/j27-28-34-hyva-yhteiskunta-kaikenikaisille/pdf/en.pdf (accessed November 22, 2012).

9 Järvelin, Jutta, "Health Care Systems in Transition," in *European Observatory on Health care Systems*, ed. Anna Rico and Teresa Cetani, 4(1) (2002):1, www.euro.who.int/document/e74071.pdf (accessed March 17, 2012).

10 West, Jennifer J. and Geete K. Hovelsrud, "Cross-scale adaptation challenges in the coastal fisheries: findings from Lebesby, Northern Norway," *Arctic* 63 (2010): 338-354; See also Ford, James, Barry Smit, Johanna Wandel, Mishak Allurut, Kik Shappa, Harry Ihusarjuat, Kevin Qrunnut, "Climate change in the Arctic: current and future vulnerability in two Inuit communities in Canada," *Geographical Journal* 174 (2008):45-62, http://dx.doi.org/10.1111/j.1475-4959.2007.00249.x (accessed October 19, 2012).

Figure - 1: Populations in the Arctic Regions



Source: Nordregio at www.nordregio.se

Climate change not only exacerbates existing vulnerabilities,[11] but also causes inequality.[12] For example, in the north it affects men more seriously than women, and

11 See World Bank, World Development Report 2010: Development In a Changing Climate: Concept Note 82008, http://siteresources.worldbank.org/INTWDR2010/Resources/5287678-1226014527953/Overview.pdf (accessed January 16, 2012).

12 Cameron, Edward. "Development, climate change and human rights: From the Margins to the Mainstream?" *Social Development Working Paper 123* (World Bank, Washington DC, 2011): 2, http://www.worldbank.org (accessed January 16, 2012).

men experience environmental change more dramatically than women.[13] The indirect effects of climate change include mental and social stresses which are related to loss of community and culture,[14] putting psychological pressure upon elderly people in particular. Since climate change in the Arctic is taking place twice as fast as in other parts of the world,[15] the elderly people in the region are likely to suffer most from climate change-related consequences.

The Arctic Climate Impact Assessment (ACIA), published in 2005, was the first comprehensive scientific assessment of climate change in the region, including as it did the full spectrum of regional challenges resulting from that change. The assessment presented ten significant findings, some of which are particularly relevant for the people in the region.[16] These findings speak about community, culture, and the economy as well as the health and well-being of the population. The concerns of elderly people are cited but not given the prominence they merit. No specific focus on the elderly is mentioned in the ACIA, nor is there any other literature specifically addressing their concerns. Significantly, these concerns affect particular aspects of the human rights of the elderly population. Accordingly, it is argued here that a human rights-based assessment of climate change is of particular relevance in the Arctic.[17]

While a debate over comprehensive human rights for the elderly has started in recent years, and scholars increasingly argue that the human rights of the elderly should be taken more seriously,[18] there has been no particular development regarding all-inclusive human rights of elderly. The rights of elderly persons have not yet attracted adequate international legal attention, as there is no specific instrument exclusively addressing those elderly people's human rights.[19] A reference to this assertion can be found in the statement of the African Commission on Human and

13 Kukarenko, Natalia. "Climate Change Effects on Human Health in a Gender Perspective: Some Trends in Arctic Research." *Global Health Action* 4 (2011), http://www.globalhealthaction.net/index.php/gha/article/view/7913/11542 ; See also Parbring B. Men in the Arctic are hit by climate change. NIKK 2009: 2.

14 Parkinson, Alan J., and James Berner. "Climate change and impacts on human health in the arctic: An international workshop on emerging threats and the response of Arctic communities to climate Change." *International Journal of Circumpolar Health* 68:1(2009): 84.

15 Hassol, Susan J. *Impacts of a Warming Arctic.* Cambridge: Cambridge University Press, 2004, 8, http://www.acia.uaf.edu (accessed April 10, 2012).

16 *Arctic Climate Impact Assessment Scientific Report* (ACIA) Cambridge: Cambridge University Press, 2005, 863-960 Findings 8, 9, 10 are: Indigenous communities are facing major economic and cultural impacts; elevated ultraviolet radiation levels will affect people, plants, and animals; multiple influences interact to cause impacts on people and ecosystems.

17 Humphreys, Stephen. *Climate Change and Human Rights: A Rough Guide.* Geneva: International Council on Human Rights Policy, 2008,11.

18 Doron, Israel and Itai Apter, "The debate around the need for an International Convention on the Rights of Older Persons," *The Gerontologist*, 50 (2010): 586; See also Butler, Robert N. "Declaration of the Rights of Older Persons", *The Gerontologist* 42 (2002): 152.

19 Fagan, Aimee R. "An Analysis of the Convention on the International Protection of Adults," *The Elder Law Journal*10 (2002): 329, https://litigationessentials.lexisnexis.com/webcd/app?action=DocumentDisplay&crawlid=1&doctype=cite&docid=10+Elder+L.J.+329&srctype=smi&srcid=3B15&key=54bb13896c0a198397761d796295787d (accessed April 10, 2012).

People's Rights.[20] Nevertheless, there are a number of international and regional instruments that address particular aspects of human rights that are applicable to the elderly population. They include aspects of human rights generally applicable to all persons as well as to particular groups of people, such as children, people with disabilities, women, migrant workers, and indigenous peoples. Elderly human rights may be inferred from these instruments; yet, it has been suggested that an inclusive study is required on the need to protect elderly human rights.[21] Such research would be particularly important in the Arctic context, since the vulnerability of elderly persons' human rights with the advance of climate change has not been adequately addressed.

The aim of this paper is not to examine any putative violations of human rights or any legal remedy to be provided should a violation of those rights occur. Rather, it addresses the challenges to the elderly population of the Arctic region resulting from climate change and integrates human rights perspectives into the particular concerns identified in that light. The purpose is thus to promote knowledge on elderly well-being and to create awareness by raising the issue in the context of the human rights that are drastically affected.

Methodologically, the study embraces a qualitative approach and involves both interpretive and critical research interests.[22] First, it aims at describing and understanding the situation of the elderly in the context of climate change in the European High North (aims 1 and 2). It also endeavours to make people aware of climate change and its possible consequences for the elderly (aims 3 and 4). Accordingly, the article sets out to:

1. describe and interpret how climate change is affecting the elderly people in the Arctic region, and the possible challenges for them posed by rapid climate change in the region;
2. provide an understanding of the human rights instruments and their provisions applicable to the elderly people;
3. critically analyse the threats and challenges with due consideration for the salient human rights questions; and
4. raise the awareness of the challenges from a human rights point of view in order for these challenges to be addressed, for example, in the relevant policy documents.

The methods used in this study are twofold: 1) a review of the appropriate literature and research and 2) informal and formal interviews of elderly people and a number of key informants. The research literature chosen for the study encompasses scientific articles and monographs, relevant international and regional legal instruments, as well

20 Yeung Kam John Sik Yuen, "African Commission on Human and Peoples' Rights, Report of Focal Point on the Rights of Older Persons in Africa," (2008): 1, http://www.achpr.org/sessions/45th/intersession-activity-reports/yeung-kam-john-yeung-sik-yuen/ (accessed October10, 2012).

21 Mégret, Frédéric. "The Human Rights of Older Persons: Growing Challenges," *Human Rights Law Review* 11(1) (2011): 38.

22 Denzin, Norman K. and Yvonna S. Lincoln. *The SAGE Handbook of Qualitative Research*. London: SAGE Publication, 2005, 6-10.

as reports and statements published by the United Nations and other international and regional institutions. In addition, some formal interviews have been conducted with elderly persons and care professionals living in Finnish Lapland. Furthermore, informal and formal discussions and interviews have been held with relevant scholars and stakeholders and professionals. Most interviews have been tape-recorded and summarized in a diary, with important themes noted. I have interviewed and discussed the themes with ten experts and researchers from the Nordic countries and Russia who participated in a number of seminars and workshops at the Arctic Centre in Rovaniemi from 2011 to 2012, as well as 14 elderly informants from Finnish Lapland, among them persons from elderly care institutions in the Rovaniemi area. [23]

My analysis in this phase is heuristic in nature.[24] I have been trying to find the relevant themes based both on theoretical reading and empirical data. The themes are based for the most part on the relevant literature, but they are also viewed against an initial reading of the interview data. The final analysis and conclusions will for the most part be derived theoretically, but will also be validated through empirical data. This kind of analysis can be called deductive-inductive.[25] This makes it possible to view global issues in local perspective.[26] A range of themes and questions has already come to the fore during the initial data analysis.

I create a dialogue between the literature and interview data, and follow theme analysis to link this with my research aims. Based on this approach, I examine the salient issues in the following structures. First, I examine how elderly people are affected by climate change in the Arctic, specifically the European High North. The aim is to examine their situation in the region and show that they are affected significantly by the consequences of climate change. Second, I identify the particular provisions enacted in the human rights instruments applicable to elderly people. Third, I analyse how the attempts or failures to address the anticipated consequences of climate change problems may affect the human rights of the region's elderly population. In concluding, I provide a number of recommendations that would promote awareness of elderly perspectives among the broader public in the European Arctic.

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23 I have conducted interviews with the elderly informants with their permission. I promised the informants that I would maintain strict confidentiality in regard to disclosing their identity. I am aware of the ethical principles, such as participants' consent, respecting their right to the confidentiality, anonymity, privacy and protection from harm.

24 Heuristic techniques refer to speculative searches serving as a guide in the construction of the themes for analysis. I have initially tested themes against the data and then tried to find different alternatives. See also http://www.thefreedictionary.com/heuristic (accessed November 29, 2012)

25 A deductive-inductive method starts from a theoretical perspective and then proceeds to examine empirical data while constructing the themes for analysis. See also Miles, Mathew B., and A. Michael Huberman, *Qualitative Data Analysis.* London: Sage Publication, 1994, 83-98.

26 Elo, Satu and Helvi Kyngäs, "The Qualitative Content Analysis Process," Journal of Advanced Nursing 62(1) (2007): 107-115. The article is a description of inductive and deductive analysis.

2. The Impact of Climate Change on the Elderly Population in the Arctic Region

The Arctic consists of the northern parts of Norway, Sweden, Finland, Canada, Russia, the United States (Alaska), and whole of Greenland and Iceland.[27] The region is inhabited by almost four million people.[28] They include local people and recent arrivals, hunters and herders, and city dwellers. These groups comprise different proportions of indigenous and non-indigenous peoples.[29] Elderly people are significant in number among all of them. Despite the fact that the challenges posed by climate change affect all of the region's population, as discussed earlier, elderly people are particularly vulnerable. While aging itself, or turning 65, does not make a person vulnerable, socio-cultural factors and physiological conditions exacerbated by the negative impacts of climate change do create greater vulnerability.[30]

The population densities of Finland, Sweden and Norway are low and the northern parts of these countries are sparsely populated compared to Russia.[31] According to national statistics of Finland, Sweden and Norway, these countries are considered home to a particularly elderly population and are characterised by a low birth rate.[32] Throughout the twentieth century, the Russian North had a far higher population than other circumpolar regions of the world, but after 1989, because of the collapse of the Soviet Union, the region experienced a rapid population decline. However, this did not have a substantial influence on the elderly, particularly among indigenous populations. The indigenous population in the Arctic lives primarily in rural areas.[33] The northern parts of Finland, Sweden, Norway and Russia are treated as a homeland

27 See the definition of "Arctic" developed by the Arctic Monitoring and Assessment Programme (AMAP), Arctic Council, http://arctic-council.org/filearchive/AHDRmap_lan-3.jpg (accessed November 1, 2012).

28 Bogoyavlenskiy, Dimitry, "Arctic Demography" in *The Arctic Human Development Report*, ed. Níels Einarsson, Joan Nymand Larsen, Annika Nilsson, Oran R. Young, Akureyri, Stefansson Arctic Institute, 27; See also Fallon, Stacy. "Don't leave the Sami out in the cold: The Arctic region needs a binding treaty that recognizes its indigenous peoples' right to self-determination and free prior and informed consent," *Law of the Sea Reports* 3(1) (2012): 5, http://www.asil.org/losreports/vol3/4%20-%20Indigenous%20peoples%20in%20the%20Arctic.pdf (accessed November 1, 2012).

29 Parkinson, Alan J., "Climate Change and Infectious Disease: Impact on Human populations in the Arctic," *Centers for Disease Control and Prevention*, 156 (2) (2008): 104-178, http://www.ncbi.nlm.nih.gov/books; See also Susan Joy, (2004), *supra note* 15: 6, http://www.acia.uaf.edu (accessed April 10, 2012).

30 Filiberto, David, Elaine Wethington, Karl Pillemer, Nancy M. Wells, Mark Wysocki and Jennifer True Parise. "Older People and Climate Change: Vulnerability and Health Effects," *Generations* 33(4) (2009): 19-25.

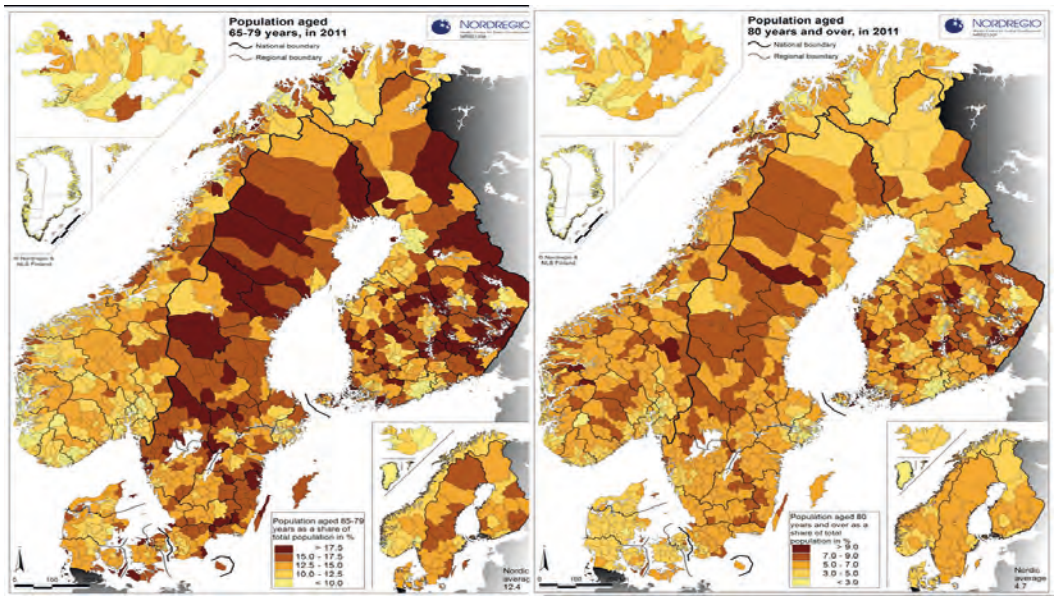
31 Hassler, Sven, Per Sjölander and Urban Janlert. "Northern Fennoscandia" in *Health Transitions in Arctic Populations*, ed. Young, T. Kue, and Peter Bjerregaard. Toronto: University of Toronto Press, 2008, 106.

32 Sven et al. (2008), *supra note* 31: 107.

33 Kozlov, Andrew and Dmitry Lisitsyn. "Arctic Russia," in *Health Transitions in Arctic Populations*, ed. Young, T. Kue, and Peter Bjerregaard.Toronto: University of Toronto Press, 2008, 94-95.

for the Sámi people. It is difficult, however, to estimate the total population of the Sámi in these countries.[34]

Figure - 2: Population aged 65-79 years and 80 years and over in 2011.



Source: Nordregio at www.nordregio.se

As mentioned, climate change gives rise to major challenges in the region, where it has prompted socio-economic, cultural, environmental and infrastructural concerns. The distinct groups of people, both indigenous and elderly, in the Arctic, especially in its remote regions, already survive with little public support, poor economic infrastructure and poor communication services. The population in the region suffers to a great extent from insufficient access to community health and acute care systems, as these are minimal and poorly financed in distant areas.[35] These factors create a complex social situation which stifles economies, undercuts livelihoods, undermines development and exacerbates discrimination[36] between the sexes.[37] In many cases, such changes encourage the migration of young people to urban areas outside the region; they leave their elderly relatives behind, which results in isolation for the elderly. Even though climate change has both positive and negative impacts on Arctic communities, it poses distinct

34 Hassler, Sven, Siv Kvernmo, and Andrew Kozlov. "Sami" in *Health Transitions in Arctic Populations*, ed. Young, T. Kue and Peter Bjerregaard.Toronto: University of Toronto Press, 2008, 148.

35 Andrew et al. (2008), *supra note* 33: 96.

36 Natalia (2011), *supra note* 13. http://www.globalhealthaction.net/index.php/gha/article/view/7913/11542

37 "State of World Population 2009 : Facing a changing world - Women, population and climate," (Publisher/Organizer: United Nations Population Fund, 2009), 1, http://www.who.int/pmnch/topics/research_statistics/2009_unfpa_worldpopulation/en/index.html (accessed October 13, 2012).

challenges from both social and economic perspectives.[38] The following sections illustrate the anticipated effects of climate change on the region's elderly.

2.1. Economic and Social Effects

The Arctic region is changing and is becoming more dependent on a mixed economy, that is, a compilation of formal and informal, cash and traditional harvesting with formal economy being predominant.[39] For thousands of years, indigenous communities have survived on natural resources. Technology has changed, and the cash economy now plays an important role in the region.[40] In villages and in many non-indigenous rural households, people are still dependent on natural resources, with elderly people constituting a significant proportion of this population. Changes stemming from the climate may pose the most serious threat to the cultural mechanisms among the Arctic communities. Traditional subsistence based on hunting, trapping, fishing, and herding activities is diminishing and shifting towards a cash economy based on industrial production.[41] Consequently, the economies of small and remote communities, already vulnerable to changes in global economic conditions, suffer drastically.[42] Arctic climatic processes influence global conditions, which in turn contribute to further change in the Arctic.[43] Moreover, the elderly who are in one way or another engaged in economic activities face multifaceted difficulties. It is crucial to remember that climate change is only one of the many factors occasioning social change and health in the Arctic.[44] For example, elderly Russian women who come from across the border to do business in the open market in Kirkenes (a border town in the northeastern Norway) have been found to suffer from a greater economic risk because of unpredictable weather conditions, as this causes them to lose business.[45] Adding to their losses is that they have to pay the authorities a prescribed fee in advance to reserve a place in the open market for a specific period of time, and to pay a visa fee.

As far as the elderly in the Arctic are concerned, one of the major problems is the population decrease, in particular the decline in the number of young people.[46]

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38 Rasmussen, Rasmus Ole "Gender and Generation: Perspectives on Ongoing Social and Environmental Changes in the Arctic," *Journal of Women in Culture and Society* 34 (3) (2009): 525.

39 Alan J. (2010), *supra note* 3: 9.

40 Langdon, Steve J. "Increments, ranges, and thresholds: Human population responses to climate change in northern Alaska," in *Human Ecology and Climate Change: people and resources in the far North* ed. Peterson, David L., and Daryll R. Johnson. Washington, D.C.: Taylor and Francis, 1995, 152-155.

41 Bjerregaard, Peter, James Berner and Jon Oyvind Odland, "Environment and Living conditions," in *Health Transitions in Arctic Populations,* ed. T. Kue Young and Peter Bjerregaard, Toronto: University of Toronto Press, 2008, 174.

42 Mark (2000), *supra note* 1.

43 Alan J. (2010), *supra note* 3: 9-40.

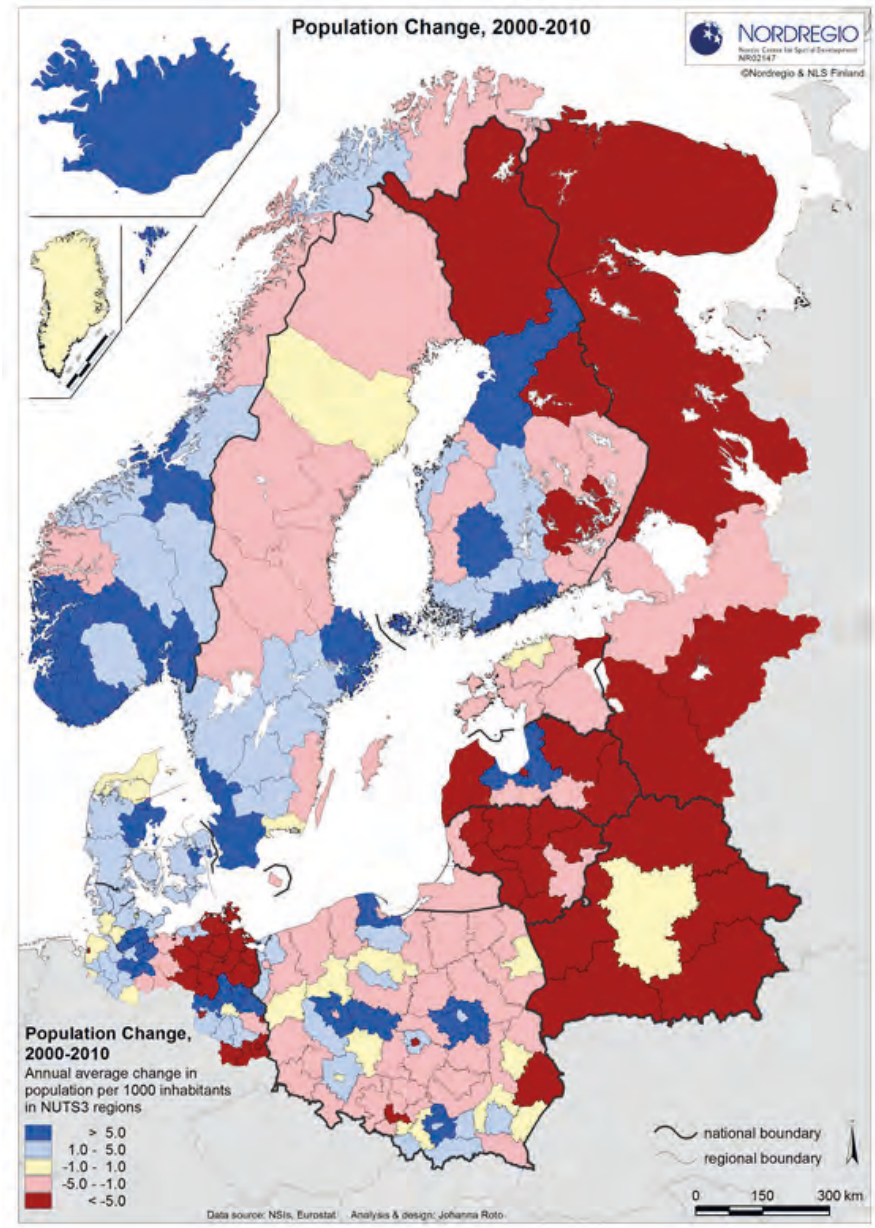
44 Peter et al. (2008), *supra note* 41:189.

45 This example was taken up in a workshop entitled "Barents International Political Economy: Governance and Gender", held at the Arctic Centre of the University of Lapland on 15 December 2010. It was mentioned that climate change has a negative impact on elderly women's life; they are particularly vulnerable economically.

46 Rasmus Ole (2009), *supra note* 38: 525.

Poor living conditions and lack of opportunities to pursue a livelihood, as well as unpredictable economic sustenance and a lack of available local and traditional resources, prompt the region's young people migrate to urban areas. In most cases, the elderly are left alone. For the elderly, losing family ties and social bonds with loved ones contributes to psychological stress. In addition, their limited mobility prevents them from engaging in social activities such as social networks and social gatherings. The overall results are isolation and helplessness.

Figure - 3: Population Change, 2000-2010



Source: Nordregio at www.nordregio.se

The elderly people of the region feel worthless, which may ultimately result in psychological problems. Social isolation, on the one hand, and chronic diseases linked to old age, on the other, together cause a greater risk to the region's elderly population,[47] a risk further exacerbated by what is an ongoing socio-infrastructural transformation. Tom Osterkamp, a permafrost expert at the University of Alaska, has stated that climate change has already started causing unbalanced substrates for roads, pipelines and buildings, leading to socio-infrastructural changes that threaten Arctic communities,[48] with elderly people being those most seriously threatened. Melting permafrost, for example, can impair or even destroy the sanitation infrastructure and other public health infrastructures important to the elderly. In Alaskan communities, the population decline has significantly influenced communities' subsistence activities, which in turn negatively impacts social and economic life.[49] Consequently, elderly people suffer from narrow and restricted economic and social lives.

2.2. Health Impacts

Effects on health are among the most obvious consequences of climate change[50] in the Arctic,[51] ones documented in scientific research as well as in discussions with elderly informants. The impacts vary from place to place due to regional differences in climate change as well as variations in health status, psychological and social characteristics,[52] and the adaptive capacity of different populations.[53] A rise in temperature is expected to cause a significantly higher mortality risk among the elderly in the Arctic.[54] Extreme cold and a longer wet season bring other health problems to elderly people, such as hypothermia,[55] bronchitis, and pneumonia.[56] The cold climate also

47 Haq, Gary, John Whitelegg and Mervyn Kohler, *Growing old in a changing climate: Meeting the challenges of an ageing population and climate change.* Stockholm: Stockholm Environment Institute, 2008, 19.

48 Tom Osterkamp, Geophysical *Institute Quarterly*, 12(2) (University of Alaska, Fairbanks, 1994), http://archive.greenpeace.org/comms/97/arctic/library/region/people.html (accessed October 13, 2012); See also Arctic Research Consortium of the United States (ARCUS), "People and the Arctic: The Human Dimensions of the Arctic System,"(Prospectus for Research, University of Alaska, Fairbanks, 1997).

49 Beamish,Richard J. "Response of anadromous fish to climate change in the North Pacific," in *Human Ecology and Climate Change: people and resources in the far North* ed. Peterson, David L., and Daryll R. Johnson.Washington, D.C.: Taylor and Francis, 1995, 133.

50 Alan J. (2010), *supra note* 3: 9.

51 Scheraga, Joel. "Overview of the health implications of climate change in the Arctic" (paper presented in the Workshop held in Anchorage, Alaska, February 13–15, 2008), http://www.circumpolarhealthjournal.net/index.php/ijch/article/viewFile/18295/20987 (accessed October 19, 2012).

52 Alan J. (2010), *supra note* 3: 9-40.

53 Geller, Andrew M. and Harold Zenick, "Aging and the environment: A research framework," *Environmental Health Perspectives* 113(9), (2005): 1257-1262; See also Alan J. et al. (2009), *supra note* 14: 84.

54 Anthony Costello et al., "Managing the health effects of climate change," *Lancet* 373(2009): 1693-733.

55 Alan J. (2010), supra note 3: 10.

56 *Guide on Climate Change & Indigenous Peoples.* Philippines: Tebtebba Foundation, 2009, 11.

causes increased morbidity, as well as injuries and accidents.[57] In the cold the most common symptoms are respiratory symptoms and poor blood circulation, which can limit outdoor activities among the elderly. Interestingly in this regard, Professor Birgitta Åhman mentioned at the 10th Annual Research Seminar of the ARKTIS Doctoral Programme[58] that extreme heat could be better than extreme cold for the elderly in the Arctic region.

The mental health of the elderly is also likely to be affected by the region's climate-related changes. With ageing, the human body's adaptive capacity diminishes in extreme temperatures.[59] A longer period of damp and cold weather will in some cases also affect the people's cognitive abilities.[60] Population dislocation and community disruption may negatively affect village habitability. Lack of social networks, loneliness, and extensive isolation combined with physical infirmity due to diseases related to old age are likely to cause psychological effects for the region's elderly. Loneliness makes the elderly easily feel frustrated and mentally ill.[61] Some of the interviewees from an elderly services institution in Rovaniemi mentioned that during the last two years the long winter had limited their outside activities.[62] Because of this, their diabetes and other chronic diseases worsened to some extent. The director of the institution also mentioned, based on her experiences from the last few years that both extreme cold and hot weather seemed to accelerate morbidity among the elderly residents.[63]

Ageing brings functional changes such as reduced gastric acid production, changes in respiratory function, decline in blood flow, decline in pulmonary excretion, and neurological degeneration, which have been observed among the elderly. Climate change accelerates these;[64] for example, in the cold season, morbidity from cardiovascular and respiratory diseases increases.[65] Physical isolation and an increased prevalence and virulence of infectious diseases become apparent.[66] Rural

57 Mäkinen, Tiina, and Mika Rytkönen, "Cold Exposure, Adaptation, and Performance," in *Health Transitions in Arctic Populations*, ed. Young, T. Kue, and Peter Bjerregaard. Toronto: University of Toronto Press, 2008, 254-255.

58 The 10th Annual Research Seminar of the ARKTIS Doctoral Programme was held on 15-16 March 2012, in the Arctic Centre, at the University of Lapland. The seminar was entitled "Science-Policy Interface – Societal Impacts of Arctic Research", organized by ARKTIS Doctoral Programme, http://www.arcticcentre.org/InEnglish/NEWS.iw3?showlocation=f635495a-a791-4226-8d81-cf5b-365d79ec&newsID=fde0b36f-5e74-45dd-a734-b2f18324b1d1 (accessed October 4, 2012).

59 Haines, Andy and Jonathan A. Patz, "Health effects of climate change," *Journal of the American Medical association* 291(1) (2004): 99-103.

60 Tiina et al. (2008), *supra note* 57: 253; See also "Environmental Health Older Adults and Seniors (Elders)," (Research Paper Assembly of First nations Environmental Stewardship Unit, March 2009, p. 1-30), http://www.afn.ca/uploads/files/rp-enviro_health_and_older_adults_and_seniors.pdf (accessed October 31, 2012).

61 Haq, Gary John Whiteleg and Mervyn Kohler, *Growing old in a changing Climate: Meeting the challenges of an ageing population and climate change.* Stockholm: Stockholm Environment Institute, 2008, 11.

62 See *supra note* 22.

63 *Ibid.*

64 Andrew M. et al. (2005), *supra note* 53: 1259.

65 Young, T.Kue. Circumpolar Health Atlas. Toronto: University of Toronto Press, 2012, 128-129.

66 *Guide on Climate Change & Indigenous Peoples* (2009), *supra note* 56: 22.

Arctic residents in small, isolated communities with a fragile system of support appear to be the most vulnerable because of meagre infrastructure and marginal or non-existent public health systems. Certain food- and water-borne infectious diseases have been found to be related to the damaged sanitation infrastructure[67] and other climate-sensitive vector-borne infectious diseases may emerge.[68] In addition, social and economic disadvantages limit the capacity of the elderly to avoid the negative health impacts of climate change.[69]

2.3. Health Implications relating to Food Consumption

Climate change in the Arctic affects the availability of traditional food, especially in the distribution of fish and wildlife.[70] As a result, significant changes occur with major health implications. Locally harvested food decreases. Traditional food is important in a social and cultural context. In Finnish Lapland, eight of the fourteen elderly respondents interviewed about their daily food habits, mentioned that they do not eat traditional food on a regular basis.[71] Participants also replied that it is difficult and expensive to find traditional food regularly. Access to traditional food is becoming difficult because of multiple stresses caused by climate change, resulting in vulnerability to the elderly, and this may increase in the future with the acceleration of climate change.[72] In Nunavut, the Keewatin research stated that 81 per cent of the elderly people relied on meat consumption.[73] The rate of economic, social and political changes in the Arctic societies has had a strong impact on the manner in which societies and people interact with the environment.[74]

Climate change could have an impact on regular freeze–melt cycles, causing difficulties, for example, for reindeer to find food. In the northern part of Russia, quite many reindeer have died because of starvation. These kinds of losses create threats to human nutrition, which affect mainly the elderly and children. Decreases in commercially important species, such as salmon, are likely to create economic hardship and health problems associated with reduced income in the traditional small communities.[75] Because of a lack of traditional food, the region's population is forced

67 Alan J. (2010), *supra note* 3: 9-12.
68 Alan J. et al.(2009), *supra note* 14: 84.
69 Peter et al. (2008), *supra note* 41: 173-191.
70 Parkinson, Alan J. (2010), supra note 3: 9-12.
71 See supra note 22.
72 Goldhar, Christina, James D. Ford, Lea Berrang-Ford, Prevalence and determinants of food insecurity in Qeqertarsuaq, Greenland, 2010, http://soa.arcus.org/sites/soa.arcus.org/files/sessions/2-1-observations-arctic-change/pdf/goldhar-2.pdf (accessed November 1, 2012).
73 Bjerregaard, Peter and Marit Jorgenson, "Diet, Nutrition, and Physical Activity", in Health Transitions in Arctic Populations ed T. Kue Young and Peter Bjerregaard, University of Toronto Press, 2008, 194.
74 Moerlein, Katie J. and Courtney Carothers, "Total Environment of Change: Impacts of Climate Change and Social Transitions on Subsistence Fisheries in Northwest Alaska," *Ecology and Society* 17(1) (2012):10,http://www.ecologyandsociety.org/vol17/iss1/art10/ (accessed October 15, 2012).
75 Alan J. (2008), *supra note* 29: 161.

to rely on imported western food,[76] which on the one hand is expensive[77] and, on the other, is known to increase the risk of cancer, obesity, diabetes, and cardiovascular diseases among these people.[78]

2.4. Cultural Effects

In the Arctic, the cultural dimension of local and traditional communities plays a significant role in their livelihoods.[79] The indigenous and local communities of the region rely on traditional activities for their livelihood,[80] although currently to a limited extent, with these ranging from rotational agriculture to hunting, gathering, trapping and coastal and marine fishing.[81] Traditional knowledge plays an important role both in traditional activities and in maintaining traditional cultures. The elderly people are the holders of such traditional knowledge. Because of climate change, the overall ecosystem in the Arctic is changing rapidly,[82] rendering traditional knowledge unreliable. As a result, traditional activities have today been undermined in many cases.[83] It should also be noted that indigenous women in many parts of the Arctic region are treated as the custodians of traditional knowledge and cultural practices, especially with respect to the maintenance of biodiversity and environmental sustainability.[84] The impact of climate change on indigenous women takes the form of an erosion of their world views, culture and identity, which are intricately woven into their relationship to their land and resources.[85] The loss of traditional plants, as well as the decline of traditional knowledge regarding their conservation, reduces the opportunity for future generations to learn and practice traditional health, biodiversity conservation and protection, and food safety.[86] From the perspective of the elderly, climate change contributes to uncertainty in predictions based on traditional knowledge; uncertainty then makes them lose respect from the younger generation, since the knowledge they bear is no longer as accurate as it used to be. For example, elderly in the Arctic can no

76 Alan J. (2010), *supra note* 3: 10.

77 Jorgenson, Marit and Kue Young, "Cardiovascular Diseases, Diabetes, and Obesity", in Health Transitions in Arctic Populations ed. T. Kue Young and Peter Bjerregaard, University of Toronto Press, 2008, 291.

78 This assertion was supported by the discussants in the scientific workshop titled "Indigenous Knowledge systems", held on 4 of October 2012 at the Arctic Centre in Rovaniemi. See http://www.arcticcentre.org/InEnglish/NEWS.iw3?showlocation=f635495a-a791-4226-8d81-cf5b-365d79ec&newsID=fde0b36f-5e74-45dd-a734-b2f18324b1d1 (accessed October 6, 2012).

79 The discussions by Dr. Elina Helander-Renvall, senior scientist, in the workshop "Indigenous Knowledge Systems" which was held on 4 October 2012 at the Arctic Centre, Rovaniemi.

80 Alan J. (2010), supra note 3: 10.

81 Hinzman, Larry D. et el., "Evidence and implications of recent climate change in northern Alaska and other Arctic regions," *Climatic Change* 72(2005): 251-298.

82 Alan J. (2010), *supra note* 3: 10.

83 *Guide on Climate Change & Indigenous Peoples* (2009), *supra note53:* 22.

84 Dankelman, Irene. *Gender and Climate Change: An Introduction.* Washington, USA: Earthscan Ltd, 2010, 146.

85 Irene (2010), ibid,148.

86 *Guide on Climate Change & Indigenous Peoples* (2009), *supra note* 56.

longer predict the weather using their traditional knowledge.[87] Since the elderly are the custodians of traditional culture and traditional knowledge in traditional Arctic communities, the loss of culture due to the challenges of climate change will cause mental and psychological distress to that segment of the population.[88]

Identity is an important issue for the elderly. Subsistence activities not only provide nutrition for the elderly but are also connected to their social values - a sense of family and community which is part of their culture and life. In Yukon Territory, the life of those dependent on traditional subsistence is directly affected by global climate change and they have no alternatives to their traditional livelihoods.[89] As climate change in the Arctic disrupts the social and cultural structure significantly,[90] the identity of the people of this specific region is at risk. As mentioned earlier, the region is inhabited by a significant number of indigenous peoples; their ethnic cultural identity is the core of their communal survival, which is being disrupted as a consequence of ongoing socio-cultural changes caused by rapid climate change. Consequently, the elderly people of these communities become even more frustrated as their community identity suffers from the risk of disappearing.[91]

3. International Legal Instruments and Elderly Human Rights

There are a number of human rights instruments that are applicable in the European High North. These instruments consist of both universal and regional agreements. Even though no explicit reference to older persons is made in these instruments, many provisions are of direct relevance to safeguarding the rights of the elderly. Each of the instruments has its own functioning mechanism. The instruments adopted within the auspices of the United Nations (UN), when combined with their implementation mechanism, contemplate an international or UN human rights system. They constitute an international bill of human rights, which includes six documents:[92] the Universal Declaration of Human Rights (UDHR), International Covenant on Civil and Political Rights (ICCPR) and its two Optional Protocols, and International Covenant on Economic, Social and Cultural Rights (ICESCR) and its Optional Protocol. Whereas the UDHR is only a non-binding declaration, the other instruments are binding upon the ratifying states. In addition to the UN system, there are regional

87 Henrikson, John B. "Draft Report on Indigenous and Local Communities Highly Vulnerable to Climate Change," (2007), 22,l http://www.cbd.int/doc/meetings/tk/acpow8j-02/official/acpow8j-02-03-en.pdf (accessed October 12, 2012).

88 Alan J. (2010), *supra note* 3: 9-10.

89 Kassi, Norma. "Native perspective on climate change, in Impacts of Climate Change on resource Management in the North", in *Department of Geography Occasional Paper no. 16*, ed. G. Wall. Ontario: University of waterloo, 1993, 43-49.

90 Alan J. et al. (2009), *supra note* 14: 88.

91 Doherty, Thomas J., and Susan Clayton. "The psychological Impacts of Global Climate Change." *American Psychologist* 66 (4) (2011): 265-276; *Best Practice Working safety in the Heat and Cold*, A work Safe Alberta, 2012, 21, http://humanservices.alberta.ca/documents/WHS-PUB_GS006.pdf (accessed November, 30, 2012).

92 Alfredsson, Gudmundur. *Human Rights and Indigenous Rights.* Chapter 8 in "Polar Law Textbook". Copenhagen: Nordic Council of Ministers, 2010, 150.

human rights systems in Africa, Europe and the Americas. Each of these systems has its unique set of human rights treaties and regulatory mechanisms. These three regional human rights systems mention the older population in particular as a group in need of special protection.[93] Each of these regulatory mechanisms determines the current status of elderly rights within these various frameworks. There are also other human rights instruments targeting specific groups of people, such as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW Convention), the Convention on the Rights of Persons with Disability (CRPD), the Convention Relating to the Status of Refugees, International Labor Organization (ILO) Convention No. 169 concerning Indigenous and Tribal Peoples and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP). These instruments also refer to some of the rights that are applicable to elderly people.

3.1. The UN Human Rights System

A number of instruments adopted under the UN system, for example, the UDHR, contain provisions applicable to elderly people. Even though the Declaration does not impose binding obligation upon states, many of its provisions have been incorporated into both the ICCPR and the ICESCR. For example, article 25(1) states:

> Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.[94]

These rights can also be found in the ICESCR. A number of its other provisions are also directly linked to elderly people, for example, those set out in articles 3, 6, 9, 10, 11, 12 and 13, which concern the right to work, to social security, to family life and to health, among others. A number of provisions in the ICCPR are also relevant in the context of the elderly. Article 6, for example, asserts that every human being has the inherent right to life, and no one is to be arbitrarily deprived of his or her life. Article 27 addresses the protection of minority culture, which includes protection of culture and the cultural lives of indigenous and other ethnic minorities. The article is applicable to elderly persons belonging to indigenous and ethnic communities.

To return in more detail to the relevant provisions of the ICESCR, article 6 guarantees the right to work, which allows individuals to live with personal freedom and dignity. The right to work also includes earning a living, and decent working conditions. As they may suffer from various health-related problems, elderly persons

93 See "Elderly Persons," Icelandic Human Rights Centre, http://www.humanrights.is/the-human-rights-project/humanrightscasesandmaterials/humanrightsconceptsideasandfora/Undirflokkur/elderlypersons/ (accessed February 28, 2011).

94 Article 25 (1), Universal Declaration of Human Rights, G.A. Res. 217A (III), U.N. Doc. A/810 at 71 (1948), http://www.un.org/en/documents/udhr/index.shtml#a25 (accessed March 5, 2012).

may be arbitrarily dismissed even before retirement age. Such a situation brings serious hardship, especially in remote areas of the Arctic. Moreover, a person's unpredictable physical and mental condition at an advanced age may make it difficult to maintain the ability to work full time. By virtue of this article, among others, the elderly people are able to demand secure work or other alternative arrangements should they face difficulties connected to old age.

Article 9 of the ICESCR is also applicable to the protection of elderly people's rights.[95] The article addresses the right to social security. The right to social security is an essential right, particularly when a person is not able to secure an adequate standard of living through work, due to unemployment, old age or disability.[96] An interesting case from the Inter-American level can be cited here in regard to the elderly persons. In the case of *Menéndez et al.* v. *Argentina*[97] a group of retired persons alleged that in order to seek an adjustment in their retirement benefits, they had to deal with a complex administrative and judicial system that made them unable to enjoy their right to social security. The alleged violation took the form of delayed judgments and inadequate enforcement of judgments, and as well as discriminatory behaviour on the part of the state agents whereby certain retired persons, such as members of the legislative and judicial branches, were privileged. The petitioners maintained that their right to health, well-being and life had been adversely affected as the situation had prevented them from buying food, essential services and medicine.[98] The right to secure work and social security are therefore interconnected. A gender dimension of elderly rights can also be established here, one relevant to non-discrimination between men and women. Article 3 sets out equal rights for men and women in the enjoyment of economic, social and cultural rights. According to the Committee on ESCR (the treaty-monitoring body of the ICESCR), the spirit of article 3 is meant to inspire equal rights by having men take on household responsibilities, which would eventually contribute to reduction of discrimination.[99] Inequality in old age is seen in pension benefits in cases where women who have taken care of the family at home

95 Article 9 guarantees the right of everyone to social security, including social insurance. See International Covenant on Economic, Social and Cultural Rights, Dec. 16, 1966, 993 U.N.T.S. 3; S. Exec. Doc. D, 95-2 (1978); S. Treaty Doc. No. 95-19, 6 I.L.M. 360 (1967), http://www2.ohchr.org/english/law/cescr.htm (accessed October 20, 2012).

96 Eide, Asbjørn, and Allan Rosas, "Economic, Social and Cultural Rights: A Universal Challenge," in *Economic, Social and cultural rights: A Text Book*. Asbjørn Eide, Catarina Krause, and Allan Rosas. Dordrect: Martinus Nijhoff Publishers, 2001, 3-8; See also Eide, Asbojrn, "Economic, Social and cultural rights as Human rights," in *Economic, Social And Cultural Rights: Text Book, 2001*," *Harvard Human Rights Journal*, 16 (2003): 563, http://www.law.harvard.edu/students/orgs/hrj/iss16/booknotes-Economic.shtml (accessed March 5, 2012).

97 Amilcar Menéndez, Juan Manuel Caride, et al. *Case Nº 11.670. Report Nº 03/01 [ENG]*, http://www.escr-net.org/docs/i/414336 (Accessed November 24, 2012).

98 "Elderly persons" *supra note* 95. The Inter-American Commission declared the case admissible on its merits since it interfered with the right to judicial guarantees in article 8(1), property rights in article 21, equal protection of law in article 24 and effective remedy in article 25(2)(c) of the American Convention. It also engaged the rights to the preservation of health and well-being in article XI and the right to social security in relation to the obligation to work and contribute to social security in article XVI, XXXV and XXXVII of American Declaration on the Rights and Duties of Men.

99 The ICESCR General Comment 20, http://www.unhchr.ch/tbs/doc.nsf/0/482a0aced8049067c12563ed005acf9e?Opendocument (accessed March 6, 2012).

receive less in the way of pension benefits as they have contributed less to the social security system financially.

Article 10 is relevant as far as protection of family life[100] is concerned in that elderly care is an essential part of maintaining family life. States are even required to provide financial support to family members who care for the elderly at home. Other relevant provisions include article 11 concerning the right to an adequate standard of living, including adequate food, water, shelter, clothing and housing, and the right to the continuous improvement of living conditions; article 12 referring to the right to physical and mental health; and articles 13 to 15 referring to the rights to education and the enjoyment of culture. These last-mentioned reflect two views on how states should approach the education rights of the elderly: First they are to facilitate educational programs for the elderly and, secondly, make efforts to pass on elderly people's knowledge and experience to the younger generation as part of that generation's right to education.[101]

3.2. Targeted Human Rights Systems

The UN system of human rights is generally applicable to all persons. There are, however, mechanisms available for the protection of the human rights of particular groups. Several instruments have taken on fundamental significance in the safeguarding of human rights for the targeted groups. The instruments with particular importance for the elderly rights include the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW Convention) of 1979, International Labour Organization (ILO) Convention No. 169 concerning indigenous and tribal peoples (1989), the Convention on the Rights of Persons with Disability of 1975 (Disability Convention), the Convention Relating to the Status of Refugees of 1951 (Refugee Convention) and the UN Declaration on the Rights of the Indigenous Peoples (UNDRIP) of 2007. Each of these instruments contains a number of articles that are either directly or indirectly linked to elderly people. The CEDAW, for example, in its article 11(1) (e), clearly mentions the need to eliminate discrimination between men and women related to old age and disability. Other provisions applicable to elderly rights are the general non-discrimination rights (article 1 and 2), non-discrimination as regards participation in public and political life as well as in decision making (article 7),[102] and non-discrimination with regard to health, economic and social benefits (article 12 and 13).[103]

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100 Mégret, Frédéric. *The Human Rights of the Elderly: An Emerging Challenge*. Social Science Electronic Publishing, 2010, 10, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1584303 (accessed August 15, 2011).

101 Rodriguez-Pinzón, Diego and Claudia Martin, "The International Human Rights Status of Elderly Persons," *American University International Law Review* 18 (4) (2003): 973.

102 See The Convention on the Elimination of All Forms of Discrimination against Women, G.A. res. 34/180, 34 U.N. GAOR Supp. (No. 46) at 193, U.N. Doc. A/34/46, entered into force Sept. 3, 1981, http://www1.umn.edu/humanrts/instree/e1cedaw.htm (accessed October 20, 2012).

103 *Ibid*.

A number of articles in the Disability Convention are also applicable to elderly people. A clear reference to elderly persons is found both in article 25 regarding access to health service and in article 28 regarding an adequate standard of living and social protection. In addition, a number of other provisions have direct bearing on the enjoyment of the rights belonging to elderly people: equality and non-discrimination (article 5),[104] women with disability (article 6), accessibility (article 9), and the right to life (article 10), to live independently and be included in the community (article 19), to habilitation and rehabilitation (article 26), to work and employment (article 26), and to participation in political and public life (article 29) as well as in cultural life (article 30). Among the other conventions, the Refugee Convention refers to social security rights in old age (article 24), and both ILO Convention No 169 and the UNDRIP embody several provisions which are applicable to elderly indigenous persons[105]: for example, article 5 of ILO Convention 169 concerns social, cultural, religious and spiritual values and practices and articles 24 and 25 set out rights concerning social security and health;

3.3. The Regional System of Human Rights

In addition to the UN-initiated human rights mechanisms, there are other regional systems available that guarantee the protection of human rights in region-specific contexts. Such regional systems are, for example, the European human rights system, the Inter-American human rights system and the African system of human and peoples' rights. The European regional system is composed of the Convention for the Protection of Human Rights and Fundamental Freedoms (known as the European Convention on Human Rights ECHR) of 1950 and of several protocols which have amended the Convention framework. The ECHR entered into force in September 1953. For the better implementation of human rights provisions, the Convention established the European Court of Human Rights (ECtHR), the judgments of which are monitored by the Committee of Ministers of the Council of Europe.[106] There are several articles in the ECHR that are either directly or indirectly linked to elderly people: for example, article 2 talks about the right to life; article 8 states that everyone has the right to respect for his or her private and family life; and article 14 asserts non-discrimination in enjoyment of the rights and freedoms.[107]

The Inter-American human rights system is composed of a number of instruments, of which the principal ones are the American Declaration of Rights and Duties of

104 See The International Convention on the Protection and Promotion of the Rights and Dignity of Persons with Disabilities, G.A. Res. 61/106, Annex I, U.N. GAOR, 61st Sess., Supp. No. 49, at 65, U.N. Doc. A/61/49 (2006), entered into force May 3, 2008, http://www1.umn.edu/humanrts/instree/disability-convention2006.html (accessed October 20, 2012).

105 See The United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/RES/61/295 (Sept. 13, 2007), 46 I.L.M. 1013 (2007), http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312314 (accessed October 20, 2012).

106 See The European Convention on Human Rights, http://www.hri.org/docs/ECHR50.html, (accessed November 1, 2012).

107 *Ibid.*

Men of 1948, the American Convention on Human Rights of 1969, the Protocol of San Salvador (Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social, and Cultural Rights) of 1988, the Inter-American Convention on the Prevention, Punishment, and Eradication of Violence Against Women of 1994, and the Inter-American Convention on the Elimination of All Forms of Discrimination against Persons with Disability of 1999. Of particular importance for elderly people is article 17 of the Protocol of San Salvador, which is dedicated in its entirety to protection of the elderly.[108]

The African human rights system has distinctive features when compared with the previously mentioned.[109] Perhaps most distinctive is its recognition of collective rights; it views the rights of individuals and of peoples as linked. The system comprises, among other elements, the African Charter on Human and Peoples' Rights (commonly known as the Banjul Charter) of 1981, which entered into force in 1986; the African Commission on Human and Peoples' Rights, established in 1987; and a Protocol to the Charter, which was adopted in 1998 in connection with the creation of the African Court on Human and Peoples' Rights and which came into force on 25 January 2005. Several articles of the Banjul Charter are linked to elderly people: for example, article 14 mentions the right to property; article 16 sets out the right to enjoy physical and mental health; and article 17 guarantees the right to take part in cultural life and the right to the promotion and protection of moral and traditional values. Only article 18 expresses directly the protection of the elderly and disabled persons.[110] In guaranteeing the protection of fundamental human rights, these regional systems also safeguard the protection of the rights of elderly persons.

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108 See the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights ("Protocol of San Salvador") (Nov. 17, 1988, O.A.S.T.S. No. 69, 28 I.L.M. 1641), http://www.oas.org/juridico/english/treaties/a-52.html (accessed October 20, 2012). Article 9 of the Protocol also refers the right to social security protecting persons from the adverse physical and mental consequences of old age in order that they may enjoy a dignified and decent existence. Article 17 reads as follows:

"Everyone has the right to special protection in old age. With this in view the States Parties agree to take progressively the necessary steps to make this right a reality and, particularly, to:

a. Provide suitable facilities, as well as food and specialized medical care, for elderly individuals who lack them and are unable to provide them for themselves;

b. Undertake work programs specifically designed to give the elderly the opportunity to engage in a productive activity suited to their abilities and consistent with their vocations or desires;

c. Foster the establishment of social organizations aimed at improving the quality of life for the elderly."

109 See The African (Banjul) Charter on Human and Peoples' Rights, adopted June 27, 1981, OAU Doc. CAB/LEG/67/3 rev. 5, 21 I.L.M. 58 (1982), entered into force Oct. 21, 1986, http://www.hrcr.org/docs/Banjul/afrhr.html (accessed October 20, 2012).

110 *Ibid*.

4. Analysis of the Human Rights Effects on Elderly in the European High North

Climate change may well impact the human rights of certain vulnerable groups in the Arctic. These include the region's aging population and persons with disabilities, for it is they who will suffer disproportionately.[111] In the Arctic, as mentioned earlier in this paper, the consequences of climate change are drastic. This section addresses how specific human rights of the region's elderly are affected because of the adverse consequences of climate change described above, in section two.

The most fundamental of all human rights is the right to life, which climate change affects in numerous ways.[112] Climate change has increasingly threatened livelihoods as well as the food safety and food security of vulnerable groups in the Arctic, including indigenous peoples.[113] "Life" in the right to life does not mean mere physical existence, nor does it mean only freedom from oppression, torture, imprisonment or other forms of physical violence. Rather, it includes enjoyment of an environment in which the right is safeguarded, can flourish and is effectively promoted. Human rights are inalienable, indivisible and interconnected.[114] Therefore, a right to life cannot be only understood literally. Other rights, such as the right to food, health, and clean water, and the right to live in a decent environment and be free from a threat to any other basic need (such as a need for access to health care facilities), all are in one way or another connected to a right to life. In the Arctic, elderly persons' right to life therefore has to be addressed in terms of these components.

The right to food, for example, is embodied in article 11 of the ICESCR. Based on the provisions of this article, Pooja Ahluwalia defines the right as the right to have regular, permanent and free access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensures a physical and mental fulfilment of individual and collective needs, and ensures a dignified life free of fear.[115] Changes in the amounts of ice and snow jeopardise the lives of local and indigenous communities since their food sources are threatened.[116] Vanishing of high alpine flora due to climate change disrupts the food chain and sources of medicine. Indigenous peoples living in remote and coastal areas, for example the Sea Sámi and the Inuit in Greenland, are particularly vulnerable, as their right to life,

111 McInerney- Lankford, Siobhán. "Climate Change and Human Rights: An Introduction to Legal Issues," *Harvard Environmental law Review* 33(2009): 436, http://www.law.harvard.edu/students/orgs/elr/vol33_2/McInerney-Lankford.pdf (accessed January 17, 2012).

112 Donald K. Anton, and Dinah L. Shelton. *Environmental Protection and Human Rights.* Cambridge: Cambridge University press, 2011, 18.

113 *Ibid*.

114 Human rights and Parliaments: handbook for members and stuffs, (UKaid, 2011), 57; Preamble, Universal Declaration of Human rights.

115 Pooja Ahluwalia, " The implementation of the right to food at the national level: A critical examination of the Indian Campaign on the right to food as an effective operationalization of article 11 of ICESCR," (Center for human rights and global justice working paper Economic, Social and Cultural rights Series, number 8, 2004),13.

116 Bjerregaard, Peter, and Marit Jorgenson, (2008), *supra note* 69:195-196; see also Section 2 of this article.

right to food, and right to culture are threatened.[117] The region's population mostly relies on traditional foods, which are either becoming less accessible and available or becoming contaminated.[118] On the one hand, reduced availability of sufficient local and traditional food leads to high food prices and eventual food insecurity;[119] on the other, the increased likelihood of contaminated food caused by climate change leads to greater health risks, with implications for the right to health of the region's elderly. This assertion has been also supported by research experts from the Nordic countries.[120] Clearly, the lack of an available and adequate supply of safe food impacts the right to health; yet the right may also be undermined by other detrimental shortcomings, such as a lack of any of the following: safe and potable water, adequate sanitation, proper housing, sound health and environmental conditions, access to health care facilities, and health-related education and information, including that on reproducing health.

In Arctic communities, especially the indigenous communities, the health of the individual is often linked to the health of the society as a whole and thus has a collective dimension. Numerous health-related effects caused by climate change pose a greater risk for the elderly people of these communities and require wide-ranging measures.[121] The health care facilities in the region are of particular importance. Guaranteeing these hinges on four main considerations: availability, accessibility, acceptability and quality.[122] The negative impacts of climate change limit these aspects of health care facilities in the Arctic. The region's elderly, particularly persons living in rural areas, are not effectively guaranteed these four aspects of healthcare facilities. For example, one distinctive feature of the organisation of the health care services in northern Russia is the use of mobile medical teams. The teams are not responsible for the evacuation of emergency patients from remote villages to hospitals. Most of the medical assistants and nurses working in medical stations and local hospitals in largely indigenous areas are themselves also indigenous. The number of doctors amongst the indigenous people is very low. Difficulties and misunderstandings happen very often on the part of the doctors. Doctors do not have enough knowledge on 'northern medicine' and they do not have proper training to work with indigenous people.[123]

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117 See section 2 of this article.

118 Parkinson, Alan J. (2010), *supra note* 3: 9-12.

119 Githendu, Mukiri wa, (Review Editor) Bert Metz et al., "Climate change 2007: Mitigation of Climate Change," (Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, summary for Policy makers), Cambridge: Cambridge University Press, 2007,10.

120 The discussions have been held in a workshop entitled "Indigenous Knowledge systems", held on the 4th of October 2012, at the Arctic Centre of the University of Lapland, http://www.arcticcentre.org/InEnglish/NEWS.iw3?showlocation=f635495a-a791-4226-8d81-cf5b365d79ec&newsID=fde0b36f-5e74-45dd-a734-b2f18324b1d1 (accessed October 4, 2012).

121 Anton et al. (2011), *supra note* 112: 19.

122 Paul Hunt and Judith Buenode Mesquita, Reducing maternal Mortality (EU and UNFA), 1-16, http://www.unfpa.org/webdav/site/global/shared/documents/publications/reducing_mm.pdf (accessed October 5, 2012).

123 Andrew et al. (2008), *supra note* 33: 99.

In other parts of the Arctic, for example, in Fennoscandia, telemedicine[124] facilities have been introduced in some remote areas,[125] improving the situation. Overall, the direct and indirect health impacts of climate change have significantly compromised the enjoyment of the right to health by the elderly in the region. In this context an important perspective is the participatory right of the population, including the elderly, in all health-related decision making at the community, national and international levels.[126]

For the Arctic communities, certain other human rights, such as the right to family life and the right to enjoy a particular culture, are connected to the very core of their identity. Ole Rasmussen notes that younger woman from the north are increasingly moving to urban areas, posing a risk for the elderly since they are mostly taken care of by the younger women in the family.[127] Large-scale migration such as this causes disruption of the right to private and family life (article 10 of the ICESCR) for the elderly people of the region. Where the enjoyment of cultural rights is concerned, the Arctic region is notable for its status as the home of diverse groups of indigenous peoples, for whom culture constitutes identity. A number of human rights instruments safeguard the right to maintain one's identity and practice one's culture.[128] A loss of culture and cultural identity is most significant for elderly persons, as they lose customary community norms and values as well as their confidence in the predictions of their traditional knowledge; this diminishes the "inherent dignity of the human person",[129] the core of all human rights.[130]

For an effective guarantee of the above-mentioned rights in the Arctic, protection of the environment and preservation of the ecological balance are of utmost importance. Even though the Arctic people have adapted well to the extreme and harsh climatic condition in the region, the changes occurring today are so rapid and dramatic that the people are no longer capable of adapting successfully to the changed environment.[131] The natural consequences of climate change on the overall life support system in the Arctic will impact the region's inhabitants harshly. It is argued that indigenous communities will be the critical victims of climate change in the region; the Inuit and the indigenous peoples of Russia figure prominently in the literature, but some references to the Sámi can be found as well. Yet, it is the elderly of these communities - and of other, non-indigenous communities – who will suffer the most from human rights challenges. Protection of the environment is therefore now

124 For example, one of the informants from Inari (Finnish Lapland) mentioned about limited availability of telephone consultations with health professionals; See also http://www.arctichealth.org/telehealth.php (accessed October 31, 2012).

125 Alan J. (2010), *supra note* 3: 11, 37.

126 http://www.unhcr.org/refworld/pdfid/4538838d0.pdf (accessed October 5, 2012).

127 Rasmus Ole (2009), *supra note* 38: 525.

128 See the discussions in section 3 of this article.

129 See Preamble of the ICCPR, http://www2.ohchr.org/english/law/ccpr.htm (accessed October 5, 2012).

130 This dignity for the elderly, for example, refers to the right to be respected from their younger generation.

131 Arctic Climate Impact Assessment (ACIA), Cambridge: Cambridge University Press, 2004, executive summary, 9.

widely viewed from the perspective of human rights, for it constitutes "a matter of survival" for the human community.[132]

The Inuit Circumpolar Council (ICC), for example, filed a petition with the Inter-American Commission of Human Rights (IACHR) arguing that the failure of the United States to mitigate greenhouse gases has contributed to the human-induced phenomenon of climate change. The ICC contended that this amounts to an infringement of the human rights of the Inuit people, a violation for which the US is in large part accountable.[133] In a number of cases the IACHR has recognised the inter-relationship between human rights and the environment.[134] All across the Arctic, both local and indigenous communities are at greater risk of human rights infringement. Changes in ice and snow jeopardise the lives of these communities,[135] one of the major threats being compromised food safety and security and the concomitant health concerns for the elderly. The elderly people of these communities, as the most vulnerable group, are the victims facing the most serious risks as far as their human rights are concerned. Preservation of the unique nature of the Arctic environment should not only be a policy/governance priority for the protection of the Arctic inhabitants; it should also be developed as right for its population – a right that Heinämäki has termed, with special reference to indigenous peoples, "a right to be part of nature".[136]

5. Conclusion and some Recommendations

Elderly persons' human rights become prominent issues when efforts are made to raise awareness, create ethical demands for action and construct coalitions.[137] In the context of the Arctic, particularly the European High North, concerns over the elderly have not been well addressed, let alone the particular concerns regarding their human rights. This paper therefore has endeavoured to show how climate change affects the lives, livelihood, health and well-being of the elderly, and what changes have occurred

132 Ratner, Blake D. "Environmental Rights as a Matter of Survival," *Human Rights Dialogue* 11(2) (2004):1-19, http://www.carnegiecouncil.org/publications/archive/dialogue/2_11/section_1/4440.html (accessed October 21, 2012).

133 Koivurova, Timo. "International Legal Avenues to Address the Plight of Victims of Climate Change: Problems and Prospects," *Journal of Environmental Law and Litigation*22 (2007): 267-299, who quoted "The petition identifies many different infringements of human rights that the Inuit have already experienced as a result of climate change. These include: violations of the right to life, liberty, and personal security (article I); the right to residence and movement (article VIII); the right to inviolability of the home (article IX); the right to the preservation of health and well-being (article XI); the right to the benefits of culture (article XIII); the right to work and to fair remuneration (article XIV); and the right to property (article XXIII). The petition asserts that these rights should be interpreted in light of the development of human rights in the Inter-American system of human rights and the evolution of the whole human rights regime in international law."

134 For detailed discussions, see Koivurova (2007) Ibid, p. 289

135 Alan J. (2010), *supra note* 3: 6-40.

136 Heinämäki, Leena. *The Right to Be a Part of Nature: Indigenous Peoples and the Environment.* Lapland University Press, LUP, 2010.

137 Edward (2011), *supra note* 12.

so far in the case of these particular issues. The changes include, for example, introduction of new diseases or the change in food habits. These issues are important since as a whole they serve as indicators for monitoring human development in the region. The paper has not dealt with whether the region's actors may be deemed to have any legal obligations in accordance with international human rights law; rather, it shows that climate change is the major driver of change in the region and a threat to human rights as an absolute value in a moral sense.[138] It is a development which threatens the enjoyment of fundamental human rights by the elderly people in the region. By interpreting the human rights discourse with a focus on climate change in the context of the European High North, this paper has highlighted the importance of wider attention to and awareness of the human rights issues facing the region's elderly population, the population segment most vulnerable to that change. This conclusion has further been supported by a number of interviews.[139] While most of the informants, all of whom are from Finnish Lapland, were acquainted with climate change, they were unaware of the connection between climate change and human rights. To address this shortcoming, the paper puts forward the following recommendations:

1. Awareness of the effects of global warming and climate change on elderly men and women and their human rights should be enhanced. This should be integrated into knowledge production in order to understand the process taking place in the Arctic region and to plan future development strategies. Both national and international/regional institutional mechanisms can be utilised for this purpose.
2. In order to improve the quality of life of the region's elderly, and to tackle the threats posed by climate change, policy makers, academia, relevant stakeholders as well as the elderly themselves should work together in both the national and regional policy frameworks. A human rights approach also allows the quality of life of people, specifically those in the most vulnerable group, to be incorporated into environmental decision making.
3. Accesses to health care facilities, such as that provided by mobile health care teams in remote areas, are to be more readily available, and telemedicine systems need to be more popularised among the elderly of the region. Due regard has to be given to the enormous range of experience and the traditional knowledge held by the elderly in addressing problems both at national and international/regional and local level.
4. The elderly of the region have to be ensured of their participatory rights in the promotion of relevant agendas at the local level. This would eventually contribute to problem-solving mechanisms in which the elderly would become actors in the policy- making process. Their opinions should be taken seriously in the policy making and in the implementation process.
5. A community-based monitoring strategy should be implemented so that any emerging threats and their potential effects upon the elderly can be identified

138 Knox, John H. "Climate Change and Human Rights Law," *Virginia Journal Of International* 50 (1) (2009): 166.

139 See section on methodology.

and mitigated. Local authorities should be strengthened, both economically and strategically, to ensure facilities providing safer, healthier and more environmentally sound living conditions for the elderly.

6. Respect for the elderly, cultural norms and issues of identity have to be promoted through educational tools and training so that the younger generation learns more on the uniqueness of the concerns of the elderly of the region.

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Effects of livelihood transformation on older persons in the Nordic Arctic: a gender-based analysis

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ABSTRACT. This paper addresses the transformation that has occurred in livelihoods in the Nordic Arctic, showing how it affects gender equality among the region's older people. The region's population includes the Sámi, an indigenous people, who have traditionally relied for their livelihood on activities such as reindeer herding, making handicrafts, farming, fishing, hunting, trapping and gathering. In recent years these have faced enormous challenges because of the rapid transformation of the region in the wake of climate change and globalisation. Overall, these and other processes have precipitated socio-economic, cultural, environmental and infrastructural changes that are transforming the local economies and severely impacting older people in particular. The main research question examined in this article is whether gender inequality has arisen among older people because of the ongoing transformation of livelihoods. To this end, the paper provides an empirical analysis based on experiences gathered from field studies conducted by the author in Finnish and Swedish Lapland. The research also presents the experiences of older persons in light of the standard set by General Recommendation 27 of the Committee on the Elimination of Discrimination against Women, which oversees the United Nations Convention on the Elimination of All Forms of Discrimination Against Women. The Recommendation sets out the right of older women to equality and non-discrimination. The findings of the present research contribute to filling a gap in the literature on the topic.

Introduction

The Arctic is a peripheral region whose population includes a number of local and indigenous groups with distinctive cultural backgrounds. The Nordic Arctic is home to the Sámi, the European Union's only recognised indigenous people. The Sámi homeland, known as Sápmi, stretches across the northern parts of Norway, Sweden, Finland and the Russian Kola Peninsula. The region's inhabitants often assert that their environment is a dynamic one (Forbes 2010) that allows for changes in their livelihoods. This paper examines the impact of the continuing transformation of livelihoods in the Nordic Arctic on women in the area, referring to the age of 65 years and above older (WHO nd.). The specific focus is on gender equality in this population segment in Finnish and Swedish Lapland where fieldwork was conducted. The elderly population form a significant proportion of the region's population (Nordic Council of Ministers 2011: 40) and, with the exception of Norway, are also the fastest growing population segment (Mégret 2011; Nordic Council of Ministers 2011: 43). Older persons have already been seen as a demographic challenge throughout the Nordic Arctic (Nordic Council of Ministers 2009: 10; Nordic Council of Ministers 2011). Since the region is undergoing an extensive transformation in means of livelihood, among other areas, older persons are among those being impacted.

The traditional livelihoods in the Nordic Arctic include hunting, farming, fishing, gathering, trapping, handicrafts and reindeer herding. However, today the region faces sweeping changes in the range of livelihoods available, brought on by the advance of climate change, globalisation and industrialisation, the latter driven by an upsurge in mining and other activities of the extractive industries. Modern occupations have emerged in the wake of these developments, but traditional livelihoods are being transformed and lost, with adverse impacts on the older population in particular threatening their social survival. In this article, reindeer herding is frequently referred to as a traditional livelihood. Even though reindeer herding is regarded as emblematic of Sámi culture, in Finland both Sámi and non-Sámi practice herding. In Sweden and Norway herding is limited to Sámi only. It is worth noting that reindeer herding as a traditional livelihood enjoys relatively strong protection in Norway since the country is party to ILO (International Labour Organization) Convention No 169 (ILO 1989), a legally binding instrument that deals specifically with the rights of indigenous and tribal peoples. At the time of writing, neither Finland nor Sweden is a party to the Convention.

The people who rely on traditional livelihoods are confronted with the adverse effects of the changes affecting the Nordic Arctic. Since those livelihoods have been predominantly connected to local activities, they constitute cultural practices that play an important role for communities in the region (Parkinson 2010: 10). The changed structure of livelihoods affects the entire population but older people in particular and the effects are both direct and indirect, include impacts on health and well-being as well as socio-cultural and economic security. Significantly, older women and men face different realities, with women becoming more vulnerable due to their different social roles in the community (Kukarenko 2011; Perbring 2009: 2). These roles depend not only on age and gender but on socio-economic class and occupation as well (Stott 2010: 159–160), with the poor members of each of the vulnerable social groups being particularly at risk. Older women in remote areas of the

region are considered the most vulnerable (Prior and others 2013; AHDR 2004). 'Vulnerability' is defined here as the degree to which people, their property, resources, systems, as well as their culture, economy, environment and social activities, are subject to risk. A lack of equality is one factor that increases vulnerability.

While the Nordic countries rank high in the global human development indicators of educational attainment, access to health care and gender equality (Hirschl 2011: 458), the Arctic areas of the countries have seen less progress. For instance, the elderly population of the region face hidden discrimination. It is with this in mind that General Recommendation (GR) 27 issued in 2010 by the committee overseeing the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) which was adopted in 1979 and came into force on 3 September 1981 (United Nations 1979), henceforth referred to as 'the Committee' (United Nations 2010), is noteworthy. The convention, which currently has 187 states parties, is often referred to as the international bill of rights for women (Byrnes and Connors forthcoming). The instrument consists of 30 articles which safeguard women's enjoyment of human rights and other fundamental practices leading to equal footing with men (Schöpp-Schilling 2004). The convention sets out and proceeds to prohibit forms of discrimination against women based on any distinction and exclusion that is made from a gender perspective. Article 21 of the convention empowers the Committee to make suggestions and general recommendations based on the examination of reports and information received from states parties.

In 2008, the Committee determined from the states parties' reports that older women's rights were not being properly addressed. According to the Committee, older women do not constitute a homogeneous group (United Nations 2010) and it was in this context that the Committee adopted GR 27 in 2010 to promote the protection of their human rights. GR 27 addresses a number of important issues, such as education, social pension, empowerment, housing, health and well-being, and inheritance. It presents an extensive and authoritative analysis of older women's human rights with special reference to equality and non-discrimination. The Recommendation sets standards to promote elderly women's rights. Since up to the time of writing state parties have not submitted any information concerning the implementation of GR 27, the Committee has not been able to examine the measures states parties may have adopted pursuant to GR 27.

'Equality' ensures non-discrimination, which means guaranteeing fair treatment for individuals or groups of individuals in response to specific needs. The term can be applied to characteristics such as race, gender, disability, religion or belief, sexual orientation and age. In this paper the term is used with reference to older women in the Nordic Arctic, a region where equality means an equal distribution of power, care and influence. Older women in the region enjoy better protection in terms of their rights if when compared with their peers in other regions of the world. However, in remote communities, because of a number of societal factors, elderly women are still vulnerable. The question this article seeks to answer is how equality and non-discrimination, as understood in GR 27, are perceived by older persons in the context of changing livelihoods.

This article consists of six sections. Section two, which follows, describes the transformation of livelihoods in Lapland. Section three presents the data collection and research processes. Drawing mainly on an analysis of interviews, section four then examines the effect of the transformation of livelihoods in the region on older persons. The focus in the section is on investigating the specific effects on older women. Section five proceeds to show the vulnerability of elderly women brought on by the transformation of livelihoods. With reference to the principles set out in GR 27 of the CEDAW, it argues that there are many ways in which equality can and should be promoted for older women in the Nordic Arctic. This finding is important as the literature has very few studies on the specific topic of older women's rights although human rights standards is in the Nordic countries are generally considered to be exemplary (Lopez-Claros and Zahidi 2005).

Livelihoods and the transformation of livelihoods in Lapland

This section provides an overview of the concept of livelihood transformation and its importance in the context of Finnish and Swedish Lapland. Generally speaking, a 'livelihood' refers to the activities by which people make their living and pay for basic commodities going beyond income, which refers to money earned by a household and payments that can be valued at market prices (Ellis 1998). It has been argued that a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living (Chambers and Conway 1991). In Finnish and Swedish Lapland, the most traditional livelihood, in particular among the indigenous Sámi community, is reindeer herding, resembling its status in Norway (Josefsen 2010: 5). Both older men and older women are either directly or indirectly involved in reindeer herding. In the remote communities in most of the region, fishing, small-scale family forestry, agriculture, gathering of wild berries, especially cloudberries, and other natural products, as well as crafting traditional articles by hand, also constitute basic means of livelihood. Again, both men and women are involved in these activities as interviews by the author have shown (see below).

In the midst of the ongoing changes, reindeer herding has remained a unique economic and cultural emblem amongst the Sámi in the Nordic Arctic. Outside the region, reindeer herding and Sámi culture are often seen as inseparable despite the fact that only a small number of Sámi are engaged in the livelihood today

(Seurujärvi-Kari and others 1997: 18) and even then largely for traditional, environmental, cultural and political reasons (Thuen 2004: 87–108). Herding is particularly vital in the sense that the related knowledge is intact and transmitted from one generation to the next through the rich Sámi vocabulary on animals, landscape features and climatic conditions (ibid.). Nevertheless, the dynamics of socio-economic and technological changes have transformed herding practices. Among other factors, differences in reindeer-herding legislation between Finland and Sweden have played a part in this development: in Finland both Sámi and non-Sámi may engage in reindeer herding, whereas in Sweden only Sámi are entitled to do so. The old nomadic life style has been replaced by permanent settlement, and reindeer husbandry has become an industry (Hætta 1996: 48). Today modern techniques are used in reindeer herding. These rely on mechanised vehicles such as snowmobiles and in some cases even helicopters are used for herding and other work connected with the industry (Seurujärvi-Kari and others 1997: 19). The changes that have occurred represent an attempt to adapt the industry to the market economy. Marketing cooperatives have been formed, modern slaughterhouses built and reindeer products placed in shops for sale (Hætta 1996: 46). These developments have made herding an industry directed towards production for sale and economic profit (Hætta 1996: 48).

Even though the traditional means of livelihood are still important components of the economy of Sámi and other local communities (Seurujärvi-Kari and others 1997: 21), the population today is also engaged in a variety of other, less traditional occupations. With traditional activities now playing a smaller role in the economy at large, other modern income-generating activities, such as tourism, fill the gap. In fact, tourism seems particularly profitable in Nordic Arctic communities. Many families have built holiday villages or established campsites near their homes (Hansen 2010). In addition, they have leased land for commercial uses. Many local people are also employed in other parts of the labour market (Josefsen 2010), such as mining, forestry or other industries. Fewer women than men work on the labour market (Normann 2014). Although the relative proportions vary in the Nordic countries (Nordiskt Forum Malmö 2014: 6), women presumably have fewer opportunities to participate in such employment to begin with. They work at home instead, and receive a modest pension making them poorer and thus more vulnerable than men.

Research and data collection processes

Methodological Framework

The research approach applied in this article derives mainly from the ideas developed by Edward Cameron (2011), who stresses the ethical rather than the legal dimension of human rights precisely when referring to women at risk (including older people) due to climate change. The principle of equality and non-discrimination is an established norm in human rights literature that promotes the expressions of social justice, values, ethics and beliefs (Freeman 2002), offering moral and ethical arguments for action (Mearns and Norton 2010). Since this research explores how change in the Arctic impacts the livelihoods of older women, the gender setting is presented with a focus on the ethical dimension of human rights more so than legal perspectives. GR 27 is the specific standard cited, as it calls for substantive equality and non-discrimination while addressing the human rights of older women. One other potentially relevant instrument is the Universal Declaration of Human Rights (United Nations 1948), which contains provisions applicable to the human rights of the elderly in general terms. Even though it provides no binding obligations upon states, many of its provisions were later incorporated into both the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights (United Nations 1966a; 1966b).

Data were collected through interviews conducted in several locations in Swedish and Finnish Lapland. The questions presented to informants were formulated on the basis of a review by the author of the literature related to Arctic change, including change in livelihoods, society, population and culture. The informants include not only older persons, but also researchers and a number of local people and professionals who provide services to promote northern culture and elderly well-being. The participants' consent to participate in the research was completely voluntary and they were competent to give consent.

Interviewees were selected using Kumar's well-known snowball sampling technique (Kumar 1996). The method relies on using participating informants to recruit future interviewees from among their acquaintances or networks. Using snowballing, information was collected about the informants from the network of researchers at the University of Lapland. In this 'interview society' (Silverman 1993: 3–32), researchers progressively create information by interviewing respondents (Holstein and Gubrium 1997). The interviews conducted can be described as qualitative research interviews, a type which consists of a dialogue between the interviewer and the interviewees that focuses on the topics of interest (Kvale 1996). Guides to interviewing were followed and the validity and reliability of the information that the informants provided critically evaluated (Gorden 1987).

Field sites and applied method

Interviews were conducted in both Finnish and Swedish Lapland during field studies the author carried out in 2013 in Inari and surrounding areas in Finnish Lapland. The province of Lapland makes up the northernmost third of the country (about 90,000 km^2). It is also a sparsely populated area with only 2.1 people/ km^2. With a surface area of more than 17,000km^2, Inari, where most of the interviews took place, is the largest municipality in Finland and lies within the area defined

as the Sámi homeland in the Finnish Act on the Sámi Parliament (Finland 1995: article 4). A year later, in 2014, the author conducted interviews in Swedish Lapland, in the village of Jokkmokk, which is also an area with a significant Sámi population. The name derives from the Sámi language, referring to the town's location close to a bend in the nearby river. With an area of 19,477 km^2, the municipality is the second largest in size in Sweden (Hytönen 2001). The average population density in Jokkmokk is 0.3 people/ km^2 (Udén 2011: 290). Each year an event called *Jokkmokk Winter Market* is organised, which represents an unbroken tradition of more than 400 years. It is one of the most important social events for the Sámi people in Sápmi. On the first Thursday in February, thousands of people gather for concerts, exhibitions and trade that feature and embody Sámi culture. It reflects the importance of traditional livelihood activities, including reindeer herding, in promoting of Sámi culture.

The author interviewed 14 older persons in Finnish Lapland (nine women and five men from Ivalo and Inari) between 65 and 80 years of age, eight people from Sweden from several locations in Jokkmokk (six women and two men between 37 and 80 years of age), as well as researchers (two women and one man between 45 and 65 years of age) from each of the three Nordic countries who are involved in research on indigenous and elderly issues. In 2014, in Finnish Lapland the number of persons aged above 65 was 13,162 of which 6,486 were women. In Swedish Lapland the figure was 31,622 of which 15,698 were women (Statistics Finland 2015; Statistics Sweden 2015). The author furthermore interviewed three researchers from the Swedish Sámi community in Umeå (between December 2012 and September 2013). The names used in this article are not the interviewees' real names. The languages used in the interview were English (local people, researchers and two older adults) and Finnish (14 elderly people). Due to the author's lack of skills in the Swedish language, interview partners were limited to English speaking informants while translators were used where necessary.

The informants were asked open-ended questions. Kumar (1996) has asserted that open-ended questions give informants an opportunity to express their opinions freely, provide in-depth information and a variety of information. The questions pertained to informants' experiences of livelihoods, the importance of traditional activities, rights, equality, changes in livelihood practices and the impact of those changes on their social lives. The author talked with and asked questions of the older and local informants in two different settings: the informants' home, where they were interviewed individually, and elderly service institutions, where the respondents were interviewed in several groups. In the case of researchers, interviews were conducted in rooms close to workshop or conference venues. All discussions were recorded using a tape recorder and some were also summarised in notes.

Before conducting the interviews, in most of the cases permission from the informants was obtained by e-mail and telephone. In a few instances, a sample of the research questions was sent by e-mail. In all cases, permission was asked for again on site before starting the interviews. In addition, the author explained the aim of the interviews and the possible social benefit, such as knowledge production on the conditions of elderly people and dissemination thereof among policy-makers and other stakeholders, that the research could bring.

The analysis which follows focuses on informants' experiences of livelihood transformation in the Nordic Arctic and gender-specific perceptions of this development with special reference to the CEDAW's equality principles set out in GR 27. Taken together, 25 individuals, 14 from Finnish Lapland, 8 from Swedish Lapland and 3 researchers, were interviewed.

Interview analyses: how older persons in Lapland experience the transformation of livelihoods

Transformation of livelihoods in Lapland

During the field studies, respondents shared their experiences of the changes that have been occurring in the region in recent decades and that have impacted the transformation of livelihoods. In their view, this transformation, which is connected to overall societal change, has caused both positive and negative effects, but the effect on older people has been comparatively negative. Moreover, the informants revealed that women and men have fared differently. The interviewees' responses were not connected to the research questions in a straightforward manner, but revealed a range of salient issues that merit analysis.

According to the respondents, most of the transformation that has occurred in the region stems from changes in living conditions. Almost all of the interviewees in both Inari and Jokkmokk agreed that despite the emergence of many new forms of livelihoods, reindeer herding and traditional handicrafts (*duodji*) remain very common means of livelihood for Sámi. Fishing, small-scale forestry by ordinary families**,** agriculture and gathering of wild berries and other natural products are also still common among the population at large, especially in the villages. Both the Sámi and non-Sámi populations in the region depend on these tradition-based activities not only for subsistence, but also as a basis for their cultural and social existence. However, some traditional practices, such as handicraft and reindeer herding, have had to adapt to new techniques and technologies. The respondents took the view that the use of modern equipment such as snowmobiles in reindeer herding is common today, an observation also supported by Pelto and Müller-Wille (1987). Indeed this has brought some positive developments in herding activities, such as herding activities being less time-consuming and with a higher degree of efficiency. On the other hand, herding has become more expensive, causing many to leave the profession.

The most frequently mentioned positive change caused by modernisation is that life has been made much easier. Advances noted include better housing, the availability of electricity and relief from traditional household chores brought by washing machines and dishwashers. Today, no hard work is needed to warm the house, housework can be done with little effort and more time can be allocated for making handicrafts and similar related activities. Development in the medical sector has also been positive. People live longer, treatment of illnesses has improved through access to better medical and healthcare services, and preventive medicines are more easily available than before. In addition, education has brought an awareness of infectious diseases. Furthermore, the state's social security and social service systems help mitigate economic and societal hardships. Some of the respondents, however, were of the view that the number of services should be increased, especially in light of outmigration of younger people and associated difficulties in establishing a solid network of care services.

In contrast to these positive changes, new economic activities, such as mining, prompted concerns from both the environmental and socio-cultural point of view. While there were mixed feelings amongst the interviewees about welcoming such new developments, most expressed concern over environmental degradation, which they felt would eventually contaminate fresh water supplies. The water of Lake Inari and the Lule river, for example, is very important for the daily life of the local communities. Moreover, mining may affect the reindeer herding culture as the grazing lands will shrink and herding areas will likely be dislocated. Some of the Sámi interviewees also expressed concern about losing their culture-based identity because of these developments. Tuula, involved in communal affairs and a Sámi herself, took the following view:

> The mining boom that has started in Kittilä is located around 100 km from Inari, which will pollute the water of Lake Inari. People in Inari and Utsjoki [in northernmost Finland] rely on the water from the lake. Decision makers think that mining is important and water treatment will eventually solve the problem, whereas people in the community are concerned about environmental pollution. We are dependent on clean water, not on mines.

A similar view was expressed on the Swedish side. The expansion of mining in Swedish Lapland will have devastating effects on the Lule river, the water of which is important for many local communities. Most of the Sámi respondents viewed the contamination of the river as a threat to their survival.

Nevertheless, as mentioned before, there are mixed feelings amongst the informants when other issues are taken into account. For example, while talking about the *Beowulf Mining Company* in Kallak close to Jokkmokk, some clearly demonstrated their support for mining (Salo 2013). They pointed out that mining is expected to create 750 new jobs in what is an underdeveloped part of the country. Maud, a 73-yearold, non-Sámi woman who was born in Jokkmokk and lives there, expressed the following opinion:

> We are only seven older people now living in this community, with no young people in this village. People are leaving the community because of the lack of jobs. I know that in the future mining will affect the Lule river and the environment of the area overall, which might result in relocation of the whole community, but I am concerned about the present situation. We need jobs to keep the young generation in the community.

Older women's perceptions of livelihood transformation in their lives

Against the background of the above-mentioned developments, it is important to examine how the region's older women describe the meaning of livelihood transformation. In the Nordic Arctic, the nature of the traditional livelihoods historically provided different roles for men and women. For example, reindeer herding has traditionally been a male profession. However, in practice both men and women have been involved in actual herding activities even though women's role was not formally acknowledged. Matti, 78, a reindeer herder and fisherman living in Ivalo, noted that 'women's role was mostly that of helper in herding activities: they prepared food, took care of the children and handled the household chores.'

However, he added that in the summer time women, including his wife, were also fishing. Matti's view is also supported by Birgit, 76, from the Tärnaby area in Sweden. Birgit is a Sámi language teacher, and works to promote Sámi culture. She was brought up in a reindeer-herding family and studied at a boarding school for children of nomadic Sámi families. Such boarding schools comprised a special schooling system organised by the state where children attended school and lived in dormitories during the week. Birgit shared the experiences of her mother, who kept house while helping her father, who was a reindeer herder:

> In customary Sámi practice, reindeer herding is considered to be difficult for women as a primary responsibility, as they must attend to the household and other responsibilities at the same time.

It is still the case that in remote communities women are engaged mostly in household activities, regardless of their age (Kuokkanen 2009). They take care of children and domestic animals, tend to household chores, make handicrafts, fish and help their husbands. Interestingly, it is suggested that in traditional livelihoods, such as reindeer herding, there is no set age limit. In all the Nordic countries, there are herders whose age is between 55 and 60 or above. As a result, herding is also regarded as an older person's profession. The decline of herding and the concomitant exclusion of older women from the profession as modern technology has taken over puts women at an economic disadvantage. At the same time,

they suffer from having a weaker position in society otherwise. Moreover, they cannot readily be engaged in new livelihoods, at least not as easily as men can. For older persons in communities in remote areas of Lapland, adapting to the changed circumstances is not as easy as it is for young people. For example, Minna, a woman working at a handicraft organisation in Jokkmokk, observed that older women are generally incapable of adapting or reluctant to adapt to modern ways of making *duodji* and are thus unable to compete with others in this sector. In addition, the loss of physical strength with age prevents them engaging in modern activities that industrial development offers. As a result, the household economy of older persons in general, and older women in particular, is unstable and even declining.

Significantly, women are becoming more and more educated in the region as elsewhere in the Nordic countries (Rasmussen 2007). They have strengthened their position in important sectors, where they are capable of influencing local and regional policies. When talking about women's position in her community, Minna very proudly observed: 'Sámi women are well-educated compared to Sámi men and even compared to Swedish women.'

When compared to young women, older women are not better off in the community. Generally, women are still subject to some hidden discrimination. Anna, a 75-year-old respondent, expressed the following view:

> Since the '70s many changes have taken place that have made women's lives today more comfortable compared to what it was like in our time. Reindeer herding, fishing, forest work, daily household chores and caring for children were our traditional daily activities. We worked side by side with the men, who were highly regarded in the community. There were some unspoken inequalities which existed earlier, and which also exist today. Despite the progress that has occurred in recent years, you can still feel them.

Anna did not mention any example of the 'unspoken inequalities' in the past, but when asked did mention an example of inequality today. She noted that although women today work outside the home, in keeping with the nature of most modern livelihoods, it is primarily they who have to take care of themselves as well as their children and older persons at home. It is an unwritten, but continuous, responsibility for women, including older women. Thus, women have to bear too much responsibility, which sometimes seems to be unfair, unhealthy and unpleasant for them. Another respondent, Hannele (born in 1932), presented an example of inequality facing women, noting that although women have been, and still are, engaged in the market economy, in many cases their salary is smaller than that of men.

In the region, it is traditionally the family's older women who are most concerned about their family members' food and health and the maintenance of traditional rituals. They are still generally regarded as the holders of traditional customs and they feel responsible for passing their culture on to their children and to the community at large. The transformation in livelihoods has given rise to new forms of cultural practices, once foreign to the community as a whole and affecting the region's cultural integrity. Such a transformation causes mental distress, especially to the region's older women as custodians of traditional culture. They feel threatened with losing their unique identity. This is most apparent amongst older Sámi women.

Birgit, an older Sámi woman mentioned above, presented the following view when talking about older women's equality, well-being and the protection of northern cultural identity:

> To keep up respect for older people, cultural norms and issues of identity have to be promoted through different educational tools and training so that the younger generation learns about the distinctiveness of the concerns of the older people of the region. Local authorities should be strengthened, both economically and strategically, to ensure facilities providing safer, healthier and more environmentally sound living conditions for older persons.

While women generally seem to be very concerned about the negative effects of livelihood transformation in the region, even today their voices are often not acknowledged, especially in remote communities. In the case of mining, for example, women's concerns have been quite pronounced indeed. The author found that they are extremely aware of the consequences of potential mining activities for their health, land and overall environment. While talking about the operations of *Beowulf Mining Company* in Jokkmokk, most of the female respondents mentioned that mining would destroy their way of life. Yet, regrettably, in the process of consultation, and in decision-making, women's voices are not taken seriously (Nordiskt Forum Malmö 2014). Apparently, it is a family's male member who is considered to be the consent giver where necessary, even though in traditional communities, women, especially older women, have long been recognised as having the role of custodians of traditional knowledge regarding the environment and sustainability (UNPFII 2010) .

Yet, the effects of the ongoing transformation vary within the region. One such effect is out-migration of the younger generation. Recent studies suggest that young people, including a significant proportion of women are leaving the north (Rasmussen 2009; Kelman and Næss 2013). In fact, the topic of out-migration figured prominently in the opinions provided by the respondents. Climate change and its consequences are generally considered to be the principal reason for out-migration. However, the lack of jobs at home and access to better facilities for education elsewhere are contributing factors (Nordic Council of Ministers 2011). When asked about the problem of out-migration, most of the respondents agreed that the reason for out-migration is not only a lack of jobs, but also a lack of higher educational opportunities. Hannele, born in 1932, noted: 'We had a

good life once, but today our home has been left empty. The children moved to another city because of jobs and other opportunities they sought.'

Where mining and other such activities replace the traditional means of livelihood, there may be new job opportunities for young adults. In other locations, however, young people migrate to cities in the southern part of the country. For young adults, especially young women, it is common to leave the region. The region's older persons are left behind. This situation creates problems of societal and economic security for them regardless of gender and ethnicity. On the one hand, the absence of the young generation, especially adult women, means a lack of family care and support. On the other, it causes economic stress, as older persons cannot support themselves alone. In addition, the breakup of the family caused by out-migration results in isolation for older persons, causing severe mental stress. Since older women in the region generally live longer than their male counterparts, they require the most physical and mental support, which seem to be less well organised in the region compared to urban settings.

In this context it is also important to note that facilities for older persons are not easily accessible in the rural areas of the region studied. There is only a handful of homes for old people, most located in relatively large cities. One respondent, Tuula from Ivalo, while speaking about her elderly mother, stated:

> We do not have an old people's home in our area. The nearest one is located in Ivalo, which is about 160 km away from our village. We have to maintain a good network with our neighbours so that they can take care of my mother when needed.

Even when the necessary facilities are available, it has been found to be hard, especially for older women, to be detached from their natural surroundings. Birgit, from Sweden, shared an old Sámi woman's experience of moving to an old people's home in the following words:

> At the age of 99, an old lady went to a service institution. Such an institution actually made her feel sad. Even though her house (where she used to live alone) was located far away from all services she needed, she wanted to stay there as long as she could. She wanted to be in nature, eat her own traditional food and listen to Sámi music in her own surroundings. But in the home she cannot do things as she wants; she cannot go outside when she wishes. Homes for old people generally lack economic resources and as a result it was not possible to take her out once a day into nature to make her feel fresh and better.

It can be concluded that while the effects of the livelihood transformation in the Nordic Arctic are both positive and negative, the position of older people in general and of older women in particular, remains relatively vulnerable. In this section, attention was drawn to the vulnerability of the region's older women in terms of the economic, physical and mental conditions that affect their general well-being. Based on the above observations, the next section analyses their vulnerability from the viewpoint of specific human rights applicable to older women as articulated in GR 27 of the CEDAW.

Older women's vulnerability in light of General Recommendation 27

In order to promote equality and non-discrimination where elderly women's rights are concerned, GR 27 obliges state parties to address various existing forms of discrimination against older women. GR 27 explores the inter-relationship of the CEDAW's 30 articles. It identifies different kinds of discrimination women face throughout their life in respect to aging as regards social pension, empowerment, housing, health and well-being and inheritance.

GR 27 further aims to include elderly women in decision-making processes. They are to be empowered by various means such as by having proper education and training to adapt to new situations while being allowed access to relevant facilities, such as social and health care, for older people. It is the role of the government to implement gender-sensitive policies to ensure older women's full and equal participation in the relevant sectors (Begum 2012). In what follows the situation of older women in Lapland in light of GR 27 is examined.

In rural communities, both in Finnish and Swedish Lapland, the rate of women's participation in the formal labour market is lower compared to the national average (Nordic Council of Ministers 2011). In Finland, for example, historically, part-time work was not common, but today it seems to be more typical for rural women. It is suggested that men's position in the labour market has always been better than women's (Högbacka 1998: 178–181). In Finland and Sweden, a significant population decline in remote areas has been recorded in recent decades and the Nordic Arctic region has become even more sparsely populated (Nordic Council of Ministers 2011). Finland, Sweden, and Norway each have a population density of around 16 to 23 people per km^2 (Nordic Council of Ministers nd.). According to Statistics Finland in 1985, 24 per cent of the country's population lived in sparsely populated areas, whereas by 1995 the proportion had declined to 19 per cent. In 1995 there were approximately 505,000 men and 462,000 women living in sparsely populated areas (Högbacka 1998). Data from 2014 indicate that Finnish Lapland has shown the sharpest decline in population (Statistics Finland 2014). One of the reasons for this decline is out-migration because of the lack of jobs. Traditional activities have been found less attractive, less well remunerated and less valued. Consequently, many such activities have gradually disappeared. For example, in Finnish Lapland, cattle rearing used to be a traditional livelihood in households in the village of Kultima, but it was discontinued as far back as in the mid-1970s (Pennanen 2006: 181).

Nevertheless, as mentioned, reindeer herding continues to be the most common traditional livelihood in

both Finnish and Swedish Lapland, although the work has become more modernised. Women make a significant contribution in herding (Rantala 2013: 114–116) as they work side by side with their husbands. However, this role is largely ignored. The Finnish Association of Herding Cooperatives has reported that during the period between June 2012 and May 2013 there were a total of 4,532 reindeer herders (Reindeer Herders Association, personal communication (e-mail), 15 October 2015). The numbers of women and men were 1,324 and 3,157, respectively. Among herders, 1,704 are at the age of 55 years or above, of whom 382 are women and 1,322 men. According to Swedish statistics, approximately 10 to 25 per cent of herders are women, which means that men own larger herds than women (Udén 2011).

To date, the academic literature has paid little attention to women's role in reindeer herding and fishing. In northern Norway, women's participation in fish-processing work and share of fishing quotas has declined (Gerrard 2008). Women also have been ignored and largely been excluded from direct accesses to fishing quotas (Neis, and others 2013). Moreover, the Sámi Parliament in Norway has documented gender-related inequality in the regulation and quota system (ibid.).

In herding, the division of labour between men and women is not formally structured, and women's role is mostly invisible in written descriptions of the occupation (Ruotsala 2007: 156–157). Women are also less well represented when developing policies for a gendered division of labour in herding activities (Kuokkanen 2009). In Sweden and Norway, policies and legislation relating to the practice of reindeer herding are not gender neutral (Kuokkanen 2009). In Finland, the government's policies since 1945 have in fact made Sámi women invisible in the reindeer-herding sector: since 1978, in official records, reindeer-owning Sámi women have been registered under their husbands' names, causing them to lose their individual membership in the herding cooperatives (Kuokkanen 2011).

Overall, it can be argued, the contribution of women to livelihoods in the Nordic Arctic has been undervalued, for their involvement is mostly informal. The household work they do, such as cooking, taking care of children and other caring work, has been viewed as less important in official descriptions of the economy. However, they take on a great deal of responsibility for their family in looking after their older family members, their children and also for the men in their lives (Bull 1995: 44; Capistrano 2010: 14; Ignatieff 2007: 117). However, their familial responsibilities do not translate into wage labour (Mies and Bennholdt 1999). Research shows that attitudes on gender equality and gender-equal practices are influenced by income (Holter and others 2009). In addition, women are involved in the voluntary sector (the third sector), which includes various social services, health care and informal activities. However, these activities are also unpaid (Pennanen 2006:179). As a result, these important contributions of women often go unrecognised and undervalued (Begum 2012: 5).

The above trends seem to have implications for older women in the region. Women considered 'elderly' may face inequalities in economic status in the future because of their lower visibility in the labour market. For example, women receive a lower old-age pension than men, whose contributions are formally acknowledged. At times, women receive no pension at all, as their contributions are as equated with wage labour. Even though women in the northern communities in Lapland have become more educated and empowered in recent times, there still exist hidden inequalities. The jobs usually held by women are less well remunerated. For example, a man with a three-year technical education earns more than a woman with a three-year education as a nurse (Mørkhagen 2009; Eurostat news 2015). It should be noted that most of those in the nursing profession are women. This gender-based discrimination in employment throughout life results in lower incomes (Mandel and Semyenov 2006) affecting economic security in old age. Another example of hidden inequality is that while Finnish inheritance law prescribes that men and women have equal rights, according to Sámi customary law, women possess fewer rights in regard to inheritance (Bremmer 2012). For example, the system of reindeer-herding cooperatives has had adverse effects on women within Sámi society. According to customary law, both the men and women in a household used to own reindeer but today the leaders of most cooperatives are men. In addition, a change has occurred in the practice of herding that has led many Sámi women to transfer ownership of their reindeer to their husbands (Åhrén 2004). Moreover, the use of of modern equipment in herding that require efforts generally suitable for men has increased, causing a decline in their participation in it (Bremmer 2012). Such practices make women weaker in society. It is therefore important that women should be empowered to tackle the challenges of old age in terms of both economics and status.

In order to improve the well-being of older women, the promotion of equality and non-discrimination in national and regional policies is necessary. Such policy development can be guided by established principles, such as those recognised, for example, in CEDAW's GR 27, which provides an international standard for the promotion of older women's rights. GR 27 enumerates important issues, such as education, social pension, empowerment, adequate housing, health and well-being, and inheritance, which figure significantly when gauging the effects of livelihood transformation on older women. GR 27 clearly states that discrimination generally differs depending on older women's socio-economic circumstances, as they are not a homogenous group. However, it emphasises that the socio-economic, political and cultural rights of older women are to be safeguarded. In fact, through its provisions GR 27 offers a protection strategy to safeguard women from all aspects of the challenges affecting them when they are older (Begum 2012: 7) that,

if put in place, offers mitigations of the risks facing older women in Lapland. The strategy put forward in the GR 27 specifically points to the importance of recognising the positive economic and social contributions which older women have made throughout their lives to both their families and society at large. They must also be valued independently for their economic and societal contributions. Their wisdom, knowledge and experiences are referred to expressly.

To sum up, it should be noted that the various effects on older women of the change in livelihoods occurring in the Nordic Arctic, especially Finnish and Swedish Lapland, have to be viewed from the point of view of social justice. The varieties of challenges faced by the older women in this context can arguably be met by the implementation of GR 27. Even though the Nordic countries progressively adhere to the legally established rights of older women compared to other parts of the world, there are still some hidden or unspoken practices that impinge on older women's rights. Observation of the various provisions of GR 27 by the states parties would improve the situation of older women and their distinct identity, and thereby promote equality and social justice.

Conclusion

The Nordic Arctic is more developed than other regions of the Arctic. While the Nordic Arctic was referred to in this paper, field studies focused only in Finnish and Swedish Lapland. There are some differences between Swedish and Finnish Lapland in women's role and place in the context of livelihood transformation. Swedish Lapland appears to be relatively more advanced and women in a better position compared to Finnish Lapland, especially in the area of traditional handicrafts related entrepreneurship. As shown in this research, the region as a whole is relatively progressive in terms of ensuring equality and non-discrimination. Women are generally well treated. Education facilities and empowerment of women are well regarded. Nevertheless, there are gaps where equality is concerned, referred to here as hidden or unspoken inequalities, that affect women in the specific context of the combination of livelihood transformation and ageing. These gaps lie in economic security in old age, empowerment and the capacity to adapt to socio-cultural changes.

In order to promote equality among older persons, with special consideration for older women it is advisable that policy makers, the research community, relevant stakeholders and older people in the region work together in both the national and regional policy frameworks. One of the more urgent priorities in this effort would be to tackle the risk and threats posed by livelihood transformation and other changes. In pursuing this end, women's participation in decision-making processes should be guaranteed. In addition, since livelihood transformation causes a threat to health and wellbeing of the older people, innovation, such as telemedicine systems need to be promoted for in remote areas of the region to ensure access to health care facilities. Furthermore, due regard has to be given to the enormous range of experience and the traditional knowledge that older persons possess and the value of this as a resource in addressing problems both at national and international/regional and local level.

As a basis for promoting older women's rights the salient issues based on both literature and interviews were examined while the principles set out in GR 27 of the CEDAW were referred to. If Finland, Norway and Sweden, all of which have ratified the convention, take the specific measures recommended by GR 27 with due consideration for the hidden inequalities shown in this research, the right to equality and non-discrimination of elderly women in the context of livelihood transformation can be further improved. However, in the author's view more research is needed to identify older women's perceptions of the extent to which equality has been realised in the face of other major changes in the Nordic region.

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6 Gender differences of older people in the changing Arctic

Shahnaj Begum

Introduction

'The Arctic' refers to the region located in the circumpolar high north at and above the Arctic Circle (*Arctic Boundaries*, 2009). The territory of the Arctic lies within eight northern nations: Canada, Denmark (Greenland), Finland, Iceland, Norway, Russia, Sweden and the United States (Alaska) (Fallon, 2012, p. 1). The region is undergoing a rapid transformation, the major driver of which is climate change, a phenomenon proceeding faster in the Arctic than elsewhere on the globe. The natural climate variations in the region differ from the trends observed elsewhere (IPCC, 2007). Temperatures in the region vary considerably from year to year and over decades (IPCC, 2007, p. 7), making the Arctic's unique eco-system particularly vulnerable (McCarthy and Martello, 2005). In addition to climate change, industrialization and other commercial activities stand to have large-scale impacts on the societies and infrastructure in the region at large.

The Arctic is home to more than four million people, a population which includes a significant number (10 per cent) of indigenous persons (Koivurova, Tervo and Stepien, 2008; Begum, 2013). The indigenous and local populations of the region share certain bonds through traditional activities connected to their cultures and livelihoods. The ongoing transformation that is prompting socio-economic and infrastructural change will result in various effects on the region's population. Older people form a significant proportion of the Arctic population, and this proportion is increasing (Patosalmi, 2011, p. 1), as is shown in Figure 6.1. The only parts of the Arctic where the figure is decreasing are those in Norway marked accordingly on the map (*Megatrends report*, 2009, p. 43).

It has been argued that the increase in the number of older people in the Arctic region will be a demographic challenge in the future, especially in the European High North (*Gender and Climate Change*, 2009, p. 10). While older people in general face limitations due to weakening functional capacity, reduced income and restricted social functions associated with age, there are a number of additional factors in the Arctic which cause varied effects for men and women within this specific group. Studies have shown that elderly women are more vulnerable to climate change than men (Shelton, 2009). This vulnerability may also be

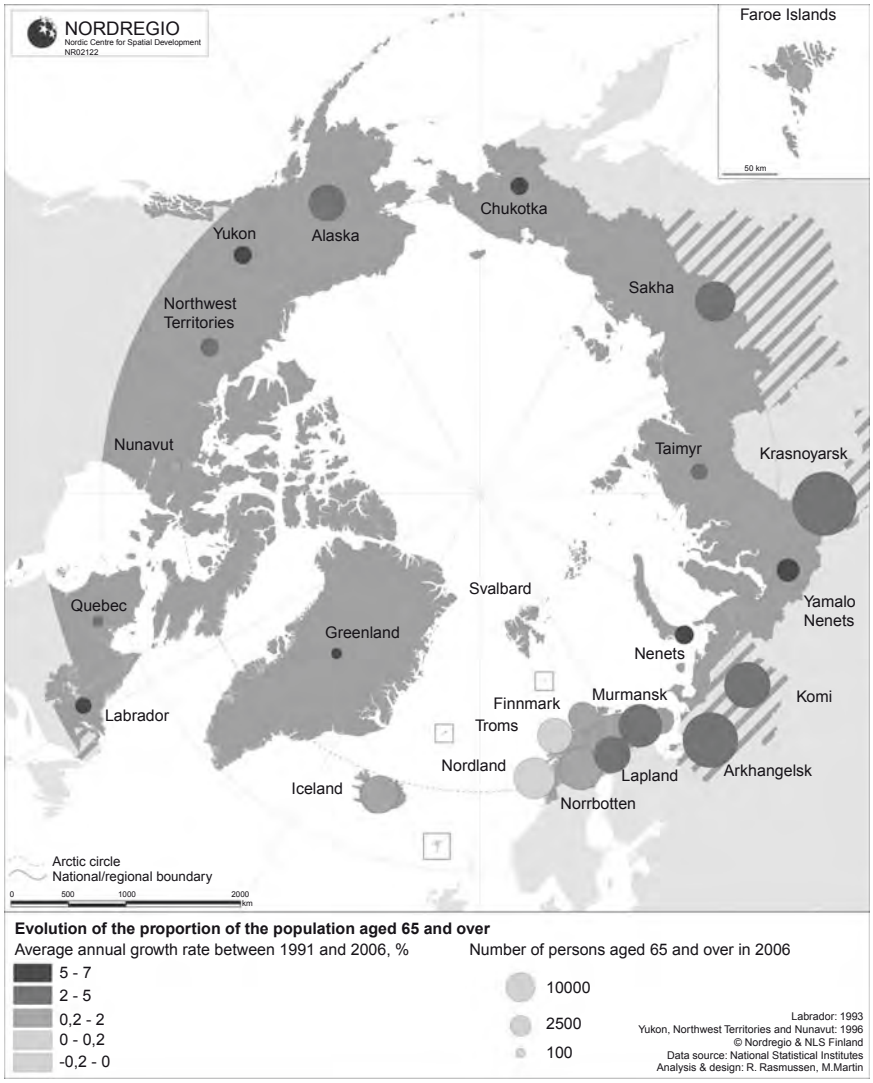

Figure 6.1 Number of persons aged 65 and over.

Source: Nordregio, map ID: NR02122. ("© Nordregio & NLS Finland", "Analysis & design: R. Rasmussen, M. Martin")

viewed through the lens of social justice as a matter of discrimination. However, the literature lacks examples of how women are more vulnerable than men in the Arctic or how women suffer differently than men because of climate change (Kukarenko, 2011; Prior et al., 2013). Given that there is a lack of coherence in the discussion on discrimination that varies from region to region, unfairness

clearly becomes a concern, suggesting that the situation of the elderly merits examining from a gender-based perspective.

It is my hypothesis that the day-to-day experiences of women in the Arctic differ from those of men. This paper undertakes to integrate gender-related themes into research on the Arctic, such as the differing social, economic priorities of women and men and the differences in how they experience the problems that they face. According to research, the effects of climate change are not gender neutral; that is, women and men face different vulnerabilities due to their different gender roles (Kukarenko, 2011; Parbring, 2009). Yet these differentiated roles, as well as the vulnerabilities, have yet to be clearly analysed. A recently published book entitled *Addressing Climate Vulnerability* (Prior et al., 2013) reports that men and women are affected differently by the change occurring in the Arctic. Another study shows that the inequality that exists in society between men and women exacerbates this vulnerability (Cumo, 2011, pp. 693–695). With the ongoing transformation, inequality is expected to become even greater. The gender perspective should therefore be integrated into policy and other documents (Preet et al., 2010). In the Arctic, women's life experiences are seen to be different from men's (Nuttall, 2005). Women are socially conditioned differently than men; their concerns and responsibilities contrast with those of men due to the respective roles of the genders in society and in the family; and their aspirations overall differ from men's.

The gender-based approach used in this paper serves to reveal the gaps between the situation of elderly women and men and thus to produce knowledge to narrow such gaps and support greater equality. The research concludes with a number of recommendations that might mitigate gender vulnerability. In advocating a gender perspective, this article follows in part the strategy described in the conclusions of the United Nations Economic and Social Council (ECOSOC 1997/2).

> Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.

The word "gender" denotes an attribute that is developed from socially constructed norms and values (Preet et al., 2010, p. 3). In each society, gender roles determine what is permitted and what is not, based on the values of the particular society as they pertain to men and women. This kind of distinction increases gender discrimination in every society (*World Health Organization* (WHO), 2009). In most cases, traditional norms lead to unequal treatment of men and women, with women becoming more vulnerable as a result. Patterns of disparity can be found between men and women in both developing and developed countries, including the nations in the Arctic. Women and men have different problems

in the Arctic. For example, older women may experience more stress than men. The societal effects of the ongoing transformation in the Arctic vary depending on age, socio-economic class, occupation and gender (Stott, 2010, pp. 159–160), with the impact of the change mostly affecting the deprived and poor, particularly among the female population (AHDR, 2004). Women experience the humiliating consequences of the change and of inadequate coping capacity (Costello et al., 2009, pp. 1693–1733).

In light of the clear gap in research applying a gender perspective in the case of older persons, this research focuses on the question: How has gender been taken into account in the research on the change in the Arctic (direct and indirect) and on the impacts of that change on older men and women in the region?

Given the small amount of research addressing this issue, the fundamental aim of this paper is to pinpoint reports of age-related disparities between men and women that have been exacerbated by the rapid transformation now affecting Arctic society. The findings seek to highlight considerations of fairness and equality that will inform research on gender-related disparities among older persons in the Arctic.

Methods

This study undertakes to describe the situation of older men and women in what is a changing Arctic and to increase awareness of the possible consequences of this change on older persons' human right to gender non-discrimination. To these ends, I have chosen to employ a qualitative approach that combines both interpretive (Elliot and Timulak, 2005, p. 147) and critical research interests (Denzin and Yvonna, 2005, pp. 6–10) with a gendered approach. I use content analysis (Mayring, 2000, p. 2) in a 'close reading' of research materials to determine what has been said and what has not been said and how gender has been treated (Mayring, 2000). Specifically, I apply a gender perspective in reading the research on life expectancy, livelihood, health and food, education, the economy and empowerment. These themes, which are intertwined, serve as salient indicators of an individual's wellbeing in society.

In examining the research materials, I establish a number of categories for my findings on gender differences in Arctic society and use these as indicators of elderly wellbeing. I have used these categories as a means to understand disparities and, at the same time, to assess how to promote elderly wellbeing. I analyse the strengths and weakness of the research findings by using a wellbeing framework to determine where there are gaps in the research.

I have conducted a comprehensive literature review. To find scientific articles and literature, I have used relevant key words (climate change/Arctic change, gender, elderly men and women, disparity) in searching the Arctic and PubMed databases. In my earlier research (Begum, 2013), I concluded that climate change in the Arctic heavily impacts the health of older persons. I also gathered relevant regional and international official documents, reports and statistics, which I examined for their importance to the research and to reveal the research gaps. The salient documents included the Arctic Human Development Report (AHDR, 2004), the Arctic Climate Impact Assessment (Symon, Arris

Table 6.1 Analytical classification of sources

Reviewed documents (number)	*Key words for search*	*Criteria of assessment of wellbeing*
Arctic Database 35 documents	Climate change, Arctic change, disparity, gender, elderly men and women, elderly health, equality	Four different criteria of assessment dimension connected to wellbeing
PubMed data base 20 documents		
Relevant Reports 10 reports		Life Expectancy, Livelihood, Health, Education, economy – empowerment

and Heal, 2005), the WHO gender and climate change report (*World Health Organization*, 2009), as well as certain other policy documents, such as the IPCC report (IPCC, 2007) on climate change and its effects on health.

Table 6.1 above presents a tool for analysing gender positioning as this is described in the literature cited earlier. The themes combine to form a framework for describing wellbeing in the case of the Arctic population.

In the next section, I briefly review the impacts of change in the Arctic on the elderly in general. In the following section, I go on to examine the impacts with a specific focus on gender. Well-known scholars, such as T. Kue Young, Peter Bjerregaard, Arja Rautio, Alan J. Parkinson and others have carried out significant research on diverse issues of circumpolar health and wellbeing. Yet this research and other lines of inquiry have ignored the gendered dimension of elderly wellbeing in the Arctic.

Change in the Arctic and its impacts on the elderly

As noted earlier, climate change is one of the major drivers affecting development in the Arctic, and in numerous ways. The challenges which climate change poses to the Arctic population have been addressed in a number of scientific reports. The Arctic Climate Impact Assessment (ACIA) has weighed the effect of the climate on the health and overall wellbeing of the Arctic inhabitants. The other important report, the Arctic Human Development Report (AHDR), specifically identified the groups vulnerable to the consequences of climate change as including children, women and the elderly. In addition, the indigenous peoples of the region have been regarded as major victims of climate change (Watt-Cloutier, 2006). Apart from climate change, a number of other drivers of change have been identified in the region: globalization; growing industrialization, including the spread of mining and hydrocarbon extraction; other commercial activities, such as tourism; and population migration.

Impacts on health are counted among the most direct and visible threats to the Arctic population. The melting of the permafrost, (Nelson and Brigham, 2003; Begum, 2013), the thawing of glaciers, heat waves and similar phenomena bring a range of changes, such as damage to infrastructure – including transportation routes – flooding, damage to housing and sanitation, reduced access to quality water and a deterioration of other public services, including health care. These impacts have already begun to affect the overall health situation. Bacterial and viral diseases have been observed more frequently in recent years (*Guide on Climate Change and Indigenous Peoples*, 2009). Warming results in the introduction of new diseases and a higher risk of infectious diseases (Chavers and Vermund, 2007). For instance, a number of vector-borne and infectious diseases have already been reported in the northern parts of the USA, Russia and Sweden (Parkinson and Evengård, 2009). Despite the delay in recognizing climate-related infectious diseases, an increase in infectious diseases has already been observed today (Parkinson and Evengård, 2009, p. 84). As one of the most vulnerable groups, older persons, who in most cases also suffer from economic hardship, are easily affected by the spread of illness.

Changes other than climate change have also had an adverse effect on health, one example being changes in food habits (Parkinson, 2010, pp. 9–12). Insufficient access to traditional food causes increasing dependence on imported food. In the Arctic, imported food has been found to contribute to the increase observed in the rates of food-borne botulism among the population and in the incidence of several diseases, such as cancer, obesity, diabetes and cardiovascular diseases (Jorgenson and Young, 2008, p. 291; Parkinson, 2010, p. 10). Climate change, for its part, has brought an increased incidence of botulism, tularemia, brucellosis and cryptosporidiosis in the region (Berner et al., 2010). In fact, these are common diseases among elderly people in the region today. In addition, damage to transportation facilities affecting the food supply chain is likely to increase exposure to contaminants, threatening not only food safety but also human health in general, with more serious repercussions for the elderly in particular.

Other socio-economic, environmental and cultural changes are also apparent in Arctic society that may cause significant social and mental stress to the region at large (Spohr, 2004, pp. 1–7). The socio-cultural lives of the communities in the Arctic have certain features that are susceptible to transformation. In some cases, these features go hand in hand with a community's identity as Arctic people. For example, communities are engaged in unique traditional activities, such as reindeer herding in Fennoscandia and in northwest Russia, and fishing, sealing and hunting in the North American Arctic. These livelihoods contribute to the residents' distinctive identity as Arctic people (Parkinson, 2010, p. 10; Hinzman et al., 2005, pp. 251–298). For groups such as indigenous peoples such an identity is crucial, making its loss due to the ongoing and anticipated societal changes a major concern. The ACIA has shown clear links between climate change and socio-cultural and economic impacts. It has been reported that the environmental change in the Arctic threatens the health of its population and will have serious repercussions for their socio-economic and cultural survival (Côté and

Williams, 2008). Older persons, who form a significant proportion of the Arctic population, are necessarily victims of the social and mental stress caused by such changes (Scheraga, 2008) and are subject to widespread frustration (Haq, Whiteleg and Kohler, 2008, p. 11). Moreover, out-migration, in particular among young adults, has also been reported as one of the challenges facing the Arctic region (Rasmussen, 2009, p. 525). Studies show that young women, who used to take care of their older parents or relatives, are now increasingly moving to the south for various reasons. The trend has been most pronounced among young women in Greenland. A decrease in the younger population and, at the same time, an increase in the elderly population will in all likelihood make the situation difficult, resulting in loneliness and social isolation among older people and leading in turn to a higher incidence of mental illness, stress and frustration.

The extensive changes in the Arctic are, however, in one way or another inter-connected, affecting the population at large in various ways that will disrupt entire communities. The changes affecting health and the socio-cultural and economic conditions of life will in all likelihood make older people even more susceptible to negative impacts unless the challenges are properly addressed. In this context, an additional factor to be broached is the differentiated positioning of elderly men and women, for these differences mean that the genders will experience and be affected by the challenges differently. It is therefore important to analyse how gender differences among older people in the Arctic are structured, for it has been anticipated that the changes affecting the region will exacerbate existing inequalities.

Older persons' gender-based positioning in the Arctic

Life expectancy

Life expectancy is one of the major indicators of gender disparity in the Arctic; it of course varies from region to region. While a number of positive changes have improved the life expectancy of the Arctic population (Berner et al., 2010), unless the existing societal challenges in the Arctic community are properly mitigated, gender disparities are likely to intensify. This section discusses how the difference in life expectancy between men and women contributes to gender disparity. However, a review of life expectancy in the different regions of the Arctic is in order before proceeding to the analysis proper.

The population densities of Finland, Sweden and Norway are low, and the northern parts of these countries are very sparsely populated (Hassler et al., 2008, p. 106). According to national statistics for Finland, Sweden and Norway, these countries are considered home to a particularly older population and are characterized by a low birth rate (Hassler et al., 2008, p. 106). Statistics indicate the following life expectancies for older people: in Finland 75 years for men and 82 years for women (Finland Demographics Profile, 2014); in Norway 77 years for men and 82 years for women (Norway Demographics Profile, 2014); in Sweden 78 years for men and 83 years for women (Sweden Demographics Profile, 2014); and in

Russia 60 years for men and 73 years for women (Russia Demographics Profile, 2014). Studies based on the statistics for 2007 also show that in Murmansk the average life expectancy was 65 years, with men's life expectancy being 58 years and women's 71 years. The life expectancy profile of the Barents Euro-Arctic Region indicates that the gap between men's and women's life expectancy is 10 to 16 years in northern Russia, while in the remaining part of the Barents region it is 5 years on average. In sum, Russia has the lowest position in this respect in the Barents region. Sweden has the highest life expectancy with the lowest gender gap – 4 years – compared to other Barents countries (Emelyanova and Rautio, 2012). According to the statistics for 2001 in Canada (*The Chief Public Health Officer's Report Canada*, 2010), the life expectancy for Inuit women was 70 years compared with 82 years for Canadian women overall, and Inuit men's life expectancy was 64 years compared with 77 years for Canadian men overall (Morgan, 2008). In the period until 1860 in Sweden, Sami women had a higher life expectancy than Swedish women in general (Karlson, 2013, p. 446). During the period 1850–1899, Sami men had a lower life expectancy than Sami women. Sami men had the same or higher life expectancy compared to Swedish men in general (Karlson, 2013, p. 445).

Studies suggest that within North America and Greenland, Alaskan Natives, residents of the North West Territories (NWT) in Canada and the residents of Greenland generally have lower life expectancies than the residents in the Nordic Arctic countries and, on average, life expectancy is lower for indigenous populations. These trends are derived from the figures for life expectancy in the Arctic population (*International Arctic Science Committee*, 2010).

Studies also suggest that globally women are the most vulnerable group and suffer more than men. At first sight, the data might indicate the contrary; yet for women a longer life expectancy does not guarantee a good quality of life. For women a longer life span often means that they will become vulnerable in different areas (*Soroptimist International of the Americas*, 2011, p. 4). Higher life expectancy can only be meaningful when other supportive social conditions are present. However, research suggests that elderly women in the Arctic living under poor living conditions suffer more ill health (Romero et al., 2005, pp. 7–18). Women live longer but, paradoxically, where they are more vulnerable to adverse effects of the changes affecting the Arctic; this means extra years of hardship rather than a 'quality life'. Apparently, based on the statistics shown here, living longer for a woman does not bring any benefit when healthy ageing cannot be ensured. Healthy ageing has been identified as one of the indicators of human development (AHDR, 2004). Unfortunately, in the remote Arctic region, the longer women live, the more hardship they suffer. The disparity between men and women in this respect is not only due to biological factors but to other, societal factors as well. As Thomas Kirkwood states:

> It might be that women live longer because they develop healthier habits than men – for example, smoking and drinking less and choosing a better diet. But the number of women who smoke is growing and plenty of others

> drink and eat unhealthy foods. In any case, if women are so healthy, why is it that despite their longer lives, women spend more years of old age in poor health than men do? The lifestyle argument therefore does not answer the question either.

Normally women have a harder life from birth to extreme old age despite the fact that they generally develop healthier living habits than men (Kirkwood, 2010). A woman's traditional domestic working life can be just as hard as a man's working life. This is because they never fight just for themselves; they fight for their children, and even for the men in their lives (Capistrano, 2010, p. 2; Ignatieff, 2000, p. 117). However, when women reach old age, there is, increasingly, hardly anyone in the family to take care of them. It is said that in the Arctic communities men get a much better deal out of marriage than their wives: married men tend to live many years longer than single men, whereas married women live only slightly longer than single women (Kirkwood, 2010). In their traditional roles in the Arctic, women suffer from various anxieties, stresses and strains.

The literature cited earlier indicates that in their old age women in the Arctic live longer and will continue to live longer in the future. Despite the higher life expectancy, if the societal challenges caused by the changes in the Arctic are not mitigated, women will continue to experience the effects of their vulnerability longer than men. A higher life expectancy only benefits women where healthy living conditions can be ensured that will make a longer life meaningful and cheerful. These conditions can be best provided by adequate health-care facilities, access to a healthy environment, the promotion of social cohesion of older women in all aspects of social life and the empowerment of older people in the society in which they live.

Livelihoods

The Arctic is a region with a peripheral character and livelihoods are basically dependent on localized activities. The cultural practices of the local and traditional community play a significant role in older people's livelihoods in the region (Parkinson, 2010, p. 10). Studies carried out on changes in the Arctic have identified changes in the general living conditions of the population (Wolsko et al., 2007, pp. 51–61) that are bringing about a transformation in livelihoods. Impacts on livelihoods have consequences for older persons, and some of these effects merit investigation from a gender perspective.

The studies reviewed indicate that the local livelihoods of the Arctic include traditional activities such as reindeer/caribou herding, fishing and hunting; boat building, farming, making handicrafts, knitting socks, and making traditional dress are also common. Particularly in the case of indigenous peoples, these livelihoods form part of the peoples' unique identity (*Guide on Climate Change and Indigenous Peoples*, 2009, p. 22). Most of these activities are seen mainly as masculine professions. For instance, in reindeer herding, the reindeer owned by women are also controlled by men and thus women's contribution to the livelihood is

ignored (Rantala, 2013, pp. 114–115). In men's professions nowadays, modern equipment such as snowmobiles and even helicopters are used, whereas women's professions must still rely on traditional tools. For example, women continue to use traditional practices in making handicrafts such as 'duodji'[1] (Rantala, 2013, p. 112), the economic value of which is not comparable with men's reindeer herding. No age limits are set on the nature of traditional activities, and thus older persons as well as young may be actively engaged in such activities. The effects of climate change and growing industrialization, as well as the increase in other commercial activities such as tourism, have introduced new forms of livelihood, replacing traditional ones. On the one hand, tourism provides jobs and income for many young and older people. To some extent, tourism strengthens some traditional industries, such as the sale of local handicrafts and various cultural events, leading to complementary and alternative forms of livelihood. On the other hand, the gradual transformation in livelihoods, and the consequent disruption of traditional lifestyles, increases the prevalence of mental and social stress (Parkinson, 2010, pp. 9–10), mostly among older persons since the new activities are not likely to be suitable for them. Moreover, older people fear the loss of their community's culture, which is rooted in the maintenance of traditional activities. While the direct involvement of men is most apparent in many traditional activities, women are also in one way or another engaged in them. Although women's roles in such activities has hardly been discussed in the academic literature, women (as spouses and grandmothers) play an important role with their male counterparts during, for example, reindeer herding (Rantala, 2013, pp. 114–116) and other traditional activities. Although a division of labour between men and women would be necessary to maintain reindeer herding as a livelihood (Ruotsala, 2007, pp. 156–157), in many cases women's roles are invisible in written descriptions of the occupation. One can justifiably ask what kind of politics is at work behind this kind of disparity.

The elderly are not a homogenous group (United Nations, UN, 2010). The transformation of livelihoods affects both men and women. While according to some studies women generally experience more mental and social stress (Healey et al., 2008, pp. 199–214; Curtis et al., 2005, pp. 442–450), in the case of loss of livelihoods it is men who easily experience stress. As a result, men suffer from a difficult situation in which women often support the family (Rantala, 2013, p. 117). Women adapt to new situations more easily by taking on additional household tasks, such as taking care of grandchildren at home. In this way, the stress associated with old age can be reduced to a tolerable level. However, men in Arctic communities seem to lack this adaptive capacity. Mental stress among men generally leads to a worsening of their situation, in some cases resulting in problems such as alcoholism and suicide.

According to the research analysed, differences in societal roles in Arctic communities show the different nature of vulnerability facing men and women. While vulnerability should not be measured in terms of which groups suffer the most, it is certainly the case that there are gender-specific roles for men and women that lead to different degrees of vulnerability. Nevertheless, women's traditional

role in the protection of family integrity makes them accept the extra burden of responsibility in difficult situations.

Health

Chapter fifteen of the ACIA identifies impacts of climate change on the health of the Arctic population. These vary substantially depending on factors such as age, gender, socio-economic status, lifestyle, culture and location, as well as the capability of the local health infrastructure and systems to adapt. Some regions of the Arctic have a different population structure than more temperate regions, even within the same country, a pattern seen also within the elderly population. This is particularly true in the case of indigenous rural populations. The populations of Alaskan Natives, Canadian Arctic indigenous groups, Inuit, and Greenlanders residents have a smaller percentage of older people than in the Nordic countries (*International Arctic Science Committee*, 2010). The health of Arctic populations can be determined from a range of health status indicators. Effects on health are the most evident results of climate change in the Arctic (Parkinson, 2010, p. 9) that bring differentiated consequences for men and women. However, the nature and extent of climate change impacts on human health depend on the extent and duration of climate change as such, as well as on the relative vulnerability of population groups and society's ability to adapt to the change (Geller and Zenick, 2005, pp. 1257–1262).

It is claimed, on the one hand, that (as discussed elsewhere in this article), food-borne diseases have increased among the Arctic population because of the increased consumption of imported foods (Parkinson, 2010, p. 10), which are replacing traditional food (Jorgenson and Young, 2008, p. 291; Berner et al., 2010). For example, there is an increased risk of cancer, obesity, diabetes and cardiovascular diseases among older people. On the other hand, a Swedish Sami research expert[2] has claimed the contrary, suggesting that traditional food increases cancer among the people living in the northern part of Sweden and Russia. Given that the diseases mentioned are gender neutral as such, further research is required to determine the truth concerning the differing health effects of imported foods on men and women.

In the conditions prevailing in the Arctic, the temperature is rising and heat waves are causing a significantly higher mortality risk for the elderly (Costello et al., 2009, p. 373), in particular for persons with heart problems and asthma (*Climate Change and Health Effects on Older Adults*, 2013, pp. 1–2). Women's mortality in old age due to heat waves has been recorded as being greater than men's (World Health Organization WHO, 2010; Spohr, 2004). Both extreme cold and extreme heat increase the risk of death among vulnerable groups, of which elderly women are one (Spohr, 2004). However, there is a gap in the research regarding the questions how and why such extreme events affect elder women more than men in the Arctic. In addition, climate-sensitive diseases such as malaria and other vector-borne infections can strike a vulnerable group very easily. In many Arctic countries, as shown previously, women's life

expectancy is higher than men's, whereby women are exposed to various infectious diseases and symptoms such hypothermia, bronchitis and pneumonia for a longer period of time.

Extreme events, such as melting ice and frequent floods, increase water-borne transmissible diseases, respiratory diseases and mucous membrane infections in rural and less-developed areas. Older persons are the segment of the population who will suffer most from the mental and behavioural health consequences of these developments. (Haines and Patz, 2004, pp. 99–103). However, gender has not been specifically identified in such cases as a factor determining who suffers the most – men or women. Women are generally resilient in many cases, whereas men become mentally stressed comparatively easily (Courtenay, 2000, p. 1397). Research on diseases affecting older people and attributable to the changes in the Arctic has not to date extended to the identification of the conditions that are most common among men and most common among women. However, the prevailing societal conditions in the Arctic mean that women suffer more when in ill health.

Differences exist in the common causes of death, as based on death certificate data, although slightly different measures are used in the Nordic countries than in the North American Arctic (Berner et al., 2010). Data also suggests that Alaska Natives and Greenlanders have much higher mortality rates for injury and suicide (Berner et al., 2010). Mortality rates for heart disease and cancer are now similar among Arctic indigenous populations and comparable to overall rates for the United States, Canada and Northern European countries.

Education, economy – empowerment

> The informal slogan of the Decade of Women became *"Women do two-thirds of the world's work, receive 10 percent of the world's income and own 1 percent of the means of production."*
>
> (Shah, 2010)

Education is a factor ensuring that a person will enjoy a better position in society. In the Arctic, the level of education of women is high in the Nordic countries. Finland, Norway and Sweden show a higher rate of educational achievement for women than for men. Despite women's better position in level of education, men report higher incomes than women. Although inequalities are modest, such a practice is unanticipated since these countries are known as the most 'gender neutral' in the world (Young and Bjerregaard, 2008, pp. 94–95). The long-term effect of this kind of unequal treatment towards women generates poorer women. They become more financially vulnerable than men when they begin ageing. Women engaged in household work are even more helpless. Turning 65 or older does not make a woman vulnerable to the effects of climate change if she succeeds in maintaining her social and psychological wellbeing. Economic instability in old age makes women most vulnerable (Nieminen, 2004).

Empowerment promotes practices of inclusion, sharing of information, rewards and gaining authority among other actors in society. Women's empowerment in Arctic communities is important if they are to be capable of taking the initiative and making decisions by themselves to solve their problems and improve their situation. However, various factors reveal that women are generally less empowered than men in society. Empowerment of women can be seen from two perspectives: social inclusion and economic self-sufficiency.

Social inclusion is a matter of opportunities to participate in societal affairs and having a role to play in decision-making. Generally women in Arctic communities are recognized as important players at the societal level. In particular, the indigenous women of the region are recognized as the custodians of traditional knowledge and cultural practices pertaining to environmental preservation, maintenance of bio-diversity and environmental sustainability (Dankelman, 2010, p. 146; Rantala, 2013, p. 113). Interestingly, these women are generally the community's older members, who are valued because of their experience and knowledge. They act as respected advisors and their influence underpins vital decisions and policy (AHDR, 2004, pp. 187–205). Other research claims that women's action is not taken into account in the development plans (Rantala, 2013, p. 123). For example, women's roles are limited in Sami culture and traditions, which some researchers consider deeply gendered (Rantala, 2013, pp. 124–125). Women in the Arctic frequently move from the north to the south (Rasmussen, 2009, p. 525), one of the reasons being that they are undervalued in the community, where men are held in higher regard (Rantala, 2013, p. 122). This assertion is also supported in research on men's and women's agency in rural Finnish Lapland by Seija Keskitalo-Foley (2004). The degree to which women are able to assume societal positions varies both geographically and culturally and according to the specific resource-based sector. However, change in the Arctic has impinged on the traditional environment, with traditional knowledge now at risk of losing its inherent value. In the gradually transformed circumstances, an alternative process of environmental management has been adopted in which women's participation is generally seen as being less valuable than men's. The research carried out by Joanna Kafarwoski on gendered dimensions of environmental risk, especially that related to health and contaminants, suggests that men and women have not only different perceptions concerning environmental change leading to health risks but also different adaptation strategies (Kafarwoski, 2006). Her research also shows that women's contribution to environmental footprints is much smaller than men's (Kafarwoski, 2006). Women's knowledge on environmental preservation demonstrates the importance of their being included in environmental decision-making. However, the likelihood of their inclusion is actually deeply gendered (Morgan, 2008; AHDR, 2004) and women are less visible in environmental politics. One reason for this is their lesser involvement in political institutions. In the Canadian Arctic, for example, women's representation in political institutions is much lower than men's. In the Northwest Territories and Yukon, since the 1970s, women's representation has been around 10 per cent. In the Nordic Arctic, modernization

and other developments have improved the quality of life of women. However, it has been argued that a hidden inequality between men and women exists in the Sami community, including that in Finland, in regard to social inclusion (Rantala, 2013, p. 116).

The second aspect of empowerment is economic self-sufficiency. Despite the touch of modernization in many Arctic communities, women's roles continue to be that of making a contribution to the informal economy and the household work. Even when women engage in formal employment, they face disparities in regard to both wages and retirement age. Women are generally poorly paid compared to their male counterparts, even in the most gender-neutral countries. According to Finnish sources, for example, in female-dominated sectors and professions, the pay is lower than in the corresponding male sectors and professions (*Ministry of Social Affairs and Health*, 2006, p. 11). Regarding pension age, although it varies from country to country, women nonetheless retire earlier than men. Early retirement naturally brings a lower pension benefit in their old age. In the case of Russia (in Murmansk), the pensionable age for women is 50 years, while for men it is 55. Additionally in formal employment, women are hindered by various other factors, such as loss of job due to maternity or leave during maternity, which eventually affects their economic self-sufficiency when older. A lack of economic self-sufficiency in old age makes women extremely vulnerable to the consequences of the changes taking place in the Arctic.

Conclusion and remarks

This article has outlined the impact of change in the Arctic with particular reference to the region's older persons and the respective position of the genders in society. In light of the research question, it can be concluded that the role of gender in the situation of older persons in the Arctic has been under researched, understated. The position of older persons has been found to be both unequal and ambiguous in academic research, strategic planning and policy documents, as well as in everyday life practices. The research carried out to date also suggests that change in the Arctic will continue to influence livelihoods, cultures, health and the economy in the region's small, remote communities. Consequently, gender positioning among older persons will continue to be affected unless effective policy measures are introduced and implemented. The findings, however, suggest that women's situation in the Nordic Arctic countries is comparatively better than that in the other Arctic regions. Based on these conclusions, the article puts forward several salient considerations to inform future efforts to address gender positioning and gender-related disparities exacerbated by climate change:

a) The lack of specific data and research on the elderly and gender dimension in the Arctic causes the related issues to be neglected and overlooked. Given that the population of older persons all across the Arctic is increasing, high priority should be given to expanding the scope of research on this issue. In such an endeavour, a diversity of approaches and methods should

be brought to bear with due consideration of the opportunities offered by multi-disciplinary research in addressing the problems.

b) Inequality, or disparity, between women and men is a social concern that should not be merely an academic issue. It requires action. However, before any action can be taken, it is necessary to pay due attention to the division of labour between the genders as well as to their access to resources and decision-making processes. In the Arctic context, achieving greater equality for older persons will require changes at many levels, including changes in attitudes and relationships, in service institutions and legal frameworks, in economic institutions and in political decision-making structures. These issues should be addressed through relevant policy instruments.

c) Relevant regional institutions, such as the Arctic Council and the Barents Euro-Arctic Council (BEAC) should take steps in order to address old age, gender-based disparities. Although the health and wellbeing of older persons have been identified as some of the indicators of human development in the Arctic, thus far these institutions have hardly shown any interest in issues relating to the situation of older people, let alone the role of gender in it. These institutions should therefore adopt a carefully planned strategy at both community (local) and regional level. The Arctic organizations for human development should provide research support and technical assistance in the production of policy strategies, as well as in monitoring and assessing the effectiveness of such strategies.

d) In policy instruments as well as in academic research, the human rights aspects of gender positioning in the case of inequality and disparity should be integrated with specific reference to the elderly in the Arctic; this development would clearly strengthen the process of knowledge production.

This paper therefore concludes that gender-based disparity can be eased by implementing the aforementioned recommendations.

Notes

1 The term *duodji* means traditional Sami handicrafts made by hand such as clothes, tools, housewares, fishing, tackle and jewelry. The materials used in Sami duodji come mostly from nature, with reindeer being the main source.

2 Prof. Marianne Lilequist made this observation about food contamination in the northern parts of Sweden and Russia at the 'Arctic Change' workshop in Tromso on 10 September 2013.

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Challenges to the Human Security of Elderly Sámi in Finnish and Swedish Lapland

Shahnaj Begum and Päivi Naskali ***

Abstract:
The indigenous Sámi people inhabit the northern parts of Finland and Sweden. They adhere to a traditional way of life and practice a distinct culture connected to their natural surroundings, forming a unique cultural identity. In this chapter, we look into how the concept of human security applies in assessing the well-being of elderly Sámi in the region. Climate change and developments such as mining and other industrial activities are causing significant socio-environmental changes that affect elderly Sámi. While both positive and negative impacts can be identified, risks pertaining to health and well-being are prevalent. We analyse these risks in light of data collected in Finnish and Swedish Lapland during the years 2012 and 2014. In particular, we examine the concerns and challenges which elderly Sámi face as regards the economy, environment, food and health. In concluding, we offer some recommendations on how the well-being of elderly Sámi can be promoted in response to the prevailing human security challenges.

Keywords: Sámi elderly, cultural identity, security threats, well-being, livelihood practices, Finnish and Swedish Lapland

1. Introduction

The article undertakes to determine the degree of human security in the lives of elderly[1] Sámi. Well-being and human security are intertwined. The concept of well-being is a broad, multidimensional one[2]. Human security is also a multifaceted construct, one whose component features span many disciplines. It combines security, rights and development. In this research, we have applied human security in its ***peo-***

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1 'Elderly' in this paper refers to 'elder persons', 'old people', 'senior persons', including 'elderly men and women'. Since in Finnish and Swedish research an elderly person is a person aged 65 and over, we also take this age as our point of reference.

2 Elina Vaara et al., "What is wellbeing for the elderly?," in *Ageing, Wellbeing and Climate Change in the Arctic: An interdisciplinary analysis*, ed. Päivi Naskali, Marjaana Seppänen and Shahnaj Begum (Routledge – Earthscan, Forthcoming, 2015).

ple-centred aspect,[3] which places the individual at the 'centre of analyses'. Well-being is socially defined based on the historical and cultural context and also on the different stages of life. As used here, the concept denotes an absence of the particular challenges that elderly Sámi people face in their communities, examples being health-related problems exacerbated by climate change, social isolation, mining activities and out-migration of the younger generation. In this chapter well-being is viewed as a component of human security.

The northern parts of Finland, Sweden, Russia and Norway are home to both non-indigenous and Sámi populations. The area known as the Sámi homeland, or Sápmi, stretches from Central Norway and Sweden through the northernmost part of Finland into the Kola Peninsula. While the Sámi inhabit a rather large area, our focus in this chapter is on Sámi living in the Finnish and Swedish parts of the homeland and, in particular, the elderly members of the Sámi communities. In Finland the Sámi homeland comprises the municipalities of Enontekiö, Inari and Utsjoki, as well as the reindeer-herding area of the municipality of Sodankylä.

Several statistics show that elderly people now live longer than earlier.[4] Longevity has increased all over the world because of developments such as urbanization, industrialization and improved standards in health care and in social services.[5] Living longer does not mean that everyone is guaranteed a healthy and happy life, however. Elderly persons are treated as an expensive group.[6] However in the European Union's policy areas healthy ageing has been put forward as an important goal.[7] An individual's well-being depends on his or her socio-economic situation, standard of living, life style and co-related surroundings. As a result, the promotion of well-being, directly or indirectly, strengthens human security.

In the Arctic, the indigenous population lives primarily in rural areas.[8] It is evident from different reports that the elderly population has become a demographic

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3 Shahrbanou Tadjbakhsh and Anuradha M. Chenoy, *Human Security: Concepts and Implications.* (London & New York: Routledge, 2007), 7. Accessed April 30, 2015. https://docs.unocha.org/sites/dms/HSU/Publications%20and%20Products/Human%20Security%20Tools/Human%20Security%20in%20Theory%20and%20Practice%20English.pdf (accessed 30 April, 2015).

4 Timothy Heleniak and Dimitry Bogoyavlensky, "Arctic populations and Migration" *in Arctic Human Development Report,* ed. Niels Einarsson, Joan Larsen and Fondahl Gail (Copenhagen: Nordisk, 2014), 54.

5 Sven Hassler, Per Sjölander and Urban Janlert, "Northern Fennoscandia", in *Health Transitions in Arctic Populations,* ed. T. Kue Young and Peter Bjerregaard (Toronto: University of Toronto Press, 2008), 103-116; Dimitry Bogoyavlenskiy and Andy Siggner "Arctic Demography", in *Arctic Human Development Report*, ed. Niels Nilsson, Joan Larse N., Annika Nilsson and Oran R. Young, (Akureyri: Stefansson Arctic Institute, 2004), 27- 41; Peter Sköld, Per Axelsson, Lena Karlsson and Len Smith, "Infant mortality of Sami and settlers in Northern Sweden: the era of colonization 1750-1900", *Glob Health Action* 4 (8441), (2011).

6 Seija Keskitalo-Foley and Päivi Naskali, "Tracing gender in political ageing strategies and the press in Finnish Lapland" in *Ageing, Wellbeing and Climate Change in the Arctic: An interdisciplinary analysis*, ed. Päivi Naskali, Marjaana Seppänen and Shahnaj Begum (Routledge – Earthscan).

7 *Healthy Ageing: A challenge for Europe, The Swedish National Institute of Public Health (2006*). Accessed May 1st, 2015. http://www.healthyageing.eu/sites/www.healthyageing.eu/files/resources/Healthy%20Ageing%20-%20A%20Challenge%20for%20Europe.pdf.

8 Andrew Kozlo and Dmitry Lisitsyn. "Arctic Russia" in *Health Transitions in Arctic Populations*, ed. T. Kue Young, and Peter Bjerregaard (Toronto: University of Toronto Press, 2008), 94–95.

challenge for the Nordic countries.[9] As members of this group, Finland and Sweden are highly developed countries, but this does not ensure that the people living in the remote areas of Lapland have a secure life; various challenges affect them and their wellbeing. According to the first Arctic Human Development Report (2004), the elderly, women and children are the most vulnerable groups.[10] The vulnerability of elderly populations is distinct in that ageing gradually reduces their physical strength and stamina; they are easily affected by viral and bacterial diseases, becoming less resistant to disease overall. Moreover, in remote areas, the availability of essential services is poor, making everyday life burdensome. This region also has a poor transport infrastructure,[11] hampering communications between villages, for example. The superior motorway networks to be found in the municipalities in northern Sweden may be seen as an advantage for that region as compared with its Finnish counterpart.

The extensive changes facing the region, ones proceeding much faster than before, also impact the lives and well-being of the elderly. To cite one example, the consequences of climate change and other human activities pose new challenges to the environmental infrastructure. These developments entail risks in the lives of people belonging to one of the region's most vulnerable groups – the older members of the Sámi communities. One risk is the erosion of social integrity. Nuttall notes, for example, that new forms of identity develop as in- and out-migration cause threats to existing cultures and livelihoods.[12] However, these tends do not have similar effects all across the region. In the case of Lapland, in-migration is not as common as out-migration, which has been specifically cited as a problem by informants and researchers.[13] In our field work we have studied out-migration in the village of Angeli in Finland and in a village near the Kallak area in Sweden. The Sámi in Lapland traditionally maintain certain practices as part of their culture and these are connected to their identity. Although the terms *culture* and *identity* create some tension in Arctic society as a whole,[14] such as preservation of traditional culture based identity versus formation of identity based on imported cultural practices, they represent particularly important considerations for elderly Sámi. They want to keep their societal norm as intact as possible. Their mental well-being is threatened due to the increasing risk of losing incentives connected to their identity. Community identity is one of the major components of human security, while other aspects of human security, such

9 *Gender and Climate Change*. Accessed October 19, 2012. http://www.equalclimate.org/filestore/Pdf/DeskstudyGenderandccreport.pdf.

10 Bogoyavlenskiy and Siggner 2004, *supra* note 5, 27-41.

11 Klaus Spiekermann and Hallgeir Aalbu, "Nordic Peripherality in Europe", (2004), Nordregio Working Paper. Accessed May 11th, 2015. http://www.diva-portal.org/smash/get/diva2:700450/FULLTEXT01.pdf.

12 Mark Nuttall, *Protecting the Arctic: Indigenous Peoples and Cultural Survival (Amsterdam*: Harwood Academic Publishers, 1998).

13 Rasmus Ole. Rasmussen, "Gender and Generation: Perspectives on Ongoing Social and Environmental Changes in the Arctic, "*Journal of Women in Culture and Society* 34 (3) (2009): 525.

14 Peter Schweitzer, Peter Sköld and Olga Ulturgasheva, "Cultures and Identities" in Arctic Human Development Report, ed. Niels Nilsson, N. Joan Larsen and Gail, Fondahl (Copenhagen: Nordisk Ministerråd, 2014).

as health, environment, the economy and food are connected in one way or another to community identity. The Commission on Human Security (CHS), established in 2001, defines human security as follows:[15]

> to protect the vital core of all human lives in ways that enhance human freedoms and human fulfilment. Human security means protecting fundamental freedoms – freedoms that are the essence of life. It means protecting people from critical (severe) and pervasive (widespread) threats and situations. It means using processes that build on people's strengths and aspirations. It means creating political, social, environmental, economic, military and cultural systems that together give people the building blocks of survival, livelihood and dignity.

Human security for the elderly, in particular the focal population in the present research, faces many critical challenges. However, this topic has largely been ignored in academic literature to date. The lack of research on elderly issues in the Arctic has also been identified in the recently published Arctic Human Development Report (AHDR, 2014).[16] The AHDR considers that more research should be done to promote the well-being of the elderly. The promotion of human security for the elderly promotes their well-being.

Our research in this chapter investigates how the concept of well-being and human security are interconnected in the circumstances of elderly Sámi in Finnish and Swedish Lapland. Our observations pinpoint the benefits of promoting the well-being of the region's elderly in response to the challenges we identify. We describe the threats that face elderly Sámi – either directly or indirectly – and that pose potential obstacles to their overall well-being. One of our main aims in this chapter is also to heighten awareness of the issue in view of the need to promote the well-being of elderly Sámi in response to the significant transformation which the region is undergoing.

Our findings draw on previous research, a literature review and field studies. The literature includes scientific research on the Sámi population, relevant health and policy reports on the well-being of the Arctic and northern populations and other relevant resources. The field studies comprise data collected using interviews conducted between 2012 and 2014 in Finnish and Swedish Lapland. Our research questions relate to informants' experiences of the ongoing transformation of the region, livelihoods, the importance of traditional activities, changes in livelihood practices and the impact of those changes on their social lives. All discussions were recorded using a tape recorder and some were also summarised in notes. In most of the cases we had received permission from informants by e-mail and telephone before conducting the interviews. In a few instances, we also sent a sample of the research questions by e-mail and ultimately obtained permission before starting the interviews. The participants' consent to participate in the research was completely voluntary and all were competent to give consent.

15 Tadjbakhsh and Chenoy 2007, *supra* note 3, 6.

16 Niels Einarsson, Joan Larsen N. and Fondahl Gail, ed. *Arctic Human Development Report* (Copenhagen: Nordisk, 2014).

We interviewed nine elderly Sámi, three active members of the communities, one healthcare professional and three researchers working on indigenous issues. The elderly people ranged in age from 65 to 85. Six were from Ivalo and Inari (Finland), two were from Jokkmokk (Sweden), and one from Tårnaby (Sweden). The community members, researchers and health professional were between 40 and 70 years of age and involved with Sami people's well-being in the Finland and Sweden. In order to gain insights into the human security challenges facing elderly Sámi, we needed to know, among other things, about their culture and its importance to them.

2. Brief overview of the Sámi in Finland and Sweden

The Sámi in Finland and Sweden

The northern parts of Finland and Sweden are more sparsely populated[17] than the corresponding areas in other Nordic countries. It is in this region that the indigenous Sámi people live.[18] It is difficult to estimate the total Sámi population.[19] The number of Sámi people is estimated to be some 70,000, but the statistics differ from source to source. In addition to Finland and Sweden, there are Sámi communities in the Kola Peninsula in Russia and in Norway, the largest population being in Finnmark County. Based on the characteristics of the locations in which they live, Sámi are referred to as Sea Sámi, Forest Sámi and Reindeer-herding Sámi. Both in Finland and in Sweden the Sámi are classified as belonging to one of the inland groups of Sámi even though sometimes their livelihoods are connected to river fishing and lake fishing.[20]

In Finnish, a Sámi is called '*saamelainen*', and in Swedish '*Same*'. The Sámi have been recognized as an indigenous people in the Finnish Constitution since 1995; they received corresponding recognition in Sweden 1989.[21] The Sámi are the only the indigenous people of Europe and their rights are protected under the international conventions on indigenous peoples.[22]

Sámi Culture and livelihood in Finland and Sweden

Despite some variations from area to area, the Sámi share similar cultural practices. In both Finnish and Swedish Lapland they strive to maintain their traditional culture, which encompasses certain activities, such as fishing, herding, farming, making of handicrafts, gathering, trapping and, in some locations, berry picking. These nature-based activities show the Sámi's special relation to their surrounding natural environment. Indeed, their cultural identity has traditionally been built around these

17 Hassler 2008, *supra* note 5, 106.

18 Bogoyavlenskiy and Siggner 2004, *supra* note 5, 27-41.

19 Hassler, Sven, Siv Kvernmo, and Andrew Kozlov. "Sami" in *Health Transitions in Arctic Populations*, ed. T. Kue Young, and Peter Bjerregaard, (Toronto: University of Toronto Press, 2008), 148.

20 *The Sámi* - an indigenous people in Sweden. (The Sami, Ministry of Agriculture, Food and Consumer Affairs). Accessed March 1, 2015 http://www.samer.se/2137

21 *The Sami of Northern Europe - one people, four countries.* Accessed March 1, 2015. http://www.unric.org/en/indigenous-people/27307-the-sami-of-northern-europe--one-people-four-countries.

22 Daniel Johnson, "Indigenous Land Threatened By Mine", August 21, 2013. Accessed May 4, 2015. http://www.mediacoop.ca/story/indigenous-land-threatened-mine/18648.

activities. Today, in addition to the Sámi languages, *duodji* (Sámi handicraft), *gakti* (the traditional clothing) and reindeer husbandry are the emblematic elements of Sámi culture to the outside world.

The iconic livelihood in the Sámi region is reindeer herding, even though only about 10 per cent of Sámi are involved in it and it is gradually becoming more commercialized. There are differences in the right to practice reindeer herding in Finland and Sweden. In Finland the Reindeer Husbandry Act of 1990[23] provides that, regardless of whether they are Sámi or not, citizens of the European Economic Area who reside permanently in the reindeer husbandry, as well as reindeer-herding cooperatives, may own and herd reindeer. In Sweden, by contrast, reindeer herding is restricted to the Sámi only by virtue of the 1971 Reindeer Husbandry Act, which was amended in 1993. In Sweden this law regulates only the rights of reindeer-breeding Sámi; the Sámi who are permitted to practise reindeer herding also enjoy special land and water rights. The amended Act does not cover the land and water rights of Sámi fishers in the country.[24] In any case, the importance of reindeer herding and other such activities keep the crucial element of the culture – the language – alive, which provides the group's identity. According to Martin Scheinin, cited in Linus: [25]

> The Sámi language lives and dies with the Sámi way of life because the social activities around reindeer herding and in the nature-based forms of livelihood really keep up the living language. If it is isolated to a museum piece I think there will be no future for the Sámi language.

As regards protection of the Sámi culture and identity, the Sámi often refer to the ratification of ILO Convention No. 169, which deals specifically with the rights of indigenous and tribal peoples and which is a legally binding international instrument.[26] Several Sámi informants from both Finnish and Swedish Lapland mentioned that this convention would indeed be important for promoting Sámi people's socio-economic, cultural and political rights. Neither Finland nor Sweden has ratified the Convention despite its importance for the Sámi. In a recent lecture, the UN Special Rapporteur on the Rights of Indigenous Peoples, Victoria Tauli-Corpuz, re-iterated the importance of the ILO Convention for the protection of the Sámi people's rights.[27] Whereas both Finland and Sweden are parties to the International Covenant on Civil and Political Rights (ICCPR) and to the International Covenant of Economic, Social and Cultural Rights (ICESCR), neither of these covenants is applicable to indigenous peoples – despite the fact that indigenous groups as a minorities sometimes invoke Article 27 of the ICCPR, which concerns the protection of cultural rights broadly connected

23 *Ministry of Agriculture and Forestry*. Accessed April 16, 2015. http://www.mmm.fi/en/index/frontpage/Fishing,_game_reindeer/Reindeer_farming.html.

24 *The Sami People in Sweden*. Accessed May 25, 2015. http://www.samenland.nl/lap_sami_si.html.

25 Atarah Linus, "Rights: Finland&#39s Sami Fear Assimilation". April 7, 2008, IPS, Helsinki, accessed April 16, 2015. http://www.ipsnews.net/2008/04/rights-finland39s-sami-fear-assimilation/.

26 *Convention No. 169*. Accessed May 4, 2015. http://www.ilo.org/indigenous/Conventions/no169/lang--en/index.htm.

27 UN Special Rapporteur on the Rights of Indigenous Peoples Victoria Tauli-Corpuz gave a lecture at the University of Lapland, February 25, 2015.

to identity. However, the article only protects the rights of individuals not of a group as a whole. Both Finland and Sweden have also endorsed the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which is a comprehensive document designed to protect the culture and identity of indigenous peoples. While the adoption of the Declaration is a huge achievement for the protection of all aspects of indigenous rights, it is nevertheless not a legally binding document.

Sámi Parliaments have been established in Norway, Sweden and Finland to promote Sámi culture. In 2010 (12th December), Kuelnegk Soamet Sobbar (The Kola Saami Assembly) was established in Murmansk but the Russian government did not recognize it as the Russian Sámi Parliament.[28] The Parliaments are composed of members elected by the Sámi themselves. In Finland only Sámi inhabitants of the Sámi homeland are eligible to vote in elections for the Sámi Parliament, whereas in Sweden all registered Sámi residents are entitled to vote. The existence of such institutions is naturally important to let the Sámi voice be heard as a channel for promoting Sáminess and thereby preserving the Sámi identity. However, in our interviews (the respondents were Sámi activists and professionals) we found concerns in both countries that the competence of the Sámi Parliaments is limited because of structural weaknesses and poor allocation of funding.

In the following section, drawing on literature reviews and field interviews, we go on to point out regional developments and circumstances that affect the well-being of elderly Sámi.

3. Impacts of ongoing changes in Lapland

Climate change

Climate change has both positive and negative impacts, ones that pose distinct challenges in social as well as economic perspective in Arctic communities.[29] The literature review and interviews both indicate that the global warming caused by climate change is one of the greatest environmental threats to the Arctic region.[30] Lapland, being part of the region, is also affected. Indigenous and rural populations are more vulnerable to negative impacts of climatic and environmental changes.[31] It has been documented in both scientific research and discussions with elderly informants that health effects[32] are among the most obvious consequences of climate change in the

28 *Fighting for Sami parliament in Russia*. Accessed May 30th, 2015. http://www.barentsobserver.com/fighting-for-sami-parliament-in-russia.4530696-16149.html

29 Rasmussen, 2009, *supra* note 13, 525.

30 *Arctic Threats:Background - 7 August, 2009 The Arctic region is under threat from Climate Change, increased exploitation, and a lot more.* Accessed April 19, 2015. http://www.greenpeace.org/international/en/campaigns/climate-change/arctic-impacts/arctic-under-threat/.

31 Maria Furberg et al.. "Facing the limit of resilience: perceptions of climate change among reindeer herding Sami in Sweden," *Glob Health Action*, 4 (8417) (2011). Accessed May 1st, 2015). http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3204920/.

32 Alan J. Parkinson, "Arctic Human Health Initiative," *Circumpolar Health Supplements* 6 (2010): 9, accessed November 12, 2012. http://www.circumpolarhealthjournal.net/public/journals/32/chs/CHS_2010_6.pdf.

Arctic.[33] According to the ACIA (2005) report, climate change results in various challenges to the region: for example thawing permafrost causes damage to roads and water supplies[34] and toxic contaminants released from snowmelt pollute water and the food chain, which is a particularly serious threat to human health.[35] The Intergovernmental Panel on Climate Change (IPCC) clearly recognizes that climate change mainly affects particular parts of the population, for example, the elderly, the powerless, indigenous peoples and recent immigrants. The effects of climate change are considerable for marginalized people all across the region,[36] including the Sámi. Within these groups, the elderly have been identified as the most exposed segment.[37] Climate change has impacts on food safety and security and heightens the risk of environmental contamination and the spread of viral diseases,[38] all of which affect the health of the region's inhabitants.[39] Risks such as these impact the elderly most significantly. Heat stroke has caused deaths and exacerbated cardiovascular diseases amongst elderly and socially isolated people in Europe,[40] and Lapland is no exception. Moreover, as elderly persons lose physical and mental stamina with age and their economic situation generally deteriorates as well, their coping capacity declines significantly. In addition to health-related challenges, the elderly, especially the Sámi elderly, are threatened by a psychological fear that the group's distinct identity cannot be sustained, a central consideration here being that climate change will bring about sweeping societal changes.[41] In her research Lena Karlsson found that trends in health and demography among indigenous people have followed a different course compared to those for non-indigenous groups living in the same area. The main finding of her research suggests that Sámi have higher mortality rates and a shorter life expectancy at birth than the pop-

33 Joel Scheraga, "Overview of the health implications of climate change in the Arctic." Paper presented in the Workshop held in Anchorage, Alaska, February 13–15, 2008, accessed October 19, 2012, http://www.circumpolarhealthjournal.net/index.php/ijch/article/viewFile/18295/20987.

34 McCarthy et el., "Climate Change in the Context of Multiple Stressors and Resilience," in *Arctic Climate Impact Assessment (ACIA),* ed. Carolyn Symon, Lelani Arris and Bill Heal. (Cambridge: Cambridge University Press, 2005), 945-988.

35 Jim Berner et el*.,* "Human health," in *Arctic Climate Impact Assessment (ACIA),* ed. Carolyn Symon, Lelani Arris and Bill Heal. (Cambridge: Cambridge University Press, 2005), 863-906.

36 Barbara Schumann, "*Climate change in Lapland and its role in the health of the elderly and rural populations,"* in *Ageing, Wellbeing and Climate Change in the Arctic: An interdisciplinary analysis*, ed. Päivi Naskali, Marjaana Seppänen and Shahnaj Begum. (Routledge – Earthscan, Forthcoming, 2015).

37 Maria Rakkolainen and Monica Tennberg, "Adaptation in Russian Climate Governance," in *Governing the Uncertain*, ed. Monica Tennberg, (London: Springer, 2012), 42.

38 Andy Haines et al. "Climate change and human health: Impacts, vulnerability and public health," *Public Health* 120 (2006): 585–96. Accessed April 19, 2015. http://www.bu.edu/sph/files/2012/08/Haines_2006_Climate_Change_and_Human_Health_-_Impacts_Vulnerability_and_Public_Health.pdf

39 Laura Arbour, Alan Parkinson and Judith Kulig, "Human health at the ends of the earth," *Rural Remote Health* 10 (2010):153.

40 George Luber and Natasha Prudent, "Climate Change and Human Health," *Trans Am Clin Climatol Asoc* 120 (2009):113-117. Accessed April 19, 2015. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2744549/; Haines et al. 2006, *supra* note 38, 585–96.

41 Alan J. Parkinson, "Climate Change and Infectious Disease: Impact on Human populations in the Arctic," *Centers for Disease Control and Prevention* 156 (2) (2008): 104-178.

ulation at large.[42] This is probably a result of their having a different lifestyle or of psychosocial and/or genetic factors.[43]

Human activities threatening traditional activities

The Sámi informants, especially the elderly ones, reported dramatic changes in what for them had been a stable environment. The changes noted have mainly been caused by numerous human activities, such as mining, tourism and other commercially oriented developments. Traditional activities are gradually being replaced by more modern ones. There is a mixed opinion about this development amongst the Sámi. An 83-year-old woman who was born in Sodankyla and now lives in Ivalo in an elderly service institution made the following comments on mining:

> Mining will just destroy our nature and environment. Our water, fishes and berries which we collect from the forest will be contaminated. When I was young, everything was fresh!

One young female informant who has a handicraft business in Jokkmokk and whose husband is a reindeer herder talked about the impact of mining in their community. In talking about the test mining at the Kallak Deposit, she presented a number of views about mining:

> Herding and *duodji* are both closely related to our cultural identity and now mining has already affected these activities. Most of the people are concerned about the future impact of mining activities on our traditional activities and environment. I am also worried about our young generation. People can easily earn good money by working in the mining industry and because of that many young people are not motivated to pursue higher studies. In the future, there will be a huge job crisis when the mining company leaves the area. There will not be good options to compensate for the effects of the crisis.

While some say these activities bring revenue to the region and hence boost the region's economy and bring new jobs for young adults, others intend to resist such developments, which impact the environment. We interviewed a 69-year-old woman from the Kallak area who is not a Sámi. She is retired but active in social life; her daughters work in the southern part of Sweden. She has supported the mining in Kallak, her logic being the following:

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42 Lena Karlsson, "Indigenous life expectancy in Sweden 1850-1899: Towards a long and healthy life?," *Demographic Research* 28 (2013): 433-456.

43 Sven Hasler et al. "Causes of death in the Sami population of Sweden, 1961-2000," *International Journal of Epidemiology* 34(3) (2005): 623-629. Accessed May 1st, 2015. http://diva-portal.org/smash/record.jsf?dswid=_e_03rO&faces-redirect=true&language=en&searchType=SIMPLE&query=&af=%5B%5D&aq=%5B%5B%5D%5D&aq2=%5B%5B%5D%5D&aqe=%5B%5D&pid=diva2%3A154024&noOfRows=50&sortOrder=author_sort_asc&onlyFullText=false&sf=all&jfwid=_e_03rO.

> Without job opportunities the young generation is leaving the village. They are only seven elderly persons living in this area. The family members are coming in the summer time and during holidays to visit their elderly. If there were jobs available, then people could stay here. Otherwise, in the future the village will not exist anymore. I know about the negative impacts of mining on our water resources and environment, but I am more concerned about our ageing population being isolated from the younger one.

As regards mining developments in Sámi areas, even though the research suggests that "[t]he legal protection that the Sámi people now enjoy against mining and its adverse impacts is relatively strong",[44] the reaction of the locals - Sámi as well as non-Sámi - is mixed. In both Finnish and Swedish Lapland, mining activities cause serious tension especially amongst the Sámi. In response to the initial development of the Kallak mine project, a series of protests were organized which even became violent at some point. The Sámi activists were at the forefront of these protests, joined by other local Sámi. In Finland, however, protests were mostly aired using popular media such as in newspapers by Sámi politicians, activists and journalists. It could be mentioned that currently there are no mines within the Finnish Sami homeland. In 2014, the Irish mining company Karelian Diamond Resources received provisional approval from Tukes (The Finnish Safety and Chemicals Agency) for exploration in Utsjoki but had to pull out because of resistance from the local people.[45] In the case of elderly Sámi, we found that in Jokkmokk many of them took part in the protest. Some of the respondents stated with great frustration that if they could not continue reindeer herding, which will be affected by mining developments, they – the whole community – will die mentally. "We would like to keep on our herding practices as long as our legs are working", said an elderly Sámi in Inari.

Changes in health and well-being

Health is one of the most important concerns for elderly Sámi as they suffer from the loss of physical strength to resist diseases in old age. As discussed, a number of viral diseases may enter the region as a consequence of climate change, and such diseases are expected to increase, particularly among the very young and the elderly.[46] In addition, environmental pollution, caused for example by extractive industrial developments in the region, puts people's health at risk. Amongst the Sámi, acculturation

44 Timo Koivurova et al., "Legal Protection of Sami Traditional Livelihoods from the Adverse Impacts of Mining: A Comparison of the Level of Protection Enjoyed by Sami in Their Four Home States," *Arctic Review on Law and Politics* 6(1), (2015). Accessed April 19, 2015. http://arcticreview.no/index.php/arctic/article/view/76.

45 *YLE news, May 11, 2015. Barents Observer, "Local opposition buries plans for diamond mine in Arctic Finland,"* accessed June 11, 2015, http://barentsobserver.com/en/nature/2015/05/local-opposition-buries-plans-diamond-mine-arctic-finland-11-05.

46 Alan J. Parkinson and James Berner, "Climate change and impacts on human health in the Arctic: An international workshop on emerging threats and the response of Arctic communities to climate change," *Circumpolar Health Journal* (2008), accessed April 05, 2015. http://www.circumpolarhealthjournal.net/index.php/ijch/article/viewFile/18295/20987

has already been shown to cause numerous health problems,[47] especially among the elderly, who feel threatened and psychologically depressed as a result.

We have observed that in remote villages in Lapland elderly Sámi are generally happy about their health. They consider health and well-being connected to individuals' physical, socio-economic, cultural and environmental surroundings. Their nature-based culture and environment have a huge influence on their physical and mental health. Our informants reported that they live close to nature, which gives them space to breathe and comfort to enjoy life. Even though regular services, such as access to healthcare centres, post offices and shopping malls are not readily available, they feel that they are well adapted to this reality. They eat fresh and traditional food, which allows them to meet their dietary needs. This sort of understanding of well-being is very important for elderly Sámi in determining whether they are healthy.[48] However, as stated before, the pureness of nature is now increasingly being contaminated, for example, by gradual expansion of mining throughout Lapland. A 54-year-old activist from Sevettijärvi, highlighting the importance of water resources for the maintenance of good health, expressed her concerns:

> Mining activities starting in Kittilä are located just around 100 km from Inari at Kevitsa, which will pollute the water of Lake Inari. People in Inari and in Utsjoki rely on the water from the lake. Decision makers think that mining is important and water treatment would eventually solve the problem, whereas the people in the community are concerned about environmental pollution. We are dependent on clean water for our health.

Generally speaking, in the Nordic countries, especially Finland, Norway and Sweden, the health of the populations, including the elderly, is much better than elsewhere in the world,[49] and they live independently. In Finland, for example, the government has worked to promote well-being in 40 municipalities by raising the nutritional level of people's diets. In the year 2012, the National Nutrition Council, in collaboration with local and regional governments,[50] conducted a study showing the importance of nutrition to the well-being of municipal residents. The study stated: "A healthy diet is an essential part of not only physical and psychological health, but also social well-being, community spirit, cultural and behavioural education, sustainable development, quality of life, and life management skills". It also mentioned that healthy food is important for elderly people's well-being. However, this project did not include Lapland; the city of Oulu was the northernmost site studied. Consequently the dynam-

47 Sven Hassler, Siv Kvernmo and Andrew Kozlow, "Sami,' in *Health Transitions in Arctic Populations,* Toronto: University of Toronto Press, 2008), 155.

48 Hassler 2008, *supra* note 47, 148-170.

49 Jakko Tuomilehto,"Health status in Finland and other Nordic countries with special reference to chronic non-communicable diseases," *.Ann Nutr Metab* 35(1)(1991):41-52. Accessed April 28, 2015. http://www.ncbi.nlm.nih.gov/pubmed/1888127.

50 *Well-being through nutrition: A guide for municipal decision-makers (2012), National Nutrition Council in Finland In collaboration with Local and Regional Government Finland With the support of Ministry of Agriculture and Forestry and Ministry of Social Affairs and Health*. Accessed May 1st, 2015. http://www.stm.fi/c/document_library/get_file?folderId=501339&name=DLFE-23602.pdf.

ics prevailing in Finnish Lapland in general have been neglected, not to mention the concerns of elderly Sámi in particular. In Sweden, a national public health policy was adopted in the year 2003 and updated in 2008.[51] According to this policy, which is based on 11 public health objectives, the government should create social conditions that will contribute to equally good health for the whole population.[52] However, as indicated, the lives of elderly Sámi are structured differently from those of the population at large. The characteristics of the region in which they live and their indigenous culture warrant a special focus on their physical and mental health.

Changes in the food supply-chain

The Sámi believe that traditional food provides the diet needed to keep them healthy. Any impact on the traditional food supply chain may bring problems related to health. Studies have found that diseases such as diabetes, asthma, cancer and high blood pressure are common among elderly Sámi in the Finnish and Swedish north. Climate change in the region has reduced the availability of traditional food, and the resulting reliance on imported food has significantly changed the local diet, with major health-related implications.[53] Traditional food is also important in social and cultural terms.[54] Research has shown that imported food has increased the risk of cancer, obesity, diabetes, and cardiovascular diseases among elderly Sámi.[55]

An elderly woman from Inari, aged 87, expressed her view on traditional food in the following way:

> I was 14 years old during the war time. We had a cold room where we stored fish. We used to get fish from our lakes and to sell them to German soldiers. But now fish stocks are not what they used to be. A variety of foodstuffs from outside sources come to the shops and these give us more options to choose from, but we still miss some of our local fish and traditional sources of foods for our dietary needs.

Another woman, aged approximately 90, living in an elderly institution in Ivalo stated: "In addition to our language, the food we used to eat before is very important for our culture, but this food is now less available in the service institutions".

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51 Anders Anell, Anna H Glenngård and Sherry Merkur, "Sweden: health System Review," *Health Systems in Transition*, 14(5), (2012). Access April 16, 2015). http://www.euro.who.int/__data/assets/pdf_file/0008/164096/e96455.pdf.

52 Katri Suorsa, "Regionality, innovation policy and peripheral regions in Finland, Sweden and Norway," *Fennia* 185 (1), (2007):15–29. Accessed May1st, 2015. http://www.researchgate.net/publication/228460641_Regionality_innovation_policy_and_peripheral_regions_in_Finland_Sweden_and_Norway

53 Alan J. Parkinson, "Arctic Human Health Initiative," *Circumpolar Health Supplements* 6 (2010): 9. Accessed November 12, 2012. http://www.circumpolarhealthjournal.net/public/journals/32/chs/CHS_2010_6.pdf.

54 Shahnaj Begum, "Impact of Climate Change on the Elderly People in the Arctic with special focus on the European High North: A Human Rights Perspective," *The Yearbook of Polar Law* 5 (2013):571 - 602. Publisher: Brill Academic Publishers, the Netherlands.

55 Marit Jorgenson and Kue Young. "Cardiovascular Diseases, Diabetes, and Obesity," in *Health Transitions in Arctic Populations*, ed. T. Kue Young and Peter Bjerregaard (University of Toronto Press, 2008), 291.

The interviews indicate that it is good that elderly Sámi have access to a wider choice of food. At the same time, the informants expressed their concerns about the poor availability of traditional food. An additional concern is that the traditional food supply chain has been contaminated by the numerous commercial activities in the region, making consumption risky. One example noted by local Sámi informants is the expansion of mining in Swedish Lapland. This will have devastating effects on the Luleå River, the water of which is important for the Sámi community and many other local residents who rely on fishing from the river. Most of the Sámi respondents viewed the contamination of the river as a threat to their very survival.

Increased out-migration

Out-migration is one of the acknowledged challenges in the north. Research suggests that the trend is common amongst young adults and women.[56] Finnish and Swedish Lapland are both experiencing out-migration, from the Inari-Ivalo and Jokkmokk regions, respectively. Out-migration creates a threat to elderly care and other relevant issues. It is mostly the younger population who move to the south for better education and for better jobs. This trend is also common amongst the Sámi of the region,[57] creating an imbalance in the social structure. The number of elderly amongst the Sámi population is increasing, which brings new challenges. Especially in the region's more remote locations, the elderly Sámi live with little public support, fewer communication services and insufficient access to community health and acute care.[58] These issues have a great impact on their overall well-being as both the lack of essential services and isolation cause considerable suffering. In old age, when they are not physically able to live independent lives, elderly Sámi who have no relatives nearby are required to move to the nearest elderly care institution. Our interviews indicate that had their children or neighbours continued to live in the village, elderly Sámi would have had a network to help them and could stay at home rather than moving to elderly care institutions.

Unavailability of essential services

Given that health care services in remote communities are not as efficient as they are in cities, elderly Sámi sometimes find access to healthcare problematic. For example, our field studies conducted in the village of Angeli in Inari reveal that some of the elderly Sámi living in the village need to come to the Ivalo health centre, which is around 80 kilometres from their home. Sometimes their physical mobility is poor and driving to Ivalo by themselves in an emergency is difficult. They frequently rely on help from family members or other relatives. Immediate health service is extremely difficult. Those who live in the care institutions also face numerous problems. In both Inari and Jokkmokk individuals mentioned that services require public funding, but the extra expense involved in providing them for the elderly living in remote villages

56 Rasmussen 2009, *supra* note 13, 525.

57 Håkan Gergils, "Dynamic innovation systems in the Nordic Countries? Denmark, Finland, Iceland, Norway and Sweden," *(Sueco) Tapa dura 2* (2006): 423. Accessed May 25, 2015. http://pdfqr.com/dynamic-innovation-systems-in-the-nordic-countries-denmark-finland-iceland-norway-and--9185355356.html.; Jauhiainen Jussi,S., Regional and innovation policies in Finland – Towards convergence and/or mismatch? *Regional Studies* 41, (2007); Suorsa 2007, *supra* note 52.

58 Kozlo and Lisitsyn 2008, *supra note* 8: 96.

is not looked upon favourably. Moreover, home services for elderly are less available because of the remoteness of the region. Even the sporadic home services that are available are not as effective as they should be. In regard to moving to elderly service institutions, we observed that elderly Sámi prefer to speak Sámi with caregivers, or at least they would like the caregivers to know the Sámi culture and norms. This is important especially when the elderly suffer from dementia. For clearer and better communication specially trained care professionals with knowledge of the Sámi language and culture could make elderly clients feel better.

4. Discussion

The threats to the well-being of elderly communities in the north in general, and Sámi elderly in particular, are not given special attention despite the fact that the Nordic countries are regarded as advanced in promoting the quality of life for all their citizens. The basic universal welfare system guaranteed by the constitutions of both Finland and Sweden offer all the residents equal rights and opportunities irrespective of their sex, age and the region where they live. The focal region for this study is Finnish and Swedish Lapland, which have distinctive environmental and cultural characteristics compared to the southern regions of the respective countries. The discussions above have indicated that the elderly Sámi population studied here is affected in a number of ways by the ongoing transformation in the region, and they can be identified as objects of human security threats. While the impacts vary depending on the characteristics of each of the smaller districts of the region, there are threats that are common to elderly Sámi in both Finnish and Swedish Lapland.

We have identified how culture and cultural identity, as essential components of human security, have a clear link to the well-being of elderly Sámi. Traditionally, elderly Sámi have been regarded as the holders of customary norms and values, which are now at risk of disappearing because of the adoption of new life styles. Their authority to transmit the customary values to the younger generations has diminished, as development has been rather rapid and traditional practices representing the Sámi culture and cultural identity are gradually being altered. This transformation poses obstacles to the elderly Sámi in transmitting culture-based practices to the younger generation, making them feel threatened with losing their identity.

We have also observed that in many areas human activities such as mining have caused mixed feelings amongst the elderly. Our interviews show that there have been valid reasons for these mixed feelings, as economic sustenance and socio-cultural survival run counter to one other. While all the respondents acknowledged the negative effect of mining, the elderly Sámi respondents in Jokkmokk, for example, seemed to object to it more forcefully than the non-Sámi elderly in the area. The former are more concerned about cultural sustenance whereas the latter are more worried about the threat from out-migration of the young generation to big cities. For the latter group, mining at least brings economic incentives that create more jobs for young people, allowing them to live closer to their elderly relatives.

The elderly are concerned about inclusion in matters that affect them. The elderly Sámi in both countries find that their voices go unheard in the decision-making

process. For example, even though it has been claimed in the literature that there are enough legal tools to protect Sámi culture and practices amid the mining activities in Finnish and Swedish Lapland, we found that the views of the people in the communities studied – indicators of the socio-cultural and psychological impact of mining – were not given due regard.

In both Finland and Sweden, elderly Sámi are in many cases engaged in reindeer herding, making and handicrafts, for example, and are thus also directly affected by the loss of jobs as new modern means take over these traditional practices. It should be mentioned here that reindeer herding activities are regarded as emblematic of Sámi culture, even though in Finland, unlike in Sweden, non-Sámi can also engage in herding. The risks affecting elderly Sámi thus are not only confined to a fear of losing community identity, but include other threats that will affect their economic sustenance, living conditions and personal safety.

Overall, the situations in the northern parts of both countries are essentially the same. Access to healthcare facilities, availability of traditional food, secure livelihood practices, preservation of cultural identity and environmentally sound development are the principal concerns of elderly Sámi, either directly or indirectly. The lack of a policy focus attuned to the situation of elderly Sámi results in a gap in the understanding of human security. For purposes of future research on this issue we propose that the concerns of elderly Sámi that we have highlighted in this chapter should be specifically addressed. We also see the need for inclusion of the relevant stakeholders in determining the policies for the promotion of the human security of elderly Sámi.

5. Conclusion

In this chapter, we have brought to light the challenges facing the elderly population, in particular the elderly Sámi of the Finnish and Swedish north. While the ongoing transformation in the Arctic generally affects the socio-cultural lives and livelihoods of all the residents, the elderly – and more specifically elderly Sámi – face distinct challenges. We have identified a number of considerations, such as health, food, culture and livelihoods, shortcomings in which pose risks to the well-being of the region's elderly. As far as the concept of well-being is connected to human security, we submit that these risks threaten the security of elderly Sámi in the northern parts of Finland and Sweden. We also contend that while the elderly in these countries in general are well treated, and supported by the states' social security networks, policy documents fail to adequately address specific regional characteristics affecting the elderly Sámi in particular. As part of bringing this issue to the fore in this paper, we propose that in-depth research should be initiated to identify the special risks facing elderly Sámi so that they may live healthy and full lives. We recommend that states should not only promote policies in this regard, but also undertake efforts to implement those policies with adequate monitoring mechanisms.

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Exploring Age-friendly Environments in Rural Settings: case study from Finnish Lapland

Abstract
The environment plays a vital role in ensuring quality of life for older people in the rural north. In this chapter, I examine how older people identify the characteristics of age-friendly environments in rural settings. "Age-friendly environment" can be understood in different ways: as a *natural*, *human-built* or *social environment*. Analysing interviews conducted in the *Enontekiö* region of northern Finland, I ascertain older people's perceptions and understanding of what constitutes an age-friendly environment. In addition, I investigate the changes and challenges which older persons encounter in their daily lives that affect the potential of their environment to be age-friendly. The analysis reveals that the key elements of such an environment are good forest, land, fresh water, good connections with family, neighbours, and the community, and an accommodating built environment.

Key words: Finnish Lapland, wellbeing, age-friendly environment, rural setting, northern perspective, older people

Introduction

Because of increased life expectancies and a growing population of older people, the policy and practices relating to older people's needs have taken on heightened importance (Chan *et al*., 2016; Lui *et al*., 2009, p.116). The concept of an age-friendly environment (AFE) has achieved widespread and growing acceptance in the discourse of ageing (Scharlach & Lehning, 2016; Lui *et al*., 2009). The current thinking is that creating a friendly environment in a community can help older persons lead healthy and active lives; such an environment optimizes opportunities for health, active participation and security, which in turn contribute to quality of life and wellbeing. It is important for older people to live at home in their own community safely, independently and comfortably as well as to remain physically and socially active with as few constraints as possible due to age, income or functionality (Janine *et al*., 2012; Chan *et al*., 2016; O'Hehir, 2014). It is anticipated that age-friendly environments will play an important role in supporting longer and healthier independent lives for older people in different settings, including rural areas (EU, 2008-2010; European Commission, 2009; OECD, 2014; Leis & Gijsbers, 2011). It is essential for the well-

being of older persons in rural areas that they have access to a community environment that ensures dignity and a healthy life. The population at large is ageing and the environment has a considerable impact on older persons in determining the extent to which they are included in society. Accordingly, older people require living conditions which accommodate their needs and preferences (WHO, 2015, p. 2-3). The expectation is that in an age-friendly environment in rural communities all services and policies, as well as the physical and social environment as a whole, should be structured in such a way that older people can live safely, securely and actively and enjoy life in good health (WHO, 2006, p.1; Eales *et al.*, p. 109).

My research undertakes to identify what older informants identify as important indicators of an age-friendly environment and what problems they face in finding such environments in the Finnish north. For this purpose, I have conducted interviews of older men and women in the villages of *Hetta* and *Peltovuoma* in the municipality of *Enontekiö*. My analysis of the interviews reveals how older women and men describe and experience the changes and challenges in their daily lives that affect the age-friendliness of their environment.

Although there is no universally accepted definition or set of indicators for an age-friendly environment (Lui *et al*., 2009, pp. 116-121), different features and requirements have been identified. In the next section, I describe those components which might be considered important in creating an AFE in the Finnish north.

Age-Friendly Environments in rural settings

The last few decades have seen an ongoing discussion on the importance of an environment that is supportive of ageing (Kending, 2003; Phillips *et al.* 2005, pp. 147-163; Wahl *et al*., 2003, pp. 195–222). On the initiative of the United Nations, the World Health Organization (WHO) established the concept of an AFE, which is described in terms of eight important indicators (Sidorenko and Walker, 2004, pp. 147–165). In the year 2006, the WHO developed the Global Age-Friendly Cities project, which has since been used as a benchmark to plan AFEs in several countries. The eight indicators for an AFE are outdoor spaces and buildings; transportation; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; and community support and health services (WHO, 2007, p. 7; Plouffe and Kalache, 2010). More than 35 countries are trying to collect information for new policies and programmes for AFEs in accordance with these features. The countries have also undertaken to modify and restructure existing policies to promote such environments (Lai *et al*., 2016). Policy makers today in several countries emphasize the diverse features of such environments by citing the diverse needs of older populations (Gilroy, 2008, pp. 145–163; Lui *et al*., 2009, p.116; Chan et al., 2016). In Finland, the Ministry of Social Affairs and Health (MSAH) is responsible for providing services for older people. The ministry monitors standards through the National Supervisory Authority for Welfare and Health and the regional state administrative agencies. The needs of older people have been considered in the care sector (Seong, 2016; Kutsar & Kuronen, 2015, p.79). Presently, policy makers consider private-sector services to be the standard solution for meeting

older people's demand for services (Puthenparambil & Kröger, 2016; Karsio & Anttonen, 2013). Since my focus is on AFEs in rural Finnish Lapland, it is important and essential to identify important indicators for rural communities.

There is no specific definition of "rural area". It is a concept that continues to change and develop (Chapman & Peace, 2008, p.22; Hughes, 1997). There are, however, some criteria that can be cited, such as distance from an urban centre and size of population (OECD, 2017; Balestrieri, 2016). A common feature of rural areas in the north is a declining population (Aarsæther and Jørgen Bærenholdt, 2001, pp. 15-17; Begum, 2016; AHDR, 2014). Young people have moved to places "where national policies have created universities, administrative staffs, specialized medical services and other advanced service and job opportunities" (Jørgen Bærenholdt, 2001, p. 16). Today urbanization has reshaped rural areas into places where there are not only fewer younger people but also a higher proportion of older persons.

Thus, urbanization has increasingly impacted rural areas, and Finnish Lapland is no exception. There is a general belief that the northern regions of the Nordic countries are highly developed and that their citizens enjoy a corresponding quality of life. Yet, several field studies in rural settings in Finland have documented a reduction in public services in the north, a trend matched by the introduction of a range of private services (Begum, 2016). Finland features a diverse volunteer sector comprising associations, religious organizations, small-scale co-operatives and foundations (*yhdistykset*, *järjestöt*, *osuuskunnat*, *säätiöt*) (Harju, 2006) whose purpose is to benefit and enrich society, often without profit as a motive and with little or no governmental intervention. Similar observations have been made in rural communities in Canada and New Zealand (Joseph and Cloutier-Fisher, 2005, pp. 133-146).

Other similarities that have been found between Canada and the Nordic countries include increasing numbers of young people moving to urban areas and few returning to rural areas after retirement (Naskali *et al.*, 2016; Chapman and peace, 2008, p. 21; Statistics Canada, 2001; Rothwell *et al*., 2002). Similar studies on elder-friendly community development have been carried out in New York (AARP, 2005; Feldman and Oberlink, 2003) and Calgary (Austin *et al*., 2001). Aging well is connected to how individuals manage their lives and their environment physically, socially and psychologically (Lawton & Nahemow, 1973). As part of this ecological view, Lawton and Nahemow cite an interactive relationship between people and their environment as the main factor contributing to aging well. They define what they call the person-environment (P-E) fit to describe the balance between a person's functional competence and his or her surrounding environment (Lawton & Nahemow, 1973). Lawton and Nahemow's ecological perspective has contributed significantly to designing several age-friendly service plans, ageing services and liveable communities (Alley *et al*. 2007, pp.1–18; Keller and Kalache, 1997, pp. 287–298; Smith, 2009, p.11). For an older person, being able to move independently in a barrier-free environment gives great independence and satisfaction, which enhances his or her sense of self-worth and overall wellbeing. Several studies have shown that the majority of older people wish to stay in their home environment or own homes as long they are able (AARP, 2010; Judd et al., 2010). Menec *et al*. (2011) have pointed out that older people's environment may render them vulnerable because they are often physically frail. Common concerns are limitations on mobility that hamper activities such as

shopping, going to the health centre and visiting neighbours and friends. The design of buildings is also an important consideration, as this may restrict wheelchair access.

Recently, in academic research and in planning and policy relating to age-friendly communities, an emphasis has been placed on creating an environment where older people can thrive (Eales *et al* 2008, p. 109). In its International Plan of Action on Ageing, the United Nations (UN, 2003) stated that it is important to have communities where older people live "in locations that are familiar to them, where their involvement in the community may be longstanding and where they will have the opportunity to lead a rich, normal and secure life" (UN, 2003, p.12; Eales *et al* 2008, p. 109). Lawton (Lawton, 1977, p. 277) has noted that older persons need to live in an environment where resources are available within an accessible distance. It is only recently that one has seen research on age-friendliness in different settings (Menec *et al.*, 2015, 203-223). In previous research, it has been claimed that environmental settings reveal inequality among older people in different geographical locations (Andrews & Phillips, 2005).

The literature has emphasized that the physical environment, that is, the relation between the built environment and physical activity among older people living in it, is a key factor in their wellbeing (Lui *et al*., 2009, p.116; Cunningham and Michael, 2004, pp. 435-443; Phillipson, 2004, pp.963-972). Studies have also concluded that nature in a given region or community has great influence on the overall quality of life for older persons (Lui *et al*., 2009, p.116; Abbott and Sapsford, 2005, pp. 29-46; Scharf *et al*., 2007, pp. 153-173: Phillipson, 2007, pp. 321 - 342). The physical and social environments play an important role in supporting older people to stay healthy and independent in their community as long as possible. Favourable environments can be designed by implementing multiprofessional approaches that inform collaborative community planning and development (O'Hehir, 2014, p.11; Clark & Glicksman, 2012; Keyes et al., 2014; Lui et al., 2009).

I am inspired by, and agree with, the Age-Friendly Rural/Remote Communities Initiative (AFRRCI, 2006), which suggests that in an age-friendly environment or community in a rural setting the policies, services and facilities should be supportive of older people so that they can live actively in their community. My understanding of an AFE is that it should support people to live with full satisfaction in their own home and community securely, independently, and happily regardless of age, income and level of physical or cognitive functionality. An AFE should promote older people's health and wellbeing and should ensure active participation in the community. For purposes of the present study, I would summarize the important components of AFEs in terms of three domains: (i) the natural environment, ii) the built environment and iii) the social environment. These distinctions are based on research conducted by Eales *et al*. (2008).

The *natural environment* includes components such as favourable climatic conditions and the availability of fresh air, clean water and adequate waste removal systems. These are important in maintaining a healthy life (Eales *et al*., 2008, p. 110; Short, 2006, pp. 18 - 21; Bubolz and Sontag, 1993, pp. 419 – 448; Plouffe and Kalache, 2010, p.734). As pointed out by Eales *et al*., a community can be regarded as age-friendly when older people's surroundings "are clean, quiet and naturally

beautiful" (Eales *et al.*, 2008, p. 113). For older people in Lapland, nature has great significance throughout their lives (Begum, 2016).

The *built environment* "refers to the alterations and transformations people make to the natural physical-biological environment for survival, sustenance and the attainment of other ends" (Eales *et al.*, 2008, p. 111). Accordingly, it includes local infrastructure such as housing, roads, shopping facilities, health services and accessible public and private transportations (Keating and Phillips, 2008, p. 4).

The *social environment* encompasses availability of sufficient opportunities to maintain relationships with family members, friends and neighbours, to take advantage of opportunities to engage in cultural, educational and voluntary activities locally and to avail oneself of programmes and information to promote health, social and spiritual activities (Eales *et al.*, 2008, p. 111; Bubolz and Sontag, 1993, pp. 422 - 448).

Research Processes

Participants and setting

The qualitative interviews for the present study were conducted in 2017 in the municipality of *Enontekiö*, Finnish Lapland. In what follows, I first describe the geographical context and physical environment and go on to present the data collection processes. The municipality of *Enontekiö* is the fourth largest municipality in area in Finland (Statistics Finland, 2016). Its location and relative size are depicted on the map below:

Location of Enontekiö, Finland

The region is sparsely populated and its population has declined since the 1980s. According to Statistics Finland, the average population in the 1980s was 2,286; in the 1990s, 2,472; in the 2000s, 2,145; and in the 2010s, 1,876. In 2016, the population

was 1,872 (Statistics Finland, 2017). From 2008 to 2017 the proportion of the population above 65 years of age increased from 19 per cent to 25 per cent (Statistics Finland, 8 & 2017). *Hetta*, the principal village in Enontekiö, is the administrative centre of the municipality. The village is a popular tourist destination and generally there are flights from Helsinki to the local airport (9 kilometres from Hetta) in the spring months. Otherwise, the nearest Finnish airport is in Kittilä. The village of *Peltovuoma* is located in the eastern part of the municipality. It is some 30 kilometres to the east of Hetta. The village is surrounded by extensive wetlands. People from *Peltovuoma* go to *Hetta* to work, for health check-ups, shopping, cultural events and other business. There is an older people's care home called *Luppokoti* in Hetta, which has 20 residents in single rooms. The facility offers residents assistance in washing, dressing, eating and taking medication as their health may require. The home also arranges a variety of weekly activities, such as a sauna and a visit from a local minister, who speaks about God, life and similar topics.

Luppokoti – an older people's care home in Hetta. (Source: Shahnaj Begum)

I have interviewed people from two different settings: a care home (Luppokoti) in the village of *Hetta* and older people living in their own homes in *Peltovuoma*. In the case of *Peltovuoma*, I obtained my first contact through a friend in Rovaniemi. Thereafter, using the snowball technique (Kumar, 1996), I contacted other informants from the same village. I sent a sample of the research questions via e-mail to residents of the care home and to individuals from *Peltovuoma*. I received permission for the study by e-mail from the head of the care home before starting the interviews and the informants gave their consent voluntarily. In planning the interviews, I gave particular consideration to two important features suggested by Dörnyei (2007): "(a) it flows naturally, and (b) it is rich in detail" (Dörnyei, 2007, p. 140).

In my interviews, I used both semi-structured and open-ended questions. The atmosphere during the interviews was very welcoming and my being a foreigner

did not introduce any complications. Quite the contrary, I received special care and attention. At both sites (the care home and informants' homes) informants talked freely with me, which is very important (Alshenqeeti, 2014, p.41). They served cake and coffee. Although Finnish is not my native language, I conducted the interviews in Finnish. Informants talked slowly so that I could understand them. I first explained the aim of the interviews and the social benefits that the research could bring, such as knowledge on AFEs from the viewpoint of older people and dissemination of this knowledge to policy makers and other stakeholders. I interviewed a total of 19 people between the ages of 61 and 85 years. Thirteen of my informants live in the care home, where they have moved from the villages of Karesuvanto (64 km), Nunnanen (42 km) and Peltovuoma (30 km). I interviewed four people from Peltovuoma who are still living in the village. In addition, I interviewed the director of Luppokoti and a relative of one of the informants, a woman who had taken care of her mother for 10 years. Of the 19 informants, 15 were women and 4 were men, with the female interviewees including the director of the care home and the older woman's daughter mentioned above. All the interviewees were physically and mentally competent to express their opinion. The consent processes and issues of anonymity and confidentiality were fully clarified from the outset. Each participant was given opportunities to ask questions before replying. The duration of the interviews varied from 30 to 90 minutes. I found that the discussions with men were shortest and they tended to give brief replies. All the interviews and discussions were tape recorded and transcribed verbatim. To protect the confidentiality of the informants, I do not use their real names. I kept a diary in which I made notes summarizing important points.

To understand what constitutes an AFE, I asked all the participants questions such as the following: What things are important in the community if you want to have a good life? What kinds of changes and challenges have you experienced? Why have you chosen to live in the care home? What are your expectations with regard to an age-friendly environment?

Data Analysis

I have used qualitative analysis to address my research objectives. In qualitative research, the researcher decides on the research framework based on his or her own understanding of relevant theory (Kyngäs & Vanhanen, 1999, Tuomi & Sarajärvi, 2004). The themes of the analysis have emerged from the interviews and the ideas developed by Eales *et al.* (2008) concerning the components of an AFE. The transcripts of the interviews were read several times before and during the writing process to ensure that the questions I asked covered all the themes relevant to AFEs, that is, the natural, human-built and social environments, and that the conclusions were based on what the informants had said. I proceeded to distinguish the changes and challenges that informants mentioned and correlated these with the components of AFEs. Lastly, I noted some suggestions and expectations which informants had regarding the development of AFEs in their own setting. Analysing the individual interviews with a focus on age-friendly features of the environment enabled me to determine the informants' views on the salient characteristics of a community for older persons.

Nature, living at home and neighbours: What is a good place for growing old?

Natural environment

> The climate, nature, water and forest are parts of the natural environment closely connected to older people's life style in the north. The informants talked about these elements, which are important for their communities and relevant to their wellbeing. All 19 informants stated that being able to live near nature and drink fresh water are the most important features of their environment, things that are still intact in their community.

One informant, Hanna, who is 90 years old and living in the care home, stated: "Nature reminds us of who we are and it gives us freedom". A similar view was expressed by the informant Mikko, 75 and also living in the care home. He pointed out that living near forest is the daily inspiration in his everyday life, noting, "it is part of our way of life". It allows older people to not only live in a natural environment but also collect food from the forest. The residents of the home find inspiration in and enjoy such surroundings. For example, all the women informants from Peltovuoma mentioned that they collect berries and mushrooms during the summer and save them for the whole year. In this regard, Ella said: "Nature plays a very important role in our life. I am still taking part in berry picking with members of my family and neighbours. It reminds me of my childhood stories. It gives me unlimited joy".

Living near nature creates a strong bond with the community at large, in particular in the case of the indigenous Sámi people. Inga, an 82-year-old Sámi, stated:

> I was raised in a farming family. From childhood I took part in reindeer herding, which used to be our family's livelihood. The land and forest have always been strong elements: I was fishing on the lake and berry picking in the forests. In fact, the natural environment represents an important backdrop to our lives. It is intertwined with my cultural identity.

Picking berries and mushrooms in the forest, hunting, farming, reindeer herding, fishing and skiing are important activities, all of which are connected to the natural environment. Therefore, the natural environment is crucial in providing activities for older people who are living in the north. For example, in Luppokoti the health of some informants is not particularly good or stable. It is not always possible for them to go out into nature and their own forest. Nowadays, with the lack of human and financial resources, visiting these places is mostly an unrealistic desire on the residents' part. With the help of the responsible authorities and relatives it could be possible to take these people out into the nearby nature so that getting out is more than wishful thinking. Nature is also associated with social activity for older people. We may distinguish three components of an AFE on the theoretical level (natural, built and social environments) but in real life these are interconnected. All 19 informants mentioned that fresh water, different kinds of wild berries and fishing are still part of their daily lives. They also mentioned that changes in the climatic conditions, often unpre-

dictable, caused frustration. In addition, they were afraid of certain developments in nearby areas that have the potential to pollute their unspoiled environment. The natural environment was found to be a resource for all older men and women as it is connected directly or indirectly to their social identity.

Built Environment

In a rural area, transportation plays a vital role in enabling older people to live in a community. All 13 older informants from the care home highlighted the importance of the availability of public transportation; they found it hard to live in outlying villages without transportation providing access to services in Hetta. They noted that, on the one hand, they were not able to drive because of their reduced physical ability and, on the other, they had become vulnerable and hence felt insecure because of the lack of local transport. This was one of the main reasons why many of the informants had moved into the care home. Commenting on public transportation, Eva, who is 85 and still lives in her own home in Peltovuoma, stated:

> The population has declined; many houses are empty; the public bus does not run anymore. We had a small shop, post office and small medicine store, none of which are available any longer. The medicine store had basic medicines which we could buy.

Citing a somewhat different trend, she mentioned that health services have improved since 1972. Nurses now visit their village every Tuesday and go to three or four neighbouring villages as well. According to the informants from Peltovuoma, people seem to be happy that they have facilities for a minimum health check-up if they need one. Older informants appreciated living close to services and facilities, such as a supermarket, hair salon, post office and pharmacy. These are the places where they could meet their friends and neighbours often and could choose themselves what to buy. Lawton and Nahemow's P-E fit is reflected here in the informants' expectations and desires. Living an active and independent life requires having all necessary services within an accessible distance.

Virpi, a 61-year-old woman living in Peltovuoma who had been taking care of her mother, who passed away at age 89 in 2017, made the following observations while explaining her mother's situation:

> We had a small shop '*Reino Keskitalo,*' which closed in 2009. Neighbours are very important to us. When we go shopping in Hetta, we ask each other for shopping lists so that we can buy things for each other when needed.

The human-built environment can be considered age-friendly when older people can readily obtain goods and services (World Health Organization, 2007; Plouffe & Kalache, 2011). In relation to the built environment, informants noted how important the "small shop", now closed, had been in their daily life. It was a great opportunity to go shopping in the neighbourhood and meet other people. This case, in which the built environment lost part of its age-friendliness, exemplifies the changes and challenges that may impact efforts to create AFEs.

All informants pointed to the importance of the human-built and social environments coming together, that is, to their being interconnected. Indeed, it is not possible to distinguish them. Housing quality is a key aspect of the built environment. All informants said that houses had been modified to meet the needs of older people. One example was a good-looking house in Peltovuoma owned by a couple who worked in southern Finland and then moved there after retirement. They are still very active and happy with their natural environment and involved in different activities. They are still physically strong enough to live in their own home and engage in all winter activities Not all older people have enough money to repair their houses but some have received support from the municipality for repairs and improvements. The houses are in good repair and have good heating systems (Sirviö & Kimmo, 2015). In Nordic rural communities, older people enjoy living in homes of their own and would like to live at home as long as possible (Bäck and Calltorp, 2015; Moberg, Blomqvist and Winblad, 2016).

In remarking on the importance of public transportation and the presence of neighbours, Eva from Peltovuoma, made the following comment:

> Even though public bus service has not been available since 2009, a small bus that seats eight comes once a week to take us to Hetta to go shopping. Our village is almost empty but a few families with children have increased recently, which brings some hope that the village will not die out soon. Earlier, neighbours came to visit very often.

In this regard, Virpi cited a case of unequal treatment in receiving transportation services. She mentioned that her mother had not received taxi services to go to the health centre, while one other older person from next door had. When I asked why, Virpi mentioned that the responsible authority could not provide a satisfactory reason.

Social Environment

It is very important for older people to maintain links with family, friends, neighbours and the community at large. Connections to family, neighbours and the community foster intergenerational interaction, which all informants valued highly. When asked about cultural events and social activities, they all highlighted that religious events are arranged at the church in Hetta and other events also take place there. Most of the time it is difficult to get out of the village to attend those activities. In this regard, Maria, 76, now in the care home, said:

> I was happy to go to the church and take part in the activities arranged by the community. But nowadays such activities are arranged very rarely. I was also happy to spend time with my family on different important occasions.

Eva also made a comment in this vein:

> I was and am still involved in women's activities, the *ompeluseura* (lit. "sewing circle"), which is no longer a regular event. Nowadays seven to eight women participate in these activities. The participants are mostly 50 to 70 years old. I am

> the oldest one at 85. Earlier, we met once every two weeks but now the number of people involved has declined. This activity, called a "rural women's sewing evening", is now an 80-year-old tradition. I have been involved for 62 years. Earlier, participants also came from neighbouring villages.

Venla, 72, from the care home, also highlighted the importance of social participation in old age:

> Through different activities, we (older people) can practice our skills and enjoy respect and self-esteem. It also helps to build and maintain relationships with family and community.

It is important to for older people to have opportunities to participate in social, cultural, and spiritual activities in the community as well as within the family. Even though people in the Finnish north have vast natural areas – essentially an unspoiled environment - those older persons who are unable to participate in activities outside of their homes watching television remains essentially the only source of entertainment. In relation to respect and social inclusion, all male and female informants mentioned that they would like to live a meaningful life. They felt that the younger generation should be more patient with and show more respect for them so that conflicting attitudes do not arise and they might better understand each other. In this regard, all informants from Peltovuoma suggested that there should be opportunities for intergenerational activities so that older people would be attached to other generations and not feel isolated.

Social support is important for older people's wellbeing. Through different kind of social funding, older people may obtain different forms of support according to their needs. Virpi, one of the informants from Peltovuoma, made the following observation:

> A decade ago we received some services from the 'KOTO' project, which were very good. The services included house cleaning, as well as someone to talk with, help us in the sauna, heat food and make coffee.

Virpi and Ella also mentioned that they had to pay only five or six euros for an hour of service and the "KOTO" project's activities were very good for their wellbeing. Mentioning the importance of community performance, Ella pointed out the following:

> [If there is a] lack of activities and lack of initiatives, people often become upset and passive. Many families have left the village because of the lack of jobs and facilities. To keep active, we still try to support each other. For example, if somebody's lights are not on at home at the regular time, we try to call him or her to make sure everything is ok, or we go to check. We have still strong social bonds that motivate us to continue to live in this community.

In a small village, it is important to say "hello" to one's neighbours at the post box or small supermarket. Neighbours are very important in the rural north, because they know each other well. A rural community can be age-friendly when it enables one to maintain a network of friends and family members. A survey assessing the age-friendliness of different municipalities highlighted that if a community is to be age-friendly it is very important for older people to have regular contact with family and friends (Plouffe *et al*., 2016, p. 22; Barrios and Sanchez 2013). Menec *et al*. have voiced the criticism that economic and social inequality lead to social exclusion; these forms of inequality were cited by informants as threats that should be taken into account in considering the social environment (Menec *et al*., 2011).

Changes and challenges to AFEs: some reflections on the informants' views

In answering my questions about their expectations regarding AFEs and the challenges of creating such environments, all female informants highlighted the importance of active involvement in different activities, including social, cultural and spiritual events in the community. They also emphasized that maintaining close relationships with their families contributed greatly to their wellbeing and health. These kinds of opportunities allow older people to maintain their functional capacity and self-esteem and to sustain and establish supportive and caring relationships. I found that male informants tended to give very brief responses. I do not know why men did not speak that much. Perhaps they did not know what to say because they were more accustomed to going into the forest, to going hunting for instance.

All 19 informants noted changes in the physical and social environment. They all mentioned out-migration of young persons and women, a trend which makes them feel insecure. Informants highlighted that a lack of jobs and a desire for higher education make people leave their villages. Most of them do not come back. Because the population is small, the municipality has reduced many services, such as local transportation, postal services and small medicine stores. The cutbacks negatively affect people's physical and mental wellbeing.

Generally, in remote regions people are less involved in the cash economy because of the limited scope of formal jobs (Copus *et al*., 2017). Rural populations have traditionally made their living in subsistence livelihoods. As a result, the labour market in regional settings is not well equipped with opportunities for formal employment, which would provide an old-age pension. In general, the social security network in the Nordic Arctic provides social support for older people, providing some measure of protection even in rural settings. However, some informants expressed pessimistic views concerning the maintenance of an age-friendly environment. They cited the inadequacy of economic resources and the support provided to them. Income from pensions or other sources of support (i.e., their family) does not necessarily allow them to maintain a sufficient quality of life. It thus appears that older people in the region today, especially those in remote communities and those who have been engaged in non-formal employment, are not likely to have a sufficient level of income.

Female informants mentioned that pensions are so small that it is difficult or impossible to live with dignity in one's own home. Not only informants living at home but also those in the care home made similar comments. For example, Hannele said:

> The pensions are not big enough to live a normal life in one's own home. However, people who held regular jobs receive better pensions.

A small pension sometimes limits involvement in social activities and opportunities to meet or fulfil one's needs, especially for older persons who live alone in their own home. Women were mostly taking care of their children, running the household and helping their partners. In old age they then receive the minimum pension, which is not enough to fulfil most of their wishes and expectations. Most of the older informants have received and still receive financial support from their children. Consequently, the size of one's pension has great influence on how age-friendly an environment is. By contrast, informants from the care home noted that they all receive the same services regardless of the size of their pension. This is possible because of how the system of welfare services is structured in Finland.

The above analysis indicates that supportive physical, social and natural environments are important in the wellbeing of older in the Finnish north. The Finnish Ministry of Social Welfare and Health (Sosiaali- ja terveysministeriö, Helsinki 2017) published a report containing recommendations that the needs of older people should be taken into account in promoting the renovation of the housing stock and in planning and maintaining residential environments. Living environments should be developed to be made safer and more accessible. Overall, an age-friendly community should provide an inclusive and accessible physical and social environment fostering health, social participation and security.

Conclusion and suggestions

The findings of this chapter provide some insights into the experience of older people from the Finnish north in relation to the features of an age-friendly environment. The salient characteristics identified through the research are good forest, a supportive neighbourhood and good connections to family, neighbours and the community at large. The different domains in an AFE are in practice connected to each other. The discussions with informants cited above indicate that nature, the availability of local transportation and health services, as well as community support to keep older people active and make them feel secure, are the most important factors in creating an age-friendly environment. The informants also noted that certain elements of the built environment and the social environment are very important in building an age-friendly environment. The former include readily available public transportation as well as affordable and accessible health care and social services, the latter facilities to meet neighbours, friends and family and to take part in different social activities and cultural events. As noted, informants pointed out that climate change, a declining population - neighbours moving out of the village and out-migration of young people - and a limited pension are among the obstacles to sustaining an AFE. Older people feel insecure in many cases because they have few neighbours. Older people themselves feel active and valuable, which needs to be recognized by the municipality and responsible authorities. With the population declining, different kinds of social activities are waning. Services and facilities should be available as close as possible to where

older people live. They feel comfortable in their own environment, but may not feel safe in that environment with too few people around them. Hence, there is a need for extensive measures to keep the younger generations in the community and to deliver a range of older support services there as well. The director of Luppokoti and the informants indicate there are far too few places in the care home compared to the demand. There should be more places in the care home for older people whose health is frail.

Replies given my informants indicate that here is a scarcity of financial and human resources in rural settings. They also suggest that authorities could take more initiative in responding to ageing-related needs and preferences that will reduce social inequalities in the environments where older people live.

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