# Living Conditions and Perceived Quality of Life Among Indigenous Peoples in the Arctic

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Birger Poppel

## Introduction to the Arctic

During the last decade all the Arctic States developed Arctic strategies, and all the Arctic states neighboring the Arctic Ocean (the Arctic Five: United States of America, Canada, Denmark/Greenland, Norway and the Russian Federation) have been engaged in research to substantiate extended continental shelf claims. China, Italy, Japan, South Korea, Singapore and India applied for and received status as permanent observers to the Arctic Council in 2013, whereas the application from the European Union was put on hold because of the EU sealskin ban. Oil exploration has started in Greenland waters and north of the Russian coast; at the same time, the Norwegian government has dropped some of its Arctic oil exploration following the argument by a major oil company that the risk of drilling was too big and safety procedures were insufficient. The Arctic Ocean has become more accessible and an increasing number of vessels pass through north of Russia and through the Northwest Passage. Naval maneuvers have also increased in recent years, in number, as well as in complexity of naval vessels participating. These few examples – and many more might be listed – contribute to the notion of 'the Arctic as a hot spot'.

All the above-mentioned episodes and incidents have hit the headlines recently (2013). However, headlines in international media seldom reveal to their readers that the circumpolar Arctic is inhabited. Sparsely populated, it is true, but the Arctic is home to both a number of indigenous peoples all over the Arctic and to settlers that have moved north either permanently or for a shorter period of time.

The major changes indicated above impact people, and they are accelerated by a changing climate:

> Coastal erosion, thawing permafrost, and changing sea-ice conditions (such as thickness, extent, and age), when combined with non-cryospheric drivers of change (such as increased economic activity, socio-economic development, demographics, governance, and the health and well-being of the Arctic society and people) will result in multi-faceted and cascading effects. (Hovelsrud et al. 2011b:10.2)

The rapid changes that have already taken place and the expected changes in the Arctic, as well as the ongoing activities among the Inuit, Saami and other indigenous peoples of the circumpolar north raise a number of questions about human development and how these changes affect the living conditions, the subjective wellbeing and the quality of life of the Arctic peoples. What consequences do climate and other changes have and how do the indigenous peoples respond? Are the effects and responses across the Arctic similar to those among peoples

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with a shared culture but living in different political-economic settings? How are people whose lifestyles have been closely tied to the land and sea impacted, and how are they adapting? And, last but not least: Can the Arctic indigenous peoples' experiences down the road inspire indigenous peoples and others elsewhere in their quest to enhance quality of life?

In 1997 a group of Arctic social scientists in partnership with Inuit, Saami and other indigenous experts and organizations set out on a journey to try to answer these questions, not least of all, the basic question: Why do people stay in communities where life might be harder and living standards most likely lower than in more southern regions? The aim of this chapter is to give some answers – and probably raise a few more questions.

The Arctic has, for a number of years (especially since the 1980s), inspired a growing interest for geopolitical, industrial, logistical and environmental reasons. Since the last decade of the old millennium, the Arctic has been a focus of interest as 'the canary in the coal mine' because global warming is impacting climate and the cryosphere in the Arctic so rapidly in the circumpolar regions. As a result, the impacts of these changes on humans and societies are experienced more swiftly here than in other parts of the world (ACIA 2005; AMAP 2011; Hovelsrud et al. 2011a).

The increasing focus on the Arctic during the 1980s reached a (first) peak in 1987 when Mikhail Gorbachev (then General Secretary of the Communist Party of the Soviet Union) made a speech in Murmansk about Arctic collaboration on reducing military activity, increasing economic collaboration and on advocating joint efforts in research and environmental protection. The 'Murmansk Speech' initiated the so-called Rovaniemi process that led to the formation of the Arctic Environmental Protection Strategy (AEPS) in 1991 and eventually the foundation of the Arctic Council (AC) in 1996 (Young 1998).

The Arctic Council was founded as a high-level intergovernmental forum to provide a vehicle for cooperation on, among other issues, sustainable development and environmental issues, coordination and interaction among the eight Arctic states (Canada, USA, the Russian Federation, Finland, Sweden, Norway, Denmark /Greenland/Faroe Islands and Iceland). The Arctic Council further included the indigenous peoples of the Arctic as Permanent Participants[1] in the Arctic Council. This signaled an acknowledgement of the growing activity and significant political impact of indigenous peoples and their organizations in the changing regional political landscape in the Arctic.

The Declaration of the Foundation of the Arctic Council (Ottawa, September 19, 1996) introduced and stressed wellbeing of the indigenous peoples and other residents of the Arctic in addition to other key elements in the agenda of what has been called 'The Age of the Arctic' (Osherenko and Young 2005).

> AFFIRMING our commitment to the well-being of the inhabitants of the Arctic, including recognition of the special relationship and unique contributions to the Arctic of the indigenous people and their communities;
>
> AFFIRMING our commitment to sustainable development in the Arctic region, including economic and social development, improved health conditions and cultural well-being;
>
> AFFIRMING concurrently our commitment to the protection of the Arctic environment, including the health of Arctic ecosystems, maintenance of biodiversity in the Arctic region and conservation and sustainable use of natural resources;
>
> . . .. . . . .
>
> RECOGNIZING the traditional knowledge of the indigenous people of the Arctic and their communities and taking note of its importance and that of Arctic science and research to the collective understanding of the circumpolar Arctic;
>
> DESIRING further to provide a means for promoting cooperative activities to address Arctic issues requiring circumpolar cooperation, and to

[1] The six Permanent Participants of the Arctic Council are: Aleut International Association, Arctic Athabaskan Council (AAC), Gwich'in Council International (GCI), Inuit Circumpolar Council (ICC), Russian Arctic Indigenous Peoples of the North (RAIPON) and Saami Council (http://www.arcticportal.org/arctic-council - accessed October 28, 2013). The Permanent Participants represent the estimated 500,000 indigenous people of the circumpolar region in the Arctic Council.

> ensure full consultation with and the full involvement of indigenous people and their communities and other inhabitants of the Arctic in such activities. (Arctic Council 1996)[2]

Historically and to date, scientific research in the Arctic has been dominated by the different disciplines of the natural sciences. From the first polar expeditions to today's research into, for example climate change, the overwhelming amount of research funding has been funneled to the natural sciences, whereas resources for research into human development, living conditions and quality of life has been modest and the studies carried out by researchers from the social and human sciences have primarily been community-based studies.

The increased focus on the Arctic as a distinct region created a requirement for data, facts, knowledge and scientific research in order to assess and monitor human development in the circumpolar north, to monitor regional impacts of global processes on people, peoples and societies, as well as monitor the local and national consequences of different countries' specific strategies and policies.[3] Several internationally concerted efforts have been launched in recent years with the Fourth International Polar Year 2007–2008 organized under the auspices of the World Meteorological Organization (WMO) and the International Council for Science (ICSU) as the most eminent example (see Krupnik et al. 2011). The Arctic Council, AC, and its working groups (see www.arctic-council.org) have been instrumental in both initiating and endorsing assessments as well as in research projects. The Sustainable Development Working Group, SDWG of the AC has, in keeping with its overall goals, endorsed a number of assessments, reports and research projects focusing on different aspects of measuring, assessing and analyzing human development in the circumpolar Arctic (see the Arctic Human Development Report (AHDR 2004))[4]; the Economies of the North project (Glomsrød and Aslaksen 2006, 2008), and the Arctic Social Indicators project (Larsen et al. 2010, 2014). The Survey of Living Conditions in the Arctic, SLiCA was adopted as an Arctic Council project in 2000.[5]

## Some Social Characteristics of the Arctic

For thousands of years the circumpolar Arctic has been inhabited by peoples who survived in an environment that is often called unfriendly and a climate that is characterized by extreme low temperatures in the long winters and midnight sun in the short summers.

The arctic and sub-arctic parts of Fennoscandia (Norway, Sweden, Finland, Russia: the Kola Peninsula, and Karelia) have, for at least 5,000 years, been inhabited by the Saami peoples (archeological findings even seem to document that ancestors of the Saami already hunted and gathered food in the region around 10,000 CE).

The Saami representatives in the first Sami Parliamentarian Conference[6] stated that

> we Sami are one people united through our common history, culture, language and land areas, and as a confirmation that the borders of our nations shall not or cannot break our solidarity, (http://www.sametinget.se/1433)

Since roughly 4500 BCE, a number of migrations departing from eastern Siberia populated parts of the North American continent and parts of Greenland. The Saqqaq culture was followed by the Dorset culture that disappeared around 1500 CE. The last migration, the Thule

[2] http://www.arcticportal.org/arctic-council. Accessed 28 October 2013.

[3] In the Arctic Human Development Report II, Rautio et al. refer to a number of projects and studies focusing on social indicators and different aspects of health and wellbeing (Rautio et al. 2014).

[4] A follow-up: Arctic Human Development Report II will be published in 2014.

[5] SLiCA was adopted as an Arctic Council project under the auspices of the Sustainable Development Working Group, SDWG at the Ministerial meeting in Barrow, October 2000 and included in the Sustainable Development Plan, SDAP 2004–2006, 2006–2008, 2008–2010/2011.

[6] The first Saami Parliamentarian Conference took place in Jokkmokk, 24 February 2005 and concluded in 'Declaration from the First Sami Parliamentarian Conference Jokkmokk', 24 February 2005

culture, originated from Alaska and the Thule peoples are the forefathers of the Inuit who now live in the Arctic and define their homeland 'Inuit Nunaat', Land of the Inuit ('Inuit' meaning 'human beings' in the mother tongue of the Inuit).

In the 'Circumpolar Inuit Declaration on Sovereignty in the Arctic' the Inuit Circumpolar Council explains the relation between the indigenous inhabitants of the Circumpolar North and the Arctic region in the following way:

> Inuit live in the vast, circumpolar region of land, sea and ice known as the Arctic. We depend on the marine and terrestrial plants and animals supported by the coastal zones of the Arctic Ocean, the tundra and the sea ice. The Arctic is our home.
>
> From time immemorial, Inuit have been living in the Arctic. Our home in the circumpolar world, Inuit Nunaat, stretches from Greenland to Canada, Alaska and the coastal regions of Chukotka, Russia. Our use and occupation of Arctic lands and waters pre-dates recorded history. Our unique knowledge, experience of the Arctic, and language are the foundation of our way of life and culture. (Inuit Circumpolar Council, ICC 2009)

For thousands of years, the Russian Arctic, ranging from Fennoscandia to the Bering Strait, has been inhabited by herders, hunters, gatherers and fishermen. The first migrations across the Bering Strait had their point of departure in the eastern part of Siberia and the ancestors of the Aleut and Yupik that migrated to the North American continent had their roots in what is now Chukotka and Kamchatka.

Having struggled through the twentieth century with environmental, health, economic and legal problems, the almost 30 indigenous peoples of the Russian Arctic established, RAIPON, the Russian Association of Indigenous Minorities of the North, Siberia and the Far East[7] stating that:

> We, the indigenous peoples of the North, Siberia and Far East of the Russian Federation, believe that: −The Air, the Land and Water are blessed; −Nature is the source of life; −Man is but a drop in the whirlpool of life; −The river of time is but a reflection of the past, present, and future and that how our ancestors lived in the past is how we now live and how our offspring will live in the future... (RAIPON 1990)

The statements from associations representing the majority of the indigenous peoples of the Arctic[8] present concordant perceptions stressing the indigenous peoples' history dating back thousands of years, the connectedness to and the dependency on nature/the natural environment.

The indigenous peoples account for approximately 500,000 people[9] out of a total circumpolar population of 4 million[10] (AHDR 2004).

Despite the basic agreement reflected in the statements above, the livelihoods and living conditions of the indigenous peoples have varied significantly with the economic systems and modes of production that have prevailed at different times in different regions; whereas most of the indigenous peoples of the Arctic were originally nomadic or semi-nomadic, according to the Arctic Human Development Report (Ibid.), only approximately 15,000 people in the Russian Arctic (mostly Nenets in Yamal) are still semi-nomadic.

[7] RAIPON was established in Moscow, March 1990. http://ansipra.npolar.no/english/Index.html. Accessed 28 October 2013.

[8] The Permanent Participants in the Arctic Council representing the indigenous peoples of the Arctic includes the Aleut International Association, Arctic Athabaskan Council (AAC), Gwich'in Council International (GCI). http://www.arcticportal.org/arctic-council. (Accessed 28 October 2013).

[9] http://www.arcticportal.org/arctic-council#permanent-participants. The uncertainty is due to different definitions in official statistics around the Arctic: in Spmi (the homeland of the Saami in the northernmost parts of Norway, Sweden and Finland) residents are not registered by ethnicity; in the Russian North the following peoples are identified in the censuses: Saami, Nenets, Khanty, Sel'kup, Enets, Nganasan, Dolgan, Evenk, Even, Yukagir, Chukchi, Chuvanc and Eskimo/Inui-Yupik; in Greenland the distinction is between residents born in and outside Greenland; in Alaska the US census includes Americans and Alaskan natives; and Canada defines Inuit, North American Indians and Metis as indigenous (AHDR 2004:29).

[10] There are different definitions of the Arctic and the total population varies accordingly. The delimitation used here is defined by the Arctic Monitoring and Assessment Program (AMAP) and used in most assessments and reports developed under the auspices of the Arctic Council (AHDR 2004:18–19) – see Map 32.1: SLiCA regions below.

In many ways the Arctic is a region of contrasts, not least when the focus is on economic development and its impact. Rapid economic development – especially since World War II, and in some regions in Arctic Canada for instance, even later – has characterized the circumpolar Arctic. There have been a variety of motives for the regional modernization processes in the Arctic. Exercising sovereignty over the different Arctic states' northernmost regions was definitely a significant driver during the Cold War. The Nordic countries were, at least to some degree, motivated by an ambition to implement the Nordic welfare model in the Arctic regions as it was considered an embarrassment to the Nordic parliamentarians when the state of health and socio-economic conditions were far below the standards in the southern parts of the respective countries. Analyzing a number of basic socio-economic indicators[11] in all Arctic regions, Duhaime and Caron found patterns corresponding to three societal models (with some variations): 'The North American model', 'The Scandinavian model' and 'The Russian model'. Their overall conclusion is that economic growth is prioritized in all regions but with very different outcomes: 'for all the models, the relationship between the proportion of women[12] and disposable income[13] can be used as a key indicator to diagnose the state of health of the economy and society' (Duhaime and Caron 2008:21). Another major driver has been and still is the abundance of resources: renewable (especially fish and shellfish) and particularly the non-renewable resources. Extraction of oil and gas became a major economic activity in the last part of the twentieth century (AMAP 2007) – not least in the Russian Arctic where extraction was often followed by environmental problems due to oil spills (Forbes 2005; Stammler and Forbes 2006). Oil extraction started in Alaska in the 1970s, later north of the Norwegian coast and, at the end of 2013, also north of the Russian coast. The history of systematic mineral extraction in Greenland dates back to the middle of the eighteenth century (graphite mining) and since then, has been conducted periodically (Fægteborg 2013; Sejersen 2014). The Alaskan-Yukon gold rush took place in the 1890s and mineral extraction in Siberia started in the 1930s, but was generally modest in most other Arctic regions before World War II. Since then, mineral extraction has attracted major companies to the Arctic and mining and hydrocarbon production are now major contributors to gross regional products (GRP) and to the national economies, not least in the Russian Arctic, Alaska, Canada and Norway. It is important though, to stress that these activities do not necessarily benefit local communities or regional economies in terms of GDP as the economic results might be transferred to companies and shareholders outside the Arctic (Duhaime 2004; Duhaime and Caron 2006). The cash economy and wage labor were introduced in the Arctic regions at different times: in Greenland as early as in the middle of the eighteenth century, shortly after the Danish colonization (Marquardt 2005) and in the circumpolar north, generally after World War II. The traditional harvest- and herding-based subsistence economy thus developed into a mixed economy where subsistence still contributes significantly to the food supply and different living conditions (see e.g. Poppel 2006a; Poppel and Kruse 2009) of most Arctic indigenous households and plays a role in many non-indigenous households.

[11] The six socio-economic indicators are: female proportion, life expectancy, infant mortality, tertiary education, disposable income and dependency rate (Duhaime and Caron 2008:13).

[12] Share of women in the total population.

[13] Average personal disposable income.

## The Survey of Living Conditions in the Arctic, SLiCA

### The Basic Research Question and Overall Goals

A survey of living conditions in Greenland conducted by Statistics Greenland in 1994 provided useful data on different aspects of livelihoods, living standards and other living

conditions but also raised a number of questions that quite obviously could not be answered applying conventional social indicators used in standard surveys. One of the most puzzling questions was why markedly different – and lower – living standards (e.g. income, housing conditions, education and work status) among people living in settlements (up to 500 inhabitants) than people living in towns did not eventually result in massive outmigration from the settlements (McDougall 1998; Andersen 2004; Andersen and Poppel 2002; Kruse et al. 2008; Poppel 2006b, 2010, 2014b).[14]

The hypothesis resulting from these considerations was that important welfare priorities were not reflected in the 1994 survey. Statistics Greenland thus decided that a follow-up survey should explore these and other priorities that the conventional battery of social indicators did not identify, and that the need for a new research design for studying living conditions and wellbeing among the indigenous peoples of the Arctic should be explored (Ibid.). Following careful deliberations, major objectives of the SLiCA-project were developed (Andersen and Poppel 2002):

- To develop a new research design for comparative investigations of the living conditions of the Inuit and Saami peoples in the Arctic (See Map 32.1 and Table 32.9). This included developing partnerships between researchers and the respondents and their organizations.
- To map the living conditions among the Inuit and Saami and the indigenous peoples of Chukotka and the Kola Peninsula in the Arctic.
- To conduct a comparative dynamic social analysis of the causal relations between different individual resources and between individual wellbeing and different political, economic, cultural and technological settings.
- To improve the basis for decision-making in relation to policy planning and implementation.
- To establish an interdisciplinary network of researchers and research institutions engaged in living conditions research in the Arctic.
- To increase the knowledge among the indigenous peoples of their own and other indigenous peoples' history and living conditions.
- To educate and involve post-docs, PhD students, candidates and undergraduates in the SLICA project (Andersen and Poppel 2002).[15]

## SLiCA Findings for Indigenous Peoples in the Arctic

As mentioned above, according to the 1994 Greenland Survey of Living Conditions, many Greenlanders did not leave their communities in favor of potentially higher living standards in larger towns. This finding was a major driver for defining a suite of indicators to account for subjective wellbeing among Arctic indigenous peoples.

The same concerns and deliberations about the underlying priorities that made some Greenlanders stay in more remote parts of Greenland were expressed in the conclusion of the Arctic Human Development Report (AHDR 2004)[16]:

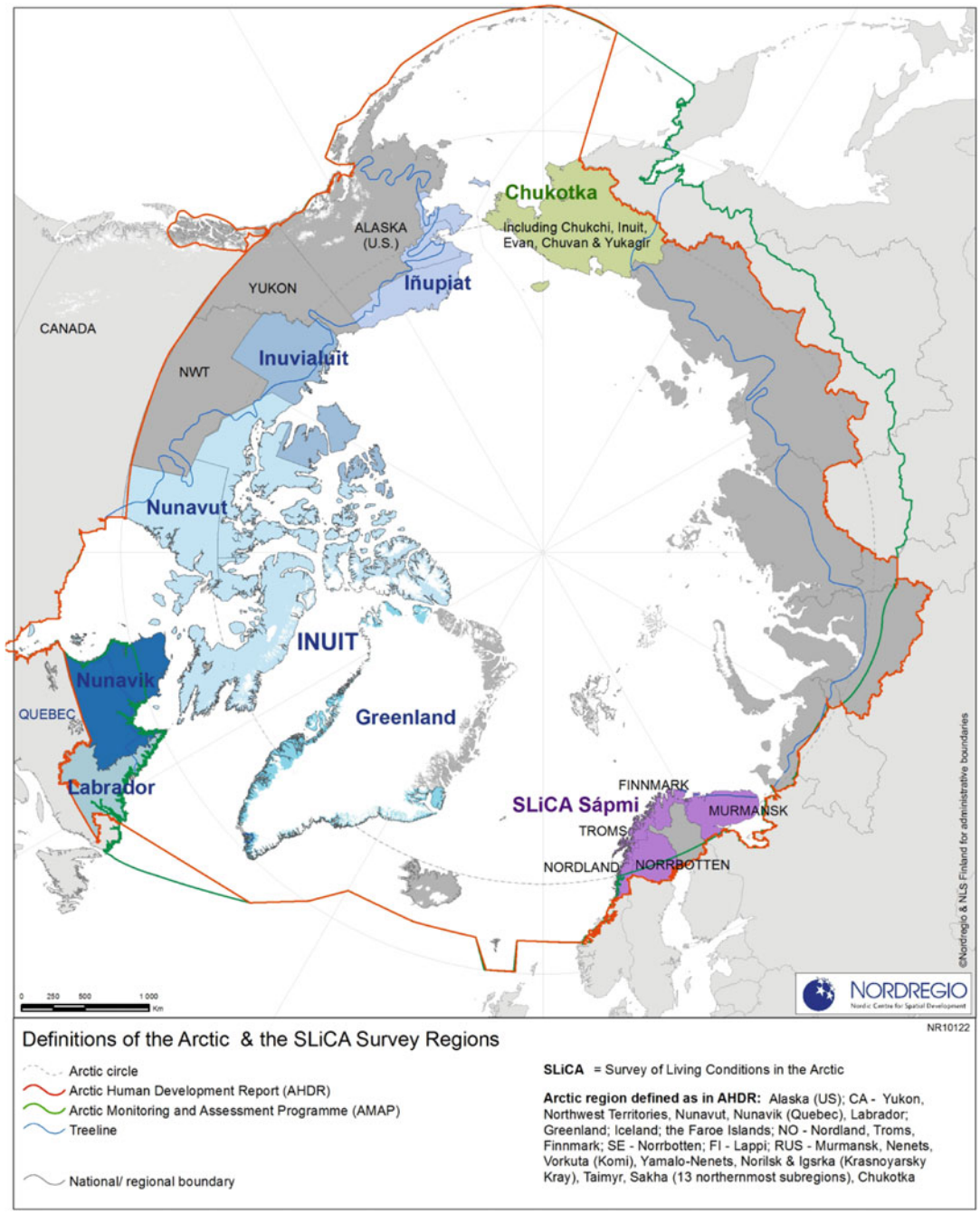
> Residents of the Arctic – settlers as well as indigenous peoples – regularly emphasize the importance of at least three dimensions of human development over and above those included in the HDI[17]:
>
> - Controlling one's own destiny
> - Maintaining cultural identity
> - Living close to nature. (AHDR 2004:240)

[14] This question, of course, only makes sense if people are able to move which was and is the case. The observed fairly stable population figures in the Greenlandic settlements until roughly 2005 have recently, for a number of reasons (including government policies focussing on a few growth centres), changed into a decline of the population in the settlements.

[15] For more thorough descriptions and comments see the project web site: www.arcticlivingconditions.org and McDougall 1998; Andersen and Poppel 2002; Andersen 2004; Kruse et al. 2008; Poppel 2010, 2014b; Eliassen et al. 2012.

[16] The Arctic Human Development Report was endorsed by the Arctic Council's Sustainable Development Working Group (SDWG) and published in 2004.

[17] The United Nations' Human Development Indicator is an index including indicators of health, education and living standard (the latter measured by GDP).




**Map 32.1** Definitions of the Arctic and the SLiCA survey regions

The Arctic Human Development Report recommended a more thorough assessment of potential indicators for all Arctic residents (indigenous as well as settlers/immigrants to the Arctic) which was followed by an Arctic Social Indicator initiative.[18] The first report on Arctic Social Indicators probed for appropriate

[18] This initiative was – like SLiCA and the AHDR – endorsed by the Arctic Council's SDWG.

indicators within the six domains (the UN's HDI indicators as well as the three mentioned above) that fulfilled a number of specific criteria (Larsen et al. 2010) and the second report included case stories and applications to the Arctic Social indicators selected in the first report (Larsen et al. 2014).

When the first SLiCA analysis was published in 2007 (Poppel et al. 2007) it included almost 600 tables[19] reflecting the different living condition dimensions in the focus of the SLiCA research interest. Acknowledging the conclusions and recommendations of the Arctic Human Development Report, these tables were categorized within the three dimensions of the United Nations' Human Development Index:

- Health
- Education
- Living standards/Material success

and the three domains suggested by the AHDR and identified for SLiCA purposes:

- Ties to nature
- Cultural continuity
- Control of destiny

This categorization and five research themes (importance of mixed economy, social relations, social problems, outside influences and policies, see above) suggested by our indigenous partners (Kruse et al. 2008) has been the point of departure for a large part of the research that has been carried out based on the SLiCA data (see Annex 2, Table 32.10, for more details on different SLiCA indicators). The three 'new' domains as well as the overall subjective wellbeing and quality of life is further investigated below following answers to a number of SLiCA questions that in some ways 'set the scene' and introduce the above-mentioned domains.

SLiCA findings within the three domains: 'ties to nature', 'cultural continuity', 'control of destiny' and findings focusing on subjective wellbeing/quality of life will be presented and documented below, following the introduction of a few SLiCA findings within the dimensions of health, education and living standard.

[19] The SLiCA database and table section on www.arcticlivingconditions.org have been developed by Jack Kruse and Marg Kruse.

## United Nations' Human Development Indicators Adapted to and Measured in an Arctic Context

### Health

It is well-documented that life expectancy dropped dramatically in Russia after the collapse of the Soviet Union at the beginning of the 1990s and health care conditions – especially in more remote regions – suffered as some regional health care services were abolished. Most results from the answers in the health section in the SLiCA questionnaire point to a health status that is generally worse in Chukotka and the Kola Peninsula ('diagnosed but untreated medical problems' is just one example). Medical research has substantiated that 'self-rated health' is a fairly good predictor of life expectancy (DeSalvo et al. 2006). The results on 'self-rated health' present a very diverse picture: between less than 50 % (Chukotka) and 95 % (Greenland) of the indigenous residents perceive that their health is 'good', 'very good' or 'excellent'. At the same time the results show that one out of five in all regions/countries (except Canada and Greenland) rate their health 'poor or fair'.

### Education – Formal and Informal

Formal education (which the UN's HDI also measures) has become a still more important parameter in the circumpolar region with the increasing focus on self-determination and the ability of Arctic communities and regions to benefit from increasing economic activities, including resource extraction and the industrial activities following it. Roughly eight out of ten people attended post-secondary school (high school or a vocational school/college) in Norway, Chukotka, Alaska and the Kola Peninsula. The percentage is somewhat lower in Greenland, and just 15 % of the Swedish Saami (this might be, at least partly, because of the age composition of the Swedish Saami sample).

As subsistence harvest activities are still important to the indigenous peoples in the Arctic,

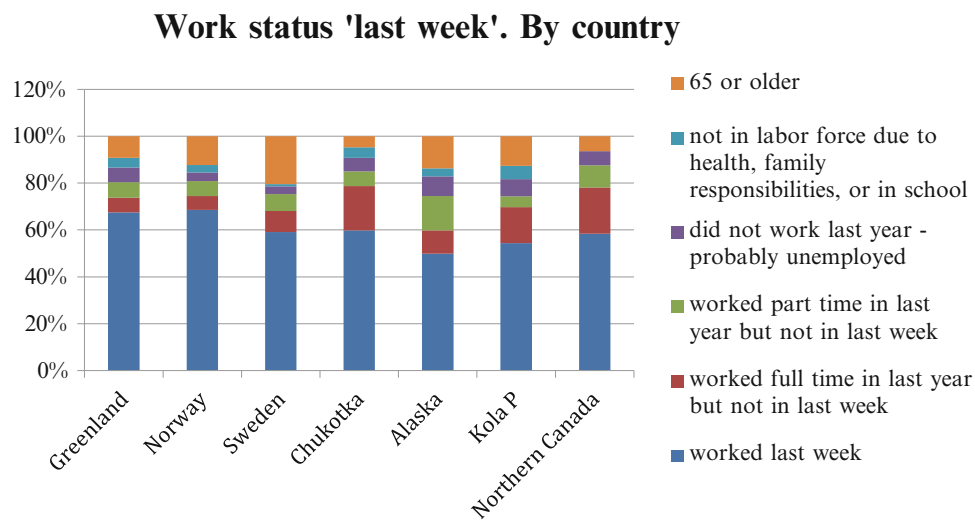



**Fig. 32.1** Work status 'last week' in the SLiCA survey regions. (Source: www.arcticlivingconditions.org & SLiCA database)

knowing about the continued intergenerational transfer of traditional knowledge is important. SLiCA respondents were asked about traditional education skills learned as a child and the skills learned or improved since childhood. A majority among the Inuit and Saami in Norway, the Kola Peninsula and Chukotka said that they learned 11 or more traditional skills and more than 8 out of 10 indigenous residents in all regions/countries stated that they have learned or improved traditional skills since childhood.

## Living Standards

The ambition of SLiCA and the recommendations of the Arctic Human Development Report (AHDR 2004) to add value of information and insight to the United Nations' Human Development Index included a focus on living standards, education and health and several clusters of questions were directed towards these dimensions. The conventional questions within these dimensions were supplemented with necessary and contextually developed questions about, for instance, traditional education, which is necessary for subsistence activities.

The development of mixed economies in the circumpolar region and communities (see for instance Wolfe and Walker 1987), together with regions becoming still more dependent on global economic, political and cultural forces has increased the necessity for stable employment and a cash income. Figure 32.1 shows the work status in the different survey regions: between half (in northern Alaska) and two-thirds (in Greenland and northern Norway) of the adult population were employed in the week prior to the interview and a minority (up to 10 %) were either not in the labor force or were unemployed in the previous week.

Comparing personal and household incomes[20] (Swedish data are not available) reveals major differences as indigenous individuals and households in Chukotka and the Kola Peninsula have considerably lower incomes than households in Greenland, northern Alaska and northern Norway, with the income level in Norway ranking highest.

Whereas the UN HDI measures Gross National Income per capita, the SLiCA project measures individual and household income as well as income inequalities and poverty. Income differences in the Arctic not only exist between regions and countries but also within regions and

[20] The incomes include all sources of income: wages, earnings from self-employment and transfer income. The income figures are measured in USD and PPP-adjusted.

**Table 32.1** Households receiving traditional food from others by country

| | Canada | Greenland | Chukotka | Alaska | Norway | Sweden | Kola Peninsula |
|---|---|---|---|---|---|---|---|
| Received traditional food from others | 100 % | 77 % | 29 % | 92 % | 65 % | 62 % | 68 % |
| Received traditional food in exchange for assisting others | 5 % | 39 % | 40 % | 51 % | 41 % | 31 % | 26 % |
| Received traditional food in exchange for other traditional food | * | 23 % | 41 % | 55 % | 39 % | 16 % | 34 % |
| Received gift of traditional food | 90 % | 90 % | 89 % | 88 % | 80 % | 62 % | 87 % |
| Shared traditional food with households in other places | * | 66 % | * | 85 % | 78 % | 53 % | * |
| Paid for traditional food in last 12 months | 19 % | 71 % | 46 % | 17 % | 56 % | 68 % | 71 % |

Source: http://www.arcticlivingconditions.org/SLiCA Results Report/Tables – Ties to Nature
*Data not available

countries. Both relative[21] and absolute[22] poverty was measured based on detailed self-reported income information. 40–50 % of households in Greenland, Alaska, Chukotka and the Kola Peninsula are relatively poor (with incomes below 60 % of the median income). The largest proportion of relatively poor (53 %) is in Chukotka, whereas less than two out of ten Norwegian Saami can be counted as relatively poor (data are not available from Canada and Sweden). Using an absolute poverty level reveals very large discrepancies between indigenous households in Chukotka and the Kola Peninsula (roughly three out of ten households live in absolute poverty) at one end of the scale, and Norway and northern Alaska (less than one household out of ten) at the other end of the scale. Indigenous households in Greenland and northern Canada range between with 15–18 % of the households in absolute poverty.

There seems to be a relation between income differences (measured as 'part of population in poverty') and satisfaction with standard of living. Between seven and eight indigenous Chukotkans and residents in the Kola Peninsula state that they are somewhat or very dissatisfied with their standard of living. One in ten Norwegian Saami and roughly every fourth Inuit in Greenland and Inupiat in northern Alaska are dissatisfied with living standards.

An overall assessment of living standards measured by cash income must include the subsistence harvest (as commented on in more detailed elsewhere in this chapter), including what is shared and received from/given away to family and fellow community members (see Table 32.1), contributes significantly to the food supply of many households and thus compensates for food that otherwise would have been bought in a local grocery or supermarket. At the same time, SLiCA data from the Inuit survey regions documented that subsistence activities not only depend on cash, but also that, where there is any correlation between cash income and subsistence activities, individuals with higher incomes take part in more subsistence activities (Kruse et al. 2008).

The answers to the question about the households' ability to make ends meet economically reflected the same economic reality and the perceptions referred to above: 85 % of the indigenous residents in both Russian SLiCA survey regions reported that they are only able to make ends meet with some or great difficulty.

## The SLiCA Specific Indicator Clusters

### Ties to Nature (Contact with Nature)

Historically, Arctic societies have fed, sheltered, and clothed themselves and maintained their well-being in large part through a close relationship and interdependence with the natural environment.

[21] Relative poverty was measured using the definition of EuroStat on households: 'the households earning less than 60 % of the median income'.

[22] To measure absolute poverty, the US definition and standard was applied.

> Arctic human-environment interactions fulfill the physical needs for food and shelter and also ground humans spiritually in their cultural worlds.
>
> . . .
>
> Contact with nature, albeit a somewhat intangible attribute of human development and therefore difficult to measure, is nonetheless central to the legacy and contemporary state of well-being in Arctic societies.
>
> . . .
>
> Therefore one logical path toward developing indicators for contact with nature would be finding ways to measure participation in different livelihood activities. (Crate et al. 2010:109)

The quoted passages from the first Arctic Social Indicator Report (Larsen et al. 2010) present a few condensed statements about some key relations not only between the indigenous peoples but also between other Arctic residents and the natural world.

In all survey regions (the question was not asked in Canada) more than nine out of ten Inuit and Saami found 'the way I view nature' as a very important or important identity marker. Nature and wild-life activities like 'hunting and fishing' and 'harvesting of wild berries and plants' ranked high among indigenous identity markers. These identity markers substantiate the meaning of 'ties to nature' as a human dimension domain focusing on important aspects of wellbeing for Arctic indigenous peoples (see Table 32.3 for more details).

### Subsistence Activities

From the very beginning of the SLiCA research process, subsistence activities[23] were the focus of the discussions between researchers and indigenous experts as the assumption was that the mixed cash and subsistence harvest economy was still a prevailing 'mode of production' in many Arctic communities and regions. Based on SLiCA data for the Inuit homelands, Poppel and Kruse conclude that subsistence harvest is not just a matter of 'meat on the table', although 'food security' has become an even more significant issue in Arctic communities recently. Subsistence encompasses a number of aspects:

- the economic aspect – the importance to the economy of the household;
- the nutritional aspect – part of the diet of the household (more nutritious than store-bought food);
- the social aspect – including intergenerational transfer of knowledge;
- the socio-cultural aspect – principles of sharing and community relations;
- the identity aspect – markers of identity related to subsistence;
- the integration aspect – the mix of subsistence and cash activities (Poppel and Kruse 2009)

Including the Saami survey regions confirmed that subsistence activities are as important in Spmi as in the Inuit-populated regions.

The overall finding was that the vast majority of the Inuit and Saami have participated in several subsistence-, and thus nature-related activities over the last 12 months.[24]

### Subsistence Harvest and Consumption of Traditional Food

Table 32.2 shows the proportion of meat and fish consumed by the household that people perceive as also being harvested by a household member. The consumption of traditional food harvested by one or more household members is significant in all regions, although with variations (Poppel 2006a; Poppel and Kruse 2009; see also footnote 25).

The proportion of meat and fished consumed by the household and also harvested by a household member not only provides information about the composition of the diet and the economic significance of nature (to which degree the household's own harvest substitutes store-bought

[23] We defined subsistence activities as harvesting local resources: hunting, fishing, herding, husbandry, gathering, and other harvest activities that people conduct as a non-market activity with the primary purpose of contributing harvest products to the household, to share with family and community members (including 'meat gifts') or to sell locally outside the market economic sector. A 'Household Production Model' was developed to be tried out as a part of the research effort (see Usher et al. 2003; Kruse et al. 2008).

[24] Unpublished paper: *Are Subsistence Activities, Harvest of Renewable Resources and Herding Important to Indigenous Peoples in Modern Arctic Economies and Cultures?* Presented by Poppel, B. at the IPY Oslo Science Conference 2010. June 8–12.

**Table 32.2** Proportion of meat and fish consumed and also harvested by household traditional food by country

| | Canada | Greenland | Chukotka | Alaska | Norway | Sweden | Kola P |
|---|---|---|---|---|---|---|---|
| None | * | 25 % | 18 % | 8 % | 6 % | 14 % | 42 % |
| Less than half | * | 38 % | 38 % | 31 % | 37 % | 44 % | 35 % |
| About half | * | 15 % | 27 % | 25 % | 17 % | 43 % | 22 % |
| More than half | * | 21 % | 17 % | 36 % | 40 % | | |
| | * | 100 % | 100 % | 100 % | 100 % | 100 % | 100 % |

Source: www.arcticlivingconditions.org (Table 26) and SLiCA database
*Data not available

food) but also indicates a relation to (and dependency on) surrounding nature (Table 32.2).

### Respect for Nature

To elucidate the strength of traditional values, a number of questions were asked about 'satisfaction with community's promotion of indigenous values' of which one was 'respect for nature' (for more details see subsection about 'cultural continuity' below). A vast majority of indigenous residents in five out of seven Arctic regions and countries (there are no data for Canada) reported that they were very or somewhat satisfied with the promotion of 'respect for nature'. Only in Chukotka a majority of 57 % was 'somewhat or very dissatisfied' with the promotion of 'respect for nature'. As the vast majority of Inuit in Greenland, Chukotka and Alaska confirmed that they apply 'traditional values in their lives' it seems reasonable to interpret the answers about satisfaction with a community's promotion of 'respect for nature' as supporting the assumption that nature is important to the indigenous people.

Infrastructure projects (e.g. hydropower stations), extractive industries and climate change are just a few, but manifest, examples of human activities with huge environmental impacts. If contact with 'nature' and nature-based activities are important to people, the way nature changes and the impact of access to and use of nature and its resources would seemingly also be a concern. Following that, it seems fair to assume that the influence people have on these changes would be of vital importance. The SLiCA project thus included questions about the environmental concerns of the Arctic indigenous peoples in the survey regions as well as perceptions of influence on 'the management of fish and game' and 'the development of oil, gas and minerals' (Poppel et al 2011).

A majority cited the following problems in the region where they live: contamination of local sites, pollution of local lakes and streams, and pollution from industrial development. Most Greenlanders perceive pollution from other countries as a problem whereas erosion of coastal areas and river banks are a concern for the majority of indigenous people in Alaska, Chukotka and the Kola Peninsula. Three out of four cited climate change as a problem in their communities (Poppel et al. 2011).

There are marked differences from region to region: the vast majority and a considerably larger part of the indigenous peoples of Chukotka and the Kola Peninsula respectively are concerned with the above-mentioned problems. This might be a response to a number of environmental disasters in the wake of the rapid development of oil, gas and mineral exploitation in the Russian Arctic (Forbes 2005; Stammler and Forbes 2006).

The identification of and concern with different environmental problems and their assumed impact on 'ties to nature' is not generally paralleled by a high score on satisfaction with influence on the 'drivers for change'. Only in northern Alaska more than half of the indigenous population is somewhat or very satisfied with the influence indigenous people have on renewable resources, non-renewable resource development and on reducing environmental problems. The Saami – especially in Sweden – rate their influence very low. The indigenous people of the two Russian regions also score very low. At the same time they (see above) are the ones most concerned with the environmental problems they identify (Poppel et al. 2011).

### Cultural Continuity (Cultural Vitality)

In the preamble and in a number of articles (especially articles 11–16), the United Nations Declaration on the Rights of the Indigenous Peoples (UN 2007) lay down the cultural rights of the indigenous peoples: rights to cultural traditions and customs; rights to spiritual and religious traditions; rights to histories, languages and oral traditions; rights to provide education in their own language; rights to dignity and diversity, and rights to own media. As an example, Article 11.1 states that

> Indigenous peoples have the right to practice and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artifacts, designs, ceremonies, technologies and visual and performing arts and literature.

And Article 13.1 further states that

> Indigenous peoples have the right to revitalize, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies, writing systems and literatures, and to designate and retain their own names for communities, places and persons. (UN 2007)

The quotes and the subject examples above very closely reflect the input to the discussions provided by the indigenous partners in the SLiCA questionnaire development process that concluded in a broad social goal entitled 'cultural continuity'. Cultural activities and cultural values as well as how they are transferred from generation to generation (for instance mastery of language, traditional values and self-identification, spirituality, participation in cultural events and use of media – and how they are valued (e.g. satisfaction with communities' promotion of traditional values and the individual application of traditional values in personal life) are embedded in several living condition dimensions but all aspects are considered to be resources and are assumed to affect quality of life. A few SLiCA findings on self-perceived identity and language will be introduced below as examples of the strength of 'cultural continuity' and cultural wellbeing (see also Schweitzer et al. 2010).

### Self-Perceived Identity Among Arctic Indigenous Peoples

All SLiCA respondents were asked whether, and if, to what degree a number of activities and customs were important in maintaining their indigenous identity (see Table 32.3).

**Table 32.3** Activities and customs important/very important to maintaining indigenous identity, by country

| | Canada | Greenland | Chukotka | Alaska | Norway | Sweden | Kola Peninsula |
|---|---|---|---|---|---|---|---|
| **Traditional food** | * | 95 % | 98 % | 96 % | 84 % | 79 % | * |
| **Hunting and fishing** | * | 79 % | 99 % | 95 % | 72 % | 77 % | * |
| **Naming kinship relationships** | * | 87 % | 100 % | 90 % | 96 % | 87 % | * |
| **Harvesting of wild berries and plants** | * | 75 % | 98 % | 89 % | 78 % | 80 % | * |
| **Occupation or profession** | * | 87 % | 77 % | 87 % | 76 % | 56 % | * |
| **Preservation of traditional foods** | * | 85 % | 89 % | 96 % | 78 % | 85 % | * |
| **Use of indigenous language** | * | 98 % | 84 % | 84 % | 90 % | 63 % | * |
| **Participation in traditional cultural events** | * | 71 % | 81 % | 85 % | 83 % | 64 % | * |
| **Childhood upbringing** | * | 96 % | 98 % | 94 % | 93 % | 89 % | * |
| **Clothes worn** | * | 78 % | 71 % | 76 % | 60 % | 58 % | * |
| **Contacts with other indigenous people** | * | 95 % | 58 % | 93 % | 91 % | 88 % | * |
| **Indigenous poetry and literature** | * | 79 % | 61 % | 73 % | 58 % | 40 % | * |
| **Religious and spiritual beliefs** | * | 79 % | 66 % | 81 % | 57 % | 33 % | * |
| **View of nature** | * | 97 % | 98 % | 96 % | 92 % | 96 % | * |
| **Meeting expectations of family and indigenous friends** | * | 88 % | 81 % | 94 % | 82 % | 78 % | * |

Source: www.arcticlivingconditions.org (Table 142) & SLiCA database
*Data not available

**Table 32.4** Language: fluency in indigenous language = understand, speak, read and write (very or relatively well)

| | Canada | Greenland | Chukotka | Northern Alaska | Northern Norway | Northern Sweden | Kola Peninsula |
|---|---|---|---|---|---|---|---|
| Understand | 92 % | 97 % | 61 % | 54 % | 84 % | 34 % | 65 % |
| Speak | 89 % | 96 % | 55 % | 45 % | 75 % | 28 % | 56 % |
| Read | 70 % | 88 % | 42 % | 29 % | 62 % | 19 % | 36 % |
| Write | 73 % | 84 % | 40 % | 22 % | 44 % | 12 % | 26 % |

Source: www.arcticlivingconditions.org (Table 91) and SLiCA database (Poppel et al. 2011)

The results across the Arctic are strikingly alike. More than three out of four (with only two exceptions) of the Arctic indigenous peoples in the SLiCA survey regions find the same activities and customs important or very important to their identity: 'view of nature', 'eating traditional food',[25] 'preservation of traditional food', harvesting of wild berries and plants', 'language use' as well as 'naming kinship relationships', 'childhood upbringing', 'contacts with other indigenous people' and 'meeting expectations of family and indigenous friends'. Whereas these values all point to the living conditions dimension of 'cultural continuity' (and many also relate to 'ties to nature'), the latter identity markers also highlight the importance of family and friends, close interpersonal relationships and social networks. Despite many similarities, there are also significant differences between the regions – for example, when it comes to 'use of indigenous language' and 'religious and spiritual beliefs'.

## Language Retention

Indigenous peoples' right to speak and write their mother tongue and to use the indigenous language as the language of instruction has been a major issue in most, if not all, indigenous peoples' fights for recognition as peoples and for self-determination. Following this, one of the traumas, both individually and collectively, for many indigenous peoples is the way many children were sent to boarding schools for several years, far from their families, and restricted and sometimes forbidden from speaking their mother tongue. In the Arctic this was the situation in, for instance, Alaska, Canada and among the Saami in the 1950s and the following decades (Smith 2009).

Table 32.4, 'Language retention', is based on individual, self-perceived language abilities and contains several findings and indicates a number of relationships. First of all, there are significant differences in the ability to understand, speak, read and write the indigenous language: the Swedish Saami rank lowest, not only among the Saami but also compared to the other indigenous groups. Twice as many of the Kola Saami and almost three times as many of the Norwegian Saami perceive their language abilities as very good or relatively good compared with the Swedish Saami. Among the Inuit, the Greenlanders rank highest in all four categories of language management as almost everyone stated that they understand and speak Greenlandic very or relatively well and more than eight out of ten reported that they read and write Greenlandic very or relatively well. The self-perceived language skills in Greenland rank somewhat higher than those of the Canadian Inuit and considerably higher than the language skills of the Inupiat in northern Alaska.

The language abilities are reflected in 'current use of indigenous language in household'. The three regions where language skills are perceived to be highest – Greenland, Arctic Canada and northern Norway – are also the regions where the largest part of the indigenous people reported that they speak the indigenous language most or all the time in the household (see Table 32.5).

[25] 'Traditional food' (in the English-speaking regions often called 'country food') is the overall term for meat, fish, herbs and vegetables harvested locally/regionally and either prepared traditionally (e.g. boiled, fried, dried or fermented), eaten raw or prepared according to more modern recipes (see e.g. Poppel and Kruse 2009). The term 'Traditional food' was not used as such in the questionnaire but related to what is considered 'traditional' in the different regions. For example: 'Inupiat/Yupik' food in northern Alaska and 'Kalaalimernit' in Greenland.

**Table 32.5** Currently use indigenous language in household

| | Northern Canada | Greenland | Chukotka | Northern Alaska | Northern Norway | Northern Sweden | Kola Peninsula |
|---|---|---|---|---|---|---|---|
| All the time | 50 % | 82 % | 17 % | 14 % | 40 % | * | 15 % |
| Most of the time | 22 % | 11 % | 11 % | 16 % | 16 % | * | 8 % |
| Some of the time or less | 28 % | 8 % | 73 % | 70 % | 44 % | * | 77 % |
| **Total** | 100 % | 101 % | 101 % | 100 % | 100 % | * | 100 % |

Source: www.arcticlivingconditions.org (Table 110) and SLiCA database (Poppel et al. 2011)
*Data not available

What seems substantiated, using Greenland as an example, is that public policy over a longer period[26] and a concerted effort can enhance an overall goal 'despite all odds', or 'what might at a first glance look like mission impossible' confronted with the fact that many languages of small-numbered indigenous peoples are either on the verge of extinction or threatened.

## Control of Destiny (Fate Control)[27]

> Arctic regions have long been resource peripheries and internal colonies of the states that encapsulate them. Political decisions made in far-flung nation-state capitals and economic decisions made in corporate boardrooms in distant metropolises have determined the trajectories of development that Arctic regions have experienced. Arctic residents are dependent on their homelands, the health of their ecosystems, and the right to use those ecosystems. Yet their power over the use and protection of these territories and resources have has been compromised by outside forces. Thus fate control is of critical importance to the sense of well-being and human development in Arctic areas. (Dahl et al. 2010:129)

One of the common points of departure for Arctic societies is a history of colonialism. Recent developments, including devolution and implementation of new political structures, can – to different degrees – be seen as attempts by the southern nation states to meet the demands of indigenous peoples and other Arctic residents in the northern regions of these states for political power to make their own decisions and to control their own destinies. The political authority that has been transferred and the forms of government that have been implemented in the Arctic region represent a broad variety of attempts to decolonize, ranging from transfer of more specific decisions to the local level (for instance, in the Saami regions) to home rule and self-government arrangements in, for example, Nunavut and Greenland respectively.

The struggle of the indigenous peoples of the Arctic for self-determination has been paralleled by an increasing international focus on indigenous peoples' rights that, based on decades of efforts by indigenous peoples' organizations, resulted in the foundation of United Nations Permanent Forum on Indigenous Issues in 2002 and, 5 years later, in the adoption of the Declaration on the Rights of

[26] During the colonial and postcolonial period (1721–1979) the Greenlandic language was used among Greenlanders, by the missionaries and by media (the first Greenlandic newspaper published in 1861; and Greenland Broadcasting in 1958) and was used in education with an increasing preference of the Danish language in the post-war decades of modernization. The agreement between the Danish state and Greenland about Greenlandic self-governance, followed by both parliaments' passage of legal acts that came into force June 21, 2009, states that the Greenlandic language is the official language of Greenland and that Danish shall still be taught. Since the introduction of Home Rule in 1979, the Greenlandic language has been prioritized. Some argue 'at the expense of learning the Danish language', a view, which the SLiCA figures on 'foreign language skills by age groups' cannot refuse.

[27] The Arctic Human Development Report (AHDR 2004) recommended social indicators developed within a human development dimension: 'controlling one's own destiny'. Following this recommendation, the term 'Control of destiny' is applied in the organization of SLiCA tables in SLiCA Results (www.arcticlivingconditions.org). The Arctic Social Indicators Report (Larsen et al. 2010) uses the term 'Fate control'. In this chapter the two terms are used synonymously.

Indigenous Peoples (adopted by the United Nations September 13, 2007). The Annex to the Declaration recognizes and reaffirms

> that indigenous peoples possess collective rights which are indispensable for their existence, well-being and integral development as peoples. (United Nations 2007)

An important acknowledgement of the significance of the Arctic indigenous peoples is the inclusion of indigenous representation in the Arctic Council as Permanent Participants of the Council and its working groups (www.arctic-council.org).

### Measuring Control of Destiny/Fate Control

Control of destiny/fate control can, according to Dahl and his co-authors, be measured using indicators within the following categories: 'political power and political activism', 'decision-making power', 'economic control', 'knowledge construction' and 'human rights' (Dahl et al. 2010:131). Many indicators within these categories might be found in publicly available assessments and reports at an aggregate level. The same availability of data does not generally exist if the research focus is the individuals' evaluation of, for instance, distribution of power and influence on decision-making. SLiCA opens a window to cast some light on some aspects of individuals' perceptions about political knowledge and influence.

### Importance of Political Decisions, Interest in and Knowledge About Politics

Most Inuit, Saami and indigenous people in Chukotka and the Kola Peninsula find 'decisions made by government' important or very important to their own lives, ranging from 74 % in the Kola Peninsula to 91 % in Chukotka.

A majority in all survey regions also indicates an interest in 'politics in general'. The variation in responses to this question is larger though, as between 50–60 % in the Kola Peninsula say they are interested or very interested, whereas more than 80 % of the Saami in northern Norway and northern Sweden declare an interest in politics in general (Fig. 32.2).

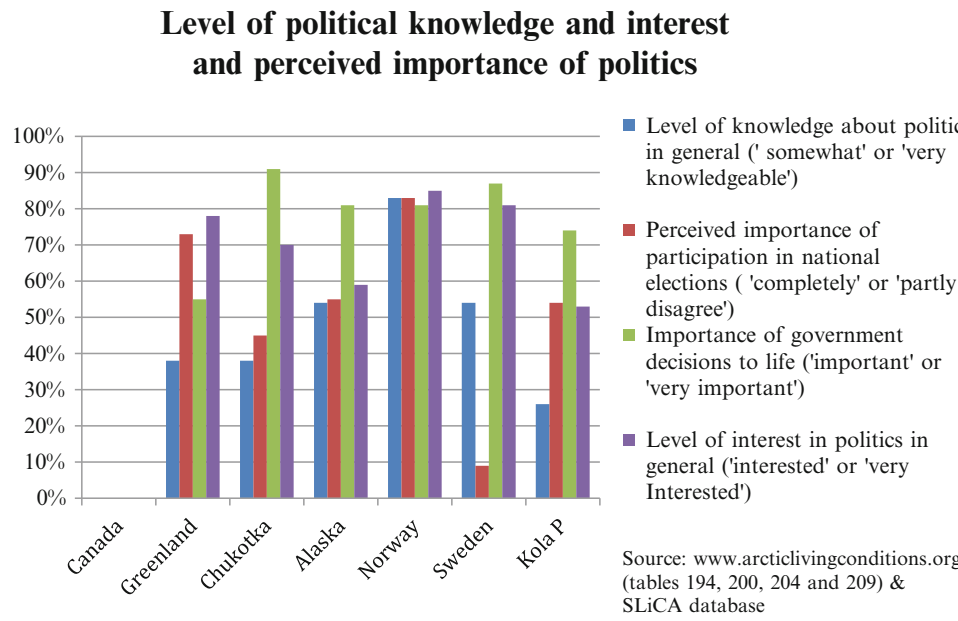



**Fig. 32.2** Level of political knowledge and interest and perceived importance of politics

The interpretation of the answers to the question 'how knowledgeable are you about politics in general' and to the perceived importance of the individual's own vote in national elections[28] is more difficult because of the distribution of answers.

Generally, the Norwegian Saami are interested, declare that they are also knowledgeable, and find government decisions important to them, but disagree on the statement that their own vote is not important. At the other end of the spectrum of perceptions related to interest in and knowledge of politics, roughly half the indigenous people of the Kola Peninsula expressed interest in politics but only every fourth found her/himself knowledgeable about politics. Almost half of the indigenous people of the Kola Peninsula agreed with the statement that it did not matter what she or he voted. Still, three out of four found government decisions important.

The survey results from the other regions do not provide a clear picture immediately. Including other findings on, for instance, votes at elections and factors of social cohesion did not present a clearer picture but merely pointed to the need for further in-depth research into the political development of the Arctic regions.

## Power, Influence and Governance on Resource Exploitation and the Environment When Climate and Environmental Conditions in the Arctic Change Rapidly

There are several reasons for the Arctic being center stage in discussions at conferences and in international fora, but a fundamentally important one is certainly that global warming and the resulting climate change manifests itself more rapidly in the circumpolar regions than elsewhere, thus affecting people's livelihoods, living conditions, subjective wellbeing and quality of life (Nuttall et al. 2005; Hovelsrud et al. 2011a, b; Rasmusssen 2011; Arctic Council 2013).

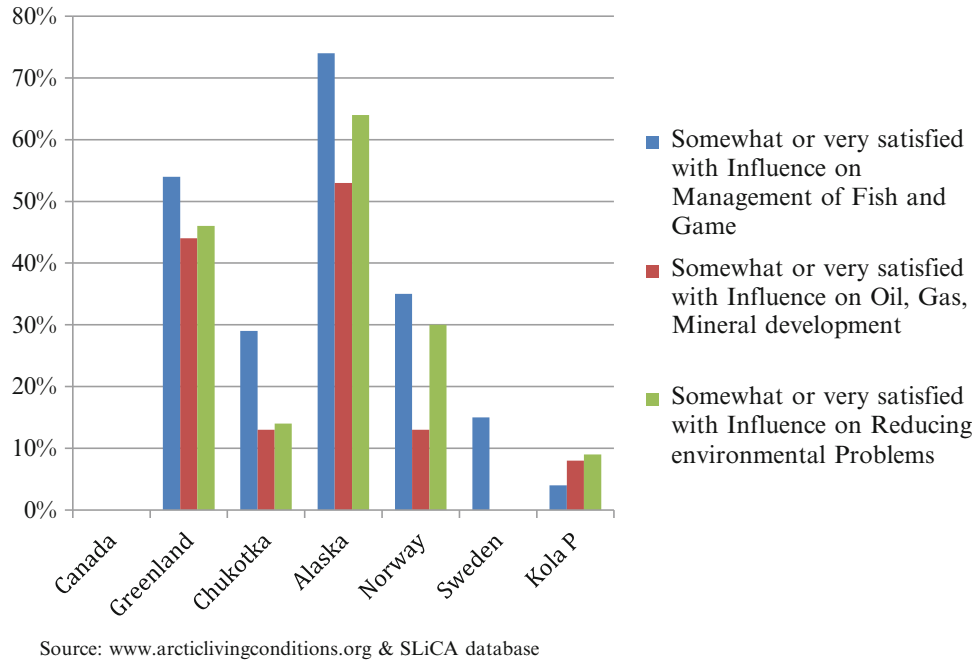
Whereas Inuit and Saami across the circumpolar Arctic and the indigenous peoples of Chukotka identify a number of environmental problems in their community, their satisfaction with the influence of indigenous people to reduce environmental problems is, at best, modest (see Fig. 32.3). Only in Alaska more than half (62 %) is somewhat or very satisfied, whereas the percentage in Greenland is 46 %, in northern Norway 30 and in the two Russian regions, 15 % in Chukotka and 10 % in the Kola Peninsula (Poppel et al. 2011) (Fig. 32.3).

The picture is very much the same when the focus is on evaluating the influence indigenous people have on management of non-renewable natural resources like oil, gas and minerals. The most significant difference is that only 10 % of the Norwegian Saami are somewhat or very satisfied with their influence. This is the same level of satisfaction with influence as reported among the indigenous people in Chukotka and a little higher than in the Kola Peninsula (ibid). The Alaskan Inupiat are an exception as they report a higher degree of satisfaction with influence over the management of natural resources.[29]

The importance of different aspects of 'control of destiny' (including influence on, for example, the environment) on 'satisfaction with quality of life' and 'quality of life in this community' seems to be supported by the findings in section "Subjective Wellbeing and Quality of Life". The significant results about lack of influence on different resources can thus be seen as an important message to local, regional, national and international decision makers to ensure the inclusion of the indigenous peoples in decision-making. Not least environmental issues, exploitation of natural resources and adaptation to change call for 'inclusive governance'. This seems to be particularly significant, taking into account the importance to subjective wellbeing of nature and subsistence activities (see above for further discussions about the significance of

[28] The wording of the question was: 'How much do you agree or disagree with the following statement: So many people vote in a national election that it does not make any difference if I vote or not.'

[29] See Kruse (2010) for a comparative study of living conditions and quality of life among Inupiat in 1973 and 2002/2003, before and after oil extraction started.




Source: www.arcticlivingconditions.org & SLiCA database

**Fig. 32.3** Satisfaction with influence over the management of natural resources like fish, game, petroleum and mining, and over reduction of local environmental problems

these activities) (Nuttall et al. 2005; Hovelsrud et al. 2011a, b; Poppel et al. 2011).

## Subjective Wellbeing and Quality of Life

People are in the best position to evaluate their own living conditions, including how satisfied they are with life as a whole. This approach has been a leading principle throughout the SLiCA project. It was embedded in the research question and was the point of departure for the research design, including the partnering with indigenous peoples at the local, regional, national and international level. As a consequence it also affected the living conditions dimensions, the indicators and thus the questionnaire.

The SLiCA team defined living conditions in the tradition of Allardt as:

> Individual possession of resources in the form of money, goods, services, mental and physical energy, social relations, physical security etc. that the individual person may control and consciously direct insofar as the necessary arenas are available. (Allardt 1975)

Still following Allardt, the ultimate objective of measuring living conditions is *"to learn about the well-being of the individual"* (Ibid.).

The individual's perception of his/her subjective wellbeing and quality of life is thus an inclusive concept as it deals with both quantitative and qualitative living conditions – physical possessions as well as mental aspects – and the interaction of these. At the same time, the concept is complex as it covers the individual's evaluation of all aspects of life as experienced by the individual (Andersen and Poppel 2002; Poppel 2014b).

Among the almost 250 questions in the SLiCA core questionnaire, roughly every tenth focused on satisfaction with different aspects of life and living conditions as well as the respondent's satisfaction with life as a whole and quality of life in the respondent's

community. The SLiCA questionnaire asked about satisfaction with life in two different ways [30]:

- The question generally asked in subjective wellbeing, quality of life and happiness research to identify subjective wellbeing and the individual's perception of quality of life ('satisfaction with life as a whole') was only asked in Greenland, northern Alaska and northern Sweden.
- The question concerning quality of life in the community was asked in all regions and thus provides the possibility for broader comparisons.

Whereas the first question provides insight into the individual's subjective evaluation of her or his overall quality of life, the latter approach tells about balancing two evaluative approaches and understandings: one is the individual's perception of the quality of life in and of the community and thus the wellbeing and quality of life 'on average' or 'in general' of all community members, including the respondent. The other understanding is 'the quality of life in this community for me'. The analysis presented below seems to support the assumption that there is a mix of the two approaches and that it is not an either/or.

## Satisfaction with Life as a Whole – Greenlanders, Inupiat and Swedish Saami

More than nine out of ten Inuit in Greenland, Alaska and Sweden reported that they were somewhat or very satisfied with their life as a whole.[31] When the sums of the positive values are broken down into the two 'satisfied' categories ('very satisfied' and 'somewhat satisfied') major differences occur as the percentage that was very satisfied was more than twice as high in Alaska and Sweden as in Greenland (roughly 55 % and 23 % respectively); a follow-up survey needs to explore the differences[32] more thoroughly.

Looking into potential differences according to age and gender in the different survey regions, the most striking observation is that the dissatisfied or neither dissatisfied nor satisfied groups among the youngest (16–24 years old) in all three regions are, on average, twice as big as most other age groups. It is thought-provoking that it is in this age group that a higher percentage has, in the last year, thought seriously about committing suicide.[33]

There are gender differences too, in satisfaction with life as a whole, but they do not constitute a trans-Arctic pattern. In Greenland roughly the same proportion of women and men indicate different levels of (dis)satisfaction; in Alaska, twice as many women as men are dissatisfied or neither dissatisfied nor satisfied with their overall

[30] The exact wording of the two questions were: 'How satisfied are you with the quality of life as a whole?' and 'How satisfied are you with the quality of life in this community?' respectively. Response categories to both questions, as well as to the other questions related to satisfaction, were: very dissatisfied; somewhat dissatisfied; neither satisfied nor dissatisfied; somewhat satisfied; very dissatisfied.

[31] Coding the answers with the values from 1 to 5 results in an average score of 4.2 in Greenland, 4.4 in Alaska and 4.5 in Sweden.

[32] Possible explanations were discussed during the development of the first review of SLiCA, including differences among respondents to rate themselves 'very satisfied'. One hypothesis was that the inclination among Greenlanders to use the Greenlandic word for 'very satisfied' might be smaller than using 'very' in English.' (Kruse et al 2008:133). A similar hypothesis might be put forward on the different use of superlatives in towns and settlements: whereas the overall distribution of the Greenlandic Inuit being satisfied (somewhat or very) were alike at both the national and the regional level, there were differences between the part of Greenlanders in towns and settlements that were 'very' and 'somewhat' satisfied. Seemingly, the differences are not reflected in the two groups that had thought about/had not thought about moving during the last 5 years, nor among those who identified social problems. There are significant differences, though, in living standards, job opportunities and satisfaction with different public facilities, which might contribute, to different levels of satisfaction with life as whole between Greenlanders in towns and settlements.

[33] Suicide rates among indigenous peoples in the Arctic are among the highest in the world. The SLiCA questionnaire asked about suicide ideation. Data are analyzed e.g. in: Kruse et al. 2008 and Broderstad et al. 2013.

quality of life, and in Sweden the situation is the reverse, with men being more dissatisfied.

A regression analysis was conducted in an attempt to answer the question: Which are the factors contributing the most to satisfaction with life as a whole? And, not least: Are there significant differences between the indigenous peoples in the different Arctic regions?

All indicators[34] resulting from questions focusing on 'satisfaction with ...' were tested for their explanatory power and thus as independent variables in regression models where the dependent variable was 'satisfaction with life as a whole'.

Generally, satisfaction with 'standard of living', 'personal health', 'opportunities to hunt and fish' and 'combination of productive activities' are the variables that explain the larger part of 'satisfaction with quality of life as a whole'. In Greenland and Alaska more than half, and in Sweden at least one-third is explained by these independent variables.

It is significant that 'opportunities to hunt and fish' is part of the Quality of Life-equation in all three regions/countries. Mostly in Alaska, where satisfaction with 'the availability of fish and game', 'a healthy environment' and 'recreational facilities' also contribute substantially to overall quality of life. In Greenland, on the other hand, 'job opportunities' and 'income' are important explanators, probably indicating a difference in both public discourses and actual development policy. In Greenland, the overall economic policy since World War II, both the Danish (post-) colonial policy in the 1950s and 1960s and the Greenlandic policy after introduction of Home Rule (1979) and not least after the introduction of Self-Governance (2009), has emphasized the importance of industrial development of the fisheries sector, the construction sector and, most recently, a mining sector. Alaska has also experienced economic development, especially with an expanding oil industry, but all the time with a focus on subsistence activities which seem to have been crucial in the Alaskan development and a hallmark for the legislation regulating ownership and use of large territories, primarily fleshed out in the Alaska Native Claims Settlement Act (ANCSA) passed in 1971 and the Alaska National Interest Lands Conservation Act (ANILCA) passed in 1980 (Huntington 1992). Furthermore the right to 'subsistence leave' is included in many job contracts, which makes it possible to combine wage work with using the land, fishing and hunting (Kruse 2010).

## Satisfaction with Life in this Community – Inuit, Saami and the Indigenous Peoples of Chukotka and the Kola Peninsula

As mentioned above, the question 'How satisfied are you with life in this community?' that was asked in all regions reveals the individual's perception of the quality of life in and of the community and thus the wellbeing and quality of life on average/in general of all community members, including the respondent, as well as quality of life for the respondent in the community.

The overall results (see Table 32.6) reflect major differences between the SLiCA survey regions. The Inuit and Saami in most regions are somewhat or very satisfied with life in their community: more than eight out of ten in Canada, Alaska, Norway and Sweden and two out of three in Greenland. At the other end of the spectrum we find the two Russian survey regions where fewer than two out of ten are somewhat or very satisfied with life in the community.

As the focus of this question is on the community, it seems relevant to investigate whether there might be a relation between satisfaction and perceived social problems. The obvious assumption would be that being satisfied with quality of life in the community would, at least to some

[34] In Greenland the number of indicators was 24, in Alaska 23 indicators and in Sweden 17 indicators. 'Satisfaction with life in this community' is not included in the regression models as it might be impacted the same independent variables that explain overall satisfaction with quality of life.

**Table 32.6** How satisfied are you with life in your community?

| | Northern Canada | Greenland | Chukotka | Northern Alaska | Northern Norway | Northern Sweden | Kola Peninsula |
|---|---|---|---|---|---|---|---|
| Very or somewhat satisfied with the quality of life in community | 92 % | 68 % | 14 % | 81 % | 86 % | 85 % | 12 % |
| Have **not** considered moving away during last five years | 71 % | 64 % | 71 % | 58 % | 63 % | * | 71 % |

Source: www.arcticlivingconditions.org, SLiCA Results and SLiCA database

**Table 32.7** Percentage of adults perceiving social problems in their community

| | Northern Canada | Greenland | Chukotka | Northern Alaska | Northern Norway | Northern Sweden | Kola Peninsula |
|---|---|---|---|---|---|---|---|
| Unemployment | 87 % | 84 % | 100 % | 83 % | 63 % | * | 99 % |
| Alcohol abuse | 78 % | 80 % | 100 % | 84 % | 77 % | * | 99 % |
| Suicide | 70 % | 69 % | 95 % | 60 % | 33 % | * | 93 % |
| Drug abuse | 79 % | 70 % | 91 % | 70 % | 26 % | * | 92 % |
| Family violence | 69 % | 64 % | 93 % | 52 % | 23 % | * | 85 % |
| Sexual abuse | 61 % | 61 % | 88 % | 34 % | 30 % | * | 76 % |

*Question not asked in Sweden
Source: www.arcticlivingconditions.org, SLiCA Results and SLiCA database

degree (and depending on whether moving is at all possible), decrease the inclination to move. Furthermore, it seems fair to assume that perceiving social problems (see Table 32.7) might encourage people to consider moving away from community.

The first assumption[35] seems to be supported by the information provided by indigenous residents in the Inuit settlement regions (apart from Chukotka) and in northern Norway as the general tendency in these regions is that people who are dissatisfied with quality of life in community are more likely to consider moving and vice versa. The situation in Chukotka and the Kola Peninsula seems quite different: at the same time that a huge majority is dissatisfied with quality of life in their community, almost as large majority has not considered moving and thus there is no correlation between the dissatisfied and those who considered moving.

The second assumption[36]: a relationship between those perceiving social problems and those considering moving away is only supported by data from Chukotka and the Kola Peninsula as a larger number of the indigenous people in these regions report different social problems and a larger number express dissatisfaction with quality of life in the community. In the other regions, data do not substantiate a close relationship and the Canadian figures demonstrate that there is no one-to-one correspondence between being somewhat or very satisfied with life in one's community and identifying key social problems in that community. Without going into much detail, it should be mentioned that a large number of the indigenous people in all regions mentioned that 'belonging to community' contributes to satisfaction with quality of life (not least, because of family and social networks, attachment to nature in the settlements, and jobs as well as education facilities in towns).

[35] The conclusions are based on analyses of survey data from the SLiCA database. The analyses are not yet published.

[36] The conclusions are based on analyses of survey data from the SLiCA database. The analyses have not yet been published.

**Table 32.8** Variables significantly contributing to explaining 'satisfaction with life in this community'**

| *Explanatory factors**** | Northern Canada | Greenland | Chukotka | Northern Alaska | Northern Norway | Northern Sweden | Kola Peninsula |
|---|---|---|---|---|---|---|---|
| ***Satisfaction with:*** | | | | | | | |
| standard of living | * | | x | x | x | * | x |
| healthy environment | | | | x | | x | |
| degree of influence indigenous people have on the management of natural resources like oil, gas and minerals | * | x | x | | | | |
| influence indigenous people have to reduce environmental problems in your area | * | x | x | | | * | |
| quality of education in your community | * | x | | x | | | |
| opportunities to hunt and fish | * | x | x | x | | | |
| quality of health services in your community | * | | x | x | | x | |
| recreational facilities in your community | * | x | x | | x | | x |
| cost of living in your community | * | x | | | x | * | x |
| availability of goods in local stores | * | x | | x | x | | |
| transportation to and from your community | * | x | x | x | x | x | x |

Source: www.arcticlivingconditions.org, SLiCA Results and SLiCA database
The following independent variables did not significantly explain the dependent variable: satisfaction with: 'quality of housing'; 'household income'; 'satisfaction with job'; 'satisfaction with courts'; 'personal health'; and 'satisfaction with you sex life' (this variable was only included in the Greenlandic questionnaire)
*Data not available
**Regression models were developed for all regions/countries including a number of independent variables (Greenland: 23 independent variables; Sweden: 17 and the other regions/countries (except Canada): 22 independent variables) to test whether they contributed significantly to the explanation of variation in 'satisfaction with life in this community'
***Six independent variables were included in only one regional/country regression model: satisfaction with: 'amount of fish and game available locally'; 'management of fish and game'; 'job opportunities in your community'; 'combination of productive activities'; 'how well the national government is dealing with needs in your community'; 'public safety'

## Quality of Life in This Community – Some Explanatory Factors

As the question about 'quality of life in this community' was asked in all survey regions it is possible to look at differences in what is important in the different regions.[37] Through regression analysis, the explanatory power of satisfaction with different aspects of respondents' life in community, livelihoods and living conditions were tested in relation to quality of life in the community. The overall results are included in Table 32.8.

Satisfaction with transportation to and from community was important in explaining satisfaction with life in community in all regions/countries. Satisfaction with standard of living as well as satisfaction with recreational facilities was important in explaining satisfaction with life in this community in four regions/countries.

Four independent variables: 'opportunities to hunt and fish', 'quality of health services', 'cost of living' and 'availability of goods in

[37] The question about quality of life in this community was also asked in Canada, but as the Canadian data (gathered und the act of Statistics Canada) are archived at Statistics Canada, it has not been possible to include Canadian test results on this topic.

local stores' significantly contributed to the explanation of satisfaction with life in this community in at least three regions/countries. Finally, 'quality of education', as well as three independent variables related to the local environment and influence on the environment and local resource use have significant power to explain satisfaction with life in community in Inuit settlement regions.

## Concluding Remarks

The Arctic has been homeland for a number of indigenous peoples for thousands of years. They survived only because they were able to adapt to harsh weather conditions, climate change and to variations in migration patterns of the wild life that was the precondition to sustaining life 'on the margin'.

For centuries, the Arctic has also been the destination for explorers, colonizers, traders and missionaries, as well as whalers and fishermen who went for the abundance of living resources in the polar waters. During the twentieth century, the Arctic attracted further settlers (not least in the Russian Arctic). Today, the increased access due to global warming, and the status of the circumpolar North as a reservoir of oil, gas and mineral resources and in consequence, the increasing strategic importance, has singled out the Arctic as 'a hot spot'.

Major changes of context and shifts in national strategies impact livelihoods and living conditions and thus subjective wellbeing and quality of life of both indigenous peoples and other Arctic residents. The changes definitely affect the environment and the possibility of continuing a mode of production characterized by a mix of traditional and market activities. The changes also challenge sustainable human development, including environmental, economic and socio-cultural elements. Furthermore local, regional, national and international ways of governing are challenged. Devolution has been one response, with the establishment of different home rule and self-governance arrangements and another response has been the development of regional fora like the Arctic Council and the Barents Euro-Arctic Council.

The assessment of human development and how people perceive the massive changes is important both as a documentation of impacts of change and for others to learn from; potentially, studies of small communities – via socially insightful 'scaling' – can inform and inspire larger communities.

SLiCA is based on international and interdisciplinary collaboration between a diverse group of Arctic social scientists and indigenous experts in regional, national and international partnerships – including international indigenous peoples' organizations, the Arctic Council and a number of funding institutions and international quality of life experts. What particularly made SLiCA unique were the partnerships with the indigenous peoples and the impacts of these partnerships in all phases of the project.

The Survey of Living Conditions in the Arctic can be seen as a small contribution to such documentation, a base line study of living conditions and quality of life for some of the indigenous peoples of the Arctic.

The point of departure for the study was a curiosity about reasons for indigenous residents remaining in remote areas with documented lower living standards (e.g. poorer housing facilities, unemployment and lower cash incomes) instead of moving to places with higher living standards. The research question following can be answered briefly: 'there are other reasons for staying in remote communities, and thus other contributing factors to quality of life than what can be measured in money terms'. It has to be mentioned though, that some 'stayers' do not move because of obstacles to moving.

Some of the main results of the study comparing Inuit, Saami and the indigenous peoples of Chukotka and the Kola Peninsula are that

- despite huge differences, the indigenous peoples included in the SLiCA survey share and agree on a number of *identity markers* such as speaking the indigenous language, eating traditional food and their connectedness to nature.

- *subsistence harvesting* (hunting, fishing, herding, gathering) is important, not only for nutritional and economic reasons, but also for social and cultural reasons.
- the indigenous peoples also identify common *problems in their community*: unemployment, suicide, domestic violence and alcohol abuse are problems that indigenous people in all regions identify.
- there are huge differences between regions and within regions when it comes to *income, income distribution and other living standard indicators*. Incomes are generally lower in Chukotka and the Kola Peninsula than in the rest of the regions/countries. This result is reflected in a larger degree of dissatisfaction with income and larger problems 'making ends meet' among the indigenous people in the two Russian survey regions.
- *self-perceived health* is rated low in Chukotka, not only relative to other regions and countries but also in absolute terms, as more than half perceive personal health as poor or fair.
- *closeness to nature* encompasses a number of activities, perceptions and attitudes and, no matter the focus, the relation to nature (subsistence activities, perceptions of and closeness to nature) is important to identity and subjective wellbeing.
- *cultural continuity*: the results not only substantiate the assumption that traditional values mean something to most indigenous residents in the survey regions but also that the identity markers that almost all identify as important are related to the cultural background, for instance, 'speaking the indigenous language', 'eating traditional food' and 'relation to nature'.
- *control of destiny/fate*: in all regions, indigenous residents find that politics is important to their lives, but they generally question the influence they have. Most regions/countries seem to agree on the perceived importance of government decisions and election turnouts, with Greenland as an exception. Most indigenous people find that they have little influence on the local environment and on development of renewable and non-renewable resources. Alaska is an exception here.
- *satisfaction with quality of life a whole* was only asked in Greenland, Alaska and Sweden.
  - More than nine out of ten Inuit reported that they were somewhat or very satisfied with their life as a whole. Younger indigenous people were especially dissatisfied with quality of life. This is the same age group that experiences the highest number with suicide ideations.
  - Generally, satisfaction with 'standard of living', 'personal health', 'opportunities to hunt and fish' and 'combination of productive activities' are the variables that explain the larger part of 'satisfaction with quality of life as a whole'.
- *satisfaction with quality of life in this community*: despite the shared perceptions of social problems, a majority of indigenous people in the survey regions are somewhat or very satisfied with quality of life in their community: more than eight out of ten in northern Canada and northern Alaska and among Saami in northern Norway and Sweden, and almost seven out of ten Greenlanders are satisfied. The indigenous people of Chukotka and the Kola Peninsula constitute an exception as less than two out of ten are satisfied with quality of life in community.
  - A more detailed analysis indicates that satisfaction with 'transportation to and from community', with 'standard of living' and with 'recreational facilities' are important factors in explaining 'satisfaction with life in this community' in all/most regions/countries.
  - Furthermore, 'opportunities to hunt and fish', 'quality of health services', 'cost of living' and 'availability of goods in local stores' significantly contribute to the explanation of satisfaction with life in this community in several regions/countries.

The increased focus on the Arctic and the rapidly changing livelihoods and living conditions in the circumpolar regions have identified

gaps of knowledge in most spheres related to human development. Consequently, there is a growing need to develop consistent, coherent and comparative statistics, and a battery of social indicators needs to be established. Monitoring and assessing important conditions for and aspects of human development is not possible without solidly founded data and time series. Understanding people's perceptions of change and the impacts of change – including changing policies – on living conditions, subjective wellbeing and quality of life demands surveys focusing on exactly these questions.

Measuring living conditions and quality of life among Inuit and Saami, the SLiCA project constitutes a baseline and a starting point for a developing a study of the wellbeing and quality of life of Arctic indigenous peoples. This starting point might be developed geographically and expanded to include the non-indigenous Arctic residents. Furthermore – to make measuring quality of life in the Arctic more economically feasible – a smaller questionnaire could be used to measure changes in quality of life over time and thus be a vital and important supplement to the development of social indicators to assess human development in the circumpolar region.

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The data, tables and graphs in this chapter all originate from the SLiCA database constructed and developed by Jack and Marg Kruse.

## Annexes

### Annex 1: SLiCA Sample Summary

**Table 32.9** Sample summary including details about interview periods and population sizes

| SLiCA: population[a], sample[a] and respondents[a] | | | | | | |
|---|---|---|---|---|---|---|
| Inuit settlement region | Indigenous peoples in the survey | Period of interviewing | Total number of adults in population | Sample size (N)[a] | Response rate | Respondents (n) |
| **Northern Alaska** | Iñupiat; Yupiit | 2002–2003 | 11,000 | 700 | 84 % | 650 |
| **Chukotka** | Inuit; Chuckchi; Evan; Chuvan; Yukagir | 2005–2006 | 14,000 | 600 | 85 % | 500 |
| **Canada** | Inuit | 2001 | 22,000 | 5,650 | 83 % | 4,700 |
| **Greenland** | Inuit | 2004–2006 | 36,000 | 1,450[b] | 83 % | 1,050 |
| **Inuit homelands/ regions/countries** | | | 83,000 | 8,400 | 83 % | 6,900 |
| **Sweden** | Saami | 2006–2008 | | | | 200 |
| **Norway** | Saami | 2006–2008 | | 800 | 56 % | 450 |
| **Kola Peninsula** | Saami | 2006–2008 | 1,500 | | | 300 |
| **Sapmî** | | | 50,000[c] | | | 950 |

Source: www.arcticlivingconditions.org, Poppel (2014b) and AMAP (1998).

Note:

[a]Rounded (to nearest '50'/'100').

[b]In Greenland also the non-indigenous population was part the survey. In this article only the Inuit (the Greenlanders) are part of the analysis.

[c]Estimate for Nordic Saami (incl. Finland - excl. Kola Peninsula) (AMAP, 1998).

## Annex 2

**Table 32.10** SLiCA indicators within the six domains adapted to the Arctic context

| Domain | SLiCA indicators |
|---|---|
| **Health and Population** | Self-rated health |
| | Satisfaction with life as a whole in this community |
| | Satisfaction with quality of life in this community |
| | Satisfaction with life as a whole |
| **Material wellbeing** | Household income (from the main sources of both the formal and the informal economy) |
| | Relative poverty |
| | Absolute poverty |
| | Ability to make ends meet |
| | Satisfaction with household economy |
| | Satisfaction with standard of living |
| | Satisfaction with jobs |
| | Satisfaction with job opportunities |
| **Education** | Level of education |
| | Traditional skills: learned in/improved since childhood/still use |
| | Still use traditional skills today |
| | Satisfaction with different conditions/ circumstances related to education |
| **Cultural continuity and cultural vitality** | **Identity markers:** |
| | Activities and customs important or very important to maintaining indigenous identity |
| | Language retention (self-reported): |
| | Language ability |
| | Language use |
| | Participation in cultural activities; |
| | Satisfaction with local support of different cultural activities and values |
| | Religious beliefs (both traditional Inuit and Saami and Christian beliefs) |
| | Sense of belonging (reflected in several questions e.g. about thoughts within last five years of moving away from the town/settlement, where respondent live) |
| **Contact with nature** | Consumption of local food |
| | Harvest of local food (proportion of meat and fish harvested by household) |
| | Participation in subsistence activities |
| | Satisfaction with availability of fish and wildlife |
| **Fate control** | Political participation; political influence; knowledge about politics; language retention |
| | Satisfaction with influence on specific matters like renewable resources |
| | Power and political activism |
| | Satisfaction with influence indigenous people have on management of natural resources like fish and game |
| | Satisfaction with influence indigenous people have on management of natural resources like oil, gas and minerals |
| | Language retention (commented above - see 'cultural wellbeing') |

Source: Poppel (2014a)

## References


ACIA, Arctic Climate Impact Assessment. (2005). Cambridge University Press.

AHDR, Arctic Human Development Report. (2004). Akureyri: Stefansson Arctic Institute.

Allardt, E. (1975). *Att Ha, Att Älske, Att Väre*. Lund: Om välfærd i Norden.

AMAP. (1998). *AMAP Assessment Report: Arctic Pollution Issues*. Oslo: Arctic Monitoring and Assessment Programme (AMAP).

AMAP. (2007) *Arctic oil and gas*. Oslo: Arctic Monitoring and Assessment Programme (AMAP), Xiii + 40 pp.

AMAP. (2011). *Snow, Water, Ice and Permafrost in the Arctic (SWIPA): Climate change and the cryosphere*. Oslo: Arctic Monitoring and Assessment Programme (AMAP).

ANCSA, Alaska Native Claims Settlement Act (1971). Pub. L. No 92203, 85 Stat. 688.

Andersen, T. (2004). *Living conditions research in the Arctic. How to measure living conditions and individual well-being among Inuit and Sami in the Arctic*. (Preliminary version circulated to the Arctic Council Ministerial in Reykjavik, November 2004 and to the Nordic Council of Minister meeting in Narsaq, August 2005).

Andersen, T., & Poppel, B. (2002). Living conditions in the Arctic. In M. R. Hagerty, J. Vogel, & V. Møller,V. (Eds.), *Assessing quality of life and living conditions to guide national policy. The state of the art* (Social indicators research series, Vol. 11). Dordrecht/Boston/London: Kluwer Academic Publishers. (Reprinted from: Social indicator research, Vol. 58, pp. 191–216, 2002).

ANILCA, Alaska National Interests Land Conservation Act (1980). Pub. L. No 96–497, 94 Stat. 2371.

Arctic Council (2013). Arctic Resilience Interim Report 2013. Stockholm Environment Institute and Stockholm Resilience Centre, Stockholm.

Broderstad, A. R., Eliassen, B.-M., & Melhus, M. (2013). Prevalence of self-reported suicidal thoughts in SLiCA. The Survey of Living Conditions in the Arctic (SLiCA). In: *Global Health Action, 4*, 10226. doi:10.3402/gha.v4i0.10226

Crate, S. A., Forbes, B. C., King, L., & Kruse, J. (2010). Contact with nature. In J. N. Larsen, P. Schweitzer, & G. Fondahl (Eds.), *Arctic social indicators – A follow up to the Arctic Human Development Report* (TemaNord: 521). Copenhagen: Nordic Council of Ministers.

Dahl, J., Fondahl, G., Petrov, A., & Fjellheim, R. S. (2010). Fate control. In J. N. Larsen, P. Schweitzer, & G. Fondahl (Eds.), *Arctic social indicators – A follow up to the Arctic Human Development Report* (TemaNord: 521). Copenhagen: Nordic Council of Ministers.

Declaration from the First Sami Parliamentarian Conference Jokkmokk, 24 February 2005, http://www.sametinget.se/1433. Accessed 28 October 2013.

DeSalvo, K. B., Bloser, N., Reynolds, J., He, J., & Muntner, P. (2006). Mortality prediction with a single general self-rated health question: A meta-analysis. *Journal of General Medicine, 21*, 267–275.

Duhaime, G. (2004). Economic systems. In *AHDR (Arctic Human Development Report)*. Akureyri: Stefansson Arctic Institute.

Duhaime, G., & Caron, A. (2006). The economy of the circumpolar Arctic. In S. Glomsrød & I. Aslaksen (Eds.), *The economy of the north*. Oslo: Statistics Norway.

Duhaime, G., & Caron, A. (2008). Economic and social conditions of Arctic regions. In S. Glomsrød & I. Aslaksen (Eds.), *The economy of the north 2008*. Oslo: Statistics Norway.

Eliassen, B. M., Melhus, M., Kruse, J., Poppel, B., & Broderstad, A. R. (2012). Design and methods in a survey of living conditions in the Arctic – The SLiCA study. *International Journal of Circumpolar Health, 71,* 17229. doi:10.3402/IJCH.v71i0.17229

Forbes, B. C. (2005). Impacts of energy development in Polar regions. In C. J. Cleveland (Ed.), *Encyclopedia of energy* (pp. 93–105). San Diego: Academic.

Fægteborg, M. (2013). *Råstofaktiviteter i Grønland. En historisk introduktion til efterforskning, udnyttelse og følger i en sårbar natur og et samfund i forvandling* [Mineral activities in Greenland. A historical introduction to exploration, exploitation and impacts in a vulnarable natural environment and a society undergoing transformation]. Nuuk/Copenhagen: Inuit Circumpolar Council (ICC)/World Wildlife Foundation (WWF). Downloadable from ICC: www.inuit.org – WWF: www.wwf.dk/arktis

Glomsrød, S., & Aslaksen, I. (Eds.). (2006). *The economy of the north*. Oslo: Statistics Norway.

Glomsrød, S., & Aslaksen, I. (Eds.). (2008). *The economy of the north 2008*. Oslo: Statistics Norway.

Hovelsrud, G. K., Poppel, B., van Oort, B., & Reist, J. D. (2011a). Arctic societies, cultures, and peoples in a changing cryosphere. *Ambio, 40*, 100–110.

Hovelsrud, G., Poppel, B., van Oort, B., & Reist, J. (2011b). Arctic societies, cultures and peoples in a changing cryosphere. In *Snow, Water, Ice and Permafrost in the Arctic (SWIPA)*. Oslo: Arctic Monitoring and Assessment Programme (AMAP), 39 pp.

Huntington, H. P. (1992). *Wildlife management and subsistence hunting in Alaska*. Seattle: University Press.

Inuit Circumpolar Council, ICC. (2009). *A circumpolar Inuit declaration on sovereignty in the Arctic*. http://inuit.org/fileadmin/user_upload/File/declarations/ICC_Sovereignty_Declaration_2009_pages.pdf. Accessed 28 Oct 2013.

Krupnik, I., Allison, I., Bell, R., Cutler, P., Hik, D., Lopez-Martinez, J., Rachold, V., & Sarukhanian, E. (Eds.). (2011). *Understanding earth's polar challenges: International polar year 2007–2008*. Edmonton: Canadian Circumpolar Institute.

Kruse, J. (2010). Sustainability from a local point of view: Alaska's North Slope and oil development.

In: G. Winther (Ed.), *The political economy of northern regional development – Yearbook 2008* (TemaNord 2010:521, pp. 55–72). Copenhagen: Nordic Council of Ministers.

Kruse, J., Poppel, B., Abryutina, L., Duhaime, G., Martin, S., Poppel, M., Kruse, M., Ward, E., Cochran, P., & Hanna, V. (2008). Survey of living conditions in the Arctic, SLiCA. In V. Møller, D. Huschka, & A. C. Michalos (Eds.), *Barometers of quality of life around the globe. Springer social indicators research series* (pp. 107–134). Dordrecht: Springer.

Larsen, J. N., Schweitzer, P., & Fondahl, G. (Eds.). (2010). *Arctic social indicators – A follow up to the Arctic Human Development Report* (TemaNord: 521). Copenhagen: Nordic Council of Ministers.

Larsen, J. N., Schweitzer, P., & Fondahl, G. (Eds.). (2014). *Arctic social indicators II – A follow up to the Arctic Human Development Report* (TemaNord: xxx). Copenhagen: Nordic Council of Ministers.

Marquardt, O. (2005). Opkomsten af en grønlandsk arbejderklasse. In A. V. Carlsen (Ed.), *Arbejdsmarkedet i Grønland* (pp. 176–188). Nuuk: Ilisimatusarfik.

McDougall, B. (1998, May 18–21). Draft proceedings report: Workshop on the proposed survey of living conditions in the Arctic, Slagelse, Denmark. http://www.arcticlivingconditions.org/

Nuttall, M., Burkes, F., Forbes, B. C., Kofinas, G., Vlasova, T., & Wenzel, G. (2005). Hunting, herding, fishing and gathering. In: *Arctic climate impact assessment* (pp. 649–690). *ACIA*. Cambridge: Cambridge University Press.

Osherenko, G., & Young, O. R. (2005). *The age of the Arctic: Hot conflicts and cold realities*. Cambridge: Cambridge University Press.

Poppel, B. (2006a). Interdependency of subsistence and market economies in the Arctic. In S. Glomsrød & I. Aslaksen (Eds.), *The economy of the north* (pp. 65–80). Oslo: Statistics Norway.

Poppel, B. (2006b). Den arktiske Levevilkårsundersøgelse, SLiCA – et komparativt og transnationalt projekt [The survey of living conditions in the Arctic, SLiCA – A comparative and transnational project]. In H. Petersen (Ed.), *Grønland i verdenssamfundet* (pp. 259–277). Nuuk: Atuagkat/Ilisimatusarfik.

Poppel, B . (2010). Some data sources on people, peoples, communities, regions and human activities in Greenland. In: G. Winther (Ed.), *The Political economy of northern regional development – Yearbook 2008* (TemaNord, pp. 254–282). Copenhagen: Nordic Council of Ministers.

Poppel, B. (2014a). Inuit Nunaat – The Inuit World: Measuring living conditions & individual well being – monitoring human development using the Survey of Living Conditions in the Arctic (SLiCA) to augment ASI for the Inuit World. In: *Arctic Social Indicators II*. Copenhagen: Nordic Council of Ministers.

Poppel, B. (2014b). Survey of living in the Arctic, SLiCA. In: A. C. Michalos (Ed.), *Encyclopedia of quality of life research* (pp. 5993–6003). Dordrecht: Springer.

Poppel, B., & Kruse, J. (2009). The importance of a mixed cash- and harvest herding based economy to living in the Arctic – An analysis based on Survey of Living Conditions in the Arctic (SLiCA). In V. Møller & D. Huschka (Eds.), *Quality of life in the new millennium: Advances in quality-of-life studies, theory and research. Social indicators research series* (pp. 27–42). Dordrecht: Springer.

Poppel, B., Kruse, J., Duhaime, G., & Abryutina, L. (2007). *Survey of living conditions in the Arctic: SLiCA results*. Anchorage: Institute of Social and Economic Research, University of Alaska Anchorage. http://www.arcticlivingconditions.org/. 666 pp.

Poppel, B., Kruse, J., Broderstad, A. R., Eliassen, B.-M. Jensen, C., Martin, S., Melhus, M., Olsvig S., & Westin, C. (Eds.). (2011). *Arctic living conditions. Survey of living conditions in the Arctic SLiCA*. Major SLiCA findings presented to the Arctic Council Ministerial meeting, 6 pp. Nuuk.

Rasmussen, R. O. (Ed.). (2011). *Analyzing megatrends* (TemaNord 2011:529). Copenhagen: Nordic Council of Ministers.

Rautio, A., Poppel, B., & Young, K. (2014). Human health and well-being. In: *Arctic human development II*. Copenhagen: Nordic Council of Ministers.

Russian Association of Indigenous Peoples of the North (RAIPON) (1990).

Schweitzer, P., Irlbacher Fox, S., Csonka, Y., & Kaplan, L. (2010). Cultural well-being and cultural vitality. In: J. N. Larsen, P. Schweitzer, & G. Fondahl (Eds.), *Arctic social indicators – A follow up to the Arctic Human Development Report* (TemaNord: 521). Copenhagen: Nordic Council of Ministers.

Sejersen, F. (2014). *Efterforskning og udnyttelse af råstoffer i Grønland i historisk perspektiv* [Exploration and explotation of mineral resources in Greenland in a historical perspective]. København/Ilisimatusarfik: University of Copenhagen/University of Greenland.

Smith, A. (Ed.). (2009, May 18–29). *Indigenous peoples and boarding schools: A comparative study*. Prepared for the Secretariat of the United Nations Permanent Forum on Indigenous Issues. Permanent Forum on Indigenous Issues Eighth session New York. http://www.un.org/esa/socdev/unpfii/documents/E_C_19_2009_crp1.pdf

Stammler, F., & Forbes, B. C. (2006). Oil and gas development in Western Siberia and Timian-Pechora. In M. Nuttall & K. Wessendorf (Eds.), *Indigenous affairs 2–3/06* (pp. 48–57). Copenhagen: IWGIA.

United Nations Declaration on the Rights of Indigenous Peoples. (2007). http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

Usher, P. J., Duhaime, G., & Searles, E. (2003). The household as an economic unit in Arctic Aboriginal Communities, and its measurement by means of a comprehensive survey. In *Social indicator research* (Vol. 61, pp. 175–203). Dordrecht/Boston/London: Kluwer Academic.

Wolfe, R., & Walker, R. (1987). Subsistence economies in Alaska: Productivity, geography, and development impacts. *Arctic Anthropology, 24*, 56–81.

Young, O. (1998). *Creating regimes: Arctic accords and international governance*. Ithaca, United States: Cornell University Press.

## Websites

http://ansipra.npolar.no/english/Index.html. Accessed 28 Oct 2013.
http://www.arcticportal.org/arctic-council#permanent-participants. Accessed 23 Feb 2014.
http://www.arcticportal.org/arctic-council. Accessed 28 Oct 2013.
http://www.sametinget.se/1433. Accessed 28 Oct 2013.
www.arctic-council.org. Accessed 28 Oct 2013.
www.arcticlivingconditions.org. Accessed 28 Oct 2013