

# COMMUNITY WELLBEING AND INFRASTRUCTURE IN THE ARCTIC

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WORKSHOP REPORT



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# 1. INTRODUCTION

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Arctic peoples are presently experiencing significant environmental, social, and economic impacts caused by changes in climate, resource use, and globalization. The Arctic is confronted by critical policy challenges related to issues of community health and wellbeing, energy resources, environmental protection, sustainable use of the Arctic Ocean, infrastructure, indigenous rights, and regional governance. To address some of the key challenges in relation to health and infrastructure and develop policy recommendations to promote community wellbeing in the Arctic, a full-day workshop on wellbeing in the Arctic communities was held in Nuuk, Greenland, on 3 October 2016.

A working group on health and infrastructure, associated with the Fulbright Arctic Initiative, initiated the workshop. The workshop was arranged in collaboration with NORDREGIO,<sup>1</sup> Stockholm, Sweden, AAU Arctic,<sup>2</sup> at Aalborg University, Denmark, and the Arctic Oil and Gas Research Centre,<sup>3</sup> at Ilisimat-sarfik (University of Greenland), with financial support from the Nordic-Arctic Collaboration Programme of the Nordic Council of Ministers.

In this report, we provide background and context for wellbeing in the Arctic, we then introduce the Fulbright Arctic Initiative (FAI) programme, and the health and infrastructure working group.

The workshop is the focus of the report and we describe the workshop organisation, share preliminary results, and conclusions. Finally we provide direction for future work.

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1 More information about NORDREGIO here: <http://www.nordregio.se/>

2 More information about the AAU Arctic here: <http://www.arctic.aau.dk/>

3 More information about the Arctic Oil and Gas Research Centre here: <http://uk.uni.gl/research/arctic-oil-and-gas-research-centre.aspx>

## 2. BACKGROUND AND CONTEXT

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### **2.1 Community wellbeing in the Arctic**

Community wellbeing in the Arctic is a concept that has been highlighted by many who live and work in the Arctic regions. Community wellbeing initiatives generally focus on disease models, health inequity, and health services, with greater emphasis on treating symptoms of illness, versus identifying root causes and promoting primary prevention through development of healthy, resilient communities. In order to explore perceptions around the determinants of community wellbeing, the working group conducted a scoping review and held a number of workshops.

There is a recognition that community wellbeing in Arctic regions is influenced by a multitude of factors that are also known to be determinants of health. In Arctic regions, these determinants include education, material resources, housing and associated infrastructure, mental wellbeing, early childhood development, social exclusion, personal security, traditions, culture and language, food security, climate change, environmental contaminant exposure, governance, and self-determination. The convergence and interactions of multiple stressors impact the health and wellbeing of Arctic communities and fuel social and economic inequities in the Arctic region. Although holistic and multi-sectoral approaches are seen as beneficial to community wellbeing, we lack interdisciplinary models for research collaboration across sectors and there is a need to develop an interdisciplinary research platform for policy formulation.

### **2.2 The Fulbright Arctic Initiative**

The Fulbright Arctic Initiative is a new, multidisciplinary, multinational, and team-based research programme, designed to meet the intersections of challenges that water, energy, health, and infrastructure pose for Arctic communities. The Initiative has been designed to have an immediate impact on understandings of these Arctic issues, within the timeframe of the U.S. Chairmanship of the Arctic Council (2015-2017). The Fulbright Arctic Initiative brings together leading scholars, policy-makers, government officials, indigenous peoples' representatives, and other stakeholders to identify critical Arctic issues, conduct

policy-relevant research, and share findings and recommendations as widely as possible.<sup>4</sup>

In support of the on-going need for policy-relevant research that aids the Arctic Council's mission, the U.S. Department of State's Bureau of Educational and Cultural Affairs announced the Fulbright Arctic Initiative (FAI), in the fall of 2014.<sup>5</sup> Operating outside the Arctic Council, the FAI was designed to support and complement the Council's need for innovative multidisciplinary and interdisciplinary research in thematic areas that were of interest both to the Council itself and to the U.S. Chairmanship programme.

Three working groups were established, on water, energy, and health and infrastructure, and bringing together 17 scholars from the eight Arctic countries.



*Photo 1. The Fulbright Arctic Scholars*

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4 The work of the Fulbright Arctic Initiative is further described in an article in the Arctic Yearbook, found here: [https://issuu.com/arcticportal/docs/ay2016\\_final](https://issuu.com/arcticportal/docs/ay2016_final)

5 Find more information about the Fulbright Arctic Initiative here: <http://www.cies.org/program/fulbright-arctic-initiative>

### **2.3 Health and infrastructure working group**

Building on the intersection of biology, ecology, engineering, spatial planning, and epidemiology, the health and infrastructure Working Group has focused on issues of sustainability, resiliency, and health policy in the Arctic region. The FAI Health and Infrastructure group is developing an integrated model of the socio-ecological interactions, relationships and outcomes that impact health and wellbeing in circumpolar countries. The overarching goal of the group is to explore how multidisciplinary approaches can enhance the understanding of community wellbeing in the Arctic.

The working group included the following members: Linda Chamberlain, who works with the Alaska Family Violence Prevention Project and at the University of Alaska in Anchorage, Alaska; Susan Chatwood, director of the Institute for Circumpolar Health Research and at the Dalla Lana School of Public Health, in Canada; Asli Tepecik Diş, a research fellow at Nordregio (Nordic Centre for Spatial Development), Sweden; Gwen Holdmann, director of the Alaska Center for Energy and Power, in Fairbanks, Alaska; Trevor Lantz, an Associate Professor in Environmental Studies, at the University of Victoria, Canada; Anne M. Hansen, a Professor at the Arctic Oil and Gas Research Centre, Greenland, and Associate Professor at the Danish Centre for Environmental Assessment, Denmark.

Findings from this collaboration are being shared through publications, conference presentations, and a collection of digital stories from across the Arctic, which feature lived experiences and emphasize the impacts of the determinants of health in Arctic communities.

The health and infrastructure working group work has been informed by a number of projects:

1. individual projects and field work, May 2015-Oct 2016;
2. group meetings and initial definition of scope of group work, in Iqaluit, Canada, May 2015;
3. seminar on determinants of wellbeing, in Dartmouth, USA, January 2016;
4. expert consultation and group work, in Oulu, Finland, February 2016;
5. scoping review of peer-reviewed and “grey” literature;
6. workshop in Nuuk, Greenland, October 2016;
7. final meetings and policy recommendations, in Washington, USA, October 2016.

In May 2015, the first FAI meeting was held, in Iqaluit, Canada, where the group met for one week. It was the first time the group had gathered and focus was placed on developing the initial scope for the group work.

A seminar at Dartmouth College was held in January 2016<sup>6</sup>. The seminar brought together additional experts and community perspectives on health care and delivery, infrastructure challenges, youth engagement, and traditional knowledge. The Dartmouth seminar was a consensus seminar featuring facilitated panel discussions by experts, breakout sessions, and non-traditional and holistic approaches, including a traditional Dene talking circle, to ground the academic discussion in the shared, first-hand experiences of community members and health care providers. The key determinants of community wellbeing that were identified included human capacity-building and local training, cultural connection, trauma, access to health care services, and self-determination.



*Photo 2. Talking circle, during seminar in Dartmouth,  
photo by Anne Merrild Hansen*

In February 2016, the FAI scholars were again gathered for meetings, this time in Oulu, Finland. During five days there, the health and infrastructure working group held joint seminars with Arctic Experts and explored shared challenges around community wellbeing in the Arctic. In the following months, individual projects and seminar activities refined the scope and focus of on going group initiatives.

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<sup>6</sup> <https://news.dartmouth.edu/news/2016/01/examining-health-and-well-being-ends-earth>



## 3. WORKSHOP

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The Community Wellbeing and Infrastructure in the Arctic workshop held in Nuuk, Greenland was initiated to build on the work to date and capture perspectives on community wellbeing in the Nordic regions. In this report, we describe the background of the workshop, objectives, process and highlight preliminary findings.

### 3.1 Organisation

The workshop, Community Wellbeing and Infrastructure in the Arctic, was held in conjunction with the Nunamed<sup>7</sup> conference, in Nuuk, Greenland, 1-3 October 2016. The workshop brought together a diverse group of researchers and practitioners from the Arctic countries, to discuss multidisciplinary frameworks and models that seek to advance health and wellbeing and to understand how the interactions between health and infrastructure are perceived in the Arctic. The goal of the workshop was to build on the findings of the first workshop, held at Dartmouth College, and integrate a Nordic Arctic perspective into the development of a conceptual model for understanding and designing ways to investigate and build resilience within social and ecological systems. The desired outcome was to enhance the scholarly activities of the Fulbright Arctic Initiative's Working Group on Health and Infrastructure, as described above.

### 3.2 Objectives

1. Highlight perspectives of community wellbeing in the Arctic (with emphasis on Nordic regions)
2. Identify determinants of community wellbeing

The purpose of the workshop was further to contribute to the understanding of:  
- relevant research frameworks and methods that support an interdisciplinary approach;

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<sup>7</sup> A health and medicine conference held in the Arctic Region; for more info visit: [www.nunamed.org](http://www.nunamed.org)

- strategies that facilitate the development of research programs and collaborations across health and infrastructure sectors;
- potential frameworks and partnerships, which can occur across sectors, to improve individual, family, and community health and wellbeing in the Arctic.

### **3.3 Methods**

The workshop involved stage setting with keynote talks and talks highlighting perspectives on community wellbeing, and findings of the health and infrastructure working group on key components of community wellbeing in the Arctic. Participants' perceptions on community wellbeing were then gathered through a written survey and compiled for discussion in group break out sessions.

**Perspectives on community wellbeing in the Arctic:** the workshop opened with keynote speeches by Tine Pars, Rector at Ilisimatusarfik; Gert Mulvad, the Greenland Centre for Health Research; May-Britt Öhman, UPPSAM, the Association for Sámi-related Research, in Uppsala; and Maria Pontes Ferreira, Fulbright Scholar, Brazil Scientific Mobility 2015.

**Introduction to the FAI and the group project:** following the keynote speeches, Aslı Tepecik Diş, Fulbright Scholar, gave a general introduction to the FAI, and individual scholars presented their projects and research. Then, Susan Chatwood, FAI scholar and spokesperson for the FAI Health and Infrastructure Working Group, presented the group project and the output from the Dartmouth College seminar.

**Engaging the participants:** the participants in the workshop were invited to identify main determinants for health and infrastructure, as well as similarities and differences concerning those determinants in all circumpolar regions. Each workshop participant received note paper listing examples of determinants, and was asked to fill in any additional determinants that they found relevant for community health and wellbeing in the Arctic.

The individual lists of determinants were collected and summarised in joint lists, which were then distributed to the participants, who were now divided into three groups. Each group was asked to discuss which determinants they found to be particularly important, as well as the prerequisites for enhancement of these, and identify their potential as a focus for interdisciplinary research and actions. At the end of the day, the best ideas were presented and discussed in the plenary session.

### **3.4 Findings**

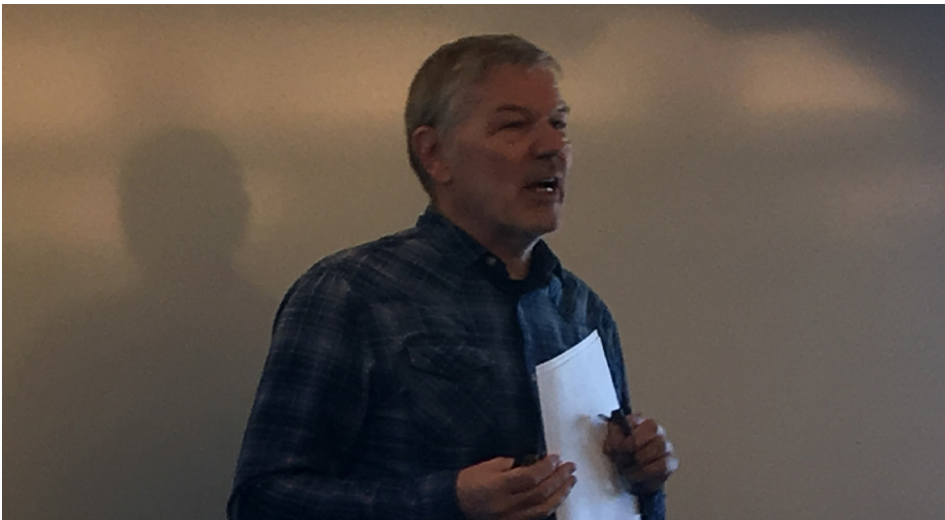
The findings are reported in three sections: main messages from the keynote presentations, survey findings and information shared in the break out groups.

#### **3.4.1 Key note presentations**

Dr. Gert Mulvad opened the workshop with a keynote address on the importance of family and family relations in Arctic communities. Drawing upon experiences from his own life in Greenland, as a professional medical doctor and researcher, he emphasized how learning takes place in all the social fields you engage in and that since the people of the Arctic are so few, we are morally obliged to obtain and pass on our knowledge.

Gert Mulvad's experience is that there is a tendency to focus on the individual in the health system, while there is a need to recognise that the health of a single child requires the focus and treatment of the whole family. He highlighted one recommendation, namely that Arctic people should collect, prepare, and eat food together in order to promote health in family life.

Gert Mulvad also discussed how important it is to implement key messages from research and from his professional experience as a physician. He explained that passing on knowledge is important, and that we are obliged to capture and share the good experiences.



*Photo 3. Dr. Gert Mulvad during his presentation at the workshop in Nuuk, photo by Anne Merrild Hansen*

The hardest part, Gert Mulvad has found, in the practice of relation improvement, is exactly the challenge of implementation of new knowledge in practice. He mentioned that the rapid turnover in staff in the health sector in Greenland is a challenge in this regard. He suggested that we should perhaps “aim lower,” by targeting health care delivery practitioners in the decision-making process that is part of the implementation of improved practises; key staff who are permanent residents in the local area can thereby be subjected to competence-building.

The following speaker, Dr. Tine Pars, Rector of Ilisimatusarfik, the University of Greenland, welcomed the workshop participants to Nuuk, and talked about the need to integrate health and wellbeing as a theme that is brought into all sectors and disciplines.



*Photo 4. Rector Tine Pars during her presentation at the workshop in Nuuk, photo by Anne Merrild Hansen*

Tine Pars noted that mental health is a topic of particular importance in engaging the attention of students. She also emphasized that mental health promotion contributes to reducing the number of university dropouts, which has had significant positive impact on Greenland in general and communities in particular. Rector Pars’ welcome was followed by a presentation by Dr. May Britt Öhman, delivered via Skype. She talked about her project, “taming exotic beauties,” and about Sami frustrations with decision-making processes in the implementation of renewable energy technology.



*Photo 5. Dr. Öhman (retrieved from the Internet<sup>8</sup>)*

Dr. Öhman emphasized that at the same time that we tend to focus on identifying problems; we also need to bring together different competences in research. We need to conduct research and scientific assessments in close dialogue with the people who are potentially identified, in order to find and promote sustainable solutions that support a good quality of life and, thereby, health and wellbeing she stated. An important point that she further noted was that Indigenous peoples, Sámi in her particular case, should be better represented in research. In being researchers, professors, scholars ourselves. “We are very few Sámi scholars, at least scholars who are open with our Sámi identity” she explained. For those that wish to help improve the life of Indigenous peoples, supporting in this is part of doing the work as an allied she finds. “Indigenous peoples are tired of being studied by others all the time, for free, for scholars doing their own thing, for their own career”. The field of Indigenous Studies – where the basic condition is that a lot of the scholars are Indigenous themselves is growing. Scandinavia is lagging behind, in regard to the US, Canada, New Zealand and Australia Dr. Öhman emphasized and raised the question: How come?

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<sup>8</sup> Picture retrieved here: <http://sverigesradio.se/sida/artikel.aspx?programid=2327&artikel=5865577>



*Photo 6. Dr. Ferreira (retrieved from the Internet<sup>9</sup>)*

The ensuing address, by Dr. Maria Pontes Ferreira, presented the results of a project working with cultural content in education, funded by the American Association for the Advancement of Science (AAAS).<sup>10</sup> She discussed the need, and methods, for engaging indigenous/traditional knowledge holders (i.e., Elders) in training programs, and for combining ethno-medicine and more classical medical training, to support local capacity-building, competences, and wellbeing.

### **3.4.2 Participant survey**

As a way of benefitting from the rich experience and knowledge held by the workshop's participants, a survey of the relevant determinants of wellbeing in the Arctic was conducted. Notepaper with prearranged headings, and room for their additions, was provided. Twenty-one such response sheets were collected. In the following (see Table 1), we present the determinants according to the same headlines already present on the notepaper as well as those added by the participants.

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9 Picture retrieved here: <http://www.pubfacts.com/author/Maria+del+Rosario+Rico+Ferreira>

10 More information about the project can be found at: [www.aaas.org/page/dr-maria-pontes-ferreira](http://www.aaas.org/page/dr-maria-pontes-ferreira).

Social Environment	Built Environment	Natural Environment	Culture and Traditions	Education and Language	Business and Innovation
Level of self-determination	Housing and urban planning	Access to fresh water	Self-determination and influence on decision-making	E-learning	Pride in innovation
Community values	Recreational infrastructure	Valuing landscapes and access to land		History and culture in education system	Public private partnerships
Work and mobility	Internet access	Possibility of hunting, fishing, and collecting fresh and non-contaminated foods	Hunting, fishing, collecting, and preparing foods	Local education opportunities	Sustainable growth
Standard of living	Water, sewage and waste management		Recognition of history	Language	Return of educated youth to impact local community
Family relations	Transport options	Access to fresh and clean air	Traditions and traditional activities	Education options and equity	
Health care	Food security	Responsiveness to reactions to climate change		Educating communities	Job opportunities
	Health systems		Local (indigenous) values promoted	Trans-national E-learning	Local entrepreneurs
	Energy supply				
	Exercise units				

Table 1: Overview of determinants identified by workshop participants, grouped under topic headlines

Many overlaps were identified. For example, education is also about:

1. the built environment (in the design of schools);
2. the social environment, that is, the family provides support and structures for going to school and doing homework, and the absence of abuse and having piece of mind are essential; and
3. the natural environment, proximity to homeland/community.

As one respondent noted on the response sheet: *“The determinants of environment and tradition are interconnected. They cannot be separated.”* The findings in the surveys are further elaborated in Appendix A.

### **3.4.3 Break out groups**

Twenty-two persons, from Greenland, Alaska and other parts of the USA, Canada (including Nunavut and the Northwest Territories), Sweden, Norway, Iceland, and Finland, participated in the workshop. For the purposes of the workshop, the participants were organised into three groups. Each group was encouraged to discuss and prioritize the determinants that had been identified during the morning session and which they found were particularly significant.

#### **Group One**

The discussion in Group One centred on the topic of housing and healthy living, adapted to local needs and culture. The group emphasized that good-quality housing means healthy living and healthy lifestyle, with the added qualification that the housing in the community provides for a multi-generational lifestyle. Traditionally, many indigenous community members were raised in a setting of multi-generational housing, with relatives close by; taking into account traditional ways of living and culture, regardless of the dominant country in question, should be an important part of the planning process for housing and infrastructure.





*Photo 7, Group One, photo by Anne Merrild Hansen*

The concept of public housing meant very different things according to the country of origin of the workshop participants. In some countries, public housing generally has a stigma attached to it (this refers to the assumption that you are poor and that you do not care about the housing, since you are not its owner). The concept of housing is thus very context dependent. It was mentioned that it is very important to create venues such as this workshop, so as to be able to learn from each other and take new knowledge home, to share it with the community leaders in each Arctic country, and to create awareness about the problems and potential solutions that also were part of life in neighbouring regions.

### **Group Two**

Group Two discussed a broad variety of determinants, but also touched upon the role of research and science in relation to the promotion of local sustainable development in Arctic communities. It was emphasized that research is not only about the product, but about processes for getting there. The group discussed how important it is that researchers are aware of their orientation, and of how the outcomes will be different for different groups, just as the outcomes of research will influence a researcher's own opportunities, and can either benefit or damage their further careers. It was also mentioned that research moves slowly, while industry moves rapidly.

The interconnectedness of determinants was also discussed, as well as topics related to landscape values and recreational activities. These were exemplified by an explanation of how access to land influences and enables individuals to make their own choices. It was pointed out that combinations of factors contribute to community wellbeing, when they coincide, in such areas as human resources, access to land, and work.

The topic of self-determination arose in different ways. The group discussed how people make active choices, in such a way that the same things are not necessarily important to all. In other words, people are able to make choices according to priorities. There was much discussion about the factors that cause people to leave or stay in a community, and about the potential for conflict between individual self-determination and community self-determination.



*Photo 8, Group Two, photo by Anne Merrild Hansen*

### **Group Three**

In Group Three, the discussions focused on the topic of information technology development and related opportunities in Arctic communities. Internet-based solutions can not only contribute to improved health care in the Arctic, but also to the more general perception of wellbeing. It was suggested that the establishment of infrastructure around Internet hubs or nests in communities could be used for education purposes, and in capacity-building in health systems through e-learning, as well as serving as a station for consultations.

Group Three also discussed how they have experienced that indigenous people in larger towns are sometimes forgotten by researchers, and become “invisible” in the general picture that results from studies and investigations. This indicates that the wellbeing of indigenous peoples in towns where they are minorities is a subject that needs further investigation.



The group also touched upon the need for addressing the differences between, and different needs in, different regions of the Arctic, not only geographically, such as in the European Arctic, the Russian Arctic, and the North American Arctic, but also in terms of cultures and values, and the differing wishes and wants of towns and smaller settlements, of indigenous and non-indigenous groups, and so on.

Demographic changes were also discussed, including the influence on Northerners' perception of what wellbeing entails. The group emphasized the need for further research in the influence that mobility has, in general, in a time when many smaller communities are experiencing the aging of their population. Research on issues of gender balance also influences wellbeing, and was something the group found to be an important determinant of health.

Another issue that was pointed out as having an important influence on health and wellbeing was discrimination, both inter-racial discrimination and discrimination in general, and not only between indigenous and non-indigenous groups and individuals, but between indigenous individuals, and even within the same groups (an example provided was discrimination against Greenlanders who do not speak Kalaallisut).

### **3.5 Summary and workshop conclusions**

The workshop helped reveal the perspectives of community wellbeing in a Nordic Arctic context and contributed to an understanding of the issues faced by Arctic communities in this region.

The participants in the workshop reached consensus on several key issues which are elaborated below. The three separate break out groups selected representatives to present their summary conclusions at the end of the workshop. This section summarizes the conclusions of the groups and the key note presentations and the overall discussions during the workshop.

A central theme that emerged during the workshop, in the key note presentations, in the surveys and in the group discussions of the thematically organized groups during break out sessions, are the importance of the local values and tacit knowledge and their promotion as well as ensuring their continuity, culturally sensitive development strategies, keeping the educated youth local and strengthening the local capacity building. There was a consensus among the participants that it is the “value of locality (i.e. language, traditions, ties to the family, inter-generational focus in the design of built environment, bridging the traditional knowledge with the conventional development)” that can improve the quality of life in this region, through the co-decision-making processes and through the understanding of and eliminating the root causes of problems under health and wellbeing of Arctic communities.

The following conclusions were elaborated based on the discussions with the workshop participants:

1. Determinants of community wellbeing in Nordic Arctic regions were identified to cross a broad spectrum of spheres; including social, built and natural environment, culture and traditions, education and language, business and innovation. Policy actions need to be taken to meet the local needs in all these different spheres
2. Growth strategies should be inclusive, culturally appropriate and tailored to meet the community needs in a broader sense by considering all the six different spheres mentioned above
3. There is a need for recognizing the problems with the loss of local knowledge, relationship to families and relatives as well as to whole the community. It is important to have a holistic perspective on community wellbeing and address complex challenges such as mental health
4. The role of education in understanding the cultural values and maintaining them in a sustainable fashion is utmost importance for local capacity building and thus the educational opportunities should support a variety of learning needs and ways of producing knowledge
5. By drawing from the perspectives of multidisciplinary research teams, traditional and academic knowledge bases; more holistic definitions and connotations of wellbeing in Arctic communities need to be developed
6. Providing new avenues for collaborative research among academia, indigenous knowledge holders, and non-governmental and governmental entities, to link infrastructure and related planning challenges with community wellbeing; and expanding an evidence base for public and health policy within circumpolar nations.

## 4. FOLLOW UP AND FUTURE WORK

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To support a high quality of life and strengthen the health and wellbeing of Arctic communities, we conclude that models that capture perceptions of community wellbeing in the Arctic context are needed. These models need to be developed with participatory processes that recognize individual and governmental self-determination and enable a design that reflects priorities for community wellbeing that are culturally relevant. They should also provide on-going opportunities for multi-sector collaboration to address gaps between sectors, including, but not limited to, infrastructure, environmental health, public health, and education.

The findings of this workshop will be included as empirical data in the development of FAI's Health and Infrastructure Working Group of a holistic model to promote inter-sectorial collaboration.

This model will provide guidance for stakeholder collaborations, so that they meet key objectives of Arctic residents, including:

1. exploring more holistic definitions and connotations of wellbeing in Arctic communities, by drawing from the perspectives of multidisciplinary teams and traditional and academic knowledge bases;
2. providing new avenues for collaborative research among academic sectors, indigenous knowledge holders, and non-governmental and governmental entities, to link infrastructure challenges with wellbeing; and
3. expanding an evidence base for public and health policy within circumpolar nations.

# APPENDIX A

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## **Social Environment**

The social environment theme was found to include a number of subthemes, including self-determination, community values as well as work and mobility, standard of living, family, and health care services. These are briefly explained below.

*Self-determination* was an issue that many emphasized. Self-determination is understood as the possibility and capability to make and influence decisions regarding one's own situation and future, including livelihood and opportunities. In relation to self-determination, a number of issues were highlighted, such as being able to be in a community together with relatives, this in a time where young people, and particularly young women, are leaving the smaller communities to move into towns; the smaller settlements do not offer the same desired opportunities, for what they perceive as being prerequisites for community wellbeing, or "a good quality of life." One participant noted, "*Return of educated youth to impact local community.*"

*Indigenous representation* in the governing structures was another topic identified by many as important. This was indicated as indigenous representation in structures including governmental work, both in an ethnic, linguistic and cultural way.

*Family*: the topic of family members and family connections was also brought up. The participants noted the following social determinants of wellbeing in this regard:

1. close and regular communication with family members;
2. having good support from family and friends;
3. family/community healing/wellbeing;
4. family strengthening activities (investments in NGOs, infrastructure for youth centres);
5. role of grandparents (45-65Y);
6. awareness of what goes on in community/family;
7. parenting skills – Inuit (indigenous) way of parenting;
8. connectiveness/familial bonds as source of strength;

9. a place and space to for communication and resolution of conflict between family and friends;
10. supportive intergenerational relationships;
11. to be connected to others;and
12. upholding of traditions.

*Community values* referred to a number of determinants, including:

1. openness to diversity;
2. to be loved and share love;
3. to be inclusive;
4. to be kind;
5. the possibility to express cultural values; and
6. to be part of a community that upholds values and resilience to heal from trauma.

*Work and mobility* were identified with the following determinants:

1. moving to “the big city” (e.g., Copenhagen, Anchorage, Winnipeg) for work, leading to loneliness, marginalisation (in big cities, especially);
2. combination of economic activities;
3. humour in working relations;
4. better possibilities for women in rural regions to find work; and
5. having meaningful activities, such as employment.

*Standard of living* determinants included:

1. cost of living, affordable living (for flights, food, housing); and
2. co-operative housing.

*Health care* determinants included:

1. cultural training;
2. family services;
3. remote health;
4. support for mental health;
5. male involvement in reproductive health; and
6. parent involvement in reproductive health.

## **Built Environment**

The build environment theme was specified by the participants in the workshop as covering a number of subthemes: recreational infrastructure, Internet, water, sewage and waste systems, transport, food security, health systems, energy, and housing. These are briefly described in the following paragraphs.



*Recreational infrastructure* determinants included:

1. sport facilities/recreational infrastructure;
2. community centres/youth clubs, etc.;
3. nature trails;
4. creation of a built environment that promotes physical activity;
5. spaces for children to play in, playgrounds, play structures;
6. activity spaces for youth;
7. unprotected construction sites as unsafe environments where kids play;
8. shorefront values, such as sailing access, a view of the ocean;
9. opportunities for hunting/fishing (and were considered to be essential);
10. other possibilities for relaxing in nature; and
11. outdoor gym units for all ages.

*Internet-related* determinants include:

1. Internet infrastructure; and
2. access to the Internet.

*Water, sewage and waste management* determinants include:

1. presence of water/sewage systems;
2. infrastructure for managing waste; and
3. sanitation systems, sewage disposal facilities (i.e., avoiding dumping into the ocean off Greenland).

*Transport* determinants include:

1. the degree of access to transportation to and from communities.

*Food security* determinants include:

1. availability of goods in local stores;
2. opportunities for hunting and fishing; and
3. having access to local foods, and development of Arctic agriculture.

*Health systems-related* determinants include:

1. health and social services staffed by people who speak the local language and understand the culture;
2. hospitals and health centres that meet the needs of the community and emphasize wellbeing perspectives; and
3. the availability of medical services.

*Energy-related* determinants include:

1. quality of power supply;
2. green energy; and
3. degree of sustainable energy (e.g., solar panels, wind turbines).

*Housing and urban planning* determinants include:

1. availability of affordable housing (important for young families who want to stay);
2. housing that is designed for “the North” (i.e., large living rooms);
3. better housing;
4. single-family housing for nuclear families, but with kin close by;
5. community-directed housing options, such as culturally appropriate housing and housing structure;
6. the need for quality housing (multi-unit buildings, their pros and cons), including such questions as whether indoor plumbing options are available;
7. the form of the society, the state of the cityscape, whether it is planned and constructed with easy building access and visibility of nature;
8. urban planning that supports cultural values and helps people (especially newcomers) feel a relationship to environment and nature;
9. sustainable growth;
10. schools that are built to support a variety of learning needs and ways of knowing;
11. indigenous solutions; and
12. adaptation to rapid (climate) changes in the physical environment (land and water).

## **Natural Environment**

The Natural Environment theme was specified by the workshop participants as covering a number of subthemes especially relevant to the Arctic, including: access to fresh and home-grown foods, the valuing of landscapes and access to land, access to fresh and clean air, and responsiveness to and support for reactions to climate change. Each of the subthemes and the determinants mentioned by the participants are briefly described in the following.

*Access to fresh or home grown foods:*

1. to be able to eat traditional foods;
2. to be able to hunt, fish and gather food;
3. food security implies awareness that supply chains can be disrupted and produced locally;

4. fresh food supplies;
5. availability of country food;
6. farming possible up to 60°N;
7. possibilities for a hunter-gatherer-like diet; hunting and fishing are still considered to be vital Greenlandic traditions and sources of food and tradition;
8. Yukon Design “mini” greenhouse;
9. fresh water supply.

*Valuing landscapes and access to land:*

1. valuing landscapes;
2. natural environment and traditional environmental spaces are respected;
3. emphasizing the value of human activities in nature, given that they are sustainable;
4. allowing time for the men, women, and children in communities to engage with the environment;
5. safe, uncontained spaces (indoor and outdoor); and
6. access to the land, including a programme to take youth and elders out on the land.

Two of the subthemes, *Access to fresh and clean air*, and *Responsiveness to and support for reactions to climate change*, were noted as being especially important determinants of health in relation to the theme of Natural Environment.

### **Culture and Traditions**

The theme, culture and traditions, led to identification of determinants within its subthemes, self-determination, hunting, fishing and collecting food, history, traditions and traditional activities, and values. The subthemes are briefly described, along with the determinants identified by the participants, in the following.

*Self-determination and Influence on decision-making:*

1. being able to ensure co-management and involvement in decisions;
2. increasing the role of indigenous methods in solutions to problems;
3. influence on local traditional ways of life (e.g., when dDf and involvement in decision t and based on this uniqueness this dissertation
4. n dissemination at the Tuesday meetings.p graneveloping large-scale industries);
5. indigenous influence in the management of natural resources;
6. the feeling of nationalism, independence, or self-government;

7. bridging ideas of young people with those who are receiving education in traditions; and
8. the role of family elders.

*Hunting, fishing and collecting food:*

to be able to prepare and eat traditional foods;  
to harvest and share country food;  
access to subsistence food (hunting, fishing, berry-picking, etc.); and  
opportunities for hunting and fishing.

*History:*

1. presence of knowledge and a sense of history; and
2. the colonial history of the relation between Denmark and Greenland still affects ideas of what sovereignty is and will be.

*Traditions and traditional activities:*

1. the role of ceremonies;
2. to sew, build and create, to have the skills for doing those activities;
3. integration of native beliefs in dominant religion;
4. youth cultural activities;
5. learning by watching, having opportunities to participate in intergenerational communication activities; and
6. language.

*Values:*

1. respect for indigenous ways of knowing;
2. respect for diversity of cultures in the Arctic;
3. and cultural training for in-coming staff and cultural safety.

## **Education and Language**

Under the topic of Education and language the participants identified determinants related to e-learning, history and tradition, local education opportunities, language, work, and education options for individuals and for communities, as specified in the following.

*E-learning:*

1. e-learning and internet-based education; and
2. distance learning at post-secondary level between countries, e.g., between the University of Greenland and Nunavut communities.

*History, tradition and culture in education systems:*

1. utilizing local knowledge and industries in identifying relevant training programmes for youth who want to stay;
2. foundations of traditional ways of knowing and knowledge transmission;
3. to have a system that acknowledges the different types of knowledge-holders (teachers, Elders, one's own history and language);
4. knowledge of both indigenous and non-indigenous languages;
5. relationships with the land, animals, people, communities and spirit world;
6. integration of traditions and Western systems in education;
7. education about history of colonialism, residential schools, and right to self-determination in the North, especially for young students and other youth;
8. inclusion of Elders' knowledge;
9. to be able to study your own history and language;
10. addressing the issue of the history of a local indigenous group – if the group has a difficult past, do they admit it?;
11. valuing different ways of making a living; and
12. land-based education.

*Local education opportunities:*

1. higher education opportunities, but without having to move “south,” to cities;
2. to have your learning needs met;
3. exposing the reasons behind the high number of school dropouts; and
4. quality of education.

*Language:*

1. being able to use one's own language in all areas and milieus (e.g., in stores, in government, when playing sports, schooling);
2. the option of being able to use Greenlandic, at least to some extent, in everyday situations, such as your job, or social life; and
3. dealing with the question, Which language to use? Should the dialects of each community be prohibited? Should this be done for the benefit of promoting the use of a language that is common throughout a whole region?

*Work:*

1. the presence or absence of industry, job opportunities, capital;
2. the issue of wage economy as opposed to, or along with, traditional economy; and
3. workplace-friendly education.

*Education options and equality:*

1. opportunities for education, more than merely teaching skills for working in a mine, for example;
2. access to education for all;
3. equality of educational opportunities for gaining expertise in traditions as much as in Western academia, trades, and professions.

*Educating communities:*

How do researchers and communities work together? How can they teach each other? What are the different needs of research vs. industry?

**Business and Innovation:**

This theme was not listed in the materials provided to workshop participants, but it emerged and was identified as being a key consideration. In relation to it, a number of determinants of wellbeing were raised, including pride in innovation, the return of educated youth to communities (“reverse brain drain,” or “brain fill”) and using their knowledge to impact their home community, public private partnerships, and more. A number of subthemes, and their determinants, also emerged, and are briefly described in the following.

*Pride in innovation:*

1. to learn about and celebrate innovation across the North; and
2. exporting solutions from the North to the South – instead of vice versa.

*Using education to impact home community:*

1. return of educated youth to impact development in local community, e.g., returning as a teacher, or starting a business in health literacy.

*Public-private partnerships:*

1. in order to address all the needs of community health and wellbeing; and
2. presence of policy that channels action and meets community needs, while development occurs.

Other determinants that were noted, but only briefly mentioned, included: *Sustainable growth*, *Job opportunities*, and *Local entrepreneurship*.



