



Model Arctic Council

Background Guide

Sustainable Development Working Group
Human Health in the Arctic – 21st Century Challenge



United Nations Association in Canada
Association canadienne pour les Nations Unies

Sustainable Development Working Group

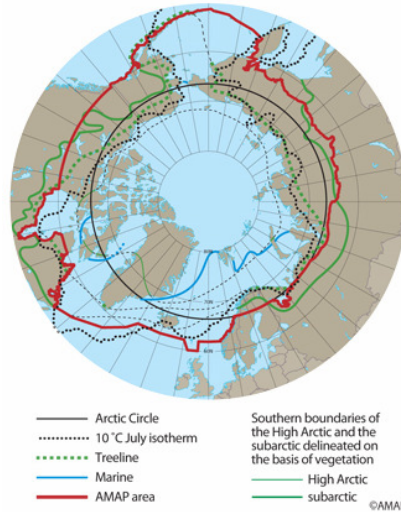
Human Health in the Arctic – 21st Century Challenge

INTRODUCTION:

The challenges to human health in the Arctic are as complex and multifaceted as the Arctic itself, a vast land gathering of 30 million square kilometres sprawled over one sixth of the earth, and encompassing twenty-four time zones. Generally, its population of about four million, including more than thirty different indigenous peoples and dozens of languages, live in a region of vast natural resources and a clean environment compared with most areas of the world. But, the fundamental dependence of indigenous inhabitants on the land, sea and natural resources for their livelihood make them uniquely vulnerable to health threats. This includes morbidity and mortality resulting from extreme weather and climate events such as storms and floods; as well as increased related incidences of injury and mortality; and may include indirect health effects like increased mental and social stress related to loss of traditional lifestyle; and related incidences of bacterial and viral diseases linked to decreased access to quality water sources.

Some regions are at risk for increasing illness due to inadequate housing and failing sanitation infrastructure. Other inhabitants may experience changes in diet resulting from changes in natural food source distribution and accessibility. This often results in a shift away from a traditional subsistence diet to a more Western diet including processed foods, high in saturated fats and sugar, which may result in an increase in the incidence of obesity, diabetes, cardiovascular disease and cancer. Furthermore, weather patterns affect the river flow resulting in greater delivery of contaminants to the coasts and oceans. These health impacts take place in the context of ongoing cultural and socioeconomic changes occurring in Arctic communities.

Over recent years, the Arctic Council has become increasingly concerned with the human health challenges facing Arctic peoples. These include the health impacts of environmental contaminants, climate change, rapidly changing social and economic parameters within communities, the changing patterns of chronic diseases, the high rates of injuries that occur in the Arctic region, and the continuing health disparities that exist between Indigenous and non-Indigenous populations in the Arctic.



Definition of the Arctic Region

The Arctic Council’s Sustainable Development Working Group (SDWG) was established in 1998, and has since been one of the key bodies working to confront human health activities in the Arctic. Through collaboration with subject experts, academics, researchers, and advisory groups, some progress has been made in undertaking activities to improve certain aspects of the health of Arctic Residents. However the work yet continues

The Sustainable Development Working Group (SDWG)

The Arctic Council, was established in 1996 by its eight member states, namely Canada, Denmark, Finland, Iceland, Norway, Sweden, the Russian Federation, and the United States of America. It is a ministerial intergovernmental forum which promotes cooperation, coordination and interaction between the 8 Arctic States including indigenous communities and other Arctic Residents on issues relating to sustainable development and environmental protection. The Council meets at the ministerial level every two years. The Chair and Secretariat of the Council rotates every two years among the eight Arctic States.

The Sustainable Development Working Group (SDWG) is one of six Arctic Council working groups, each of which has a separate mandate. The SDWG was established by Arctic member-state Ministers at the first Arctic Council Ministerial meeting, held in Iqaluit, Nunavut, Canada, September 1998. Its core objective is to protect and enhance the economies, culture and health of indigenous communities and of other inhabitants of the Arctic, in an environmentally sustainable manner; as well as to improve the environmental, economic and social conditions of Arctic communities as a whole. The current Chair of the Working Group is Denmark/Greenland/Faroe Islands.

In 2000, the SDWG identified six subject areas of special importance related to sustainable development around which their activities and efforts are guided. They are:

- Health issues and the well-being of people living in the Arctic
- Sustainable economic activities and increasing community prosperity
- Education and cultural heritage
- Children and youth
- Management of natural, including living, resources
- Infrastructure development.

The SDWG is unique amongst the various Arctic Council Working Groups in that it carries out its mandate based on specific projects approved by member-state Ministers, rather than following a broader program mandate. This includes a way to help facilitate new SDWG projects at periodic meetings of the Council in line with the overall work and evolving priorities of the Arctic Council. Given the broad range of topics and rapidly changing conditions in the Arctic, it was determined that flexibility would be required to enable better response, so the SWDGs were later authorized to go ahead and approve projects in line with the priorities of the Arctic Council.

A cluster of projects and activities in relation to Arctic human health led to the creation of the SDWG Arctic Human Health Expert Group (AHHEG), which assists the SDWG in identifying Arctic human health issues and priorities; identifying and coordinating new projects and activities; and cooperating with related working groups.

Currently the Sustainable Development Working Group is involved in projects in the areas of children and youth, health, telemedicine, resource management, cultural and ecological tourism, and living conditions in the Arctic.

HUMAN HEALTH, CAUSES AND EFFECTS

Overview

Human health concerns and challenges that face Arctic peoples include the health impacts of environmental contaminants, climate change, rapidly changing social and economic parameters within communities, the changing patterns of chronic diseases, the high rates of injuries that occur in Arctic regions and the continuing health disparities that exist between indigenous and non indigenous segments of the Arctic populations.

The SDWG shares the responsibility of human health activities of the Arctic Council with the Arctic Monitoring and Assessment Program's (AMAP) Human Health Assessment Group which focuses on the relationship between pollution and health.

Historically, human health had not been a research theme for the Arctic Council, but the recent *International Polar Year* (IPY) provided an opportunity for the Arctic Council to take a leadership role by supporting research activities to address the human health concerns of Arctic communities and set the stage for future research and activities.

Human Health in the Arctic

Life expectancy in arctic populations has greatly improved over the last 50 years. For example, in 1950, the life expectancy of the indigenous people of Alaska was 47 years compared with 66 years for the general North American population. By 2000, the life expectancy for Alaska Natives had increased to 69.5 years, a gain of over 20 years. Much of this improvement has been a result of new prevention and treatment activities which resulted in reductions in morbidity and mortality from infectious diseases, such as tuberculosis, and the vaccine preventable diseases of childhood.

In addition public health research led to innovations such as the provision of safe water supplies, sewage disposal, and the development of community based medical providers, which contributes to improved care and access to care for injuries and illness. Research on the negative health effects of tobacco has led to tobacco cessation and education programs. Mortality rates for heart disease and overall cancer rates are similar in arctic indigenous residents in relation to overall rates for the US, Canada, and northern European countries.

Despite these improvements, life expectancy remains shorter and infant mortality rates are higher among indigenous arctic residents in the US Arctic, northern Canada, and Greenland than among other Arctic residents of Nordic countries. For example, life expectancy for Alaska Natives still lags behind the general U.S population which was 76.5 years in 2000. Similarly, indigenous residents of the US Arctic and Greenland have higher mortality rates for injury, suicide and hospitalization rates for infants with pneumonia and respiratory infections. These disturbing health disparities will only be solved with greater understanding of their causes through research and focused efforts at prevention.

The rapid pace of change across the Arctic present new challenges to the health and well-being of Arctic residents, and will require additional health research. Some of the major trends likely to affect the health status of Arctic peoples include economic changes, improved transportation and communications, environmental pollutants and climate change.

Living conditions are changing from an economy based on subsistence hunting and gathering to a cash-based economy. Across the circumpolar north there is increasing activity towards sustainable development via local resource development and widening involvement in the global economy. The influence of such changes on the physical health of arctic residents on the one hand have been positive, resulting in improved housing conditions, a more stable supply of food, increased access to more western goods, and decreases in morbidity and mortality from infectious diseases. But changes in lifestyle brought on by the move away from traditional subsistence hunting and gathering and the societal changes brought on by modernization, in general, have resulted in an increase in prevalence of chronic diseases such as diabetes, hypertension, obesity and cardiovascular diseases. In addition, it is well known that child abuse, alcohol abuse, drug abuse, domestic violence, suicide, unintentional injury is also connected to rapid cultural change, loss of cultural identity and self esteem.

Globalization

Globalization has meant improvements in the transportation infrastructure and communications technologies such as the internet and telemedicine innovations. Many communities once isolated, are now linked to major cities by air transportation, and are only one airplane ride away from more densely populated urban centers. Consequently these communities are now vulnerable to the importation of new and emerging infectious diseases (such as influenza, SARS-like infectious diseases, or multi-drug resistant strains of tuberculosis).

Environmental Contaminants

Environmental contaminants are a global problem. Contaminants such as mercury, other heavy metals, PCBs, DDT, dioxins and other toxins from other industrial and agricultural areas of the globe have migrated to the Arctic via atmospheric, river and ocean transport. Their subsequent presence in Arctic subsistence foods such as fish, waterfowl, marine and land mammals is of further concern to the Arctic residents and indigenous people who rely on these foods. Potential human health effects include damage to the developing brain, endocrine and immune system. A new concern is the role of mercury on cardiovascular diseases.



More research is needed to identify the levels and impact of these contaminants on Arctic residents, particularly the very young. New findings will help provide guidance on both the risks and benefits of consuming traditional foods.

Climate Change

In 2008, the United Nations' World Health Organization issued their report *Protecting Health from Climate Change*:

“There is now widespread agreement that the earth is warming, due to emissions of greenhouse gases caused by human activity. It is also clear that current trends in energy use, development, and population growth will lead to continuing – and more severe – climate change.”

The changing climate will inevitably affect the basic requirements for maintaining health: clean air and water, sufficient food and adequate shelter. Around the world each year, about 800,000 people die from causes attributable to urban air pollution, 1.8 million from diarrhoea resulting from lack of access to clean water supply, sanitation, and poor hygiene, 3.5 million from malnutrition and approximately 60,000 in natural disasters. A warmer and more variable climate threatens to lead to higher levels of some air pollutants, increase transmission of diseases through unclean water and through contaminated food, to compromise agricultural production in some of the least developed countries, and increase the hazards of extreme weather.

The impacts of climate change on the health of arctic residents will vary depending on factors such as age, socioeconomic status, lifestyle, culture, location and the adaptability of the local health infrastructure. It is likely that the most vulnerable will be those living a traditional lifestyle close to the land in remote communities, and those already facing health related changes. Direct health related impacts, for example may include an increase in injuries, hypothermia, and frostbite or heat stress related to travel in unpredictable weather conditions. Indirect impacts include the potential changes in air-borne diseases such as West Nile virus, other infectious diseases, changes in access to safe water supplies, failure of the permafrost and damages to the sanitation infrastructure, and changes in the traditional food supply as the migration patterns of subsistence species change. Research is needed to identify climate sensitive indicators that will allow the prediction of health impacts and the development of mitigation strategies.

While these challenges seem great, the Arctic is unique in many aspects. It can be defined by population, a population that is sparsely scattered over a very large geographical area, by climate and latitude, by seasonal extremes of temperature, light and dark, and by its spirit and history of cross border cooperation on issues of concern to Arctic communities.

HUMAN HEALTH AND THE ARCTIC COUNCIL

Human health activities of the Arctic Council are currently carried out through the Arctic Monitoring and Assessment Program's Human Health Assessment Group and in the Sustainable Development Working Group (AMAP HHAG). While the role of the AMAP HHAG has been to conduct periodic assessments of the impact of environmental contaminants on human health, the SDWG has undertaken several activities intended to improve certain aspects of the health of Arctic Residents.

- The *Survey of Living Conditions in the Arctic* (SLiCA) is an ongoing project founded in 1998, and led by researchers in Greenland and Denmark and is designed to develop a new research base for the measurement of living conditions and individual well being among the Inuit and Saami peoples of the Arctic.
- In 1998 the ministers endorsed the Canadian led "*Future of Children and Youth in the Arctic Initiative*". The goals of this project were to improve the health and well being of children and youth in the Arctic and to better prepare them for a future by increasing knowledge and understanding of sustainable development in the Arctic.
- The *Telemedicine Project*, lead by the United States was designed to share information among the Arctic Council members about programmatic successes and lessons learned from national and international experiences in remote health care delivery, training and education.
- In 2000, the *International Circumpolar Surveillance* (ICS) system for emerging infectious diseases established a network of hospital and public health laboratories throughout the Arctic. This network allows the sharing of laboratory information and other data between Arctic countries to help track infectious diseases of concern, the emerging problems of bacterial resistance, and the implementation of prevention and control strategies.

The Arctic Human Health Initiative

The International Polar Year (IPY) 2007-2008 was a unique opportunity to focus world attention on Arctic human health and encourage member-state cooperation on emerging Arctic human health concerns. The Arctic Human Health Initiative (AHHI) is an Arctic Council IPY initiative that aims to build and expand on existing research of the Arctic Council and International Union for Circumpolar Health.

The IPY can be used to create new or expand existing health networks, for the purpose of sharing information between communities, regions or Arctic countries and promote international collaboration on health research, outreach, education and communication in the areas of health

disparities, the health effects of environmental pollution, rapid social & economic change and climate change.

AHHI is coordinated by an international steering committee with representation from scientists from International Union for Circumpolar Health, and the human health working groups, and permanent participants of the Arctic Council.

SDWG Cooperation with other Working Groups and Expert Bodies

The SDWG is increasingly required to contribute to Arctic Council priorities being carried out by other working groups and subsidiary bodies. There are a number of other multi-national governmental and nongovernmental organizations working on improving the health and well being in circumpolar regions. These include:

- The International Union for Circumpolar Health (IUCH)
- The International Arctic Social Sciences Association (IASSA)
- The International Network of Circumpolar Health Researchers (INCHR)
- The Northern Dimension (ND) Partnership in Public Health and Social Wellbeing (NDPHS)
- Barents Euro Arctic Council and the Co-operation Program on Health and Related Issues in the Barents Euro Arctic Region (BEAC), and
- The Northern Forum (NF)

The SDWG continues to seek more input from existing and new expert groups on issues and activities within its mandate.

CONCLUSION

The challenges to human health in the Arctic are as complex and multifaceted as the Arctic itself. It is important that the Arctic Council continue working to develop and implement strategies and tools to help bridge the human health disparities. This requires increased collaboration with other health organizations to ensure synergy between programs and avoidance of duplication of effort in specific program areas.

Further development of such relationships with all stakeholders including expert bodies can contribute to better outcomes for all.

QUESTIONS TO CONSIDER:

1. What are the major human health challenges in the Arctic?
2. What has contributed to improvements in morbidity and mortality rates in Arctic indigenous peoples? How can this trend continue?
3. How and why does the SDWG differ in its mandate than that of the other Arctic Council working groups?
4. What are the SDWG six subject areas of special importance related to sustainable development?
5. What factors influence the impacts of climate change on the health of arctic residents? How?
6. How can the Arctic Council work with Indigenous populations to improve human health in the Arctic?
7. How can the Arctic Council work with some of the other organizations working to improve health and well being in circumpolar regions?
8. Why are indigenous peoples of the Arctic inordinately affected by health risks even though the Arctic is considered environmentally cleaner?
9. What are the pros and cons of globalization as it relates to human health amongst indigenous peoples in the Arctic?
10. How could the Arctic council expand or strengthen its efforts regarding human health?
11. What are some of the new major trends to affect the health status of Arctic peoples?

REPORTS AND MORE DETAILED INFORMATION

The following are available on the SDWG website at [<http://portal.sdwg.org>]

- *SAO and Ministerial Documents*
- *SDWG Project Reports*
- *Reports of SDWG Projects & Activities*
- *SDWG Work Plans and Listing of Projects & Activities*

SDWG also offers a series of scientific reports which offer more detail on specific areas of human health research and activities in the Arctic.

- 2009 Human Health Report