



# Introduction

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In its ministerial declaration adopted in Inari, Finland in the fall of 2002, the Arctic Council called for the production of an Arctic Human Development Report (AHDR) to initiate the process of developing "... a comprehensive knowledge base for the Arctic Council's Sustainable Development Programme." Originating in discussions in the Standing Committee of Parliamentarians of the Arctic Region and evolving during the course of meetings of the parliamentarians in Rovaniemi, Finland in 2000 and in Tromsø, Norway in 2002, the proposal to produce an AHDR met with a positive reception in the Arctic Council. During the 2002 ministerial meeting, Iceland made a commitment to the completion of the report as a matter of priority during the 2002-2004 Icelandic chairmanship of the Council. This book fulfills that pledge.

This introductory chapter presents the rationale behind the project in more detail and some of the choices made in the process of producing the report. It also provides some general background about the Arctic as it relates to human development in the region.

## The Arctic Human Development Report

### *Rationale and purpose*

The rationale for treating the Arctic Human Development Report (AHDR) as a priority includes a number of distinct elements:

- The AHDR will offer an accessible overview of the state of human development in the Arctic that can serve as a point of departure for assessing progress in the future.
- The report will identify critical gaps in knowledge that require attention on the part of the scientific community.

- The AHDR will provide a framework and help to establish priorities for the activities of the Sustainable Development Working Group.
- More generally, the AHDR will shed light on the concept of human development itself, highlighting dimensions of human well-being that are not prominent in mainstream discussions of this topic.

The individual chapters of the AHDR not only identify problems, they also lift out success stories that can be studied and possibly adapted by policymakers and people throughout the region. The Arctic is not the place of unmitigated gloom and doom, ridden with pollution, social problems, and depression that popular accounts often portray. We need a much more nuanced picture of life in the Arctic – the kind that ordinary inhabitants themselves possess. It should reflect an awareness of the realities of successes and failures of people and communities in coping with changes and striving to maintain lifestyles, traditions, identities, and culturally constructed meaning.

Social scientists have played a prominent role in the making of this book. This is testimony to the fact that the Earth has entered an era in which major changes in the global biosphere and global society result from human actions and the operations of social institutions. The Arctic is strongly affected by rapid social as well as natural changes, and we need to know what adaptive mechanisms societies and cultures in the North have at hand, how they are likely to react, and how these reactions will play out. To understand the effects and adaptations of Arctic societies and their welfare, we can use the tools of modern social science. These tools can help us to comprehend these societies and how they interact with outside threats and opportunities.

The concept of interaction is crucial, as human societies are not impacted as dead matter but react creatively within social and cultural structures that guide actions and adaptations of individual actors.

Given the tight schedule imposed on this project and the limited resources available, the AHDR can make no claim to be comprehensive, encyclopedic, or all-encompassing. The purpose of this book is to identify and provide policy relevant insights on key issues, themes, and trends that are of high importance and immediate concern to individual livelihoods and the welfare of people and societies in the circumpolar region.

## What is human development?

Human development has emerged in recent years as an important concept among those seeking an alternative to Gross Domestic Product (GDP) per capita as a measure of human well-being or the quality of life. But what is the nature of human development in the Arctic and how should we go about measuring it? This question emerged as a key issue for the authors of the Arctic Human Development Report.

### *The Human Development Index and its limitations*

The United Nations Development Programme has devised and made good use of a Human Development Index (HDI) that integrates three distinct factors: (1) a long and healthy life measured in terms of life expectancy at birth, (2) education treated as a combination of adult literacy and school enrollments, and (3) a decent standard of living construed as GDP per capita. Simple as it is, calculations of the HDI over a number of years have shown how a broader measure of human development diverges significantly from GDP per capita beyond a relatively modest income level. This is a finding of obvious importance. In an era in which escalating levels of material consumption constitute a major source of large-scale environmental problems, the realization that human well-being does not correlate with GDP per capita beyond a certain point is both critical and encouraging.

Nevertheless, the AHDR Report Steering Committee decided at its first meeting not to attempt to compute a regional HDI for the Arctic. Partly, this was because of the lack of regional data. As the analysis in *Chapter 2. Arctic*

*Demography* makes clear, we have encountered problems even in identifying the Arctic's residents with precision. But also, the decision reflects a desire to address human development in broader terms, taking into account a range of factors not represented in the HDI.

The residents of many Arctic communities would not receive outstanding HDI scores (1). Yet humans residing in the Arctic do not generally see themselves as lagging behind in terms of human development or deficient with regard to some broader conception of human well-being. Clearly, there are social problems in the circumpolar North; the chapters of this report discuss a number of them along with strategies that have been devised to cope with them. But this does not mean that Arctic lifestyles, cultures, or social institutions are inferior to those in communities that rank higher in terms of HDI scores.

This suggests the value of enquiring into dimensions of human development that are not included in the HDI and asking about their relevance to the Arctic. Many Arctic residents – especially those who are indigenous to the region or long-term residents – associate a good life with the maintenance of traditional hunting, gathering, and herding practices. Yet it is difficult to use indicators like GDP per capita to measure the health of subsistence systems or mixed economies more generally. For many, well-being is to be found in a way of life that minimizes the need for the sorts of material goods and services included in calculations of GDP per capita.

Education raises similar concerns. Many Arctic residents have a highly sophisticated grasp of matters important to their well-being. But their knowledge often does not translate into high scores in terms of adult literacy and gross school enrollments.

Even the weight given to life expectancy at birth can be discussed in this setting. No doubt, living a long life is desirable. But what if one were offered a choice between a shorter life deeply rooted in traditional values and cultural practices and a longer life spent trying to adjust to the loss of a highly-valued lifestyle? Evidence from the Arctic makes it clear that longevity by itself is not a paramount goal.

Turning our enquiry around, we can identify several important aspects of human development that are not well represented in the HDI. Most Arctic residents value fate control or the ability to determine their own destinies. Highly

valued also is cultural continuity in the sense of nurturing traditional values and ways of life, even while embracing some of the obvious benefits of modernization. Close relationships with the natural world together with a sense of belonging to the land (and the sea) are important as well. Many of the Arctic's residents would not want to exchange this way of life for the lifestyles of residents of southern metropolises, even though such a life may offer higher standards of living in material terms.

Anyone who has worked extensively in the Arctic is also acutely aware of the differences among individual communities in the region in terms of social welfare and community viability. It is not uncommon to find radically different conditions prevailing in communities that are located in the same area and that resemble each other in terms of a range of demographic, economic, and social factors. As a result, we found it particularly important to identify success stories relating to the achievements of individuals and specific communities in the Arctic.

Considering these issues, the Report Steering Committee concluded not only that computing a regional HDI for the Arctic would not be feasible but also that it should not be the principal objective of this effort. Instead, the AHDR seeks to identify characteristics of human development that are informative in their own right and that can pave the way for collecting data that can be used in devising indicators that illuminate the special features of life in the Arctic. Examples are efforts to capture economic rents associated with the extraction of natural resources or the devolution of authority to regional and even local decision-makers. Similarly, the report addresses measures designed to empower men and women in a rapidly changing social environment that is calling into question some traditional gender roles.

In the process, we hope to broaden and deepen the vision of human development implicit in the HDI. Our purpose is not to undermine the HDI; it has served its purpose well as a supplement to indicators based exclusively on economic measures like GDP per capita. But if we succeed, the AHDR will both identify issues that need to be addressed by policymakers concerned with the quality of life in the Arctic and contribute to a richer conception of human development that will prove useful in assessing the quality of life in other regions of the world.

## The Arctic region

### *Defining the Arctic*

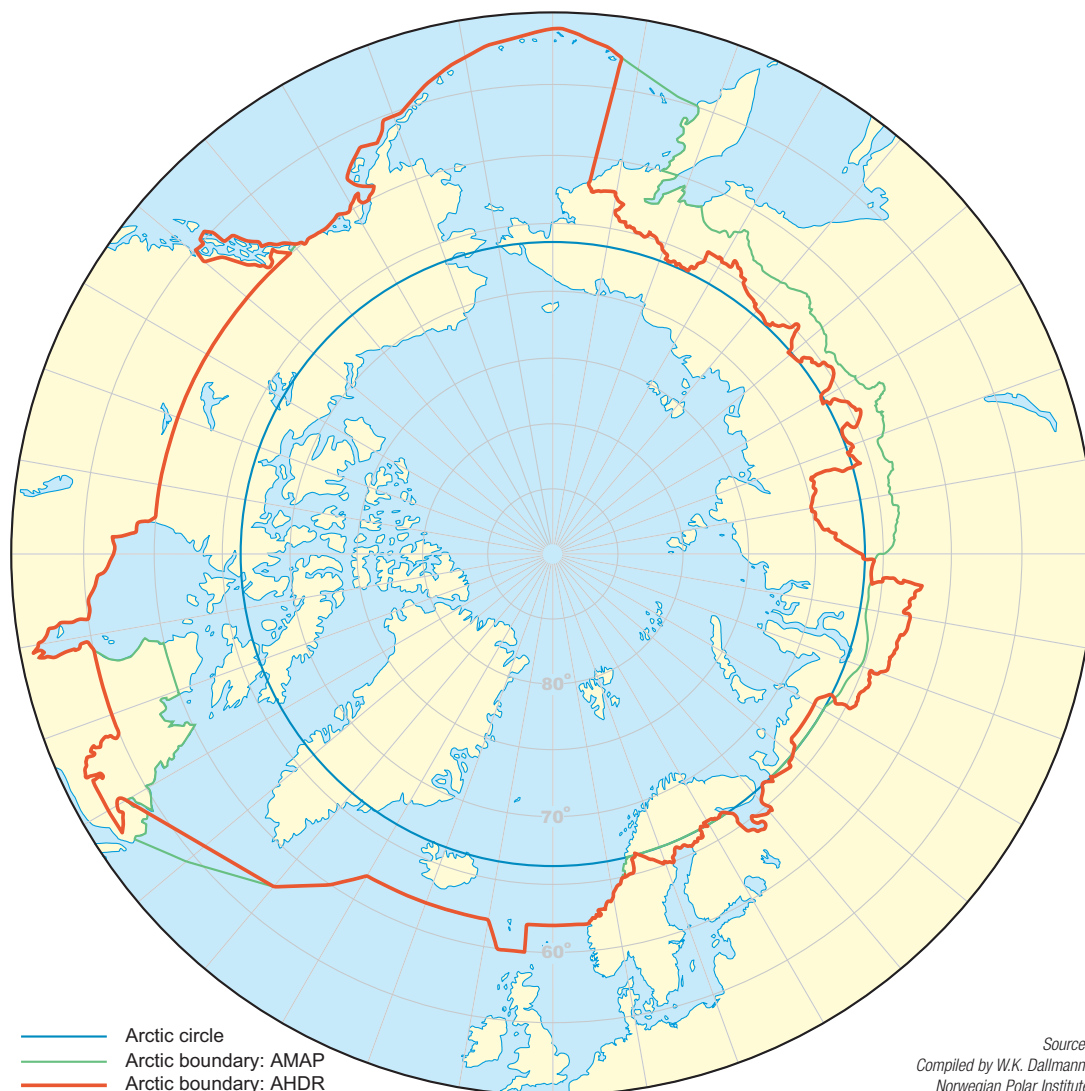
There is nothing intuitively obvious about the idea of treating the Arctic as a distinct region. Unlike more familiar regions, such as Southeast Asia, the Middle East, or South America, the Arctic consists largely of segments of nation states whose political centers of gravity lie, for the most part, far to the south (2). This observation presents us with the problem of determining what specific parts of these states to include in a region designated as the Arctic or the circumpolar North.

Even more troublesome is the fact that this effort requires the application of different geopolitical conventions in individual sectors of the region. In the Canadian Arctic, for instance, it seems reasonable to adopt 60°N as the southern boundary of the region, a convention that separates the three northern territories from the southern provinces (3). Yet applying the same convention to Fennoscandia would demarcate a region running as far south as Oslo and Helsinki, an outcome that makes little sense to those who think about Arctic issues in the Nordic countries.

Of course, it is possible to resort to the use of biophysical criteria to determine the extent of the Arctic as a region. But aside from the fact that this approach has little to recommend it in cultural, economic, or political terms, it also fails to produce a clear cut result.

In practical terms, we have concluded that there is much to be said for bounding the Arctic in a manner that is broadly compatible with studies of other Arctic issues rather than adopting yet another approach to determining the extent of the region. For this reason, the AHDR takes as its point of departure the region that the Arctic Monitoring and Assessment Programme covers in its 1997 and 2002 reports (4-5). For reasons having to do mainly with the location of jurisdictional or administrative boundaries and the availability of data, however, the area covered by this report differs from the AMAP Arctic in some respects.

Thus, the AHDR Arctic encompasses all of Alaska, Canada North of 60°N together with northern Quebec and Labrador, all of Greenland, the Faroe Islands, and Iceland, and the northernmost counties of Norway, Sweden and Finland. The situation in Russia is harder to describe in simple terms. The area included, as



demarcated by our demographers, encompasses the Murmansk Oblast, the Nenets, Yamalo-Nenets, Taimyr, and Chukotka autonomus okrugs, Vorkuta City in the Komi Republic, Norilsk and Igrska in Krasnoyarsky Kray, and those parts of the Sakha Republic whose boundaries lie closest to the Arctic Circle.,

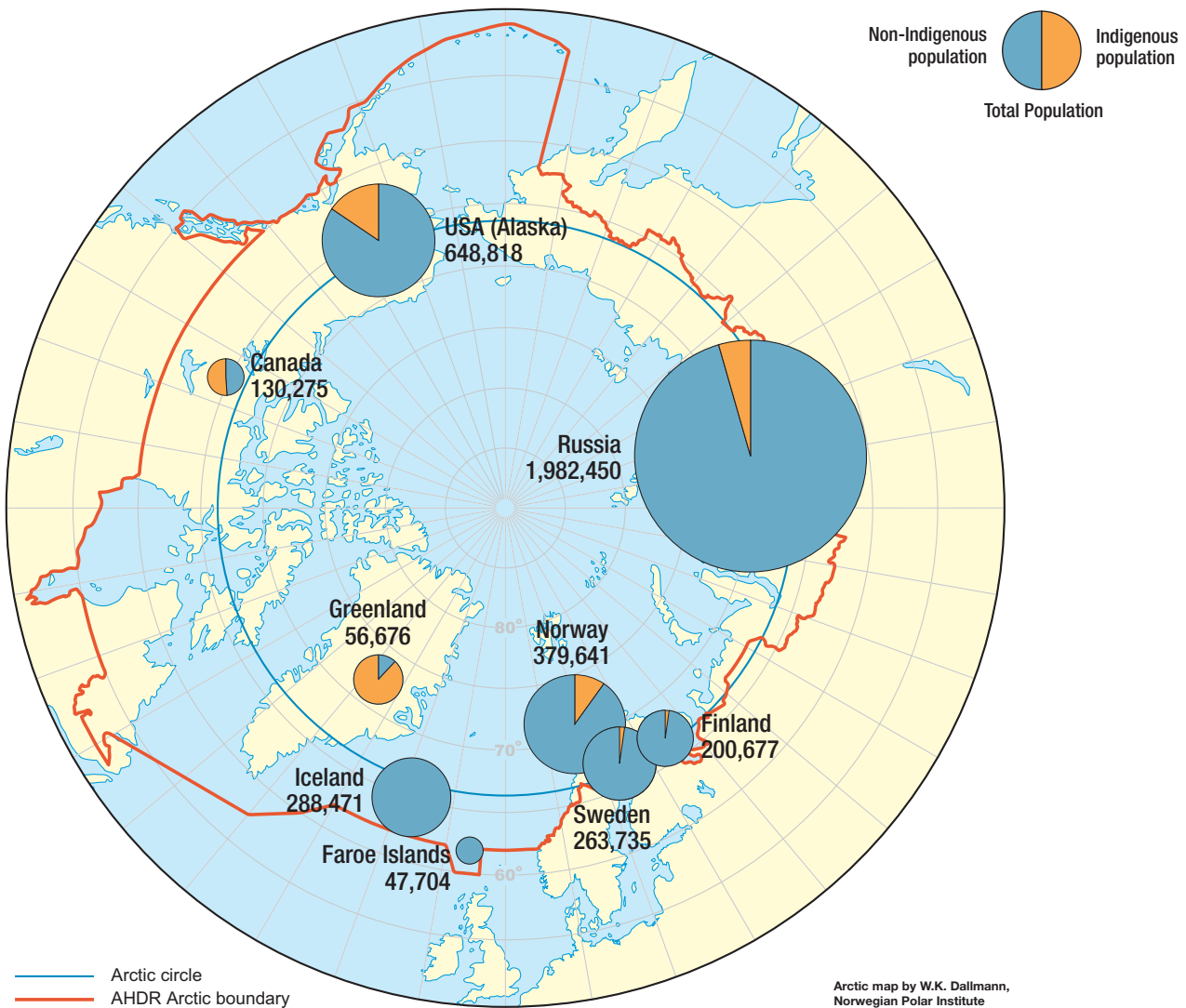
This, then, is the AHDR Arctic. It encompasses an area of over 40 million square kilometers or about 8% of the surface of the Earth, a sizable domain by any standards (4, 6). But the human residents of this vast area number only about 4 million, of whom almost half are located within the Russian Federation (4).

Unless otherwise stated, we use the AHDR Arctic as our domain of interest. Nonetheless, the lead authors of some chapters have found it necessary to deviate from these boundaries in addressing certain topics. In these cases, we have asked the authors to indicate clearly where these differences lie.

### ***Arctic cooperation: a context for this report***

A number of writers have questioned the appropriateness of treating the Arctic as a region at all. They point to striking differences in the history of the Arctic and the roles the Arctic has played in North America, Fennoscandia, and Russia. To them, the idea of the Arctic as a coherent region with a policy agenda of its own is little more than an artificial construct that requires serious manipulation of the facts to seem credible (7). Although it is understandable in some respects, this critique is falling increasingly on deaf ears among both those who live in the Arctic and others who think about Arctic issues today. More and more, the Arctic has emerged as a distinct region in public policy discussions (8-12).

During the Cold War, the Arctic loomed as a region of confrontation, if it merited treatment



as a region at all. Yet today, the circumpolar North has become an arena for launching cooperative activities featuring not only interstate agreements but also innovative transnational initiatives on the part of subnational units of government and a variety of non-state actors (11-12).

At the interstate level, the most important joint initiatives include the Arctic Environmental Protection Strategy (AEPS) established in 1991 and its successor, the Arctic Council, founded in 1996. The agenda of this cooperation has grown from an initial focus on environmental protection to a broader emphasis on sustainable development. Moreover, the Arctic Council has introduced innovative procedures granting indigenous peoples organizations the status of permanent participants and allowing them to participate fully in its work. Although its authority is limited, the Council has played a part of considerable significance both in framing a pol-

icy agenda for the Arctic and in amplifying the voice of the Arctic in global settings.

The Council has assumed a proactive role in sponsoring scientific assessments regarding pollution, flora and fauna, and climate change and variability. The Arctic Human Development Report is an assessment prepared under the auspices of the Arctic Council's Sustainable Development Working Group.

The Arctic has also become an arena for efforts on the part of lower levels of government to form transnational associations. The most striking example of this phenomenon is the Northern Forum, founded officially in 1991 and evolving over time in parallel with the AEPS/Arctic Council. The years since the founding of the AEPS/Arctic Council and the Northern Forum have witnessed also a remarkable growth in the number and variety of non-governmental organizations focused on Arctic issues. Among the most important of these are



### *The Permanent Participants and the AHDR*

A unique and innovative feature of the Arctic Council is the role it accords to the Permanent Participants. Although they are not treated as formal members, the indigenous peoples organizations representing the six Permanent Participants are engaged in all activities of the Council on a basis of de facto equality. Representatives of all the Permanent Participants sit on the AHDR's Report Steering Committee; one of the



PHOTO: SVEN HAKANSSON, JR.

Nenets children.

members of the Executive Committee is indigenous. The Permanent Participants have taken an active interest in the preparation of the AHDR and made many contributions to the quality of the product. While the report is not in any way a negotiated document, the concerns of the indigenous stakeholders of the Arctic are clearly reflected in the substantive chapters of this assessment.

indigenous peoples organizations (e.g. the Russian Association of Indigenous Peoples of the North), scientific organizations (e.g., the International Arctic Science Committee), and organizations focused on the delivery of education to residents of the Arctic (e.g. the University of the Arctic). See also *Chapter 10. Education*. Taken together, the growth of this array of non-

governmental organizations has contributed significantly to the emerging profile of the Arctic as a distinct region. See also *Chapter 12. Circumpolar Geopolitics and International Relations*.

### *Global connections*

Given the fact that the Arctic is still emerging as an accepted region in world affairs, it is tempting to focus on efforts to delineate Arctic-specific issues and, in the process, to ignore or down-play links between the Arctic and the outside world. Such an approach would be misleading. The Arctic is affected increasingly by outside developments and the region has also played a role in shaping the course of world affairs.

Roughly, these links can be categorized under the headings of global environmental change and globalization or global social change. The environmental links between the Arctic and the outside world are emerging with greater and greater clarity. Impacts of climate change, for example, are already observable in the Arctic. It is accepted now that there is a critical need to improve our understanding of regional processes and that the high latitudes of the northern hemisphere constitute a critical region both as a generator of global processes and as an area in which the effects of climate change are likely to be particularly severe.

Globalization, too, has affected the Arctic in a number of ways. The volatility of world markets for raw materials (e.g. oil and gas) has intensified preexisting forces giving rise to rapid socio-economic changes – often called boom-bust cycles – in many Arctic communities. The narrow economic base of most Arctic communities has made them vulnerable to actions (e.g. bans

### *The Arctic Climate Impact Assessment*

The Arctic Climate Impact Assessment (ACIA), mandated under the terms of the Arctic Council's October 2000 Barrow Declaration, involves an effort to integrate all available knowledge regarding climate change and variability in the circumpolar North and to investigate the economic and social impacts as well as the biophysical consequences of climate change in the region. Guided by a Scientific Committee and supported by the Arctic Monitoring and Assessment Programme (AMAP), the Working Group on the Conservation of Arctic Flora and Fauna (CAFF), and the International Arctic Science Committee (IASC), ACIA is the most extensive assessment of climate change and variability at the regional level that has been done so far. As the assessment makes clear, climate change is already generating impacts that affect human well-being. Thus, storm surges are producing mounting pres-



PHOTO: JONAS G. ALLANSSON

Spring in Kulusuk, East Greenland.

sure to relocate some communities, and the deepening of the active layer of the permafrost is undermining infrastructure in many areas.

on the import or sale of seal products, sudden changes in the rules governing uses of whales and other marine mammals) on the part of outsiders who may not understand the impacts of their actions on northern communities. More positively, Arctic indigenous peoples have become leaders in the global struggle to secure the rights of indigenous peoples.

## A scientific assessment

The AHDR constitutes an assessment rather than a report intended to present original research. In this, it resembles the reports of the Arctic Monitoring and Assessment Programme and the Arctic Climate Impact Assessment. The essential goal is to identify and synthesize existing knowledge in the interests of presenting an integrated picture of human development in the Arctic, including similarities and differences between the Arctic and other parts of the countries whose northern areas make up the Arctic. The practice of scientific assessment has become relatively familiar in the natural sciences during the past 20 years (13). But there is no parallel tradition of conducting scientific assessments in the social sciences. Accordingly, we envision the AHDR as a contribution to the rise of scientific assessment in the social sciences in general, as well as a contribution to the work for the Arctic Council's Sustainable Development Working Group.

### Scope and structure of the report

The AHDR is broad in scope. The topics covered range from straightforward issues of demography, through more or less familiar socio-cultural, economic, political, and legal concerns, to emerging issues of health, education, and gender roles. In each chapter, the lead authors have undertaken to single out the most important themes and trends rather than attempting to address all matters of interest pertaining to that topic. Specifically, the instructions given to the lead authors requested that they single out the 3-5 most important trends in an issue area, compare and contrast conditions regarding these matters in the Arctic with parallel conditions in the southern reaches of the Arctic states, comment on variations from one section of the Arctic to another with respect to these concerns, and identify important issues where there is a need for improving our understanding to provide a basis for making public choices in the future.

### *Native? Aboriginal? Indigenous?*

Aside from language differences, Arctic countries have different words to designate the peoples who were already established at the time people of European tradition came to the North. In Alaska, "Native" is the most common designation. In Canada, the constitution defines the term "aboriginal peoples of Canada" to include "the Indian, Inuit and Métis peoples of Canada." But while the Constitution of Canada uses the term "Indians", Indian people themselves increasingly prefer the term First Nations. Soviet, and then Russian, legislation distinguishes between "indigenous numerically-small peoples", less than 50,000 strong, and other non-Russian peoples – e.g., in the Arctic, the Sakha and the Komi – who, by virtue of their numbers, are denied indigenous status. The AHDR uses the term "indigenous" in recognition of the need to find a common terminology that transcends a particular people or peoples. We note as well that many Arctic residents are of mixed heritage. The rules regarding who qualifies as indigenous vary from one part of the Arctic to another. But it is fair to say that a sizable proportion of those living in the Arctic today have both indigenous and non-indigenous roots. A map of the indigenous peoples of the Arctic is provided in *Chapter 3. Societies and Cultures: Change and Persistence*.

The report is structured with these ends in mind. *Chapter 2. Arctic Demography* addresses a range of demographic issues arising from the treatment of the Arctic as a distinct region, including population growth rates, the balance between indigenous peoples and other residents, and rates of in- and out-migration in the North. Together with this chapter, it provides a point of departure for examining a range of aspects of human development in the Arctic.

The second section includes four chapters addressing the basic systems of the circumpolar North: socio-cultural systems (*Chapter 3*), economic systems (*Chapter 4*), political systems (*Chapter 5*), and legal systems (*Chapter 6*). The goals are to monitor trends over time in a set of basic systems, to contrast systems prevailing in the Arctic with those more typical of the outside world, and to compare recent developments occurring in various sectors of the Arctic itself. More specifically, these chapters address issues like the retention of culture in the face of rapid social change, the rise of mixed economies in remote Arctic communities, initiatives designed to secure the rights of indigenous peoples to self-determination without eroding the rights of others, and shifting approaches to property and property rights in the Arctic.

The third section of the report contains a series of chapters focusing on themes that are crosscutting in the sense that they relate to all the basic systems considered in the previous section. Specifically, these chapters focus on managing harvests of renewable resources (*Chapter 7*), community viability (*Chapter 8*),

human health (*Chapter 9*), education (*Chapter 10*), gender issues (*Chapter 11*), and international relations (*Chapter 12*). To take a single example, the discussion of managing the harvest of renewable resources touches on enduring cultural practices dealing with consumptive uses of animals, the significance of the informal economy, the creation of co-management regimes, and the legal bases for creating unconventional but innovative resource regimes. The result is a set of accounts of cutting-edge concerns that go to the heart of sustainable development in the circumpolar North.

### *Policy-relevant conclusions*

The AHDR closes with a chapter that highlights policy-relevant conclusions arising from the analyses presented in the previous chapters. The aim is to draw attention to policy-relevant findings rather than to advocate the adoption of specific policies. There are cases in which the pursuit of this goal necessitates walking a fine line. Ignoring the identification of policy-relevant conclusions, however, would be incompatible with the terms of reference for the preparation of this report articulated in the 2002 Inari Declaration. The AHDR will succeed to the extent that it proves helpful to the activities of the Arctic Council's Sustainable Development Working Group.

## Arctic visions and interests

Before turning to the substance of the report, we pause to reflect on the general perspectives that stakeholders bring to a consideration of human development in the Arctic. Those wanting to plunge directly into the main concerns of this assessment may want to skip this section. But others will find it helpful, providing a broader context for the AHDR accounts of conditions prevailing in the Arctic.

It is tempting to assume that we can characterize a region like the Arctic in objective terms that will somehow capture the perspectives of all those who are active in the area as well as those who are interested in the region even though they are not players in the Arctic in any direct sense. But efforts of this sort are doomed to failure. There are many visions of the Arctic, and the appeal of individual visions varies as a function of the vantage points and interests of individual actors. Thomas Berger's familiar phrase "Northern Frontier, Northern Homeland," for instance, captures the distinction between those who see the circumpolar Arctic as a storehouse of natural resources of interest to industrialized societies to the south and those who reside in the Arctic and see themselves as the current representatives of peoples who have lived in the region.

Important as it is, this dichotomy does not do justice to the range of Arctic visions that have framed northern issues and shaped the interests of individuals and stakeholder groups during the course of modern history (15). Many of the visions have given rise to distinct mindsets. Because these mindsets tend to spawn dramatically different and sometimes conflicting approaches to Arctic issues of public importance, they provide an important backdrop for the Arctic Human Development Report.

### *Homeland*

First and, in our view, foremost, is the idea of the Arctic as a homeland for a diverse group of indigenous peoples ranging from the Inuit and Athabascans of the North American Arctic through the Saami of Fennoscandia and the Kola Peninsula and on to the small-numbered peoples of the Russian North and Arctic. They are the descendents of peoples who followed the retreating icecap in Europe, spread out over northern Siberia and the Russian Far East, and crossed the Bering Strait some 4,000 years ago or more. They have found ways to live comfort-

#### *The Mackenzie Valley Pipeline Inquiry*

Responding to both growing pressures from industry to develop Arctic oil and gas and increasingly vocal opposition on the part of the Dene and Metis, the Government of Canada acted in March 1974 to establish the Mackenzie Valley Pipeline Inquiry as a royal commission and to appoint Justice Thomas R. Berger to serve as the Inquiry's commissioner. The report of the Inquiry entitled *Northern Frontier, Northern Homeland*, published in 1977 and commonly known as the Berger Report, is widely recognized as a seminal statement regarding alternative visions of the Arctic. As Berger observed in his letter of transmittal, "[T]he North is a frontier, but it is a homeland too ... And it is a heritage, a unique environment that we are called upon to preserve for all Canadians."

As a result, he concluded, "[T]he decisions we have to make are not ... simply about northern pipelines. They are decisions about the protection of the northern environment and the future of northern peoples" (14).

The proposed route of the Mackenzie Valley Natural Gas Pipeline. Map published by the Mackenzie Gas Project, see [www.mackenziegasproject.com](http://www.mackenziegasproject.com).





ably in the Arctic and to respond in a flexible manner to the biophysical fluctuations in the region. Throughout much of the past, groups like the Inuit of the North American Arctic and the Nenets of Northwestern Siberia have led a relatively self-contained existence, a condition that accounts for their common practice of using terms that mean “the people” to refer to themselves and “the land” to characterize the areas in which they live.

In more recent times – ranging from the end of the 10<sup>th</sup> century for the Greenlandic Inuit as a result of Icelandic Norse passages and settlement (16-17), to the middle of the 18<sup>th</sup> century for the Aleuts residing in the Bering Sea region, and on to the early 20<sup>th</sup> century for the Inuit of the High Arctic in Canada – the Arctic’s indigenous peoples have come into contact with a variety of outsiders. Over the past fifty years, these contacts have precipitated a cascade of rapid and accelerating social changes among the Arctic’s indigenous residents.

Today, the indigenous peoples of the Arctic constitute only a fraction of the region’s permanent human residents (though they are the majority in some subregions). Under these circumstances, a major issue facing those responsible for making decisions about the Arctic is the clarification of the rights of the region’s indigenous peoples, including not only human and political rights but also the rights to the land and natural resources of those who have never relinquished their aboriginal rights despite the absorption of their homelands into the jurisdictions of modern nation states. Struggles centered in one way or another on claims and counterclaims relating to indigenous rights now constitute a major feature of the Arctic’s political and legal landscape. For more detail, see *Chapter 5. Political Systems* and *Chapter 6. Legal Systems*.

### ***Land of discovery***

From a European perspective, the Arctic has long loomed large as a land of discovery (18). Starting in the 16<sup>th</sup> century and accelerating well into the 19<sup>th</sup> century, Europeans, ignoring or denying the presence of the region’s indigenous peoples and driven by a desire to open up a Northwest Passage or a Northeast Passage to the Orient, strove to explore the far reaches of the Arctic and to assert jurisdictional claims to various parts of the region on behalf of their countries of origin. The intensity of this vision waxed and waned with seemingly unrelated

circumstances, like the existence of a surplus of naval officers in Great Britain in the aftermath of the Napoleonic Wars and the culture of chivalry that fueled the search for the lost Franklin Expedition during the middle decades of the 19<sup>th</sup> century (19). Today, most of the Arctic is well mapped and firmly allocated in jurisdictional terms to the eight Arctic states, a fact that suggests that this vision of the region is no longer relevant. But we should avoid jumping to such a conclusion prematurely. There are major unknowns regarding the undersea topography of the Arctic Basin, a situation whose importance is growing with the onset of climate change in the region. Moreover, many outsiders persist in viewing the Arctic region as a land of discovery or a wilderness mostly devoid of permanent human residents. Such perspectives make it hard for decision-makers to come to terms with the real concerns (e.g. establishing the rights of indigenous peoples, protecting the region’s environment) that dominate the Arctic policy agenda today.

### ***Magnet for cultural emissaries***

As in other parts of the world, Christian missionaries arrived in the Arctic on the heels of explorers. In fact, the region soon became an arena for competition among a wide range of Christian sects, including Roman Catholics, Russian Orthodox, Anglicans/Episcopalians, Lutherans, Moravians, Presbyterians, and Quakers, to name but some. The most determined efforts of the missionaries produced in many areas some form of syncretism rather than a complete conversion to one variety of Christianity or another. See also *Chapter 3. Societies and Cultures. Change and Persistence*. Today, the era of Christian missionaries is largely over in the Arctic. Nonetheless, the legacy of this experience lives on in many quarters, and the impact of western culture, ranging from dietary habits through recreational activities and on to popular music, is pervasive. In many cases, this cultural impact on the Arctic encompasses unintended side effects from activities carried out with little or no concern for these extraneous effects. But the consequences are no less pervasive and powerful. At present, efforts to come to terms with the impacts of the missionaries and their successors as emissaries of western culture constitutes an important preoccupation for many of the Arctic’s permanent residents.

### *Storehouse of resources*

Starting with the activities of Basque and Dutch whalers in the 16<sup>th</sup> century, the Arctic has appealed to many as a storehouse of natural resources – both renewable and nonrenewable. This perspective has given rise to a view of the Arctic as a place to be mined for natural resources with relatively little concern for sustainability or the side effects of resource extraction. In earlier times, these practices focused mainly on the exploitation of living resources, as in Russian harvests of sea otters and fur seals starting in the middle of the 18<sup>th</sup> century, and American and British harvests of great whales during the 19<sup>th</sup> and early 20<sup>th</sup> centuries.

During the 20<sup>th</sup> century, the Arctic emerged as locus for world-class fisheries as well as a storehouse of nonrenewable resources, including minerals and hydrocarbons. Today, the region is a major source of nickel, lead, zinc, and even diamonds. Perhaps even more important is its role as a relatively secure source of oil and gas. The Prudhoe Bay oil field, identified as commercially significant in 1968, is the largest field in North America. The immense gas fields of Northwest Siberia, as well as the oil and gas potential of the Barents Sea, are critical to the efforts of Russia to mobilize the financial resources needed to engage in international trade. Those who complain about the sizable role that transfer payments from southern governments play in the Arctic economy seldom stop to think about the money flowing south in the form of economic returns and rents arising from the extraction of the Arctic's raw materials. But as *Chapter 4. Economic Systems* demonstrates, the southward flow exceeds the northward flow.

### *Theater for military operations*

Although the region's hydrocarbons are important to the operation of advanced industrial societies, those who focus on matters of security have seldom considered the Arctic as a prize in its own right. Nevertheless, the region has emerged from time to time as an important theater of military operations (9). Perhaps the most dramatic case is the role of the Arctic during the Cold War between the Soviet Union and the United States and its allies. Not only did the region encompass the closest point of contact between the superpowers, it also provided attractive conditions for the deployment of nuclear weapons mounted on manned bombers

equipped with cruise missiles and nuclear-powered submarines able to operate beneath the region's sea ice in relative safety (20). With the collapse of the Soviet Union and the end of the Cold War, it would be reasonable to assume that the military perspective would be marginalized, and to some degree this has happened. But it would be a mistake to assume that the idea of the Arctic as a theater of military operations is a thing of the past. The United States continues to deploy strategic weapons systems to forward bases in Alaska and Greenland as well as in the waters of the Arctic. The residue of military operations remains in evidence in many parts of the region. A prominent example involves decommissioned Russian nuclear-powered submarines at rest in the Murmansk Fjord as they await the attention of those with the expertise and technology needed to dismantle them safely. Another example centers on the fate of the American airbase at Thule in northwestern Greenland. See also *Chapter 12. Circumpolar International Relations and Geopolitics*.

### *Environmental linchpin*

The environmental importance of the Earth's high latitudes and especially the high latitudes of the northern hemisphere has been recognized for a long time. Partly, this is a product of the fact that waterborne and airborne pollutants originating in the mid-latitudes make their way to the Arctic and often remain there for extended periods of time. Information about the accumulation of persistent organic pollutants (POPs) in the Arctic and their impact on human health played a role of some importance in the successful effort to negotiate a multilateral environmental agreement – the 2001 Stockholm Convention – designed to curb the production, uncontrolled use, and release of POPs (21). Even more dramatic is the emerging evidence regarding the role of the Arctic in climate change. The impacts of climate change, in such forms as the retreat of sea ice, the erosion of beaches in storm surges, and increased depth of the active layer of permafrost, are now clearly in evidence in the circumpolar North (22). Moreover, climate change in the Arctic may produce feedbacks that serve to accelerate global climate change. The melting of permafrost may change the region from a net sink to a net source of greenhouse gases, and the melting of sea ice will lower the capacity of the Arctic to reflect solar radiation back into space. As a consequence, those interested in the global impacts

of climate change and variability have begun to pay close attention to the Arctic.

Looking at the Arctic solely as an environmental linchpin does nothing to address the cultural, economic, or political issues of importance to the Arctic's permanent residents today. If anything, it may distract attention from more immediate regional concerns, such as the decision whether to continue eating traditional but now increasingly contaminated foods. Still, it is undeniable that this vision of the Arctic is on the upswing.

### *The scientific Arctic*

The Arctic has long served as a magnet for researchers, ranging from physical scientists interested in glaciers and the Earth's climate system to cultural anthropologists seeking to reconstruct the peopling of the new world and to understand the cultures of indigenous peoples whose lives are focused on herding or hunting and gathering. Today, awareness of the sophistication of indigenous or traditional ecological knowledge is growing. Efforts are underway to compare and contrast the two approaches to knowledge and to bring both western science and traditional ecological knowledge to bear in efforts to solve concrete problems.

Scientists interested in the Arctic became driving forces behind the International Polar Years in 1882-1883 and 1932-1933 and, to a lesser extent, the International Geophysical Year in 1957-1958. In recent years, the Arctic has loomed large in the work of scientists seeking to understand such matters as climate change, the depletion of stratospheric ozone, and the effects of different pollutants. The focus has been on both global processes and conditions that are specific to the region. Planning is currently well underway to prepare for a new International Polar Year in 2007-2008, in which Arctic concerns will loom large.

### *Destination for adventure travelers*

As the planet grows smaller in conceptual terms, regions that appeal to eco-tourists as relatively unspoiled wilderness and to devotees of extreme sports as physical challenges become rarer and take on added value. In some respects, Antarctica with its lack of permanent human residents fits this vision better than the Arctic. While it is difficult and costly to reach Antarctica, however, many parts of the Arctic are readily available to adventuresome travelers. It is possible to reach Svalbard as well as many

remote locations in the North American Arctic via scheduled commercial air service, for instance.

Of course, the circumpolar North is not a wilderness at all. Most parts of the region have been lived in and used on a regular basis by a variety of indigenous peoples for centuries. Nonetheless, it is possible to travel quite extensively in the Arctic in a manner that allows visitors to retain an image of the region as an unspoiled wilderness area. This vision of the Arctic encourages some visitors to oppose efforts to develop the region's nonrenewable resources and to espouse measures (e.g. prohibitions on the killing of whales or wolves) that are likely to erode cultural practices important to some of the region's indigenous peoples and coastal communities (23-24). These side effects seem like acceptable consequences to those adventure travelers who have limited knowledge of Arctic cultures and little understanding of the dynamics of Arctic ecosystems. They wish to sustain their "Arctic," regardless of the likely impacts of such a position on the interests of other Arctic stakeholders.

### *The Arctic of the imagination*

Last but not least is what some have referred to as the Arctic of the imagination. The region has come to occupy an important place in the thinking of many who will never set foot in the Arctic and who lead lives in urban settings that are increasingly divorced from direct contact with nature (25). The Arctic has played a role of considerable significance in fleshing out the concept of the sublime (26). The region has produced a seemingly endless supply of accounts of derring-do – starting with expeditionary reports of Elisha Kent Kane, and the fictional stories of Jack London – that appeal to sedentary urban dwellers. It has even attracted a wide range of advertisers looking for appealing images to be used in promoting specific products.

It may seem at first blush that this vision on the part of outsiders is – or should be – of little or no significance from the point of view of those who live in the Arctic. But it would be a mistake to dismiss this view of the Arctic too quickly. Not only is there an extraordinary demand for images and writings that reinforce the Arctic of the imagination, but those who view the region in this way are easily recruited to causes calling for a cessation of the harvesting of wildlife and, more generally, for the imposition of severe restrictions on human

activities in the Arctic. Given their numbers and their general lack of interest in human welfare in the region, members of this group can and often do support policies that prove disruptive to the interests of the Arctic's permanent residents as well as to those of a number of other stakeholder groups in the region.

In summary, the Arctic is not a uni-dimensional space. Because they start from different vantage points, Arctic stakeholders frequently talk past one another, often without realizing that they are doing so. A first step in assessing human well-being in this region, then, is to recognize this diversity of perspectives and to grasp its implications for any effort to understand the state of human well-being in the Arctic.

## References/Further Reading

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