

ICARP II – SCIENCE PLAN 2

INDIGENOUS PEOPLES AND CHANGE IN THE ARCTIC: ADAPTATION, ADJUSTMENT AND EMPOWERMENT



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PREFACE

The Second International Conference on Arctic Research Planning (ICARP II) was held in Copenhagen, Denmark from 10 November through 12 November 2005 and brought together over 450 scientists, policy makers, research managers, indigenous peoples, and others interested in and concerned about the future of arctic research. Through plenary sessions, breakout sessions and informal discussions, conference participants addressed long-term research planning challenges documented in twelve draft research plans. Following the conference drafting groups modified the plans to reflect input from the conference discussions and input from the ICARP II web site. This science plan is the culmination of the process.

ICARP II Science Plans

Science Plan 1	Arctic Economies and Sustainable Development
Science Plan 2	Indigenous Peoples and Change in the Arctic: Adaptation, Adjustment and Empowerment
Science Plan 3	Arctic Coastal Processes
Science Plan 4	Deep Central Basin of the Arctic Ocean
Science Plan 5	Arctic Margins and Gateways
Science Plan 6	Arctic Shelf Seas
Science Plan 7	Terrestrial Cryospheric & Hydrologic Processes and Systems
Science Plan 8	Terrestrial and Freshwater Biosphere and Biodiversity
Science Plan 9	Modeling and Predicting Arctic Weather and Climate
Science Plan 10	A Research Plan for the Study of Rapid Change, Resilience and Vulnerability in Social-Ecological Systems of the Arctic
Science Plan 11	Arctic Science in the Public Interest
Background Document	Contaminants

2.1. Introduction

The Arctic has been occupied since time immemorial by a large and diverse number of peoples and cultures that have managed to make a living out of natural conditions considered by outsiders as extreme and unforgiving. These cultures have provided the research world with a unique and intricate knowledge about arctic environments and ecosystems, and their languages, cultures and livelihoods have contributed significantly to modern understanding of the global role of the Arctic.

Researchers have always been attracted by the unique ability of arctic cultures to exhibit resilience and thereby occupy new physical and social environments. This explains the long tradition in the Arctic of cultural research being integrated with other research initiatives.

Although arctic societies and cultures are diverse, history and experience have revealed noteworthy similarities in their responses to changes that encroach upon their communities from the outside. Linked to this has been a no less remarkable ability to cope with physical, cultural and political changes, and to develop strategies, solutions and models to manage and deal with such changes that have been noted by the global community. One example is the way that arctic societies have adopted co-management regimes to cope with the introduction of new hunting and fishing technologies, population changes, and social and environmental transitions. Another example is the establishment of systems of political autonomy, self-government and land-use regimes that are considered to be inspirational models by indigenous peoples and minority groups far outside the Arctic.

The scientific community has focused on the ability of arctic cultures to observe, cope with, and respond to climate variability and change, because some of the extreme effects and more pronounced impacts are expected to be seen and felt in the northern regions of the globe (ACIA, 2005). As a result, researchers now have some understanding of the traditional knowledge of the Arctic's indigenous peoples and this is now an integrating perspective of most cultural, social, and environmental research.

The Arctic Human Development Report (AHDR, 2004) emphasized that indigenous and non-indigenous peoples of the Arctic consider three issues as key factors in their lives: controlling one's own destiny, maintaining cultural identity, and living close to nature. These issues are included in major research initiatives such as the SLiCA (Survey of Living Conditions in the Arctic) program (http://www.iser.uaa.alaska.edu/projects/Living_Conditions/index.htm) and a number of other research programs initiated in the Arctic by the peoples themselves and by local institutions. Such issues should also be reflected in future research priorities.

Indigenous peoples of the Arctic have managed to establish political regions in which they comprise the majority, or at least a significant part of the population. Indigenous peoples and communities are now actively involved in setting research agendas based on this reality. This opens a completely new dynamic between researchers and arctic peoples. No longer seen as "objects" of research, indigenous peoples are now active participants in new research initiatives increasingly based on partnerships, out of which new knowledge can be gained, general theory developed, and policy-relevant recommendations for pressing contemporary issues can emerge. Research agendas set by indigenous peoples themselves or reflecting indigenous cultures will be a key factor in setting research priorities for the next decade.

The aboriginal peoples of the Arctic identify themselves as indigenous and are recognized as such by the international community, including the Arctic Council and the United Nations. The peoples of the Arctic identify themselves as indigenous to a large extent because they, despite significant cultural differences, have faced common histories and common problems. These peoples were marginalized when modern states were created and they share one or more of the following characteristics:

- they are the aboriginal inhabitants of the region in which they live;
- they speak or spoke a language that is different from those of the dominant group(s);
- they are or were being discriminated against within the legal and political systems;

- their cultures diverge from that of the remaining society;
- their languages, cultures, and values are endangered;
- their cultures are based on herding, hunting, and fishing; and
- they consider themselves and are considered by others as different from the rest of the population.

Being indigenous is a framing context for peoples' own perceptions of the role of language, forms of education and health care, political ambitions, resource management, and so on. This is the case even though indigenous peoples live together with non-indigenous peoples who often have come to share their visions and ambitions. In the Arctic, indigenous peoples have for generations intermarried with non-indigenous peoples. Most children, but not all, of these marriages who reside in the Arctic are considered as being indigenous.

Part of today's reality is that arctic societies are post-colonial societies that have developed their own types of political autonomies such as the Alaska boroughs, the new territories in northern Canada, the Saami parliaments, and Greenland Home Rule. It is striking that while the indigenous peoples have become dominant in some of these regions much of the cultural, social, and political discourse is still phrased in terms of indigenoussness, with the result that research agendas and research processes must take this into consideration.

2.2. Focus

The changing arctic societies and indigenous communities offer researchers a number of unique challenges and opportunities. A key factor explaining this is that the Arctic has provided a number of success stories in relation to the development of indigenous cultures and societies. While problems do exist, there are examples of indigenous traditions being incorporated into and used for the development of new legal standards, industrialized fishing, political systems, and bilingual education, to name but a few innovations. Thus, while many challenges remain, there are significant opportunities to initiate research that can make a difference to the lives of indigenous peoples.

The working group that prepared this ICARP II science plan thus looked into matters where indigenous peoples of the Arctic make a difference within a regional as well as a global context. For example, in the Arctic there are a number of unique self-government arrangements, including indigenous representation in the Arctic Council, a situation possibly without parallel anywhere else in the world.

When considering research priorities in relation to this science plan it is important to focus on research that can make a difference, specifically by addressing issues and pressing contemporary needs identified by indigenous communities. It is not enough simply to outline existing research agendas and to define scenarios for future research based on what is already done or being done. However, such agendas should initially be reviewed / evaluated by the working group.

When dealing with indigenous peoples, the research process, including the involvement and education of local inhabitants, is a key – indeed necessary – part of the research agenda. Part of the research process is also the definition of research themes (who's interests are in focus?), the decision-making procedures (who decides what?), and the implementation of research (who are the researchers?). In future research scenarios, indigenous and local peoples, communities, organizations, and interest groups should be seen as actors rather than just participants. Thus, the research agenda should also include a consideration of the research process instead of focusing purely on the results.

Empowering indigenous communities includes indigenous peoples being able through research programs to analyze their own situation as part of a wider society. Research should therefore deal not just with issues that are highlighted by peoples themselves, or certain groups of peoples, but also with issues that make it possible for the peoples concerned to ask new questions about issues relating to culture and development. Communication and cooperation between researchers and concerned

communities should in each case have a form that makes the interest of the concerned communities transparent. Research projects dealing with indigenous communities should adhere to the free, prior, and informed consent procedures as recommended by the UN Permanent Forum on Indigenous Issues.

Four key thematic issues are addressed in this ICARP II science plan:

- culture and education;
- wellbeing and health;
- economic models; and
- indigenous peoples and the state.

Within each of these themes gaps in knowledge are identified that are considered necessary to address in future research planning. Despite the significant amount of research into problems of arctic societies and communities, this science plan gives first priority to issues that reflect gaps in knowledge, but also takes as a point of departure for further discussion areas where arctic knowledge can make a difference, not just in the Arctic, but globally.

This approach addresses the fact that social science researchers in the Arctic have been preoccupied with problems instead of challenges and opportunities. A number of research themes are identified that can make a difference for arctic communities and peoples as well as for science itself.

2.2.1. Culture and Education

General

In recent years the assertion of indigenous rights, along with the concomitant growth of indigenous political power leading, variously, to the negotiation of land claims, increased autonomy and self-representation, and even home rule have afforded significant opportunities for cultural recovery and revitalization. These political gains have been largely founded on the conviction that culture, and by extension heritage, language, values, and life-skills, are central to the continuity of individual and collective indigenous identities. In response there has been a blossoming of initiatives in the cultural, linguistic, and educational fields including, for example, the promotion of indigenous art, music, literature and film; development of indigenous media, particularly radio and television; the teaching of traditional philosophies and life-skills; “culturally inclusive” school curricula; oral history collection; orthographic reform; dictionary making; and, in some jurisdictions, the assignment of “official status” to indigenous languages (Olsen, 1992).

Along with these initiatives, however, new threats and challenges to indigenous social and cultural sustainability have appeared, most fuelling (or fuelled by) an increasingly rapid pace of externally forced, disruptive social change. These include, but are not limited to, globalization, urbanization, exposure to mass media, population growth, demographic shifts, a widening “generation gap”, withdrawal from traditional hunting, fishing or herding economies (with the resultant dietary shift away from country foods and its associated consequences for health and wellbeing) and, ideologically, the growth of neo-conservative tendencies among the nation states incorporating indigenous homelands within their boundaries (cite Henry Minde etc). However, besides focusing on external forces, research should reflect and investigate the challenges and dynamics that exist in many arctic communities and that enable them to absorb, reject, and incorporate new ideas, traditions, and technologies.

The vitality, resilience, creativity and cultural persistence of indigenous communities are often and properly noted (AHDR, 2004:230). It has also been pointed out that along with undeniable cultural loss there are parallel processes of “culture gain” and “culture creation” (AHDR, 2004:60). In addition, there is a recent trend away from the reactive “problem solving” approach to arctic issues towards the development of a pro-active “pre-emptive” stance.

Despite the undeniable negative effects on arctic cultures and communities of global processes such as climate change and rapid social transition, there are arctic communities that have taken significant steps to control their own future and destiny (AHDR, 2004:240) by using new global opportunities. Even the most remote arctic communities are now in the process of accessing the internet, tourism is being promoted, knowledge about the rights of indigenous peoples in other parts of the world is being sought, and so on.

Nevertheless, there are arctic communities where, for various reasons, resilience and cultural continuity are severely compromised, and where community integrity is threatened by endemic social malaise often manifest through extremely high rates of abuse, addiction, malnutrition, family dysfunction, identity loss, intergenerational divergence, and suicide (these issues, as well as others, were addressed by ICC [date]); see also Anon, 2004; Fienup-Riordan, 2000). Clearly, in some regions, there are serious issues on the wider social front whose resolution will be essential for, and in part depend upon, successful outcomes of local initiatives to re-establish, at the individual and community levels, a strong sense of cultural identity and purposefulness.

Many indigenous communities in the Arctic are preoccupied with preserving traditional practices and knowledge regimes and thus bringing new order and meaning to endangered communities. Documented bases of traditional knowledge and practices have been established among indigenous peoples in Alaska particularly, and similar trends have taken place in Canada and Russia. The use of knowledge bases from the reindeer herding areas of Fennoscandia has spread to northern Siberia and the Aleutian Chain. These and other similar initiatives have had a significant impact upon the scientific community.

Over the next fifteen years it is reasonable to assume that external pressures on most arctic communities will continue, driven by factors, some already noted, such as rapid population growth, rising unemployment rates, immigration, emigration, social stratification, globalization, increased exposure to international mass media, and non-renewable resource exploitation. Climate change, particularly global warming, is likely to impact increasingly on both subsistence and commercial wildlife harvesting and fishing, with serious implications for local and regional economies, traditional diet, and cultural identity (ACIA, 2005).

Researchers and politicians sometimes use the term “endangered” to describe those cultures and communities where the native language is threatened, where the economy has developed away from being subsistence based or where traditional dress is no longer in use. Although many communities are severely affected by social malaise there is an urgent need to look at cultures from a development perspective instead of seeing indigenous communities as being passive victims of an inevitable process.

Strong, resourceful responses will be required from indigenous communities to meet the challenges mentioned, to mitigate their negative effects, and to engage the opportunities that they present. The appropriateness and effectiveness of these responses will depend heavily on strong local values, identity, and life skills, integrated with a well-delivered and well-received mainstream education system.

Schools in arctic communities established by the “colonizing” nation states were initially intended as instruments of acculturation and assimilation, whereby local cultures, values, languages, and spirituality would be variously modified, replaced, or alienated by their presumed superior foreign equivalents (early schools in Greenland had a more benign approach to indigenous education, see AHDR, 2004:54). There is some irony in noting that schools are now, in many regions, seen as the main vehicles for the revitalization of the very cultures and languages they had once demeaned and diminished. Indeed, questions have been raised in some indigenous communities about the appropriateness of cultural instruction in schools. Are classrooms conducive to the teaching of indigenous languages, cultures and values? As one Inuk educator from Nunavik insightfully pointed out: “Inuit are strangers to school, but not to education” (Evie Ikidluak, quoted by Rigby et al., 2000).

For decades, and even centuries, indigenous peoples of the circumpolar north have gone through boarding schools, and many of those who received higher education now live in towns and cities. When indigenous peoples went to boarding schools and to southern towns for higher education they adopted many new cultural notions, but also met indigenous peoples from other communities and thus began to build the foundation for the political unification of dispersed communities under one political umbrella.

Nevertheless, indigenous peoples in some regions of the Arctic continue to adhere to norms of the traditional society such as a preference for traditional country food. But Inuit cultures have always been on the move and such a preference is often successfully combined with adapting to and incorporating Western traditions. That the continuity of certain indigenous traditions is strong in some regions but weak or non-existent in others (and among different groups of peoples) was rarely considered in earlier research, and the factors in play should be an important focal point for future research on the viability of indigenous cultures.

Thus, at the community level, not all attempts to integrate local culture and language with the school curriculum have met with full acceptance. In some regions (Nunavut and Nunavik in Canada, for example) there is debate, even controversy, over the degree of local control over education and the degree of inclusion of indigenous cultural material and languages in formal curricula (local control versus central control of educational programs is an issue flagged in the Arctic Human Development Report; AHDR, 2004). In addition, some parents argue that educational resources should be allocated exclusively to the teaching of English and other “non-traditional” subjects to equip and enable their children to thrive in the modern world.

In Greenland, the Home Rule authorities made the Greenlandic Inuit language the primary language in school and public settings, with Danish the second language. Years later, one impact has been that many youngsters are mono-lingual and severely disadvantaged in relation to further education where only Danish and English are used. Such developments have given rise to one of the most important cultural and political controversies in the post-Home Rule era.

The trend, however, by educators and policy makers alike is to strive for school curricula that solidly ground students in their local cultures and languages while affording them the best of contemporary mainstream education (AHDR, 2004). Guiding principles for the basis of contemporary circumpolar Inuit education and cultural continuity, and the necessity to link both, are set out in the relevant sections of the Inuit Circumpolar Conference document on Principles and Elements for a Comprehensive Arctic Policy (ICC, date). Formulated specifically for Inuit societies, pertinent sections of the document might also serve as a broad statement of indigenous intent and expectations relating to cultural and educational needs.

Noting the primacy of culture in bestowing meaning and identity to community life, the ICC document invites consideration of numerous principles relating to the development of education, language, and culture, as well as other crucial factors contributing to the sustainability and wellbeing of indigenous arctic societies. Some of the more general principles pertaining to culture and education are paraphrased below:

- indigenous language, customs, and traditions must be an integral part of basic learning;
- curricula should be closely associated with local communities and should accommodate differences in priority among various circumpolar regions;
- culturally appropriate and relevant content should be ensured in all materials and indigenous children should be made aware and proud of their heritage;
- indigenous students in circumpolar regions should be taught in their own language, beginning at the earliest possible age;
- structures must be established within indigenous communities to enhance the role of elders, to reinstate a respect for their knowledge, and to transfer this knowledge to youth; and

- continuing use of oral tradition must be encouraged and formalized by the production of indigenous histories and other educational, cultural, and scientific materials. These written materials and recorded tapes should be used in school curricula and local archives.

Key Science Questions

Given what is known about the past, present, and (conjectured) future circumstances of circumpolar indigenous societies with respect to culture and education, together with a general understanding of their expectations, how can research make a difference in these areas?

This ICARP II science plan identifies and frames a number of specific research questions, bearing generally on topics common to the indigenous circumpolar world, whose investigation would contribute to a clearer understanding of the issues and would help shape future initiatives, programs, and policies.

Cultural Continuity

Cultural and linguistic continuity among some indigenous groups in the Arctic is perceived to be strong, among others weak. *What interplay of historical, sociological, political, and economic factors account for this difference? What is the effect of supportive public policies and programs offered by regional and national governments in promoting indigenous cultural and linguistic continuity?*

Communication

How can current and emerging communications technologies contribute effectively to the preservation, promotion, and development of arctic cultures and languages? What are the likely adverse effects of these technologies on indigenous communities, and how can they be minimized?

Language

Indigenous language loss, erosion, and shift are frequent topics of socio-linguistic research. In recent years there has been an increase in local and regional attempts at language revitalization. *How successful have these attempts been? What are the standards of measurement? What conditions are prerequisite for successful language revitalization?*

Non-indigenous immigrants, or “incomers,” to arctic communities rarely acquire adequate competency in the local language or dialect of their community (sometimes despite enabling official policies). *What are the barriers (teaching methods/materials, social factors, etc.) to language acquisition by incomers? How can these barriers be lowered or surmounted?*

Bilingualism, even multilingualism (usually a combination of an indigenous language and one or more European languages), is a feature of many contemporary arctic communities. *How can bilingualism be maintained without threatening the integrity of local indigenous languages or dialects?*

Indigenous Knowledge

Oral history embodies the intellectual heritage of indigenous arctic cultures. In many parts of the Arctic much of this heritage is no longer passed down orally but instead resides, mostly unrecorded, in the ageing memories of a rapidly diminishing number of elders, many of whom spent their formative years on the land away from established colonial settlements and towns. In many communities elders’ knowledge provides the only alternative to the histories and accounts of indigenous cultures recorded by agents of the colonizing states, including anthropologists and historians. It is crucial to record and document the oral history of these elders while it is still possible to do so. *How can this be accomplished effectively in accordance with local indigenous wishes and direction? Which*

recording/collection/archiving procedures, technologies, and methodologies are appropriate and effective for arctic communities? How can oral history and traditional knowledge be elicited appropriately and a balance achieved between men's and women's representations? How best can oral history and traditional knowledge be integrated with local and regional school curricula? Do the products of oral history projects, when made available to the community, support cultural continuity, language enhancement, and self-representation? What are the issues relating to the sharing of oral history and traditional knowledge outside the community from which it originated? What regional, national, and international copyright laws and intellectual properties rights bear on the use, publication, and distribution of indigenous oral history?

Anthropologists and others have often documented and stressed that traditional knowledge is not always “static”, and that “living” knowledge often includes traditional knowledge. However, much more needs to be known about the relationship between traditional knowledge and contemporary knowledge. *How is traditional knowledge interpreted and re-interpreted in contemporary indigenous society? Has the emphasis placed on elders and traditional knowledge in some regions served to devalue current “living” indigenous knowledge, to alienate youth, and to widen the “generation gap”?*

The time now seems ripe to establish communication between different kinds of knowledge regimes in their different representations across the Arctic. *How can this be done?*

Increasingly, indigenous knowledge is being used to inform western scientific research on a variety of issues, particularly on climate change and wildlife management. *What exactly is the nature of the association between these two systems of knowledge? How are they integrated? Is their relationship becoming politicized?*

Ethnographers, explorers, adventurers, and geographers have for years registered an enormous amount of knowledge on geographical details on indigenous lands and territories. A great deal of this material has never reached the indigenous communities and is rarely used as official geographical names. Most of this material is in storage in diverse research institutions outside the Arctic and scattered versions of this material occasionally appear in publications. This material is part of the indigenous intellectual culture and contains significant symbolic value. *How can this knowledge be delivered to future generations? Should this be by the construction of an arctic map with original geographical names?*

What are the local effects on indigenous communities of commercializing or “commodifying” traditional knowledge and culture for external consumption through, for instance, tourism and mass media?

Education

In general, the demographics of arctic communities are weighted heavily towards infants, children, and youth; a trend that is likely to continue. School resources are under increasing pressure, and in many communities dropout rates are high and attendance rates low, particularly in the upper grades. *Why is this so? What factors – social, cultural, demographic, or pedagogic – contribute to the perceived “failure” of schools in some communities and the perceived “success” in others? What are the current best practices in arctic education programs and how can they be suitably adapted and shared for the betterment of the wider indigenous community? What is the role of indigenous cultural material in mainstream education programs? Is each enhanced or weakened by this integration? How best to present indigenous curricula from a local and arctic perspective? How can indigenous curricula and mainstream education be optimally integrated and balanced in a way that affords students a rich intellectual and spiritual life, along with multiple occupational choices? How has the tension between local and central control of education across the Arctic affected the direction and quality of arctic education?*

The unemployment rates are high in most arctic communities. *How can education programs contribute to a strong and enhanced intellectual, spiritual, and recreational life independent of employment status?*

In some jurisdictions vocational and industrial training is offered at the expense of “softer” subjects such as indigenous and mainstream arts (music, dance, sports, theatre, and creative writing). *What are the implications of this trend on local cultural identity and wellbeing?*

2.2.2. Wellbeing and Health

General

Individual wellbeing is an inclusive concept, which covers all aspects of living as experienced by individuals, and includes the person’s subjective evaluation of his/her objective resources. It therefore covers both the material satisfaction of vital needs and aspects of life such as personal development, being in control of one’s own life and destiny, and a balanced ecosystem. The individual experiences are however closely related to the collective wellbeing of social groups, communities, and nations.

The concept of wellbeing is complex with physical, mental, emotional, and spiritual aspects. The complex interrelation between physical, mental/intellectual, spiritual, and emotional facets of wellbeing is a theme explored by many indigenous cultures. For example, many aboriginal societies use the “Medicine Wheel” as a symbol of holistic healing that embodies the four elements of “whole health”. The natural world is also a key part of wellbeing because of the intrinsic connections and interrelationships between people and the environment in which they live. Wellbeing flows from balance and harmony among these elements.

There is obviously a discrepancy between the indigenous feeling of wellbeing and that defined by traditional Western social science researchers. Hence, the concept of wellbeing must reflect the ways of life and the priorities of the indigenous peoples in question. This also has profound implications for conventional Western views on health, where the focus on individual health problems (abuse, maladjustment, lifestyle symptoms) contrasts with that of the collective or community-based approach by many indigenous peoples. Key scientific questions were discussed by this working group relating to what kinds of control are effective to individuals, families and communities?

To a large extent it is possible to compare the character of the health situation of indigenous peoples in one arctic community with that of others. This is the case whether the indigenous peoples make up a majority of the population, such as in the self-governing regions of Greenland and Nunavut, or a minority, such as in Alaska, Scandinavia, and the northern regions of Russia. Thus, in Greenland the health and disease patterns of ethnic Greenlanders are comparable to that of regions where indigenous populations constitute a minority.

Today, the indigenous peoples of the Arctic suffer from a large range of health problems that are considered to be connected with the so-called modern society. Diseases such as lung cancer, breast cancer, obesity, diabetes, and heart disease are becoming more common, together with the threat from environmental hazards such as mercury, PCBs (polychlorinated biphenyls), DDT, dioxins, and other organochlorine compounds that threaten fertility and the immune system, and cause cancer. Many chronic diseases such as diabetes, hypertension, obesity, and cardiovascular disease are the result of rapid changes in lifestyle, particularly in dietary habits and levels of physical activity (Young, 1994).

Indigenous peoples in most communities, especially in the urban centers, have lost the foundation of their traditional nutritional practices. In addition, many traditional food resources, such as fish and marine mammals, have become contaminated to the extent that their consumption is potentially dangerous to human health. Traditionally, indigenous peoples have adapted to a diet rich in proteins, complex carbohydrates, and unsaturated fats, and low in simple carbohydrates (sugar) and saturated fats.

Traditional foods and traditional practices relating to “country foods” are, however, highly praised by indigenous peoples. Imported foods, by contrast, are neither an economic, nor a cultural or nutritional alternative to traditional foods.

The traditional family structure has been transformed. Norms and values, gender and intergenerational relationships have changed dramatically.

In today’s arctic communities many children die, become critically ill, or do not thrive. This is often a result of or influenced by the modern social welfare system. Even with advanced technology the possibility for therapeutic cure of all today’s health problems is limited. It is therefore necessary to intensify health promotion initiatives and through research create a better understanding of the relationship between health and social, cultural, and environmental parameters.

It is well known that child abuse, suicide, incest, domestic violence, and other forms of social malaise are widespread among arctic indigenous peoples. Their high incidence is usually connected with rapid cultural change, loss of identity, and lack of self-esteem. As such, it should be emphasized that health and development programs are linked to cultural contexts.

There is a significant discrepancy between the view of health by indigenous peoples and by health workers and scientists that most often are outsiders. Indigenous communities usually prefer approaches which encompass the whole community rather than which aim at certain “target groups”. The Western model of analytical segregation of communities for the purpose of health education and health promotion can hardly gain support from indigenous peoples when they feel that this approach may result in “blaming-the-victim” models of community organization. In contrast, doctors and scientists often compare the health situation with that of the South with which they are familiar and where they were educated. This background determines their health parameters, and their recommendations are often based on recommendations from this other culture. The health system is not culturally adjusted to the North, and nor is health science.

In the Arctic there is often an imbalance between health promotion and treatment. Through public campaigns the focus is usually on how to minimize risk factors such as smoking, and alcohol and drug abuse, as well as sexually transmitted diseases rather than looking at the causes of these forms of abuse. Research in these areas needs to be entrenched in the local communities and involve local researchers as actors.

Another factor is educational level. This, by and large, is lower than in the South and information will therefore not reach the same proportion of individuals in the Arctic, and when it does the people are often unable to read or to understand what they have read.

Although scientific methods are universal, these must take cultural perspectives and local aspirations into account. What is good for one society may harm another.

Key Science Questions

Wellbeing and Control

The need for research into health and wellbeing is not to point out physical or chemical risk factors. It is well known, for instance, that being overweight and having the wrong diet leads to diabetes, but to understand why people get overweight and choose the wrong diet it is necessary to consider the relevant historical, sociological, and cultural factors. It is assumed that people have a deep wish to control their life, and are good at that, as long as they live in harmony with themselves, their family, and their community. The linkage between wellbeing and factors such as employment, education, and the feeling of success remains a challenge to researchers.

What kinds of control – economic, social, political, cultural – are essential for the wellbeing of individuals and communities?

Social Development and Living Conditions

The rapid development of arctic communities has meant radical changes in family structures. It is assumed that there is a linkage between these changes and social problems. *What specific circumstances of rapid change leads to disintegration of families and the creation of social problems? Under what circumstances have families adapted to rapid change.*

There is a need for planners to increase their knowledge about the connection between specific diseases and social, cultural, and environmental parameters. *Are there specific diseases that can be attributed to factors during pregnancy? Are there specific diseases that can be attributed to specific conditions during early childhood and adolescence? What kinds of conditions during pregnancy, childhood, and adolescence have lifelong effect for disease patterns?*

Future research on the relationship between health patterns, wellbeing, and conditions during childhood should have a long-sighted timeframe and should include the testing of theories and methods of health intervention. *What are the relationships between ill health, lifestyles, and cognitive development? How can a database be established that continually contributes information of relevance to arctic communities?*

Human Biomedical Research

Arctic populations live under unique climatic and physical conditions. Rapid changes in lifestyle, nutrition, housing, and communication combined with a distinct genetic population presents ideal conditions for studying the relationships between environmental conditions and genetic patterns. *What are the reasons for the accelerating frequency of obesity, diabetes, and cardiovascular diseases? Is there a connection between viral infections, high prevalence of tubercular and venereal diseases, and changes in the relationship between microorganisms in the arctic environment and human beings?*

2.2.3. Economic Models

General

Two issues are of outstanding significance for future research agendas: economic development models based upon local realities, priorities and visions, and the establishment of sustainable management systems. In both cases, a criticism leveled at policy-making is that this is increasingly being framed at the international level through international organizations or bilateral agreements rather than at the national or local/regional level. On the level of policy-making there has been a change from focusing on self-sustained nation building towards an open economy with emphasis on globalization and international cooperation.

Globalization of the public discourse has also reduced the ability of indigenous peoples and local governments to deal with matters of fundamental concern to them. The anti-sealskin campaign is one example. Another example is the lobbying by sports fishermen and sports hunters that has dominated the public discourse to the detriment of indigenous subsistence interests, particularly in Alaska and Canada.

Economic development models can be used to evaluate different scenarios and, for example, the impact of different economic strategies, to facilitate ways to avoid crises both regionally and nationally. There is today no overview of management systems in relation to the use of natural and renewable resources in the Arctic. Specifically, there is a need to know the origins of the management systems prevalent in the Arctic today to enable a comprehensive and critical analysis of the extent to which these are adequate in relation to the areas that *de facto* are governed by them.

Use of specific natural and renewable resource management systems impacts upon the livelihoods of indigenous peoples in all arctic communities. For example, coastal communities may be put at risk by the implementation and failure of marine policy-making and management systems designed to ensure the conservation and sustainable use of living marine resources.

Indigenous peoples throughout the Arctic continue to depend largely on harvesting and the use of living terrestrial, marine, and freshwater resources. Many of these resources (e.g., fish, seals, whales, and caribou/reindeer) are used as food, and for clothing and other products, but also figure prominently in the cash economy of local households and communities. Indigenous peoples maintain a strong connection to the environment through traditional resource use activities, which provide the basis for food production. While these activities, and the food they produce, have economic and dietary importance, they also have a far-reaching social and cultural importance. Increasingly, however, indigenous fishers and other resource harvesters, such as whalers and seal hunters, perceive themselves to be victims rather than beneficiaries of marine resource policy and management systems. Sustainability cannot be reduced just to competing economic and ecological issues, as it is first and foremost a social issue. Establishing economic models of sustainable development and working towards ensuring the sustainable use of living marine resources in the Arctic must ultimately be concerned with community viability and the promotion of sustainable livelihoods.

Researching the nature of the harvesting and uses of living resources as an industry, as an economic practice, and as a way of life requires an understanding of the tendency towards unsustainable practices. Sustaining one practice or product, or protecting one area, may generate pressure on another. This is the case, for example, with restrictive quota systems that forces fishers and hunters to concentrate harvesting activities on non-quoted species. It might also push fishers into international waters outside national jurisdiction where the high costs of fishing these areas may result in fishers increasing their catch to break even.

Finding appropriate ways to achieve sustainability requires an examination of the processes of negotiation, and choice and decision-making within households, communities, and regions. From a wider regional or even global perspective, scientists, environmentalists, and policy-makers may view the goal of sustainability to be the protection and viability of renewable resources and an entire ecosystem; however, from the perspective of producers, it is the fishing industry and markets which need to be sustained; and from the perspective of the local fisherman or seal hunter, it is the viability of the family, household, and community which is at stake.

Researchers (“science”) as well as local people (“indigenous knowledge”) are often led by their immediate and short-term interests in their approach to research issues. This makes planning very difficult and increases the gap between the two parties. Much attention has been given to the viewpoints of each party and to attempts to reconcile these viewpoints instead of to considering the viewpoints as part of a negotiating process which results in the separate backgrounds of each party being integrated into the decision-making process.

Key Science Questions

Models

Economic models and policies in modern arctic societies are traditionally designed and legitimated in administrative and political institutional contexts outside the Arctic. A key concern of future research should be a critical examination of these contexts aiming at gaining new grounds for decision-making. *Do new government approaches allow a more encompassing approach to the design of economic models and resource management? How far do management systems remain outside the domestic sphere and within the framework of international relations?*

International commercial, political, economic and conservation interests impact upon arctic economies and management systems. To an increasing extent they also experience the impacts and consequences

of climate change. It is also known that indigenous business interests are constrained by external definitions of “subsistence” and “tradition”. *There is a need to review and identify such barriers (including legislative and trade regulations) and their implications for local and indigenous peoples’ business interests. How do commercial, political, economic, legal, and conservation interests reduce the abilities of indigenous peoples to adapt and be flexible in coping with environmental change, climatic variability, and economic changes?*

The application of specific economic models and management systems will have an impact upon and facilitate or restrict the sustainable use of resources and thus the livelihoods of local and indigenous communities of the Arctic. *What kinds of social and cultural implications are there when economic models and management regimes transform common use rights into the private property of a select group of producers? What are the existing development perspectives for the Arctic in relation to, for example, small-scale versus large-scale developments, strategies for the reduction of economic dependence, and capital import/export? What is the relationship between the public and the private sector, the interaction between plan and market respectively the boundaries of the public and the private – and what is the significance of different kinds of ownership?*

Governance and Management

An understanding is needed of management systems, particularly wildlife management and management of marine resources. Management, particularly fisheries management, has tended to focus on catch and harvest with the ultimate goal of stock management, exemplified by the ITQ (Individual Transferable Quota) system which invests property rights in a resource and is designed to ensure the economic efficiency of fishing. Environmental governance can be understood to include the “much broader social institutions” (Elliot, 1998:5), rather than the formal organizations, which exist in order to address and deal with environmental issues. This raises the following questions: *What kind of new governance approaches to renewable resource use are emerging in the Arctic and do they promote or endanger sustainable use of renewable resources? In what ways are indigenous peoples empowered, if at all, by new governance systems (e.g., in Nunavut and Greenland)?*

Indigenous peoples and local communities are often forced to negotiate on terms and conditions different from their own and are often short of resources (economic, knowledge). *Can co-management and governance institutions create additional opportunities to increase resilience, flexibility, and the ability to deal with environmental change? How far are renewable resource use activities determined by resource management regimes, land use and land ownership regulations, and local and global markets?*

Non-renewable Resources

Indigenous peoples all over the Arctic are worried about the environmental, social, and cultural implications of exploitation of non-renewable resources on their lands and territories. Most indigenous peoples, however, seem to realize that the economic future of the arctic regions, and with that their own social and political aspirations, will depend on the exploitation of minerals, oil, and gas. This coincides with the pressure on indigenous and arctic communities from mining companies and governments to exploit the Arctic’s non-renewable resources. Under these circumstances, indigenous groups and local communities are often powerless with little opportunity to make a free and informed choice.

Research is needed that scrutinizes negotiations processes between governments, indigenous peoples and communities, and companies. Do the decisions to establish non-renewable projects live up to the international norms of free, prior, and informed consent? Are indigenous peoples and communities equal partners in the so-called “impact assessment studies”? And do assessment studies really balance environmental protection imperatives with economic benefits? What are the options for local communities faced with large-scale development to be in control of their own cultural and social future?

2.2.4. Indigenous Peoples and the State

General

The political systems of the Arctic are the results of an historical development that was initiated by the expansive colonial policies of the European and Euro-American states. Today's political structures in the Arctic are the result in part, of the historical formation of the states and the building of new nations. The Arctic was seen as a frontier, and colonialism and assimilation became the main strategies of the states bordering on the Arctic in their nation-building processes.

Following the Second World War the indigenous peoples of the Arctic reacted by claiming self-government and this has given rise to a number of ethnic and public autonomies. While the nation building by indigenous peoples represents one trend, it is also obvious that the political and economic presence of the Arctic States is increasingly evident. However, there is an enormous variation in governmental arrangements, which reflects economic, demographic, and political differences.

Indigenous peoples of the circumpolar north are numerically small groups of people scattered across vast geographic territories. There has been a general trend for indigenous peoples to carve out political and administrative regions within which they comprise the majority or at least a significant proportion of the population. In Greenland, indigenous Greenlanders make up 88% of the population; Nunavut was cut out of the Northwest Territories and 85% of the population is Inuit; the Natives of Alaska have used several means to establish regions where they exert a maximum amount of economic or political control, such as boroughs, village and regional corporations, and traditional villages. In Russia the autonomous regions were based on the aboriginal populations, but in the majority of the ethnic-administrative regions today indigenous peoples comprise only around 1 to 2% of the total population.

The Arctic Human Development Report (AHDR, 2004) emphasized three dimensions of human development essential to arctic residents: (a) controlling one's own destiny, (b) maintaining cultural identity, and (c) living close to nature. Distinctive features of indigenous peoples are traditional land use by hunters, fishers and reindeer herders, and a high degree of self-consciousness connected to the land and to traditional knowledge.

There are significant variations within the Arctic with regard to these three factors. While political control of land and territories (including water and ice) is a key issue for indigenous peoples in most parts of the Arctic it is less so in Greenland where ownership of land does not exist. However, conflict in relation to sub-surface resources is a political issue in all arctic regions simply because exploitation of living resources has its limits for further economic development. Local control of own affairs and own future seems to be an issue for all arctic communities and the political strategies adopted should reflect this. However, little is known about the linkages between such wishes and political decision-making processes.

Indigenous peoples of the Arctic fall under the legal system of the states within which they live. The cultural, economic, and political aspirations of indigenous peoples are often not protected by the state legal systems even in those cases where the rights of indigenous peoples are guaranteed by the Constitutions. Arctic national states vary in relation to how they apply justice to indigenous peoples. In some countries a "Western" constitutional approach is imposed on the understanding that legislation and practice of justice should be standardized. In other areas, however, there have been attempts to apply an inclusive approach where elements of traditional customary law have been built into the legislation in accordance with national legislation.

Indigenous peoples have gained some political control in parts of the Arctic, for example in Nunavut and Greenland. Taking control of an old colonial structure is not easy and where this control is only partial the result may be frustration and victimization of indigenous peoples. As little is known of the background and processes underlying such difficulties there is an obvious need to investigate the

political impacts and opportunities inherent in self-government systems that rely on block grants from national governments.

The claim of indigenous peoples for self-determination and self-government often contravene the interests of newcomers, mining companies, and settlers, etc. This is the case where settlers and immigrants make up the majority of the population, but is also the case when states depend upon revenue from mineral, oil, and gas activities. Cases of conflict are numerous in all parts of the Arctic, but more research is needed on the relationship to outsiders when self-government has been initiated or local political control has been established.

The establishment of the Arctic Council with the permanent participation of the national and international indigenous organizations is unique in its governmental structure. Such a structure should also imply opportunities for greater contact between indigenous peoples in the different arctic countries. The extent to which this has happened, however, has been little analyzed, and the extent to which this reflects the exact structure of the Arctic Council, that in theory should provide a model for indigenous peoples in other parts of the world, is also worthy of attention. However, some indigenous peoples have taken initiatives to learn about self-government structures in other areas of the Arctic (Wessendorf, 2005).

Key Science Questions

Legal Systems

Politics of legal pluralism may become one of the possible ways to protect the rights of indigenous peoples. The establishment of types of self-government regimes has made it necessary to increase the focus upon the issue of justice. One approach might be to document the various practices of traditional understanding compared to those of national understanding. The issues at stake include ownership, management, acquisition, resource management, and intellectual property issues. *How and to which degree may customs and traditions be included in the state legal system? How much can the practice of legal pluralism promote protection of the rights of indigenous peoples as human beings, citizens, women and children? Is it possible to create a culturally oriented normative system sensitive to cultural-linguistic and socio-economic demands of indigenous peoples? How can traditional indigenous legal knowledge be “translated” into the language of official jurisprudence and anthropological discourse?*

Silence as a form of communication. In legal contexts such as courtroom procedures indigenous peoples often remain silent appearing to take a non-responsive attitude, which has been interpreted as acceptance, non-committedness, or a problem of interpretation, rather than as a specific form of communication. *Is silence a specific password on interaction of indigenous peoples with the outside world?*

Political Models

The arctic indigenous movements have gained noticeable political results, nationally and internationally. Among these are several types of unique autonomies, cooperation across boundaries, and representation in the Arctic Council. Some results are seen as models by indigenous peoples outside the Arctic. *What is it exactly that makes these models unique and distinct? Can these models retain this uniqueness and distinctiveness in the future? How are indigenous rights protected in the various types of self-government arrangements?*

To promote their interests indigenous peoples have opted for land claims solutions, the establishment of public governments, or for ethnic autonomies. In parts of Russia indigenous peoples have proportionate representation in some legislative bodies. *Under what circumstances are these diverse types of representation effective mechanisms to protect and promote the rights of indigenous peoples?*

Besides being part of official political structures indigenous peoples have also chosen to establish strong non-governmental organizations such as Inuit Circumpolar Conference, the Saami Council, and the Association of Small Indigenous Peoples of the North, Siberia and the Far East. *Under what terms and conditions do these organizations and representations express the legitimate and legal rights of indigenous peoples? To what extent do international law and international processes influence the life of indigenous peoples of the Arctic? How successful has the Arctic Council been at building the capacity of indigenous peoples as participants in Arctic Council meetings, working groups, and initiatives? Are indigenous peoples kept at arm's length by member states? Does the category of Permanent Participant actually recognize indigenous issues, or is there a danger of the Permanent Participant category being opened up to membership by non-indigenous groups?*

Indigenous politicians sometimes blame the dominance of non-indigenous cultures, languages, economies, and practices for their lack of control even though they themselves have assumed the political control. Owners of production facilities, offices, and workshops, complain about indigenous peoples not being disciplined to salaried jobs with regular working hours. And researchers talk about cultural differences. *Under what terms and conditions become victimising and instrument for decision-makers? Should modern institutions incorporate indigenous cultures, or should the indigenous cultures incorporate modern institutions? What are the options for indigenous peoples to promote their rights as indigenous peoples without violating the rights of others?*

Centralization and Decentralization

The establishment of new self-government regimes can be seen as decentralization. However, for people living away from the urban centers it is merely a new form of central government. While some self-government regimes in the Arctic initially opted for a decentralized development this did not last. In several cases the central governments have promoted a policy of devolution, i.e., a gradual transference of administrative and political authority. *What are the implications for indigenous peoples of decentralization, devolution when the indigenous peoples are in a minority position?*

Arctic economies seem increasingly to be relying on large-scale development of non-renewable resources owned by multinational companies. *What are the implications for indigenous peoples when states deregulate or reassert control over natural resources? What kinds of consequences will large-scale developments have for self-government and autonomy in the Arctic? Will they increase opportunities for self-government or increase dependency on national governments and trans-national corporations?*

The urban development that takes place all over the Arctic is often blamed for social malaise and cultural erosion, etc. However, there are many cultural and economic ties that make sense to peoples' feeling of social, political, and cultural wellbeing. *Can new research roads be created by not focusing separately on situations in the urban and rural areas but by trying to specify all types of relationship that link urban and rural dwellers? What kinds of social and economic networks do people move within?*

2.3. Linkages

The research addressed by this ICARP II science plan relates to a number of other initiatives, some of which are ongoing. The Arctic Human Development Report (AHDR, 2004) dealt with a number of matters directly relevant to this science plan as did the Survey of Living Conditions in the Arctic (http://www.iser.uaa.alaska.edu/projects/Living_Conditions/index.htm) and the Arctic Climate Impact Assessment (ACIA, 2005; <http://www.acia.uaf.edu>). Plans are developing for the International Polar Year (<http://www.ipy.org>) and several projects concerning the lives and political situations of indigenous peoples have been proposed. To get the most from the research efforts of the often very small arctic social sciences research teams the proposed activities should be seen in the light of the inclusion of an arctic social science focus in the overall International Polar Year science program, including Research Theme #6 and Observational Strategy #6.

2.4. Future Activities/Implementation

A key issue is the ownership and active participation of arctic indigenous peoples in research activities. This should be reflected in future programs and the implementation of science plans.

For each of the four focal points in this ICARP II science plan (i.e., culture and education, health and wellbeing, economic models, and indigenous peoples and the state) scientists and concerned indigenous persons and communities should be given the opportunity to propose specific research plans that break new ground.

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