



## Why the Arctic matters

Several years ago, scientists studying the effects of toxic chemicals found in the blood of people from heavily industrialized areas decided that they needed to compare these people with another group who would not have such chemicals in their blood. They went to the Arctic, thinking that would be the least likely place to find toxic chemicals. **BY JOHN CRUMP**

However, when the scientists examined blood taken from the Arctic people they were surprised by the high levels of toxins they found. Research from Arctic countries soon showed that far from being the clean, unpolluted land of everybody's imagination, the Arctic was in danger of becoming one of the more polluted spots on earth. Air and water currents carry the chemicals to the Arctic. Once there, they tend to stay. They are taken up by Arctic plants and animals and ending up in the bodies of indigenous peoples who rely on local foods.

### Survival or store foods

For Arctic indigenous peoples, contaminants are an issue of survival. Most people still rely on the land for a large portion of their nutritional intake. If they can not eat locally available food – seal, walrus, fish, polar bear – there will be direct health consequences. Even with the current contaminant load, in most

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places it is still better to eat this food than substitute fatty, high calorie but low nutrition store-bought foods. Study after study has confirmed the benefits to human health of wild food. And for Arctic indigenous peoples, eating local food is tied to their identity and value systems.

Arctic indigenous peoples used the information from these studies on toxins to lobby for international negotiations. Their influence was important in two international environmental treaties – the Aarhus Protocol on Persistent Organic Pollutants (POPs), which was signed in Denmark in 1998 and came into force earlier this year, and the Stockholm POPs Convention, signed in 2001.

Through these negotiations, indigenous peoples from around the Arctic formed an effective coalition that raised awareness, lobbied delegates and

governments, and conducted an effective media campaign. As a result, the Stockholm Convention is the first such agreement that specifically mentions the Arctic and its indigenous peoples. The Chair of the Stockholm negotiations, John Buccini, described the role of the indigenous peoples as “putting a human face on what many people considered a scientific or abstract issue.”

### Climate change in the Arctic

Now, indigenous peoples are bringing their concerns, perspectives and influence to bear on an even larger issue: climate change. Evidence of climate change is being seen and felt in the Arctic right now.

Saami are seeing their reindeer grazing pastures change, Inuit are watching polar bears waste away because of a lack of sea ice, and peoples across the Arctic are reporting new species, particularly insects. Some communities

have to sandbag their shorelines to try to slow down an increase in coastal erosion, while in others buildings, pipes, and roads are slumping because the permafrost is thawing. Vital travel routes linking communities to each other and to harvesting sites are becoming dangerously unpredictable.

### All Arctic climate information in one place

These observations are informing the Arctic Climate Impact Assessment (ACIA), a project of the Arctic Council and the International Arctic Science Committee (IASC). The ACIA will be submitted, along with a plain language summary and policy recommendations, to the Foreign Ministers of the eight Arctic Council nations at the Arctic Council Ministerial meeting in Iceland in September 2004.

The assessment is an attempt to

gather all of the information on climate change in the Arctic and to predict future changes. It will also recommend steps to governments and northern peoples that could be taken to reduce the amount of change, and the negative impacts of that change. The original direction from the eight Arctic Council states was to consider the environmental, social, economic and cultural implications of climate change. This means indigenous peoples have a key role in this process.

This is one of the first attempts to incorporate indigenous knowledge and perspectives on a regional basis. This partnership lays the foundation for future collaboration and sets a benchmark against which all other Arctic Council projects will be measured.

### Indigenous peoples help with assessment

Having indigenous peoples intimately involved with the collection of data, producing the assessment, and drafting policy recommendations is important. It brings to the debate some important allies. Arctic indigenous peoples are likely to be in the forefront of any international campaign to raise awareness about the assessment, its results, and its recommendations. Needless to say, part of this campaign will be designed to put pressure on the very governments that instituted the study – to get them to take the lead in negotiating new international agreements.

Having indigenous peoples speaking about the assessment and the recommendations will be important to their marketability. Indigenous peoples are participating with country representatives in developing these recommendations, and this will lend them greater weight and acceptability. Their voices will reinforce the message that the Arctic is an indicator region for global environmental health.

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## The impact of climate change on traditional food

Northern food production systems are under stress from a variety of forces. Many northern aboriginal communities experience periods of crisis in food supply due to the temporal fluctuations in natural food resources. **BY CINDY DICKSON**

Climate change will increase temporal fluctuations in species distribution, population abundance, morphology, behaviour and community structure. Some of the predicted and currently experienced changes in the north may create positive changes in animal numbers and distributions or provide opportunities to hunt new species as migration patterns and distributions shift.

The Canadian north is vast, rich in natural resources and includes the boreal forest, taiga and Arctic ecosystems. Indigenous peoples top the food chain in all three ecosystems. Athabaskan peoples in northern Canada eat large quantities of traditional foods obtained through hunting, fishing, trapping and gathering. Since market foods are much more expensive in many northern communities than in the south, traditional food provides many components of a quality diet at relatively low cost.

Besides its nutritional values, the traditional diet is also a source of cultural strength and is critical for the social, mental and spiritual well-being of individuals and communities.

### Improving indigenous health?

The potential health effects of fluctuations of natural food resources on indigenous peoples may be indirect as well. Environmental contaminants, long-range transport, accumulation and biomagnification in the Arctic environment will be affected by climate change. Predicting how climate change will alter contaminant mechanisms in the Canadian north in a global environmental context remains a challenge. Traditional foods can also provide protection against many diseases, which are more prevalent among southern populations. Environmental influences on the availability of and ac-

cess to these important sources of food, present the risk of losing these beneficial factors as well.

A project developed in partnership by two members of the Arctic Athabaskan Council, the Council of Yukon First Nations (CYFN) and Dene Nation, as well as the Inuit Tapiriit Kanatami and the Center for Indigenous Peoples Nutrition and Environment (CINE) of McGill University and Laval University will investigate the potential health impacts of climate change on three northern Indigenous communities.

The effects of climate changes in the north on indigenous peoples' ability to locate and procure these physically, social, culturally, mentally and economically important food sources are not simply predictions for the future, they are a reality in many communities today. However, the extent of these impacts and their implications for the nutritional well-being of individuals and communities is not yet well understood.

The project will work to develop strategies for adaptation to minimize potential impacts on the communities involved. These strategies will integrate local and traditional knowledge, wildlife biology, information on toxicology of environmental contaminants, food composition and nutrient requirement, food availability and effects of environmental changes, cultural and socioeconomic factors. Education and communication initiatives are also planned to assist individuals in making their own informed decisions on food choice.

Appropriate adaptation strategies will be cooperatively developed in the three communities. These strategies will be of value for environmental and health-planning exercises throughout the Canadian north and potentially the circumpolar world in the face of climate related changes.

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### OPINIONS OF THE WORLD

#### Climate change is a weapon of mass-destruction

Sir John Houghton, co-chair of the Scientific Assessment Working Group of the Intergovernmental Panel on Climate Change and former Chief Executive of the Meteorological Office, wrote in *The Guardian* in July 2003 that global warming is a “weapon of mass-destruction”. He said: “...And yet our long-term security is threatened by a problem at least as dangerous as chemical, nuclear or biological weapons, or indeed international terrorism: human-induced climate change. Like terrorism, this weapon knows no boundaries. It can strike anywhere, in any form – a heatwave in one place, a drought or a flood or a storm surge in another. Nor is this just a problem for the future. The 1990s were probably the warmest decade in the last 1,000 years, and 1998 the warmest year. Global warming is already upon us.”

Source: *The Guardian*