



## **Northern Contaminants Program**

The Northern Contaminants Program (NCP) was established in 1991 in response to concerns about human exposure to elevated levels of contaminants in the fish and wildlife species important for the traditional/country food diets of northern Aboriginal peoples. Early studies indicated that a wide spectrum of substances – persistent organic pollutants, heavy metals, and radionuclides – many of which had no Arctic or Canadian sources, were nevertheless reaching unexpectedly high levels in the Arctic ecosystem.

The first phase of the NCP (NCP-I) (1991-1996) focussed on gathering the data required to determine the levels, geographic extent, and sources of contaminants in the northern atmosphere, environment and its people, and the probable duration of the problem. Results from NCP-I were published in 1997 in the first *Canadian Arctic Contaminants Assessment Report* (CACAR).

During its second phase, which ran from 1998–2003, the NCP focussed on:

- ▶ impacts and risks to human health that may result from current levels of contaminants in key Arctic food species
- ▶ temporal trends of contaminants of concern in important indicator Arctic species and air
- ▶ improved education and communications activities involving northern communities
- ▶ efforts to control contaminant production, use and disposal at the international level

NCP-II addressed these issues under a number of subprograms: human health; monitoring the health of Arctic peoples and ecosystems and the effectiveness of international controls; education and communications; and international policy. The results of the research and related activities conducted during NCP-II are summarized in the *Canadian Arctic Contaminants Assessment Report II* (CACAR II) series of reports, which was released in March 2003. CACAR II is a comprehensive assessment of the last five years of research and related activities on northern contaminants funded under the NCP.

Five fact sheets have been developed, one for each of the CACAR II reports. These fact sheets provide a snapshot of many of the significant NCP research results described in each report.

## **Canadian Arctic Contaminants Assessment Report II**

# **Knowledge in Action**

The CACAR II technical *Knowledge in Action* report presents each step in the NCP process and how the process comes together as outlined in the following points:

- ▶ problem identification and priority setting
- ▶ addressing questions through responsible research
- ▶ interpreting results and making decisions within a benefit-risk framework
- ▶ communicating sensitive information within the northern communities
- ▶ contributing to and driving political action on local, regional, national, and international levels

## **Partnerships in the NCP**

Much of the strength of the Northern Contaminants Program is derived from the partnership approach that forms the basis of its management structure and process. The issue of food chain contamination in the North is multi-jurisdictional, involving federal, territorial, and Aboriginal governments. This complicated issue calls for cooperation among these jurisdictions. The NCP is directed by a management committee, which is chaired by DIAND, but which also includes representatives from northern Aboriginal organizations, territorial governments (GN, GNWT, YTG), and federal departments (HC, EC, DFO).

Through the partnership between the NCP and its Aboriginal Partners, including the Council of Yukon First Nations (CYFN), the Dene Nation, Inuit Tapiriit Kanatami (ITK), and the Inuit Circumpolar Conference Canada (ICC-Canada), internal capacity to work on contaminants issues and other important environmental issues has been developed within and among these organizations. Additionally, the NCP has been better able to respond to the needs and wishes of northerners through the involvement of the Aboriginal Partners, and many significant accomplishments have been realized in the program with their help, including the development of the program's Blueprints.



## ***NCP Blueprints***

*The Blueprints are guiding documents that get revisited annually to focus the program's resources on the highest research priorities.*

The NCP blueprint documents provide the long-term direction for the program and outline the specific gaps and priorities for research and activities under each sub-program. The goal and focus of each sub-program, as outlined in the blueprints, are briefly outlined below.

### **Human Health**

**Goal:** to determine the risks to humans, particularly on the developing fetus, from contaminant exposure by consuming traditional/country foods, as well as to characterize the benefits associated with this diet.

**Focus:** exposure assessment, toxicology, epidemiology, and characterization of risk/benefits.

### **Monitoring the Health of Arctic Peoples and Ecosystems and the Effectiveness of International Controls**

**Goal:** to collect physical and biological data necessary to support human health risk assessments and international controls, such as information on temporal and spatial trends.

**Focus:** abiotic monitoring and modeling, biotic monitoring, and local contaminant concerns.

### **Education and Communications**

**Goal:** to provide Northerners with the information needed to make informed decisions on their food use.

**Focus:** public awareness, directed communications, resource materials, infrastructure, and evaluation.

### **International Policy**

**Goal:** to control the input of contaminants to the Arctic through coordination on international monitoring programs and participation in international negotiating sessions leading to regional and global agreements.

**Focus:** incorporation of NCP scientific information, involvement of northern Aboriginal peoples, and international collaboration.

## ***Responsible Research***

From the perspective of northern Aboriginal peoples, the conduct of scientific research in the North can be a highly visible, yet often misunderstood process. To a scientist trained in the south, research in the North presents its own unique and unfamiliar challenges. To bridge the gap between these contrasting perspectives and diverging needs is a challenge in and of itself. It calls for a high level of coordination, consultation, cooperation and capacity building among the relevant regions and players. The NCP has made these aspects of the research process a priority in its approach to northern research.

The NCP has established a range of measures to ensure "responsible research" in all its fields of interest, with particular emphasis on studies conducted in the North. One of these measures is the set of *Guidelines for Responsible Research*, which provides direction for communities and researchers to agree upon mutual obligations and to foster beneficial relationships. The basic principles of these Guidelines can be seen at the bottom of page 3.

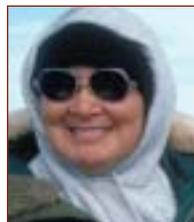
## ***Balancing Benefits and Risks: Consuming Country Food in the North***

The NCP approach to risk management involves the balancing of both benefits and risks. This is done through a cooperative, multi-agency approach, whereby the problem is considered in its ecological and public health context, and those who are affected by the risk management decisions are involved to varying degrees in the decision-making process. Of prime importance here is the involvement of the Territorial Environmental Contaminants Committees (TECCs) which are made up of a diverse group of people. The NCP has developed a process that involves people from a wide variety of backgrounds and experiences in making decisions on how best to provide information to northerners about the many benefits and potential risks of these issues. These individuals include medical doctors, wildlife researchers, toxicologists, and Aboriginal people among others.

For example, in 2001, the decision of a benefit/risk assessment of consumption of northern waterfowl livers was not to issue advice to limit consumption despite elevated levels of mercury, but rather to update current communication materials on the issue and draft a fact sheet reflecting this new information and the benefits and risks of consuming these foods. This was despite the fact that, if taken at face value and consideration of the risks alone, these levels would warrant the release of a health advisory to reduce consumption. The decision taken was based on consideration of the actual and regular consumption of these items which was lower in frequency and quantity than the advisory restriction that would have been issued. This was particularly the case among children and women of childbearing age. The decision also considered the potential unintended effects on people's diet and behaviour resulting from an advisory that was solely risk-based.



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GNWT/RWED/R. Popko

### **Basic Principles of the Guidelines for Responsible Research**

The Guidelines for Responsible Research are one of several tools to assist project leaders in the Northern Contaminants Program to initiate community contacts, build research relationships, plan communications, and, in some instances, develop research agreements with communities. According to the guidelines, responsible research includes the following elements.

**Consultation** – Appropriate consultation is required before any research can be conducted under the NCP. Researchers are responsible for explaining any potential beneficial and/or harmful effects of the research on individuals, communities and the environment. Greater consideration must be placed on the risks to cultural values rather than on potential contributions of the research to knowledge.

**Community Participation** – Research projects must include community participation in planning and implementation, as well as in identifying research topics and priorities. Research must be responsive to local or regional needs and must respect sacred sites, cultural materials and properties. Where practical, local Aboriginal researchers and assistants are to be employed and trained, and all those who contribute to the project are to be acknowledged in any publications in any publications resulting from the research.

**Partnership** – Researcher-community relationships are ideally established early on in the project planning process. It is recognized that these relationships are dynamic and will evolve throughout a project's duration. In some circumstances, researchers and communities may wish to set out the parameters of their agreements, including such details as "mutual obligations" for each partner, in a Memorandum of Understanding. An individual may exercise his/her right to refuse participation at any point in any study.

**Communications** – Leaders of all NCP projects, with advice from Aboriginal organizations and territorial contaminants committees, are responsible for ensuring that the most timely and appropriate forms of communications planning, materials and methods are incorporated into their project. Translation of summary reports into Aboriginal languages is critical and should be done wherever possible/appropriate.

**Data Reporting** – Researchers must ensure the accuracy of their results since these results may influence decisions and policies that can directly affect individuals and communities. The existing NCP protocols for dissemination of information are to be followed.

To date, no simple formula or equation exists with which to simplify this process of balancing benefits and risks of consuming traditional/country foods. Instead, processes have developed under the NCP to address the need to resolve the various perspectives and deal openly with the complexities of the problem.

### **Education and Communication Activities under the NCP**

Critical to the success of the NCP is its ability to communicate complex information to northerners to support their informed decision-making on food use. Recognizing this, the NCP invests significant time and resources into communications and education in the North and elsewhere on the issue of contaminants.

In order to deliver messages to specific target audiences identified by the program, the NCP has developed and adapted a number of different processes of communication. These processes rely on the existence of the communications network. Different processes of

communication are used at different times depending on the local context, message content, and goals of the activity. Community Tours were a new and well received mode of communication during NCP Phase II. They brought a team of experts to many communities in the NWT, Nunavut, and Labrador between 1999 and 2002 to present information about contaminants and related topics.

Additionally, Frontline training courses were offered in the Yukon, NWT, Nunavut and Labrador in an effort to increase understanding of contaminants issues among health care and environment professionals at the grass roots level to whom community members turn for information about environmental health related concerns.

Educational materials have been developed to fit into the school curricula in the Yukon and NWT (and Nunavut), which have enabled teachers to educate children and youth about contaminants in the North using the most northern-relevant information and examples.

#### **Curriculum material developed under the NCP**

##### **NWT materials**

- Teachers' Guide and Lesson Plans for Grade 7
- Teachers' Guide and Lesson Plans for Grade 8
- Teachers' Guide for Grades 7, 8, 9
- Teachers' Guide NWT Science 15, 25
- CD-ROM version school materials
- CD-ROM NCP graphics and clipart

##### **Yukon materials**

- "Contaminants Found Me: A Science Curriculum for all Yukoners"
- Book One: Grades 3-6
- Book Two: Grade 7
- Book Three: Grades 8-10
- Monty the Moose (series of three posters)
- "Contaminants Found Me", music compact disc and video



*Winning entries from the Contaminants in the North Poster Contest.*



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## **National and International Action on Contaminants**

The NCP has enabled Canada to produce world class science aimed at identifying and assessing past and current sources of POPs and metals, and in predicting global movement through the atmosphere. The results of NCP studies have provided the basis for policy decisions and action in Canada and on the international stage.

The NCP has contributed significantly to the efforts of the Arctic Monitoring and Assessment Programme (AMAP), which coordinates a program to monitor levels of pollutants in the circumpolar Arctic. NCP-funded research has contributed to the UN-ECE LRTAP (United Nations Economic Commission for Europe Long-range Transboundary Air Pollution) Convention, and the UNEP (United Nations Environment Program) Global Agreement on POPs.

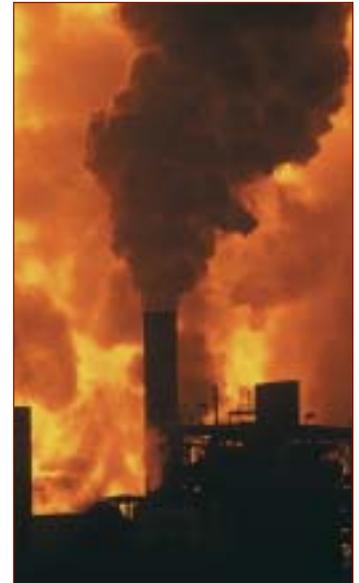
Northern Canadian Aboriginal peoples have played an extremely important role in translating NCP-funded research into international policy. In 1997, the NCP Aboriginal Partners formed a coalition called CAIPAP (Canadian Arctic Indigenous Peoples Against POPs), which successfully participated in global POPs negotiations.



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Science conducted under the auspices of the NCP was successfully translated into international policy. The NCP has had a marked influence on the conclusion of international agreements to significantly reduce emission to the environment of key POPs. That international agreements, including the Stockholm Convention, single out the Arctic and Aboriginal peoples is testament to this fact. It took less than 15 years – extremely quick for international diplomacy – to move from initial research that identified a POPs-related problem in the Canadian Arctic to a global convention that addressed the issue. The role played by the NCP in this period has been crucial. Not only did it generate scientific data to convince skeptics of the nature of the problem, but it has supported a process to educate and equip Aboriginal peoples so that they could effectively represent their interests on the international stage.

**For more information** on *Knowledge in Action* please consult the CACAR II series of reports, available from the Northern Contaminants Program Secretariat:

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