



Health
Canada

Santé
Canada

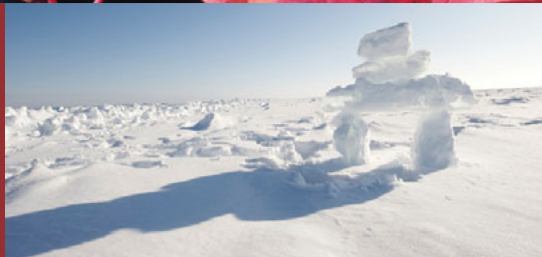
*Your health and
safety... our priority.*

*Votre santé et votre
sécurité... notre priorité.*

First Nations and Inuit Health Branch

**RESEARCH AND
MONITORING SECTION
ENVIRONMENTAL HEALTH
RESEARCH DIVISION**

**ANNUAL SUMMARY REPORT
2008-2009**



Canada 

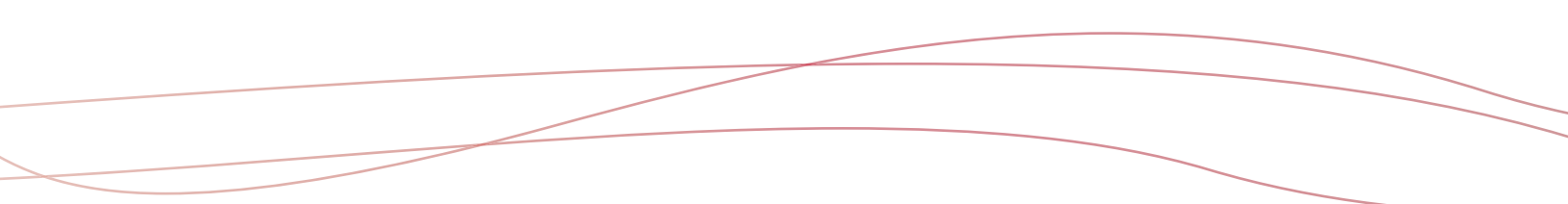
First Nations and Inuit Health Branch

**RESEARCH AND
MONITORING SECTION
ENVIRONMENTAL HEALTH
RESEARCH DIVISION**

**ANNUAL SUMMARY REPORT
2008-2009**



Research and Monitoring Section
Environmental Health Research
Division
Primary Health Care and Public
Health Directorate
First Nations and Inuit Health Branch
Health Canada



Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health. We assess the safety of drugs and many consumer products, help improve the safety of food, and provide information to Canadians to help them make healthy decisions. We provide health services to First Nations people and to Inuit communities. We work with the provinces to ensure our health care system serves the needs of Canadians.

Published by authority of the Minister of Health.

Également disponible en français sous le titre :

*Direction générale de la santé des Premières nations et des Inuits, Section de la recherche et de la surveillance,
Division de la recherche en santé environnementale, Rapport sommaire annuel 2008–2009*

This publication can be made available on request on
diskette, large print, audio-cassette and braille.

For further information or to obtain additional copies, please contact:

Publications
Health Canada
Ottawa, Ontario K1A 0K9
Tel.: (613) 954-5995
Fax: (613) 941-5366
E-Mail: info@hc-sc.gc.ca

© Her Majesty the Queen in Right of Canada, represented by the Minister of Health Canada, 2010

This publication may be reproduced without permission provided the source is fully acknowledged.

HC Pub.: 100599
Cat.: H33-1/7-2009
ISBN: 978-1-100-52621-8

INTRODUCTION

The key objectives of the Environmental Health Research Division (EHRD), First Nations and Inuit Health Branch (FNIHB) are to conduct, coordinate and fund environmental contaminants-related research in collaboration with First Nations and Inuit organizations, FNIH regions and the Department of Indian and Northern Affairs Canada (INAC). To support these objectives, the Research and Monitoring Section (RMS) coordinates and funds community-based environmental health research aimed at assisting First Nations and Inuit in assessing the extent of potential health impacts resulting from exposure to environmental pollutants; facilitates knowledge transfer, risk assessment and risk communication related to environmental health research for Aboriginal communities, health authorities and stakeholders; and provides advice to Health Canada's senior management on environmental health research issues.

MISSION

TO HELP FIRST NATIONS AND INUIT IMPROVE THEIR HEALTH AND WELL-BEING BY BUILDING AND SUPPORTING THEIR CAPACITY TO IDENTIFY, UNDERSTAND AND, WHENEVER POSSIBLE, REDUCE THE IMPACT OF EXPOSURE TO ENVIRONMENTAL CONTAMINANTS THROUGH COMMUNITY-BASED RESEARCH, RISK ASSESSMENT AND EDUCATION.

TABLE OF CONTENTS

Activities	2
2008–2009 Accomplishments	6
Additional Activities for 2008–2009	10
Priorities and Plans for 2009–2010	11
Organizational Chart	12

ACTIVITIES

ENVIRONMENTAL CONTAMINANTS RESEARCH

RMS focuses on community-based research and knowledge development on the extent of First Nations exposure to environmental contaminants of concern such as persistent organic pollutants and heavy metals, as well as emerging chemical contaminants. RMS conducts research and participates in two national research programs: the First Nations Environmental Contaminants Program and the Northern Contaminants Program. RMS analyzes the outputs generated from this research and works on the synthesis and knowledge translation of this information for First Nations, Inuit, Health Canada senior management and the general public.

FIRST NATIONS ENVIRONMENTAL CONTAMINANTS PROGRAM

The First Nations Environmental Contaminants Program (FNECP) was established in 1999 to assist Canada's First Nations people in assessing the extent of their exposure to environmental contaminants and the potential for associated risk to their health and well-being. The FNECP consists of two components:

National component

The National First Nations Environmental Contaminants Program (NFNECP).

The NFNECP is national in scope and is co-administered by the First Nations University (FNU) of Canada. The Assembly of First Nations (AFN) participates in the NFNECP as a member of the Steering Committee and as champion of the program. FNU, on behalf of the NFNECP Steering Committee, issues the annual call for proposals. Received proposals are reviewed and undergo a selection process. Proposals that meet the requirements are then evaluated by the First Nations-led Selection Committee. RMS enters into funding agreements with successful NFNECP applicants to implement their research projects. Project results are communicated back to the communities through various media.



Regional component

The Regional First Nations Environmental Contaminants Program (RFNECP). The RFNECP is administered by the Regional Environmental Health Managers and is designed to address local and regional environmental contaminants issues.

NORTHERN CONTAMINANTS PROGRAM

RMS participates in and contributes funding to the health component of the Northern Contaminants Program (NCP), which conducts environmental contaminants research in the Arctic ecosystem. The Northern Contaminants Program was established in 1991 in response to concerns about human exposure to elevated levels of contaminants in fish and wildlife species that are important to the traditional diets of northern Aboriginal people. The program's key objective is working to reduce and, wherever possible, eliminate contaminants in traditionally harvested foods, while providing information that assists informed decision-making by individuals and communities in their food use. The NCP is directed by a Management Committee that is chaired by Indian and Northern Affairs Canada (INAC) and includes representatives from four northern Aboriginal organizations (Council of Yukon First Nations, Dene Nation, Inuit Tapiriit Kanatami and Inuit Circumpolar Conference – Canada); the Yukon, Northwest Territories and Nunavut Territorial Governments; the Nunavik Nutrition and Health Committee; and four federal departments (Environment, Fisheries and Oceans, Health, and Indian and Northern Affairs). The Chief of RMS co-chairs the Human Health Technical Review Team.

ARCTIC MONITORING AND ASSESSMENT PROGRAMME

RMS participates in the Arctic Monitoring and Assessment Programme (AMAP) via its Human Health Assessment Group. AMAP was established in 1991 in order to implement components of the Arctic Environmental Protection Strategy agreed upon by Ministers of eight Arctic countries (Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the United States). AMAP is one of the six working groups of the Arctic Council. AMAP's primary function is to provide advice on matters relating to threats to the Arctic region from pollution and associated issues. The Human Health Assessment Group is responsible for assessment of human health risks from environmental pollution of Arctic environments.





COMMUNITY EXPOSURE ASSESSMENTS / TARGETED RESEARCH

RMS contributes to and participates in community exposure assessments and targeted research studies in collaboration with First Nations communities and provides expert technical assistance on research projects for regional environmental health offices and stakeholders. Assessments are conducted on an ad hoc basis, when determined to be important by the community and other stakeholders, with consideration of the priority of the issue and available funding. Assessments conducted to date have focused on exposure to environmental contaminants such as mercury and polychlorinated biphenyls (PCBs) and often include the collection of eating pattern/diet surveys and human biomonitoring samples.

TRADITIONAL FOODS SAFETY PROGRAM

The Primary Health Care and Public Health Directorate's involvement in nutrition and food safety is built on collaborative activities including participation in the Food and Nutrition Safety Initiative. Work undertaken as part of this initiative includes providing information on environmental contaminants in country/traditional foods. Traditional foods provide nutritional benefits and are also culturally, socially and economically important for many First Nations communities. However, issues such as avoidance of some traditional foods due to potential exposure to environmental contaminants are a concern. As well, the growing trend of Aboriginal populations to decrease consumption of traditional foods in favour of market foods could contribute to increased health problems such as heart disease and diabetes.

To help address these concerns, RMS works towards effective knowledge translation and education by holding regional workshops on environmental contaminants and traditional foods for First Nations health directors, leaders, nurses and community designates. The goal of the workshops is to promote the importance and benefits of a traditional diet and to provide information regarding the potential health risks associated with consuming some traditional foods affected by environmental contaminants. The workshops also address risk perception and risk communication issues and provide a forum for local community-based research to be presented and discussed.

The Traditional Foods Safety Program also involves conducting or supporting targeted research and risk assessments of chemical exposure to contaminants of concern through consumption of various traditional/country food sources.



First Nations Food, Nutrition and Environment Study

The First Nations Food, Nutrition & Environment Study (FNFNES) is a 10-year study that will develop a portrait of the total diets of First Nations, and baseline information on environmental contaminant levels in traditional foods. Initiated by RMS in 2007, FNFNES is a multi-year study that will address the knowledge gap that currently exists on consumption rates, nutritional composition and environmental safety of traditional foods on First Nations reserves, south of the 60th degree parallel.

The five components to the study include:

- household interviews aimed at determining food consumption patterns,
- drinking water sampling for trace metals,
- surface water sampling for pharmaceuticals and their metabolites,
- hair sampling for mercury, and
- traditional food sampling for contaminants and some nutrients (as required)

Primary funding of this study is provided by RMS through its Traditional Food Safety Program. The Community Programs Directorate, FNIHB is also contributing funds to facilitate assessment of nutrient intake and food security. FNFNES partners include the AFN (Dr Donald Sharp), UNBC (Dr. Laurie Chan) and Université de Montréal (Dr. Olivier Receveur). The FNFNES is housed at the UNBC, under the leadership of Dr. Laurie Chan, who holds the B.C. leadership Chair in Aboriginal Environmental Health.

OTHER CORE ACTIVITIES

RMS also works with other health protection branches of Health Canada and other government departments on a variety of issues such as:

- Health Canada Mercury Issues Task Group
- Interdepartmental Food Security Reference Group
- Participation in risk assessments of traditional food practices in collaboration with the Bureau of Chemical Safety, Health Products and Foods Branch
- Canadian Environmental Assessment Act Review process (upon request)
- Canadian Environmental Protection Act Review process (upon request)



2008–2009 ACCOMPLISHMENTS



NATIONAL FIRST NATIONS ENVIRONMENTAL CONTAMINANTS PROGRAM

- FNUniv and the Selection Committee collaborated in the review of proposals and RMS negotiated and administered contribution agreements for the five highest-rated projects.
- NFNECP project proposals underwent a science peer review with respect to scientific merit to help inform the project selection process.
- Five community-based research projects were funded through the NFNECP in 2008–2009 totalling **\$855,048**.
- Environmental contaminants research conducted by these community-based project teams included assessing the extent and impact of different environmental contaminants in various media and included research on: risks and benefits of traditional marine and traditional off-the-land resources; contaminants assessment in freshwater fish; and investigation into the potential impacts of landfill emissions on human health.

Overview of NFNECP Project Funding 2008–2009

PROJECT TITLE	COMMUNITIES/ ORGANIZATIONS	AMOUNT FUNDED (\$)
Examining the presence of contaminants in wildlife and plants	Takla Lake/TseyKeh Dene	244,650
Develop a model using biological, physical and chemical water parameters to predict recreational water illnesses in the Calling Lakes area	FNUniv/Peepeekisis/ Kahkewistaha	128,632
Focusing on human contaminants exposure pathways and contaminant levels in food sources	Wabaseemoong FN/ Asubpeeschoseewagong FN (Grassy Narrows)	213,673
Environmental Exposure in the Restigouche River	Gespe'gewaq Mi'gmaq Resource Council (GMRC)	57,750
Mapping of the contaminants affecting the health of the FN in NB	Union of New Brunswick Indians (UNBI)	210,343
Total NFNECP Project Funding		\$ 855,048

- Technical support was offered to project teams in attaining research ethics approval for projects, as well as in data analysis when required. All 2008–2009 NFNECP projects requiring research ethics approval were approved by Health Canada's Research Ethics Board.
- The Call for Proposals for the 2009–2010 fiscal year was developed and issued for the NFNECP in conjunction with FNUniv.
- The Funding Application Guide that accompanies the national Call for Proposals was updated. The guide outlines the key principles of the program and includes guidelines for proposal format, budget and research ethics involving humans as well the criteria for selection of proposals.

REGIONAL FIRST NATIONS ENVIRONMENTAL CONTAMINANTS PROGRAM

- The RFNECP is administered by Regional Environmental Health Managers of the First Nations and Inuit Health Branch. The regional program is designed to address local and regional environmental contaminants issues. RMS contributes up to a total of \$1,200,000 annually to the RFNECP, depending on the number of proposals from each region. The funding amount allocated to each region is based on the total First Nations population per region and the number of communities per region. Many of the regions contribute funds from their own budgets to enable more communities to participate in the program, but only RMS funds are included in this document.
- An additional \$199,500 is provided to the regions (\$28,500 per region) for local administrative costs associated with the program.



ARCTIC MONITORING AND ASSESSMENT PROGRAM HUMAN HEALTH ASSESSMENT GROUP (AMAP HHAG)

- The Chief of RMS is a key national expert and member of the AMAP HHAG since 2004. HHAG was established in 1992 with the mandate to monitor human exposure levels of certain priority contaminants (POPs and heavy metals) in the Arctic. Publications produced by AMAP can be accessed at <http://www.ainc-inac.gc.ca/nth/ct/ncp/pub-eng.asp#amap>
- The release of the 3rd Assessment Report, which focuses on human health, is expected to take place in Iqaluit in June 2009.
- The main conclusions of the current Human Health Assessment Report indicate that health risks to northern populations from exposure to environmental contaminants have reduced, though there are new emerging contaminants which require ongoing monitoring to assess possible human health impacts.
- The Chief of RMS, together with staff from the Healthy Environments & Consumer Safety Branch (HECSB) and Health Products & Food Branch (HPFB) are lead authors and scientific editors on both reports.
- The RMS contributed funding to support the AMAP secretariat, which coordinates AMAP activities and productions.

Overview of RFNECP Projects funded for 2008-2009

A total of 28 projects from the different regions were funded by RMS for a total of **\$1,087,963**.

REGION	NO. OF PROJECTS FUNDED	TOTAL FUNDING
Alberta	0 projects submitted	\$0
Atlantic	1	\$62,100
Manitoba	2	\$105,000
Ontario	4	\$326,202
Pacific	18	\$394,661
Quebec	3	\$200,000
Saskatchewan	0 projects submitted	\$0
Total	28	\$1,087,963

NORTHERN CONTAMINANTS PROGRAM

- RMS participated in the NCP proposal review and selection process. Total funding contribution for the health component of the research projects totalled \$400,000.
- Reports on the work of the Northern Contaminants Program including research synopsis and project summary reports as well as Canadian Arctic Contaminants Assessment reports can be accessed on the NCP website at: <http://www.ainc-inac.gc.ca/nth/ct/ncp/pub-eng.asp#il>.

TRADITIONAL FOODS SAFETY PROGRAM

- RMS funded a workshop on Environmental Contaminants and Traditional Foods hosted by the Federation of Saskatchewan Indian Nations (FSIN) in February, 2009 in Saskatoon for \$80,000. This workshop brought together over 70 First Nations people from 30 First Nations communities.
- A guide to *Conducting Environmental Contaminants and Traditional Foods Workshop*, developed by RMS to assist partner First Nations organizations in conducting these workshops was shared with the FSIN workshop organizers.

Workshop discussions included the access and food security of traditional foods, as well as the nutritional concerns that arise from the avoidance of traditional foods.

A workshop report was produced and included presentation summaries and results from interactive breakout sessions: discussion topics included perceived changes in consumption of traditional foods and environmental contaminant concerns.



THE FIRST NATIONS FOOD, NUTRITION AND ENVIRONMENT STUDY

FNFNES began the first phase of data collection in the fall of 2008 in eight randomly selected B.C. First Nation communities – the first region to be sampled.

Data analysis is being finalized, and preliminary results will be presented to the communities in the fall of 2009.

Thirteen communities have been identified for Year 2, and a methodology workshop is planned for April 2009. Data collection will begin in the fall of 2009.

Promotional materials including posters, brochures and DVD were developed by the FNFNES Steering Committee and distributed to community members.

A FNFNES website has been developed under the guidance of the study coordinator and can be accessed at: <http://www.fnfnfes.ca/>





ADDITIONAL RESEARCH AND RELATED ACTIVITIES

FIRST NATIONS ENVIRONMENTAL HEALTH INNOVATION NETWORK

In 2008–2009, RMS contributed \$102,750 in funding towards the FNEHIN secretariat.

FNEHIN is a virtual network that links First Nations communities with environmental health researchers from across Canada. Its main functions are to provide First Nations with a single access point to environmental health researchers, information and research tools; to provide syntheses of the current state of knowledge on First Nations environmental health; and to facilitate knowledge mobilization for both First Nations communities/organizations and government policy makers for better informed decision making.

A website has been developed by FNEHIN, and can be accessed at: <http://www.fnehin.ca/>

FNFNES and FNEHIN were announced in December 2008 by the University of Northern British Columbia (UNBC), in collaboration with First Nations organizations of British Columbia and the Assembly of First Nations.

CASTS CONFERENCE

- RMS provides funding to the Canadian Aboriginal Science & Technology Society (CASTS) to support a national CASTS conference. The primary objective of the CASTS conference is to provide an opportunity for Canadian Aboriginal science and technology researchers to share their work with peers and to network in a national forum.

- The CASTS conference is held every two years; the next conference is expected to take place in February 2010 in Ottawa, Ontario. RMS is planning to provide support for eleven community-based research teams funded through the NFNECP to present the findings of their research. The conference will be attended by Elders, Aboriginal researchers and students, as well as representatives from communities, Aboriginal organizations, academia, and government.
- More information about CASTS can be accessed at <http://www.casts.ca/>.

THE LIFELINE GROUP

- RMS continues to work with a US non-profit organization, The Lifeline Group, to modify existing probabilistic risk assessment software that characterizes population-based exposures and risks from chemical substances in food and other media. The goal is to assess these tools for applicability in First Nations and Inuit populations with diets largely composed of traditional foods. As part of the evaluation of the applicability of Lifeline products in a Canadian context, a case study analysis is being conducted to compare the Lifeline software with existing methodologies currently employed in Health Canada.
- In March, 2009 The LifeLine Group presented the Canadian Arctic Dietary Compendium and components of the LifeLine™ software to representatives of Health Canada and the Inuit and First Nations Communities.

CONTRIBUTION TO NEWSLETTER

RMS contributed to Vol. 6 of the Environmental Health Research Division's newsletter *Environmental Research Matters*, published in March 2009. The newsletters highlighted the start of the data collection of the First Nations Food, Nutrition & Environment Study (FNFNES). The newsletter's target audience is the Regional Environmental Health Managers and Environmental Health Officers as well as other Divisions of the Primary Health Care and Public Health Directorate, and other regional staff who are working on environmental research/health related issues.



PRIORITIES AND PLANS FOR 2009–2010

- Continue successful collaboration on environmental contaminants research on reserves with the AFN and with First Nations across Canada;
- Continue to work with the FNUniv in the co-administration of the NFNECP;
- Building on the solid policy foundation of the NFNECP, continue to improve tools such as the Funding Application Guide; finalize the Operational Management Guide for the program, and continue to encourage research capacity-building among First Nations;
- Continue efforts to synthesize existing research data and information collected on the impact of environmental contaminants on human health and engage interested and affected parties through the dissemination of research results and identification of gaps in areas of research and information, so that other First Nations communities can benefit from the knowledge derived from the completed projects;
- Through the National First Nations Environmental Contaminants and Northern Contaminants Programs and initiatives such as the First Nations Food, Nutrition and Environment Study, together with First Nations and Inuit partners and researchers, continue to explore ways of assessing the integrity of traditional foods on First Nations reserves and in Inuit communities across Canada with a goal to determining baseline levels of environmental contaminants in traditional foods;
- Work toward effective knowledge translation, education and awareness with respect to the benefits of traditional foods, and to potential exposure to environmental contaminants, by contributing to and participating in the First Nations Environmental Health Innovation Network and conducting one or more Environmental Contaminants and Traditional Foods Workshops in the regions and territories;
- Continue to contribute to the human health research components of the NCP and of AMAP;
- Continue to respond to requests for information and action requests that are presented by First Nations, senior management of Health Canada, and other federal departments.

ORGANIZATIONAL CHART

