

APPENDIX A: Other Monitoring Programs

Large scale monitoring programs which encompass several of the VCs were not described in detail in the VC reports. These, and other relevant programs, are described below:

→ Ecological Monitoring and Assessment Network (EMAN) and EMAN-North

The Ecological Monitoring and Assessment Network is a collection of approximately 100 ecological research and monitoring sites and programs across Canada organized by ecozones.

The national EMAN network is coordinated by Environment Canada and provides:

- 1) A national perspective on how the health of Canadian ecosystems are affected by environmental changes.
- 2) An early warning system that identifies new ecosystem changes and reports the distribution and characteristics of the changes.
- 3) The distribution and characteristics of the changes.

A suite of standardized monitoring protocols suitable for use at EMAN sites across Canada is also being developed. The most recent draft was issued in March 2001.

EMAN-North is a network of ecological monitoring sites and programs in northern Canada seeking to answer the question: "What is changing on our northern ecosystems?". Several federal and territorial government departments and research institutes participate in EMAN-North.

There are five EMAN-North sites in the Northwest Territories: Yellowknife, Daring Lake, Mackenzie Delta, Nahanni National Park Reserve and Wood Buffalo National Park. (The Arctic Borderlands Ecological Knowledge Co-op is also partially located in the NWT.) Long-term ecological monitoring of avian and terrestrial wildlife, vegetation, water quality and quantity, snow, permafrost, and climate occurs to varying degrees at one or more of these sites.

The objectives of the EMAN-North network as of February 2005 are to:

1. Facilitate cooperative projects to collect, manage and interpret long-term ecological monitoring data.
2. Identify information gaps and priorities and facilitate development of monitoring initiatives to address them.
3. Foster multi-disciplinary and multi-site assessment of long-term ecological monitoring data.
4. Provide a central access point for long-term ecological monitoring information.
5. Deliver information on ecosystem changes to decision-makers and the public.

More information on EMAN-North can be found at <http://www.emannorth.ca/>.

→ Arctic Borderlands Ecological Knowledge Co-op

The Arctic Borderlands Ecological Knowledge Co-op provides an excellent model of community based monitoring in northern Canada which the NWT CIMP and Audit can benefit from.

The Knowledge Co-op is run by the Arctic Borderlands Ecological Knowledge Society, a non-profit organization incorporated in the Yukon. It is coordinated by Environment Canada and linked to EMAN - North. Members of the Society represent co-management boards and councils, First Nations, federal and territorial government departments and academic and research institutions.

This ecological monitoring program focuses on the range of the Porcupine Caribou herd, which includes portions of the Inuvialuit Settlement Region, portions of the Gwich'in Settlement Area, the northern Yukon, and the Alaska North Slope. The communities of Aklavik (NWT), Fort McPherson (NWT), and Old Crow (Yukon) have been involved in community based monitoring since the program was initiated in 1996. More recently the Alaskan communities of Arctic Village and Kaktovik have become involved.

The Co-op brings together science and local/traditional knowledge to focus on ecological monitoring of three main issues: climate change, contaminants and regional development.

The Co-op's website can be found at: <http://www.taiga.net> ; specific parts of the website are referenced in the sections below.

There are four main parts to the Knowledge Co-op's program:

1) *Indicators: track and communicate indicators of ecosystem change*

Currently, the Knowledge Co-op has a list of about 75 indicators that participants are interested in monitoring. Developed data sets, with explanations, are in place for approximately 40 indicators. The status of these indicators is updated, as data become available, on the Knowledge Co-op web site at <http://www.taiga.net/coop/indics> .

2) *Community-based ecological monitoring: record, synthesize and communicate local knowledge about the environment*

Interviews with local experts are conducted annually by community researchers. Observations about numerous aspects of the environment are pulled together and presented at annual gatherings, community meetings, and in report format. Information on community-based monitoring is found at <http://www.taiga.net/coop/community/> .

3) *Projects: facilitate and develop ecological monitoring projects*

Projects and indicators are identified, assessed, and reviewed through the annual gatherings. The Old Crow Plant Monitoring Project in the Yukon was the Co-op's first long-term monitoring project. Other projects are being assessed and will proceed when partnerships and funding have been established. Information on projects is on the web site at <http://www.taiga.net/coop/projects/> .

4) *Information sources: provide a central point for finding information*

Co-op participants identified a need to easily find information on research and monitoring, both past and present, in the Northern Yukon and adjacent Northwest Territories and Alaska. This is accomplished through a Database of Information Sources and through reports on the Co-op web site at <http://www.taiga.net/index.html> .

All four of these elements are reviewed at the Co-op's annual gatherings and revised as necessary.

→ West Kitikmeot / Slave Study (WKSS)

The West Kitikmeot Slave Study (WKSS) is a transboundary program with Nunavut which funds scientific and traditional knowledge studies in the Slave Geological Province to gather baseline ecological information. It is a registered Society with a partnership of Aboriginal organizations, industry, environmental organizations, and federal and territorial governments.

The WKSS began in 1996 and by 2001 had produced 19 research reports, using both traditional and scientific knowledge, on topics such as caribou and other wildlife, community health, vegetation and water. These reports provide a valuable information base for the NWT CIMP and Audit. The WKSS continues to fund cumulative effects research and monitoring projects in the Slave Geological Province.

Information and annual reports can be found on the WKSS website at [http:// www.wkss.nt.ca](http://www.wkss.nt.ca) .

→ Northern Contaminants Program (NCP)

The Northern Contaminants Program (NCP) resolves to:

- Measure contaminant levels in the environment and people in the Canadian North
- Assess effects of contaminants on the health of people, wildlife and the Northern environment
- Evaluate contaminant pathways to the North
- Pursue international agreements to control global release of contaminants
- Provide information that assists Northerners in making informed decisions about their food use.

Phase I of the NCP was initiated in 1991 in response to studies highlighting the presence of contaminants in the Arctic ecosystem. It focused on assessing location and levels of contaminants in the arctic. Presently Phase II (1998-2003) emphasized human health research, the development of effective community dialogue, increasing community participation, and working towards international agreements to control the release of contaminants.

The NCP is managed by Indian and Northern Affairs Canada in partnership with other federal departments (Health, Environment, Fisheries and Oceans Canada), the Yukon, Northwest Territories and Nunavut territorial governments, and five Aboriginal organizations (Council of Yukon First Nations, Dene Nation, Inuit Circumpolar Conference, Inuit Tapirisat of Canada, and Métis Nation - Northwest Territories).

Further information and publications can be found at http://nwt-tno.inac-ainc.gc.ca/cd-ncp_e.htm. A series of fact sheets on specific contaminants and contaminant receptors is available from DIAND.

→ GLOBE Program

The 'Global Learning and Observations to Benefit the Environment' (GLOBE) program is a network of students (kindergarten to grade 12), teachers and scientists around the world working together to study and better understand the global environment. Through the Internet, students make and report environmental observations at or near their schools. In turn, scientists use this data and provide feedback to students on their research.

Several schools in the Northwest Territories are participating in GLOBE. The monitoring data collected by these students could be very valuable to the NWT CIMP and Audit.

More information on GLOBE can be found at www.globe.gov/.

→ Nunavut General Monitoring Program (NGMP)

The Nunavut General Monitoring Program (NGMP) is a large-scale comprehensive monitoring program being developed in Nunavut as a requirement of the Nunavut Land Claim Agreement. When in place, the NGMP will identify changes in the long-term state and health of Nunavut, and act as an 'early warning system' for changes in the environment. The program intends to balance both community and scientific knowledge.

The NGMP is in the development stage. As development advances, cooperation with the NWT CIMP will be necessary to address transboundary monitoring issues.

More information on the NGMP can be found at <http://npc.nunavut.ca/eng/> .

→ Mackenzie River Basin Board (MRBB)

The Mackenzie River Basin Board (MRBB) has been created as a forum for cooperative management of water within the huge Mackenzie River Basin (one sixth the area of Canada, including most of the Northwest Territories, and parts of the Yukon, British Columbia, Alberta and Saskatchewan).

The MRBB was formed under the "Mackenzie River Basin Transboundary Waters Master Agreement", and began full operation in 1998. Three members represent the federal departments of Environment, Indian and Northern Affairs, and Health. Each of the five provinces and territories has two members, one appointed by the provincial or territorial government and the other appointed by Aboriginal organizations in each province or territory.

To summarize the principles in the Agreement, the Parties are committed to:

- maintaining the ecological integrity of the aquatic ecosystem,
- managing the use of the water resources in a sustainable manner,
- the right of each [Party] to manage the use of water resources provided such use does not unreasonably harm the ecological integrity in another jurisdiction;
- providing for early and effective consultation, notification and information, and
- resolving issues cooperatively.

The MRBB recently released the "State of the Aquatic Ecosystem Report 2003" which is now available on their website.

Further information can be found at <http://www.mrbb.ca>.