

# NORTHWEST TERRITORIES ENVIRONMENTAL AUDIT 2005

## Supplementary Report on the Status of the Environment



## **EXECUTIVE SUMMARY**

The Mackenzie Valley Resource Management Act (MVRMA), an outcome of the land claim agreements established between the First Nations and the Government of Canada, and the Gwich'in, Sahtu and Tlicho land claims agreements, require that an independent environmental audit be conducted at least once every five years. One component of the audit is an evaluation of information on the environment in order to determine trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends. The term "environment" is broadly defined as follows:

*"The components of the Earth and includes:*

- a) land, water and air, including all layers of the atmosphere;*
- b) all organic and inorganic matter and living organisms; and,*
- c) the interacting natural systems that include components referred to in paragraphs (a) and (b)."*

Given the above context, this first ever Status of the Environment report covers seven major components of the NWT environment:

- atmospheric environment (including air quality, climate and climate change);
- freshwater aquatic environment;
- marine environment;
- terrestrial environment;
- permafrost, ground ice and snow;
- human health; and,
- socio-economic and community wellness.

As a starting point in conducting the Status of the Environment assessment, the valued components (VCs) identified in the INAC report, *A Preliminary State of Knowledge of Valued Components for the NWT Cumulative Impact Monitoring Program (NWT CIMP) and Audit* were selected. Key indicators of change for the selected VCs were then identified and carried forward through the study. For these key indicators of change, trends in environmental quality were assessed for the Mackenzie Valley, the Inuvialuit Settlement Region and the NWT as a whole.

To assess current conditions and trends, previously completed studies were relied upon extensively, particularly where these studies had assessed trends in environmental quality. Where required, these studies were supplemented with original data analysis; however, conducting original research was not within the scope of the Status of the Environment reporting. For each of the key indicators, available data were analyzed and assessed to identify: trends; potential contributing factors to any changes in the environment; the significance of any trends

identified; the likely impact of the trends; activities to mitigate the factors/emissions that are causing the observed trends, and, data gaps. Table ES.1 provides an overall summary of the results of the Status of the Environment assessment.

Overall, environmental quality in the NWT was found to be favourable for most components. In some cases it was difficult to determine the current condition of an environmental component or evaluate trends due to a lack of adequate baseline data for the NWT. However, where data were sufficient, several instances of unfavourable conditions and deteriorating trends were identified. The two most disturbing of these are: the recent large decreases recorded for the size of caribou herds that Aboriginal people living in the NWT rely on as a major source of subsistence; and, the need for action in the area of socio-economics and community wellness.

With changes to the environment from climate change and the potential for increasing development near calving grounds, the need for accurate data on the status of the individual herds and their habitat is becoming increasingly important.

With respect to socio-economics and community wellness, while traditional economic indicators show that the NWT population and economy are growing, there is no commensurate progress in community wellness with numerous measures of social well-being being found to be less favourable than national indicators. The social problems identified appear even more pronounced in the NWT smaller communities and are more associated with the Aboriginal population. This situation requires action by government agencies that have health and social service mandates.

Looking forward, climate change is expected to have a profound effect on the Canadian North. The potential effects extend to all components of the environment ranging from: loss of permafrost conditions in some parts of the NWT; increased erosion of river banks and shorelines; changes in the duration, extent, and quality of sea ice cover; changes in vegetation coverage and animal habitat; increased mobility of nutrients and organic and inorganic contaminants; and, changes in the quality and availability of traditional foods. Additional research is required in a number of areas to improve the understanding of the effects of climate change on all components of the environment.

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