Draft Final Report: Updating The Mackenzie Valley Cumulative Impact Monitoring Inventory and Tariuq Oceans Monitoring Inventory

Submitted To

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by
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Introduction

Section 24 (Clause 24.14) of the Gwich'in Comprehensive Land Claim Agreement and Section 25 (Clause 25.1.4) of the Sahtu Dene and Metis Comprehensive Land Claim Agreement call for the implementation of a 'method to monitor the cumulative impact of land and water uses on the environment in the Mackenzie Valley, and for periodic, independent, environmental audits which shall be made public' (Indian and Northern Affairs Canada 1992, 1994). These requirements are also reflected in Part 6 of the Mackenzie Valley Resource Management Act. The implementation plans for the Sahtu and Gwich'in agreements assign the Department of Indian Affairs and Northern Development (DIAND) the lead role in establishing a monitoring program in collaboration with Gwich'in and Sahtu organizations.

During a workshop held in Inuvik November 17-19, 1998, the next steps in consultation and an action plan for a Mackenzie Valley Cumulative Impact Monitoring Program were identified. The first action item emerged as developing a compilation of databases and records of current and historic environmental, social, economic, and community monitoring related data and research. The idea was to ensure that the report and database be living documents to provide up-to-date information on environmental, social, economic, and community monitoring programs taking place in the Mackenzie Valley. In response, the Aurora Research Institute created the ***Mackenzie Valley Cumulative Impact Monitoring (MVCIM) Inventory*** focusing on Gwich'in and Sahtu settlement areas and the Mackenzie Valley in general, published in March 2000. This is identified as the first step in the creation of a community-based Cumulative Impact Monitoring Program for the Mackenzie Valley.

Further to this, the Department of Fisheries and Oceans initiated the ***Tariuq Oceans Monitoring Inventory*** (Tariuq) as part of the marine Environmental Quality Program developed under the Oceans Act. The Inventory provided Inuvialuit Hunters and Trappers Committees (HTCs) with easily accessible information related to community concerns and monitoring activities occurring in the Beaufort Sea and Mackenzie Delta Region. The Inventory also provides the Department of Fisheries and Oceans and other agencies with a database to track and report on monitoring activities within the marine and estuarine waters of the Inuvialuit Settlement Region (ISR). The MVCIM and Tariuq databases were then merged into one database by GeoArctic.

Methodology

Scope of the Project

The focus of this project was to supplement the prior work outlined in the introduction. In doing so, GeoNorth concentrated on researching current and historical monitoring activities in the Deh Cho, South Slave and North Slave regions, as well as updating existing Sahtu, Gwich'in and Tariuq monitoring inventories.

Research Strategy

The research strategy used by GeoNorth was essentially an extension of the methodology documented by the Aurora Research Institute (ARI) in creating the original Mackenzie Valley Cumulative Impact Monitoring Inventory (ARI, 1999).

Monitoring Activities

The main focus of GeoNorth's research was to identify current and historical monitoring activities in the specified regions. Monitoring was defined as programs or research projects that demonstrate the systematic measurement and collection of data and observations (ARI, 1999). To be included in the database, it was not required that the project be declared a *true* monitoring program, as long as it met the proposed definition.

Contacts/Organizations

With each monitoring activity added to the database, the associated contact name and/or organization was entered and cross-referenced with the monitoring activity.

Publications

Relevant publications sourced from a specific monitoring project included in the database, were cross-referenced at the time of data entry and linked to that activity. As well, various point data publications and data reports were discovered during the research. Although this was not the main objective of the research, these publications were added where relevant, and cross-referenced when possible.

Data Sources/Collections

A handful of relevant data sources and/or collections were found during the research process. Most of these sources overlapped with monitoring and/or point activities. Each source was added to the database, specifying their location and availability for public access.

Community Concerns and Sources

Updating and expanding this section of the database was beyond the scope of this GeoNorth contract.

Research Process

GeoNorth completed the following tasks in researching this project:

Task 1: Studied and assessed the previous version of the Mackenzie Valley Cumulative Impact Monitoring Inventory and the Tariuq (Oceans) Monitoring Inventory databases (May 2001) to become familiar with the formatting of the above materials before proceeding with any research.

Task 2: Contacted by regular post and email, approximately 100 Aboriginal communities and organizations, as well as various renewable resource and research councils that could potentially provide information on current or historical monitoring projects. A letter outlining the history of the Mackenzie Valley and Tariuq CIM Inventory and its current status was included, as well as a "monitoring form" to be completed by the organization for each known activity and returned to GeoNorth. A copy of this letter and monitoring form can be found in the Appendix. If no response was received after one-month, a follow-up phone call and/or email was placed to each contact to encourage contribution.

Task 3: Contacted approximately 200 individual researchers/investigators by email and phone for updates on monitoring activities included in the existing database, as well as information on any current or historical monitoring programs they were involved in or aware of. Approximately 50 of these individuals concentrate their research and monitoring in the Inuvialuit Settlement Region. Key individuals were followed-up with by telephone and email to encourage contribution.

Task 4: Comprehensive searches of approximately 75 online databases and information archives were conducted, including:

- ASTIS
- Northern Information Network
- CANTTEX Project Database
- Department of Fisheries and Oceans Waves Database
- RWED Online Library
- Arctic Borderlands Database
- WKSS Reports and Projects Database
- First Nations Periodical Index
- Geological Survey of Canada Database
- Environment Canada Database Catalogue

Task 5: Local Yellowknife libraries were searched for historical and current monitoring activities in the Mackenzie Valley and Inuvialuit Settlement Region with some success. This included searching for, and through, documents and bibliographies from larger initiatives. The documentation from many of these reports served as excellent links to new information and contacts.

Task 6: All information retrieved was analysed for relevancy, organized, verified and checked for duplication in the existing database prior to entry. All relevant information was entered into the database by hand. To maintain the integrity of the database, electronic synchronization of databases was not used in this update, unlike past efforts.

Results

The results of the research can be found in the updated database on the accompanying CD. Of the nearly 100 communities and organizations contacted for their input on current or historical monitoring activities, approximately 15% responded, 10% of those positively by completing one or more monitoring forms to be included in the database.

Of the approximately 150 individual researchers contacted who work in the Mackenzie Valley region, nearly 40% of responded, 20% positively, by completing one or more monitoring forms, or by forwarding documents of larger initiative to GeoNorth for further research. The results were almost identical for the researchers who concentrate in the Inuvialuit Settlement Region; approximately 40% response rate, with just under half of those contributing to the database directly, or providing new research pathways.

All told, nearly 250 unique monitoring activities were added to the database, 180 from the greater Mackenzie Valley, and approximately 70 from the Inuvialuit/Beaufort Sea region. As well, GeoNorth has updated over 50 monitoring entries that were included in the previous database, with more detailed abstracts, location, and/or dates of study.

Due to the nature of this project, and the response rate received from community organizations compared to that of individual researchers, the majority of the new monitoring entries and updates were environmental projects, leaving many of the social, economic and cultural monitoring activities in each region still uncovered.

Approximately 240 relevant point-data studies and publications were also added to the database. Where possible, these documents were linked to monitoring activities for searching ease. As well, the number of data sources and/or collections was almost doubled, adding approximately 25 new entries.

Throughout the exercise, over 120 new contact individuals and organizations were added to the database and linked to various monitoring activities and projects. This bodes well for the maintenance of the database, as well as further attempts to expand and update the current database.

Discussion / Recommendations

The newest GeoArctic version of the Mackenzie Valley and Tariuq CIM Inventory software is much improved from earlier attempts. However, as with any work in progress, there are still some improvements that need to be made. The most pressing issue is the fragility of the software. Although the "Viewer" seems to be more stable than it was previously, the data entry "Master" is still very unstable (perhaps because it is still based in the old interface), and crashed regularly throughout the data entry process.

As well, further improvements to the search capabilities of the "Viewer" would be useful. For example, although each monitoring activity entered into the database is cross-referenced with a

contact, and the contact information is recalled after searching for a specific monitoring activity, it is impossible to reverse search, to find all activities a single contact is involved with. Also, it is impossible to search by "Settlement Region", other than by bounding coordinates (when available) or if the region is mentioned in the Title or Abstract, even though there is an option when entering data to select "Settlement Region" from a pull-down menu.

> ***Recommendation #1: Continue to improve the software interface of the Mackenzie Valley and Tariuq CIM Inventory by stabilizing the database itself, making it more "user-friendly" and expanding its search capabilities. Many of these improvements will become obvious as feedback is received from end users.***

The status, or completeness, of a database such as the Mackenzie Valley and Tariuq CIM Inventories is nearly impossible to quantify. As was recommended in the March 2000 update by the Aurora Research Institute, for this to be an effective information source, the database needs to be continually researched and updated. Hiring one or more full-time staff members is necessary to manage, maintain, update and expand geo-spatial information sharing of the database.

> ***Recommendation #2: Hiring full-time staff member(s) to manage the Mackenzie Valley and Tariuq CIM Inventories and coordinate the distribution of the database to end users and researchers.***

Due to the nature of this contract, and earlier contracts to create and update this database, many of the community-based social, economic and cultural monitoring activities have not yet been included in this database. Some of these organizations have indicated that although there may be current or historical monitoring activities in their region, they do not have the resources to research, and communicate the results to the appropriate parties. As well, there seemed to be apprehension in contributing to this database from some of these organizations, assumingly because their efforts may be considered "wasted time".

A full-time staff member would be able to communicate with communities and organizations to develop a relationship, and thus ensuring them that their efforts to participate and contribute to the database would not be wasted. This person would also be able to aid in their research for historical activities, thus more thoroughly completing the database.

> ***Recommendation #3: Developing a rapport with communities and organizations to expand the scope of the information being entered into the database, and ensuring the communication of end results to each.***

Uploading this database into an online interface would be an effective method of information sharing. Creating a searchable archive of the Mackenzie Valley and Tariuq CIM Inventory would make the data accessible to anyone with Internet access. As well, arming the website with a password accessed data entry module, would allow end users and researchers to update existing programs and add new monitoring projects and publications regularly.

> ***Recommendation #4: Online Internet data entry and search capabilities should be developed for maintenance, and expansion of the database.***

Appendix

The following letter and "monitoring form" was sent to approximately 100 communities and organizations under Task #2 in the Research Process. The same package was sent via email to approximately 200 individual researchers/investigators for information on current and historical monitoring programs.

In the Gwich'in, Sahtu Dene and Metis Comprehensive Land Claim Agreements, there are clauses which call for the implementation of a 'method to monitor the cumulative impact of land and water uses on the environment in the Mackenzie Valley, and for periodic, independent, environmental audits which shall be made public' (Indian and Northern Affairs Canada 1992, 1994).

In response, a plan to develop a compilation of databases and records of current and historic environmental, social, economic, and community monitoring related data and research was outlined. The Aurora Research Institute created the ***Mackenzie Valley Cumulative Impact Monitoring (MVCIM) Inventory*** focusing on Gwich'in and Sahtu settlement areas and the Mackenzie Valley in general, published in March 2000. Further to this, the Department of Fisheries and Oceans initiated ***Tariuq Oceans Monitoring Inventory*** (Tariuq) as part of the marine Environmental Quality Program developed under the Oceans Act. These databases have since been merged into one by GeoArctic.

Indian and Northern Affairs Canada and the Department of Fisheries and Oceans have contracted GeoNorth to supplement the work mentioned above by focusing on the monitoring activities in the Deh Cho, South Slave, North Slave and Inuvialuit regions, and updating the Sahtu, Gwich'in and Tariuq inventories that have already been produced.

In an effort to update these inventories, we are contacting various agencies, companies, organizations, institutes, and government departments who may be or have been carrying out monitoring initiatives in the different regions of the Northwest Territories; Sahtu, Deh Cho, North Slave, South Slave, Gwich'in and Inuvialuit. We are looking to identify environmental, social, economic and community monitoring activities.

We would appreciate a reply about past and present monitoring programs you are aware of in your vicinity. Please fill out the attached form (with as much information as possible); one for each monitoring activity in order to ensure that we receive all the information possible, feel free to attach additional pages if more space is required than that which is provided on the form. We will follow up by telephone to answer any questions you may have regarding the questionnaire.

Please return your response via fax 867-873-2377 or email geonorth@theedge.ca to our office. Inquires can be made by telephone at 867-873-3380 or via email.

Thank you in advance for your time and patience.

Monitoring Activity Form

Title of the monitoring activity:

Abstract:

Purpose and/or relevance to the area:

Supplementary Information:

Traditional Knowledge:

Similar Programs:

Licence or Permit Number:

Settlement(s) in the area:

West Bounding Coordinate:
East Bounding Coordinate:
South Bounding Coordinate:
North Bounding Coordinate:

Geographic Location Description:

Beginning Date:

End Date:

On-going: Yes or No

Updated (ie. Continually, daily, annually, as needed, irregular, etc.) :

Measurement Frequency:

Future Plans:

Completeness:

Data Access:

URL:

Native Data Set Environment:

Access Constraints:

Use Constraints:

Keywords:

Contact Information:

Name:
Address:

Organization:

Position:
Phone:
Fax:
Email:
URL:
Hours of operation:
Contact Instructions: