

Ní hat'ní - Watching the Land

Cumulative Effects Assessment and Management in the Denesóhine Territory

FINAL REPORT

August 2001



Submitted to:

The NWT CEAM Steering Committee / Canadian Arctic Resources Committee

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NWT CEAM SC Members:

On behalf of the Lutsel K'e Wildlife, Lands and Environment Committee (WLEC), I would like to present to you the Final Report of the Ní hat'ni - Watching the Land project. We have always felt the great need for the implementation of measures whereby our traditional ways are used and considered in monitoring and managing the land - this project was an important first step in determining what methods could be used to realize this vision.

We hope that the principles and models presented in this Final Report will serve to inform the design of a regional CEAM framework for the NWT in a way that is respectful of the ways of aboriginal people. We also hope that other aboriginal groups can learn from this project, so that they can design and implement land monitoring and management programs that suit their needs as aboriginal people.

The WLEC believes that the current NWT CEAM initiative has the potential to truly incorporate aboriginal ways and community-based initiatives in a larger regional framework. We hope to continue contributing to this process.

Sincerely,

Charlie Catholique - Chair
Wildlife, Lands and Environment Committee
Lutsel K'e Dene First Nation

c. Chief Archie Catholique

1.0 STUDY DESCRIPTION

Back from 1918 - I can remember how things looked. It was so different. Some people who don't care so much won't notice the changes. How we do things is also changing. We are supposed to be working together. My grandfathers used to sit around together and think about these things and predict what would happen. That is what we are doing now; elders can predict what will happen in the future. Maybe our children will be very poor. We talk about a lot of things. What we are talking about is very important. Our grandfathers used to talk about these things. (ML 11 05 00)

The way of life of the Denesøhne (Łutsël K'e Dene) is based on ways of knowing that have been passed on for generations. In addition to the socio-economic, cultural and spiritual relationships that exist among people, the Denesøhne have a complex and sacred relationship with the land around them. By respecting this sacred relationship and recognizing the richness of the knowledge held by the Elders and land-users about their traditional territory, much can be learned about the health of the land and how it is changing.

This study is based on the premise that respecting the Denesøhne way of knowing is an essential component of understanding the complex changes that are happening on the land due to industrial and tourism development. By using the rich knowledge base of the Denesøhne, we can seek to better assess and manage the changes that are or may happen upon the land.

The specific focus of this study is to develop a community-based plan for monitoring and managing cumulative effects in the traditional territory of Denesøhne people. In order to assess how development will impact the landscapes / watersheds in the

traditional territory, it is vital that the rich knowledge of the Denesóhne be considered in environmental assessment processes. The appropriate means of accessing this knowledge is by respecting the traditional ways of knowing of the Denesóhne. This study will demonstrate a methodology for using these traditional ways of knowing in monitoring and managing the vast natural resources of the Denesóhne traditional territory.

It is hoped that the results of this study will help the NWT CEAM Steering Committee and the Canadian Arctic Resources Committee contribute towards the development of an effective framework for dealing with cumulative effects in a manner that incorporates the knowledge and wisdom of aboriginal peoples in the NWT.

1.1 STUDY OBJECTIVES

The objectives of this study are as follows:

1. To inform and educate the community about CEAM, the various developments in the region, and the effects these developments may have upon features of value to the Denesóhne.
2. The identification of community visions for the land, as well as thresholds of tolerance for activities that hamper the achievement of these goals.
3. The identification of goals for a local plan to monitor and manage cumulative effects in the traditional territory of the Denesóhne.
4. The development, testing and implementation of a cycle of knowledge system for the flow of CEAM information (collection – organization – analysis – synthesis – action) and ongoing communication with the community.
5. The development, testing and implementation of strategies whereby the skills and knowledge of community members can be used appropriately in the

assessment and management of the cumulative effects of development affecting the community.

1.2 STUDY TEAM

Ní hat'ní Working Group - *Łutsël K'e Wildlife, Lands and Environment Department*

Łutsël K'e Elders - *Łutsël K'e Dene First Nation*

Wildlife, Lands and Environment Committee (WLEC) - *Łutsël K'e Dene First Nation*

Henry Catholique, Sam Boucher - *WLEC Community Researchers*

Stephen Ellis - *WLEC Study Director*

1.3 METHODS

TASK 1: Documentation of community concerns and desires regarding CEAM

An inventory of written and oral information previously gathered by the Wildlife, Lands and Environment Department was conducted. This review was done to familiarize the researchers with areas being developed, the types of development projects, as well as the effects these developments have had or may have upon the environment and the people. The documentation consulted included Wildlife, Lands and Environment Committee minutes, land-use permit applications, various development proposals (i.e. mines, proposed East Arm park, road construction, hydro-development) as well as other projects ongoing in the community, especially the *WKSS Community-Based Monitoring*.

Using the information gathered in this preliminary step, a list of specific questions regarding the effects of development in the area were developed for the purposes of conducting one-on-one home-visit interviews with community members. These questions were designed to encourage people to share information around two broad themes:

- *Community visions for land-use in the region.* These questions helped elicit community issues in relation to the effects of development in the region.
- *Using Denesoline traditional ways of knowing in CEAM.* These questions were very helpful in informing the researchers about the capacity of the community to contribute to a local CEAM plan.

As well, these focus interviews served as a forum to inform the community about the various developments in the region, as well as their potential effects upon the land. Much of the community was not fully aware of the various development pressures in the region. This is due in part to the rapid pace of development in the region, the volume of information about these projects, as well as the difficulties developers and the government have in communicating effectively with the community.

Approximately 30% of the population of Łutsël K'e participated in the interviews (62 home-visits). In order to determine who would be interviewed, the population was categorized into Elders (60+), people aged 40-59, people aged 20-39 and people aged 10-19, and 30% of the people in each category were randomly selected for interviews. Project participants were given the choice to conduct the interview in either Chipewyan or English.

TASK 2: Establishment of the Ní hat'ń working group

A local CEAM working group was established to direct the study. This working group had the primary role of designing the local CEAM plan for implementation by the

WLEC. Meetings were held with the WLEC and the Łutsël K'e Dene Elders to discuss the composition of this working group. The decision of the WLEC and Elders was that the working group include all community Elders, the WLEC and the WLE Staff. As such, the working group functioned more like an "experts pool" that the researchers called together to discuss the study. Different aspects of the study called for different people to be called together dependent upon their expertise in certain areas.

The Łutsël K'e Dene Elders named this working group "Ní hat'ni", or "Watching the Land". This reflected the role they hoped the working group would play in increasing the capacity of the community itself to effectively monitor and manage the effects of development in the region.

TASK 3: Analysis of interview results with the Ní hat'ni working group

The information gathered in the home-visit interviews was organized into the following themes:

- Concerns about how development will affect the land and people.
- Problems with how development occurs in the north today.
- How the people want to participate in the management and monitoring of the effects of development.
- What skills and knowledge people would like to use in managing and monitoring development.

This categorized information was used for presentation to the Ní hat'ni. They analyzed and evaluated this information in the interest of developing the community goals that would drive the development of the local CEAM plan. Once these goals were established, group brainstorm and focus discussions were used to identify and develop appropriate strategies for the use of traditional ways of knowing in monitoring and

managing the land in a formalized manner. These meetings sought to establish *how* the local CEAM plan would operate. Once developed, these strategies were compiled by the researchers and a draft plan for local CEAM was developed. This was presented by the Ní hat'ni to the WLEC for their review and approval.

TASK 4: Pilot project

The strategies for local CEAM developed by the Ní hat'ni were tested through a pilot project implemented under the direction of the WLEC. Throughout the community interviews, participants raised repeated concerns about the cumulative effects associated with diamond exploration in the region to the north of the East Arm of Great Slave Lake, the Nà Yaghe Kué (really rocky land). Community members are concerned about the potential disturbances the winter roads and exploration sites may cause to wildlife and wildlife habitat. Poorly maintained, managed and reclaimed portions of road as well as work camps present a major risk to the health of the land, water and wildlife.

This concern provided a good opportunity for the Ní hat'ni and the WLEC to test the newly designed strategies for local CEAM. The Ní hat'ni held meetings to devise what should be monitored during this pilot project, as well as the protocols the community monitoring technicians would have to respect. An on-the-land assessment followed to gather land-user observations. The results of this pilot project were then processed using the as-of-then untested local CEAM techniques.

The pilot project was then evaluated by the Ní hat'ni, and the lessons learned from the pilot project were incorporated into the final design of the local CEAM plan.

TASK 5: Development of final local CEAM plan

The results from the previous tasks were incorporated into the draft plan for local CEAM by the study researchers. This finalized plan for local CEAM was then verified by the Ní hat'ni during a community workshop in Łutsël K'e. The WLEC then adopted the final plan for use in the ongoing development of a comprehensive community program for land-use decision-making in the traditional territory of the Denesóhine.

1.4 CHRONOLOGY OF ACTIVITIES

February 2000	Preliminary meetings with the WLEC to develop study
March-April 2000	Community home-visit interviews Presentation at Łutsël K'e WLEC 2000 Public Presentations Verification of local CEAM plan goals with WLEC and Elders
September 2000	Establishment of the Ní hat'ni working group
October-Nov 2000	Organization and analysis of home-visit interview results Results presentation to the WLEC
January-March 2001	Design of the draft local CEAM plan Progress report to the CEAMF SC Design of the local CEAM plan pilot project
April 2001	Execution of the pilot project Reporting of pilot project participants to the Ní hat'ni and the WLEC Incorporation of lessons learned from pilot project into the draft local CEAM plan
May 2001	Finalization of the local CEAM plan

Presentation to the WLEC at the 2001 WLEC Public Presentations

2.0 A LOCAL CUMULATIVE EFFECTS ASSESSMENT AND MANAGEMENT PLAN

We are trying to relay the traditional knowledge so that the Elders will be used, and maintain the youth in the school system. It's all very complex. We've got to monitor, we've got to record traditional knowledge so the younger people can see it, so its impressive to the young. The Wildlife Committee [WLEC] has more people employed than I have ever seen, it's an area where young people want to be, they're still interested in the land. But the next generation, if we don't keep our people out on the land, they're not going to [be interested in the land]. The community has to look at getting the people out on the land, to understand development. These things are being done with the Wildlife [WLEC], that is their purpose, without trying to say to development "We don't want you". The community has to make a vision as a whole of what we want to be like in the future. (FC)

Ultimately, the Denesóhne want to act as the stewards of their territory, making decisions in the interest of maintaining the integrity and health of the land, water, air, animals and people that compose and inhabit Denesóhne Nēne (Chipewyan land). It is believed that the only way to effectively achieve this end is to adapt Denesóhne ways of knowing and doing to the modern context, so as to inform the decision-making process in a fashion that respects Denesóhne tradition as well as the realities of the modern world. This chapter explores the various components of the local CEAM plan devised throughout the course of this study, focussing particularly on how the plan seeks to use Denesóhne ways of knowing for contemporary land-use monitoring and decision-making. Specifically, this section explains the following:

- How the land should be respected.
- The goals of the community CEAM plan.
- The techniques to be used for collecting, organizing, analyzing and interpreting monitoring information.
- Implementation of the plan and the road ahead.

2.1 VISIONS FOR RESPECTING THE LAND

A primary objective of the home-visit interviews was to try and establish community visions for respecting the land. In this interest, interview participants spoke in great detail about how they envisioned their land in the future. They spoke about the importance of the land to the Denesq̓hne, as well as how the land should be properly respected so that it continues to serve as a forum for the practice of the Denesq̓hne way of life. Feedback was sought regarding what sorts of land-use activities were respectful, or conversely, disrespectful of these visions. In other words, this study tried to establish thresholds for determining what *type* and at what *degree of intensity* land-use activities would negatively impact the land, water, animals and plants of the Denesq̓hne.

The resounding vision for the land transmitted by the interview participants was that the land should, in the future, be as it is and as it always has been. The land should always allow for the Denesq̓hne to practice their culture and traditions. The water should always be clear, cold and clean so the people can drink from it anywhere. The fish should always be healthy and plentiful so the people can set their nets without fear of diseased or scarce fish. The land should always be vast and plentiful so the caribou can migrate as they always have through the hunting grounds of the Denesq̓hne. Interview participants stressed that the very livelihood of Denesq̓hne culture is dependent upon their pristine territory - this is how they want it to be.

Following from this overarching vision for the land, it became quite obvious through the interview process that to establish thresholds of tolerance for the land was quite simply *not* the Denesøhne way. The whole concept of thresholds is contrary to the Denesøhne way of doing. Indeed, instead of asking "How much can the land tolerate?", the interview participants deemed it more appropriate to ask "How can we respect the land?". These questions represent two fundamentally different ways of looking at the relationship between the land and the people. Industrial culture seeks to determine to what extent they can modify natural systems before they collapse; the Denesøhne seek to live in a respectful harmony with the land.

Among the most important lessons learned from the Elders is the importance of respecting the land. Researchers learned that those people who respect the land and live according to the knowledge of the Elders benefit from what the Creator has provided. Respecting the land for the Elders is a way of expressing thanks to the Creator for all that is provided to the Denesøhne. Part of that respect is built upon a cultural identity that is closely connected to the land. Stories of Łutsël K'e Denesøhne history on the land are very powerful for the Elders. It is very important to them that others understand that they were born and survived on this land, that by respecting the land they were able to live a good and healthy life.

Respect is also based on a spiritual connection or a deep understanding of the land. The land is alive in the same way that people are alive. Many Elders speak about how the Denesøhne share a common language and song with the animals and the land. The Elders tell many stories about the value of respecting the land and the implications of not showing respect. Their words echo the belief that to disrespect the land is to disrespect the Creator. The outcome of such disrespect can only be the demise of the Denesøhne as a thriving culture. On the other hand, showing proper respect for the land will insure health of the Denesøhne people and their ways for generations to come. The integrity of the land is intimately tied in with the health of the people and their

lifestyle. Elder Maurice Lockhart describes eloquently how the land provides when respected in a story about the Old Lady of the Falls, the great Denesøhne spiritual site:

The Lockhart River has been here a long time, from our ancestors (Old Lady sitting in the falls). Some times she feeds people by killing big game, caribou, moose, by drowning them in the river and sending it down the river for people to pick it up at the mouth of the river. Until today it's still the same, if you ask for help, she'll hear you any where you are, she's there to help people. When I was a young man I remember traveling with my parents (deceased) by canoe paddling. We would sometimes paddle to the mouth of Lockhart River and find dead floating caribou. The old lady had fed us today and we give thanks. The caribou was fresh and the weather was good at that time. Not long ago she gave us moose floating down river; that time there were a lot of people traveling. All the people ate moose meat and gave thanks. We have good use for her to be among us out here at Lockhart River. She helps people in every which way she can. Today we still visit her every summer to pay our respect for our people, our health and to be strong in our spirit. The Denesøhne believe she's a spirit that helps all walks of life, even nature and animals. If someone is sick people help that sick person in taking him or her to the falls and leave him or her over night to heal, that time there was a teepee set up back then. In order for her to help you would have to confess all your sins, just like going to church for confession. That is how it's been done to this day. During the winter you can see smokestack from a distance that has caused the rocks around the falls to darken. People who travel looking for caribou during the cold winter months ask her for help if they can't find the caribou around the Lockhart River. The smoke points straight up and at the tip it bends in every which way it points and that's where the caribou is. The people go that way to find the caribou. Once we built house around the mouth of the river,

that time we had good life then, some of the log cabin is still standing, there are all types of stories about the Old Lady in the falls. (ML 08 00)

2.2 WATCHING THE LAND

Another primary objective of the home-visit interviews conducted in the early stages of this study was to establish community goals for watching the land. These interviews focussed on eliciting comments about how the Denesøhne should make decisions about land-use in their territory. Interview participants spoke of how they envisioned the Denesøhne participating in managing and monitoring the land. By discussing their visions for watching the land, the people of Łutsël K'e effectively devised the goals that drove the design of the local CEAM plan.

Throughout the interview process, reoccurring themes echoed by many participants became obvious. Once verified and approved by the WLEC and the Elders, those themes that fit within the scope of this study formed the basis for the development of relevant CEAM goals. These goals are outlined as follows:

- The Denesøhne must be participants in the direction, administration and implementation of all management and monitoring activities upon their lands.
- The Denesøhne must have a local-level board to make land-use decisions concerning Denesøhne Nēne. The Denesøhne should also be equal members on land-use decision-making boards on a broader regional scale.
- Denesøhne knowledge should be recorded, and its continual evolution should be encouraged by keeping people on the land.
- Denesøhne knowledge should be used for baseline environmental studies, identifying geographical areas of importance, noticing changes in the environment and evaluating / interpreting the meaning of environmental knowledge.

- Land-users should be used to gather information for the Denesøhne knowledge projects by travelling and using the land.
- Information gathered by land-users should be evaluated, verified and interpreted by a group of Elders, land-users and technical experts.
- New knowledge generated by the group of Elders, land-users and technical experts must inform the decision-making process.
- Scientific expertise should be sought to work with the group of Elders, land-users and technical experts to offer their perspectives on the interpretation of land-user information.
- A stable local research team is required to conduct monitoring activities on a seasonal and yearly basis. This requires stable funding.

These are the primary principles that the study team sought to respect during the research and design of the local CEAM plan. The direction given to the study team by the WLEC and Elders was to insure that these principles were incorporated into the CEAM plan as much as possible.

2.3 MONITORING TECHNIQUES - THE CYCLE OF KNOWLEDGE

The people of Łutsël K'e stressed through their interviews that the local CEAM plan must respect and utilize Denesøhne ways of knowing. These are the ways of knowing that have been practiced by the Denesøhne for generations and generations, ways of knowing that have provided the Denesøhne with a deep and intimate understanding of their natural environment. These ways of knowing provide the foundation and the model for how knowledge is generated and used in the local CEAM plan, for how the Denesøhne cycle of knowledge should operate in the CEAM context.

Information Gathering

Denesõhne ways of knowing are fundamentally experiential in nature. They only operate effectively when people engage in traditional activities on the land - hunting, fishing, gathering, travelling and camping. Having people in close contact with the land insures that new information about the land is continually being generated through observation and experience. The closer to the land people are, and the longer they spend on it, the richer the information that is derived from experience. This is the fundamental "information gathering" aspect of the Denesõhne way of knowing - people experiencing the land making empirical observations about it. This gathered information is transmitted orally to Elders who validate and interpret the new information in light of their collective experience and history. This is essential for the continual evolution of Denesõhne knowledge - without people on the land gathering information and sharing it with the Elders, Denesõhne knowledge can simply stagnate and eventually become outdated.

In order to incorporate Denesõhne means of data gathering into the local CEAM plan, the WLEC approved the following measures:

- To gather information around environmental indicators developed through other community projects such as *Traditional Knowledge in the Kache Kue Study Region (WKSS)*, *Caribou Condition (University of Manitoba)* and the *East Arm Traditional Knowledge Study (DFO)*.
- The use of personal interviews to gather environmental observations from land-users while they are on the land, or just after they have returned to the community after they have been on the land.
- The gathering of environmental observations from land-users participating in WLEC sponsored on-the-land activities, for example the fall caribou hunt and winter musk-ox hunt at Artillery Lake, as well as the spring community hunt in the immediate region of Łutsël K'e.

- The gathering of environmental observations from land-users after each different harvesting season. For example, information of fish could be collected after the fall fishing season, while information on fur-bearers could be collected after the winter trapping season.
- The initiation of specific on-the-land monitoring activities to gather information pertaining to areas of special concern to the WLEC, for example the area on the north shore of the East Arm of the Great Slave Lake where much mining exploration activity is occurring.
- The seasonal and yearly repetition of these different information gathering cycles, using the same questions asked to the same land-users. This is to insure continual and comparable knowledge generation.

Organizing Information

Once information has been gathered from land-users through personal interviews, it must be put into a format that is conducive to analysis and interpretation by community Elders. This is the role of the WLEC staff, who must process the gathered information so as to facilitate discussions among the Elders. The Elders stressed that gathered information should be organized and presented to them in the following fashion:

- Interviews should be recorded in an oral fashion, either on audio or video tape.
- All interviews should be transcribed into English so they can be understood by people who may not speak Chipewyan.
- All information should be stored in a digital, searchable database.
- Information gathered through the interviews must be organized in a manner so that they can be compared with information gathered in previous years and seasons. This is primarily done with using a GIS system for spatial information, effectively displaying the relationship between traditional, industrial and recreational activities on the land.

- Indicator information with no spatial aspects should be presented using simple graphic or oral summaries.
- Information that has been organized must be presented to the Elders in the Chipewyan language by the WLEC staff as well as representative land-users that participated in information gathering.

Information Verification and Dissemination

The information gathered by land-users and organized by the WLEC staff remains simply empirical observations up to this stage. A fundamental step remains in the transforming of information (i.e. data) into verifiable knowledge from which to make decisions. This process involves putting information into the context of the Denesöñne knowledge and experience that resides within the collective heads of the Elders. This process of contextualizing land-user information serves the following purposes:

- *Verification.* By comparing the observations of the land-users with what is known to be true through the experience of the Elders, information can be verified. This type of information can be weighed against a collective environmental knowledge that has withstood the test of time, knowledge about the land and how it changes that has proven time and time again to be reliable. In such a fashion, information is either rejected by the Elders or accepted based upon whether it fits with the Elders' understanding of the land.
- *Dissemination.* The presentation of information to the Elders is one method of quickly and efficiently communicating new knowledge about the land to the Denesöñne people. People continue to practice the tradition of seeking knowledge and wisdom from the Elders. As such, incoming information from land-users gets effectively transmitted to the populace through the ongoing oral tradition.

- *Updating Denesøhne knowledge.* Information that is verified by the Elders becomes incorporated into the collective oral narrative of the Denesøhne people. This insures that Denesøhne knowledge remains contemporary; otherwise, this knowledge could simply become a relic with only a historical relevance.

Interpretation of knowledge

Information that has been verified and turned into Denesøhne knowledge must be interpreted in order to evaluate its meaning and consequence. The Elders take the new information and evaluate it against the experiential history of the people and the land. In such a way they can discover the reasons for why things are as they are, or why they are changing. The Elders must also take the new knowledge and evaluate it against the values and traditions of the Denesøhne people. In such a way can they determine whether the new knowledge represents a concern or little consequence to the land and people.

It is during this process of knowledge interpretation that the judgement of scientific experts may be called upon to help in knowledge interpretation. Denesøhne knowledge is experience-based - it may have difficulties dealing with situations outside the experience of the Denesøhne people. For example, while Denesøhne ways of knowing may be able to determine that certain animals are becoming unhealthy, they may not be able to discover the reasons for this lack of health. In such instances, scientific experts are often invited to sit with the Elders and offer their interpretation of the new knowledge.

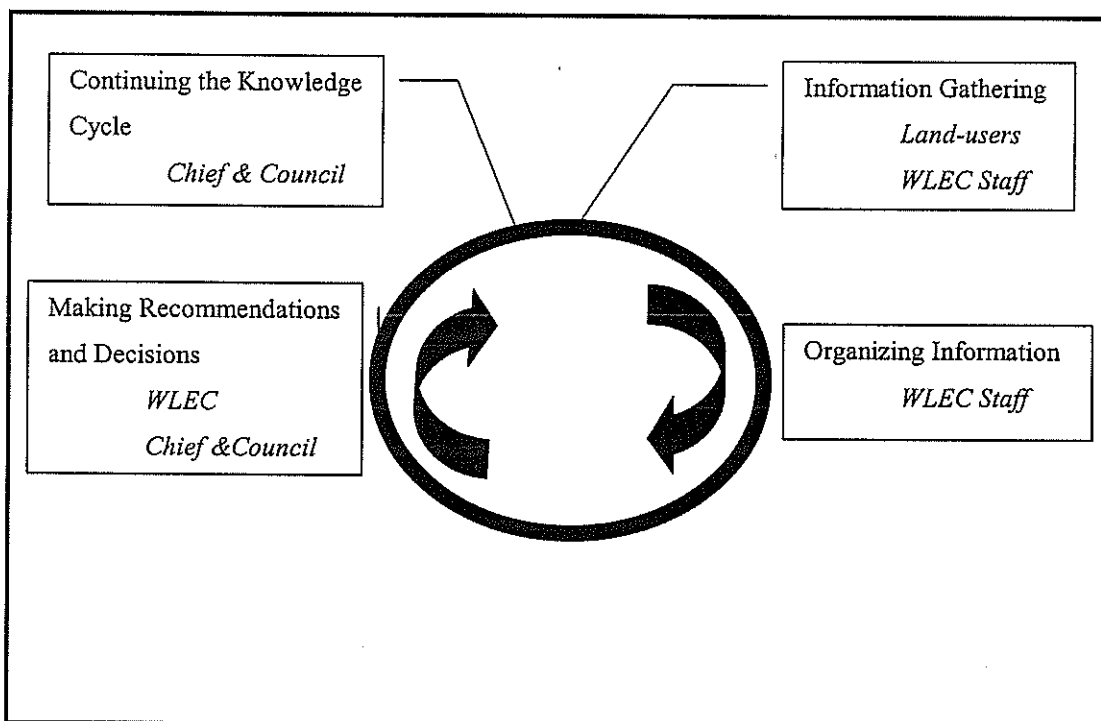
Making Recommendations and Decisions

Once knowledge about the land has been interpreted by the Elders (and thus incorporated into Denesøhne knowledge), it is communicated to the WLEC for the

formulation of recommendations to the Chief and Council. This process is facilitated by the fact that some Elders sit on the WLEC, and thus can communicate the new knowledge directly with the entire committee membership. Knowledge from the Elders informs the WLEC discussions, and the recommendations they come up with are passed on to the Chief and Council for action.

Completing the Knowledge Cycle

While a role of the WLEC is to provide recommendations to the Chief and Council for action, the Chief and Council must provide the WLEC with direction for further research and monitoring activities. The WLEC then implements programs and studies to insure that pertinent information about the land is being gathered by land-users and analyzed in the Denesóhne way. In such a way does the whole Denesóhne cycle of knowledge



continue, from information gathering to action and back around again.

The Denesóhne Cycle of Knowledge

2.4 TESTING THE PLAN

Following the design and approval of the monitoring techniques and cycle of knowledge detailed in the previous section, the Ní hat'ní group ran a pilot project to test the draft local CEAM plan. The purpose of this pilot project was to fine-tune the design of the local CEAM plan through the assessment of the impacts of the ice roads supplying the Snap Lake and Kennady Lake Diamond Exploration Sites. The specifics of this pilot project are contained in a report contained in **Appendix 1**.

Upon completion of the pilot project, a presentation of the pilot project report was made to the WLEC and Elders in order to elicit comments and suggestions regarding the final design of the local CEAM plan. The following comments were offered:

- The Elders and WLEC were quite pleased with the composition of the monitoring team (One Elder, one WLEC member, 3 land-users and a youth). They stressed the import of having an Elder participating in the monitoring, specifically to show the monitoring team how to properly respect the land as well as to exercise caution in the often dangerous barrenlands. However, the Elders were concerned that the younger members of the monitoring team may have traveled at a pace perhaps too fast for the Elder. They suggested that Elders participating in monitoring should be considered trip leaders, determining the pace and the extent of the monitoring activities. Both the Elders and the WLEC strongly supported the inclusion of a youth on the monitoring team. They considered the participation of youth fundamental to the transmission of the Denesóhne skills and knowledge that can only be learnt from and on the land. The Elders suggested that the parents of the youth participating in

monitoring activities should have a good talk with their children about the importance of respecting Elders.

- There was concern that the monitoring team did not stick together all the time during their travels on the barrenlands. It was recommended that in the future a single leader must be designated prior to a monitoring project, and that their word must be followed throughout. The Elders stressed that this was how things were traditionally done when traveling on the land. As well, all participants should remain within eyesight of each other, particularly during foul weather situations.
- There was a strong desire on both the part of the WLEC and the Elders to conduct such monitoring studies on a regular basis. They suggested that the exact same monitoring studies, using the same protocols, should be run at the exact same time on a yearly basis. This suggestion was based on the desire of the Elders and WLEC to compile a database of seasonally comparable information in order to spot trends and changes on the land. They also suggested that these monitoring studies be coupled with traditional on-the-land activities already engaged in by the Denesohine people. This would insure that monitoring information could be compared with an already existing historical context, as well as to remain cost-effective. The following yearly studies were recommended:
 - The monitoring of caribou condition, movements and abundance at Artillery Lake during the traditional fall hunt and in the vicinity of Łutsël K'e during the spring community hunt and the winter.
 - The monitoring of musk-ox condition, movements and abundance during the spring musk-ox hunt in the Artillery Lake region.
 - The monitoring of fish abundance and condition at traditional fishing sites during the fall fish-storing season and the winter netting season.
 - The monitoring of duck and goose abundance, movements and conditions at traditional hunting sites during the spring season.

- The monitoring of fur-bearer abundance, movements and conditions during the winter trapping season.
 - The monitoring of the ice roads and exploration / mine sites on the north shore of the East Arm in the spring, summer and winter.
 - The monitoring of lodges and outfitter camps during their operational seasons.
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- It was suggested that monitoring team participants give an oral presentation of their findings to the Elders and WLEC Staff directly after each monitoring trip. This would insure that observations were still fresh in the monitoring team's mind. The WLEC Staff would then take the observations and do the technical analyses that may be necessary to compare them with previous years. This would then be presented back to the WLEC for the formulation of recommendations for action to the Chief and Council.
 - The Elders stated that they would like more pictures and even video taken in order to better communicate the observation made by the monitoring teams. As well, they suggested that the monitoring mark the locations of their observation upon a map, or else log coordinates in a GPS system. This would help the Elders in interpreting the meaning of the observations.
 - The Elders thought that perhaps a more complete set of environmental observations could be made if the monitoring team traveled at a slower pace, taking more time to experience the land. This could be accomplished by travelling either a smaller distance or having a longer time frame in which to travel. The Elders felt that the time allotted for the monitoring team to complete their activities was not enough, forcing them to travel very quickly with perhaps not as much time as they should have to watch the land well. It was recommended that monitoring activities should have a smaller spatial focus with perhaps a longer timeline in the future.

These comments were considered by the Ní hat'ni working group and incorporated into the local CEAM plan by the WLEC Staff.

2.5 VISIONS OF THE FUTURE

Following the incorporation of lessons learned from the pilot project, the CEAM plan was presented to the WLEC for approval. The plan was adopted by the WLEC as a fundamental foundation for the implementation of a comprehensive management and monitoring plan envisioned for the traditional territory of the Denesøhne.

In the future, the Denesøhne want to have the capacity and power to monitor and manage the traditional territory in a manner that respects Denesøhne ways of knowing and doing. This project is but an initial step down this road. At the end of this road the people foresee:

- The development and implementation of a permitting and licensing process for lands in the Denesøhne territory.
- The formation of a Denesøhne land-use board to review licenses and permits using Denesøhne laws and principles of respect for the land as criteria. This board should also have regulation, inspection and enforcement capabilities.
- The finalization and implementation of a comprehensive monitoring program for the traditional territory using Denesøhne ways of knowing and doing. Indicators to measure changes on the land must be finalized for all features of value (water, caribou, fish, ducks, etc.), and regular, seasonally-based monitoring initiatives must be established.
- The training of people in Denesøhne ways of knowing and doing, and their subsequent employment in the capacity of monitoring technicians, inspectors, etc.
- The creation of employment positions that keep the people on the land, doing things in the Denesøhne way.

In sum, the Denesóhne view the implementation of a comprehensive land management and monitoring program for the traditional territory as much more than a good way to look after the land. It is also an excellent means for ensuring the vitality and relevance of traditional culture in an increasingly industrial world. It is a way for the Denesóhne culture to remain contemporary in a time when the ways of the Elders are passing on into the realms of distant memory; it is a way to ensure that these ways keep on living.

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APPENDIX 1 - PILOT PROJECT REPORT

The WLEC decided that an effective way to test and fine-tune the local CEAM plan would be through the running of a pilot project to monitor issues of concern to the community of Łutsël K'e. In such a way the Ní hat'ni could determine how the theoretical CEAM plan would operate in real-world situations. As well, this test would highlight the strengths and weaknesses of the plan's design, allowing the Ní hat'ni to modify the plan into a more finalized form.

Pilot project objectives

The over-arching purpose of this pilot project was to fine-tune the design of the local CEAM plan through the assessment of the impacts of the ice roads and exploration camps on the north shore of the East Arm of the Great Slave Lake. Monitoring activities were to focus on the following:

- The abundance, distribution and condition of wildlife in the region.
- The presence and extent of spills and garbage in the region resulting from vehicular and industrial activity.

Selection of monitoring personnel and indicators during pre-trip meetings

Following the draft local CEAM plans emphasis on using land-users to gather monitoring information, six community land-users were selected to travel via snowmobile to the Snap Lake and Kennady Lake Diamond Exploration Sites, as well as to the winter roads supplying the region. The land-users were selected by the WLEC based upon their competency in the barrenlands environment during the winter, familiarity with the north shore region of the East Arm of the Great Slave Lake, as well as land-use history (all participants were considered good hunters and trappers). One of

the land-users selected was a community Elder, and thus could transmit gathered information more directly when the Elders would verify and interpret. Another was a WLEC member who could pass information on directly to the WLEC during their regular meetings.

Prior to departing to the aforementioned region, the six land-users engaged in meetings with the Elders and the WLEC to receive direction as to what they should be monitoring. They heard the concerns of the Elders expressed, concerns the land-users used as direction to their monitoring activities. From the Elders concerns, it was decided *what* would be monitored during the trip and *how*.

Indicators for monitoring were selected and refined from preliminary indicators developed in other studies directed and coordinated by the WLEC (i.e. *Traditional Knowledge in the Kache Kue Study Region, Caribou Condition*). Indicators selected were chosen based upon their relevance to the monitoring goals of the pilot project. Thus, the following indicators were used to measure wildlife abundance, distribution and condition in the survey region:

- Number, type and location of wildlife species seen.
- Number, type and location of wildlife tracks seen.
- Visual condition of wildlife seen from a distance (fat / skinny, fine / limping).
- Visual condition of harvested wildlife (brisket and back fat / skinny, joints swollen / fine, liver fine / spotty, meat fine / has cysts, marrow rich / watery).

In addition, indicators were selected to measure the extent of spills and garbage in and around the winter roads and the diamond exploration sites:

- Type, number, location and spatial extent of spills and garbage seen (photographs taken).

- Type, number and location of trucks parked on the ice.
- Type and extent of ice road traffic not associated with mining activity.

A daily monitoring survey sheet was drafted by WLEC Staff in order to aid the land-users in their monitoring efforts.

Monitoring methods

The six land-users traveled the north shore of the East Arm region for a period of six days. During this period, they were asked by the Elders and WLEC to keep their eyes open - they were to make as many observations about the state of the land as they possibly could. They were also asked to fill out a daily monitoring survey. It must be stressed that other than the survey, the land-users were not asked to do any other formal monitoring. Rather, they were asked to practice their traditional means of knowing about the land - simply by being on the land and experiencing it. The land-users were to learn about the lay of the land and environmental situation on the winter roads and at exploration camps by travelling and camping on the land. They were to learn about the health and abundance of the animals in the region by tracking and hunting. This is the Denesqhne way - learning *from* the land by *doing* on the land.

Information gathered

Upon return from the monitoring trip to the barrenlands, representatives of the monitoring team presented an oral trip report as well as turned over their daily monitoring surveys to the WLEC Staff for organization and summarization. The observations of the land-users included the following:

- Very few signs of wildlife were seen. All told, one set of wolf tracks was seen in the vicinity of the Kennady Lake access road, as well as a few sets of ptarmigan tracks near MacKay Lake. No animals were seen directly.
- The amount of traffic on the Lupin winter road was described by the monitoring team as continuous, with trucks in view almost all the time.
- Many small oil spills were seen on the Lupin winter road and the Snap Lake access winter road. These seemed to be concentrated in areas where trucks may have stopped and parked for a while, usually on frozen lakes. No trucks were seen that were parking on the ice.
- There were frequent observations of trash on the side of the winter roads, often stuff that had clearly been thrown from trucks (i.e. cans, wrappers, etc.). As well, some discarded vehicle parts were also sporadically noticed.
- The snow in the immediate vicinity of the Kennady Lake site was very dirty from incinerator ash. This ash was also noticed approximately 10 kms away from the mine site, though to a much lesser degree. As well, the facilities at the site itself were quite dirty. The monitoring team noticed specifically that the amount of oil on the floor in the garage was quite substantial, making it difficult to walk around inside the building.
- The Snap Lake site was considered fairly clean with regards to trash and spills, though it was noticed that the Mine Water Containment Pond was overflowing, with the excess being pumped out into Snap Lake. It was noticed that this water was not very clear.
- No people were seen that were engaged in either hunting / fishing / cutting wood activities along the winter roads.

Information processing

An oral report was made to the WLEC Staff by monitoring team representatives upon their return to the community of Łutsël K'e. Completed monitoring survey sheets were

also provided to the Staff. The information was summarized and mapped using GIS software for formal presentation to the Elders.

Information verification and interpretation

Organized information was presented to the Elders and WLEC during a monitoring workshop, where the information gathered was to be weighed against the collective Denesóhne knowledge of the region traveled by the monitoring team. Their comments are summarized as follows:

- The sighting of few wolf, fox and wolverine tracks in the area was of serious concern. Many of the Elders involved in the monitoring workshop have trapped in the region in the late spring, and recall it being rich with fur-bearing mammals. They attribute the fact that very few signs of wildlife were seen to the incessant road activity, though they do believe that the speed at which the monitoring team was travelling may have limited their observations.
- The Elders noted that oil spills and trash on the road would enter the water in the springtime, perhaps over time having enough cumulative impact to negatively affect fish and other aquatic populations.
- There was concern that ash from incinerators would accumulate to such a degree as to perhaps hamper the growth of plant life. Also, it was noted that ash collecting on plants used by animals as feed could negatively affect animals such as caribou.

Decision-making and follow-up

From the knowledge generated during the monitoring activities, the WLEC acted with the following measures:

- A follow-up site visit to the Kennady Lake exploration camp was requested and granted.
- Concerns and suggestions were brought up with the Tibbit to Contwoyto Winter Road Joint Venture Committee on Safety and the Environment at a meeting in Łutsël K'e. These will hopefully be developed and implemented with the help of a newly appointed Łutsël K'e WLEC representative on this Committee.
- The WLEC resolved to continue winter monitoring activities in the region of the Lupin winter road, and hope to secure funds for a summer program.