Survey of Caribou health and monitoring in the boreal forest region Of Pehdzeh Ki Deh

Final report - Wrigley, NT

NWT Cumulative Impact Monitoring Program
March 29, 2008

Pehdzeh Ki First Nation Harvesters Sampling Program – Caribou in the Pehdzeh Ki Deh Region

1.) Contact Information:

Pehdzeh Ki First Nation
General Delivery, Wrigley NT
Phone: 1 867 581 3321
Fax: 1 867 581 3229
Email: sahchont@yahoo.com

2.) Introduction

a.) The intent of this project was to engage Pehdzeh Ki First Nation (PKFN) harvesters and youth harvesters to become active participants in establishing baseline information on wildlife health (caribou in the Pehdzeh Ki Deh region) and therefore helping to maintain long term monitoring projects on wildlife health in collaboration with the GNWT Environment and Natural Resources.

People who harvest wildlife on a regular basis are the 'eyes on the land' and are the first line of defense for detecting abnormalities in wildlife. Most hunters already know to submit abnormalities to the biologist or Renewable Resource Officers and this provides considerable information on the health of the animals. However, some diseases are not easily seen in the field and special tests are

needed to determine if an animal has a disease, or if it has been exposed to a disease. An efficient way to gather baseline information on the health of the caribou is to have Wildlife Health Monitors collect samples from normal caribou. Should PKFN's Wildlife Health Monitors continue to collect samples over many years this will become an effective method for monitoring caribou health in the Pehdzeh Ki Deh region over the long term.

PKFN in association with the GNWT's Environment and Natural Resources (South Slave region) did train and assist PKFN harvesters in a wildlife monitoring / sampling program to be established commencing January 2008 in a known harvesting areas – Tseepantee Lake - around the community. Two or more regular subsistence harvesters from the community of Wrigley were trained to collect and submit a standardized suite of biological samples from animals that are normally harvest for subsistence purposes. This project had many facets that benefited the community and region and these are the following:

- PKFN harvesters learned more about the animals they hunt, share with the community and consume. They also had learned in the process, techniques that will only help the region (and ENR) to maintain healthy wildlife stocks for future generations.

- Personnel involved in the project were as follows: Local harvesters – trained in monitoring / sampling. The harvesters chosen have literally decades of on the land / harvesting experience between them. Be it trapping, moose and in this case, caribou harvesting. PKFN community membership – knowledge and the distribution of meat: once the caribou was sampled – a number of people in the community gave the meat out to elders and community families in need of wild meat – the same day the meat was delivered into the community.

- In the past few years there has been some moose sampling done by local harvesters on request from ENR. In these cases, sample kits were sent up with written instructions and a few harvesters did comply and send in the required samples. This project is part of a larger project of yearly sampling by harvesters on behalf of ENR. This is the first time that a representative from ENR came into the community and was on the land with harvesters to train them in sample gathering methodology.

- Originally this sampling program was to be conducted on moose. After speaking with Environment and Natural Resources (ENR) it was decided that in fact caribou and not moose would become the test subjects. This is due to the following reasons: 1) During the time of the sampling program, the moose were believed to be too dispersed within the Pehdzeh Ki Deh (PKD) territory. It was known at the time that there were several herds of caribou around the Fish / Tseepantee Lake(s) region, of which both these lakes are a short flight from the Wrigley community. 2) Another factor in the decision was the cost of the survey both monetarily and time wise. I would have required a great deal of time and money to track and sample the moose as they are widely dispersed in the PKD region. The caribou survey was deemed much more cost effective with only one flight in and out of the test region. It should be noted that CIMP was notified of the test subject change and permission was granted by CIMP for PKFN to move forward with the Caribou Health and Monitoring program.

Methods:

a.) The local harvesters were trained in cooperation with ENR Wildlife Technician – Danny Allaire, on sampling methods for the detection of wildlife diseases in the Deco – at Tseepantee Lake – a known Pehdzeh Ki Deh caribou harvesting area. The harvesters participated in a hands-on training session for sample collection from a freshly-killed, intact caribou. They were trained how to measure back fat, collect and store biological samples for scientific analyses, and to record their information on data forms currently utilized by the Dehcho region's ENR office.

In addition, the harvesters were also provided with information packages that included wildlife diseases in the Northwest Territories, emerging diseases, and the role of Wildlife Health Monitors (harvesters). *A Wildlife Health Monitor is a person who is trained to collect a standard set of samples from caribou that they normally harvest and to record important data about the animal harvested.*

Then each monitor was provided with an information package on wildlife diseases, sample collection kits, and specially-prepared data recording forms provided by ENR. Samples from community-based Wildlife Health Monitors will:

1. aid in establishing baselines for current animal health and condition;
2. help with detection of pathogens/diseases where there are no visible abnormalities;
3. provide a means for early detection of disease;
4. Provide ongoing, long-term surveillance; and help to build an archive of samples for future analysis.

ENR Wildlife Technician Danny Allaire accompanied the hunters to Tseepantee Lake. He showed the hunters how to collect a variety of biological samples that can be used for assessing animal condition. A full suite of 8 biological samples was collected from 10 of the harvested animals. The samples were: the front teeth, a sample of heart, liver and muscles tissue, a femur bone, the kidney plus accompanying fat, rumen (stomach) contents, and feces. PKFN provided these samples to ENR.

b.) This project was organized in partnership among the Dehcho Renewable Resources Board – via the South Slave ENR and the Pehdzeh Ki First Nation band – harvesters from the PKFN Harvesters and Trappers Association. Three local harvesters participated in the project – the project was posted in the community several weeks beforehand – cold weather was a deterrent for participation by several local community hunters.

c.) Though there were elders who were asked to participate in the hunt, all declined due to the harsh January winter conditions / temperatures. They did however inform the PKFN Harvesters and Trappers Association where the best sites to locate caribou were at that specific time of year.

Results

- The CIMP category that this project supported was the Monitoring and Research.

- As a monitoring / research project the Valued Component studied was that the local harvesters were trained in cooperation with ENR Wildlife Technician – Danny Allaire, on sampling methods for the detection of wildlife diseases in the Deco – at Tseepantee Lake – a known Pehdzeh Ki

Deh caribou harvesting area. The harvesters participated in a hands-on training session for sample collection from a freshly-killed, intact caribou. They were trained how to measure back fat, collect and store biological samples for scientific analyses, and to record their information on data forms currently utilized by the Dehcho region's ENR office

The reason for the above is due to the fact that locals who harvest wildlife on a regular basis are the 'eyes on the land' and are the first line of defense for detecting abnormalities in wildlife. Most hunters already know to submit abnormalities to the biologists or Renewable Resource Officers and this provides considerable information on the health of the animals. However, some diseases are not easily seen in the field and special tests are needed to determine if an animal has a disease, or if it has been exposed to a disease.

- PKFN's Wildlife Health Monitors collected the left kidney with the fat attached, a piece of liver, feces, the lower jaw, the left lower leg bone (metatarsus), and blood on paper disks. They also measured the back fat over the rump, recorded if the animal is male or female, approximate age, opinion of body condition, and if the animal has a calf and if it is producing milk. From the kidney fat, back fat, long bone, and Wildlife Health Monitor's observations determined the body condition of the moose. The incisors (front teeth) from the lower jaw were used to determine the exact age of the moose. The feces are examined for parasites.

- The femur marrow fat content has been determined for all samples and averaged over 82% indicating the animals were in good shape. The fecal material has been analyzed for disease and parasites; no nematodes, giardia, or cryptosporidium were recorded. ENR will be writing a report on the sampling program and the results of the analyses of any biological samples.

Discussion / Conclusions:

a.) With the onslaught of the impending Mackenzie Gas Pipeline among others, more and more contaminants will be coming from down the Mackenzie River (e.g. the start- up of Prairie Creek Mine, up-river community wastes / wind borne contaminates, pollutants in rain from Europe / USSR / China) and the effects these pollutants will have on the regional watersheds. There is growing concern on how these variables will impact the local wildlife populations in terms of overall health and population densities etc. This type of training and testing will help the First Nation to gain a better understanding of these issues.

- It is anticipated that more monitoring will be required and conducted on both caribou and moose in the future. The monitoring and health of the local herds remains a priority to the First Nation – as it has been for many years. Now PKFN is able to contribute to the scientific methodology of this type of sampling / monitoring. It is also anticipated that ENR will send out sampling kits on an annual basis to the community for distribution to the local harvesters.

b.) PKFN is still awaiting the results to be compiled by ENR and forwarded to the band via a written format report, a power-point presentation will be created to assist in a public meeting that will later be held in the community to report on these results with the PKFN general membership – there will be reports available to the general membership upon request. The presentation to the public will most likely be in conjunction with a PKFN public meeting with accompanying feast.

- A copy of the report will be posted on the community website.