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Highlights of six years of intensive research work involving several of the Network's First Nations partners

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Building Capacity Through Leading Edge Research

Aboriginal research in the Caribou-Lower Peace Region of northern Alberta

An interview with Jim Webb, Corporate and Intergovernmental Affairs, Little Red River Cree and Tallcree First Nations communities

Tomorrow's forests: The Little Red River Cree First Nation was the first to join the Sustainable Forest Management Network. How would you describe your level of satisfaction as a partner in this unique scientific network?

Jim Webb: We are very satisfied because we understand and appreciate that the SFM Network is a research organization focused on producing the best science related to forest sustainability. The Network does this through a competitive proposal process that has a significant number of checks and balances involved with it. Given the projects that have been approved so far, the SFM Network has allowed us to raise the consciousness of industry and government participants about the need for research information on First Nation issues that everyone can trust and rely on. While we feel there is a need to shift its direction from basic scientific research to socio-economic and policy research, we are generally satisfied with the movement we have obtained to date.

There is also another aspect I want to emphasize in terms of our satisfaction. The people that are going through graduate level education today - foresters, wildlife biologists, ecologists, anthropologists, sociologists - will be sitting in senior institutional levels 20 years into the future. By bringing these graduate students into a research arena that is informed by First Nation values and beliefs, we are helping to shape their perspectives and their understanding of the world, and 20 years into the future, as these people become mature and seasoned managers. That shaping will have a very large effect. In the context of the Network's objective of producing highly qualified experts, we want to be able to influence their qualifications by allowing them, through exposure to our issues and values, to develop expertise that reflects those things. Our experiences with the researchers we have worked with who have come into our communities have been very positive. We believe these people have taken away some core beliefs and values that will become incorporated into their professional work.

TF: What was your vision for joining the Network?

JW: When we originally approached the Network, we understood from our participation in the Northern River Basin Study, and from our participation through the Treaty 8 First Nations in Alberta and the Alberta Forest Conservation Strategy process, that there was going to be a strong emphasis on science informing management. By that I mean there was going to be a strong emphasis on adaptive management processes that would allow sustainable development to be approached as it was in progress. This is the type of approach that was being talked about as the Network was being formed back in 1995. We also understood, though, that the major focus of the Network would be on basic scientific research.

Our belief was, and still is today, that this focus on basic science is incomplete because most of the management decisions required for sustainability are not necessarily decisions about how to better manage the resource. Rather these decisions are really about how to manage better human use and competing human uses over resources. This is our philosophy as best explained by Mr. Henry Lickers, Director, Environmental Division, Mohawk Council of Akwesasne, and probably the pre-eminent Aboriginal scientist in Canada. In brief, Lickers says we are not the "older brother" in our relationship to the environment and therefore responsible for managing other things. Rather we are very much the "younger brother" who is expected to make mistakes.

Nature will generally tolerate these errors as long as we do not make so serious a mistake as to destroy the ecological balance of the forest.

So it is generally this philosophy that we have brought to the Network. We want to be part of the research so we can focus on this realization. It is the management of human use that is required if we are going to have sustainability. In addition, we feel there are some social, economic and political aspects that need to be researched if we are going to develop management models that facilitate meaningful First Nation involvement and participation.

TF: Earlier you mentioned "approved projects" that I believe refers to those projects approved by the Network's Research Planning Committee. Could you provide us with a brief overview?

JW: We joined as a First Nation that has substantial crown timber holdings, and therefore a corporate voice in resource management and timber harvest. We also joined as a First Nation that had an agreement with a provincial government for the development of an integrated resource management plan over a 30,000 sq. km. forest where we have timber holdings, and where some of our industrial partners also have holdings, and where we have other substantial commercial interest. So we saw the Network as a vehicle for a cooperative research approach that would involve the province, which was already a partner, and our major corporate partner which at that time was the Daishowa-Marubeni International Ltd. We wanted SFM Network research to produce an information base capable of supporting the management-planning task the province had agreed to undertake with us and Daishowa-Marubeni International Ltd.

Initially, because there was a very strong internal emphasis on basic science and on natural disturbance regimes mediated by fire, there was an opportunity for us to work jointly on some aquatics research in the Caribou Mountains. There is a series of lakes in these mountains that is culturally important to us, and that also provides the fishery resource for some sport fishing lodges we own. This work was done in 1997/98.

Our second project was a study of values associated with subsistence hunting and practices used by elders and members of our First Nation for hunting. This work was undertaken by Cynthia Pyc from the University of Calgary. This type of research was important because it allowed us to begin to develop a science-based information set that will be necessary for us to define what the nature and scope of our rights and interests in the forest are as an aboriginal people with a treaty and constitutional protection.

A third project was done through the University of Ottawa that focused on environmental health. The thesis was that those who have a strong attachment or commitment to either a traditional lifestyle, employment-based lifestyle or participation in education and training are generally healthier than those who are not. While demonstrating this relationship, we learned one-third of our male population is succeeding, one-third is trying to succeed but not being successful, and the remaining third is adrift. The policy implication of this research is that significant improvements to community wellness and self-reliance can be achieved by a focused approach to wellness among the middle 30 percent of the population.

The last of these initial studies was a cooperative management study done by Dr. Naomi Krogman and Leslie Treseder. Cooperative management, as a process, was relatively new and no one had ever documented the development of a cooperative management process between First Nations, government and industry. So we asked Dr. Krogman and her student Leslie Treseder to study the process for reaching an agreement for a cooperative management planning process. We had first seen this type of focused investigation as participants in the Alberta Forest Conservation Strategy process.

We wanted to document whether it was possible to put in place and implement a cooperative management agreement and to, as well, document the perceptions, beliefs, values and fears of the participants as they undertook this effort. She provided us with an excellent research study that did indeed document all of these various aspects from 1995 to when the new agreement was signed with the Province of Alberta in 1999.

Then there was a series of second-generation projects. There was one additional water-based project within our special management area focused on the Lawrence River Watershed which provides the domestic water supply for the reserve community of John d'Or Prairie. Daishowa-Marubeni International Ltd. and the Little Red River Cree First Nation had an interest in determining whether fire impacted water quality in a manner similar to logging. So there was a research project undertaken within that watershed to compare the impacts of fire on some segments of the watershed and to compare, in a parallel process, the impacts of large-scale cut logging within the same watershed.

Then we undertook a series of projects more focused on concepts of traditional use. The study done by Cynthia Pyc led us then to work with Dr. Clifford Hickey and Dr. David Natcher, Dr. Scott Findlay and Dr. Quentin Grafton to begin to develop a more informed approach to traditional use. The first project in this research stream was a project to develop a model for tradeoff analysis between a First Nation and its timber values. Dr. David Natcher worked with Dr. Clifford Hickey to develop a list of First Nation values associated with traditional use. Dr. Scott Findlay is working to compile a list of timber management values as well as creating the model. That research is still ongoing.

At the same time, and again elaborating on Cynthia Pyc's work, we came to the SFM Network and said, there is a cohort of wildlife species that has a very high value in our culture. The way human use of these species is managed is relatively uninformed by seasonal habitat use. In addition, the way other resource use in the forest impacts upon these animals and their habitats is also not well understood or capable of being demonstrated in an objective fashion.

So we proposed that an interdisciplinary graduate student work with our elders and hunters to develop a model based on traditional ecological knowledge of how these animals moved within the forest landscape on a seasonal basis. Our thesis is that because our peoples have been dependent on these animals for subsistence for thousands of years, we have a very detailed ecological knowledge that allows us to predict where these animals, such as black bear, moose, wood buffalo and caribou should be in their seasonal round. When the model is developed, we would like to see if it has predictive capacity. If it does, then it will become an effective management tool, for it allows us to identify critical habitat that will need seasonal consideration

in relation to the other uses of those areas for resource management purposes. This research by Tanja Schramm and Dr. Naomi Krogman is still ongoing.

The next research project that has just been approved is a traditional use study. We started it prior to joining the SFM Network. The work began as a cultural resource inventory on the landscape, including gravesites, old community sites and discreet geographic features that have cultural value. However, again from Cynthia Pyc's work and from Dr. David Natcher's work, we learned that traditional use is more than the need to protect discreet, limited sites within a forest landscape. We knew and wanted to demonstrate that the entire forest landscape and the integrity of that whole ecosystem is essential for the survival of our culture. So, building on our previous research studies, we developed a definition of traditional use and then we went again to see Dr. Clifford Hickey and Dr. David Natcher. We asked them to undertake a research project to document our ecological footprint in this landscape that we believe has three important components:

- the cultural resource inventory which is nearly complete;
- how our people actively use the entire forest landscape for subsistence purposes as well as for cultural transmission; and
- our subsistence needs which we define as the aggregate need of our community members for commodities or resources taken from the forest.

This research is critical because the courts of Canada have said our rights to use the forest have a priority second only to legitimate conservation. The Crown can justify some infringements of our rights provided those infringements are as small as necessary to accomplish legitimate objectives. Timber harvest is a legitimate use and so is oil and gas development. The question is how much timber harvest and how much oil and gas development is legitimate in the context of interfering minimally with our rights to use the same landscape for traditional use. There is a balance that has to be obtained when considering human resource-use decisions.

The statutory decision maker is usually a provincial manager who has to decide how to achieve that balance. The courts have said that these resource managers have to have an informed understanding of the nature and scope of our rights and interests to be able to make this type of predetermination. The only way they can have an informed interpretation is if we have a mutually acceptable definition of traditional use, and if we have some objective, measurable models the same way we do for timber harvest and oil and gas development. If we can make traditional use as a concept objective and transparent, it then becomes possible to balance our needs against timber needs and oil and gas needs. This is the model we are working on developing now.

In the last initiative to be approved thus far by the SFM Network, we are working with Dr. Quentin Grafton to develop a model to project the developmental cost of moving the Little Red River Cree communities from 85 percent unemployment and 70 percent welfare dependency to 40 percent unemployment and community self-reliance based on "moderate livelihood" standards that have been enunciated in court decisions like Marshall.

In this resource economics study, Grafton's research will focus on the special management area - the total number of business opportunities and employment opportunities available. He will do this in the context of the current and projected population growth, and of the need for training and community support that will allow the middle third of our population that I mentioned earlier to become successful in training and employment. This information is necessary to inform policy approaches that are reflected in the aboriginal policy framework of the Government of Alberta, which says they want to use natural resource development as a vehicle for facilitating community wellness and community self-reliance among aboriginal and First Nations, and they want to consult with First Nations in that context. So we have asked Quentin to develop a model that will give us objective and transparent indicators of what will be necessary to do this.

TF: Thank you.

JW: You are most welcome.

Fox Lake, Garden River, John d'Or Prairie are all located in the boreal forest of northern Alberta.

Welcome to This Special Issue

Dr. Vic Adamowicz, Professor, Department of Rural Economy, University of Alberta, and Program Leader, SFM Network

The SFM Network is a national, university-based interdisciplinary research network created in 1995 by the Networks of Centres of Excellence program. The Network's mandate is to develop new knowledge and technologies for sustainable forest management. Considering the economic, environmental, social and cultural dimensions of our forests, there is increasing pressure to manage these forests effectively, sustainably and equitably. To achieve this requires an integrated and comprehensive research program involving leading researchers and dedicated support by various partners. This, in effect, is what the SFM Network is all about.

Currently, the Network links 14 forestry companies, four provincial governments, four aboriginal partners, one university-funding partner and one non-governmental organization with close to 100 of Canada's leading researchers and 150 graduate students at 30 universities in forestry, biology, the social sciences and engineering. This approach ensures the Network contributes practical, innovative and holistic sustainable forest management solutions.

This special issue on our initiatives with First Nations, through our Sustainable Aboriginal Communities (SAC) initiative, provides a snapshot of our current research on aboriginal issues. Canada's aboriginal people are unique because of their socio-economic and cultural circumstances, their collective aboriginal and treaty rights and the knowledge they possess about Canada's forests. Our specific research goals are to develop criteria and indicators for aboriginal peoples and their social and economic development, and secondly, to develop and evaluate institutional structures that will lead to sustainable aboriginal communities. This includes developing methods of incorporating aboriginal knowledge, values, rights, needs and interests

into sustainable forest management. Since the inception of the SAC in 1997, the Network has approved just over 20 research projects totalling approximately $1.2 million.

It is significant that we have, for the first time, produced an issue of *Tomorrow's forests* dedicated to just one area of our ongoing research work. In total, we are working on 13 research areas simultaneously. As with any organization with numerous partners, there are also numerous views about what the future may look like and what the solutions might be. Without question though is that First Nations ecological, socio-economic and policy research is an important and integral link in achieving forest management practices that are sustainable and equitable.

Future Research Directions: Sustainable Aboriginal Communities

Dr. Clifford G. Hickey, Director of the Canadian Circumpolar Institute; Professor, Department of Anthropology, University of Alberta; and Group Leader, Sustainable Aboriginal Communities initiative, SFM Network

Sustainable Aboriginal Communities (SAC) is one of several "working groups" within the Sustainable Forest Management Network. It was specifically formed to co-ordinate and undertake research on four priority issues identified jointly by First Nations forestry experts and SFM partners.

There are now four aboriginal partners in the Network and several other aboriginal groups are considering partnerships.

First Nation Partners:

- Little Red River Cree/Tallcree First Nations, AB
- Gwich'in Renewable Resources Board, NWT
- Moose Cree First Nation, ON
- Heart Lake First Nation, AB

Considering Partnerships:

- Waswanipi Cree First Nation, PQ
- Central Yukon Sustainable Communities Initiative (Selkirk, Little Salmon Carmacks, Tr'ondek Hwech'in, Nacho Nyak Dun), YT

Three of our First Nations partners also have industry partners - who are also part of the SFM Network - operating on their traditional lands. Clearly, these relationships enhance research on sustainable forest management (SFM) issues and can serve as models for other First Nations and companies to follow. There are four sub-groups within the SAC initiative that are each working

on ensuring that a specific issue, of the four noted below, is properly incorporated into our research work.

1. Integration of aboriginal institutions, knowledge and values into SFM

The objective of this sub-group is to develop and assess policy, processes and frameworks that integrate aboriginal institutions, knowledge and values into SFM. Growing awareness that "business as usual" may not be socially nor economically sustainable has led the Network to consider the sustainability requirements of aboriginal communities living in Canada's boreal forest. It is important that forests be managed not just for timber, but also for other values, as well as the cumulative impacts of all forest uses. Integral to this is the incorporation of aboriginal values, knowledge and management systems into sustainable forest management.

Through its involvement with First Nations, the SAC Working Group has determined that marrying indigenous ecological knowledge with scientific knowledge may not be the most useful exercise for aboriginal peoples or SFM. The knowledge and wisdom that many aboriginal people possess about the forest and their relationship with it informs a uniquely different system and philosophy of management that has evolved and proven to be sustainable over countless generations.

Echoing the World Commission on Environment and Development, we may have much to learn about sustainability from indigenous people and their time-proven approaches to managing relationships with the natural world. The challenge for the Network is to undertake research that develops processes and frameworks to incorporate them, while leaving those relationships intact. Most of the research projects within the Sustainable Aboriginal Communities group deal with these issues. Two projects in northwest Ontario involving **Shoal Lake** and Grand Council of Treaty Three are examples.

We intend, also, to explore with the Moose Cree and Matawa Tribal Council the development of a "Native Values Collection" framework that meets their needs in forest planning. Another promising approach currently being employed in northern Alberta is the development of a model that seeks to understand what values aboriginal people derive from specific forest resources, and how losses of, and trade-offs among, competing values can be best accommodated and compensated.

2. Accommodation of Aboriginal and treaty rights

It is vitally important that Network partners and other forest stakeholders understand each others' rights of access to forest resources if forestry and other industrial activities are to be socially and economically sustainable. The goal of this research group is to develop recommendations, processes and institutional arrangements to accommodate aboriginal and treaty rights into forest policy, planning and practice. Given recent court decisions, such as in the Delgamuukw and Marshall cases, it is equally important to understand the ramifications of not incorporating aboriginal and treaty rights into forestry regulations and practices, both now and in the future.

Network researchers in Alberta have been working on this issue, particularly in regard to the duty of government to consult, the constitutionality of Alberta's Forestry Act vis-à-vis numbered treaties, and the legal context for co-management involving First Nations. Future research will explore the development of a tenure system that enables aboriginal institutions to become integral components of sustainable forest management.

Other research will explore co-management models in national parks and in developing appropriate forms of compensation when forestry legislation and practices infringe upon aboriginal and treaty rights.

3. Aboriginal economic and capacity development

This sub-group is focusing on the development of tools, opportunities and processes to enhance aboriginal peoples' participation in SFM. Aboriginal people are beginning to acquire the skills and knowledge to participate in the management and development of their forests, but not on a scale that has made a real difference in their communities. Network researchers, working with their First Nations partners, will explore ways to strengthen aboriginal capacity to maximize the benefits from assuming greater control of sustainable forest management on their traditional lands.

As an example, over the next several years the Network will work with the Little Red River Cree First Nation, Kayas Cultural College and other educational institutions to create a pilot "Aboriginal Forest Managers Education Program" to be delivered by satellite to First Nations communities. Again, these experiences will be passed along to the other Nodes in the SFM Network.

4. Aboriginal Criteria and Indicators for SFM

The goal of this sub-group is to establish criteria and indicators that will assist and measure industry performance in incorporating aboriginal rights, interests, values, institutions and indigenous ecological knowledge into sustainable forest management. People around the world want to be assured that the products they buy are not harming indigenous communities and the forests in which they live. The Canadian Council of Forest Ministers' criteria and indicators go a long way toward developing relevant standards. More pertinent in this regard may be the principles and criteria developed by the Forest Stewardship Council, an international, non-governmental accrediting organization committed to preserving indigenous cultures and the forested environments in which they live.

Certification is no trivial issue for SFM Network partners. Increasingly, large secondary manufacturers and retailers of wood products (e.g., Home Depot) are choosing to purchase wood from certified forest companies in order to satisfy public demand. Failure to meet this demand could have irreversible consequences for Canada's forest industries and communities, both aboriginal and non-aboriginal.

Over the next seven years, the Network will undertake research and consultation to develop a set of aboriginal forest standards. In this way it will provide its industry partners with a "leg up" on

the competition with respect to the development of sustainable forest management practices and meeting the standards of various certification bodies. After three years, a set of criteria will be produced, which will then be monitored and assessed for its utility.

The Challenge with Traditional Knowledge Research

Dr. Marc Stevenson, First Nations Project Coordinator, SFM Network

Excerpt from the presentation, *No, it's not just like gardening: traditional knowledge and colonial discourse in the modern world*, delivered to the CINSA Annual Conference, May 29 to 31, 2000.

For well over a decade there has been a growing frustration among environmental managers, aboriginal people and academic researchers with Traditional Ecological Knowledge (TEK) research. The problem is not so much with TEK itself, but the inability to effectively use and apply this knowledge in environmental resource management. The reasons why TEK has not made any real dent into how resources are managed lies neither with the knowledge nor the people who hold this knowledge. Rather, it lies with the environmental management frameworks and epistemologies into which TEK is forced, where, inevitably, it winds up playing "handmaiden" to western science.

Many substantial and systemic barriers have come to light over the last decade that call for a different way of incorporating aboriginal people and their wisdom, values and knowledge into management practice. Unfortunately, we academics have been slow to rise to the challenge. Here is but a short list:

- Problems or issues are usually identified by non-aboriginal people such as biologists, government employees, managers and others cultured in the western scientific tradition;
- The methods or research designs developed to address these problems almost never originate in the aboriginal community;
- Non-aboriginal researchers often wind up being the collectors and managers of TEK owing to a lack of capacity in aboriginal communities to undertake such work;
- Only those elements of TEK understandable to western science and environmental resource management are considered useful; the rest is effectively ignored;
- This form of knowledge is often taken out of its original context and inserted into a western scientific paradigm and, in the process of making it fit, it is often sanitized in order to make it palatable to the dominant culture;
- TEK, which exists first and foremost in an oral context, is usually translated from its original language into that of the dominant culture and then transformed into text or maps, or some other potentially inappropriate format;
- These formats then become the authoritative source or reference, excluding the people who hold this knowledge from decision-making.

However, perhaps the greatest barrier confronting even the best-intentioned efforts to incorporate TEK into environmental resource management is the imposition of the researcher's and manager's own deeply held cultural values and beliefs on the aboriginal subjects with whom he or she works. Nowhere was this more poignantly illustrated to me than at a recent lecture I attended.

This lecture was given by a prominent researcher who had earned the respect and trust of both her peers and aboriginal people. She spoke of her research among a BC First Nation people who tended plots of land at the head of a large coastal inlet. After asking an elder about his efforts to enhance the production of certain plants through weeding and other activities, she exclaimed, "So, it's just like gardening!" After a moment of reflection, the elder replied, "Yeah, that's it, it's just like gardening."

But how can this be? The First Nation to which this elder belongs has no agricultural heritage, at least not traditionally, and no Judeo-Christian world view that separates "man" from nature. At first glance, "gardening" and the activities that this First Nation was engaged in may appear similar. However, under the surface, they are structurally and functionally quite different.

Let's examine the nature of the discourse between the researcher and elder at the moment of their exchange. The researcher interpreted what the elder said by reference to her own cultural framework, with all its biases, myths and all. With the new-found knowledge that what this First Nation was doing was nothing more than "gardening," a formidable barrier to understanding the deeper underlying significance of what this elder was saying and its implications was erected. Since what he and his family were doing was just like "gardening," there was no need for the researcher to probe deeper, to ask questions to discover what lies beneath the surface, to learn more about what was really going on. "We know you, and you're just like us," was the sub-context of the discourse.

At the same time, the elder not only shared his knowledge in a language that was probably not his first, but he was forced to respond affirmatively to the researcher's interpretation of what he said, using a concept that was alien, at least traditionally, to his First Nation's oral lexicon.

So what type of questions could the researcher have asked? How about the social significance of what this First Nation was doing? What roles did their activities play in terms of maintaining social order, structuring social relationships or maintaining equity and reciprocity between families? Did these activities have a property dimension whereby rights of access were limited or controlled? What about the economic and nutritional dimensions of these activities? What roles did they play in subsistence, exchange and the like?

It seems to me that in the arena of TEK research, academics, environmental managers and aboriginal people are confronted with two choices. We can remain on our present course, continuing to marginalize indigenous systems of management and the knowledge that informs them while increasing the schism between ourselves and aboriginal peoples, or we can begin to explore alternative ways to meaningfully incorporate aboriginal people and their knowledge, wisdom and values in decision-making about the lands and resources upon which they depend. With respect to the boreal forest, perhaps the two best ways I know of doing this are not to focus

on TEK per se, but rather to refocus on (1) understanding the values aboriginal people derive from the forest, and (2) revitalizing those systems and institutions of indigenous management that give meaning, value and efficacy to TEK, and the attainment of these values.

Our efforts, no matter how well intentioned, have been misplaced. TEK has had little to contribute to environmental resource management. However, for countless generations it has informed a way of life and a system of management that endeavors to maintain balance, reciprocity and equitable relationships with the natural world. Under this paradigm, what is important and vital to know is fundamentally different than that information required for environmental resource management. Relationships with resources and human activities become the management unit, not the resources per se.

Working with aboriginal people to determine what values are derived from, and what needs are fulfilled through the use of boreal forest resources is perhaps as good a way as any that I know to begin to understand their relationships with the forest and how these are managed. When we refocus our efforts towards the purpose of seeing that aboriginal management systems, philosophies and institutions are given an equal role with that of environmental resource management in management decisions, then and only then will the real value of TEK be realized. And, maybe, just maybe, we may all learn something from each other.

Sharing Knowledge: Protocols and Processes

Case study involving the Iskatewizaagegan #39 Independent First Nation, Shoal Lake Watershed, Northwestern Ontario

Marvin Abugov, Communications Coordinator, SFM Network

When Iain Davidson-Hunt, a Ph.D. candidate working with SFMN Principal Investigator, Professor Fikret Berkes, at the University of Manitoba, and Ed Mandamin, a founder of the Shoal Lake Resource Institute, joined forces to help organize a fall 1999 conference on non-timber forest products in Kenora, Ontario little did they know they would begin a three-year journey of discovery.

One of the conference's outcomes identified the need for more research to understand the non-timber values of First Nations peoples. Says Mandamin, "I knew there were still elders living in the Shoal Lake community who remembered and practiced the harvesting of plants from the forest." So the idea was born between the two of them to form a partnership to explore the potential for scientists and elders to work together to ask and answer questions related to the sustainable use of the non-timber resources around the Shoal Lake area. After significant discussion, the research objectives for an ethnoecological and ethnobotanical project began to emerge:

- collect historic information on the plants used by the Aniishinaabe people of Northwestern Ontario;
- document the Aniishinaabe names and uses of plants;
- record elders' knowledge and perception of the ecology of where they live with respect to forest patches and disturbance events;
- describe harvesting patches using ecological and botanical methods for plant community categorization; and
- relate the findings to current systems of ecological land classification.

"To obtain the informed consent of the community," said Davidson-Hunt, "we developed a formal research protocol signed by the Natural Resources Institute and the Shoal Lake Resource Institute."

The Shoal Lake Resource Institute is a unit of the Shoal Lake Band's administration that served as a way to formally set up the research project's administration and archival center. Here are the steps it took to achieve proper mutual consent:

a. Once the goals, objectives and methodology had been discussed among all parties to the agreement, the researchers from the Natural Resources Institute prepared a discussion paper describing the project in plain language. At this time, a letter was also submitted to the Shoal Lake Resource Institute summarizing the project and expressing interest.
b. The summary and letter were then presented to the First Nation council along with an opportunity for questions and discussion.
c. The Band Council passed a resolution and approved a workshop agenda that gave permission for members of the Shoal Lake Resource Institute to work with the Natural Resources Institute to solicit funding and draft a research protocol for the proposed project.
d. The research protocol included the need for an advisory committee, workshops, written document review and oral presentations, as well as accountability measures including the informed consent of the elders.

The research model included the following components:

- Identification of ethnographic, governmental and archival documents related to the historical use and management of non-timber forest products by Aniishinaabe people in the region. Researchers also collected scientific reports and publications related to plant distribution, associations and commercial uses.
- Organization of a workshop with the First Nation prior to the beginning of the first year of field research. During the workshop, the purpose and objectives of the research were presented and time was allowed for discussion, comments and suggestions for additional objectives. Research team members were from the Chief and Council, Shoal Lake Resource Institute, Natural Resources Institute and community elders.
- Selection of a young community researcher to work with university researchers as a translator in the ecological and ethnobotanical field areas.
- Identification and collection of plant specimens. Elders took researchers to the field to find specific plants about which they wanted the researchers to learn in terms of

Aniishinaabe names and uses. This included whether the habitat in which the plant was found had an Aniishinaabe name, the specific ways in which a certain plant should be harvested, and the historic and contemporary harvesting of such plants.

- Unstructured, qualitative interviews. Researchers talked to the elders about the Aniishinaabe way of becoming skilled plant harvesters.
- Identification of forest patches that elders considered important blueberry habitat. Elders accompanied the researchers to the patch in order to discuss the plants that could be found in these patches, and what they remembered in terms of the importance of these patches for certain types of plants.
- Recording on digital video and audio media all interviews and excursions.
- Organization of a workshop at the end of the first year of field research. Results were presented to the community by the researchers, elders and council representatives, and where Shoal Lake Resource Institute members had the opportunity to provide their comments. (The second year of this three-year project begins Spring 2001).

"What we realized," said Davidson-Hunt, "was the development of a research protocol, including workshops, review of written documents and oral presentations, became the negotiating arena out of which the final written document resulted. Trust, respect and partnerships were negotiated orally through the process. The signing of the final agreement served only to signify these conditions had already been established orally." The process forced the researchers to engage in a detailed process of communication in order to reach a common understanding of the research project and, particularly, how the researchers would use the results and respect the intellectual property rights of the knowledge recorded during the project.

While the signing of a band council resolution signified the band administration's formal agreement, "Informally," stated Davidson-Hunt, "elders showed their support by attending a pipe ceremony and a feast held to start the first year of the field research and by showing up for interviews." Those that chose not to become involved simply chose not to attend interview sessions or trips to the bush (an option agreed to in advance).

While the process of writing a research protocol may seem officious, the importance is found not in the written document, but in the intercultural communication necessary to find themes of common interest that a research project can address. If common themes and methods cannot be found that are mutually acceptable, the likely end result will be that one of the parties will walk away from the negotiation process before a final protocol is established.

The founders of the Shoal Lake Resource Institute include Ed Mandamin, Brennan Wapioke and Phyllis Jack, with guidance from Elders, Basil Greene and Robin Greene, and with support from the Chief, the Council and the community.

Helping Communities Market a Non-timber Forest Product

Market testing cloudberries, Gwich'in First Nation Settlement Area, Northwest Territories

An interview with Dr. Peter Boxall, Associate Professor, Department of Rural Economy, University of Alberta, and a Principal Investigator in the SFM Network

Tomorrow's forests: You are now in the process of determining whether or not there is a national market for cloudberries which I'm told looks like a yellow-raspberry. From where did this idea originate?

Peter Boxall: The Renewable Resource Board of the Gwich'in First Nation was interested in understanding the local people's use of non-timber forest products. The cloudberries idea, because there are a lot of them that grow wild in the region, came from the knowledge that there are industries in Scandinavia that make cloudberry products. The question I had to ask was, other than the cottage industry in the Maritimes, why isn't this happening here? Cloudberries are widely used in commercial yogurts and for jams in Nordic countries.

TF: Have you determined that there is sufficient productive capacity to produce enough berries to serve the market in the event the product becomes popular?

PB: We have data from the first year of this two-year project that says there is sufficient productive capacity. In the first year of our work we talked to the local people, did some biological surveys to find out where these berries grow, got some idea of production levels, how much of the bush foods local people collect is actually comprised of berries, and the various types of berries. A bigger question that we probably will not be able to answer is how secure the production level is. Cloudberry production varies annually, due to weather conditions.

We are breaking some new ground here. We want to put some rigor around the claims about non-timber forest products and their potential for commercial use. Our work will also provide some guidance about what the Gwich'in Renewable Resource Board might expect if this product were ever to be produced commercially and sold across the country.

TF: What is the next phase of the project?

PB: We will shortly begin test-marketing jams in some food establishments in Edmonton using some Scandinavian cloudberry products for consumer taste tests. This will include cloudberry jam and lingonberry (or low bush cranberry) that also grows in the Gwich'in region. We will be conducting what is known as a choice experiment - a marketing tool to look at how sensitive a consumer would be to the berry type, the product, the label, the place where the berries are grown and to its price for a jar of that product. Through this analysis, we hope to get an answer to two important questions:

1. If a product like cloudberries is produced by a First Nations business is there a greater likelihood in Canada that it will sell as compared to the imports from Nordic countries?
2. Will Canadians pay a premium for a product produced by First Nations communities?

I'm confident that by Spring 2002, the Gwich'in Renewable Resource Board will have enough data to make some informed decisions.

Creating a New Reality

Jamie Honda-McNeil, Manager of Resource Initiatives, Alberta Aboriginal Affairs and Northern Development

One of three Cooperative Management Agreements in Alberta, the Little Red River Cree/Tallcree (LRRC/TC) Memorandum of Understanding (MOU) has the potential to create a new cross-cultural reality among First Nations, the Alberta government and industry. Many First Nations categorize cooperative management as an "interim measures" approach, in recognition that they have outstanding legal and philosophical grievances over the nature and understanding of the treaties (particularly the ceding of aboriginal title) and the *Natural Resources Transfer Agreement*. This cooperative approach recognizes and accepts differences of opinion on these legal matters, and within that context, focuses on developing a working relationship. This process moves beyond a dialogue that is focused on aboriginal and treaty rights and moves into the realm of finding mutually acceptable solutions on renewable resource issues.

This process supports *Strengthening relationships: the Government of Alberta's Aboriginal Policy Framework*. This document, released in September 2000, is a statement of government policy containing principles and commitments to action regarding improving individual and community well-being and self-reliance, as well as clarifying federal, provincial and Aboriginal roles and responsibilities.

The interest of the LRRC/TC First Nations to enter into a cooperative management initiative was first articulated in their 1991 Model Forest proposal. According to the two First Nations, "the ultimate goal of the Cooperative Management Agreement is to regain control over their traditional lands and establish a sustainable forest-based local economy." For Alberta, the goals are to use the MOU as a vehicle for meaningful consultation on resource management, and to facilitate the development of specific initiatives to help achieve First Nations' economic objectives.

In general, the MOU recognizes that forest management decisions need to consider the long-term interests and viability of communities that rely upon the forest. The mandate of the Cooperative Management Planning Board (the structure established to implement the MOU) is to create and report on a cooperative landscape assessment related to the management and use of renewable natural resources, using an ecosystem management approach. This mandate is linked to the *Alberta Forest Legacy* document and the *Interim Forest Management Planning Manual, April 1998*.

The landscape assessment considers the forest in a holistic manner that incorporates cultural, environmental, social and economic values. It includes consideration of the following:

- resource use priorities that are compatible with sustainable development and traditional use;
- objectives and guidelines for management and use of renewable natural resources within the planning area;
- economic development, employment and training opportunities and initiatives for First Nations; and
- special initiatives to address First Nations concerns regarding management of wildlife and wildlife habitat.

The Little Red River Cree/Tallcree MOU expired on March 31, 2001 and a renewed commitment from Alberta to this process is under consideration. Over the past six months, parties such as the Fort Vermilion Metis Local, guides/outfitters, and the Municipal District of Mackenzie, have raised serious concerns regarding the MOU and Board process. This has certainly been cause for reflection about the current Board process and the need to resolve these outstanding issues. There are three issues of note that require some attention and deliberation, not only by the Government of Alberta, but also by the other parties to the process. These issues include the need for an MOU evaluation mechanism, funding commitment to the MOU process, and key stakeholder and public involvement.

Currently, there are no indicators or measures in place to measure and evaluate cooperative management outcomes. Many of the benefits of cooperative management are intangible. That is, cooperative management is successful from the standpoint that things *do not* happen, such as Court injunctions, lawsuits and political issues/crises. In the case of economic benefits, it is problematical to attribute economic initiatives and development strictly to the MOU. The challenge of developing indicators to measure cooperative management success will require serious thought on the part of the Government of Alberta.

There is a perception stemming from the fact that parties to the cooperative management process are expected to cover their own administrative costs, that cooperative management has no real associated costs. However, the proposed budget advanced by the Technical Planning Committee to the Board projects costs of approximately $500,000, and in-kind costs of just under $1,000,000 over a two-year period. The Board and their Technical Planning Committee recognize, in order to make further progress in developing the landscape assessment, resource management philosophy, and goal statement, that a firm financial commitment is required.

First Nations, industry and government believe in the value and benefit of the Cooperative Management Planning Board process. It is now time to convince others. The Board will need to make some decisions regarding the ongoing role of the Municipal District, the Metis Local and other stakeholders. The process to this point has been somewhat closed, from the standpoint of communications. That is likely based on the fact that members of the Board had not reached a level of comfort themselves to adequately engage those other interests. A comprehensive communications strategy must be launched in conjunction with any extension of the MOU.

There is a tremendous potential in the Little Red River Cree/Tallcree MOU to create a new reality for resource management and local economic development. It is a reality founded in the principles of recognition and acknowledgement of existing Aboriginal and treaty rights, mutual respect, and reciprocity, grounded in a commitment to work together - in effect, to explore the art of the possible.

Caribou-Lower Peace Cooperative Forest Management Board

Dr. Naomi Krogman, Assistant Professor, Department of Rural Economy, University of Alberta, and Leslie Treseder, Department of Renewable Resources, University of Alberta

With the permission of the Caribou-Lower Peace Cooperative Forest Management Board, we assessed the perceptions, beliefs, values and fears associated with the operation of a new cooperative management board. We did this by interviewing past and current members of the Board, reviewing Board minutes from its previous operation between 1995 to 1997, and by attending meetings with government officials and Little Red River Cree Nation representatives as they were developing a new co-management agreement.

A key issue, one that is often cited but not critically examined in other co-management studies is the importance of trust among the parties involved in co-management agreements. Participants in the co-management process reported that their trust would improve as they developed agreements on definitions of sustainable forest management and on roles and responsibilities of Board members, and secured commitment from the Province and industry to devote time and resources to the co-management process. For example, of prominent importance to First Nations representatives is the "cultural sustainability" of the forest. This means addressing issues such as cross-cultural communication among Board members, development of protocols for sharing of sensitive information, and coming to agreement on ways to protect and preserve First Nation forest values. "Cultural sustainability" is also related to First Nation priorities for a stronger integrated resource management approach, where protection of water, wildlife and other landscape features is recognized as part of sustainable forest management. Participants in our study emphasized that cooperative management requires better organizational development of the Board. This would include mechanisms for conflict resolution as well as periodic assessments to measure the success of the Board at meeting its goals.

An issue for all parties to the Board is the skill base required to implement co-management. Required skills include technical knowledge of forest management issues, practical knowledge of activities occurring in the forest, and experience with alternative dispute resolution processes. Co-management participants also require organizational skills related to the conduct of meetings and negotiations, and general comfort with the language and business approach of industry and government. These findings apply to all Board members and to all parties involved in co-management processes. Despite the fact that co-management institutions include First Nations members as partners, most of them operate in the same way as other institutions of mainstream

society. Some First Nations participants in our study felt that a lack of experience with the institutions of mainstream society was a barrier to full participation in co-management by the First Nations.

In addition to the above skills, non-First Nation members need to have an understanding of First Nation culture, and interpersonal skills related to cross-cultural communication. We recommended a formal apprenticeship program for First Nations members who are on the Board or would like to participate on the Board, and first hand experiences for industry and government Board members to help them learn about Aboriginal cultures and traditions. A related issue that is of concern to many Board members is maintaining appropriate representation on the Board. This is especially relevant in terms of the accountability of Board members and the inclusion of other parties representing larger societal interests, particularly non-native interests that are not currently represented on the Board.

In our final report we suggested that a key test of the co-management process will be the Board's ability to ensure that Aboriginal people in the region can maintain their traditional and cultural land uses in the context of expanding industrial forestry activities. We recommended to the Board that further research be done on alternative techniques for practising forestry to reduce impacts on First Nations people and their land uses.

Accommodating Aboriginal and Treaty Rights: A Workshop

Dr. Marc Stevenson, First Nations Project Coordinator, SFM Network

On October 27-28, 2000, the SFM Network held a two day workshop at the University of Alberta for its industry, government and First Nations partners entitled *Accommodating Aboriginal and treaty rights in sustainable forest management: the future of Aboriginal/industrial relations in the boreal forest*.

This workshop was held to inform SFM Network partners about recent court decisions regarding aboriginal and treaty rights to forested lands and resources, and to transfer knowledge generated by SFM Network research on these issues to our partners. By continuing to define the scope of aboriginal and treaty rights, the courts are setting the stage for a paradigmatic shift in the way forests are managed and forestry operations are conducted. These decisions make it clear that current tenure arrangements and forestry practices in most provinces were not designed to readily accommodate aboriginal and treaty rights.

The workshop reviewed the legal status of aboriginal and treaty rights to renewable resources and the forest stemming from recent court decisions. Also presented was SFM Network research on related issues, including the duty to consult and the legal implications of selected provincial forestry practices. Discussions focused on the broader legal constellation of aboriginal rights in which this research is embedded, with the goal of developing workable and equitable

arrangements that meet both industry and aboriginal needs while accommodating aboriginal and treaty rights.

Presentations by panel members led to the discussion of several issues such as depolitizing the discussions in the context of accommodating aboriginal and treaty rights. Emerging principles of treaty rights interpretation outlined by the courts underscore the fact that government interpretations of treaty are outdated. Disputes over rights to lands and resources are increasingly being resolved in favour of aboriginal parties. While governments recognize that forestry regulations need to be amended to accommodate aboriginal and treaty rights, there is a lack of institutional momentum and capacity to respond to recent court decisions.

All who attended considered the workshop a success. For the most part, discussions were congenial and participants came away with a better sense of what the issues are and what types of research need to be undertaken to facilitate the incorporation of aboriginal and treaty rights into sustainable forest management. This included research on various topics, such as: co-management regimes; the modern application of rights guaranteed under treaty; the role of aboriginal environmental governance in sustainability; the best ways to enhance the capacity of First Nations communities to participate in sustainability; and the relationship among aboriginal and treaty rights, certification and implications for the stability of timber supplies and markets.

The workshop was moderated by Drs. Marc Stevenson and Terry Veeman, and attended by 35 people, including an expert panel consisting of Sakej Youngblood Henderson (University of Saskatchewan), Catherine Bell (University of Alberta), Dale Gibson (University of Alberta), Monique Ross (Canadian Institute of Resource Law), Russell Diabo (Interior Alliance of First Nations, B.C.) and Jim Webb (Little Red River Cree Nation). Also participating were representatives from ten SFM Network partners, including the Heart Lake First Nation, Little Red River Cree Nation, Moose Cree First Nation, Weyerhaeuser, Canadian Forest Products, Alberta Pacific, Louisiana-Pacific, Daishowa-Marubeni International Ltd., the Government of Alberta and the Government of Québec. The expert panel and partners were joined by SFM Network researchers, students and staff, as well as invited guests from the North Slave Metis Alliance, BC Treaty 8 Tribal Association, First Nation of Nacho Nyak Dun, Little Salmon Carmacks First Nation, Selkirk First Nation, the Canadian Forest Service and the law firm of Chamberlin-Hutchinson.

The proceedings of this workshop are now in preparation and will be made available. A "primer" or "white paper" for SFM Network partners on aboriginal and treaty rights is also being considered. In the interim, the Network has identified research on this issue as one of four major priorities for its Sustainable Aboriginal Communities Initiative. By continuing to undertake research in this important area, the SFM Network will assist its industry and government partners to prepare for the future and develop forestry practices that are in concert with the Crown's fiduciary responsibilities to aboriginal and First Nations peoples.

Workshops/Symposiums: Catalysts for New Research Directions

Marvin Abugov, Communications Coordinator, SFM Network

SFMN Program Leader, Vic Adamowicz explains the relevance and importance of a Network sponsored or co-sponsored workshop or symposium:

A workshop is a major tool in our knowledge exchange efforts, and as a network focusing on research with partners, we place significant emphasis on the word "exchange." Traditional conferences contain a lot of one-way communication with researchers presenting results. Whereas a workshop, if it's really done properly, gets researchers into the domain of knowledge exchange such as sharing of knowledge, problems, and potential solutions. Knowledge exchange involves the interaction between researchers and partners, or to paraphrase Beatrice Leigh of BioChem Pharma: "Knowledge exchange is like a body contact sport"

Part of the value is recognizing that in our own professions, disciplines and fields, we write in our own codes. When we come together, we tend to translate out of those codes into a more general language. At a workshop or symposium, people start to learn from each other and start to link across the various groups. Researchers really begin to understand the concerns and challenges raised by the partners. They can begin to formalize this new information into a scientific problem that may be useful for the partners. So a workshop is one of the methods we use to get partners in touch with researchers, and researchers in touch with a number of partners who have problems, conditions, challenges, questions and solutions.

Over the past year, the SFM Network either sponsored or co-sponsored the following workshops/symposiums in four areas of importance to its mission.

A workshop on **Accommodating Aboriginal and treaty rights in sustainable forest management: the future of Aboriginal/industrial relations in the boreal forest** was held in Edmonton, Alberta, on October 27-28, 2000.

Integrating socio-economic and ecological indicators of sustainability: bridging boundaries between groups and fields of expertise, Trois-Rivières, Québec, February 11-13, 2001 was co-sponsored by SFM Network and the Canadian Model Forest Network. The workshop attracted just over 140 researchers and SFM Network partners. Attendees heard Francine Dorion (Abitibi Consolidated Inc.) underline the need for a coherent, coordinated structure for both research and implementation regarding indicators at levels from national to local management units. Michel Cantin (Ministère des ressources naturelles du Québec) noted the opportunity to profit from current changes in the Québec Forest Regime to develop and implement indicators, potentially attaching pertinent indicators to the ongoing program of the provincial inventory. Jeremy Williams (ArborVitae Environmental Consulting) explained how a large number of indicators were screened for the Lake Abitibi Model Forest.

Louis Bélanger (Université Laval), in the context of his experiences with Forêt Montmorency, asked, "How durable are monitoring systems? Who is going to take long-term responsibility for implementation?" Frédérik Doyon (IQAFF) and Peter Duinker (Dalhousie University), in discussing their implementation of biodiversity indicators in the management plan for Millar

Western Forest Products Ltd., demonstrated the requirement to embed landscape modeling and analysis directly into the forest management planning process. Similarly, researchers working in the Québec Integration Project including Marie-Josée Fortin (Simon Fraser University) and Dan Kneeshaw (DRF-MRNQ and GREFi) et al. demonstrated the use of their SELES model to evaluate the impact of various management and natural disturbance scenarios over large spatial areas and long time frames. Luc Bouthillier (Université Laval) reminded workshop participants that as forest practices evolve with increasing scientific knowledge, social expectations and values of communities also evolve. These additional aspects must also inform adaptive management through various public participation processes, as was demonstrated by workshops about various model forest public participation initiatives. Presentations about other national and international criteria and indicator-related research projects were made by researchers from across the SFM Network and as far away as Sweden. Special thanks to the conference organizing team: Maureen Whelan and Jacques Larouche (Canadian Forest Service), Alison Munson (Université Laval) and researchers Stephen Yamasaki (UQAM and Laval) and Daniel Kneeshaw (DRF-MRN and UQAM).

Sustainable Aboriginal Communities Workshop, Thunder Bay, February 24-26, 2001 was sponsored by the SFM Network and involved 75 people. The central message coming out of the workshop is that community and culture are essential components of sustainable forest management. The workshop began with a pipe ceremony conducted by Ojibway Elders of the Shoal Lake First Nation located in the Treaty 3 area southwest of Kenora, Ontario. Terry Veeman (University of Alberta) provided a comprehensive overview of scientific and future research directions for the SFM Network. Cliff Hickey (University of Alberta) explained the guiding principles that support the Sustainable Aboriginal Communities initiative within the SFM Network. Fikret Berkes provided an overview of a unique research project involving the Shoal Lake Elders and PhD candidate Mr. Iain Davidson-Hunt. Shashi Kant (University of Toronto) outlined the efforts of his research team in determining the degree to which forest managers represent the values that various groups hold for the forest. Peggy Smith (Lakehead University and conference organizer) noted that since Northwestern Ontario is covered by historic treaties signed between aboriginal peoples and the federal government, it will be important for provincial governments to recognize the spirit and intent of these treaties. According to Ms Smith, aboriginal peoples agreed to these treaties to "provide a way to share resources and protect a way of life." Jean-Paul Gladu, a policy forester with the National Aboriginal Forestry Association noted that, "workshops such as this allow us to discover what our resources are, to network and to amalgamate our ideas." The workshop attracted representatives from government and non-governmental organizations, aboriginal communities from as far west as the Yukon Territories, forest industry representatives, and researchers from across the country. Special thanks to workshop organizers: Peggy Smith (Lakehead University), Shashi Kant (University of Toronto), Fikret Berkes and Iain Davidson-Hunt (University of Manitoba).

Natural disturbance and forest management: what's happening and where it's going, Edmonton, March 5-7, 2001 was co-sponsored by the SFM Network and the Foothills Model Forest. More than 200 people attended. The symposium highlighted some of the shifts in focus that have occurred within this field of research. Research from across Canada, including SFM Network research from New Brunswick, Québec, Ontario, Manitoba and Alberta, presented a

wide range of insights on past developments and new directions for NDM research. David Andison, from Bandaloop Landscape-Ecosystems Services, a driving force in much of Foothills Model Forest NDM research, put some perspective on the presentations to follow when he emphasized the challenges facing researchers. He cited assumptions required in modeling, data quality and quantity, and the need to acknowledge the many challenges associated with objectivity as reasons for emphasizing the need to ask the right questions in NDM research and implementation. The research presentations clearly demonstrated the inherent patterns of variability in natural disturbance regimes, as well as the extraordinary range of topics that fall under the NDM umbrella on a broad range of spatial and temporal scales.

The symposium also highlighted examples of integration efforts from across Canada on both forest management areas and parks. This session focused on the challenges and opportunities of adopting NDM, given issues within our current atmosphere of cultural disturbance, fire suppression and the wide range of desired outputs from Canada's forest resources. While the implementation of NDM is not as straightforward as many may have hoped for only a few years ago, the symposium was a clear demonstration of research integration successes and the general improvement in the types of questions being asked by both NDM researchers and forest managers of Canada. Special thanks to conference organizers: David Andison and Kris McCleary (Bandaloop Landscape-Ecosystem Services); Steven Cumming (Boreal Ecosystems Research Ltd.); and Lisa Risvold, Fiona Ragan and Fran Hanington (Foothills Model Forest).