

WORKSHOP PROCEEDINGS 2002-7

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**Incorporating Aboriginal knowledge,
values, and institutions into
sustainable forest management:
Taking stock of where we've been
and where we're going**

**Nov. 3, 2001
Winnipeg, MN**

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**Incorporating Aboriginal knowledge, values, and institutions
into sustainable forest management: Taking stock of where
we've been and where we're going**

***A Sustainable Aboriginal Communities Knowledge Exchange and
Technology Exploitation Workshop***

November 3rd, 2001, Winnipeg, Manitoba

Sponsored and Organized by:
The Sustainable Forest Management Network

Workshop Proceedings

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Workshop Background, Objectives and Format

Since 1996, the Sustainable Forest Management (SFM) Network has funded research with First Nations focused on documenting traditional ecological knowledge and developing and assessing ways to incorporate this knowledge into sustainable forest management. This particular area of research has become the most heavily researched area of the Sustainable Aboriginal Communities (SAC) group. This one-day workshop highlights the successes as well as the challenges related to incorporating Aboriginal values, knowledge and management systems and philosophies into sustainable forest management.

Invited speakers in this workshop included internationally recognized scholars in the area of traditional knowledge research issues and co-management practice. Participants were asked to discuss, within the context of their research in or outside of the SFMN, both the successes and challenges they have experienced in documenting and incorporating traditional ecological knowledge, Aboriginal values, and systems of philosophies of management into decision-making and practice.

The goal of the workshop is to develop consensus on:

- What works and what does not,
- What and where the existing challenges are, and
- How these might be addressed through future Network research initiatives.

In the morning, invited speakers focused on the latest issues related to incorporating Aboriginal values, knowledge and management systems and philosophies into sustainable forest management. SFM Network First Nations partners provided their perspectives, issues and experiences with this type of research. The afternoon begins with presentations by other SFM Network researchers involved in this type of research, followed by a discussion session.

Workshop Agenda

9:00 am	Introductions, purpose	Hickey
9:15 am	Presentations by Invited speakers, and discussion	Hickey, Freeman, Berkes
1:00 pm	SFMN First Nations partner perspectives	van Bibber, Charlie, Webb
12:00 pm	LUNCH	
1:00 pm	Presentations by SFMN researchers	Findlay, Natcher, Webb, Kant, Davidson-Hunt, Wein, Boxall
3:30 pm	COFFEE	
3.45 pm	Discussion session	
5:00 pm	SFMN Wine and Cheese Social	

Introduction and Keynote Speakers

The meeting began with an opening prayer by Elders Robin and Kathleen Green (Shoal Lake First Nation). Dr. Cliff Hickey, SFM Network SAC group leader, introduced the keynote speakers: Drs. Milton Freeman (Dept. of Anthropology, University of Alberta), Adrian Tanner (Dept. of Anthropology, Memorial University), and Fikret Berkes (Natural Resources Institute, University of Manitoba).

Dr. Milton Freeman emphasized the value of incorporating traditional ecological knowledge (TEK) in resource management. Freeman discussed the importance of co-management as a forum for bringing the culture of science and TEK together for the purpose of sustainable forest management. Co-management boards face the challenge of addressing the conflict between the culture of science and TEK. Science, particularly biological science, puts great value on the status quo (the value of the system before human-induced change), focusing on biodiversity protection and identification of species at risk. However, focus on these values ignores the on-going change in the environment and can have a devastating impact on indigenous populations similar to that of the anti-fur campaign. Furthermore, science as a written culture conflicts with TEK, an oral culture. TEK exists in context, through participation and observation. There is a danger that the context of TEK is lost when it is recorded. However, TEK is typically written down or mapped in order to 'co-exist' with the culture of science. It must be recognized that in its written

form TEK represents a cultural truth. Freeman stated there remains a gulf between science and TEK that must be acknowledged in sustainable forest management.

Dr. Fikret Berkes supported Freeman's description of TEK. He further elaborated that TEK is a multi-generational knowledge of the land that includes specific day-to-day observations, and that a distinct worldview underlies TEK that include stewardship values. Berkes argued that TEK is relevant in many different resource management contexts. TEK is used to monitor change in the environment, examples are development impacts (i.e., diamond mining), climate change (recording of local observations), and environmental and community health (community-based indicators). These examples show how TEK is important in understanding environmental and resource issues. TEK is also important in the co-management context. Berkes gave examples of wildlife, fisheries, parks and protected areas and forest co-management boards that all incorporate TEK in the co-management process. Berkes encouraged the development of partnerships in TEK research. Such partnerships involve the identification of common objectives and respect for differing objectives, and ultimately should be mutually beneficial.

Dr. Adrian Tanner reflected on the terminology of TEK. He suggested that "traditional" implies the past or something static, whereas Aboriginal knowledge is a living, dynamic, current knowledge. Reference to the "environment" implies a location such as the wilderness, bush, and nature, terms from European language, which suggest separation from self and where someone lives. However, indigenous people do not see the environment as something separate from self; indigenous people are simultaneously part of and dependent upon the environment. Inaccurate characterizations have created problems in the legal context. Forest management must recognize and strive to understand these differences to achieve sustainable management.

Discussion

Discussion then focused on research priorities with respect to incorporating TEK into SFM.

Dr. Marc Stevenson pointed out that there is no one approach to TEK. He also stressed the importance of pursuing research that legitimizes TEK as a viable management system in and of itself, and ensures that TEK has an impact on how resources are actually managed.

It was noted in the discussion that a pluralistic approach to problem solving should be taken in identifying research priorities. Future research should build on existing knowledge and understanding. Problems related to incorporating TEK into SFM need to be defined, understood, and acknowledged so that research can then move towards investigating systems and structures of decision-making. Networks, such as the SFM Network, help to define research problems cooperatively and iteratively with Aboriginal communities.

Partner Perspectives

Doug van Bibber (Central Yukon First Nations) stressed the urgency of developing land use plans for their traditional area where extraction and development are seemingly given priority. A research program needs to be developed that uses traditional laws and that emphasizes traditional approaches to taking care of the land. Resource management decisions should be guided by the practical aspects of TEK, this knowledge can be readily obtained by taking direction from the elders in the communities. TEK is the basis of SFM, but it is also informed by science where necessary.

Robert Charlie (Gwich'in Renewable Resource Board, GRRB) spoke about the 1992 Land Claim agreement that led to the development of the GRRB. The board has broad representation, including local and government agency representatives. The GRRB reviews scientific research proposals. It is necessary that the research contain a component of TEK with equal consideration and respect as the western scientific inquiry. The Gwich'in communities prioritize research in the claim area. Participatory-style research, which capitalizes on ways to involve community residents in the project, is also required. Research is typically funded by either land claims or partnered funds, or some combination of the two. The SFM Network is supporting three projects in the Gwich'in area on 1.) non-timber forest products, 2.) productivity of white spruce, and 3.) the economics of driftwood supply.

Jim Webb (Little Red River / Tall Cree (LRR/TC) First Nations) highlighted the importance of TEK in legitimizing the role of First Nations in the land management process. Using TEK to inform land management allows Aboriginal people to validate the roles of the elders and their wisdom. This process is however hindered by the lack of institutional capacity at the First Nations level. First Nations should be given the right to manage industrial activities on their lands, thus providing the institutional capacity and opportunity to recreate cultural structure. Jim also spoke about the differences between scientific knowledge and wisdom, arguing that TEK is a source of wisdom. Land management decisions are guided by science to validate value-guided decisions. First Nation's values must also be allowed to guide the decision-making process.

SFM Network Research Project Summaries

Scott Findlay - University of Ottawa. Project title: "Integrating Aboriginal Values into Forest Management Plans". Scott spoke about the similarities between TEK and western scientific knowledge in that they are both narrative, error correcting, adaptive (changes with new knowledge), context dependent, and predictive (refer to causal relationships in nature). Scott's

project focused on identifying values, indicators, and performance objectives for forest management. Using this criteria it is possible to identify value conflicts (similarities) between First Nations and non-First Nations in the forest management process.

Dave Natcher – University of Alberta. Project title: “Crossing Boundaries: A multidisciplinary approach to community and resource sustainability”. Dave’s research with the Little Red River/Tall Cree First Nations aims at making TEK more accessible, policy relevant, and methodology transferable. Much of this research has contributed to the development of an Interim Resource Management Plan (IRMP). Dave summarized the main challenges for SFM in terms of balancing TEK and science; addressing the needs of multiple stakeholders and incorporating community perspectives on the environment in management practices; and creating opportunities to communicate across disciplines and new methodologies for forest management. Dave suggested some approaches to incorporating TEK into SFM such as continued emphasis on collaborative approaches; more consideration of skill levels at the community level; local capacity building; and community involvement in long-term environmental monitoring programs. Policy and intergenerational access to resources was highlighted as an important area of future research.

Jim Webb – Little Red River / Tall Cree First Nations. Related projects led by SFM Network principal investigators: “The role of natural resources in community sustainability”; “Integrating indigenous values into forest management plans”. Jim reiterated the importance of integrating First Nations values into the institutions of forest management, as well as establishing and using Aboriginal indicators, the importance of accommodating Aboriginal treaty rights, and building capacity in Aboriginal communities. Three specific projects were highlighted as important areas of research 1.) multiple and cumulative effects models (such as the *ALCES* model by B. Stelfox), 2.) bison disease risk identification models, and 3.) traditional resource use research. Jim suggested that definitions of traditional use should reflect Aboriginal values, customs and beliefs, and that there is a distinctive difference between “use” and “need” of the resource in the Aboriginal context. To fully understand the this difference cultural inventories should be done.

Shashi Kant – University of Toronto. Project titled: “Sustainable forest management through co-management in north-western Ontario”. Shashi’s research focuses on measuring and comparing the importance of economic, cultural, ecological and other forest values to different stakeholders (Aboriginal groups, local groups, forest industries, and environmental non-government organizations). Initial research results reveal that there is not much difference between individual values and the Aboriginal and environmental groups. There are however, large differences between the industry /government groups versus the Aboriginal / environmental groups. Also

results from the study indicated that Aboriginal people see themselves as part of nature, whereas non-Aboriginal people tend to see themselves apart from and superior to nature. These differences are important when attempting to integrate values into processes. Shashi suggested that the best approach for integrating Aboriginal values into SFM was to create a new system where values of both groups are equally recognized.

Iain Davidson-Hunt –University of Manitoba. Project title: “Combining scientific and First Nation knowledge for the management and harvest of traditional and commercial non-timber forest products”. Iain’s work with the Shoal Lake First Nation in Manitoba focuses on the relationship between people, plants and places. Relationships, defined as cultural landscapes, are influenced by natural disturbance and as a result change in location over time. Disturbance in the system is an important element of social-ecological well-being. SFM must account for the effects of timber harvesting and natural disturbance on these cultural landscapes. Iain stated that there are opportunities for managing cultural landscapes for the purposes of teaching, vegetation, and cultural values. Recognition by government of Aboriginal rights to manage these landscapes is essential for SFM.

Ross Wein – University of Alberta. Project title: “A dynamic model of driftwood flow along the lower Mackenzie River: An alternative timber supply for remote northern communities”. Resultant of the community’s concern for the potential over-harvesting of timber, this project focuses on the rate of productivity and recovery of forests in the Gwich’in area. Initial results reveal very old trees and low potential for regeneration. In this case, timber harvesting is analogous to ‘mining trees’. Another component of the project focuses on the TEK related specifically to fuelwood. There are potential impacts of development on the supply of fuelwood, of specific characteristics that the local people use. Ross emphasized the importance of research that addresses Aboriginal communities’ concerns, addresses cumulative effects of development, partnerships in research initiatives, and sharing research results with the communities. Ross also suggested a model where a database of research results pertinent to local communities would increase the level of understanding of these issues and in the broader context of cumulative effects.

Peter Boxall – University of Alberta. Project title: “Developing sustainable non-timber forest product business opportunities: Is there a First Nations advantage?”. This project focuses on potential market opportunities for non-timber products, in particular berries, available to First Nation communities in the Gwich’in area. Within the study area, 100 percent of households depend on berries of different kinds. Both the biological (levels of abundance of berries) and economic (marketability of berry jams) were investigated. Currently there is very little biological literature regarding Aboriginal use of berries. Results reveal many marketing opportunities for

berry products, however, potential for development of these opportunities depend on community capacity, particularly that of entrepreneurial spirit and skill. An important prerequisite to developing markets is the need to establish Aboriginal property rights regimes to protect the resources.

Plenary

Following the presentations, a plenary session was held on the opportunities and challenges that exist for integrating Aboriginal values into forest management. Some major questions were asked to guide discussion including:

- What are the 'big issues'?
- Where should the network be going?
- What are some processes that should be developed?

Milton Freeman made some final comments on the nature of sustainability; sustainability varies depending on local needs, circumstances, and it also depends on the stakeholder defining it. It also varies over time (e.g. young people may have different perceptions, values than elders). He made the point that cultures are not static; with globalization the world is shrinking and worldviews are shifting. Milton also commented on equity as important in discussing sustainability, and that here is a big human cost to non-equitable decision-making. He discussed the potential role of environmental organizations in protecting forests, however, commented that a lot of environmental organizations focus time and energy on political lobbying. He added that alliances between environmental organizations and industry are potentially dangerous for Aboriginal people who may become further marginalized in the decision-making process. Milton also commented on best management approaches, suggesting that with adaptive management, every decision made is a learning opportunity.

Fikret Berkes added that traditional knowledge in adaptive management is an important area of research and discussion. He emphasized that he was not an "expert" in traditional knowledge; only the holders of traditional knowledge who practice it and hold those values and beliefs are experts. He spoke about the importance of working with First Nations on the ground (building from the ground up) and using this learning to guide policy and institutions. Fikret emphasized some key priorities for the network in doing traditional knowledge research:

- (i) Learn from people who have this knowledge (TK for us); it helps us (academics) make sense of resources / management
- (ii) Use traditional knowledge to educate young people and non-First Nations; wherever there is community-based knowledge projects it has a cultural impacts; non-FN can positively influence people's perspectives on their own lives

The overall objective of the work should focus on First Nations doing their own traditional knowledge research.

Tanner also commented on the importance of Aboriginal peoples being autonomous in carrying out their own research. He suggested that anthropologists violate autonomy by documenting traditional knowledge. He emphasized that traditional knowledge is not only words; it is also action based

He then spoke about the different kinds of planning and management practices being undertaken such as land use planning, and planning for AAC (annual allowable cut). Tanner talked about the level of commitment that is expressed by Aboriginal people towards the land; their long term relationship and respect for the land. Tanner also spoke about the challenges of Aboriginal rights to resources not being fully recognized in the legal system and gave the example of the James Bay Cree.

Another major issue of concern related to ecological change and how ecological events cause families to change or not to change their hunting practices (i.e. family hunting territories). He concluded by saying that traditional knowledge should be recognized as productive, generative and regenerative.

The meeting closed with prayers and a ceremony by Robin and Kathleen Green.

Summary

While no definitive conclusions were reached on how best to incorporate Aboriginal knowledge, values and management systems into SFM, there was general agreement that the major challenge in this area is to develop effective institutional structures and arrangements that effectively give Aboriginal people and their knowledge a greater and more equitable voice in management decisions and planning.

Workshop discussions focused on the use, role and challenges of incorporating TEK in SFM. Generally it was agreed that merging or forcing TEK into western scientific knowledge paradigms to inform environmental resource management has not been very successful or satisfying to most involved parties.

An alternative model, currently being adopted and explored by the Little Red River / Tall Cree First Nation, focuses on the return of tenure and management responsibilities to First Nations as the most expedient way to incorporate TEK into SFM. Another alternative, as suggested by Marc Stevenson, proposes that TEK inform management systems and philosophies unique to Aboriginal people, and that the 'relationship', as opposed to the "resource" is the central management unit. Marc suggested that consideration of Aboriginal management systems

together with the western environmental science resource management systems offers an opportunity to incorporate TEK, and resulting in well-informed management systems.

Abbreviated Participant List

Name	Institution/Organization
Marvin Abugov	SFM Network
David Balsillie	University of Toronto
Fikret Berkes	University of Manitoba
Harry Bombay	National Aboriginal Forestry Association
Andrew Chapaskie	Taiga Institute
Robert Charlie	Gwich'in Renewable Resource Board
Iain Davidson-Hunt	University of Manitoba
Ray Ferris	Nishnabi-Aski Nation
Scott Findlay	University of Ottawa
Milton Freeman	University of Alberta
Jean-Paul Gladu	National Aboriginal Forestry Association
Quinton Grafton	University of Ottawa
Kathleen Greene	Shoal Lake First Nation
Robin Greene	Shoal Lake First Nation
Cliff Hickey	University of Alberta
George Hoberg	University of British Columbia
Shashi Kant	University of Toronto
Dianne Korber	SFM Network
Henry Lickers	Mohawk Akwasasne
Bruce	Heart Lake First Nation
Bruce Macnab	SFM Network
Arthur Moore	Constance Lake
Dave Natcher	University of Alberta
Harry Nelson	University of British Columbia
Lucille Partington	SFM Network
Peter Quill	Pikagikan Taiga Institute
Monique Ross	University of Calgary
Bill Spade	Eabametoong First Nation
Peggy Smith	Lakehead University
Marc Stevenson	SFM Network
Adrian Tanner	Memorial University
Lillian Trapper	Moose Cree First Nation
Doug van Bibber	First Nation Nacho N'yakDun
Terry Veeman	SFM Network
Jim Webb	Little Red River Cree Nation
Ross Wein	University of Alberta
Terry Wilson	Nishnabi-Aski Nation