

IMPLEMENTING TRADITIONAL ECOLOGICAL KNOWLEDGE: SOLEC 2000 TO 2006

STATE OF THE GREAT LAKES ECOSYSTEM CONFERENCE

Deborah McGregor, Environment Canada-Ontario

Introduction

SOLEC 2000 focused on Aboriginal people sharing their perspectives of TEK and exploring models for applying TEK in the SOLEC type activities.

The theme for Aboriginal people's participation in SOLEC 2002 is "managing Great Lakes Ecosystem health by applying TEK "

At the 2002, workshop John Seyler from Anishnabek/Ontario Fisheries Council and Elder Mr. Harold Michon from the Lake Nipigon area in northern Ontario to talk about their experience in working with TEK and Science to address fisheries management. SOLEC 2004 did not include formal Aboriginal representation via workshop or presentations.

SOLEC 2006 focused on examples or case studies of how TEK is being utilized in Great Lakes indicator work.

TEK and SOLEC: Introduction con't

TEK is not formally gathered by Aboriginal people and applied to SOLEC activities (at least on the Canadian side of the Great Lakes).

However, TEK is shared and utilized by Aboriginal people throughout the Great Lakes Ecosystem at the community level to address the same environmental concerns that SOLEC concerns itself with (biological integrity, water quality, forestry, fisheries, etc.)

There are examples of partnerships and collaboration in which TEK and Science are used in an acceptable fashion to meet the needs of the community. The Anishinabek/Ontario Fisheries Council is an excellent example of such a partnership.

An other noteworthy example of excellent work by First Nations on indicator work is Haudenosaunee Environmental Protection Process presented at SOLEC 2006 in Milwaukee, WI.

These case examples illustrate different models for utilization of TEK in indicator work in the Great Lakes.

The Key Message is “to work effectively with First Nations people means” **not** trying to extract knowledge from the community and knowledge holders but to work with them directly in SOLEC activities a mutually beneficial way.

Goal of Aboriginal Participation in SOLEC 2000

- The **goal** of Aboriginal involvement in SOLEC was, and continues to be, to develop a process which facilitates the utilization of Aboriginal Traditional Ecological Knowledge (TEK) in SOLEC initiatives.
- This goal necessitates the establishment and maintenance of positive, long-term and mutually beneficial working relationships between Aboriginal peoples and the SOLEC organizers.

SOLEC AND TEK: A SOLEC 2000 INITIATIVE

- Missing from the earlier SOLECs was the input of those who have the closest ties to and are most directly affected by the Great Lakes Basin and the ecological conditions within it.
- Environment Canada and the other SOLEC 2000 organizers recognized that not only was this an injustice to First Nations, but that non-Native scientists and decision-makers involved in SOLEC were missing out on the potentially invaluable contribution of those who collectively held thousands of years of knowledge and understanding of the Great Lakes ecosystem.
- This knowledge, referred to here as Traditional Ecological Knowledge, or TEK, has allowed Aboriginal peoples to live, prosper from, and contribute to the Great Lakes ecosystem for countless generations, and could provide valuable insight as to how current society might reestablish more harmonious ways of relating to the lands and waters of the area.

BACKGROUND TO TEK

- Remains controversial in terms of defining and seeking appropriate terminology
- History of TEK research and Aboriginal people. Aboriginal people are related to as research subjects and the methods are geared toward extracting TEK from knowledge holders.
- Aboriginal Perspective Lacking (although changing)
- Control by External interests. Western scientific methods dominate the field. Aboriginal interests are emerging.

- TEK, from a Native viewpoint, is a holistic form of understanding, encompassing all areas of human existence.
- TEK as more of a “way of life” than something which can be concisely described or written down. This also will be discussed again below.

What is TEK?

- Aboriginal and non-Aboriginal people hold contrasting views on what the concept actually entails.
- Academics and western-trained researchers generally view TEK as a “body of knowledge,” ...a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living things (including humans) with one another and with their environment.
- From an Aboriginal viewpoint, TEK is conceptualized as both more than and different from western definitions.
- Native understandings of TEK tend to focus on *relationships* between knowledge, people, and all of Creation (the “natural” world as well as the spiritual).

TEK is viewed as the *process* (a *verb*) of participating fully and responsibly in such relationships, rather than specifically on the knowledge gained from such experiences.

Barriers to TEK Use: Hurdles to be Overcome by SOLEC

Three main problems of importance to SOLEC are noted briefly below based on the feedback from the Aboriginal participants at SOLEC 2000:

- I. Aboriginal peoples are not accorded sufficient *meaningful participation* in studies and other work which should and in some cases does attempt to use TEK. As TEK is not separable from the people, the meaningful involvement of the people is necessary in order to utilize TEK in environmental work.
- I. Aboriginal people and their knowledge are viewed as *objects* suitable for *study* rather than as *people* for *working with*. It is time to begin building positive long term relationships with Aboriginal people rather than simply studying them and their knowledge at the mercy of project-by-project funding.
- I. Aboriginal people have little *control* over how the knowledge they share will be used. Again, meaningful involvement of Aboriginal people is required for TEK to be implemented effectively.

In general terms, it is important to realize that Environment Canada is a western science-based department whose work is directed by western scientific paradigms. However, the reality and perspectives of Aboriginal people must be recognized and respected as well.

SOLEC 2002

FEATURE Presentation by Harold Michon and John Seyler Anishinabek/Ontario Fisheries Resources Centre.

John provided an overview of the environment of Lake Nipigon - located sixty miles northeast of Thunder Bay, the lake is one hundred and seventy-three square miles and can reach depths of four hundred and fifty feet.

It is connected to Lake Superior by the Nipigon River. He noted that the local First Nations communities have a “profound knowledge of the lake bottom and fish habitat”.

The recent history of the lake includes the fact that it was a significant

tourist destination in the late 1800's, particularly in fishing for brook and lake trout.

Between 1920 and 1950, hydro-electric development on the Nipigon River began to affect water levels and fish habitat.

Exotic species such as rainbow smelt first made an appearance in 1978 and are now an abundant food source affecting the population of lake trout and walleye.

Harold then identified traditional fishing practices including the use of wood trap nets.

He identified that suckers and pike are customarily taken in the spring and spawning species in the fall. The Hudson's Bay Company used to commercial fish to feed dogs.

By 1917 the Lake was opened for commercial fisheries - this industry was dominated by Toronto-based fishing companies with large boats. By the 1950's, the Anishnabe people began to notice the effects of the hydro-electric development.

There was at least a three foot drop in water levels during the fall affecting the spawning beds and causing habitat loss. No one listened. Some time later, all fishing during spawning seasons was closed. In the late 1940's nylon nets were being used which could catch more fish using less length.

The Anishnabe people geared down from sixty foot nets to forty foot to lessen the harvest. The dominant catch is whitefish, with some walleye and the annual catch is kept at a certain level (ie. approx. 500,000 pounds).

In 1994 Binjitiwaabik Zaaging First Nation (BZFN) established their own fisheries unit, funded by Ontario Hydro, and focused on habitat and habitat loss.

The Government of Ontario also provided some funding but the levels were unstable.

This led to the 1996 initiative to create the Anishnabek/Ontario Fisheries Resource Council (A/OFRC). It serves the needs of forty-three First Nations and has a permanent fisheries unity on Lake Nipigon. Priorities are determined annually.

Case Example

In the 1980's the first signs of decline were noticed by the people of BZFN. There were fewer females, less catch, more effort for the desired amount, and it took more fish to fill up a fish box so it was obvious the fish being caught were smaller.

In 1993 BZFN declared a self-imposed closure of the fishery and waited two years for the non-Indigenous fishery to do the same after the Ministry of Natural Resources sponsored legislation on this matter. Since the year 2000 recovery is being monitored.

Whitefish management on Lake Nipigon demonstrated the difference in approaches between science and NKS.

Ontario froze whitefish quota's in the 1980's because scientists were not finding enough juveniles in their testing programs.

The people of BZFN did not have confidence in this method because they know juveniles and adults are different - they migrate differently and at different times of the year.

In conjunction with the people of BZFN, the A/OFRC mapped the differences in whitefish stocks and habitats. This led to a new assessment in 1999 with a more accurate determination of the health of the lake whitefish. This approach is also being applied to lake trout.

John and Harold proceeded to identify lessons learned.

- **Recognize the value of local knowledge.** Science should not be embraced as the only source of knowledge in resource management. NKS/TEK explains the variability of data. It is important to bring local

knowledge to the table in management processes because local people often recognize changes first and they are important in initiating changes in management direction.

- **There is a need to improve how we select indicators.** There are too few observation-based indicators. The language of science is often just jargon - it must be understandable to all people. It is essential to have people buy-in for the credibility of the process;
- **Ongoing consultation is important.** Relationship-building and maintenance is labour intensive but it is necessary and valuable.

SOLEC 2006: FEATURE Presentation by Joyce King, Executive Director of the Haudenosaunee Environmental Task Force (HETF)

The HETF mission is to bring the traditional teachings together with environmental protection through a process “Haudenosaunee Environmental Protection Process”.

This protection process is based on Haudenosaunee worldview, philosophies and values: Creation Story, Thanksgiving Address, Great Law of Peace, Two-Row Wampum/Silver Covenant Chain, Messages from Handsome Lake.

HETF is in the process of developing criteria and indicators for a healthy nation/environment.

One case example, currently being field tested involves strawberries (important for ceremonies and medicines).

For example, “incorporation of strawberries in ceremony” is an indicator of good, mixed and poor status for the people and environment.

Ceremony with strawberries: status-good; ceremony without strawberry- status-mixed; no ceremony and no strawberries- status-poor.

Indicators in this example are developed based on culture, tradition and values.

Recommendations

(from SOLEC conferences with FN involvement).

that an equitable, long-term and mutually beneficial partnership be established between Environment Canada - Ontario Region and those First Nations within the Ontario portion of the Great Lakes Basin. Such a partnership would enable the involved parties to share information, including scientific knowledge and TEK, on a mutually beneficial basis. This partnership should be created and maintained according to a co-existence model as described by the Two-Row Wampum.

that First Nations capacity-building for the purpose of contributing meaningfully to this partnership be funded by Environment Canada on a stable, long-term basis. This will ensure that the best results possible are achieved in all areas and will help to “level the playing field” in terms of information availability. Such funding must ensure that communities have the resources they need to conduct any necessary follow-up activities following specific projects.

that the unique status of First Nations in establishing and maintaining environmental partnerships be recognized by all parties, including Environment Canada. Any such partnerships must be negotiated on a Nation-to-Nation basis, accounting for the fact that First Nations continue to hold Aboriginal and Treaty rights.

that a Cultural Sensitivity Training Program be established for Environment Canada staff who can be expected to come into contact with Aboriginal peoples as part of their official duties. This training should be organized in partnership with First Nations and be delivered by Aboriginal people. Financial resources should be set aside by the respective governments for this training.

that existing First Nations projects on the health of the Great

Lakes ecosystem (especially the EAGLE Project) be continued and built upon so that the wealth of information arrived at through such undertakings is not lost. This information could be put to good use in the development of a separate First Nations process to run parallel to SOLEC.

that Environment Canada take steps to officially recognize TEK as a complementary and valid source of knowledge on a par with western science. If Environment Canada and First Nations are to enter into partnerships based on mutual respect, then Environment Canada will have to begin taking seriously the TEK which Aboriginal people offer. Native people will not share it if it is not valued.

that an Aboriginal focus be included in SOLEC web sites and reports. As part of establishing and maintaining partnerships, SOLEC Web pages should contain links to documents and other Web sites (e.g. EAGLE Project, Indigenous Environmental Network, Bkejwanong.com, etc.) which provide Aboriginal perspectives on Great Lakes issues and describe First Nations undertakings in this area.

that a representative group of Aboriginal people be included from the outset of any Environment Canada Great Lakes project or program, and that such representation be 50% female. Long term success depends on meaningful First Nations participation at all stages, from project formulation through to implementation and monitoring.

that community control be maintained over projects involving community TEK. If the people are to be expected to share their knowledge, they must be assured of having a meaningful say in how that knowledge is used. In order to guarantee this to the fullest extent possible, community members must be involved in all project stages, and must have a thorough understanding of all aspects of the project as it unfolds.

CONCLUSION

Still a very long way to go for SOLEC to be effective at engaging Aboriginal people, especially TEK holders

However, Aboriginal people are utilizing TEK in their own environmental/ecological work in the Great Lakes Basin.

Effective working relationships and mutual benefit are very important pre-requisites for effective collaborations and partnerships.

Aboriginal people are not interested in having their knowledge extracted from them.....but they do want to see it reflected in environmental decision making that impact their lives and environment.

In addition, another key process, is that science too must be shared with Aboriginal people. Aboriginal people want to develop relationships with scientists, not just receive scientific reports.