

The Ashkui Project - Using Cultural Landscapes to Link Labrador Innu Knowledge and Western Science

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Paper

Introduction:

The Innu people of Labrador have a world view of the land they occupy, known to them as Nitassinan, which views the landscape, the processes that interact with it and the plants and animals that live on it as a collection of inseparable elements. The western and particularly western science view is best considered reductionist, with the landscape being viewed as a series of small but linked pieces. The predominant approach of attempting to fit the more holistic traditional ecological knowledge (TEK) into the more reductionist western scientific knowledge has led to concerns over the validity, scope, accuracy, mis-use and potentially the production of categorical distinctions of the researcher which may not be held by the knowledge holder.

It is our contention that the attempt to incorporate the big picture into the little picture is inherently flawed and discourages open and honest discourse amongst all of the knowledge holders. Perhaps the best way to illustrate this, is to consider the making and use of tea by the Innu. Innu knowledge recognizes the blend of many features and savours the taste, aroma, the medicinal values and social activity around the making of camp tea. Western science on the otherhand, focuses on the constituents of the tea, the leaves, the water, the sugar, the milk the fire and the container. Attempting to infuse the Innu view of tea into a western science view of water, clearly will not work. The big box will not fit into the little box.

Over the past five years, a partnership between the Innu Nation, Environment Canada, the Gorsebrook Institute of Saint Mary's University and Natural Resources Canada has been exploring new ways to connect Innu knowledge and western science. Our approach uses the conceptual category of a Cultural Landscape Unit (CLU) as the basis for generating new knowledge about the biophysical make-up of Labrador. This method starts with Innu knowledge and terminology for an element of the landscape that has value and meaning for them and then builds a knowledge base of that feature from a number of perspectives. Our hypothesis is that a combined form of ecological knowledge can be developed that recognizes the qualities and limitations of Innu and western knowledge systems and situates both within the specific context of the times they are produced in.

The work undertaken to date has focused on a case study to examine the feasibility of the CLU approach. Zones known as Ashkui in the Innu language have been identified by Innu elders as being of primary importance to them and will form the basis of this case study. Ashkui are areas of early or permanent open water on rivers, lakes and estuaries and are considered by the Innu as their "supermarkets and pharmacies". The first step in this project is the collection of Innu knowledge on the biological and environmental components of Ashkui, the conceptual boundaries of the Ashkui, the land use characteristics of the Ashkui and the sociological importance of the Ashkui. The knowledge gained from these elder interviews is continually reshaping the overall direction of the project and the perspectives of the partners. For example, the elders have participated in the selection of fifteen Ashkui sites for intensive research with an emphasis on understanding the biology and chemistry of these special landscape features. Questions from the Innu about whether the water is good to drink, will make good tea or will have lots of fish and birds are influencing both the science being conducted and the way that the science is communicated.

Methods:

The case study will focus on the three following elements:

1. Collection of oral history information from Innu elders about Ashkui. Innu knowledge on the biological and environmental components of Ashkui, the conceptual boundaries of the Ashkui, the land use characteristics of the Ashkui and the sociological importance of the Ashkui will be collected using a variety of techniques. A series of individual and group interviews with Innu elders, women, hunters and youth have been conducted in order to collect an Innu knowledge base on Ashkui. These interviews are all recorded on video and audio tape and have been translated, transcribed and digitized. Additionally, elders will accompany researchers in-country in order to provide specific Innu knowledge about significant places in Labrador. To aid in the collection process numerous maps and satellite images will be used to allow the Innu to identify particular locations and in some situations to record their knowledge. As part of this work, the interviews will try to identify other CLU's! that make up Nitassinan.

2. Directed science initiatives based on the Innu knowledge of Ashkui. Specific science initiatives will be undertaken to try to understand the distribution and function of Ashkui from a western science perspective. Hypothesis will be generated in concert with the Innu people and will attempt to address issues and concern of relevance to them. The elders have helped to identify critical ashkui sites which are a priority for scientific investigation. Research activities have started with characterization of water quality at these ashkui and will be expanded as new questions and issues arise. For example, climate change research will investigate the impacts of modified timing of Ashkui formation from physical, biological and cultural perspectives.

3. Development of Linked Knowledge Products. The design of this project attempts to develop natural linkages between Innu knowledge and western science and as such it is expected that a number of standard output products (i.e. reports, publications, newsletters etc) will be produced that will focus on presentation of the hybrid knowledge. In addition, based on needs expressed by the Innu Nation, an interactive CD-Rom based multi-media application for use in the Innu school system that combines Innu and western science voices, faces and knowledge to describe the importance of the Ashkui in the Labrador landscape will be developed. The very nature of the ashkui project demands that attention is paid to the development of innovative products that can help to bridge western and Innu cultures.

Results and Discussion:

The differences in the underlying principles and tenets of Western Science and Innu knowledge have often made it difficult to connect the two knowledge systems. In fact, there is a widely divergent degree of acceptance of the merit of the two systems to the point where some authors such as Howard and Widdowson (1997) completely disregard the value of TEK. Kuhn and Duerden (1996) in a review paper highlight many of the inherent differences between science and Traditional Ecological Knowledge. These differences only partially explain why the two systems of knowledge often fail to connect. In essence, it is the inability to respect and value the views and approaches of others as being valuable contributors to the ecological knowledge base that often precludes effective connections between western science and TEK.

The ashkui project was designed to invert the usual approach of linking TEK to the back end of western science. The project is loosely organized around three connected themes: 1) Special People, 2) Special Places and 3) Special Products.

Special People:

The Special People portion of the project focused on bringing together a core of knowledge holders that embodied both TEK and Western Science understanding and also were willing to invest in the development of trust and respect. Although bringing specific expertise to the team

was an important criteria, individuals that were open to sharing their ideas, accepting ideas from others and were listeners rather than lecturers were primary considerations in building the project team. From the Innu perspective, the project slowly evolved over time from a series of introductory meetings in an Innu community, to relying on the input of a core group of respected elders. These elders were instrumental in designing the project and the Innu community selected the "Ashkui" as the first CLU for study. The first two years of work concentrated on spending time with Innu elders, hunters and families, both in the community and in-country in order to build the knowledge base about ashkui. A wealth of information about the formation of ashkui, weather and ice conditions around ashkui, social and culture significance of ashkui, the timing of waterfowl arrival, the availability of traditional medicines and changes in these features over time has been recorded. In general, the Elders have observed that ashkui form earlier now and may not last as long as they used to. In some areas, spring may be arriving a month earlier. Ducks and geese may also be arriving at ashkui much earlier and specific birds such as Teal, Goldeneye, Pintails and Mergansers are now arriving in March, rather than May. Ashkui are also considered to be important sources of medicines. Food and medicine are often intertwined, as elders feel much better when eating country foods than when eating foods purchased from stores. There is a general feeling that the medicine and food is getting weaker due to pollution and other man-made causes. Although there is considerable variability across individual interviews, particularly related to the order of arrival of waterfowl, there is consistency in the opinion of elders that the ecology of Labrador is now in a period of dramatic change. Through these interviews and the compiled results, it was possible to begin to develop a research agenda for the project that was responsive to the questions and concerns raised by the elders. Initial concerns about water quality, changing climate and availability of high quality country foods and issues related to on-going and proposed developments such as the Voiseys Bay Mine, Low level military flight training and the Churchill River Hydro Development Project formed the basis for scientific investigation.

Following the initial Innu knowledge collection, a co-researcher concept was implemented as a means of building capacity in the Innu community. The co-researcher, Jack Selma, was interested in working with western scientists and took on an active role in the overall design of the research aspects of the project. Through the participation of the co-researcher, the project established a place in the Innu community with a dedicated link between the Innu and the western scientists. Through numerous dialogues with elders and hunters, the co-researcher was able to determine the dominant Innu concerns and also to help select appropriate research areas. The role of the co-researcher has expanded throughout the life of the project. Responsibilities now include planning of monitoring and research activities, preparing, developing and presenting project reports within the Innu community and at scientific meetings, liaising with elders, hunters, families and children in the community, assisting in translation of interviews and providing field assistance and logistic support. To enhance the capacity development opportunities, the co-researcher concept has evolved into an environmental guardians program. Through this program, eight Innu have been employed full time in ecological research initiatives and a community specific training program is being developed. This training program is modular in design, is delivered in the community, combines classroom and field training and will in the near future provide the students with University accreditation. Four modules (forest management, fisheries management, GIS and collecting TEK information) have already been developed and delivered while a series of other modules are in preparation.

Special Places:

The concept of special places is central to the cultural landscape unit approach of the Ashkui project. Ashkui represent portions of the Labrador landscape that have special significance during the spring of the year and the spring travels of the Innu center on an informal network of camps situated at ashkui. A south to north network of fifteen ashkui sites was established, based on elder recommendations and initial work on water chemistry, fish abundance and distribution, waterfowl abundance has been underway for the past three years. These sites are sampled in the early spring during initial formation, during high water in mid-summer and low water in the fall. Ashkui are known to be collection points for both waterfowl and fish and the initial research was

aimed at determining whether ashkui are more productive than other sites. Results of nutrient and chlorophyll a analysis have indicated that the ashkui sites are no more productive than other sites and that the concentration of wildlife and fish at these sites is most likely an opportunistic response to open water and enhanced light conditions. These findings correspond to information previously provided by numerous Innu elders. The importance of ashkui to provide country foods for the Innu has led to new research in mercury dynamics at some of the research sites. This study is developing new knowledge about the deposition of atmospheric mercury in Labrador and mercury bio-accumulation through several trophic levels of system with emphasis on food resources utilized by the Innu.

Seasonality is an important element of the cultural landscape unit concept. While ashkui are special places in the spring, they may have limited significance during other periods. Consideration of landscape travels during particular seasons are now being used to identify other CLUs. For example, during the autumn the Innu camp at areas where topography and hydrography cause migrating caribou to congregate. The new CLU is known as a caribou intersection area and research is just starting at these areas.

In recognition of the special places concept, the project established an in-country meeting concept. Rather than meeting in western boardrooms, camps were established at ashkui sites and major project meetings were held at these sites. The in-country meetings saw western scientists spend several days living with Innu elders and families in traditional bush accommodations. A special large format tent was made in order to hold all of the project team and provide room to discuss project results and develop new project directions. The in-country meetings provided western scientists with an insight into the Innu way of life and helped to open the dialogue between the scientists and the Innu. These meetings have been extremely valuable for all participants and several new project research initiatives have been formulated at these in-country camps.

Special Products:

An important concept of the ashkui project is to develop creative products that can provide project value for the Innu community. Although, traditional scientific publications are a part of the project, the main focus is to develop a series of other community based projects. These products include a variety of poster and other hard copy products that can be displayed and distributed within the Innu community. All Innu knowledge interviews have been recorded on both video and audio tape and copies of all interviews are provided back to the community. Additionally, all interview data has been translated, transcribed and encoded in a qualitative research software application called QSR Nudist. This application allows easy searching and selection of segments from interviews based on a researcher established indexing system.

Interactive Cd-Roms about ashkui have been produced both as communication tools and as educational products for the Innu school system. The educational products have been developed along with the Innu teachers and combine Innu faces, voices and culture with the views of the western scientists. These multi-media products are extremely valuable and for the first time have provided the Innu teachers with technology based teaching products. During the spring of 2002, the educational Cd-Rom product was evaluated by a number of Innu school children and teachers. The overall impression was highly positive and the suggested changes in the product have been implemented.

Geographic information systems (GIS) have also been used to develop a long term record of both Innu and western science knowledge of ashkui. Recently, these data have been made available, with password production, on the internet using on-line mapping software. Although the use of technology has value, it is also recognized that many Innu, particularly the elders, do not have ready access to these technologies. To overcome this issue, the Labrador Atlas project was implemented which is developing a hardcopy version of the GIS system. This will allow elders and others to stack transparent layers of Innu and western science knowledge on top of base

maps to create the map product of interest to them. An extension of the atlas work is the development of a spatial modeling technique that combines all of the Innu knowledge into a composite Innu values layer that can be used within the environmental assessment process without risking confidentiality and control of the underlying knowledge. If successful, this approach could for the first time see Innu knowledge used effectively to influence environmental decision making in Canada.

Remote sensing through the use of a variety of satellite imagery products is also an important product line for the project. Spatial and temporal patterns of ashkui are mapped using RADARSAT, while other forms of imagery are used to investigate changes in land cover. These products have been used to promote development exclusion zones, to investigate the potential of ice safety mapping and recently to identify caribou migration patterns.

Conclusion:

The Ashkui pilot project has been used to test the ability of the cultural landscape unit concept to connect Innu and western scientific knowledge. The results to date have indicated that there is merit in this approach and that both Innu and western science knowledge of the Labrador landscape have been enhanced through this project. The innovative approaches employed as part of this work have helped to increase trust and respect between the two cultures which has led to new areas of collaborative work. The results of this work are just beginning to impact on sectoral development activities in Labrador and ultimately are expected to have significant influence over future environmental decisions.

References: References:

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