

LORE

Capturing
Traditional
Environmental
Knowledge

Edited by
Martha
Johnson



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Capturing Traditional Environmental Knowledge



Our culture is something that surrounds us, something that is part of us, and is inextricably linked with the land upon which we have lived for thousands of years. Our culture has a past, and it is that past – especially as we find it embodied in our elders – that we are pledged to preserve. It also has a present – a present that threatens our culture, which we are pledged to protect. Our culture lives, and must have a future. We are pledged to promote our culture, especially among our young people, to ensure that they will identify themselves as Dene, in the full meaning of the term. The mission of the Dene Cultural Institute is to work with the people of the Dene Nation, and with other institutions and organizations, to preserve, protect, and promote the Dene culture, languages, spirituality, heritage, traditions, and customs.



The International Development Research Centre is a public corporation created by the Parliament of Canada in 1970 to support technical and policy research designed to adapt science and technology to the needs of developing countries. The Centre's five program sectors are Environment and Natural Resources, Social Sciences, Health Sciences, Information Sciences and Systems, and Corporate Affairs and Initiatives. The Centre's funds are provided by the Parliament of Canada; IDRC's policies, however, are set by an international Board of Governors. The Centre's headquarters are in Ottawa, Canada. Regional offices are located in Africa, Asia, Latin America, and the Middle East.

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Capturing Traditional Environmental Knowledge

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Martha Johnson

DENE CULTURAL INSTITUTE



INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

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Foreword

In recent years, the value of the traditional knowledge of indigenous peoples, and particularly their traditional environmental knowledge, has been recognized. This has unleashed a flood of research. Some of the research has been undertaken by scientists working alone, but the most innovative responses to this trend have been developed by indigenous researchers working in collaboration with Western scientists. They recognized early on that the main objective was not simply to collect reels of audio or video tape as a form of folklore, but to catalogue this information so that it could be compared from one region and one culture to other regions and other cultures, and, even more, so that it could be brought to bear on policies for sustainable development in remote and typically fragile ecosystems.

This book presents the results of a workshop on the documentation and application of traditional environmental knowledge through community-based research. Organized and hosted by the Dene Cultural Institute (DCI) based in Fort Hay, Northwest Territories, Canada, and supported by Canada's International Development Research Centre (IDRC), the workshop brought together a small number of teams, each composed of indigenous and nonindigenous researchers from Northern Canada, Europe, Africa, Southeast Asia, the South Pacific, and South America. Their primary goal was to discuss effective methods for documenting the unique

environmental knowledge and understanding that characterizes the heritage of all indigenous peoples around the world.

In many ways, the workshop was unique. It represented an important initiative on the part of a Canadian aboriginal organization (DCI) and a Canadian development agency (IDRC) working together toward a common goal. The workshop was held in a traditional Dene camp along the shores of the Deh Cho (Mackenzie River) in the Canadian North. Participants flew to Canada from around the globe. Upon arrival in Canada, they faced another extended flight to Yellowknife in the Northwest Territories. From there, they were taken by bush plane and boat to the Dene camp. Daily life and workshop sessions took place in tents, which both represented typical living conditions during actual collection of indigenous knowledge and, unhappily but typically for the North, provided protection from the cold and rainy summer weather.

This book examines the process of collecting traditional environmental knowledge while using a participatory action or community-based approach. It looks at the problems associated with documenting traditional knowledge problems that are shared by researchers around the world and it explores some of the means by which traditional knowledge can be integrated with Western science to improve methods of natural resource management.

We hope that this book will assist others to develop effective, culturally appropriate research methods at a time when alternative understandings and approaches to sustainable development are increasingly critical to the survival of our planet.

Joanne Barnaby
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Acknowledgments

The Fort Good Hope workshop was a unique event and many people and agencies contributed to its success. The community of Fort Good Hope put on a show of hospitality that left our international guests with a true taste of traditional and modern Dene culture. The Chief and Council of Fort Good Hope provided generous logistical support for the camp. Star Tech Ltd lent tents and other camping gear and Northern Stores Ltd donated groceries. Special thanks go to Alfred Masazumi, Michael Lafferty, and Joe Cotchilly. They ensured that the camp ran smoothly despite inclement weather and a last minute change of site. Bella T seleie and Judy Lafferty assisted in setting up the camp, and Mary Barnaby and Margaret Kelly prepared some memorable meals of traditional Dene cuisine. Wilma Schreder of the Dene Cultural Institute made all of the travel arrangements.

Dr Evelyn Pinkerton served as the rapporteur for the workshop. Her work on the discussion summaries and her thoughtful insight on earlier drafts of the introductory papers were much appreciated.

Our special gratitude goes to Robert Ruttan, project biologist for the Dene Traditional Environmental Knowledge Pilot Project. His calm and sense of humour in overseeing the entire organization of the camp made the workshop the success that it was.

Thanks are also owed to the Canadian Broadcasting Corporation (CBC) and the Yellowknife *Press Independent*. Their generous publicity created better public awareness of the value of traditional environmental knowledge and the research that is being conducted to preserve and apply it today.

Finally, thanks go to all of the elders, community researchers, and scientists who travelled from the nearby community of Fort Good Hope and from the far corners of the globe to participate in this unique event. Their willingness to overlook the bad weather and the mosquitoes, and to share their knowledge and culture in the traditional setting that was the Fort Good Hope camp represented the true spirit of international and cross-cultural cooperation.

Martha Johnson

Research Director

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The Workshop: Purpose and Results

*by Martha Johnson, Dene Cultural Institute,
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The idea to hold an international workshop on the documentation and application of traditional environmental knowledge (TEK) arose through the joint interest of the International Development Research Centre (IDRC) and the Dene Cultural Institute (DCI). In July 1990, nongovernmental groups from Canada's North, the South Pacific, the African Sahel, northern Thailand, and elsewhere came together to share their experiences. Most of these groups use a participatory action approach to research and involve both aboriginal and nonaboriginal researchers.

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In the year leading up to the workshop, DCI conducted a pilot project to document TEK in the Dene community of Fort Good Hope in Canada's Northwest Territories. Originally, the workshop was to be held in Fort Good Hope; however, given the theme, local community researchers suggested that it be held in a traditional Dene camp. Pursuing this idea, DCI and the community of Fort

Good Hope began to establish a camp along the shores of the Mackenzie River. Their guests, from the far corners of the globe, would sleep in tents on beds of spruce bows, sample fresh fish and caribou, and experience the breathtaking scenery of this majestic river.

The biggest challenge of the workshop was to stimulate open discussion and interaction to draw out the common and distinct aspects of each project. With such a disparate group, each participant with different motivations, agendas, and cultural backgrounds, this was not an easy task. In addition to the project representatives, participants included local Dene elders, interested community members, various independent social and natural scientists, and government employees.

The workshop was the first of its kind to bring together aboriginal and nonaboriginal researchers from around the world in a unique cultural setting. For those participants not used to the cold weather, rustic facilities, and long hours of daylight, it meant some discomfort. Visits from local community residents, boat rides down the river, and all-night drum dances introduced the guests to Dene culture and provided an ideal forum for people to share their experiences in an informal setting. However, people who tried to



Workshop participants at the Mackenzie River camp.

sleep to be up early for the workshop missed out on the cultural experience and those who stayed up most of the night were too tired to work the next day. Inclement weather, leaky tents, lack of sleep and the many activities going on in camp often distracted from the job at hand. Nevertheless, an agenda did evolve and the work got done.

The Presentations: A Summary

The workshop was organized around the case studies presented by each group. In most instances, presentations were jointly made by collaborating aboriginal and nonaboriginal researchers. In the case of the Dene project, elders who had participated as advisors on the project also spoke, giving those present a real taste of the traditional Dene view of the world.

Most presenters concentrated on the research process of their respective projects and outlined efforts to apply the information gathered. However, a few focused on the impact of Western acculturation on their traditional knowledge and their political struggle to achieve self-determination. This disturbed some of the participants, who saw the workshop, with its focus on research methodology and application, as an inappropriate forum for political speeches. On the other hand, the recognition of aboriginal land rights and self-government are fundamental issues in the struggle to preserve and apply traditional knowledge and cannot be ignored in the broader sociopolitical context. The social dynamics of the workshop in effect reflected the whole cultural and political reality of traditional environmental knowledge research as well as the underlying power struggles and opposing world views that are a part of it.

The DCI Pilot Project

The DCI report describes and evaluates a pilot project to document traditional environmental knowledge. Initiated by an aboriginal organization, the goal of the project is to collect as much traditional information as quickly as possible before it is lost with the disappearance of the current generation of elders. Eventually, the

information will be used for education and environmental management, but precise applications have yet to be determined. The methodology emphasizes the use of a semi-structured questionnaire in the Dene language to gather information about the behaviour of different animal species and traditional rules of management. Local researchers receive training in basic research skills, are involved in designing the questionnaires, and carry out the interviews. The evaluation of the pilot project stresses the need for more direct community control of research, a greater role for elders in interpreting results, and the need for more cooperation and sharing of knowledge between scientists and local researchers.

The Belcher Islands Project

The Belcher Islands project is a collaborative, community-based research initiative involving the Inuit community of Sanikiluaq and scientists from the Canadian Circumpolar Institute. The traditional environmental knowledge of the Inuit is combined with Western science to develop a cooperative management plan for a herd of reindeer recently introduced to the Belcher Islands. A variety of methods are used to document TEK, including participation in hunting activities, community meetings, informal discussions, and formal interviews.

The Marovo Lagoon Project

The Marovo Lagoon project is an initiative of the Marovo community, with some government guidance and support. Although the project did not arise specifically to document TEK, this is a vitally important element of the research. A key feature of the Marovo project is its focus on information exchange rather than formal interviewing. The research is reciprocal in nature. Visiting investigators are invited to apply their skills and knowledge in ways relevant to the project. They are encouraged to learn traditional skills and information through hands-on experience and to promote feedback of TEK in documented form to stimulate the interest of informants and make others more aware of its nature and extent. The on-site research process is characterized by a loosely formulated structure of informal research administration: elders, local project

staff, interviewers, interpreters, and other villagers guide visiting investigators to the topics and locations deemed to be important from a local perspective.

The Sahel Oral History Project

The Sahel project also has an applied focus. The report describes how traditional knowledge about ecological change and past agricultural and conservation techniques can directly benefit a development project: in this case, the implementation of a community forestry program. Like the Dene research, the aim of this project is not only to record indigenous knowledge and determine how to involve the elderly and other local people directly in the research process but also to develop a practical methodology that could be incorporated into project planning, implementation, and evaluation. With the information collected, some direct applications are planned. They include developing an index to provide easy access to comments made on topical political, social, and economic issues; development education; botanical and agricultural surveys; and guidelines for extension workers.

The Highlanders of Northern Thailand

From northern Thailand, and the Mountain People's Culture and Development Educational Programme (MPCDE), there are two reports. The first discusses an IORC-sponsored project examining the impact of regional development on the highlanders of northern Thailand. Here, as with the Marovo Lagoon and Sahel projects, TEK research is only one component of a larger study. Traditional environmental knowledge is examined in light of how it has adapted to ecological and social changes and to what extent it has been incorporated into development ventures. Data is collected by local researchers through informal interviews. The information is then compiled into tables designed by the administrative research team for comparative analysis.

The second paper describes efforts made by MPCDE, since its inception in 1980, to document and apply traditional environmental knowledge among the highlanders of northern Thailand. Research to

date has focused on the Akha people. Unlike the other projects, the MPCDE project does not always make a clear distinction between ecological, managerial, historical, or ritual knowledge; they are regarded as being interwoven into all aspects of cultural life. The most important feature of the MPCDE research is that it is not intended for outside publication. Rather, it is meant to create awareness of existing development problems and their possible solutions among participating team members, interviewers, informants, and villagers.

Other Presentations

Two other presentations were made: one by an individual from the Amazon Basin and another on the comanagement agreements in Washington State, USA. As these presentations were of a less formal nature, no reports are included in this book. Synopses of the presentations appear in the Appendix.

The Discussions

Following the presentations, participants formed small groups and attempted to draw out the common threads of each project with respect to research methodology and application. Despite initial suggestions to form small working groups focusing on specific topics early on in the workshop, in retrospect, it was necessary to hear the case studies first. Not everyone was able to read the draft papers before the workshop. Further, discussions following the presentations allowed for a lively interchange of information between participants. Later, when participants did break up into small groups they had a clear understanding of all the projects, which allowed for better comparison.

Despite the range of project orientations and vastly different sociopolitical and ecological situations, many common elements emerged from the workshop. Dr Evelyn Pinkerton acted as the workshop rapporteur. In the final section of this book, she summarizes the discussions surrounding each of the presentations and identifies some of the issues that participants viewed as essential, common elements of TEK research. These include the land

tenure situation, the major problem or dilemma traditional environmental knowledge is expected to correct, methods, and traditional environmental knowledge as both a long-term and a short-term strategy. Many other important issues emerged from the presentations and discussions. These include the problem of defining traditional environmental knowledge, the problem of translating one world view into another, the role of outside collaborators in TEK research, the need for increased dialogue between social and natural scientists, and the problems of applying traditional knowledge in a modern context.

Observations and Conclusions

An important outcome of the workshop was the realization that, because of the different orientations and goals of the projects, they were difficult to compare. For instance, the Dene and Thai projects were initiated by aboriginal peoples to document TEK as quickly as possible before it is lost – once the information is collected, ways would be found to apply it to education and resource management. Others, like the Marovo Lagoon and Belcher Islands projects, emphasize collaboration between scientists and local people to study specific research problems. The African Sahel project was different again: it was actually a sideline to a larger development project initiated by an outside agency.

The sociopolitical and ecological contexts of each project also had a profound impact on their outcomes and, hence, the extent to which the application of TEK could be compared among the different groups. It appears that the degree of autonomy held by an aboriginal group and the impact of assimilation on that group ultimately affects the status of their traditional knowledge. For instance, in the Solomon Islands, the indigenous people own most of the land and the majority still speak the aboriginal languages. This situation is very different from that of the Dene, who, at the time of the workshop, still held no legally recognized title to their land and face an uphill battle to preserve the rapid erosion of their languages and culture.

The type of traditional knowledge being collected also differed between groups. The Thai group took a much broader, holistic interpretation of traditional knowledge than did the Dene or the Marovo Lagoon researchers. Ecological knowledge was an important focus of the Thai study; however, it was gathered along with information about other aspects of hill tribe cultures, such as traditional medicine, justice, and religion. The Belcher Islands project was also unique as it involved reindeer introduced to a region that had been without caribou or reindeer for about a century.

The workshop explored a full range of issues related to traditional environmental knowledge and helped participants to situate their work within this range. However, participants learned that they were in very different situations and that what they could compare at this point was limited. Because of the vastly different contexts, most participants felt it was difficult to generalize about the research and premature to make recommendations about management systems. In some sense, this amounted to a recognition that it is perhaps more appropriate to take on one issue at a time: data management, indexing systems, etc.

Tasks suggested as part of future networking included exchanging questionnaires, reviewing the types of collaboration that seem successful, more clearly identifying what type of TEK research is being done, and continuing to educate the public and resource-management agencies about traditional environmental knowledge. In countries such as Brazil, where traditional environmental knowledge is not recognized, international conferences and film crews should be used to document the use of traditional resources. In all countries, the marketing of value-added products that represent a more complete use of subsistence goods (for example, caribou hides) should be developed. Finally, to make the public more aware of TEK, it must be linked to the issue of sustainable resource management. Sustainability is part of the very definition of traditional environmental knowledge.