

***READING THE SIGNS IN THE
WHITEFEATHER FOREST CULTURAL LANDSCAPE,
NORTHWESTERN ONTARIO***

By
Janene M. Shearer

A Thesis submitted to the Faculty of Graduate Studies of the University of Manitoba in
partial fulfillment of the requirements for the degree of
Master of Natural Resources Management (M.N.R.M)

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ABSTRACT

In Canada's boreal forest, natural resources planning, management and governance are increasingly becoming shared amongst different cultural groups. Criteria and Indicators (C&I) have become a leading tool for assessing sustainability, for guiding natural resources management planning and decision-making, and for monitoring ecological change. However, there are few examples of 1) the processes by which a shared understanding of Indigenous C&I, grounded in local knowledge, values and institutions can be developed, and 2) what a local-level Aboriginal C&I framework, grounded in local values and institutions, would look like.

This research, undertaken collaboratively with Pikangikum First Nation (PFN) and the Whitefeather Forest Management Corporation (WFMC), attempts to address these knowledge gaps through the following objectives:

1. Develop an understanding of Pikangikum values for *Keeping the Land*, and the institutions through which they are fostered and actualized (i.e. Ahneesheenahbay ways of knowing, practices and beliefs).
2. Cooperatively develop a framework to both articulate and communicate the values, knowledge and institutions for *Keeping the Land*.
3. Develop an understanding of how these values represent criteria for *Keeping the Land*, how Pikangikum people perceive these signs (i.e. indicators) of social-ecological variability in the Whitefeather Forest, and how these signs contribute to:
 - a. Monitoring, responding and adapting to change, and
 - b. Maintaining the values, knowledge and institutions for *Keeping the Land*.

Methods for this undertaking included review of narratives gathered throughout the Whitefeather Forest community-based land use planning process as well as collaborative workshops with community Elders. Approached from a cooperative learning perspective, the research was participatory and iterative in nature. This approach allowed for the co-production of a holistic cultural landscape framework and

the development of shared understandings of the values and institutions for *Keeping the Land*.

Keeping the Land must begin with *Ohneesheesheen*, to have good mental, spiritual, physical, emotional health, and practice activities properly on the land to create well-being in yourself and in your actions. To be able to create *Cheemeenooowecheeteeyaung*, to build good relationships with family, community, and the Creator and to form partnerships with people from other cultures, everything must be good. These relationships, in turn, are what make *Oohnuhcheekayween* possible (i.e. planning for the future, and making decisions for the community that will have positive social, economic, and environmental outcomes). This planning and decision-making will ensure that *Ahneesheenahbayweepeemahteeseeween*, the Pikangikum way of life, will continue as it should and that the land will continue to be kept.

As criteria are values, and indicators arise from values (Meadows 1998), the cultural landscape framework was also developed into a local-level approach to monitoring *Keeping the Land*. Pikangikum's approach to criteria and indicators (C&Is) are based on held values embedded in Ahneesheenahbay worldview, beliefs, and rules of proper conduct with the land.

This study presents an example of a place-based learning community, where collaborative learning resulted in the co-production of new knowledge. This knowledge is based on a shared understanding of Pikangikum values and institutions for *Keeping the Land*, and as such can contribute to building a new approach to Natural Resources and Environmental Management (NREM).

ACKNOWLEDGEMENTS

I would like to begin by thanking the WFMC Elders Steering Group, with special thanks to Elders Mathew Strang, Norman Quill, Charlie Peters, George B. Strang, Oliver Hill and Alex Suggashie for generously extending their knowledge, wisdom and kindness, Meegwetch. To my research partner, Paddy Peters, I will be forever thankful for your patience, kindness and insight. Your contribution to this project cannot be overstated.

Thank-you to Reggie, Murray, Marlene and everyone from the WFMC office in Pikangikum for both your technical and logistical assistance (without you I'd still be waiting at the airport). Thanks to Danny and Alex Peters. I also would like to thank the students of the SLAAMB class for their contributions. Thank you to those who participated in the land use planning process, without your willingness to share your knowledge, this research would not have been possible. I would also like to thank the community of Pikangikum for inviting me to stay on your traditional land.

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This project was funded by the Sustainable Forest Management Network (SFMN) as part of a larger research project entitled "Cooperative learning for integrated forest management: building a C&I framework for the Whitefeather Forest Initiative, North-Western Ontario". The principal investigator on this project is Iain Davidson-Hunt.

TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	vii
LIST OF FIGURES	vii
LIST OF PLATES	vii
ACRONYMS	ix
NOTE ON LANGUAGE	viii
1.0 INTRODUCTION	1
1.1 Background.....	2
1.2 The Whitefeather Forest Cultural Landscape	3
1.3 Rationale.....	4
1.4 Purpose & Objectives.....	5
1.5 Research Approach.....	5
1.6 Contributions of the Study	6
1.7 Organization of Thesis	7
2.0 KEEPING THE LAND IN CONTEXT	8
2.1 Chapter Overview	9
2.2 Pikangikum First Nation & The Whitefeather Forest	9
2.2.1 <i>Historical Context</i>	9
2.2.2 <i>Contemporary Context</i>	12
2.3 Place, People, Perceptions & Power	14
2.3.1 <i>The Boreal Forest</i>	14
2.3.2 <i>Perceptions of the Land & Our Place Within</i>	15
2.3.3 <i>Natural Resources Institutions</i>	18
2.4 Criteria and Indicators	25
2.5 Adaptive Social Learning.....	28
2.6 Chapter Summary.....	30
3.0 RESEARCH DESIGN.....	31
3.1 Chapter Overview	32
3.2 Methodological Framework	32
3.3 Methods & Process	34

3.4	PRE-PROJECT PREPARATION & PLANNING	35
3.4.1	<i>Situating the Project</i>	35
3.4.2	<i>Situating the Researcher</i>	38
3.5	Navigating the Process: From Heuristic Learning to the Co-Production of Knowledge.....	39
3.5.1	<i>PHASE I: Heuristic Learning</i>	39
3.5.2	<i>PHASE II: Cooperative Learning for Building a New Understanding</i>	41
3.6	Results & Dissemination	46
3.6.1	<i>Validity & Verification</i>	46
3.6.2	<i>The Thesis Document</i>	47
3.6.3	<i>Confidentiality & Intellectual Property</i>	47
4.0	CONSTRUCTING A CULTURAL LANDSCAPE FRAMEWORK	48
4.1	Chapter Overview	49
4.2	Guided to Ask the right questions.....	50
4.3	Considering values for <i>Keeping the Land</i>	51
4.4	Matrix Version #1	53
4.5	Cheekahnahwaydahmungk Keetahkeemeenaan	55
4.5.1	<i>Modifying the Matrix</i>	56
4.6	Matrix Version #2	57
4.7	Matrix Version #3	58
4.8	Cheemeenoototauhkooyaun	59
4.9	Matrix Version #4	61
4.10	Keekeenuhwuhcheecheekun	62
4.11	Final Matrix: A Cultural Landscape Framework	65
4.12	Chapter Summary	67
5.0	UNPACKING THE FRAMEWORK FOR CROSS-CULTURAL COMMUNICATION	68
5.1	Chapter Overview	69
5.2	Cultural Symbolism for an Ahneesheenahbay Framework.....	69
5.2.1	<i>Circle and Quarters</i>	70
5.2.2	<i>Centrality of the Creator</i>	71
5.2.3	<i>Balance & Harmony</i>	71
5.2.4	<i>Energy, Adaptability & Creativity</i>	71
5.2.5	<i>Exploring the Whitefeather Forest</i>	73
5.3	Ohneesheesheen	73
5.3.1	<i>Meenwaytauhmooween</i>	74

5.3.2	<i>Ohtauhmeenooween</i>	76
5.3.3	<i>Meenooyauhyauhween</i>	76
5.4	Cheemeenooweecheeteeyaung	79
5.4.1	<i>Ahnuhbukoomench</i>	80
5.4.2	<i>Cheekeechee'eenayneemeeteeyaung</i>	82
5.4.3	<i>Cheekeechee'eenaytauhmung</i>	83
5.5	Oohunuhcheekayween	85
5.5.1	<i>Oohneekuhneeseeg</i>	87
5.5.2	<i>Ohnunshoowayweeneeng</i>	89
5.5.3	<i>Keecheeahneesheenauhbaag</i>	90
5.6	Ahneesheeahbayweepeemahteeseeween	92
5.6.1	<i>Keecheeahneesheenauhbayweekeeytauhmuhween</i>	93
5.6.2	<i>Ahkeeweekeekaytuhmuhweeneeng</i>	99
5.6.3	<i>Ohtauhchee'eeteesooween</i>	101
5.7	Chapter Summary	103
6.0	CONCLUSIONS	104
6.1	Introduction	105
6.2	The Process is the Product: Co-creating a Holistic Cultural Landscape Framework for <i>Keeping the Land</i>	105
6.3	<i>Cheemeenoototauhkooyaun, "We know it will do us Good": Engaging Future Generations for <i>Keeping the Land</i></i>	107
6.4	<i>"Reading the Signs": Criteria and Indicators for <i>Keeping the Land</i></i>	109
6.5	<i>Keeping the Land</i> through <i>"Reading the Signs"</i>: Towards a Cooperative Approach	115
6.6	Concluding Statements	117
	REFERENCES	119
	APPENDIX I – <i>Keeping the Land</i> Diagram	131
	APPENDIX II – WPMC Transcript Records	133

LIST OF TABLES

2.1 OMNR Sustainable Forest Management Evaluation Framework	26
6.1 Example of Pikangikum Criteria and Indicators	111
6.2 Table of Pikangikum Criteria and Indicators	113

LIST OF FIGURES

1.1 Map of Pikangikum First Nation and the Whitefeather Forest, ON	4
2.1 Cross-scale linkages of NBI	13
2.2 Potential Value Conflicts in SFM, Natural Resources Canada	15
2.3 Ladder of Citizen Participation	23
3.1 Schematic Representation of Research Process	35
3.2 Collaborative Matrix Analysis	45
4.1 Matrix Version #1	54
4.2 Matrix Version #2	58
4.3 Matrix Version #3	59
4.4 Matrix Version #4	61
4.5 Final Cultural Landscapes Matrix	66

LIST OF PLATES

1.1 Elder George B. Strang sharing his knowledge of Plant Uses	1
1.2 Travel Corridor in the Whitefeather Forest Cultural Landscape	1
2.1 Pikangikum First Nation, Ontario	8
2.2 Elder Alex Suggashie with Northern Pike	8
3.1 Rapids between two Lake in the Whitefeather Forest	31
3.2 Elder Norman Quill and Paddy Peters	42
3.3 Members of the WPMC Elders Steering Group – PFN, ON	44
4.1 Collaborative Workshop #1, Taiga Institute – Kenora, ON	48
4.2 Modifications to Matrix Version #1 following Collaborative Meeting #1	57
5.1 Elders Mathew Strang and Oliver Hill, and Reggie Peters	68
5.2 Elder Norman Quill sharing his land-based knowledge	100
6.1 Members of the WPMC, Elders Steering Group and WFRC	104

LIST OF ACRONYMS

AOU - Area of the Undertaking (for forestry Class EA in Ontario)
CCFM – Canadian Council of Forest Ministers
C-LUP - Community-Based Land Use Planning
C&I(s) - Criteria and Indicator(s)
EA - Environmental Assessment
EC - Environment Canada
ENGO - Environmental Non-Governmental Organization
NRCan - Natural Resources Canada
FMU - Forest Management Unit
FSC - Forest Stewardship Council
IK - Indigenous Knowledge
INAC - Indian and Northern Affairs Canada
LUS – Land Use Strategy, “Keeping the Land”
NAFA - National Aboriginal Forestry Association
NBI - Northern Boreal Initiative
NREM - Natural Resources and Environmental Management
NRI – Natural Resources Institute, University of Manitoba
OMNR - Ontario Ministry of Natural Resources
PFN - Pikangikum First Nation
RCAP – Royal Commission on Aboriginal Peoples
SAP - Strategic Action Planning
SFM – Sustainable Forest Management
SFMN - Sustainable Forest Management Network
SLAAMB - Sioux Lookout Area Aboriginal Management Board
TEK - Traditional Ecological Knowledge
UM - University of Manitoba
WF - Whitefeather Forest
WFI – Whitefeather Forest Initiative
WFMC - Whitefeather Forest Management Corporation
WFPA - Whitefeather Forest Planning Area
WFRC - Whitefeather Forest Research Cooperative
WHS - World Heritage Site

A NOTE ON LANGUAGE

No standard orthography for the Ojibway language (*Ahneesheenhbaymooween*) exists. Just as there are many different spelling variations for the word “Ojibway” (e.g. Ojibwe, Ojibwa), so too are there diverse spellings for many Ojibway words. These differences arise from the unique dialect of *Ahneesheenhbaymooween* that the people of Pikangikum speak; differences in pronunciation result in difference in spelling. The spellings offered throughout this document are those recommended by the people of Pikangikum that they feel best represent the way they speak. Exceptions to Pikangikum spelling variations in this thesis occur when directly quoting another author, in which case the spelling they use is preserved.

Chapter One

1.0 INTRODUCTION

“The Creator has given us the responsibility to protect the lands on which we were placed. We are to take care of and nurture everything that the Creator has given as a trust and duty to future generations...”

(Pikangikum People Sustaining Our Livelihood on the Land, WFI 2008)

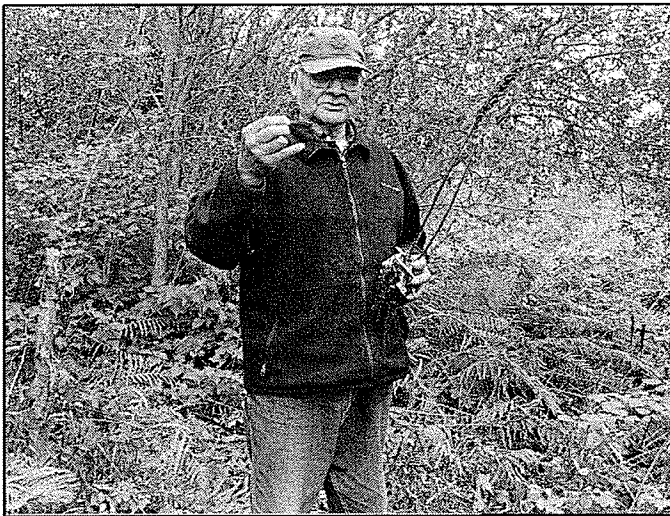
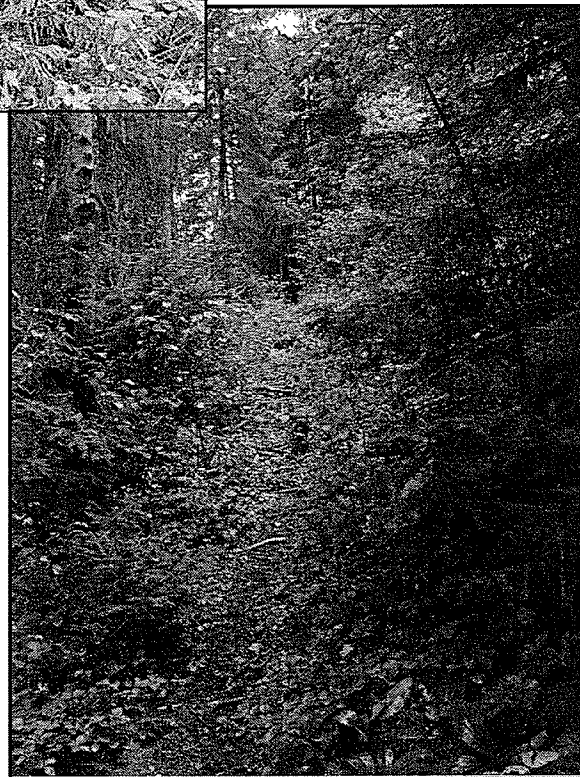


Plate 1.1: Elder George B. Strang sharing his knowledge of plant uses (Photo by I. Davidson-Hunt, 2006).

Plate 1.2: A travel route in the Whitefeather Forest cultural landscape (Photo by: I. Davidson-Hunt, 2006).



1.1 BACKGROUND

The way a society perceives, values, and relates to their particular environment is culturally constructed and shaped by shared worldview, knowledge and beliefs. Aboriginal and non-Aboriginal peoples, drawing on their respective perceptions, have diverse ways of relating to the land, i.e. differing approaches to natural resources and environmental management (NREM). The overriding goal of NREM is social-ecological sustainability and resilience. Recently, criteria and indicators (C&I) have become the focus for monitoring sustainability and guiding NREM decision-making, most notably in relation to forest resources (e.g. CCFM). However, the term “sustainability” is culturally contingent as it is derived from the values held important to a society, i.e. C&I are value-laden as they are based on knowledge that is both culturally perceived and socially negotiated (Davidson-Hunt and Berkes 2003).

Conventional NREM systems, drawn from Eurocentric human-nature dualistic perceptions, are historically riddled with the misappropriation of Indigenous lands and, in addition to failing to meet their objectives of sustainability and resilience, have resulted in the alienation and disenfranchisement of local populations (Lane 2001). It is now understood that Aboriginal customary approaches to NREM, founded on humans-in-nature cosmology arising from long-standing relationships with the land (see Chapter Two) are not incommensurable with Western systems and can, in fact, increase our understandings of social-ecological dynamics (Berkes 2008; Davidson-Hunt and Berkes 2003a). Furthermore, criteria and indicators based on local knowledge are becoming recognized as integral to achieving sustainable forest management (Natcher and Hickey 2002).

In the Canadian North, NREM responsibilities are becoming increasingly shared as First Nations communities regain sovereignty in their traditional territories through the implementation of collaborative and community-based approaches. Although the emergence of alternative NREM arrangements seek to recognize Aboriginal rights and Indigenous agency, both NREM and C&I frameworks continue to be grounded in Western perceptions and values (Stevenson 2006).

As such, there is a growing body of literature emphasizing the importance of coming to an understanding of different culturally derived cognitions of the environment (Davidson-Hunt and Berkes 2003a) upon which local-level C&I frameworks can be built. To this end, cultural landscapes have become a useful concept for conceiving of diverse views of resources and resources management as this concept embodies the key elements in this field of inquiry; environment, people and perceptions (Buggey 1999; Davidson-Hunt 2003a). However, to come to a shared cross-cultural understanding, it is necessary to develop a “common currency” upon which a dialogue for developing new approaches to NREM and C&Is can occur. Furthermore, as O’Flaherty *et al.* (2008) have noted, not only is it important to have a dialogue on different ways of knowing, but also on the underlying values that institute how people perceive of their environments and collectively internalize knowledge (i.e. a key component of adaptive learning and management) (Davidson-Hunt and Berkes 2003a).

1.2 THE WHITEFEATHER FOREST CULTURAL LANDSCAPE

The 1.3 million hectares of boreal forest in northwestern Ontario, delineated as the Whitefeather Forest Planning Area (WFPA), is the social-ecological setting for this project. The Whitefeather Forest represents a portion of the traditional territory of the Ahneesheenhbay (Ojibwa) of Pikangikum First Nation (PFN). The community of PFN is nestled in the centre of the Whitefeather Forest Planning Area (WFPA), approximately 120 kilometres north of Red Lake, Ontario (Figure 1.1). The knowledge, practices and beliefs of the people of Pikangikum have, over the generations, cultivated the cultural landscape which continues to evolve as the shared journey between people and the land unfolds. This project presented a unique opportunity to learn from Pikangikum Elders about their knowledge and values of the Whitefeather Forest, accumulated from both a lifetime of personal experience with the land and from the wisdom handed down through generations from the ancestors.

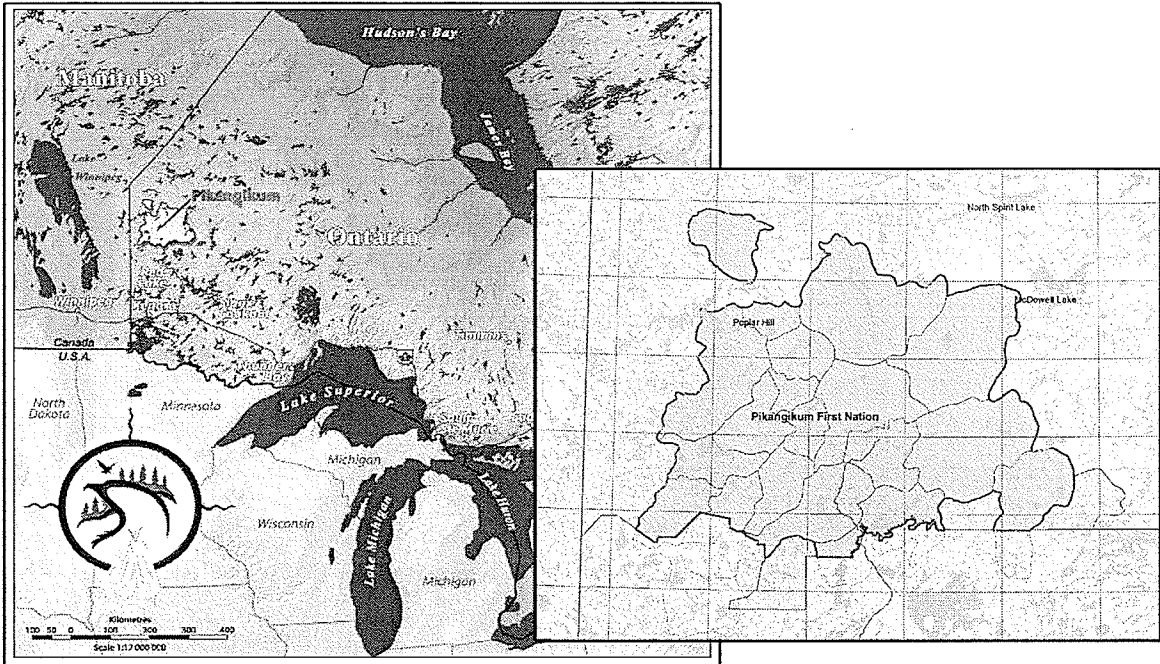


Figure 1.1: Pikangikum First Nation and the Whitefeather Forest Planning Area (PFN and OMNR 2006)

1.3 RATIONALE

Approaches to natural resources management rarely emerge from Indigenous values (Pokharel and Larsen 2007). Two key barriers have prevented the meaningful participation of Aboriginal people in the governance and management of Canada's boreal forest resources, the first being that traditional approaches to NREM are simply unable to accommodate customary Indigenous approaches to NREM. Second, because few examples for coming to a shared understanding of Indigenous values exist, it is difficult to know how to go about learning and bringing that knowledge into new, complementary approaches to NREM.

An understanding of Pikangikum's knowledge and values as well as of how customary resources management institutions are organized and implemented is imperative for the development of an adaptive co-management approach towards *Keeping the Land* of the WFFPA.

1.4 PURPOSE & OBJECTIVES

This research was undertaken in partnership with Pikangikum First Nation and the Whitefeather Forest Management Corporation (WFMC) to develop a framework for representing Pikangikum values and institutions for *Keeping the Land* that can be communicated cross-culturally. The specific objectives of this project were to:

1. Develop an understanding of Pikangikum values for *Keeping the Land*, and the institutions through which they are fostered and actualized (i.e. Ahneesheenahbay ways of knowing, practices and beliefs).
2. Cooperatively develop a framework to both articulate and communicate the values, knowledge and institutions for *Keeping the Land*.
3. Develop an understanding of how these values represent criteria for *Keeping the Land*, how Pikangikum people perceive these signs (i.e. indicators) of social-ecological variability in the Whitefeather Forest, and how these signs contribute to:
 - a. Monitoring, responding and adapting to change, and
 - b. Maintaining the values, knowledge and institutions for *Keeping the Land*.

1.5 RESEARCH APPROACH

This research took a qualitative approach within the interpretive social science paradigm. Interpretive studies, grounded in phenomenology and postmodernism, wherein experience and experiential learning are valid “ways of knowing” (Bessette 2004), generally attempt to understand phenomena through the meanings that people assign to them. This study, set in a place-based learning community, sought to come to a shared understanding of Pikangikum values for *Keeping the Land* through the iterative process of collaborative learning and the co-production of knowledge (Davidson-Hunt 2006; Davidson-Hunt and O’Flaherty 2007).

This research employed collaborative and participatory methods with the primary underlying assumption that “local people are knowledgeable about matters which affect their lives” (Mitchell 2002: 218). This study used techniques such as narrative analysis and collaborative workshops with community esteemed Elders.

This project is but one node of a larger research network involving the Whitefeather Forest Research Cooperative and the Sustainable Forest Management Network. This network is engaged with community-based research for cooperative learning about how Pikangikum people use indicators to perceive of and understand social-ecological change in order to respond to change and maintain resilience. From these new understandings, this knowledge can be shared so as to contribute to an emerging holistic paradigm of NREM that moves beyond simply incorporating traditional ecological knowledge, seeking to create a shared understanding amongst diverse partners.

1.6 CONTRIBUTIONS OF THE STUDY

The results of this research make several theoretical contributions to the NREM literature as well as practical contributions towards advancing the vision of the Whitefeather Forest Initiative (WFI).

In terms of contributions to the literature, the results of this study address several themes, including: community-based and cross-cultural collaborative resources planning and management, as well as criteria and indicators for community-based monitoring. Gunderson & Holling (2002) have noted, current understandings of how people respond to periods of change and how society reorganizes following change are some of the most neglected and the least understood aspects in resource management. The results presented in this thesis provide an example of how community-based research can lend insight into the indicators local peoples use and the processes they engage in to both monitor and adapt to changes in a social-ecological system.

I believe this research makes a significant contribution with respect the theory that adaptive learning networks are a means of developing new approaches to NREM (Davidson-Hunt 2006). The results presented here provide an example of a social learning forum that, through cross-cultural collaboration, articulate not only the values that structure Pikangikum NREM institutions, but also how these values and institutions represent criteria and indicators for monitoring *Keeping the Land* in the Whitefeather Forest cultural landscape.

Moreover, as Huntington *et al.* (2006) have pointed out, although community-based research with First Nations is a commonly used method for investigating social-

ecological resilience, results rarely report or explicitly reflect on the cross-cultural interpretations or understandings of what was said during workshops. Both Chapters Four and Five seek to illuminate the journey of coming to a shared understanding of Pikangikum values and institutions of NREM and the iterative process of negotiating meaning.

This project has practical significance and utility to Pikangikum in forwarding the goals of the WFI. As Fraser *et al.* (2006) have noted:

...the identification and collection of sustainability indicators not only provide valuable databases for making management decisions, but the process of engaging people to select indicators also provides an opportunity for community empowerment that conventional development approaches have failed to provide.

Through the process of co-creating a cultural landscape framework for cross-cultural communication, the knowledge and values of the Elders are re-affirmed as central to Pikangikum's holistic approach to NREM - *Keeping the Land*. Furthermore, as the WFI is implemented, Pikangikum will need to communicate with planning partners how they are monitoring whether or not the goals of *Keeping the Land* are being met. The cultural landscape framework, as a local-level system of C&I, also contributes to this end.

1.7 ORGANIZATION OF THESIS

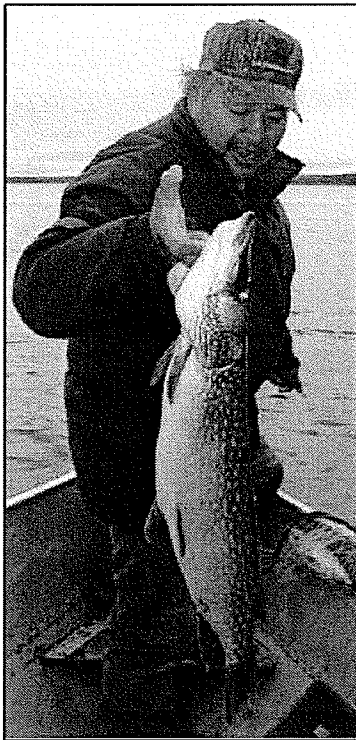
This thesis is organized into six chapters. **Chapter One** has introduced the study and outlined the purpose and objectives for its undertaking. **Chapter Two** provides a discussion of the theoretical basis for analysing cultural landscape-level resource management and Indigenous criteria and indicators for monitoring socio-ecological sustainability with a review of relevant literature pertaining to the study. **Chapter Three** follows with a detailed description of the research design and methodology employed. **Chapter Four** documents the process of iteratively negotiating a shared understanding of *Keeping the Land* through cross-cultural collaborative learning that resulted in the co-creation of cultural landscape framework. **Chapter Five** illuminates on the values and institutions of cultural landscape framework that serve as C&I for *Keeping the Land*. **Chapter Six** concludes the thesis by identifying lessons drawn from this Project on the process of cross-cultural communication, collaborative learning and communicating a local-level approach to criteria and indicators.

Chapter Two

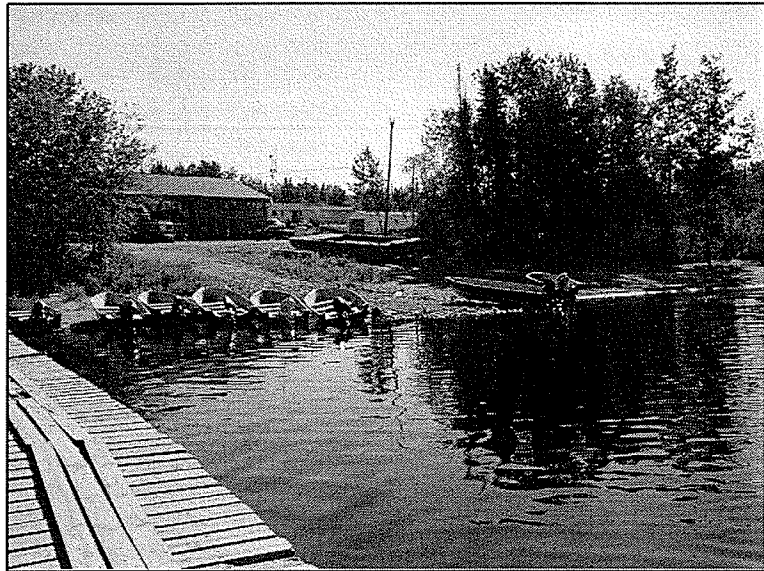
2.0 KEEPING THE LAND IN CONTEXT

“As co-creators with nature, everything we do and experience has importance to the rest of the world. We cannot misexperience anything, we can only misinterpret what we experience...what we think and believe, and how we act in the world impacts literally on everything.”

(Cajete 2003:52)



**Plate 2.1: Pikangikum First Nation, Hotel
Dock (Photo by K. Aquino).**



**Plate 2.2: Elder Alex Suggashie with Northern
Pike (Photo by J. Driedger 2004).**

2.1 CHAPTER OVERVIEW

This Chapter situates the theoretical framework for this research, namely cultural landscapes, institutions of natural resources and environmental management with criteria and indicators as an emerging tool, and adaptive collaboration learning, within the community-based context of this research, the Whitefeather Forest.

The Chapter begins with an introduction to the Whitefeather Forest, including the historical influences that have shaped this cultural landscape, the people of Pikangikum First Nation and the community-based land use strategy (LUS), the Whitefeather Forest Initiative. This is followed by a review of relevant literature, beginning with an overview of cultural landscapes, followed with a discussion on the institutions of natural resources management. These institutions, including ways of knowing, property rights, governance and approaches to management, involve a discussion on how they are shaped by a culture's perception of the environment, and how these perceptions in-turn shape the environment through the implementation of their institutions. Following this, a summary of the emergence of criteria and indicators for sustainability monitoring and NREM planning and decision-making is presented. Finally, the review of literature concludes by postulating that a new approach of NREM, including C&I as a tool, can be forged through the development of cross-cultural collaborative adaptive-social learning forums taking place at the local level.

2.2 PIKANGIKUM FIRST NATION & THE WHITEFEATHER FOREST

2.2.1 HISTORICAL CONTEXT

An historical review can build an understanding and appreciation of the present, and help us to conceive of the future. The following section provides an overview of the social, political and cultural influences that co-created the Whitefeather Forest cultural landscape as it exists today.

The Ahneesheenahbay (also known as Anishinaabe, Ojibway, Ojibwe, Saulteaux and Chippewa) ancestors of Pikangikum First Nation inhabited the lands of this region since time immemorial. Archaeological evidence from sites that continue to have significance to the community date back at least 2000 years (Taylor-Hollings and Hamilton 2007).

The cultural identity of the Ahneesheenahbay emerges from a shared worldview, knowledge, livelihood and language (Davidson-Hunt 2003). The Ahneesheenahbay speak the Ojibway language (Holzkamm *et al.* 1988), or “*Ahneesheenahbaymooween*”. Ahneesheenahbay people adapted to, as well as adapted, the boreal forest environment, altering their activities with the changing of the seasons. Over time, people developed a sophisticated system of knowledge, practices and beliefs to monitor ecological variability and to guide their relationships with the land and secure a livelihood (Hallowell 1992).

The *Rupert's Land Charter* of 1670, which granted the Hudson's Bay Company as the “true and absolute Lords and Proprietors” of the region, was the first formal involvement of colonial powers in the management of what was previously the sole territory of Aboriginal peoples. The *Royal Proclamation of 1763*, although an attempt to mitigate conflict between Aboriginal peoples and the British Crown, paved the way for the appropriation of land by extinguishing “Aboriginal title” and instituting “proprietary title” through the formation of treaties granting the Crown the legal ownership of land (RCAPa 1996). The *British North America Act* (BNA) of 1867 section 91, subsection 24 gave the Government of Canada exclusive jurisdiction over “Indians and Lands Reserved for the Indians” (Government of Canada 1867); which effectively meant the loss of the Aboriginal commons through the appropriation and use (and allocation to industry) of Crown lands, thereby negating Aboriginal rights to the land (Spry 1983). The BNA brought the Province of Ontario into being, and section 91(27) awarded exclusive power to make law related to “property and civil rights in the province”.

The purpose of the *Indian Act* 1876 was to relegate lands and rights to the Crown, and assimilate Aboriginal peoples into Euro-Canadian culture. Even in its present form, many provisions of the *Indian Act* limit the management, governance and use of resources by Aboriginal peoples, which has hindered Aboriginal livelihoods and culture (RCAPa 1996). Although not explicitly referred to in the treaty document, Pikangikum First Nation was signed for *Treaty 5* (Winnipeg Treaty of 1875) (Dunning 1959:10). First Nations people today present a unified voice about how the ancestors viewed the treaty-making process, stating they were perceived as both oral and written agreements about the sharing of resources with the federal government, on the condition that they “would

retain adequate land and resources to ensure the well-being of their nations” (RCAP 1996b:174). However, *Treaty 5* stipulates that:

Her Majesty further agrees with Her said Indians, that they, the said Indians, shall have right to pursue their avocations of hunting and fishing throughout the tract surrendered as hereinbefore described, subject to such regulations as may from time to time be made by her Government of Her Dominion of Canada, and saving and excepting such tracts as may from time to time be required or taken up for settlement, mining, lumbering or other purposes... (Government of Canada 1969:5-6).

Thus, only hunting and fishing rights were guaranteed in the signing of *Treaty 5*, all other rights to the land were quashed. However, due to the remote location of Pikangikum, the community was not consigned to a parcel of land, and according to the government surveyor of the day “there is no necessity for doing so...as it is not at all likely they will be disturbed by other people” (O’Hanly cited in Dunning 1959:11). This, for the most part held true, and the period following the signing of the *Treaty 5* had little impact by itself on the livelihoods of the people of Pikangikum aside from the annual treaty payments and deliverables from the Indian Agent (Dunning 1959). It was a confluence of events that were the catalysts for change in this community.

Missionaries began to arrive in Pikangikum in the 1920s with the purpose of civilizing the Ahneesheenhbay people through the introduction of a Christian way of life. In 1939 PFN was placed under the authority of the Sioux Lookout Indian Agency, the new Superintendent, who frowned upon “ritual practices”, abolished them. In 1946 Pikangikum children began attending school, in the same year the Pikangikum trading post opened, making European goods readily accessible (Dunning 1959). It was also in 1946 when the Ontario Ministry of Natural Resources (OMNR), “the meat bosses” (PFN and OMNR 2006:26), established the trapline system.

Although the Aboriginal economy was bolstered by the fur trade and although religious beliefs have been influenced by the work of missions, the people of Pikangikum have retained an essentially traditional way of life (Dunning 1959:5). Western influence was mainly economic and indirect, what Dunning (1959:208) called “acculturation at a distance”. In other words, although some traditional practices and beliefs have been eroded by Western persuasions, due to the remoteness of Pikangikum this community has been relatively isolated from these influences, having survived colonialism.

2.2.2 CONTEMPORARY CONTEXT

Pikangikum, from the *Ahneesheenhbaymooween* word *Beekahncheekahmeeng*, refers to how the Berens River flows into Pikangikum Lake on the east, how the lake spreads out from the river on either side, and how the River leaves the lake in the west across from where it comes in (WFI 2008). The Whitefeather Forest Planning Area encompasses 1.2 million hectares of boreal land in northwestern Ontario. This region, delineated by Pikangikum trapline territories, is representative of Pikangikum's ancestral lands (PFN and OMNR 2006).

The current population of PFN is approximately 2,300 with approximately 97% of the population still retaining Ojibway as their primary language (WFI 2006). Retention of traditional language is indicative of the high retention of traditional practices and beliefs in this community, as Hallowell noted, the persistence of the native language serves to "maintain, however unconsciously, the concepts, connotations, and classifications embedded in speech that were consonant with the Ojibwa world view" (Hallowell 1992:60).

Livelihoods today in the Whitefeather Forest can be characterized by a blend of traditional activities (hunting, fishing, trapping and berrying), transfer payments and participation in the conventional wage economy through, for example, outfitting, seasonal labour and government-funded community services such as education and band administration.

Although the effects of colonialism and Western acculturation have resulted in cultural transformations within this community, the customary values and practices remain an integral part of Pikangikum people's identity. Thus, with the increasing pressures of industrial expansion, coupled with lack of opportunities for the youth, Pikangikum Elders felt it was time to re-assert their role as custodians of this land and began the Whitefeather Forest Initiative.

2.2.2.1 *THE WHITEFEATHER FOREST INITIATIVE*

Increasing contradictory pressures of industrial expansion and environmental protection provided the impetus for PFN to develop a community-based land use plan. Rather than

allowing forestry operations to operate in their traditional territory, which would result in few benefits for the people of Pikangikum, the community began negotiating with the OMNR in the early 1990s to obtain a sustainable forestry licence so that they could guide resources development in the Whitefeather Forest. However, because Pikangikum lies north of the 51st parallel, beyond the range of Environmental Assessment (EA) coverage for commercial forest development in Ontario, a new policy had to be developed to accommodate this proposal.

The Northern Boreal Initiative (NBI), established in 2001, provided the policy framework for community-based land use planning (C-LUP) and the development of commercial forestry in northern Ontario First Nations communities (OMNR 2001). Together, this new policy environment provided First Nations communities with the opportunity to take a lead role in landscape-level planning within their traditional territories, while cross-scale linkages with provincial authorities ensure that local activities are consistent with broader regional and provincial priorities (O’Flaherty *et al.* 2008; Figure 2.1).

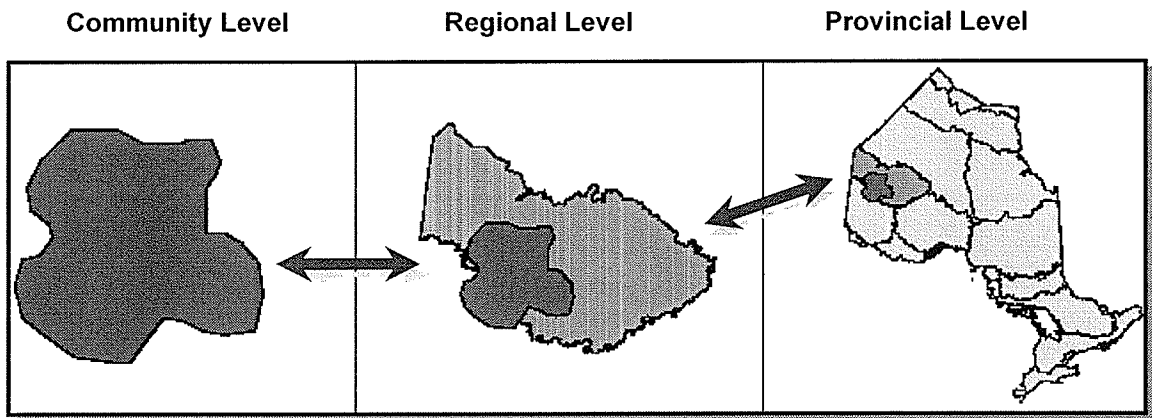


Figure 2.1: Cross-scale linkages of land use planning under the NBI (adapted from OMNR 2002:4)

Since 1996 the OMNR has partnered with PFN in support of the community-led economic renewal and land use planning process known as the Whitefeather Forest Initiative (WFI), with the goals of (1) Creating major economic and employment opportunities through resource-based tribal enterprises, particularly for the growing population of youth living on-reserve, and (2) Developing a Land Use Strategy for resource management that harmonizes Indigenous knowledge and practices of Pikangikum people with the best of Western science (PFN and OMNR 2006).

In June 2006, the WFI Land Use Strategy, entitled "*Keeping the Land*" was ratified by both PFN and OMNR. *Keeping the Land*, in the context of the WFI, means renewing human agency on the land through the creation of land-based livelihood opportunities serving to maintain the knowledge, values, beliefs, which have shaped this cultural landscape. In this way, the land which houses the memory of ancestors will become the home of future generations; *Keeping the Land* is essential for cultural survival.

The Whitefeather Forest, relatively uninfluenced by conventional land use planning, has given PFN the unique opportunity to reassert their particular approach to NREM, *Keeping the Land*, to ensure that local values are respected and integrated in future economic and land use activities.

2.3 PLACE, PEOPLE, PERCEPTIONS & POWER

Worldview guides how a particular society perceives their environment. From worldview arise cultural values, institutions of knowledge, social, economic and political systems, which together determine how a society relates to their environment. Indigenous and non-Indigenous perceptions of the environment have diverse approaches to NREM, however it is issues of power and politics that have traditionally excluded Indigenous participation. The following sections provide a review of the places, people, perceptions and power relevant to the context of this research.

2.3.1 THE BOREAL FOREST

Covering nearly 6 million km² and 58% of Canada's landmass, the boreal forest Ecozone represents 25% of the remaining large intact forests on the planet (CBI, online). The Coniferous forest with some limited areas of mixed forest, characterize the vegetation. Dominant species include white spruce, balsam fir, and black spruce with some trembling aspen and balsam poplar, although jack pine and black spruce are more common in wetland areas, which constitute over 25% of the Ecoregion (Environment Canada, online). Common wildlife species include wolf, lynx, ermine, fisher, beaver, moose, black bear, woodland caribou, snowshoe hare, spruce grouse, bald eagle and waterfowl. The boreal forest is a fire-dependant system in which periodic fire cycles have resulted in a mosaic landscape of diverse habitat types. Fire is one feature which lends to the ecological variability (i.e. natural range of variation) in this complex system.

However, this ecosystem has not been shaped by “natural” processes alone. The boreal forest is a cultural landscape, representing the combined work of humans in nature, beginning with Indigenous agency followed with the influences of Euro-Canadians. Indigenous peoples and Euro-Canadians alike rely upon boreal forest resources for their livelihoods. Today, approximately 50% of Canada’s boreal forest has been allocated to industry (forestry, hydro and mining). As a result of increasing awareness of development in the boreal ecozone, initiatives from all levels of Canadian government, international organizations, NGOs and scientists to manage this Ecozone for the purposes of biodiversity conservation, protecting species at risk, mitigating climate change and preserving ecological integrity and promote sustainability have emerged in the recent decade. Attempts have been made to determine the economic value of ecosystem services like water filtration and carbon storage, which has been calculated to be roughly 2.5 times greater than the net market value of forestry, hydro, mining, and oil and gas extraction (Pembina Institute 2005). To these entities, the boreal forest represents one of the last remaining regions of “pristine wilderness” (e.g. Sierra Club, CPAWS, Manitoba Conservation, Environment Canada, and the Senate Subcommittee on the Boreal Forest, all use the image of the boreal forest as an undisturbed landscape). However, Aboriginal people value and perceive the boreal forest in a different light.

2.3.2 PERCEPTIONS OF THE LAND & OUR PLACE WITHIN

Euro-Canadian perceptions of the land stem from the Age of Enlightenment where reason became the new foundation for understanding (i.e. Newtonian science), supplanting traditional values and perceptions and provided the philosophical foundation for the human-nature divide (Capra 1984).

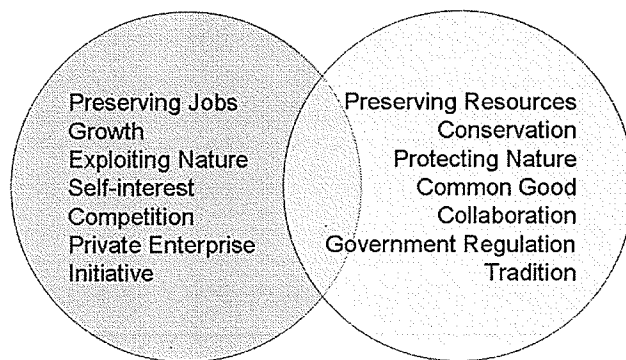


Figure 2.2: Potential Value Conflicts in Sustainable Forest Management as Perceived by Natural Resources Canada (1998)

In the process of nation building the Cartesian perceptions harboured by colonial powers resulted in the loss of Indigenous agency,

replacing the Aboriginal cultural landscape with one that reflected Eurocentric values (Cronon 1983; Davidson-Hunt 2003). The institutions of colonial and industrial societies increasingly excluded Indigenous peoples from securing a meaningful livelihood.

The legacy of dualistic thinking remains entrenched in Canadian resource management institutions. Figure 2.2 provides an example of how government perceptions of sustainable forest management in Canada continue to perceive conflict in terms of either-or value choices.

For many Indigenous cultures, the land is comprised of fellow beings: plants, animals, rocks, water and air, all of which are gifts from the Creator (Callicott 1989; Hallowell 1992). The Earth is alive and sacred, and people are perceived to be an integral component of a holistic system (Buggey 1999; Callicott 1989). Unlike Western scientific perceptions, kinship with all of Earth's beings influences the Indigenous way of life; humans have an obligation to act responsibly in their relationships with the land (Overholt and Callicott 1982; Hallowell 1992). This notion of "respect" predominates in many traditional belief systems; it is a moral imperative (Callicott 1994; Berkes 1999). In many Indigenous cultures, learning is based upon oral tradition and experience which "is mapped on the landscape... events are anchored to place and people use locations in space to speak about events in time" (Cruikshank 1994:409). This "way of knowing" supports the knowledge-practice-belief complex (Berkes 2008), which emphasizes the embeddedness of environmental knowledge (i.e. TEK) in management institutions and practices (Roth 2004).

2.3.2.1 *CULTURAL LANDSCAPES*

Cartesian dualism embedded in the fields of cultural ecology and cultural geography, have long suggested a dialogical relationship between the natural environment on one hand and cultural organization and perception on the other (Preston 1999). A multidisciplinary paradigm shift has begun to reconcile these disparate fields with the notion of cultural landscapes as the catalyst for the holistic study of social-ecological systems (Toupal *et al.* 2001; Davidson-Hunt and Berkes 2003a). The concept of cultural landscapes has now become useful in the field of natural resource management as this concept embodies the key elements in this field of inquiry; the environment, people and perceptions (Buggey 1999; Davidson-Hunt 2003a).

The term cultural landscape only emerged in NREM literature beginning in the early 1990s (Jacques 1995). Cultural landscapes, in its broadest of terms, represent the “combined works of nature and of man” (UNESCO 1996). However, this definition does not adequately reflect the complexity of this concept. Sauer’s (1956) classic definition, described the relationship between people and their environment, “culture is the agent, the natural area the medium, the cultural landscape the result.” Tuan (1974; 1977), in his works *Topophilia* and *Space and Place*, described the effect of the biogeophysical environment on the perceptions, values, beliefs, practices and worldviews of local and Indigenous peoples. He concluded that nature becomes a part of human culture through experience and teachings on the land (Stoffle *et al.* 2003). It was not until 1976 when Meinig suggested that not only do human cultures influence their immediate physical environment, but so too does the physical environment shape the resident culture, stating that “any landscape is composed not only of what lies before our eyes but what lies within our heads” (cited in Buggey 1999).

Nassauer (1995) supported this notion that human landscape perception, cognition and values directly affect the landscape, as they are affected by the landscape, and deemed it one of the main principles of cultural landscapes. She also provided three more principles for exemplifying cultural landscapes: cultural conventions influence landscape patterns in both inhabited and apparently natural landscapes; land-based culture’s concepts of nature are different from scientific Cartesian concepts of ecology; and the appearance of landscapes can reveal cultural norms and values (Nassauer 1995:229).

Aboriginal Cultural Landscapes

Parks Canada (2004) has developed a definition of Aboriginal cultural landscapes:

An Aboriginal cultural landscape is a place valued by an Aboriginal group (or groups) because of their long and complex relationship with that land. It expresses their unity with the natural and spiritual environment. It embodies their traditional knowledge of spirits places, land uses, and ecology.

Within the governing structure of Parks Canada, the defining and identifying of Aboriginal cultural landscapes is for purposes of heritage conservation, in other words, to artefact a landscape in stasis (Ingold 2000; Davidson-Hunt 2003b). However, for cultural landscapes to maintain a current value and provide an opportunity for a secure

and meaningful livelihood for Indigenous cultures, their dynamics (both cultural and natural) must be allowed to persist (Bengtsson *et al.* 2003; Ingold 2000). Aboriginal cultural landscapes, which embody the knowledge of spirits, places, land uses and ecology, are not discrete, but rather may be comprised of overlapping nested nodes and networks with varying values throughout (Buggey 1999; Stoffle *et al.* 2003; Davidson-Hunt 2003a). Stoffle *et al.* (2003) termed this “cultural landscape layering” where the landscape of one culture will have different meanings, and may not even be perceptible to another culture because of differing perceptions, values and political-economies (Davidson-Hunt 2003a). Not unlike Meinig’s “landscapes of the mind”, Stoffle *et al.* (2003:3) have enhanced this notion by adding the concept of social knowledge transmission; “land exists in the mind of a people and that their imagery or knowledge of the land is both shared among them and transferred over generations.”

Cultural Landscapes as Social-Ecological Systems

Not only has the concept of cultural landscapes provided a theoretical framework for examining varying values of society’s perceptions and relationships with particular environment, they have also become useful for coming to an understanding of social-ecological systems. Social-ecological systems are complex adaptive systems characterized by cross-scale interactions and feedbacks between ecological and socio-economic components, often resulting in re-organization of these components and nonlinear trajectories of change (Berkes and Folke 1998; Berkes *et al.* 2003; Folke 2006). Resilience is a key property of social-ecological systems, and can be defined as the capacity of the system to withstand or recover from perturbations through self-organization and adaptation (Berkes and Folke 1998; Folke 2006). With the understanding that human-environment interactions are inherently linked and dynamic, cultural landscapes, drawing on the definition offered by Davidson-Hunt (2003b), are here defined as “the physical expression of the complex and dynamic sets of relationships, processes and linkages between societies and environments.”

2.3.3 NATURAL RESOURCES INSTITUTIONS

Institutions can be defined as sets of formal (rules, laws, constitutions) and informal (norms, values, conventions) constraints that shape interactions of humans with others and the environment (Agrawal and Gibson 1999; North 1990; Berkes *et al.* 2003). The

key institutional arrangements that guide the use of forest resources include institutions of knowledge, property rights, governance structures and management regimes.

All of Canada is currently situated within the cultural, social, political, environmental and economic legacy of contradictory top-down institutional approaches to natural resources and environmental management. On the one hand, we have the conservation argument, where areas of seemingly pristine wilderness are set aside in perpetuity for “protection” from human influence. On the other hand, there remains the tradition of “hewers of wood and drawers of water”, a quintessentially Canadian economic framework of resource extraction and export. Ironically, both approaches are grounded in the notion of *terra nullis*; the Euro-Canadian perception of “empty land”, i.e. free to take up, occupy and utilize (Cronon 1983).

However, in addition to falling short of their goals, wilderness protection areas established for the purposes of maintaining ecological value have resulted in the loss of Aboriginal lands and rights. Furthermore, with diminishing natural capital and social-ecological resilience (Holling and Meffe 1996), crises remain within the “command and control” model of resources management. Although some inroads have been made, these two disparate approaches remain mired in conflict due to the antiquated notion that an inverse relationship exists between human activities and ecological health (Borrini-Feyerabend 2004; Berkes 2004b).

Examples where progress has been made towards reconciling these perceptions and approaches often involve decentralized, adaptive cooperative management with First Nations, who are able to draw upon a knowledge tradition that views humans as an integral part of the landscape (Berkes *et al.* 2000; Armitage *et al.* 2007).

The following sections aim to illuminate on the evolution from Eurocentric perceptions of humans vs. nature, to the more contemporary view and Indigenous reality of, humans-in-nature and how these perceptions influence the institutions of NREM.

2.3.3.1 *WAYS OF KNOWING*

Indigenous ways of knowing greatly vary from Western ways of knowing. Indigenous institutions of knowledge include storytelling, wisdom of the Elders, observation,

experience and dreams. In academia, we have come to talk about these ways of knowing in terms of traditional ecological knowledge (TEK) and Indigenous knowledge (IK). TEK has been defined as the “sacred cumulative body of knowledge, practices and beliefs, evolving by adaptive processes that are passed on through generations about the relationship of living things and their environment” (Berkes 2008:8). Indigenous knowledge, which includes TEK, refers to knowledge held by indigenous people about a specific landscape that members of a culture group have inhabited for generations. Indigenous scholars such as Deborah McGregor, Gregory Cajete, Vine Deloria, Winona LaDuke and others provide further understandings of IK and TEK, explaining that this knowledge is holistic and viewed by knowledge-holders as a gift from the Creator (McGregor 2004). Indigenous scholars are reluctant to provide a definitive definition of IK or TEK because this knowledge can not be extrapolated from the knowledge-holders and the land from which the knowledge emerged, Battiste and Henderson (2000: 42) provide a conceptualization of IK:

Perhaps the closest one can get to describing unity in Indigenous knowledge is that knowledge is the expression of the vibrant relationships between people, their ecosystems, and other living beings and spirits that share their lands...All aspects of knowledge are interrelated and cannot be separated from the traditional territories of the people concerned...To the Indigenous ways of knowing, the self exists within a world that is subject to flux. The purpose of these ways of knowing is to reunify the world or at least to reconcile the world to itself. Indigenous knowledge is the way of living within contexts of flux, paradox, and tension, respecting the pull of dualism and reconciling opposing forces...Developing these ways of knowing leads to freedom of consciousness and to solidarity with the natural world.

This intimate understanding of the environment does not function as a linear relationship; the human component and the “other-than-human” components work together to form an integrated, symbiotic and resilient network, otherwise known as a “social-ecological system” (Davidson-Hunt 2003a; Berkes *et al.* 2003). Knowledge is not only used by resource management institutions but also produced, maintained, and adapted through the practices of such institutions and is thus embedded in social, cultural, economic, and political contexts; it is inseparable from the institutions and practices that create it (Roth 2004). These adaptive responses give Indigenous peoples the capacity to alter their activities and modify local institutions and practices to conserve resources and ensure sustainable cultural landscapes and livelihoods (Berkes *et al.* 2003; Berkes *et al.* 2000; Gadgil *et al.* 1993).

2.3.3.2

PROPERTY RIGHTS

The notion of property and the right to the land has a strong influence on the utilization of natural resources (Chapin and Whiteman 1998; Johnson 2004). Property can be defined as “the rights and obligations of individuals or groups to use the resource base” (Berkes *et al.* 2003:12). Schlager and Ostrom (1992; 1993) divide the continuum of property rights into three main categories: operational (access and withdrawal); collective rights (management, exclusion and alienation); and constitutional rights (the authority on operational and collective rights).

Conventionally, the dominant school of thought on property rights has advocated that private or state property are the most effective means of ensuring the sustainable use of resources. It has been argued that unregulated, open access, characterized by an “absence of well-defined property rights” (Berkes *et al.* 1989), leads to resource depletion as described by Hardin’s (1968) “tragedy of the commons”. Conversely, private property, communal property, and state property have mechanisms to regulate access to resources and provide a basis for more sustainable use (Ostrom 1990). However literature arising over the past few decades (Gibbs and Bromley 1989; Bromley 1992; Ostrom 1990) has demonstrated that common property regimes are also capable of regulating the use of resources in a sustainable and equitable manner (Johnson 2004).

Common property (i.e. collective rights) is now generally defined as a system where “the resource is held by an identifiable community of users who can exclude others and regulate use” (Berkes *et al.* 1989). Gibbs and Bromley (1989) noted that a well functioning common property regime can be distinguished by: a minimum (or absence) of disputes and limited effort necessary to maintain compliance; a capacity to cope with progressive changes through adaptation; a capacity to accommodate surprise or sudden shocks; and a shared perception of fairness among the members with respect to inputs and outcomes. As noted in the section on IK and TEK, each of the successful characteristics common property regimes is also embodied by Indigenous customs. How these characteristics are organized and expressed in practice is dependant upon the acting institutions of governance.

2.3.3.3

GOVERNANCE

Governance can be defined as the interactions among structures, processes and traditions that determine how power is exercised (Graham 2002). The nature of governance institutions, cultural norms and values bears a strong influence on resource management (Roth 2004). At the local level, it is not a system of rules or policies, but the way by which individuals, communities and institutions manage their common concerns in relation to natural resource use (Borrini-Feyerabend *et al.* 2000). Resource use in Eurocentric, technocratic society is governed by the state through formulation of policies and regulatory enforcements (Berkes 1996).

Indigenous customary governance systems construct rules to utilize their natural resources in a sustainable manner (Ostrom 1990; Agrawal 1999). Kofinas (1998: 122) defined local Aboriginal systems of governance as consisting of the following four elements: an information base and paradigm or set of mental constructs that organizes and interprets information into useful knowledge; a set of practitioners with a distinctive worldview or culture that includes both this paradigm and certain normative values; a system of rules, norms, and customs concerning rights and responsibilities that are intended to govern the behaviour of all who partake of resources and their benefits; and an overall set of objectives that are embedded in the situations and ideology of the society. This customary system of governance is based on several cultural principles, including: the centrality of the land, individual autonomy and responsibility, the role of women, the role of Elders, the role of the family and clan, leadership and accountability, and consensus in decision-making (RCAP 1996b:116). These traditional governance systems greatly differ from both the present-day governing system of the dominant society, as well as from the electoral Chief and Council system imposed by INAC and conferred in the *Indian Act* (Graham and Wilson 2004; Hallowell 1992). Neither system (centralized or chief and council) is effective in the governance of common property resources; the former is a mismatch of scale and is ineffective at the community level (Folke *et al.* 2002 cited in Berkes 2004), while the latter does not foster traditional values, norms and practices leading to disparities and conflict in communities (Graham and Wilson 2004). Cross-scale and cross-cultural linkages (Ostrom *et al.* 2002) through the development of collaborative management systems are required for the effective and sustainable governance of natural resources.

2.3.3.4

MANAGEMENT SYSTEMS

Natural resources and environmental management arise from a society's perceptions, values, technologies and political interests (Scott 1998). A useful model for gauging the institutional arrangements along a continuum of management regimes has been adapted by Berkes (1991:36; 1994) from Arnstein's *Ladder of Citizen Participation* (1969). The level of local involvement in the planning, decision-making, management and governance increases as you move up the ladder (Figure 2.3).

Conventionally, natural resources management has been concerned with "power and politics" (Ferne and Pitkethly 1985) and "command and control" (Meffe *et al.* 2002) involving top-

down unilateral decision-making, policy formation, and legislative promulgation resulting in manipulation of the natural environment with little involvement of local communities (i.e. very low on the ladder of participation) (Berkes 1996). However, these "one size fits all" (Folke *et. al.* cited in Berkes 2003) management regimes from centralized agencies have ignored issues of scale, local institutions, values and norms and in many cases have resulted in the disempowerment of local communities, loss of traditional resource management systems and environmental degradation (Striplen and DeWeerdlt 2002).

In the field of natural resources management two models dominate the recent literature, collaborative management (co-management) and community-based management (Agrawal and Gibson 1999; Kellert *et al.* 2000; Berkes *et al.* 2000; Alcorn *et al.* 2003; Hunn *et al.* 2003; Berkes 2004a). Each model is based on the highest levels of community participation in the planning, management and governance of natural resources.

Although there is no single widely accepted definition of co-management (Berkes *et al.* 1991), it can essentially be defined as "formal arrangements facilitating the participation of local people in planning and management" (Lane 2001:663). More recently, the term

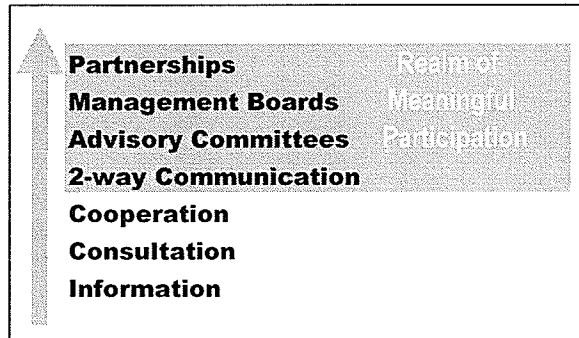


Figure 2.3: Ladder of Citizen Participation (Berkes *et al.* 1991:36).

adaptive has become affixed to the term co-management as has been demonstrated in the literature that Indigenous systems are typified by adaptive and resilient social-ecological systems (Folke *et al.* 2002) (see Holling 2001; Gunderson and Holling 2002 for a discussion on resilience and complex adaptive systems). Adaptive co-management may be defined as a process by which institutional structures (the continuum of arrangements involving various degrees of power and responsibility-sharing between the government and local community), and ecological knowledge are tested and revised in a dynamic, ongoing, process of learning-by-doing (Folke 2002; Berkes 2004a).

Community-based resource management approaches involve accepting ecological complexity and uncertainty, appreciating complex adaptive social-ecological systems, incorporating sustainable livelihood issues, and developing participatory management with community-based institutions and cross-scale governments (Berkes 2003). It is based on the premise “as much local solution as possible and only so much government regulation as necessary” (Berkes 2003), as local populations have a greater interest in the sustainable use of resources, are more aware of local ecological processes and are more able to effectively manage resources than centralized agencies (Brosius *et al.* 1998).

Indigenous peoples have approached NREM from an entirely different perspective. Aboriginal practices are based upon traditional ecological knowledge systems and adaptive learning that promotes social-ecological resilience and sustainability (Davidson-Hunt and Berkes 2003b; Berkes *et al.* 2003). Compliance is based upon internal self-regulation, ethics, community sanctions, extensive teaching and social learning, as opposed to external rules and enforcement (Sherry and Myers 2001; Callicott and Overholt 1982).

Although the influence of managerial ecology, of excluding Indigenous participation and of reliance on centralized power, will continue to resonate throughout NREM institutions, as the term “management” becomes redefined as governance, social relations, adaptation and the maintenance of system resilience (Berkes 2003, cited in Davidson-Hunt 2003b: 24), participation will increase. Furthermore, this redefinition bears a closer

resemblance to Indigenous customary management institutions, meaning more inclusive and equitable participation in NREM.

2.4 CRITERIA AND INDICATORS

In the contemporary context, the overriding goal of NREM is social-ecological sustainability and resilience. Criteria and Indicators (C&I) have become the foremost tool for assessing sustainability and for guiding NREM planning and decision-making (Karjala and Dewhurst 2003). The appearance of criteria and indicators frameworks (C&I) as a means for measuring progress towards sustainability began in 1987 with the Bruntland Report (Duiker 2001) and progressed with the Montreal Process (1992) call for development by the UNCED (Natcher and Hickey 2002).

Fundamentally speaking, criteria are values, and indicators arise from these values (Meadows 1998). As a culture's values will define how they view "sustainability" as well as what is important to sustain (i.e. what should be measured), criteria and indicators are basically atheoretical. Therefore, definitions only arise in context to explain how C&I function within an established management system. For example, Prabhu *et al.* (1999), define criteria as "the intermediate points to which the information provided by indicators can be integrated and where an interpretable assessment crystallizes" and indicators as "any variables or components of a forest ecosystem or management system that are used to infer the status of a particular criterion".

In 1983, the Canadian Council of Forest Ministers (CCFM) set out "...to define, measure and report on the forest values Canadians want to sustain and enhance" (CCFM 1995). In this framework criteria and indicators were defined as "...tools for assessing trends in the state of forests and for promoting sustainable forest management" (Canada 1998:62). According to the CCFM (1995), a criterion is a category of conditions or processes by which sustainable forest management may be assessed...characterised by a set of related indicators, which are monitored periodically to assess change and an indicator is a quantitative or qualitative variable which can be measured and described and which, when observed periodically, demonstrates trends.

CCFM have identified six criteria and 83 indicators essential for sustainable forest management. Provincial governments, industry and forest certification systems have

adapted the National framework to their unique sustainable forest management needs. In 2002, OMNR released their sustainable forest management evaluation framework (Table 2.1, OMNR 2002).

Table 2.1 OMNR Sustainable Forest Management Evaluation Framework	
Criterion for Forest Sustainability	Elements for Forest Sustainability
1. Conserving the Biological Diversity	1.1 Conserving Landscape Diversity 1.2 Conserving Ecosystem Diversity 1.3 Conserving Species Diversity 1.4 Conserving Genetic Diversity
2. Maintaining and Enhancing Forest Ecosystem Condition and Productivity	2.1 Monitoring and Managing Incidences of Forest Disturbance 2.2 Maintaining or Enhancing Forest Ecosystem Resilience and Productivity
3. Protecting and Conserving Forest Soil and Water Resources	3.1 Minimizing the Effects of Forest Management Practices on Ontario's Forest Soil Resources 3.2 Minimizing the Effects of Forest Management Practices on Water Resources in Ontario's Forests
4. Monitoring Forest Contributions to Global Ecological Cycles	4.1 Monitoring and Modelling Ontario's Forest Sector Contributions to Global Carbon Enrichment 4.2 Monitoring and Managing Conversion of Forest Land to Other Uses in Ontario
5. Providing for a Continuous and Predictable Flow of Economic and Social Benefits from the forest	5.1 Maintaining or Enhancing the Resource Production Capability of Ontario's Forests 5.2 Monitoring and Supporting Forest Sector Employment, Investment and Competitiveness 5.3 Monitoring and Supporting Enhanced Forest Sector Contributions to the Economy 5.4 Maintaining or Enhancing Recreation, Tourism and Other Social and Environmental Values Associated with the Forest
6. Accepting Social Responsibilities for Sustainable Development	6.1 Respecting Aboriginal Rights and Supporting Aboriginal Participation in Sustainable Forest Management Activities 6.2 Maintaining and Supporting Forest-Based Communities 6.3 Maintaining Effective Public Participation in Sustainable Forest Management Decision-Making
7. Maintaining and Enhancing Frameworks for Sustainable Forest Management	7.1 Maintaining and Enhancing Ontario's Legal Framework 7.2 Maintaining and Enhancing Ontario's Institutional Framework for Sustainable Forest Management 7.3 Maintaining and Enhancing Ontario's Economic Framework for Sustainable Forest Management 7.4 Maintaining and Enhancing Ontario's Monitoring Framework for Sustainable Forest Management 7.5 Maintaining and Enhancing Ontario's Research and Development Framework for Sustainable Forest Management Refer to the current version of

	the Ontario state of the forest report for the list of indicators for forest sustainability.
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While the CCFM framework, and by extension the OMNR, addresses many of the scientific and socio-economic issues related to an industrial approach to sustainable forest management, those of the Aboriginal community were subsumed under “Society’s Responsibility”. This provided little opportunity to address the many unique concerns of Aboriginal people with regard to current forest management practices by industry, their specialized knowledge and traditional and present uses of the forest. As a result, this national set was never endorsed by the National Aboriginal Forestry Association (NAFA) as it was felt that it did not adequately address Aboriginal and Treaty Rights, stating: “Aboriginal and Treaty rights are a criterion for forest sustainability, not indicators of sustainability” (NAFA 1995).

Both national and provincial levels of resources management agencies have failed to recognize and meaningfully involve Aboriginal peoples in the development of C&Is, as such the majority of C&I frameworks have been developed by government and industry “experts”. However, these frameworks, which are scientific and objective in nature, fail to address local interests or managerial realities with regard to implementation (Sherry *et al.* 2005).

Although formalized C&I frameworks have become the focus as an approach towards achieving forest sustainability, Indigenous societies, given their longstanding relationships with a particular land, have well developed systems of knowledge and practices that enable them to live in dynamic environments (Berkes *et al.* 2003). Customary approaches for monitoring signs and signals of change are one way that Aboriginal cultures have become attuned to social-ecological variability, which have guided adaptive approaches that have maintained system resiliency. The indicators used are unique to a given social-ecological setting; just as aspects of the cultural landscape are only perceptible to those who have participated in its creation, so to are the signs based upon individual perceptions of the environment (Davidson-Hunt and Berkes 2003).

In addition to the impracticality of implementing top-down C&Is at the local level, these frameworks have limitations within themselves. McCool and Stankey (2001) state that in order to be effective there needs to be agreement on what should be measured and sustained. Furthermore, Kijazi and Kant (2003) have pointed out significant gaps between Ontario's C&Is and National level policy (CCFM), as well as significant barriers for the implementing the provincial C&I at the local level (Kijazi and Kant 2003). Due to these gaps and the improbability that a consensus can be reached on what should be measured for assessing sustainability, let alone coming to an agreement on what defines "sustainability", the utility of C&I as a means for assessing sustainable forest management at the local level is clearly inadequate.

What we are left with are two divergent approaches to monitoring sustainability. Firstly, there are the top-down C&I approaches which are grounded in Western values and perceptions, which have been developed by "experts" that utilize quantitative indicators as measures of sustainable forest management. Secondly, there are the customary approaches that Indigenous people employ for monitoring change in social-ecological system dynamics. This system, grounded in Aboriginal knowledge and values, is equally inaccessible to non-Indigenous people as the top-down approaches are to Indigenous communities.

Recently, attempts to reconcile these disparities have emerged in the literature with the development of local-level and Aboriginal C&I literature (Parkins *et al.* 2001; Natcher and Hickey 2002; Karjala and Dewhurst 2003; Sherry *et al.* 2005). However, coming to a shared understanding of the social-negotiated meaning of signs and signals that a society used to assess and guide the trajectory of their environments is an incremental learning process. Issues surrounding subsuming Aboriginal values in Western, scientific categories as well as concerns around cross-cultural understanding of what C&I are trying to achieve remain to be addressed.

2.5 ADAPTIVE SOCIAL LEARNING

With the understanding that decentralized, participatory approaches, responsive to social-ecological dynamics are the most effective method of achieving NREM objectives within cultural landscapes (Alcorn 1993; Lane 2001), the question remains how can new

approaches, that reflect complementary ways of knowing, be developed to facilitate cross-scale, pluralistic and adaptive integrated resource management? Adaptive-social learning, when applied into a cooperative cross-cultural context, can provide a forum upon which new shared understanding can be forged and brought into effective, equitable NREM (Davidson-Hunt 2006; Stevenson 2006).

One aspect which has been recognized as a prerequisite for adaptive management in complex systems is the notion of social learning (Berkes 2007). Social learning theory has its roots in the work of John Dewey, who defined “social learning” as a process of “conversion of past experience into knowledge and projection of that knowledge in ideas and purposes that anticipate what may come to be in the future and that indicate how to realize what is desired” (Dewey 1963: 50). Furthermore, in the context of NREM, adaptive learning has been referred to “as a method to capture the two-way relationship between people and their social-ecological environment” (Davidson-Hunt and Berkes 2003a). This process draws upon a culture’s social memory, coupled with individual perceptions and experiential knowledge, brought into a social learning forum where individual perceptions are given meaning through negotiating and interpretation, which will result in new knowledge of how to respond accordingly (ibid).

Building shared understandings of how signs and signals of social-ecological dynamics are perceived and culturally negotiated (i.e. C&I are used within respective social-ecological systems) is integral to fostering resilience. Therefore, in addition to being important for reconciling disparate approaches to NREM, adaptive social learning can increase our capacity to deal with change as it increases shared understandings of both perceiving and responding to change. The advantage of this approach is that it becomes possible to focus on the processes by which knowledge is produced, as opposed to the information and categories of knowledge, such as those between Indigenous and Western ways of knowing (Davidson-Hunt 2003; Agrawal 1995 cited in Davidson-Hunt 2006).

In theory, adaptive-social learning forums in collaborative cross-cultural settings can lead to shared understandings, the co-production of new knowledge and NREM and C&Is frameworks that respect complementary knowledge and values. However, few examples exist in practice. This thesis provides an example of how criteria and

indicators, in addition to providing a means of assessing sustainability, can also facilitate communication that leads to mutual understanding and adaptive-social learning across scales.

2.6 CHAPTER SUMMARY

Conventional, top-down approaches to NREM are generally failing to achieve the goal of social-ecological sustainability and resilience. This is in part due to the persistent failure to embrace local and Indigenous values and approaches to NREM, which has contributed to the loss of both natural and cultural heritage. In response to this limited success, new institutional settings have emerged (or rather Indigenous systems have re-emerged) in the form of adaptive co-management and community-based resource management. These approaches are participatory in nature and take a more holistic, integrative approach to NREM problems at the local level (Berkes 2004a). Adaptive social learning is a means of building shared understanding of diverse NREM approaches, including C&I. As local resource users gain a higher level of participation in the planning, management and governance of their resources, the likelihood increases that NREM objectives will be met. Furthermore, these emerging paradigms also ensure that traditional practices, beliefs and knowledge are preserved through the fostering of dynamic processes in Indigenous cultural landscapes.

Chapter Three

3.0 RESEARCH DESIGN

Cross-cultural, place-based learning, “approached from the premise that knowledge is a dynamic process...contingent upon being formed, validated and adapted to changing circumstances, opens up the possibility for researchers to establish relationships with Indigenous peoples as co-producers of locally relevant knowledge...”

(Davidson-Hunt and O’Flaherty 2007:293)

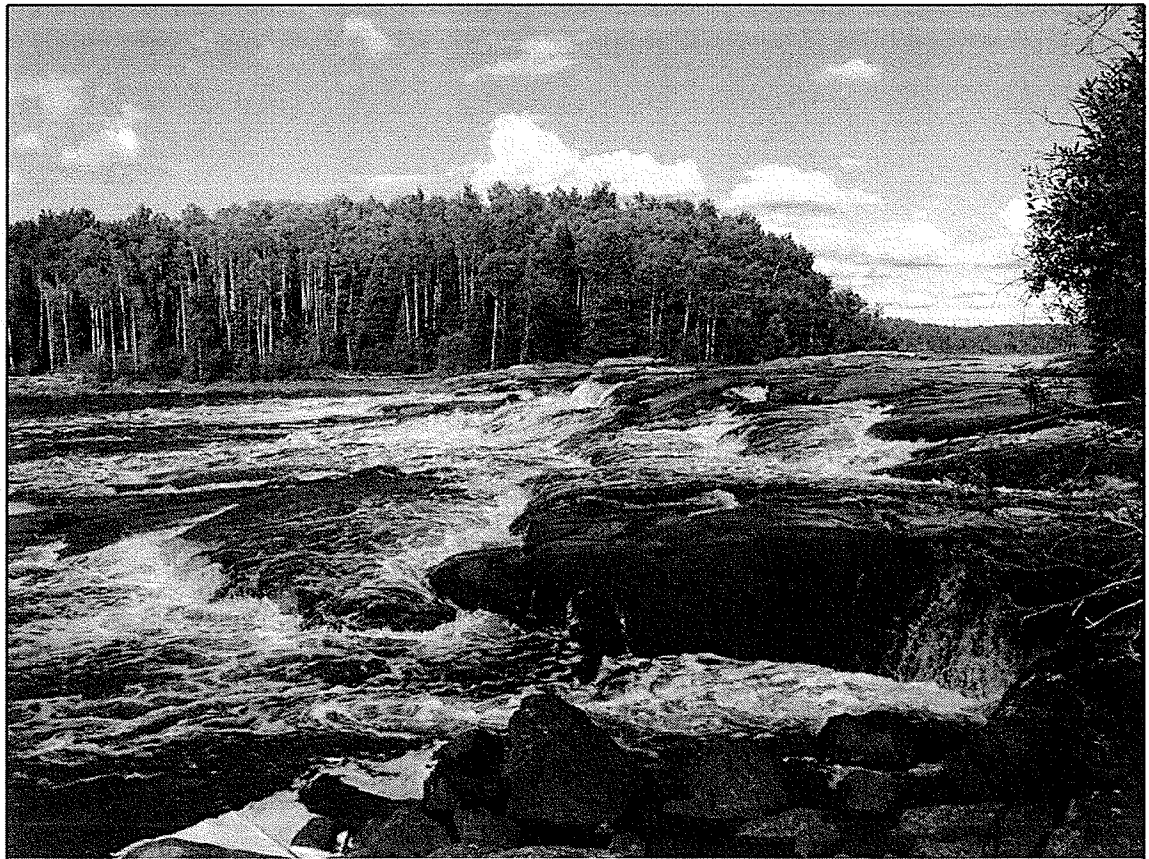


Plate 3.1: Rapids between two lakes in the Whitefeather Forest. Photo by: I. Davidson-Hunt, 2006

3.1 CHAPTER OVERVIEW

This thesis, as a component of the pre-existing research cooperative between the WFMC and the Natural Resources Institute at the University of Manitoba, was guided by established research protocols (WFRC 2004).

Grounded in a qualitative research paradigm, this project took an approach that: emphasized process rather than just outcomes, was interested in understanding and meanings (e.g., how people make sense of their lives, experiences, and environment), and was descriptive in nature, where meaning and understanding were gained through narratives and visual sources (c.f. Creswell 1994). The research process was adaptive, interactive and iterative in nature, allowing for methods, data collection and interpretation to be continually refined throughout the course of the project.

Driven by participant goals and shared decision-making (Munt 2002; Gibbs 2001), my approach was similar to that of Baskin (2005:12), as she described in her work *Storytelling Circles: Reflections of Aboriginal Protocols in Research*: "My approach was not to plan, but to allow the process to happen in whatever way it was meant to develop. I chose not to control the process, but rather to allow myself to be controlled by it."

3.2 METHODOLOGICAL FRAMEWORK

Although the research process was one that organically and iteratively evolved, I also recognized that methodology is important because it frames the questions being asked, determines the set of instruments and methods to be employed and shapes the analyses (Smith 1999:143).

This study consisted of a mix of cooperative methodological approaches drawing from current practice in community-based research, including; Place-based learning communities (PbLCs) (Davidson-Hunt and O'Flaherty 2007), Participatory Action Research (PAR) (Bessette 2004) and Collaborative Learning (Peters and Armstrong 1998), as well as Participatory Rural Appraisal (PRA) (Chambers 1994). At the same time, I also sought to embrace Indigenous approaches to learning and collaborating throughout this project, which included listening, building on prior knowledge, not

rushing, learning-by-doing, reflecting and sharing decision-making about when, where and how the research journey would take us.

The opening quote of this chapter from Davidson-Hunt and O'Flaherty both describes the knowledge-producing process of this project in the context of a place-based learning community as well as situates my role as a researcher in the co-production of knowledge through this project. Place-based learning essentially promotes exploring a specific history, set values and institutions of knowledge in close collaboration with a particular people in a particular place. In the context of cross-cultural, community-based NREM research, PbLCs contribute to building understandings of local phenomena by having researchers and Indigenous peoples engage in a dialogue about their respective understandings so as to build some form of common currency upon which a collaborative dialogue can be based for the co-production of knowledge (Davidson-Hunt 2003; Davidson-Hunt and O'Flaherty 2007:294). The goal is not to produce a common knowledge set that subsumes two different ways of knowing and understanding, but rather to develop a process and way of communicating that is mutually acceptable to the diverse people who form the PbLC (Davidson-Hunt and O'Flaherty 2007:295).

The research approach was both participatory and collaborative, with communication being the medium for both. This aspect drew upon the methodology of participatory action research (PAR), in that researchers are not simply objective gatherers of data but are active participants in the research. This approach is echoed in the tradition of collaborative learning, which has been defined as "people labouring together to construct knowledge" (Peters and Armstrong 1998:72). At its core, participatory research seeks to understand the relationships between individuals within and between communities and the relationships between people, communities and their physical environment (Besette 2004). This emphasis of the collaborative learning approach emerges in this study from a concern for coming to an understanding of "ways of being in the world", particularly with how meaning is made and knowledge is created through use of language (Shotter 1993). For many, as for this thesis, "collaborative learning" and "cooperative learning" are used interchangeably.

Elements of Participatory Rural Appraisal (PRA) were also a component of the methodological framework of this project as this approach is focused on "enabling

people to undertake their own investigations, to develop solutions and to implement action” (Mitchell 1997:219). Key principles of PRA concern the behaviour of the researcher, such as the reversal of learning and being critically self-aware (Chambers 1994). Some of the collaborative aspects of PRA which suit the nature of this project include sharing and not rushing (ibid). The other way that PRA was an appropriate approach to this collaborative project is that visualization is a commonly applied tool, as Chambers (1994: 1257) describes:

Diagramming and visual sharing are common elements in much PRA. With a questionnaire survey, information is appropriated by the outsider. It is transferred from the words of the person interviewed to the paper of the questionnaire schedule. The learning is one-off. The information becomes personal and private, unverified, and owned by the interviewer. In contrast, with visual sharing of a map, model, diagram...all who are present can see, point to, discuss, manipulate and alter physical objects or representations. Triangulation takes place with people crosschecking and correcting each other. The learning is progressive. The information is visible, semi-permanent, and public, and is checked, verified, amended, added to, and owned, by the participants.

Furthermore (ibid 1263):

With visual analysis, relationships change. The topic may be determined, or at least suggested, by the outsider, but the role is not to extract through questions but to initiate a process of presentations and analysis. The outsiders are conveners and facilitators, the insiders actors and analysts. The outsiders hand over control, and insiders determine the agenda, categories and details.

The mix of approaches reflected in this project represents both the traditional training of social science researchers in academia and emerging understandings of community-based collaborative research and the relationships between researchers and Indigenous peoples and communities (Smith 1999).

3.3 METHODS & PROCESS

Three key methods were chosen to fulfill the specific objectives of this research project:

- Narrative analysis of C-LUP transcript records
- Collaboration with community research partner Paddy Peters
- Collaborative workshops with community Elders using visualization/matrix analysis

The following, which describes the research methods and process, is presented in 3 sections. The first (3.4) describes project planning and preparation. The second section (3.5) explains the research process, and how each of the aforementioned methods was employed. The research process was divided into two phases: Phase I (3.5.1) involved a journey of personal learning, using the method of narrative analysis, and Phase II (3.5.2) involved a process of collaborative learning for the co-production knowledge in the form of a framework to both represent and communicate Pikangikum values for *Keeping the Land*, which employed the second and third methods as listed above. The third and final section of this Chapter (3.6) provides an overview of how the results were verified and shared.

3.4 PRE-PROJECT PREPARATION & PLANNING

3.4.1 SITUATING THE PROJECT

The opportunity for undertaking this research project materialized out of a combination of the Whitefeather Forest Initiative, the Whitefeather Forest Research Cooperative agreement and a Sustainable Forest Management Network research project.

In the context of the WFI, there was a realization that as the WFMC moves forward with the implementation of the Land Use Strategy, it will become important to be able to measure the extent to which management outcomes met the goals of the Strategy; that is, how do the people of Pikangikum draw upon signs and signals to create an understanding that the Whitefeather Forest cultural landscape is moving towards a desirable state, and how can we communicate this to WFI planning partners?

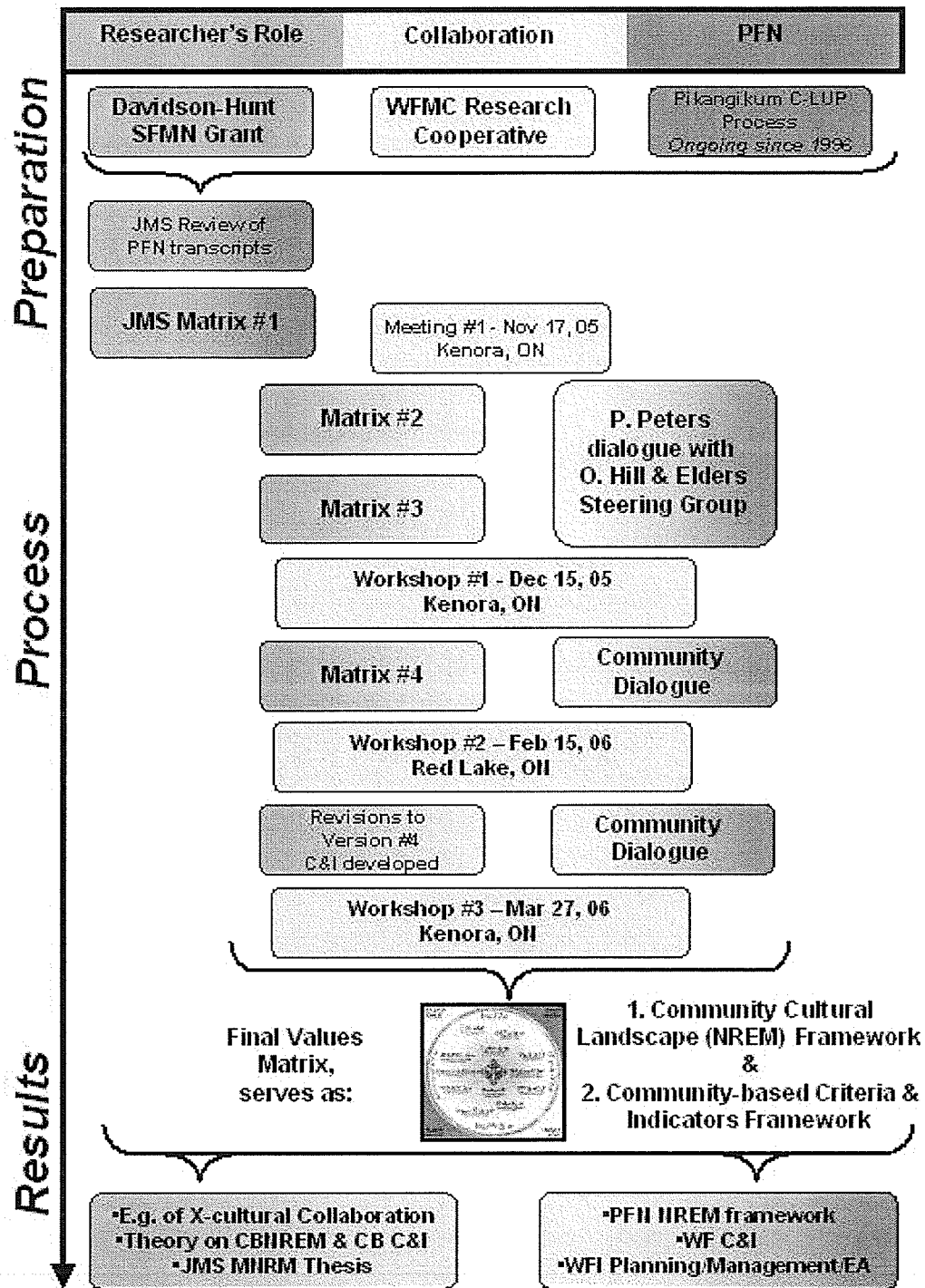


Figure 3.1: Schematic representation of research process

An initiative of Pikangikum First Nation, the WFRC was established in 2004 with the purpose to facilitate the goals of the WFI through the development of research programmes. The spirit of work to be carried out through this consortium supports Pikangikum in responding to their own needs by recognizing PFN as in “the driver’s seat” for the development of research programmes. Simultaneously, the WFRC also seeks to create collaborative learning networks through the building of dynamic processes for the co-production of locally relevant knowledge that can also be communicated cross-culturally to planning and research partners (i.e. to foster a place-based learning community) (Davidson-Hunt and O’Flaherty 2007:295).

The WFRC is a written document to which members, representatives of both Pikangikum First Nation and research institutions, as partners are signatory. This written protocol is integral to fostering a cooperative learning environment because it clearly established the roles and authority of each partner, as well as established understanding regarding intellectual property and confidentiality at the outset. This project, as a component of the WFRC, was guided by established research protocols (WFRC 2004).

As a component of the WFRC, a Sustainable Forest Management Network (SFMN) grant, entitled “Cooperative Learning for Integrated Forest Management: Building a C&I Framework for the Whitefeather Forest Initiative, northwestern Ontario”, was secured by Dr. Iain Davidson-Hunt (PI) (Box 3.1).

This project primarily addressed the second objective of the larger SFMN Project, in addition to being guided by the first three key research questions.

Box 3.1: Summary of SFMN Project (*dauidsonhunticoop10*)

In this project, we will undertake a cooperative learning process with Pikangikum First Nation Elders, to learn about the signs and signals of forest ecosystem change, and to build a harmonized criteria and indicators (C&I) framework, in support of community-based land-use planning and management in northern boreal forests.

Our research will be guided by 4 key questions:

1. How do Indigenous people draw upon signs and signals to create an understanding that a forest ecosystem is moving toward a desirable or an undesirable state?;
2. Can informal signs and signals of ecosystem change provide the basis for a dialogue to develop a harmonized C&I framework, for cross-scale and pluralistic systems of natural resource governance?;
3. Can the development of a harmonized C&I framework lead to the shared perception and meaning of ecosystem change, and the basis of an information system for adaptive community-based resource management?; and
4. What is the First Nation experience in deriving C&I frameworks based upon their knowledge, values, and institutions, as opposed to adopting frameworks developed by others?

Our specific objectives are to:

1. Identify and document signs and signals that can be utilized to monitor changes in boreal forest ecosystems;
2. Build a harmonized C&I framework for integrated management of the Whitefeather Forest Planning Area (WFPA); and
3. Assess the state of knowledge, and integrate lessons learned from First Nation experiences with C&I processes.

3.4.2 SITUATING THE RESEARCHER

Prior to the onset of this project, and in addition to the review of relevant literature as provided in Chapter Two, it was necessary for me as a researcher embarking on a collaborative research journey to learn more about Aboriginal culture, worldview and institutions through which knowledge culturally mediated. Drawing from the works of ethnographers (Dunning, Hallowell) oral historians (Cruikshank, Overholt and Callicott), Aboriginal scholars such as (Bird, Johnson, Cajete), and previous community-based research with Ojibway people of northwestern Ontario (Davidson-Hunt 2003a) I was able to familiarize myself with some of core tenets of Ahneesheenahbay cosmology such as the interconnected view of the universe, where animate and inanimate are not as starkly defined as in Western perceptions of the world.

3.5 NAVIGATING THE PROCESS: FROM HEURISTIC LEARNING TO THE CO-PRODUCTION OF KNOWLEDGE

3.5.1 PHASE I: HEURISTIC LEARNING

The following section describes the first phase of the research, where personal learning about *Keeping the Land* took place through immersion in narratives from the WFI land use planning process. Referring to Figure 3.1, this Phase began with research preparation and, as the learning progressed, moved towards entering the research process.

3.5.1.1 NARRATIVES FROM THE WHITEFEATHER FOREST

In this study, the use of discourse follows that of Roe (1991; 1995; 1999), Fairhead and Leach (1995) and Leach and Mearns (1996), where discourse can be broadly defined as a “shared meaning of a phenomenon” (Adger *et al.* 2001). Discourse statements do not always have to be spoken or written, but may also be manifest in images, actions, practices, cultural norms, and many other things, and can be expressively communicated in many ways, including narratives (Adger *et al.* 2001). Classically, narratives are defined as chronological stories with a beginning, middle and end (Adger *et al.* 2001). It is, however, important to note that in Indigenous cosmology, the concepts of time and space are not so linearly defined.

In this project, the primary source of discourse narratives were the transcript records compiled throughout the Whitefeather Forest land-use planning process (Appendix II). These transcripts were collected in a variety of different contexts, including community land-use planning (C-LUP) workshops and PFN Elders’ Steering Group workshops. During these meetings, Elders and other community members offered their perspectives on, among other things, *Keeping the Land*. The transcripts included, but were not limited to, narratives of the following nature:

- Ahneesheenahbay stories, legends, prophecies and humorous anecdotes
- Political discourse on past and present relationships with government (e.g. OMNR)

- Traditional knowledge and customary practices of the Whitefeather Forest cultural landscape

As Elders were the primary participants in the C-LUP process, the meetings employed a note-taker and a translator to record the *Ahneesheenhaymooween* statements to English as they were made. Many of these meetings were also audio-recorded, and the taped statements were then translated into English by the WFMC staff at a later date. These records are held in trust by the WFMC and were made available for use in this research as a part of the WFRC.

Discourse analysis focuses on knowledge and knowledge-making processes of a phenomenon rather than on a particular phenomenon itself (Hannigan 1995, cited in Adger *et al.* 2001). This approach was appropriate as this project sought to document the means by which Pikangikum people collectively perceive and adapt to environmental change. Discourses are also culturally and historically contingent (Fairhead and Leach 1995). This, again, deemed this approach appropriate as this project took an emic approach to describing the process of environmental monitoring in the Whitefeather Forest. An 'emic' approach focuses on describing phenomena in terms meaningful to the actor, i.e. it is culture-specific (as opposed to the 'etic' account that attempts to remain culturally neutral).

3.5.1.2 PHASE I: NARRATIVE ANALYSIS

The form of cultural landscapes emerges out of the relationships between people's values and the places they inhabit (Toupal 2003; Davidson-Hunt 2003b). The concept of cultural landscapes provides an organizing construct within which cultural perceptions of and relationships with a natural environment may be characterized by components, uses, and meanings (Toupal 2003). I used a similar approach to the analysis and interpretation of the narrative documents, continually self-questioning how the statements related to the Whitefeather Forest cultural landscape and the process of *Keeping the Land*.

Analysis was ongoing as I sifted through the narratives looking for patterns and connections within and between the statements (this process is further discussed in

Chapter Four). Through this process, I was able to begin to infer which values within the statements were instances of the same underlying theme and started categorizing these themes. Analysis was conducted primarily with the use of word processing and spreadsheet software (i.e. Microsoft Office). After several reviews of the narrative documents, key value statements were typed and organized (i.e. coded) into categories that organically arose from the data set through the process of “reduction and interpretation” (Marshall and Rossman 1989:114). This aspect was borrowed from the componential analysis method, which is concerned with discovering how people perceive their world from the way they talk about it, and involves “...a systematic search for the attributes (components of meaning) associated with cultural symbols” (Spradley 1979:174).

However, as to be discussed further in Chapter Four as well, it was also through the analytical process of reduction and interpretation where I realized that the values for *Keeping the Land* could not be organized into discrete categories as Ahneesheenahbay values and knowledge are holistic.

The overall process of analysis and interpretation was one of heuristic learning. I was guided to discover for myself the values and their interrelationships, which are important for *Keeping the Land*. This first phase of the research process was integral for gaining an understanding of Ahneesheenahbay knowledge and worldview in the context for ecological, social, economic and cultural sustainability of the Whitefeather Forest.

3.5.2 PHASE II: COOPERATIVE LEARNING FOR BUILDING A NEW UNDERSTANDING

The previous section provided an account of my personal learning during the first phase of this research process. The following section provides an overview of the second, interactive, collaborative phase of this project. Cooperative learning occurred in the context of collaboration with community research partners and in collaborative workshops.

3.5.2.1 COLLABORATION WITH COMMUNITY RESEARCH PARTNER

Although Paddy Peters’ official title was “Whitefeather Forest Land Use Planning Coordinator”, whose responsibilities included organizing meetings between WFI

committees and planning and research partners, this moniker does not explicate his contributions to this project.



Plate 3.2: Elder Norman Quill and Paddy Peters at SFMN Conference, “Sustaining Canada’s Forests: Building Momentum”. 20-22 June 2006, Edmonton, Alberta. Photo from: <http://www.innovationalberta.com/article.php?articleid=841>

Paddy played several roles that facilitated this research project from its onset through fruition. Collaboration with Paddy was ongoing throughout the research process, and he was always available and interested in keeping the project moving forward and to hear what I had learned from the Elders. Paddy provided translations during each of the workshops, communicating the Elders thoughts, stories and comments to me, as well as communicating my ideas and interpretations with the Elders. Pikangikum people speak a unique dialect of Ojibway. Paddy has spoken both fluent Pikangikum *Ahneesheenhbaymooween* as well as English throughout his entire life, deeming him an ideal research partner as his skill to translate the subtle nuances of meaning between the two languages is unmatched. Paddy also coordinated our collaborative workshops, acting as a community liaison to determine which locations and schedules would be most appropriate for the Elders to convene.

However, Paddy not only provided logistical support and English-*Ahneesheenahbaymooween* translations, but he was also an active participant in the co-creation of knowledge over the course of this research project. From our first collaborative meeting, Paddy assisted my learning about the values for *Keeping the Land*, as well as contributed knowledge for both the form and content of the framework. Paddy's artistic ability greatly contributed to the appearance of the framework. From my perspective as a researcher who, previous to this project, has had little experience in conducting workshops and working with a translator, Paddy was an invaluable advisor. He is a considerate, thoughtful, good-humoured person who created a welcoming environment for me into the community research process.

3.5.2.2 COLLABORATIVE WORKSHOPS

In conventional qualitative research literature, workshop participants are considered "key informants" who provide the investigator with information. This research project, approached from the place-based learning community perspective where all members have equal opportunity to participate, mitigated the usual researcher-participant divide.

Three collaborative workshops were held to address the key objectives of this research project. Workshop themes and outcomes will be further discussed in Chapter Four. However, it is important to mention at this juncture that the collaborative workshops were the setting where the majority of participation and collaborative learning occurred in the research process (i.e. middle column of Figure 3.1). This process of cooperative learning draws from the field of semiotics, where communication is viewed as a mutual negotiation of meaning rather than a linear transfer of messages from transmitter to receiver. Accordingly, there was no need to develop an in-depth set of interview questions, even for semi-structured purposes. The Elders were keen to share their wisdom of *Keeping the Land*, stating they feel a deep sense of responsibility to pass on the knowledge, to the youth and to WFI planning partners. I reiterate here my position of allowing the project to be guided by the research process, rather than visa versa.

Although issues of community heterogeneity have arisen in the realm of community-based research (Natcher and Hickey 2002), workshop participants were all members of the Whitefeather Forest Elders' Steering Group. These are the Elders who set the WFI in motion and are highly regarded and respected by the community as knowledge-

keepers, i.e. “esteemed Elders”. It can therefore be noted with confidence that their views can be considered characteristic of the greater cultural groups they represent (Toupal 2003).

3.5.2.3 *COMMUNITY DIALOGUE*



Plate 3.3: The WFMC Office (Pikangikum, ON) showing an early version of the framework posted on the left (to be further discussed in Chapter Four). Pictured: Michael O’Flaherty and members of the WFMC and Elders Steering Group. Photo by: I. Davidson-Hunt, 2006.

Although I am unable to speak of the processes and degree to which community dialogue took place during the development of the framework, communication with Paddy Peters informed me that this process was indeed ongoing (this process is represented in the right-hand column of Figure 3.1). Following each collaborative workshop, and subsequent amendments to the evolving framework, an updated version was sent to Pikangikum and posted in the WFMC office (e.g. Plate 3.3). Paddy informed me that occasional informal discussions amongst community members about the framework would evolve. This process is important because, as noted above (Chambers 1994), several features of visualization techniques serve the goals of

collaborative research, including: a greater degree of two-way participation and learning in the research process, accessibility of the knowledge resulting from the research, and ownership of the information produced remains with the knowledge-holders.

3.5.2.4 PHASE II ANALYSIS

Together, the outcomes of collaboration between research partner Paddy Peters and myself, collaboration in participatory workshops, and community dialogue were processed using a matrix analysis approach. Figure 3.2 illustrates the iterative process of interpretation and analysis, undertaken both individually and as group, following each collaborative learning workshop.

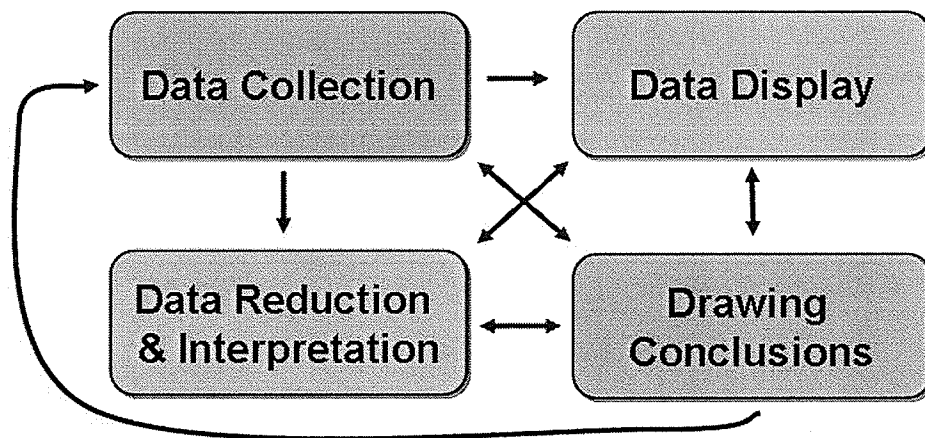


Figure 3.2: Collaborative analytical process of Phase II, adapted from Miles and Huberman (2004:12)

Matrix Analysis

Matrix analysis technique is grounded in four key features (Padilla, Trevino, Gonzalez and Trevino 1997):

- It is embedded in a research agenda that seeks to raise the awareness of those affected by the research in question.
- Participants are considered the experts.
- The results, often diagrammatic, are formed from group participation.
- The interpretation of the data in the diagram requires an analysis of conceptual relationships represented.

3.6 RESULTS & DISSEMINATION

3.6.1 VALIDITY & VERIFICATION

Validity refers to the extent to which the results reflect reality (Merriam 1998). One of the most commonly identified threats to validity in qualitative research arises when working across language and culture. However, the collaborative nature of this project, that being the process of co-creating knowledge, mitigated many of these threats in at least two ways.

Firstly, researchers, who do not have knowledge of the primary language spoken by research partners and participants, use a translation approach. This can pose a threat to validity if researchers attempt to have words or phrases translated for concepts that do not exist, or concepts that are expressed in very different ways across cultures. This often occurs when translation is conducted without adequate consideration of context, which does not provide space to learn about the depth of knowledge embedded in Aboriginal languages. In this project, as aforementioned, research partner Paddy Peters, who is not only fluent in both English-*Ahneesheenhbaymooween* but also the practice of translating, provided the translation throughout this research. Furthermore, translation throughout this project occurred in the context of the iterative process of coming to a mutual understanding through a continuous dialogue. As collaborative learning is rooted in dialog, understanding is necessarily iterative in that a common language of communication and trust is built up over time and may be subject to constant revision (Barge and Little 2002, cited in Davidson-Hunt and O'Flaherty 2007). With every workshop, each participant was building on prior knowledge and learning. Time between the workshops allowed for reflection and re-conceptualizing the matrix as understanding was cultivated.

A second aspect also served to add validity to the results of this project. This research sought to understand and construct a cross-cultural interpretation on Pikangikum values of the Whitefeather Forest. The best way to measure the fairness of representation is to present the results for verification with those who hold these values and contribute to the process of cultivating this cultural landscape. A community forum to share the results of WFRC projects was held on April 11-12, 2006 in Pikangikum. The results of this

research were presented to the community in both English and *Ahneesheenhbaymooween*, with Paddy Peters translating. Although few comments were received at the meeting itself, I later learned through discussions with Paddy that many of the community Elders told him they felt that the results of our research did reflect the *Keeping the Land* teaching and that they felt as though this was an important tool to share this teaching with the community as well as with WFI planning partners.

3.6.2 THE THESIS DOCUMENT

Quotes are an integral part of this document, oral consent was given by research participants to utilize their statements and to identify them by name, thereby recognizing their personal contribution to this project. This follows the work of Cruikshank (1991), Davidson-Hunt (2003) and others who advocate acknowledging and respecting individual research contributions and for a better collaborative ethic in research protocol and practice.

The actual procedure of writing this thesis document was an iterative and recursive process, not unlike the research process. Putting the outcomes of the research to paper involved rethinking and rewriting as I tried to communicate all I had learned. As Van Manen (1990:127) has stated, "writing teaches us what we know, and in what way we know what we know". I chose to bring in other voices throughout the results sections of this thesis, those that either complemented or contrasted my own interpretations, to help illuminate my position.

3.6.3 CONFIDENTIALITY & INTELLECTUAL PROPERTY

As per the WFRC, any information deemed privileged by the community of Pikangikum and/or individual research participants was identified and not included in this thesis document. The research received human ethics approval by the University of Manitoba ethics committee prior to its outset.

Chapter Four

4.0 CONSTRUCTING A CULTURAL LANDSCAPE FRAMEWORK

Learning is the “reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent learning.”

(John Dewey 1916)



Plate 4.1: Collaborative Workshop #1, Taiga Institute, Kenora ON. Photo by: Norel Tucher.

4.1 CHAPTER OVERVIEW

The opening quote by educational philosopher John Dewey was borrowed from Kai Lee's *Compass and Gyroscope* (1993:136). This quote, in the context of Lee's work, epitomizes the essence of my experience, what I believe to have been a shared experience with Pikangikum research partners, of co-constructing a cultural landscape framework for the Whitefeather Forest - the substance of Chapter Four.

As you read through this Chapter the significance of the "compass and gyroscope" metaphor will materialize. The Elders' stories and teachings from the transcript documents were my compass; they guided my thinking, which enabled me to ask the right questions. The *collaborative process* of developing a framework to represent the values for *Keeping the Land* was the gyroscope. As there was no pre-existing Ahneesheenahbay "framework" for me as a researcher to discover, it had to be mutually developed through an iterative process of negotiating and communicating. Each meeting and discussion generated a greater degree of shared understanding, which in turn allowed us to move forward in our communications and negotiating, towards reaching our objectives. The journey was not unlike traveling down a meandering river, some days you make great time, other days you need to step back and reflect on where you've come and where you have yet to go. As Cajete (2000: 81) has aptly described, "building on prior learning and traditions is never a direct or linear path...In the Western mind-set, getting from point A to B is a linear process, and in the Indigenous mind-set, arrival at B occurs through fields of relationships and establishment of a sense of meaning, a sense of territory, a sense of breadth of the context". In this context, taking the long way is the only way to reach our destination of shared understanding.

Chapter Four provides a detailed account of this journey, from the identification of values through the development of signs and signals of *Keeping the Land*. It is important, however, to remember that the end result of this research process does not paint a complete picture of Ahneesheenahbay worldview. Rather, it is a tool or a window through which Aboriginal and non-Aboriginal people can communicate, learn and collaborate on building shared understandings of socio-ecological change and diverse approaches to NREM in the Whitefeather Forest.

4.2 GUIDED TO ASK THE RIGHT QUESTIONS

My original concept for this project was to contribute to the WFI through the facilitation of a framework for community-based conservation which would be both grounded in local values *and* fulfill provincial requirements, thus bridging two disparate approaches in one harmonious model. In my mind, the model for this arrangement would be based on an Aboriginal adaptation of protected areas. However, as I became immersed in the narratives, it became clear that my objectives would have to be drastically modified. The values imbedded in the stories, teachings and knowledge of the Elders, the same ones I was struggling to fit into a conservation model, were guiding me down a different path. The values I was coming to understand could not be compartmentalized using the Western notion of conservation; there is no equivalent Ahneesheenahbaymohween term for this concept. This caused a significant shift in my way of thinking about this project.

There already exists a clear understanding of what values, institutions and governing structures influence conventional approaches to NREM. We also know what top-down criteria and indicator frameworks include when they delineate sustainable forest management goals and objectives (e.g. CCFM). As these structures are already defined, the result, when working in cooperative planning or co-management scenarios, is an unequal balance of power and affinity for the familiar. If I was going to honestly represent and communicate the values and practices at work in the Whitefeather Forest, I had to first present a framework that illustrates Pikangikum's perspective unobscured by the authority of the dominant paradigm, while remaining comprehensible to non-Indigenous partners. I came to the realization that trying to harmonize Ahneesheenahbay and Western values under a conservation framework was not the appropriate place to start.

If and when a researcher comes to this metaphorical crossroad, a choice must be made between following the path of least resistance (continuing with the established objectives, flawed though they are) or taking a risk and abandoning personal bias, hoping for innovative results unconstrained by rigid thinking. From the small window of insight I had gained from the Elders' statements in the transcript documents, that the people of Pikangikum know how to, and do, care for the land (the evidence being the Whitefeather Forest), it was easy to opt for the latter.

When the draft land use strategy (LUS) was released a few months after I began this project, I was reassured as the statements reflected what I felt I had learned about the manner in which activities take place in the Whitefeather Forest, as the following statement explicates:

Beekahncheekahmeeng paymahteeseewahch [Pikangikum people] do not consider the livelihood use of our Ancestral lands (*Ahneesheenahbay otahkeem*) to be inimical to its ecological preservation; the entire landscape will be both used and protected. We have always managed our *Ahneesheenahbay otahkeem* as a whole. We have never divided our land into zones that are either set aside for development or for protection (PFN and OMNR 2006:8).

The *Cheekahnahwaydahmungk Keetahkeemeenaan* ("Keeping the Land") teaching replaced the former objective of building a harmonized conservation framework. However, at the time I only had the smallest inkling as to what the *Keeping the Land* concept entailed. I hoped that I would be able to begin to uncover and understand the values and practices that have cultivated the Whitefeather Forest cultural landscape.

4.3 CONSIDERING VALUES FOR KEEPING THE LAND

Incorporating multiple forest values, that is, values beyond the customary timber value (Bengston 1994; Davidson-Hunt and Berkes 2001), is a primary objective of the Whitefeather Forest LUS. Understanding values and perceptions is essential for the successful implementation of management frameworks, especially in co-management arrangements (Bengston 1994; Brown and Reed 2000).

Historically, little effort has been paid to the understanding Aboriginal values. Hallowell (1955: 358) recognized the lack of attention paid to the examination of value systems, "... [We] have fought shy of dealing with...the plain and simple fact that implicit as well as explicit values of various kinds are one of the central and inescapable phenomena of a human existence." The legacy of this apprehension and confusion in considering multiple value sets continues to the present day. In the realm of NREM the concept of "values" is currently struggling at the crossroads of culture, discipline, concerned communities, management institutions and statutory requirements (Bentrupperbaumer *et al.* 2006). This lack of consideration and understanding of value systems constitutes a

present threat to the implementation of sustainable management practices (Bentrupperbaumer *et al.* 2006).

As one of the primary objectives of this research was to, "*Identify, verify and document Pikangikum values for Keeping the Land*", a central point of clarification must be to understand what is meant by the term "values" and what role values play in *Keeping the Land*.

Bentrupperbaumer *et al.* (2006), Groenfeldt (2003) and Shields *et al.* (2002), together provide a comprehensive review and discussion on values as summarized in Box 4.1:

Box 4.1: Values Defined

Values are trans-situational goals that serve as guiding principles in the lives of individuals and societies. They serve as standards of the desirable when judging behaviour, events, and people (including the self), when selecting and rationalizing actions (Schwartz 1999:665), and direct how we organize and integrate our life experience (cited in Bentrupperbaumer *et al.* 2006:725). They are not only tools for thinking; values actually shape the substance of thoughts and feelings, not deterministically, but through mediating between collective institutions and individual behaviour (Barth 1993, cited in Groenfeldt 2003:920).

Brown (1984) further defines values as either held or assigned. Held values comprise the morals, beliefs, conduct, qualities and states that individuals and groups consider desirable, whereas assigned values are derived from held values and refer to the worth or importance (monetary or otherwise) attributed to an object, state or behaviour (Brown 1984). A value set can be divided into two categories: terminal and instrumental. Terminal values are the generalized end states one seeks in life, whereas instrumental values are the means through which one seeks to attain those ends (Keeney 1992; Kahneman and Knetch 1992; Gregory *et al.* 1993, cited in Shields *et al.* 2002:151).

Values exist within social institutions, communities, and familial units (Beckley *et al.* 1999, cited in Shields 2002:151), and are expressed by individuals living within a social group having a shared culture. The preservation of values depends on the preservation of cultural identity within which values can be maintained (Groenfeldt 2003:918). The social context also affects how individuals order their values, i.e. give precedence or emphasis to certain values over others (Boulding and Lundstedt 1988, cited in Shields *et al.* 2002:150).

Traditionally, Aboriginal perspectives have had to adapt and integrate into dominant Western worldview management systems, disconnecting the values from practice and

thereby destroying the customary management institutions (Nadasdy 2003). The result of this bifurcation has destroyed that which we are now trying to rediscover and share. The Elders carry the values and the knowledge of how the values are actualized through practice in the process of *Keeping the Land*. As such, an objective of our collaborative workshops was to not only document these values and institutions, but do so in a way that can be shared cross-culturally for cooperative management of the Whitefeather Forest cultural landscape.

4.4 MATRIX VERSION #1

This first values matrix for *Keeping the Land* was constructed solely through a review of literature and Indigenous narratives. The primary source of narratives was the transcript records compiled throughout the Whitefeather Forest land-use planning process. These transcripts were collected in a variety of different contexts, including community land-use planning workshops (C-LUP) and PFN Elders Steering Group workshops (Appendix II). During these meetings, Elders and other community residents offered their knowledge and experiences of *Keeping the Land*.

As I began to delve further into these documents, the breadth of concepts and values, embedded in story and legend, became almost overwhelming. Coming from a background where deconstruction and reductionism are commonly applied to facilitate an understanding of complex ideas, it was difficult for me to wrap my head around the holistic nature of this knowledge. I began to see a vertical and horizontal nesting of concepts, I found ideas within ideas and interrelatedness between the teachings, each concept independent and yet simultaneously dependent upon others. This was the primary difficulty for me, to begin to assign values and sub-values to particular, discrete categories. The idea for developing a matrix arose out of this difficulty so as to facilitate the organization of values into themes. It was important to begin building a conceptual model for several reasons, including:

- To organize the values emerging from the transcripts for my own learning and understanding,
- To serve as a tool upon which to enter into a dialogue on these values in a workshop setting, and

- To represent Pikangikum values and institutions while providing an interpretation to facilitate cross-cultural communication.

As I “journeyed” through the narratives over and over, key themes organically emerged and I began to organize these values for *Keeping the Land* into the categories. This figure represents an interpretation of what I was learning about the values and institutions intrinsic to the Whitefeather Forest cultural landscape. Although I placed *Keeping the Land* at the centre of the first matrix, in hindsight I now realize that I didn’t have a good understanding of this teaching at that time.

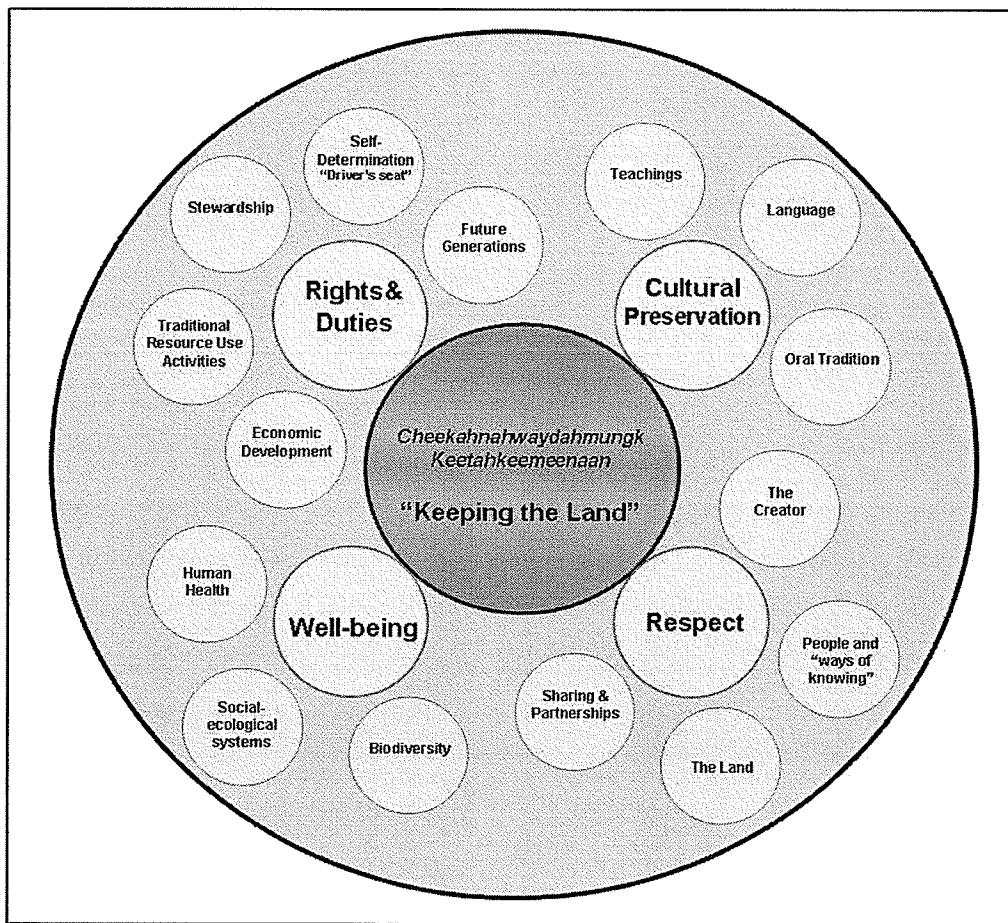


Figure 4.1: Values Matrix #1 Developed through review of C-LUP transcripts

4.5 CHEEKAHNAHWAYDAH MUNGK KEETAHKEEMEENAAN ᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭ *Understanding Keeping the Land*

Research Meeting #1 - November 17 & 18, 2005

Taiga Institute, Kenora, Ontario

Participants: Paddy Peters (Research Partner, WFMC), Iain Davidson-Hunt, Janene Shearer

A primary objective of our first meeting was to negotiate the terms by which the objectives of this project could be undertaken in a collaborative manner. I presented my initial thoughts to Paddy Peters by way of the matrix to initiate the process of identifying the values for *Keeping the Land*. He indicated that amendments to this version must incorporate and reflect Ahneesheenahbay “ways of knowing” and worldview, so that a more appropriate framework could be presented to the Elders. In order to begin this process, Paddy recognized that he must first provide me with a greater understanding of what *Keeping the Land* means to the people of Pikangikum (Appendix I).

At the time I began reviewing the transcripts, I thought that *Keeping the Land* was the Ahneesheenahbay equivalent of protection; you must “keep” the land the way it is by defending it from human influence. However, this initial assumption was misguided, as Paddy explained, “Keeping the Land does not mean putting a protected area there, you can not keep the land through government regulation” (Nov. 17, 2005). With Paddy’s guidance, I learned that *Keeping the Land* is not simply a land use strategy that emerged in response to ever-increasing “development” and “protection” pressures from the south. Rather, it is an ancient teaching given to the Ahneesheenahbay people from the Creator. This teaching has been passed down through the generations; it fosters an intimate and holistic relationship between people, the land and the Creator. *Keeping the Land* is both a teaching and a land use strategy specifically designed for maintaining the values that cultivate the Whitefeather Forest cultural landscape. This lesson brought a new perspective to *Keeping the Land*, yet it would be just one of many that I would require to adequately understand and communicate this concept.

4.5.1 MODIFYING THE MATRIX

The first comments Paddy made with regard to this diagram related to its physical appearance. He indicated that the sub-values should not be detached from their respective themes or from the central value of *Keeping the Land*; they must be connected to symbolize the interrelatedness between the concepts. In other words, the circles which represent values can not be disconnected from one another or from the central philosophy of *Keeping the Land*, but rather must be physically and symbolically linked.

Paddy also quickly noted the lack of symmetry and this was a major concern. In my effort to thoroughly document all values that had emerged from the transcripts I had unwittingly created an imbalance, with several themes having an uneven number of associated sub-values. Although I had correctly associated many of the interrelated values within a main theme, Paddy stressed that there must be balance in everything, and if this framework was to accurately represent Pikangikum values, it too must be in balance. He said the Elders would notice this right away. Together we set about reworking the matrix (Plate 4.2).

We were able to begin negotiating some of the concepts, as I explained why I thought that the themes and values were important for *Keeping the Land*, and Paddy affirmed some of my thoughts, while correcting others. We also began to identify the *Ahneesheenhbaymohween* terms for the themes that we agreed could be brought forward into discussions with Elders. However, Paddy explained that he did not have all the knowledge required to comment on every value and teaching we were discussing, and that the Elders would have to explain those concepts.

One of the amendments we worked on involved the theme I had originally identified as “rights and duties”. This theme included values associated with economic development and environmental stewardship. Paddy explained that these English words and Western concepts separated the holistic way in which the land is kept. Rather than calling this theme “rights and duties”, *Ohnahshohwayweeneeng* was deemed more appropriate. At the time, I understood this to be Pikangikum’s decision-making authority. However, this would not be the final evolution of this theme, as explained further in the following sections.

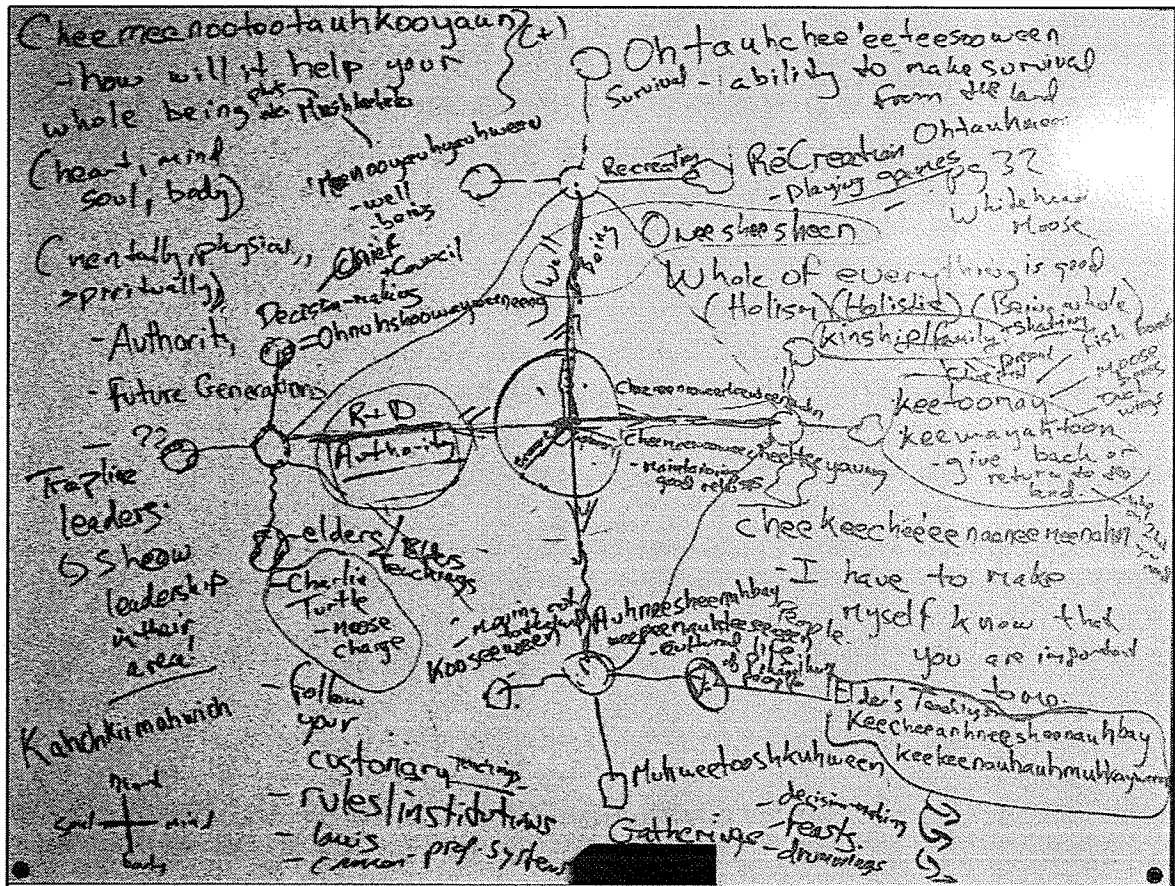


Plate 4.2: Modifications to the Matrix during meeting with Paddy Peters, Nov 18, 2005.

4.6 MATRIX VERSION #2

The second diagram was produced with the results of meeting with Paddy Peters; the modifications following those illustrated in Plate 4.2. I tried to connect the 4 themes to the central *Keeping the Land* teaching with energy lines to represent the dynamic way in which values can evolve and adapt with changing community activities and relationships. The colour scheme also shifted with the addition of the *Keeping the Land* figure, to better represent Pikangikum; green, blue and yellow being the colours most significant to this community and, as such are represented in the community's flag.

Although there was now balance and cohesion, admittedly this version wasn't aesthetically pleasing. After sharing the second version of the diagram with Paddy, we both agreed that some work on the appearance of the framework had to be done. I spent the first few weeks of December 2005 developing a third version of the diagram.

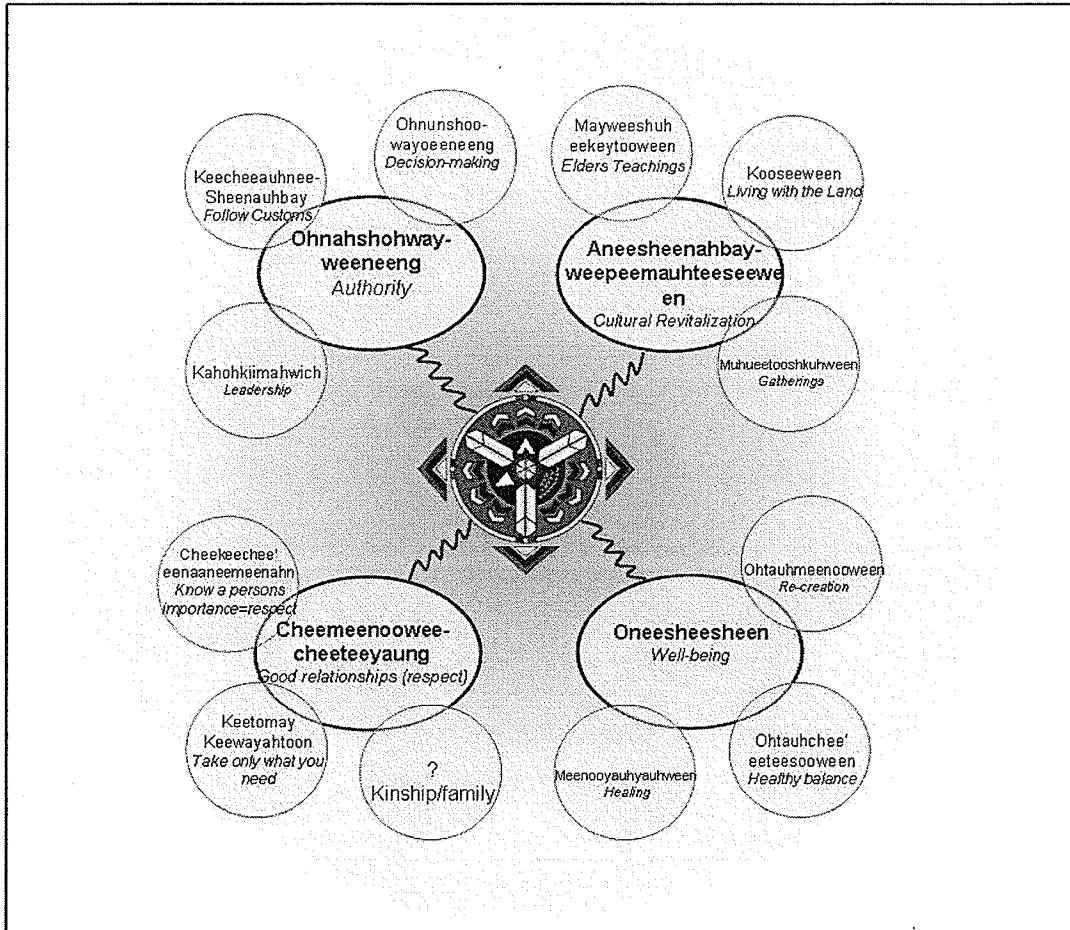


Figure 4.2: Matrix Version #2, constructed following first collaborative meeting

4.7 MATRIX VERSION #3

This version took on a form that better represented the interrelated nature of the values; the cross-inscribed within a circle brought together the symbolism, such as balance, and the values within a single unified figure. In coordination with Paddy's central figure, the major value themes were presented in blue text to represent the ancestor's wisdom brought forward by the Elders' teachings, the background green to represent the future generations who must carry on this knowledge through the process of *Keeping the Land*. This third version was utilized at the first collaborative workshop with the Elders held in Kenora, Ontario.



Figure 4.3: Matrix Version #3, amended from Version #2 following collaboration with Paddy Peters

4.8 CHEEMEENOOTOTAUHKOOYAUN

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“We know it will do us Good”

Collaborative Workshop #1 - December 15th, 2005

Taiga Institute, Kenora, Ontario

Participants: Paddy Peters, Elder Mathew Strang, Elder Norman Quill, Iain Davidson-Hunt, Janene Shearer

It was during this meeting when the framework evolved from being static to dynamic; representing the values actualized through practice. “Keeping the Land is a process; this too must follow a process” (Elder Norman Quill, Dec. 15, 2005). Elder Norman rearranged the layout of the themes so that the order of the themes changed to

represent an orderly progression (clockwise), stating that we first need to have good relationships before we can begin planning, it won't work the other way.

The Elders explained that the process of *Keeping the Land* is achieved through *Cheemeenoototauhkooyaun*, which can be understood as, "we know it will do us good, and be beneficial in everyway...it is the right way for Keeping the Land" (Elder George B. Strang, Feb. 16, 2006) or "going on the good path" (Elder Norman Quill, Dec. 15, 2005). In this context, the term "path" is both metaphorical and literal, it is a personal journey as well as shared journey. A path does not form by traveling it just once; it must be traveled over and over again throughout ones lifetime. Paddy Peters (Jan 25 2006) helped me to understand the "path" of working towards *Keeping the Land*, which includes:

Accepting and practicing the teachings, mentally, spiritually and physically, when you accept the Keeping the Land teaching, it will benefit the community as a whole.

Elder Norman Quill (Dec. 15, 2005) explained the importance of travelling down the path of *Keeping the Land* to the people of Pikangikum:

The whole life of Ahneesheenahbay is intertwined with everything, the way we lived – our life skills, for being able to live on the land. This is how our ancestors survived and how we will survive, it is all of our well-being. If you know something is good, you have to keep it.

He further stated,

The process of *Keeping the Land* has kept us, and it will continue to keep them [future generations].

This illustrates that *Keeping the Land* is not an endpoint goal that can be maintained in stasis. Everyone, from youth to Elder, must practice *Keeping the Land* as a process throughout their lifetime; this is how the values are actualized.

This idea of *Cheemeenoototauhkooyaun* has important implications when we consider it in the context of the WFI. As Pikangikum moves forward with the land use strategy, engaging in the process of forest certification and environmental assessment, it will be important to illustrate and communicate the community's vision for landscape management.

This workshop also brought about amendments to the framework, resulting in the production of a fourth version.

4.9 MATRIX VERSION #4

Symbolically, the large outer circle was added to create balance with the small inner yellow circle of the central symbol, representing that the Creator is central in the values for *Keeping the Land*.

Additionally, amendments were made to the framework's categories of values themselves. *Keetomaykeewayahtoon*, the notion of "taking only what you need" from the land, was subsumed into the theme *Cheekeechee'eenaytauhmung*. This recognizes that all of Creation has value, is interconnected and related; therefore it must be respected through the maintenance of good relationships.

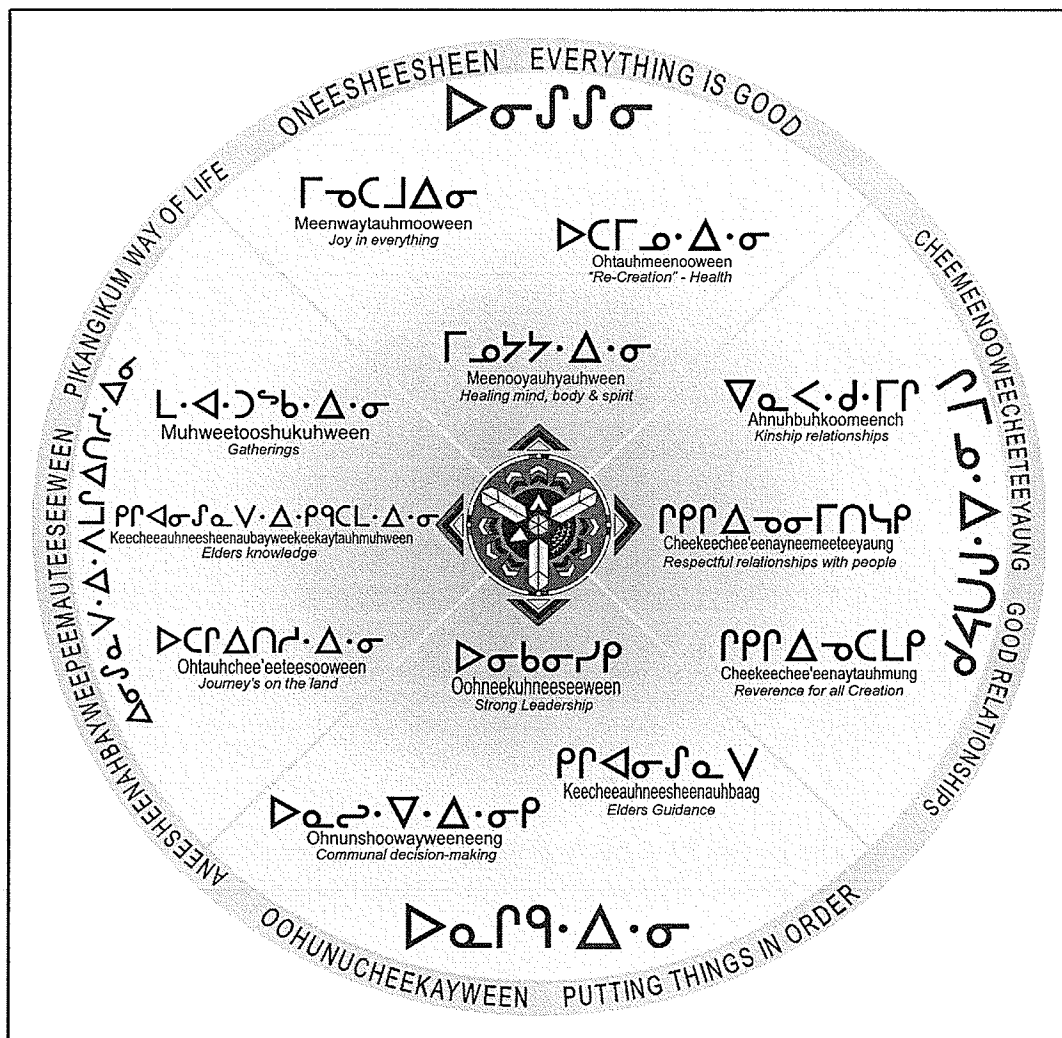


Figure 4.4: Matrix version #4, co-constructed from collaborative workshop #1

activities being undertaken are leading them down the right path of *Keeping the Land*, and how could this be communicated to other parties.

The central question of this workshop, "*In the values which have been identified as being important for Keeping the Land, how would you know that these values are being kept?*", sought to facilitate a discussion to reveal how people monitor their activities and adjusting them accordingly in the Whitefeather Forest.

The Elders spent a great deal of time pondering this question and discussing amongst themselves for a large proportion of this workshop. When I think back on this, the need for the prolonged exchange was logical. For the Elders to expound on a processual skill developed and practiced throughout their entire lives, across both language and cultures, was an arduous task. The process of monitoring and assessing the land, and one's activities in relation, is so imbedded in practice to the point that it becomes almost indefinable in the absence of context. To perceive change, and then to communicate it, is further confounded by the fact that some Indigenous peoples have a capacity to sense what is happening in their environment without seeing any kind of physical signs (Smith 1978, cited in Parlee 2005:251). This is what Anderson (2000:116-117) referred to as "sentient ecology"; knowledge that is "based in feeling, consisting in the skills, sensitivities and orientations that have been developed through long experience of conducting one's life in a particular environment" (cited in Ingold 2000:25). Monitoring the values and process of *Keeping the Land* can be "sensed" by those who have enduring and direct experiential knowledge of the land.

After the exchange of ideas, Paddy enlightened me as to what the Elders had come to agree best explained this concept. *Keekeenuhwuhcheecheekun*, or "reading the signs", was the term that could best explain the innate skill of monitoring the land and responding to ensure that practices are undertaken with *Cheemeenootootauhkooyaun* so that the land will continue to be kept. "Keekeenuhwuhcheecheekun is something for you to recognize, it is not an obvious display our people didn't use that" (Elder George B. Strang, Feb. 16, 2006). *Keekeenuhwuhcheecheekun* does not refer to objective or artificial signs, such as using a watch to tell the time or a calendar to track the seasonal weather patterns or a road sign to navigate the Elders explained. Rather, "reading the

signs” is a process of using implicit socially negotiated categories, which represent particular phenomenon, and to adapting based on what the signs indicate.

The ubiquitous cues that an individual, as a member of a particular social-ecological system, is subject to on a regular basis will, given the person has the knowledge to interpret the patterns of these indicators, be filtered accordingly. The individual can draw upon past personal experience and knowledge of the Elders to successfully adapt their behaviour. For example, Elder Charlie Peters has an intimate knowledge of the seasons and when it is appropriate to carry out certain activities based on many signs like the stars (Feb. 16, 2006), and Elder Norman Quill differentiates many different types of ice, some ice that is safe to travel on, some ice is good for making tea, and some ice looks safe but is dangerously thin (Dec. 15, 2005). “Reading the signs” depends upon the recurrence and succession of events in their qualitative aspects. As Hallowell (1937: 669) came to understand from his experiences with the Ojibway of Berens River: “...events...are indications, preparatory symbols and guides for those extremely vital activities through which the people obtain a living from the land”. Pikangikum Elders spoke of the process of “reading the signs” in the Whitefeather Forest as a teaching, as Elders Charlie Peters and George B. Strang (Feb. 16, 2006) explained:

The Elders still practice this teaching, we listen and watch the land, the Creator shows us the way things are. We know the time without a watch, we watch the weather, and read the snow. This is how we know what to expect and we will be prepared.

The Elders also shared some recent observations that were outside their realm of experiential knowledge. For example, new bird species have begun appearing, these species have no Ahneesheenahbaymohween name because they have never been seen in the Whitefeather Forest before. Elder George B Strang (Feb. 16, 2006) stated,

I know things are changing, there is a blackbird now that comes in the winter, a ‘winter bird’, I don’t know what to call it, I’ve never seen this bird before, there is no name for them.

This new “blackbird” species the Elders are referring to are starlings (*Sturnus vulgaris*) which have been steadily extending their range northwards, which may indicate anything from climate change to decreased competition from native species or increasing landscape fragmentation (Askins 2000). The important message here is that the presence of new species is an indicator that things are changing – the sign is more than

just the presence of the bird, it carries with it more information about the changing ecological conditions.

The knowledge of how to read the signs has always been important, and has “been used for centuries to guide environmental and livelihood planning and action, long before scientific knowledge attempted to understand the processes of environmental change and development” (Mwesigye 1996: 74). The Elders know that *Keekeenuhwuhcheecheekun* will continue to be important, that future generations must acquire the knowledge of how to read the signs. This knowledge is generated through first-hand experience as well as passed down by the Elders; knowledge of how to “read the signs” will continually guide the community down the good path of *Keeping the Land*.

4.11 FINAL MATRIX: A CULTURAL LANDSCAPE FRAMEWORK

Collaborative Workshop #3 - March 27th, 2006

Taiga Institute, Kenora, Ontario

Participants: Paddy Peters, Mathew Strang, Charlie Peters, Danny Peters, Janene Shearer

The final values matrix was produced with verification of the values, the *Ahneesheenahbaymooween* and syllabic spelling and the symbolism during the second and third collaborative workshops.

This matrix expresses the values intrinsic to the process of *Keeping the Land*. Many management frameworks seek to address a primary forest value, such as sustainable harvest of timber. This framework exemplifies the importance of multiple forest values to Pikangikum people, and as such has been deemed a cultural landscape framework.

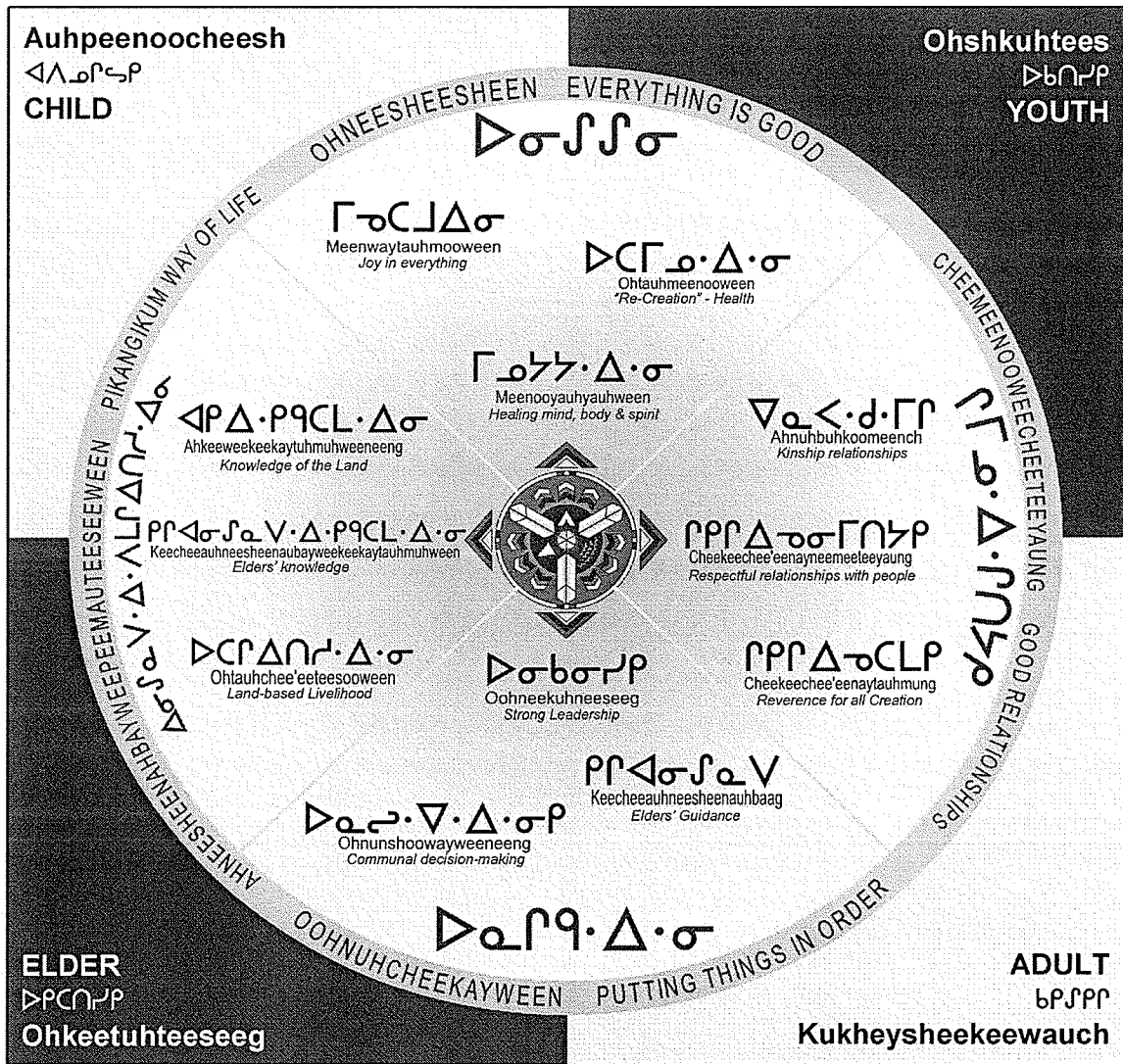


Figure 4.5: Final Matrix, a cultural landscape framework for *Keeping the Land* grounded in Pikangikum values and institutions

The final revisions to the matrix involved the addition of *Ahkeeweekeekaytuhmuhweeneeng* (“knowledge of the land”) replacing *Muhweetooshukuhween* (“communal gatherings”), as discussion with the Elders determined that gatherings could be incorporated into the *Ohnunshoowayweeneeng* (“communal decision-making”) value. Gatherings, for the purpose of celebration, feasts or ceremony are often a time where people would also discuss strategic directions for the community as a whole. As a component of Pikangikum’s “way of life”, *Ohtauhchee’eeteesooween* was further explicated to present a more accurate translation as “land-based livelihoods” rather than “journeying with the land” which was how *Kooseween* was defined (which remains an important component of

Ohtauhchee'eeteesooween, but does not fully describe this value or practice). The human lifecycle aspect was added to the diagram, as the Elders explained that every person throughout their life has an integral role in *Keeping the Land*. Each of these values will be discussed in greater depth in the respective sections of Chapter Five.

4.12 CHAPTER SUMMARY

Chapter Four has presented an example of a collaborative learning process to build cross-cultural understandings of *Keeping the Land* through the co-creation of a values matrix, which upon fruition represents a Pikangikum approach to NREM (i.e. a cultural landscape framework).

In coming to a cross-cultural understanding, the discourse will meander, it will require iterative negotiations of meaning throughout the process, and it must be entered into without presumption as to what the outcomes will be. However, as Davidson-Hunt (2006) has noted, new NREM frameworks require not only the knowledge and participation of local people the process of co-creation, but also a shared understanding of Indigenous institutions of knowledge and the values upon which the frameworks are constructed. The key values of this framework shall be discussed in detail in Chapter Five.

Chapter Five

5.0 UNPACKING THE FRAMEWORK FOR CROSS- CULTURAL COMMUNICATION

"When we hear 'Keeping the Land', we know what it means...the Whiteman does not know, but he will eventually."

(Elder Gideon Peters, Nov. 25, 2004)



Plate 5.1: Elders Mathew Strang and Oliver Hill, with Reggie Peters translating, discuss way to incorporate Indigenous values and knowledge in forest management. Photo by: I.Creed,

<http://www.sfmnetwork.ca/docs/e/E26%20Aboriginal%20land%20use%20studies.pdf>

5.1 CHAPTER OVERVIEW

This Chapter is centred on the question: *How can we understand Pikangikum people's values regarding Keeping the Land of the Whitefeather Forest, and communicate this to Pikangikum planning partners?* While the previous Chapter sought to describe the process of creating a framework for communicating cross-culturally the values and practices for *Keeping the Land*, the following Chapter will deconstruct this framework to communicate, and attempt to build a shared understanding of, the values themselves. The following is a description of some of the criteria (values, beliefs, practices, institutions of knowledge) that are fundamental to the process of *Keeping the Land*.

First of all, the framework itself is considered with respect to how the purposeful symbolism fosters the process by which the knowledge and skills for reading the signs are cultivated. Subsequently, each of the three values for the four quadrants of the framework is then described. Although they are presented sequentially and individually, it is essential to remember that each value is intrinsically interrelated to every other value within the framework and they are in no way exhaustive. Furthermore, as a word of caution to the reader, the results of this research represent but one interpretation of Ahneesheenahbay values and institutions of knowledge as acquired through my limited exposure to such topics in discussions with the members of Pikangikum Elders Steering Group. The nature of this topic enters the spiritual realm of Ahneesheenahbay beliefs and cosmology. Rupert Ross (1992: 54-55) has cautioned those of us who have limited knowledge and experience in this realm to:

Be careful when considering the role of the spiritual plane. We are not dealing with some quaint custom, nor are we dealing with religion as many of us define that term in our post-industrial, Western world. For many Aboriginal peoples, the spiritual plane is not simply a sphere of activity or belief which is separable from the pragmatics of everyday life; instead, it seems to be a context from within which most aspects [of] life are seen, defined and given significance.

5.2 CULTURAL SYMBOLISM FOR AN AHNEESHEENAHBAY FRAMEWORK

As mentioned in Chapter Four, rarely do frameworks arise from Indigenous values, rather Indigenous values are subsumed and pigeon-holed into existing approaches that

reflect Western knowledge and value systems. Through the co-production of knowledge based on collaborative learning, this framework was able to symbolically embed many Ahneesheenahbay teachings and values within the diagram itself. For many Aboriginal societies, "nature was the primary model; plants, animals, natural phenomena, earth, sun, moon and cosmos were used as symbols" (Cajete 2000:104) that are reflected in values and emulated in practice. Four key symbolic features are reflected in this framework: the circle, the centrality of the Creator, balance and harmony, and energy, adaptability and creativity.

5.2.1 CIRCLE AND QUARTERS

The image of a circle...symbolize[s] wholeness, completeness, and ultimately wellness. The never ending circle also demonstrates the synergistic influence and responsibility to the generations of Ancestors, the generations of today, and the generations yet to come. The goal is to attain a mutual balance and harmony among animals, people, elements of nature, and the Spirit World. To attain this goal, ways of acquiring knowledge and codes of behaviour, are of course essential and are embedded in cultural practices (Archibald 1997:14).

The circularity of this framework reflects many key values of Ahneesheenahbay culture. The symbolism of this framework brings together the teachings of the circle, such as egalitarianism, reciprocity, democracy, and a participatory view of the relationships between humans, "other-than-human persons" (Hallowell 1992:64), the land and the Creator. These fundamental values, reflected in the image of the circle, have important significance when considered in the context of the WFI. All people, young and old, women and men from Pikangikum, neighbouring communities, governments and research institutions have all been invited to learn, share and work together throughout this process. The circle, in this context, represents an inclusive arena where knowledge can flow equally between all participants (Sillitoe 2002: 117).

As discussed in the Chapter Four, when dialogue on constructing the framework first began, the Elders insisted the image take on the form of a circle with four quadrants. The number four and multiples thereof, often reflected in nature, are of significant importance to the people of Pikangikum and are used to mark cycles, particularly the four cardinal directions the eight seasons and the twelve moons of the year. The

symbolic significance of this, when taken as a whole, personifies Ahneesheenahbay ideals of balance and harmony.

5.2.2 CENTRALITY OF THE CREATOR

We have to treat everything as important as it was created by the Creator (Elder Whitehead Moose, Dec. 13, 2004).

In Pikangikum, the colour yellow symbolizes the Creator. The framework incorporates the Creator's presence with the large outer circle, the small inner yellow circle and the lines that run from the center to the edge of the diagram through the values. The yellow lines are continuous with the inner *Keeping the Land* diagram, and all the themes and values are held within one large circle to better represent their holistic nature and the centrality of the Creator in everything; "we see that everything leads into, or returns to, the center, and this center which is here, but which we know is really everywhere" (Black Elk 1953:89-90). This represents the interconnectedness within all things, and the ideal of the each individual part moving together as a whole in harmony, as the Creator intended.

The following sections of this Chapter present several examples of how everything in Ahneesheenahbay life, including the values being shared in this framework, are gifts from the Creator and how the people continue to honour and respect these gifts through upholding and passing on these values in belief and practice.

5.2.3 BALANCE & HARMONY

The ideals of balance and harmony, as mentioned above and in Chapter 4, were ubiquitous throughout our discussions. The Elders stressed that the representation of balance and harmony in this framework was imperative. As a symbol depicting the relationships between people, other-than-human persons, the land and the Creator, the framework itself must honour the value of these relationships by adhering to the cosmology of balance and harmony.

5.2.4 ENERGY, ADAPTABILITY & CREATIVITY

We are an expression of nature within us, a part of a greater generative order of life that is ever-evolving... Human life at all levels is wholly a

creative activity and may be said to be an expression of the nature within us with regard to 'seeking life', the most basic of human motivations since it is connected to our natural instinct for survival and self-preservation (Cajete 2003:47)

I learned from the Elders that the themes must unfold in an orderly progression. Just as important as balance is the path by which the framework unfolds "everything has to follow a process, just as the sun" (Elder Norman Quill, Dec. 15, 2005). This facet of energy required contemplation on the concept of time. This may seem rather minute in the process of *Keeping the Land*, but when we consider the differences between Ahneesheenahbay temporal orientation and that of Western societies, the need to clarify differing perceptions emerges. In Ahneesheenahbay cosmology, the movement of both the Sun and Moon do not mark discrete divisions of time, but rather they are cyclical, "recurring event(s)" (Hallowell 1937:667). This aspect of Ahneesheenahbay philosophy is reflected in the dynamic nature of this framework, with the circularity enabling a cyclical progression. Circularity becomes especially relevant when we discuss Elders' knowledge with reference to stories and legends, where temporal significance loses almost all chronological importance (Hallowell 1937:667).

The Elders also communicated how the human lifecycle is an integral component to this process of *Keeping the Land*. Every person, from child to Elder, both women and men, has a role to play. This lifecycle is not age dependant, but rather relates to the role that each person will play throughout their lifetime. For Ahneesheenahbay, it is understood that knowledge and creativity have their source in a person's inner being, through their personal journeying and in their thinking (Cajete 2000). It should be noted that the concept of age in Ahneesheenahbay philosophy does not necessarily correspond to years lived, but rather important milestones, achievements and responsibilities the individual has undertaken.

This framework is also dynamic in its ability to evolve and adapt to the changing needs, goals and visions of this community. The notion of "traditional knowledge" recognizes that traditions are not static, but rather continually changing and evolving over time as a society innovates, borrows and adapts to changing social and ecological circumstances (Berkes and Dudgeon 2003). In no way is this diagram static, already it has been adapted by community members for various uses; as a tool for explaining the

Keeping the Land teaching both within the community as well as to outside the community (e.g. World Heritage planning). It has also evolved and adapted as a framework for community health (e.g. healing journey) and education. The framework will continue to evolve with the progression of the WFI, and as the youth of today, with Elders guidance, develop a vision for Pikangikum in the future.

5.2.5 EXPLORING THE WHITEFEATHER FOREST

In the following four sections, I endeavour to share the lessons I have learned about the values, beliefs and practices which, when considered as a whole, articulate how *Keeping the Land* has been, and will continue to be, carried out. Although each theme will be presented individually, it is essential to remember that every value-node is integral to the social-ecological network that cultivates the Whitefeather Forest cultural landscape.

5.3 OHNEESHEESHEEN ▷σ∫∫σ - “EVERYTHING IS GOOD/BEAUTIFUL”

Although little attention has been given to the connections between social and ecological health in the realm of forest management (Parlee 2006), First Nations communities have been striving to communicate to non-Aboriginal people that the health of the land is central to individual, social and ecological well-being (Adelson 2000; Parlee 2006). At first I was unsure how *Ohneesheesheen* related to *Keeping the Land* because I was unfamiliar with the sacred connections between people and the land, and how these connections translate into well-being. Consequently, at the start, I was focused on looking for ecological indicators that have correlations to human health such as biodiversity, clean water, moose habitat and the like.

“Whitehead Moose taught me that the land gives us well-being” (Paddy Peters, Nov. 18, 2005). The “land” in this context, as I came to learn, includes all the plants, animals, fish, air, waters, soils, wetlands, forests, rocks, medicines and humans, past and yet to come. *Ohneesheesheen* encapsulates the idea that human health is intrinsically linked to the land; it is a guiding principle in the process of *Keeping the Land*. In Pikangikum, as with other Aboriginal communities, the “land” may be considered as a metaphor for social-ecological health, where the term, social-ecological, refers to the integrated concept of humans-in-nature (Berkes *et al.* 2003).

Ohneesheesheen is a complex theme, serving several roles from a moral teaching, a value system, and a life goal. “Ohneesheesheen is holistic, it means that everything is beautiful, healthy, the way it should be” (Paddy Peters, Nov. 18, 2005). “The way it should be”, as I understood it, means the way the Creator intended it to be. The Creator gave *Ohneesheesheen* as a gift that begins with individual health and happiness and includes all aspects of the self; spiritual, mental, and physical well-being. Each individual has the responsibility to foster this value within his or herself throughout their lifetime and in every aspect of their being. The importance of the human lifecycle becomes apparent here in this first value. A fundamental component of the Ahneesheenahbay system of belief is that all activity practiced with *Ohneesheesheen* promotes and reaffirms the interconnections within oneself, between other humans and with other-than-human persons. As such, this value is inherently interrelated to each and every other value presented in this framework.

Through dialogue in collaborative workshops, *Meenwaytauhmooween* (“joy in everything”), *Ohtauhmeenooween* (“re-creation”), and *Meenooyauhyaueween* (“healing the mind, body and spirit”) were determined to be the three core values, that when actualized in practice, foster *Ohneesheesheen*. Elder Mathew Strang commented that the three values of *Ohneesheesheen*, when considered together “...are in-tune with one another that creates a beautiful harmony” (Dec. 15, 2005).

5.3.1 MEENWAYTAUHMOOWEEN **Γ↯C]Δσ - "JOY IN EVERYTHING"**

The importance of positive emotions, expressions and happiness is an integral component of well-being for all people. The Elders discussed several expressions of “joy” in the context of the WFI, from the right to follow one’s cultural customs to journeying on the land, to cooperating with one another to plan for the future. In order to experience a “joy in everything”, an individual must practice the right activities in the right manner, both morally and spiritually. The “right” way, the way the Creator intended it to be, fosters well-being in individuals, the community and the land.

Meenwaytauhmooween cannot be considered in absence of context, it is a product of both practice and belief, expressed through language, customs and “ways of knowing”.

When considered together, *Meenwaytauhmooween* is a means of connecting to oneself, with others, with the land and with the Creator. It is a state of balance and harmony, as Elder George B. Strang explained in our collaborative workshop on February 16, 2006:

Four men were traveling together by boat. They came to a large lake, it was very windy that day and it was dangerous to cross. Three of the men were against going on the water, but one man insisted. They proceeded to cross the lake, but unfortunately their travels ended in tragedy. There was no *Meenwaytauhmooween* in their choice.

In addition to being the personified expression of balance and harmony, the value of *Meenwaytauhmooween* also alludes to the “comic vision” of Ahneesheenahbay worldview (Gross 2002). The use of humour is common amongst many Aboriginal peoples (Taylor 2005), and is often a common element of experience for those who have come to know members of a First Nations community through collaborative research, land use planning or otherwise. Hallowell documented his exposure to the “comic vision” in his time spent with the Ojibway of the Berens River region:

The very positive emphasis upon the expression of amusement...is highly characteristic. The psychological importance of laughter among them is also evidenced by the institutionalization of humor. Despite the fact that their myths are sacred stories, many of them are characterized by a Rabelaisian humor that never fails to provoke a laugh (Hallowell 1955:45, cited in Gross 2002:448-9).

I too experienced the use of humour during our collaborative workshops. The Elders often shared humorous anecdotes, sometimes to convey meaning of the topic at hand, other times just to have a laugh. I felt as though the Elders’ use of humour brought a sense of ease to the situation and helped to construct and strengthen our personal relationships. Given the gravity of the topics we were discussing, the comic relief was beneficial to all.

The institution of humour is also pragmatic. It serves to create a social harmony as community well-being is contingent upon individual interpersonal relationships: “In order to survive as a group, individuals, living cheek by jowl throughout their lives, had to be continuously cooperative and friendly” (Brant 2005:25). The Elders told me that *Meenwaytauhmooween*, in all its forms, is a gift from the Creator; a way of life that is founded in harmony so that all people, if they follow the teachings, can experience a joy in everything.

5.3.2 OHTAUHMEENOOWEEN ▷CΓ_σ·Δ·σ - “RE-CREATION”

I was first introduced to the notion of “re-creation” during the December 15, 2005 workshop in Kenora, Ontario. Elder Norman Quill explained that “re-creation” does not have the same meaning in English as it does in *Ahneesheenahbaymohween*. He said, you might think that this means being physically active, like playing hockey for example. Although physical health is a part of *Ohtauhmeenooween*, it does not clarify the whole concept.

The Aboriginal way of getting exercise was not just for the sake of getting exercise; it was our way of life, living off the land, surviving off the land. It took all of you, every area of your life (Elder Solomon Turtle, PFN and OMNR 2006:45).

Ohtauhmeenooween is a process of literally creating, and re-creating oneself over and over again on the land. Activities, from hunting and fishing, collecting medicines and gathering berries, to traveling and navigating, all require a personal knowledge of the land. The information required to conduct these activities is revealed by direct experiential knowledge, by journeying on the land time and time again.

Everything I do, my way of life on the land, makes me healthy. Still today at 72 years, the only way I feel good is to be on the land, re-creating myself. When I was young I would work a lot, this made me healthy, my mind, my body, my spirit felt good because I was in balance (Elder Norman Quill, Dec. 15, 2005).

The practice of “re-creation” is interlinked both with *Meenwaytauhmooween* and with *Meenooyauhyauhween*. Being in good physical health is one component of the process for healing the mind, body and spirit. Omushkego Elder Louis Bird has expounded on the importance of health and healing in his teachings “...when you develop your mind, your body has to be in good health. And when your body is in good health, your mind also functions much perfectly” (2005:92). When mind, body and spirit are made well through “re-creation”, an individual is open to receive the gift of “joy in everything”, to create harmonious relationships and to feel a deep sense of happiness in their heart.

5.3.3 MEENOYAUHYAUHWEEN Γ_σγγ·Δ·σ - “Healing mind, body & spirit”

Many First Nations communities across Canada are currently struggling with issues of both physical and mental health. In Pikangikum, it is the Elders who have called

attention to this issue, knowing it is they who have the wisdom to address these matters through *Meenooyauhyauhween*. This is one of the reasons for starting the WFI, and throughout the collaborative C-LUP process, the Elders expressed their concerns over the lack of access and knowledge about traditional foods and medicines.

I experienced the food that we ate way back when, as I was growing up, when we lived off the land; the only things we ate were the animals and birds that live on the land... Today, many people are not eating that kind of food that we ate way back then, they are eating store bought food (Elder Charlie Peters, Sept. 17, 2002).

A prerequisite for the process of *Keeping the Land* to continue is that the people of Pikangikum, in mind, body and spirit, as well as their relationships, be healthy. The Elders have stated that an important aspect of healing is to reintroduce the knowledge of how and where to acquire bush food and traditional medicines to Pikangikum youth (PFN and OMNR 2006; Driedger 2006).

5.3.3.1 *AHNEESHEENAHBAY MEECHIM*, FOOD FROM THE LAND

The Elders are concerned about the well-being of their community as it relates to the supply of food, telling me that too many people are eating “sit around food” (Elder Norman Quill, Dec. 15, 2005). Elders Oliver Hill and Charlie Peters further explain the relationship between food and health in their community:

We eat “dried blood food” (chicken, pizza – bad meat all mixed together with salt). This is why people are not getting healthy (Elder Oliver Hill, Nov. 25, 2004).

The food that we eat now makes me sick. Sugar diabetes is associated with eating this food. The diet that our people were on long ago didn't cause them to get sick, but rather it gave them strength, it made them strong because of what they ate (Elder Charlie Peters, Sept. 17, 2002).

I also learned that in Ahneesheenahbay culture, as opposed to Western systems of food production and clinical care, food and medicines are often mutually inclusive.

Muskeg leaves are good for people with sugar diabetes. It helps treat it if you boil the leaves and make a tea; it was also a drink not just for medicinal purposes (Elder Gideon Peters, Dec. 13, 2004).

Bear cub berries are good to eat and are medicinal (Elder Lucy Strang, Dec. 13, 2004).

Moose eat twigs on the shoreline, these carry herbal medicines that help the moose, and when we eat the moose it helps us too (Elder Alex Suggashie, Nov. 25, 2004).

The Elders know that food, whole and fresh from the land, has the power to heal not only the body but also the mind and spirit.

5.3.3.2 AHNEESHEENAHBAY MAHSHKEEKEE, MEDICINE

Although the term *Mahshkeek* is commonly glossed as “medicine” when translated to English, in Ahneesheenahbay reality this includes a complex array of knowledge, practices and beliefs, as Elders Solomon Turtle and Lucy Strang have expressed, “The whole world can be symbolized as medicine” and “everything that grows on our land is there for a purpose” (Dec. 13, 2004). In this discussion however, “medicine” will be interpreted more narrowly, referring to the relationship between plants and people in terms of healing and health. Nevertheless, it must be acknowledged that the relationships between people, food and medicines cannot be divorced from Ahneesheenahbay cosmology, which involves among other things, ritual, ceremony, dreams and visions (which will be discussed in a later section as a component of *Ahneesheenahbayweepeemahteeseeween*).

An important aspect of *Meenooyauhyauhween* is for the people of Pikangikum to continue to gather and prepare *Ahneesheenahbay Mahshkeek*. This requires knowledge of the land, the skills of how to find, prepare and respect for the animals and plants so that they will continue to provide for future generations. The knowledge of where to find medicines and how to collect and use them in the appropriate manner is housed within the memories of the Elders. One of the concerns expressed by the Elders is with the youth not spending enough time learning about the process of collecting and preparing food and medicines. Furthermore, the Elders are concerned because not only does the process of obtaining, preparing and consuming traditional food and medicines promote good mental and physical health, it serves to reinforce personal spiritual connections with the land. As Cajete (2000:131) has described, “Human life is maintained through a constant work for, sharing of, and relationship with food; when people eat food from their land, the substance of the plant or animal joins with the substance of the person in a way that is more than physical”. This illustrates the reciprocal relationship between people and the land; the people of Pikangikum have

created the Whitefeather Forest cultural landscape in the process of journeying on the land to obtain food and medicines, and in turn the food and medicines create the people. Elder Whitehead Moose (PFN and OMNR 2006:24) describes this process:

Everything that you see in me, it is the land that has moulded me. The fish have moulded me. The animals and everything that I have eaten from the land has moulded me, it has shaped me.

Through the process of healing, of developing a healthy mind and body, an individual becomes able to receive the teachings from the Elders - the portal to spiritual well-being and wholeness. By virtue of their long life experience, the Elders are paramount in maintaining the essential structures of the spiritual life and well-being of the community (Cajete 1994); their memories house the teachings, stories and institutions of *Ohneesheesheen*.

In Ahneesheenahbay worldview, maintaining good health is a moral obligation; undertaking actions in a manner that supports *Ohneesheesheen* will ensure good health and a long life. When the people are healthy, the land is healthy. The well-being of the Whitefeather Forest is a combination of a healthy people and their relationships with themselves, other people, with other-than-human persons, with the land and with the Creator; symbiotically they work together in the process of *Keeping the Land* of the Whitefeather Forest cultural landscape.

5.4 CHEEMEENOOWEECHEETEYAUNG ᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭ - “MAINTAINING GOOD RELATIONSHIPS”

Like many Aboriginal peoples, Ahneesheenahbay organize and self-identify in terms of kinship. However, the relationships with people outside of clan and community, with other-than-human persons and with the land (gifts from the Creator) can also be understood in terms of kinship. This perception of belonging to a universe of kin must be taken seriously; Ahneesheenahbay culture must be examined from the vantage point of this worldview (Gross 2003).

One of the main difficulties in describing *Cheemeenooweecheeteeyaung* is that there is no simple English equivalent for these values and relationships. The Assembly of First Nations (1992:14) explains the complexity of Aboriginal language and issues

surrounding translation: "Our native language embodies a value system about how we ought to live and relate to each other. It gives names to relations among kin...there are no English words for these relationships." *Cheemeenooweecheeteeyaung* is a process, a practice that an individual undertakes throughout his or her life to "maintain good relationships". The practice of *Cheemeenooweecheeteeyaung* fosters a personal relationship with the Creator; through one's personal actions of "maintaining good relationships" an individual shows respect to the Creator by honouring the gifts that have been provided. These relationships together weave the tapestry of Ahneesheenahbay values, practices and beliefs and reflect an order of "kincentric ecology" (Salmon 2000). The key to "maintaining good relationships" can found in the fundamentals of the framework - balance, harmony, creativity and adaptability.

Relationships have not only provided the institutional frameworks by which people organize their lives, they are considered sacred and must be respected. For the Ahneesheenahbay of the Whitefeather Forest, the core of these relationships is the belief that values such as reciprocity, sharing, cooperation, partnerships (i.e. the principles of alliance relationships) are gifts from the Creator and are the key to survival and well-being. At the same time, people also acknowledge that with relationships there exists the possibility that the unexpected can enter and disrupt the balance (Peat 1996:257, cited in Cajete 2003:53). In this way, *Cheemeenooweecheeteeyaung* is a continuous, cyclical process of creating and re-creating good relationships in the face of perturbation.

5.4.1 AHNUHBUHKOOMEENCH **∇_α<·d·Γ^ρ - "KINSHIP/FAMILY RELATIONSHIPS"**

Ahneesheenahbay pattern of kinship relationships greatly differs from that of the Western system of relational organization (Hallowell 1967:52). In reality, the term "kinship" does not fully represent the depth of this concept. One distinction lies in the breadth of "kin"; Ahneesheenahbay social organization dictates that although others may not be of direct blood relation, they are imbued with the same value and importance that those of us from a Eurocentric tradition would deem "family" (Hallowell 1991). This is a significant institution in Ahneesheenahbay culture, made clear to me as the Elders shared stories relating to the importance of this value. These stories wove a tapestry of related values together in a fabric of relationships, from accepting the responsibility to

past and future generations to the transmission of knowledge and skills from teacher to learner, the foundation of each teaching was *Ahnuhbuhkoomeench*.

One important aspect of *Ahnuhbuhkoomeench* the Elders shared with me is the process of healing the sorrow from the loss of a relative. This has a strong connection to *Meenwaytauymooween* ("joy in everything"):

When we lose someone we are close to, like a brother or father, you may see someone soon after their death that resembles that person, and you can connect with them to fill the loss and build another close relationship. This is the Creator at work, to make the hurt less painful, and replace the sorrow; this is how the Creator takes care of us (Elder Mathew Strang Dec. 15, 2005).

Elder Norman Quill (Dec. 15, 2005) further elaborated on Mathew's statement:

There was a father who lost his son at a young age, he loved his son and grieves for a long time with much sorrow for him. To get back what he has lost, the man searches for 'him' – another person who he can have a relationship with, someone who will become a part of his family, to heal. The father will have the same love for this person as he had for his son. This is the Creator at work.

A similar aspect of *Ahnuhbuhkoomeench* involves the center of balance between life and death - ancestor and infant.

There are people who passed away many years ago, and people who are with us today, and there are also people who have yet to be born. When Murray was born, for example, he would cry and cry all the time. I had a dream one night while I was out on my trapline; this dream was about a young man who died many years ago – this young man was related to my mother. This man said to me in my dream, "I've come to live with you, to be part of your family". I accepted him in the dream, and after that Murray didn't cry any more (Elder Norman Quill, Dec. 15, 2005).

This story shared by Elder Norman Quill begins with describing that the process of self-realization requires the Elders knowledge, revealed through dream, to recognize the ancestor's spirit in the newborn infant, and name that child accordingly. When we remember that Ahneesheenahbay cosmology is cyclical, the process of grieving and healing and the "naming ceremony" becomes clearer. *Ahnuhbuhkoomeench* facilitates a continuity between past, present and future generations.

Ahnuhbuhkoomeench is also important as livelihood skills, learning and sharing often occurs within family units. The Elders often spoke of learning from their Elders through story and while on the land.

Three summers ago I was outside my place and a voice spoke to me. It said 'Let's keep the land'; I took this to the community. A fish said 'you keep the land and I will help you keep the land'. If we keep the land the fish will survive, and this will help us survive. Our forefathers understood this, this is how they survived.

This sentiment speaks to the reciprocal contract entered into when Ahneesheenahbay were given the custodial authority to care for the land, and in return the land and everything within would ensure that the people would be cared for. Respecting the land is a central philosophy common to many Indigenous societies. The Elders told me that when on the land, where livelihoods are gifts from the Creator, it is important not to be greedy (i.e. take only what you need), and to show gratitude for being provided with all that is needed to survive.

When we were young we would shoot bow and arrows. One day while we were doing this, an arrow got stuck high up in a tree. I wanted this arrow back; I wanted to cut down this tree. My father stopped me, he wouldn't let me cut it down. He said the arrow would fall down overnight as we slept, and it did (Elder Mathew Strang, Dec. 15, 2005).

If there is no satisfactory need to take from the land, then people should leave well enough alone. Elder Mathew Strang, as a child, was impulsively acting on his own personal desire to continue to play with his bow and arrows. At the time, he didn't have the experience to develop a relationship with the land to know that he should show respect to that tree, for he and the tree are dependant on each other for survival.

However, this notion of "take only what you need" does not equate to "conservation" as some may misinterpret it to be. Elder Mathew Strang (PFN and OMNR 2006:9) expressed his concern over the possibility of this confusion:

We don't want the term to be misunderstood as wanting to keep something because it is valuable to you. It will just sit there and sit there like something valuable in your living room. We want to work with the animals and benefit from what is on the land.

The last sentence of this statement provides the insight; "working with the animals" confers that *Cheekchee'eenaytauhmung* is based upon the value of relationships. Relationships (Stevenson and Webb 2004), or what Langdon (2003) calls "relational sustainability", is what Aboriginal peoples have recognized for many generations as the key to sustainability. Although sustainable use of "resources" (i.e. gifts from the Creator)

over people and property (Holling and Meffe 1996). However, from Pikangikum's perspective, when they look at the land to the south of the Whitefeather Forest the impression they have is not one of "order". The Elders have often stated that the partitioning of land into the "checkerboard" pattern and the forestry practices they have witnessed is not the vision they have for the future of the Whitefeather Forest.

I want to mention what is happening to the South of us...the land is not the same as the Creator made it in the beginning. I have seen where they have cut the trees and destroyed the land, even the soil is in heaps. Where they have cut all the trees and replanted the land looks different. My knowledge of the land tells me what the Whiteman has done to the land south of us, the way they have tried to replant the forest, those plantation forests are not the same...they will never be the same as the original forest (Elder Norman Quill, Jan. 12, 2005).

Moreover, the Elders emphasized that *Oohunuhcheekayween* does not mean exercising the authority over people or property (in Ahneesheenahbay culture the notion of "property" is usufruct, which is not easily perceptible to those outside of the common-property system) nor does it refer to "managing" resources, which is also a common assumption of Western thinkers drawing from our view of property. As Natcher and Davis (2005) have explained, "the idea of 'managing' resources is not only presumptuous, but potentially hazardous by demonstrating a sense of arrogance towards the sentient world" (cited in Stevenson 2006:169).

Societies that have successfully cared for the land over long periods of time have the common element of a spiritual representation of what Western culture would define as "resource management" (Berkes and Folke 2002:141). Ahneesheenahbay customary stewardship and governance systems for "putting things in order" arise out of respect for the Original Instructions given by the Creator; it is part of Pikangikum people's responsibility for *Keeping the Land*.

It is a part of us. It is given to us as a gift from the Creator. That is why we want to keep the land; it has been entrusted to us by the Creator, to look after the land...even the animals, they helped our people way back when and they are still there to help us today (Elder Norman Quill, Jan. 12, 2005).

The Elders have already explained that it is *Cheemeenoowecheeteeyaung*, "relationships", not specific resources, habitats, ecosystems or administrative boundaries

that dictate behavioural conduct. Naturally, it is these relationships that are the nexus around which governance systems and practices are implemented (Stevenson 2006).

Elders Mathew Strang and Charlie Peters explained that this process of *Oohunuhcheekayween* operates simultaneously across scales, from an individual, to family, to community to an entire region working together to “create order” (Feb. 16, 2006). It is intrinsically polycentric and multilayered. In this way, “putting things in order” can be viewed as a representation of the principle of self-organization. Self-organization has been recognized as a fundamental property of social institutional patterns required for the development of adaptive governance systems that promote social-ecological resilience (Holling 2001:403). Integral to adaptively governed social-ecological systems are reciprocal feedbacks and self-enforcing capabilities (Folke *et al.* 2005). *Oohunuhcheekayween* provides the institutional framework whereby environmental signals (*Keekeenuhwuhcheecheekun*) are appropriately interpreted, and the mechanisms to adapt accordingly. In other words, “putting things in order” is the institutional process where values, practices and beliefs which lead to resilience and sustainability are culturally internalized (Folke, Berkes and Colding 1998), thus preserving Pikangikum’s duty of *Keeping the Land*.

The following sections demonstrate how the three institutional values for *Oohunuhcheekayween*: *Oohneekuhneeseeg*, (“leadership”); *Ohnunshoowayweeneeng*, (“Communal decision-making”); and *Keecheeahneeshenauhbaag*, (“Elders guidance in following cultural customs”), embody the key characteristics of adaptive governance in the social-ecological context of the Whitefeather Forest.

5.5.1 OOHNEEKUHNEESEEG **▷σβσρΡ - “RENEWED / STRONG LEADERSHIP”**

Leadership is often upheld as a key value by many Indigenous societies. In Pikangikum, leadership has been traditionally associated with kinship relationships as this was the effective unit of social and economic organization (Hallowell 1991:44).

He is the leader of his trapline (*Kahohkiimahwich*) and he would make the decisions for people in that area. This authority is shared on our land, we still have it today, and it will be passed on to future generations (Paddy Peters referring to Elder Alex Suggashie, Feb. 16, 2006).

Leaders of these semiautonomous kin groups worked together to share the land and, as Paddy explained above, although community socio-economic patterns have changed the value of leadership continues to be essential for “putting things in order”. The Elders brought forward the notion of renewed leadership, *Oohneekuhneeseeg*, early on in the collaborative meetings as an essential component for *Keeping the Land*. I learned that Ahneesheenahbay social organization places little value in managerial hierarchy, the authoritative responsibility of *Oohneekuhneeseeg* is earned through respect of an individual who has demonstrated their ability and merit as a leader, which is a function of their skill, knowledge, experience, relationships and an understanding of what is best for the wider group. Elder Charlie Peters (Feb. 16, 2006) explained with the following analogy,

There is *Oohneekuhneeseeg* with animals, the wolves have a leader...geese follow the ones who know the way – they depend, on leadership for the whole to succeed.

In Pikangikum, members of the WFMC and the Elders Steering Group, as well as the Chief and Council, have and continue to fulfill leadership roles that were required to initiate and bring into fruition the WFI. These visionary leaders have the skills that cultivate trust, manage conflict, link key individuals to initiate WFI partnerships, compile and generate knowledge, develop and communicate the community’s vision, mobilize broad support for change, and gain and maintain the momentum needed to navigate the transitions and institutionalize new approaches to governing the Whitefeather Forest (Berkes *et al.* 2003, Folke *et al.* 2005, cited in Olsson *et al.* 2006). From this description, we can see how *Oohneekuhneeseeg* can be understood as a fundamental component in the dynamic process of participatory self-organization (Sexias and Davy 2008) in the adaptive governance of a resilient social-ecological system (i.e. the Whitefeather Forest) (Olsson *et al.* 2006). This also illustrates a strong link between leadership and the value of “maintaining good relationships” *Cheemeenoowecheeteeyaung*. Individuals who achieve *Oohneekuhneeseeg* are those who have been accepted to represent the community’s perspectives to the wider network. Leaders have the ability to manage existing knowledge within social networks and further develop those networks, in other words, they maintain and build “relationships” that will lead the community down to right path for *Keeping the Land*.

to learn the teachings and ways of caring for our land passed on to us by our ancestors (Alex Peters, cited in PFN and OMNR 2006: 12).

The teachings and values held in the memory of the Elders represent a reservoir of long-term social-ecological knowledge and adaptive capacity (Berkes and Folke 2002). However, it is not only the knowledge, but also the institutions of knowledge that are fundamental to the process of learning about how to manage and govern human relationships with the land (Lee 1993). In Ahneesheenahbay culture, Elders and advisors use the institution of storytelling to transmit knowledge. However, rather than explicitly providing guidelines for proper or improper conduct, it is left up to the individual to develop an understanding of the teachings. As Cruikshank (1991:12) explains:

... each narrative contains more than one message. The listener is part of the storytelling event too, and is expected to think about and interpret the messages in the story. A good listener will bring different life experiences each time he or she hears it and will learn different things each time. Oral tradition is like a prism which becomes richer as we improve our ability to view it from a variety of angles. It does not try to spell out everything one needs to know, but rather to make the listener think about ordinary experiences in new ways.

The stories shared by the Elders of Pikangikum provide examples of how Ahneesheenahbay enforce a system of moral behaviour through teaching about proper conduct with humans and other-than-human persons (e.g. proper disposal of animal bones). There can be real consequences for failing to listen to an Elder. As George B. explained, the result of not following the teachings about proper treatment of bones (the example given in Chapter Four warned of the burning of rabbit bones), there would be consequences, not only for the offender, but for the community as well (cold weather would come and make life difficult for everyone). This proper conduct not only ensures the survival of the people of Pikangikum, but it also shows respect to the Creator who entrusted the Ahneesheenahbay as keepers of the land.

However, as a result of both the historic and contemporary imposition of Western governing structures, the people of Pikangikum have been restricted from upholding their responsibility to care for the land. The following example shared by Elder Norman Quill (Jan. 12, 2005) exemplifies the contradiction between the need to follow cultural customs, and consequences that can arise from the imposition of Western laws and values.

neesheenuhbayweekeekaytauhmuhween includes not only the knowledge of the Elders, but also Ahneesheenahbay institutions of knowledge, the means by which knowledge is held and transmitted to future generations. Ahneesheenahbay Elders create learning environments of observation and learning-by-doing, where counselling and teaching focus on the experience, thereby allowing the learner to garner their own abilities (Davidson-Hunt 2003a: 216). The institutions of knowledge identified by the Pikangikum Elders, including the wisdom of “Ancient Sayings”, “Stories and Legends”, “Dreams and Visions” and “Prophecy”, are imparted orally within a particular learning environment context. The values held within these institutions represent the “how” of *Keeping the Land*; how the land has been and will continue to be kept because, even though community circumstances have changed, the methods for acquiring knowledge are as relevant today as they ever were.

5.6.1.1 *MAYWEESHUHEEKEYTOOWEEN* “Ancient Sayings”

During collaborative workshops, there was always much mention of how the youth of Pikangikum need to learn about the “old ways” from the Elders. The way I came to understand this concept of *Mayweeshuheekytooween* is that the Elders of today carry forward a deep social memory from the ancestors. Ancient sayings are difficult to define as they bring forward accumulating wisdom on a multiplicity of themes. One example is offered by Elder Charlie Peters (Sept. 17, 2002):

There is an ancient saying that if our people refuse to use the medicines on the land, and refuse to treat them respectfully for what they are intended, the plants will cease to produce these medicines, they will cease to exist.

Ancient sayings are the spoken words of wisdom that the Elders of today have a duty to pass on to the future generations. Although this wisdom is transmitted orally, they are often accompanied by customary practice and ceremony. Just as with the example Elder Charlie Peters gave, the ancient saying is to use the gift of medicine the Creator has provided for the people. However, the wisdom of this *Mayweeshuheekytooween* can only be realized through the *practice* of gathering and utilizing the medicines.

5.6.1.2 *TEEPUHCHEEMOOWEEN & AUHTAUHSOOKAYWEEN* “Stories” & “Legends”

With oral tradition, Ahneesheenahbay culture finds its foundation in the values and beliefs embodied in stories and legend. In other words, Ahneesheenahbay people are the stories and legends they know and tell. Stories and legends have always been used to teach about the ways of the land, survival lessons, to enhance relationships (especially with the use of humour), to pass on the customs, beliefs, and traditions to future generations.

Stories are true accounts of events and experiences whereas legends are stories created by our people to explain the world... In your culture you read your children stories from a book, we also tell our children stories, our legends are spoken though. We tell legends with the kids in the bush... those kids are good listeners (Elder Mathew Strang, Feb. 16, 2006).

The power of the story comes, in part, from its repetition. The telling, and re-telling of stories are an institutional means of keeping spirit beings and other-than-human entities contemporary with each new generation. This is also inherently linked to "maintaining good relationships". The relationships found in the past are united with the present through the character's and events of stories and legend, which in contemporary reality are "timeless" (Hallowell 1937:668). In this way cultural narratives are adaptive. During the February 16, 2006 workshop held in Red Lake, a small segment of a story involving the trickster character was told. One research partner from the University who had previously been told many other parts of this story commented, "That story must go on for a long time..." the Elders replied, "There is no end to that story". The adaptive capacity of Elders' knowledge is illustrated here, the story has yet to be written, the youth of today will carry this legend forward, adapting it as they journey, making it relevant to the youth of tomorrow. This also illustrates the Ahneesheenahbay approach to interpreting story and legend, which stresses values over meaning. Instead of maintaining a bottom-line meaning of a myth, the important consideration is whether the adaptation and interpretation expresses the intended values. In this way a plurality of meanings can be conveyed, so long as they are in harmony with the accepted value system (Gross 2003). This is integral to Ahneesheenahbay way of life because to the degree that stories, legends and the characters within remain relevant and vital to the people, so too will their cultural sovereignty remain strong (Gross 2003).

5.6.1.3

PUHMUHMOWEEN & EENUHPUHCHEEKUN “Dreams” & “Visions”

Every society has a complicated set of mechanisms for passing on its worldview, in Ojibwa culture the telling of the myths and stories is an important part of this process. Of course these narratives did not have to bear the entire burden of transmitting worldview. Dreams were also important, so much so that one could speak of children going “to school in dreams” (Overholt and Callicott 1982:139).

To Ahneesheenahbay people, the dream-world is as real and perceptible as the waking world; events that occur in dreams are legitimate and become a part of an individual’s personal experiential knowledge and memory (Hallowell 1975). Visions are equally important as the intimate portal between an individual and the spirit world, they are often revealed in the context of ritual and ceremony (such as fasting). However, dreaming and visions are not necessarily mutually exclusive, as each individual will have knowledge from the spirit world revealed in a unique way (i.e. everyone will acquire special knowledge and skills from spirit guides and other-than-human helpers differently).

The story that Elder Norman Quill (Dec. 15, 2005) shared with regard to *Ahnuhbuhkoomeench* and dreaming, where his grandson cried continuously until he accepted in his dream the man who had returned to live with them, the namesake to this child, is one example of how knowledge can be revealed in dream to help resolve a waking-life dilemma. An Elder, who has undergone a lifetime of dreaming, has the power to interpret dream appropriately, in this case to identify and give name to this child. Elders have the knowledge and power to bridge the past, present and future through dreaming. This is because the teachings and knowledge on the practice of dreaming is imparted to a child from very early on, as Elder Norman Quill explained (Dec. 15, 2005):

I was taught from a very young age about how to live on the land, how to live the good life. When I was about thirteen years old, I would have to prove that I had learned these teachings, that I could survive and that I could dream. One time, when I was a young man, my father brought me to a cave. There was nothing there but rocks, and I stayed there alone all night to dream. As I slept, I heard someone coming in my dream, so I

woke up to see them, and there was no one there, but I heard “what you hear is the ice crying because it is cold”.

I think that Elder Norman shared this story with me so that I would understand the process a person has to go through, from a very young age, learning from Elders and instilling the teachings within oneself to be able to understand and learn from dreams. This story also indicates how people can learn about the land through their dreams. Elder Norman was told the “ice was crying because it is cold”, this could be interpreted as a sign indicating a change in ice conditions, which would also dictate a change in activities so that people will be safe when traveling on the land.

The Elders also discussed how dreaming can provide answers to questions or endow a special gift, how dreaming “is a gateway to creative possibilities” (Cajete 2000). Elder George B. Strang (Feb. 16, 2006) explained this concept with the following example:

There was a man from Poplar Hill who only spoke the Ojibway language. This was the time when Whiteman came to this area, and they only spoke English. This man dreamt he could communicate with this man [an English-speaker]. That is what happened, he dreamed he could speak English, he learned through his dream. And he passed this knowledge on to his son. They never went to school for this.

It is through dreams that an individual receives gifts of knowledge and/or skill, which in turn is socially beneficial as the knowledge and skills are shared with others, beginning with one’s kin. The process of receiving gifts from dreaming, which are then shared with others illustrates, again, the importance of sharing, reciprocity and egalitarianism in Ahneesheenhbay culture.

5.6.1.4

NEEKUHNEEKEEKEENOOEEKAYWEEN, “Prophecy”

Our Elders of old prophesized what would happen in our lands in the distant future. These sayings are ancient and date back a long way. These are the ancient sayings that my grandfather told me of. These sayings were passed down knowledge from my grandfathers, my great-grandfathers; these are the teachings they spoke of... Everything was explained in a certain way and the order in which they would occur (Elder Charlie Peters, Dec 2004).

Prophecy is not a well-understood aspect of Indigenous institutions of knowledge and, as a result of this lack of understanding, prophecy narratives have often been contested by the dominant ideology (Cruikshank 1994). However, prophecy narratives have been, and continue to be an important institution of social memory. The Elders shared with me some of the various forms that *Neekuhneekkeenooeekayween* can take, ranging from knowledge of where to find food (this is closely linked to dreaming and human-prey relationships), to foretelling one's own future or, in special circumstances, to know of events that have yet to materialize. Although the gift of prophecy can be revealed through dream or vision, this will only occur if the person is willing and able to receive this knowledge. Prophecy bestows a great power; most people do not have the skills or experience to handle this gift until they are an adult or Elder (Nelson 1988).

The prophecy narratives often recounted today in Pikangikum by the Elders are those foresights from the ancestors that have recently come to pass. One such prophecy is recounted when discussing a blow down event in the Whitefeather Forest during a severe thunderstorm in the summer of 2004:

Long ago trees were not seen on the ground; that is, to have fallen over. There was no evidence of disturbance that would cause the trees to have fallen down. There was no strong wind to blow the trees down. Today there is a lot of strong wind that causes a lot of trees to blow down. It was said that the wind would become unpredictable in how forcefully it would blow; the wind would be destructive. We now hear and see quite steadily that the winds come strong, passing through. This was another ancient prophecy of our people (Elder Charlie Peters, Dec 2004).

Cruikshank (1994:163) noted that prophecies demonstrate the depth of knowledge "embedded in oral narrative by showing how contemporary events are discussed with reference to traditional narrative, how an understanding of the past informs our comprehension of the present." In this way, prophecy narratives are not only an institution of knowledge that situate and validate the observations of the present generation, they also provide an arena for discussion on how to address changing social, political and environmental circumstances while maintaining traditional values (Cruikshank 1994). The prophecy shared by Elder Charlie Peters brings the current observations about severe weather events that are outside the "normal" range of observations of both the present and past generations (i.e. a sign that something has



Plate 5.2: Elder Norman Quill sharing land-based knowledge with Pikangikum youth. SLAAMB Course, 2006. Photo by: M. O'Flaherty.

However, I learned that land-based knowledge can be acquired by anyone who is open to learning from the land and the teachings of the Elders. I personally experienced how knowledge can be shared with visitors to the Whitefeather Forest in January 2006, when I had the opportunity to participate in a community capacity-building and training seminar (SLAAMB). One of the main objectives of this seminar was to expose Pikangikum youth to the knowledge and skills of the Elders by creating a participatory learning environment, both on the land as well as in the classroom. Elders Norman Quill and George B. Strang demonstrated how and where to build a fire in the winter. The wealth of knowledge required for this task was seamlessly recalled by the Elders on the land; knowledge of different tree species and the ability to select individual trees that would burn well, knowledge of how to peel birch properly from the tree ("fire starter") so as to not harm the tree, and a knowledge of how to select the proper place to have the fire. Elder Norman Quill explained that if you had a fire too close beneath certain trees, that the heat from the flames would melt the snow as it rises through the boughs above, and the melting water would fall down, and you would get wet and the fire would go out,

which could be very dangerous in the winter. Through this experience, albeit brief, I began to see the land in a different way. I began to notice, and think to myself “that tree would burn well” or “that would be a great place to have a fire”; the unfamiliar was, in some small way, becoming familiar. As the land and I were getting acquainted, the “signs” began to reveal themselves. I gained a small window of insight in to how an intimate knowledge of the land and how to live accordingly is engrained in the memories of both the land and the people who inhabit it. This also illustrates how Ahkeeweekeekaytuhmuhweeneeng can be revitalized with future generations, as well as with others who are invited to participate in the WFI.

5.6.3 OHTAUHCHEE’EETESOOWEEN ▷◁▷◁▷◁▷◁▷◁ - “LAND-BASED LIVELIHOOD”

Keeping the Land means a gift, our livelihood, the way we live on the Land (Elder Ellen Peters, Nov. 25, 2004).

To many Aboriginal societies, the “land” is not simply the basis of livelihood but of *life*, and must be treated as such (Wuttunee 2004:14). Customary livelihood activities, such as hunting, fishing, trapping and berry-picking, are activities that foster well-being, maintain good relationships, enhance social ties and strengthen cultural roots. It is through these customary livelihood activities, the Ahneesheenahbay of the Whitefeather Forest have for generations traveled down the path of *Keeping the Land*, and it is this journey that cultivates this cultural landscape.

The Creator gave us this land to live...everything we needed came from the land (Elder Whitehead Moose, Dec. 14, 2004).

It is the Creator who created me with a purpose, who put me on this land to live (Elder William Strang, Dec. 15, 2004).

The Creator provided for the Ahneesheenahbay ancestors of the Whitefeather Forest, and the Elders are confident that the people of Pikangikum will continue this legacy, that the Creator will continue to provide for future generations to make a livelihood with the land, that this is their purpose. As such, a primary goal set out by the Elders in the WFI is not only to maintain customary livelihoods but also to generate new land-based economic opportunities. This notion of new livelihood activities should not be misconstrued as merely “employment” opportunities in the wage economy, rather an

evolution and integration of both novel and customary land-based activities that will foster cultural (and thereby ecological) sustainability for the people of Pikangikum.

Land-based livelihoods are shaped by both internal and external forces; institutions (e.g. local customs regarding access to resources as well as restrictions to access imposed by government), social organization (e.g. kinship) and market forces, together govern resource access and utilization (Ellis 2000). The knowledge, practices and beliefs involved in carrying out land-based livelihood activities in the Whitefeather Forest cultivate the ongoing evolution of this cultural landscape and are an integral part of Pikangikum's collective identity. Participation in land-based livelihoods contributes to the formation of personal and community identity in at least three ways: by furnishing valued land-based knowledge and skills, by maintaining social relationships, and by establishing peoples affiliations with both land and landscape (Ingold 2000).

Considering *Keeping the Land* from a livelihood perspective illuminates how this approach focuses on the wellbeing of the people as much as the well-being of the land, i.e. a social-ecological system. This is how the utilization of values as criteria for measuring sustainable landscape activities is legitimized. The preservation of values depends on the preservation of cultural identity within which values can be maintained (Groenfeldt 2003:918). The values, knowledge, skills, practices and beliefs involved in maintaining customary livelihoods are also the foundation for developing novel, sustainable economic opportunities on the land.

At this present time, we are still living on the land and have come to know that we have a lot of potential in the process we have initiated in our community that will immensely help our people. Furthermore, we have to further expand our knowledge of the land and how it will benefit our people, our community; to always know that the Creator blessed us with this land as a gift, to use what our ancient Elders taught and understood (Elder Charlie Peters, Dec. 2004).

A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers and Conway 1999). Adaptive capacity is an integral feature of small-scale livelihood systems. Reflecting on the dynamic nature of Elders knowledge, the knowledge that carries the values within, we gain an insight into how the people of Pikangikum are "re-creating" their collective

identify through both the maintenance of customary livelihoods, as well as creating new livelihood activities in the Whitefeather Forest. This is the heart of *Ohtauhchee'eeteesooween*.

The philosophy of *Keeping the Land* through “reading the signs” and adapting practices serves to simultaneously maintain social, natural, cultural, and economic capital required for sustainable and resilient livelihoods, which in turn maintains the process of *Keeping the Land*.

5.7 CHAPTER SUMMARY

To reiterate, the second objective of this research project was to develop a framework to *communicate* Pikangikum values for *Keeping the Land*. To communicate does not mean simply to archive or to “document” information in stasis. Rather, communication is a *process* by which we assign and convey meaning in an attempt to create *shared* understanding. One of the prerequisites of communication is that both the senders and receivers of information use a mutually understood set of signs. Chapter Four attempted to communicate the process of coming to a shared understanding of *Keeping the Land*.

It has been acknowledged that understanding values is required for the successful implementation of NREM frameworks, especially in the context of adaptive co-management (Brown and Reed 2000). The purpose of this Chapter was to communicate cross-culturally one interpretation of Pikangikum values so as to facilitate a process of social learning, which will contribute to the ongoing development of a new NREM framework for *Keeping the Land*, in the adaptive co-management context of the WFI.

Chapter Six

6.0 CONCLUSIONS

"...This concept that our Elders designed is an open concept [referring to the values framework]. Our Elders are saying that this is very important. There was a confirmation given to me in a dream. I heard a voice that said to me: the people of Pikangikum need this [the framework]. Never put this at the bottom of all the papers. Use this and nothing will go wrong. They put the LUS right in the middle, and the yellow circle represents the Creator. What we have designed is for our youth, so the four different colours represent four different ages."

(Elder Gideon Peters, Jun. 7, 2007)



**Plate 6.1: Members of the Whitefeather Forest Elders Steering Group, Management Corporation and Research Cooperative in Red Lake, Ontario
(Photo by: M. Sanders, 2007).**

6.1 INTRODUCTION

The main purpose of this research, undertaken in partnership with Pikangikum First Nation and the Whitefeather Forest Management Corporation (WFMC), was to develop a framework to communicate cross-culturally Pikangikum's values and institutions for *Keeping the Land*. However, this project was not only interested in coming to a shared understanding but it was also focused on the process for developing a local-level framework, which did not attempt to simply accommodate these values, but rather form the very basis of it. Furthermore, through the process of co-creating the values matrix, an understanding of how this framework could also be applied as a local-level approach to criteria and indicators for monitoring activities for *Keeping the Land* was also developed.

The following Chapter presents the key results of, and lessons learned through, this research. This Chapter also gives consideration to two key factors integral to the successful implementation of this framework. First, is the need to engage Pikangikum youth so that the process of *Keeping the Land* will continue with future generations, and second that the OMNR recognize Pikangikum's framework for *Keeping the Land* as equally valid to conventional approaches to NREM and C&I for monitoring SFM.

6.2 THE PROCESS IS THE PRODUCT: CO-CREATING A HOLISTIC CULTURAL LANDSCAPE FRAMEWORK FOR *KEEPING THE LAND*

The first and second objectives of this project were to: 1) Develop an understanding of Pikangikum values for *Keeping the Land* and the institutions through which they are fostered and actualized (i.e. Ahneesheenahbay ways of knowing, practices and beliefs), and from those understandings, 2) Cooperatively develop a framework to both articulate and communicate the values, knowledge, and institutions for *Keeping the Land*.

The cultural landscape framework evolved out of the process of co-constructing a values matrix (presented in Chapter Four and elucidated through Chapter Five) for developing a shared understanding of, and communicating, the key values for *Keeping the Land*. This framework is holistic in that it does not attempt to separate social, environmental,

political and economic values into discrete categories. This framework is also holistic in that it both embodies and communicates not only the key values but also the institutions (knowledge, practices and beliefs) deemed important by Pikangikum Elders for maintaining the process of *Keeping the Land*. In academia, we have come to understand and converse on the holistic nature of this framework in terms of “Indigenous” and “traditional ecological knowledge”. However, as discussed in Chapter Five, to our Pikangikum colleagues the framework represents a way of life. As Elder Gideon Peters explained (Jun. 6, 2007):

We have a concept our Elders follow [he shows the framework co produced through this research with the Elders]. First we have *Oneesheesheen*. Then we need to achieve good relations. Then we can start putting things together and [when everything is in order] the way of life of Pikangikum people will continue.

The research process demonstrated in Chapter Four provides an example of how bringing knowledgeable individuals into a collaborative learning forum (Davidson-Hunt 2006:611) can help to build common understandings of differing approaches to NREM amongst diverse partners. The key feature of the process was to develop a “common currency” (Davidson-Hunt 2003) upon which inclusive, collaborative dialogue could be based.

One principal facet of developing a common currency for the co-production of knowledge is giving special consideration to the use of language. Diverse perceptions about the role and importance of language exist between Western and Aboriginal cultures. Pikangikum is unique in that *Ahneesheenhbaymooween* is the language of daily life in this community and, as discussed in Chapter Five, cultural continuity is maintained in part through the oral transmission of teachings, stories and legends. Throughout the process of co-developing the values framework, attention was given to making it accessible to everyone: Elders (i.e. emphasis on *Ahneesheenhbaymooween* and syllabics) and youth (i.e. terms that can be understood cross-generationally) as well as cross-culturally. During our collaborative workshops, language was a recurring theme with the Elders often expressing concerns regarding the use of language. One of the main worries voiced was that they did not want their knowledge about *Ahneesheenhbay* values, beliefs and practices in relation to *Keeping the Land* to be misunderstood in the process of being communicated in English, as meaning embedded

in Aboriginal languages can be lost in translation. The value *Ahneesheenahbayweepeemahteeseeween*, “Pikangikum way of life” provides an illustration of the depth of meaning carried within the language. Following, the word “Ahneesheenahbay”, or “people of the land”, the second part of this word can be understood in English as “how and where we obtain a livelihood...how our way of life is carried out” (Paddy Peters, Jan. 25, 06). It was through the iterative process of negotiating meaning and coming to shared understandings that the values could be effectively be communicated in the both English and *Ahneesheenahbaymooween* within one framework. Furthermore, as this framework seeks to support the goals of the WFI (i.e. community-based land use planning and NREM), presenting the framework in *Ahneesheenahbaymooween* contributes to language retention in the community, and thereby the retention of values and knowledge embedded within the language, which serves to maintain a cultural continuity to continue the process of *Keeping the Land*.

However, maintaining a cultural continuity does not equate to a framework locked in tradition. As discussed in Chapters Four and Five, Pikangikum’s approach to *Keeping the Land* is represented by a dynamic rather than a prescriptive framework. As Indigenous ways of knowing and learning are adaptive and welcome creative solutions (Berkes 1999; McGregor 2004; Cajete 2000; Davidson-Hunt 2006), this framework has the ability to evolve and adapt over time to changing social-ecological circumstances.

A continuously evolving framework not only reflects Ahneesheenahbay knowledge systems, but this approach is also better suited in the adaptive co-management context of the Whitefeather Forest Initiative. It is also due to the adaptable nature of this framework that it is can be applied to other situations where collaborative learning about the process *Keeping the Land* is paramount. For example, the opening quote from this Chapter was made at a meeting held to discuss Pikangikum’s EA proposal for obtaining a sustainable forest licence. Elder Gideon Peters used the framework to help explain to a diverse audience Pikangikum’s approach to *Keeping the Land*; that this approach is holistic and that the Elders developed it for the youth of Pikangikum.

6.3 CHEEMEENOOTOOTAUHKOOYAUN, “WE KNOW IT WILL DO US GOOD”: ENGAGING

FUTURE GENERATIONS FOR *KEEPING THE LAND*

During our collaborative workshop discussions, as well as throughout the C-LUP transcripts, the Elders continually emphasized that they began the Whitefeather Forest Initiative for the youth of Pikangikum; to provide future generations with new economic opportunities that also maintain the knowledge, values and practices for *Keeping the Land*. Therefore, a critical element for *Keeping the Land* is to engage the youth so that this process can continue with future generations. Several aspects of this framework facilitate the involvement of future generations so as to actively engage their participation in this process.

Firstly, as discussed in Chapters Four and Five, the process of *Keeping the Land* is inclusive, and involves all people young and old, women and men alike. Every community member participates in the process of *Keeping the Land* through “reading the signs”. The Elders have recognized and have voiced their concerns about what they are currently witnessing in their community, that the youth do not always know or practice the teachings. This framework is now being utilized as a tool to help communicate the knowledge, values and practices for *Keeping the Land* to the youth in Pikangikum.

Secondly, the framework is dynamic and can adapt to meet the needs of future generations, while maintaining the values and knowledge and practices of *Keeping the Land*. Furthermore, the framework also includes the institutional setting required for responding and adapting to change. As discussed in Chapter Five, the value of shared decision-making and Elders’ guidance provide forums for social learning and opportunity for creative solutions to emerge. This enables youth to become meaningfully involved in the WFI, to become empowered to create their own destiny.

The results from our collaborative workshops illustrate that Pikangikum has recognized the need to communicate their knowledge and values both within and across language and culture, and that they are also open to developing new ways of communicating, of coming to a common ground of understanding. Furthermore, the results of this project illustrate that it is possible to build new understandings and approaches for land use planning and management, so long as a mutually-agreed upon language for communicating is co-developed.

The setting of a place-based learning community, which is rooted in dialogue and where understanding is iterative and subject to constant revision, provided a starting point for developing a common language of communication upon which social learning and the co-production of knowledge has and can continue to occur (Barge and Little 2002, cited in Davidson-Hunt and O’Flaherty 2007:295). It is this common language that is vital to community-based NREM, given that planners and Indigenous peoples rarely have a common understanding of the issues at hand and tend to speak past one another (Davidson-Hunt and O’Flaherty 2007:293).

6.4 “READING THE SIGNS”: CRITERIA AND INDICATORS FOR KEEPING THE LAND

The third objective of this research was to: 3) Develop an understanding of how the values represent criteria for *Keeping the Land*, how Pikangikum people perceive these signs (i.e. indicators) of social-ecological variability in the Whitefeather Forest, and how these signs contribute to, a) Monitoring, responding and adapting to change, and b) Maintaining the values, knowledge and institutions for *Keeping the Land*.

Through the process of co-producing the framework for *Keeping the Land*, as described in Chapters Four and Five, the idea that this diagram could simultaneously serve as a local-level criteria and indications framework emerged. The following section presents the results of how the process of coming to a shared understanding about Pikangikum values, knowledge, beliefs and practices also fostered a shared understanding of how these values also represent signs of *Keeping the Land*. These results make a significant contribution to both theory and practice as an example of an Indigenous approach to criteria and indicators for monitoring Aboriginal-led, community-based forest planning and management (Stevenson and Webb 2003).

Seldom have Indigenous values received the same attention as those of the dominant paradigm in processes of developing criteria and indicators frameworks (Pokharel and Larsen 2007). It has not been until recently that local-level and Aboriginal C&I frameworks, seeking to integrate these perspectives in forest planning and management, have emerged (Natcher and Hickey 2002; Sherry *et al.* 2005; Parlee

2006; Karjala and Dewhurst 2003). However, in many instances where Indigenous values have been considered in a forest management context, rarely have ecological and socio-cultural values considered together, which is antithetical to an Indigenous worldview. Additionally, Aboriginal C&I have typically been incorporated into frameworks developed with Western values, compartmentalized into social, environmental, political and economic science-based categories for the singular purpose of forest management (rather than fostering multiple forest values of a cultural landscape). This approach results in a dualism that separates people and their values from their environment, and therefore cannot provide a model upon which to base an Ahneesheenahbay framework, as Davidson-Hunt and Berkes (2003a) have noted; Ahneesheenahbay institutions of knowledge are inseparable from their values, beliefs and practices – as it arises out of the relationships between people and their environment.

One of the difficulties in representing Indigenous values in such frameworks is that the concept of objective, formalized criteria and indicators is utterly foreign to societies who have a close relationship with the land. As illustrated throughout Chapter Five, constructed, objective and compartmentalized models for gauging the effectiveness of management activities for achieving a desired NREM goal is an almost absurd notion because, as previously discussed, Indigenous knowledge is based within a worldview that is interconnected and interrelated (i.e. holistic). Another difficulty arises when we consider that the moment a framework is devised, it becomes artefact. Even the hierarchical nature of C&I frameworks can also pose a philosophical barrier in representing Aboriginal values.

The process of developing this framework sought to mitigate these barriers by beginning with the values (i.e. the process of co-creating the values matrix) rather than pre-defined categories in which values must be arranged. As criteria are essentially values, and indicators arise from those values (Meadows 1998), Pikangikum people, through the collaborative process of this research, have shared many of the criteria instrumental to *Keeping the Land*.

This framework represents a guide for maintaining the Whitefeather Forest cultural landscape. Each of the values identified in this framework can be considered the criteria required to maintain the process of *Keeping the Land*. The knowledge gained through

“reading the signs”, *Keekeenuhwuhcheecheekun*, represent indicators that both signify the outcomes of human action as well as monitor social-ecological cycles and change. *Cheemeenootootauhkooyaun* (“we know it will do us good”) is a process to maintain the values for *Keeping the Land* and *Keekeenuhwuhcheecheekun* dictates how behaviour must be adapted throughout this process. This allows the people of Pikangikum to both maintain traditional activities and become innovative while ensuring that such action is consistent with desired future landscape conditions.

Preliminary work on coming to an understanding of some signs of *Keeping the Land* was accomplished through the collaborative workshops of this research. An example illustrates how the values are expressed in practice, and how there are signs to ensure that these values, and thereby practices, are being kept in the process of *Keeping the Land*.

Values / Criteria		Sign / Indicator
<i>Cheemeenooewecheeteeyaung</i>	<i>Cheekeechee'eenaytauhmung</i>	Respectful treatment of animal bones
Maintaining Good Relationships	Respect for all Creation	

Table 6.1: Example of a Pikangikum Criteria and Indicator for *Keeping the Land*

Respecting the land, and all of Creation, is a central philosophy common to many Indigenous societies. Elder Norman Quill told me that being on, and making a fruitful living from the land, is a gift from the Creator. Norman, through Paddy’s translation, said it is important not to be greedy, it is also important to show gratitude to the land for providing all that is needed to survive. This teaching, *Keetomaykeewayahtoon*, or “take only what you need” is “about respect” he told me, “respecting everything that has been given to us and honouring Mahneetoo”. One way this respect is awarded and practiced is through the proper handling and disposal of the bones of the animals.

When I catch a fish or a beaver, I put the bones back in the water to show that I am thankful and I want those animals to return to continue to live in the future; this is out of respect to Mahneetoo (Elder Normal Quill, Dec. 15, 2005).

When we kill a moose, you have to cut off the beard [bell] and hang it on a nearby sapling or something that the moose eat to demonstrate that you want the moose to continue to eat and live in the future...to show that you always want the animals to be on the land (Elder Mathew Strang, Dec. 15, 2005).

I remember when this was always practiced – we would wrap all the bones into bundles and hang them in the trees (Elder Charlie Peters, Feb. 16, 2006). Wherever the animal lived, that is where we would lay the bones (Elder Mathew Strang, Feb. 16, 2006).

The Elders also shared stories that advise that if this respect is not shown, there can be consequences, “You should never burn the bones, especially the bones of a rabbit – that would bring cold weather” (Elder George B. Strang, Feb. 16, 2006). The belief that if proper treatment were not awarded, hardship would befall the hunter, his family or community, ensures that people will continue to show respect for the relationships people have with animals and the Creator. Respectful treatment of animal bones represents a sign of *Keeping the Land*. When people travel on the land, and notice that bones are being properly handled it indicates that the knowledge of these teachings remains strong with the people of Pikangikum.

The Elders also told me they have noticed that things have changed, that some young people don't know this teaching or aren't practicing it:

When I was a young boy, I always noticed bones, all types of bones, in the trees – lynx and marten bones, and moose shoulder blades. People didn't leave them just lying around or in the garbage dump (Elder Charlie Peters, Feb. 16, 2006).

To the Elders, this represents another sign. This sign indicates that the teachings must be revitalized and passed on to future generations. This is one of the reasons for starting the Whitefeather Forest Initiative, to ensure that the youth have the knowledge required for *Keeping the Land*.

Table 6.2 provides some further examples of *Keekeenuhwuhcheecheekun* that were documented through the review of transcripts and in the collaborative workshops. Further signs of *Keeping the Land* may also be developed should the Elders and people of Pikangikum decide that a formalized list of indicators be required for this framework to be implemented and communicated as a local-level approach to C&I.

If further indicators are developed and the framework is utilized by the community as a formal local-level approach to C&I, it will differ from conventional C&I approaches (e.g. CCFM), which, although they have been moving towards integrating Aboriginal and/or local values, because of their top-down structure, they continue to face problems of implementation at the local level (Natcher and Hickey 2002; Sherry *et al.* 2005; Pokharel and Larson 2007). One barrier to their implementation is that Aboriginal languages, and the cultural understandings and concepts that such languages convey, have conventionally been excluded from the development of C&I, which has compromised the meaningful engagement of First Nations people (Stevenson and Webb 2004; Stevenson 2006). Although the need for the preservation of Aboriginal languages has been clearly expressed by First Nations people, and recognized for some time (e.g. RCAP 1996c, Vol 3 Sec 6) the space for incorporating Indigenous languages, and thereby values, in the development of criteria and indicators has not followed. Furthermore, the language, concepts and procedures of national-level C&I in and of themselves pose a philosophical barrier to First Nation participation as they are frequently antithetical to Aboriginal values and understandings. For example, CCFM indicators such as “productivity index”, “total growing stock” and “net change in forest carbon”, in addition to having no comparable translation in Aboriginal languages, also threaten to infringe upon reciprocal relationships between people and other-than-human persons and, thereby, the Creator (Berkes 1999; Stevenson 2006). However, as described in the previous section on the process of developing the values matrix, this framework incorporates *Ahneesheenhbaymooween*, syllabics and English translations. Shared understandings were built through an iterative process of negotiating meaning. Although English-speakers may not utilize “respectful treatment of animal bones” and Pikangikum people may not recognize “total growing stock” as indicators of sustainable forest management practices, a common currency for a dialogue on this culturally-mediated knowledge has begun to be developed through this research.

When the development of a C&I framework begins with local values, they can not only be used as tool monitor if management practices are meeting their goals, but also as a forum for collaborative adaptive social learning about diverse approaches to NREM that can increase our understandings of social-ecological dynamics. This is particularly important when we consider the framework as a means of community-based monitoring for, among other things, sustainable forest management because C&I frameworks only

Keekeenuhwuhcheecheekun "Reading the Signs":		
Indicators of Keeping the Land in the Whitefeather Forest Cultural Landscape, Northwestern Ontario		
Values, practices and beliefs for Keeping the Land	Signs and Signals	Examples of Pikangikum Indicators of and for Keeping the Land
Ohtauhchee'eenaytauhmung Ohtauhchee' Ohtauhchee'	Ohtauhmeenooween ᑕᑦᑏᑦ ᑕᑦᑏᑦ "Re-creation"	Re-Creating oneself on the Land Everything I do, my way of life on the land, makes me healthy. Still today at 72 years, the only way I feel good is to be on the land, re-creating myself. When I was young I would work a lot, this made me healthy, my mind, my body, my spirit felt good because I was in balance - Elder Norman Quill
	Meenooyauhyauwween ᑏᑦᑏᑦ ᑕᑦᑏᑦ Healing the mind, body and spirit	Knowledge and use of medicine (Mahshkeekkee) and traditional food The whole world can be symbolized as medicine. The Earth holds all the different types of plants, each with its own purpose and each was Created for people to use them - Elder Solomon Turtle They always ate fresh meat, and it made them healthy - Elder Lucy Strang
	Meenwaytauhmooween ᑏᑦᑏᑦ ᑕᑦᑏᑦ Joy in Everything	Following customs in practice and belief to lead the 'good life' I was taught from a very young age about how to live on the land, how to live the good life – Elder Norman Quill
Cheekeechee'eenaytauhmung Cheekeechee' Cheekeechee'	Cheekeechee'eenaytauhmung ᑕᑦᑏᑦ ᑕᑦᑏᑦ Reverence and Respect for all Creation	Respectful treatment of animal bones You must do certain things when you take an animal for food... with a moose, you must immediately cut off the bell and hang it on a nearby shrub. With a fish, you must return the bones to the water, and do the same with beaver bones. Duck wings must be hung in the trees. If this teaching is respected and followed, we know we are keeping the land - Elders George B. Strang and Norman Quill
	Ahnuhbukooomeench ᑕᑦᑏᑦ ᑕᑦᑏᑦ Kinship relationships	Planning for the future with customary social relationships When I look at our land as a whole... I think about what our people did in the past. They had a kinship relationship with other people. By that kinship relationship they had help, and could help other people in the community. This is how I see our WFI planning; it is based on the past. We have to have a relationship with other people and work together. Our vision is a way to survive, not only for us, but for our grandchildren and great-grandchildren - Oliver Hill
	Cheekeechee'eenayneemeeteeyaug ᑕᑦᑏᑦ ᑕᑦᑏᑦ Respecting people and perspectives	Partnerships and respect in WFI planning The teaching we have is that we are to love one another, be in harmony with one another - Elder William Strang We have to be understood, we are planning for our future... as others do their planning, they should respect what we are doing here too - Elder Solomon Turtle
Ohtauhchee'eenaytauhmung Ohtauhchee' Ohtauhchee'	Ohnunshoowayweeneeng ᑕᑦᑏᑦ ᑕᑦᑏᑦ Communal decision-making	Authority of the community to plan for the future This is our people's plan to preserve the land. It is the way of life, for our survival...this is how we will continue to move forward, we must all agree to make it work - Elders William Strang & Solomon Turtle
	Keecheeauhneeshenauhbaag ᑕᑦᑏᑦ ᑕᑦᑏᑦ Elders' Guidance	Authority to follow cultural customs We need to be in the driver's seat for our ancestral traditional lands - Elder Gideon Peters [The land] has been given to us as a gift from the Creator. That is why we want to keep the land; it has been entrusted to us - Elder Norman Quill
	Oohneekuhneeseeg ᑕᑦᑏᑦ ᑕᑦᑏᑦ Leadership	Authority of traditional leadership in the Whitefeather Forest He is the leader of his trapline (Kahokhimahwich), and would make decisions for the people in the area. You know that you're on the 'right path' when the leader of the trapline has the authority. This authority is shared on our land, we still have it today, and it will be passed on the future generations - Paddy Peters (referring to Elder Alex Suggashie)
Ahkeeweekaytuhmuhweeneeng Ahkeeweekaytuhmuhweeneeng Ahkeeweekaytuhmuhweeneeng	Ohtauhchee'eeeteesooween ᑕᑦᑏᑦ ᑕᑦᑏᑦ Land-based livelihood	Journeying though the Land Kooseween is going on the land with a purpose, to travel, to live with the land and to have livelihood there. This is our way of life - Paddy Peters
	Keecheeauhneeshenauhbayweekeekaytuhmuhweeneeng ᑕᑦᑏᑦ ᑕᑦᑏᑦ Elders' Knowledge	Teachings, stories, legends, dreams, prophecy All the teachings that were passed down to me I have not forgotten, I still keep them. This is why the land is so important to me - Elder Whitehead Moose
	Ahkeeweekaytuhmuhweeneeng ᑕᑦᑏᑦ ᑕᑦᑏᑦ Knowledge of the Land	Land-based knowledge, e.g. survival skills (ice condition) The youth need to learn about the land, it is important for their survival. I was taught these lessons from a very young age, and this is how I survived - Elder George B. Strang

Table 6.2: Examples of Criteria & Indicators of Keeping the Land in the Whitefeather Forest

become useful when they are incorporated into the formal decision-making process on how to respond to signs of change.

6.5 *KEEPING THE LAND THROUGH “READING THE SIGNS”*: TOWARDS A COOPERATIVE APPROACH

Kopra and Stevenson (2008), drawing on the work of Natcher and Hickey (2002; 2005), have identified monitoring as a necessary element for effective implementation of C&I frameworks. The question of who monitors, how often, and how the results of monitoring feed into decision-making processes for adaptive management are prevalent questions throughout most, if not all, C&I systems (including CCFM) (ibid).

The framework for “reading the signs”, presented in Chapters Four and Five and as summarized in the preceding section, describes a process that the people of Pikangikum have and continue to informally conduct as they travel on the land. This skill is based on the specific knowledge of the social-ecological dynamics of the Whitefeather Forest cultural landscape. This knowledge and associated practices exist among people that, on a daily basis and over long periods of time, interact for their benefit and livelihood with the land (Berkes *et al.* 2000; Colding *et al.* 2003). In other words, the Ahneesheenahbay of the Whitefeather Forest have long-standing experience with “reading the signs” and responding accordingly so as to continue the journey of *Keeping the Land*.

However, as the WFI progresses towards obtaining EA coverage for obtaining a sustainable forest licence, a formal system for monitoring the outcomes of land use activities will be required. It is through the co-creation of a framework, and in the context of the WFI, that this previously informal process of “reading the signs” may well be formalized. The successful implementation of Pikangikum’s approach to monitoring land use activities will require an understanding by WFI partners (i.e. the OMNR) of Pikangikum’s values (i.e. the cultural landscape framework) and how they represent criteria and indicators for monitoring *Keeping the Land*.

Under the C-LUP policy framework of the Northern Boreal Initiative (i.e. the policy which enables Pikangikum to undertake the WFI as a formal land use planning process) the OMNR retains the lead responsibility for ensuring local planning is consistent with priorities at broader regional and provincial planning levels (OMNR 2002). At the provincial level, sustainable forest management (SFM) forms the foundation for all current forest policies in Ontario. As discussed in Chapter Two, the OMNR has utilized the national CCFM framework to develop a provincial set of C&I for SFM. The OMNR set of C&I were primarily developed by government and industry “experts” to achieve certain policy objectives (e.g. *Crown Forest Sustainability Act* 1994). Although the criteria may stem from public forest values, the indicators are most often quantitative and scientific, in other words inaccessible to those for which the framework is claimed to have been developed for. This externalizes the process of monitoring, charging this responsibility to governments, industry and scientific “experts”. The cultural landscape framework co-constructed through this research, however, cannot function in the absence of the people who have the knowledge of “reading the signs” for *Keeping the Land*.

Examining the respective terms (i.e. indicators vs. “readings the signs”) used to talk about what and how criteria are measured provides some insight into the differences between the OMNR and Pikangikum approaches. In the language of both the CCFM and OMNR, the term “indicators” is a culturally-neutral noun, defined as a measure of an aspect of a criterion that are periodically monitored to assess change (CCFM 1995; OMNR 2001). “Reading the signs” on the other hand, is a culturally embedded *process* (i.e. verb) that an Ahneesheenahbay person engages in throughout their entire life with the Whitefeather Forest.

An implication of these differing approaches is such that the OMNR cannot simply “integrate” a Pikangikum set of C&I into the existing provincial framework. As discussed in Chapters Four and Five, Ahneesheenahbay values, knowledge, beliefs and practices cannot be represented by others or by abstract categories such as those of the OMNR criteria and indicators, where an individuals knowledge is bifurcated from the knowledge producing process (Lane 2002, cited in Davidson-Hunt 2006:594). Furthermore, many of these signs of dynamic social-ecological processes and changes are understood through a specific way of knowing, and often times these changes are only perceptible to

the people who have an intimate relationship with the land; i.e. they are specific to those who have participated in the co-creation a particular cultural landscape. Moreover, it is from these unique understandings that appropriate responses and adaptations emerge, as they are based on local assessments of the situation that account for what matters most (i.e. the values) of a community (Berkes and Jolly 2001).

This is not to say that Pikangikum people's knowledge, values and beliefs need to be adopted by the OMNR in order to be successfully implemented. This, in addition to it being impossible to conceive another cultures' perceptions of the environment, is also unnecessary. People come to the table with their own knowledge and values of the land, shaped by the philosophy and institutions of their worldview and, as the Elders have stated, differing views are welcomed in the WFI. Furthermore, as O'Flaherty *et al.* (2008) have pointed out, "the cross-scale NBI planning framework can accommodate cultural differences without needing to resolve them, as long as partners remain committed to respectful cross-cultural dialogue." In other words, "reading the signs" should not be co-opted by the OMNR, but recognized and supported as an equally valid approach to monitoring *Keeping the Land*. Furthermore, successful implementation of this framework as an approach to monitoring land use activities will require ongoing cooperation and collaboration, and although the high degree of investment in cross-cultural communication has been identified as a potential barrier to the development of new approaches to NREM (Davidson-Hunt 2006), the results of this research demonstrate that these investments yield dividends.

6.6 CONCLUDING STATEMENTS

Clearly diverse values, knowledge-sets and perceptions of the land exist between Pikangikum community members and their planning partners. The values for *Keeping the Land* embodied in this framework are not new to the people of Pikangikum, but are now being applied in a new way to achieve mutually desired outcomes. Respect for different ways of knowing (Indigenous knowledge and scientifically-based knowledge for example), or different management and governance systems (customary polycentric adaptive systems of the Ahneesheenahbay and the hierarchical department-based structure of Canadian governments) are now being mutually acknowledged and this plurality is beginning to become accepted through cross-cultural communication and

shared understanding amongst diverse partners committed to the Whitefeather Forest Initiative.

As Natcher and Davis (2007) have pointed out, the devolution of authority, such as in the Whitefeather Forest through the NBI that has provided Pikangikum with the opportunity to engage in a community-based land use planning process, does not necessarily translate to the emergence of a new NREM paradigm grounded in local values and institutions. However, the outcomes of this research enable Pikangikum, through the implementation of their Land Use Strategy, to reaffirm their values and contribute to an emerging paradigm of NREM that recognizes local values as valid indicators in sustainability monitoring.

Although the utility of this framework in the adaptive co-management of the Whitefeather Forest has yet to be tested, Fraser *et al.* (2006) have found that using local knowledge as a starting point, which are then shared through cross-scale interactions increases the relevance of the C&I for that given area. Furthermore, the differences in perceptions between Pikangikum community members and government represent an opportunity for collaborative social learning about new ways for *Keeping the Land* rather than an impasse.

LITERATURE CITED

- Adelson, N. 2000. *Being Alive Well: Health and the Politics of Cree Wellbeing*. University of Toronto Press: Toronto, ON.
- Adger, W.N., Benjaminsen, T.A., Brown, K. and H. Svarstad. 2001. Advancing a Political Ecology of Global Environmental Discourses. *Development and Change*, 32: 681-715.
- Agrawal, A. and C. Gibson. 1999. Enchantment and Disenchantment: the role of community in natural resource conservation. *World Development*, 27(4):629-649.
- Alcorn J.B, Bamba, J., Masiun, S., Natalia, I., Royo, A. 2003. Keeping ecological resilience afloat in cross-scale turbulence: an indigenous social movement navigates change in Indonesia. In Berkes, F., Colding, J. and C. Folke. (Eds.). *Navigating social-ecological systems: building resilience for complexity and change*. Cambridge University Press: Cambridge, UK. pp. 299-327.
- Anderson, D.G. 2000. *Identity and Ecology in Arctic Siberia: The Number One Reindeer Brigade*. Oxford University Press: Oxford. In Ingold, T. *The Perception of the Environment. Essays in Livelihood, Dwelling and Skill*. Routledge.
- Archibald, J. 1997. *Coyote learns to make a Storybasket: the place of First Nations stories in education*. PhD Dissertation, Simon Fraser University, Department of Philosophy.
- Arnstein, S. 1969. A ladder of citizen participation. *Journal of the American Institute of Planners*, 35:216-224.
- Askins, R. 2000. *Restoring North America's Birds: Lessons from Landscape Ecology*. Yale University Press: New Haven and London.
- Baskin, C. 2005. Storytelling circles: Reflections of aboriginal protocols in research. *Canadian Social Work Review*, 22(2): 171-187.
- Battiste, M. and J.Henderson. 2000. *Protecting Indigenous Knowledge and Heritage*. Purich Press Publishing: Saskatoon, SK.
- Bengtsson, J., Angelstam, P., Elmqvist, T., Emanuelsson, U., Folke, C., Ihse, M., Moberg, F. and M. Nystrom. 2003. Reserves, Resilience and Dynamic Landscapes. *Ambio*, 32(6):389-396.
- Bengston D. N. 1994. Changing forest values and ecosystem management. *Society and Natural Resources*, 7: 515-533.
- Bentrupperbäumer, J.M., Day, T. and J. Reser. 2006. Uses, Meanings, and Understandings of Values in the Environmental and Protected Area Arena: A Consideration of "World Heritage" Values. *Society and Natural Resources*, 19(8): 723-741.
- Berkes, F. (Ed.). 1989. *Common property resources: Ecology and community-based sustainable development*. Belhaven Press: London.
- Berkes, F., George, P. and R. Preston 1991. Co-management: The evolution in theory and practice of the joint administration of living resources. *Alternatives*, 18(2): 12-18.
- Berkes, F. 1994. Co-management: bridging the two solitudes. *Northern Perspectives*, 22 (2-3):18-20.

- Berkes, F. 1996. Social systems, ecological systems, and property rights. In S.Hanna, Folke, C. and K.G. Maler (Eds.). *Rights to Nature* Island Press: Washington, DC, pp. 87-107.
- Berkes, F., Colding, J. and C. Folke. 2000. Rediscovery of traditional ecological knowledge as adaptive management. *Ecological Applications*, 10: 1251-1262.
- Berkes, F. and C. Folke 2002. Back to the future: Ecosystem dynamics and local knowledge. In: *Panarchy: Understanding Transformations in Human and Natural Systems*. L.H. Gunderson and C.S. Holling (Eds.) Island Press: Washington, DC, pp. 121-146
- Berkes, F., Colding, J. and C. Folke. (Eds.). 2003. *Navigating social-ecological systems: building resilience for complexity and change*. Cambridge University Press: Cambridge, UK.
- Berkes, F. 2003. Alternatives to conventional management, lessons from small-scale fisheries. *Environments*, 31(1):5-20.
- Berkes, F. 2004a. Rethinking community-based conservation. *Conservation Biology*, 18(3):621-630.
- Berkes, F. 2007. Adaptive Co-Management and Complexity: Exploring the Many Faces of Co-Management. In *Adaptive Co-Management: Collaboration, Learning and Multi-level Governance*. Armitage, D, Berkes, F., and N. Doubleday (Eds.). UBC Press: Vancouver, BC.
- Berkes, F. 2008. *Sacred Ecology: Traditional ecological knowledge and resource management*, Second Edition. Routledge: New York.
- Bessette, G. 2004. *Involving the community: a guide to participatory development communication*. Southbound: Ottawa.
- Bird, L. 2005. *Telling Our Stories: Omushkego Legends and Histories from Hudson Bay*. Broadview Press: Peterborough, ON.
- Borrini-Feyerabend, G., Farvar, M.T., Nguingiri, J.C. and V.A. Ndangang. 2000. *Comanagement of Natural Resources: Organizing, Negotiating and Learning-by-Doing*. GTZ and IUCN: Kasperek Verlag, Heidelberg, Germany.
- Borrini-Feyerabend, G. 2004. Governance of Protected Areas, Participation and Equity. In *Biodiversity Issues for Consideration in the Planning, Establishment and Management of Protected Area Sites and Networks*. CBD Technical Series No. 15.
- Black Elk. 1953. Joseph Brown (Ed.). *The Sacred Pipe: Black Elk's Account of the Seven Rites of the Oglala Sioux*, University of Oklahoma Press.
- Boyd, R. (Ed.). 1999. *Indians, fire and the land in the Pacific Northwest*. Oregon State University Press: Corvallis, Oregon.
- Bromley, D.W. 1992. The Commons, Common Property, and Environmental Policy. *Environmental and Resource Economics*, 2:1-17.
- Brosius, J.P., Tsing, A.L. and C. Zerner. 1998. Representing Communities: Histories and politics of natural resource management. *Society and Natural Resources*, 11(2):12.
- Brown, J. and L. Peers. 1999. "There is no end to relationship among the Indians" Ojibwa Families and Kinship in Historical Perspective. *The History of the Family*. 4(4):529-555.

- Brown, G. and P. Reed. 2000. Validation of a forest values typology for use in national forest planning. *Forest Science*, 46(2):240-247.
- Buggey, S. 1999. An approach to aboriginal cultural landscapes. Parks Canada, HSMBC agenda paper.
- Callicott, B. 1989. American Indian land wisdom? Sorting out the issue. *Journal of Forest History*, 33(1):35-42.
- Callicott, B. 1994. Conservation values and ethics. In Meffe, G. and C. Carroll (Eds.). Principles of conservation biology. Sinauer Associates: Sunderland, Mass, pp. 24-49.
- Cajete, G. 1994. Look to the Mountain: An Ecology of Indigenous Education. Kivaki Press: Durango, CO.
- Cajete, G. 2000. Native Science: Natural Laws of Interdependence. Clear Light Publishers: Santa Fe, NM.
- Cajete, G. 2003. Philosophy of Native Science. In Waters, A. (Ed.). American Indian Thought: Philosophical Essays. Blackwell Publishing.
- Canadian Boreal Initiative (CBI). About Canada's Boreal Forest. On-line, available: <http://www.borealcanada.ca/boreal-e.php> - Accessed December 17, 2007.
- Canadian Council of Forest Ministers (CCFM). 1995. Defining Sustainable Forest Management – A Canadian Approach to Criteria and Indicators. Ottawa, ON.
- CCFM. 1998. National Forest Strategy 1998-2003. Ottawa, ON.
- Capra, F. 1984. Turning Point: Science, Society and the Rising Culture. Doubleday.
- Chambers, R. 1994. Participatory Rural Appraisal (PRA): Analysis of Experience. *World Development*, 22 (9): 1253-1268.
- Chambers, R. and G. Conway (1992) Sustainable rural livelihoods: Practical concepts for the 21st century. IDS Discussion Paper 296. Brighton: IDS. Cited in. DFID (Department for International Development). 1999. Sustainable Livelihood Guidance Sheet. http://www.livelihoods.org/info/guidance_sheets_pdfs/section1.pdf
- Chapin, F. S. and G. Whiteman. 1998. Sustainable development of the boreal forest: interaction of ecological, social, and business feedbacks. *Conservation Ecology*, 2(2):12.
- Colding, J., T. Elmqvist, and P. Olsson. 2003. Living with disturbance: building resilience in social-ecological systems F. Berkes J. Colding C. Folke Navigating social-ecological systems: building resilience for complexity and change Cambridge University Press Cambridge, UK 163 185.
- Connelly, F. M. and D.J. Clandinin. 1990. Stories of experience and narrative inquiry. *Educational Researcher*, 19(5), 2-14.
- Creswell, John W. 1994. Research Design. Sage Publications: Thousand Oaks, California.
- Cronon, W. 1983. Changes in the Land: Indians, colonists and the Ecology of New England. Hill and Wang, New York.

- Cruikshank, J. 1991. *Life Lived like a Story: Life Stories of Three Yukon Native Elders*. UBC Press: Vancouver, BC.
- Cruikshank, J. 1994. Oral traditions and oral history: reviewing some issues. *Canadian Historical Review*, 75(3):403-418.
- Cruikshank, J. 1994. Claiming Legitimacy: Prophecy Narratives from Northern Aboriginal Women. *American Indian Quarterly*, 18(2):147-67, 1994
- Davidson-Hunt, I. 2003a. *Journeys, Plants, and Dreams: Adaptive Learning and Social Ecological Resilience*. PhD Thesis. Winnipeg, Canada: University of Manitoba.
- Davidson-Hunt, I. 2003b. Indigenous lands management, cultural landscapes and the Anishinaabe people of Shoal Lake, northwestern Ontario, Canada. *Environments*, 31(1):20-41.
- Davidson-Hunt, I. and F. Berkes. 2003a. Learning as you journey: Anishinaabe perception of social ecological environments and adaptive learning. *Conservation Ecology*, 8(1):5. Online, available: <http://www.ecologyandsociety.org/vol8/iss1/art5/main.html>
- Davidson-Hunt, I. and F. Berkes. 2003b. Nature and society through the lens of resilience: toward a human-in-ecosystem perspective. In Berkes, F., Colding, J. and C. Folke (Eds.). *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*. Cambridge University Press: Cambridge, pp. 53-82.
- Davidson-Hunt, I. 2006. Adaptive learning networks: developing resource management knowledge through social learning forums. *Human Ecology*, 34(4):593-613.
- Davidson-Hunt, I. J., and R. M. O'Flaherty. 2007. Indigenous peoples, researchers and place-based learning communities. *Society and Natural Resources*, 20:291-305.
- Dewey, J. 1916. *Democracy and Education*. Qtd in Lee, K. 1993. *Compass and Gyroscope. Integrating Science and Politics for the Environment*. Island Press: Washington D.C.
- Dreidger, J. 2006. *A Journey of A Thousand Miles Begins with a Single Blueberry: Learning Journeys of the Whitefeather Forest, Pikangikum First Nation, Ontario*. Unpublished Masters Thesis, University of Manitoba, Natural Resources Institute.
- Dudgeon, R.C. and F. Berkes 2003. Local understandings of the land: Traditional ecological knowledge and indigenous knowledge. In: *Nature Across Cultures* (H. Selin, ed.) Kluwer, Dordrecht, pp. 75-96.
- Duinker P.N., 2001. Criteria and Indicators of Sustainable Forest Management in Canada: Progress and Problems in Integrating Science and Politics at the Local Level. In: Franz *et al.* (Eds.) *Criteria and Indicators for Sustainable Forest Management at the Forest Management Unit Level*. EFI Proceedings No 38, pp. 7-29.
- Dunning, R.W. 1959. *Social and Economic Change among the Northern Ojibwa*. University of Toronto Press: Toronto.
- Ellis, F. 2000. *Rural Livelihoods and diversity in developing countries*. Oxford University Press.
- Fairhead, J. and M. Leach. 1995. False forest history, complicit social analysis: rethinking some West African environmental narratives. *World Development*, 23(6):1023-35.
- Farina, A. 2000. The cultural landscape as a model for the integration of ecology and economics. *Bioscience*, 50(4):313-320.

- Fernie, J. and A.S. Pitkethly. 1985. *Resource: Environment and Policy*. Harper & Row: London.
- Field, D. R., Voss, P.R., Kuczenski, T.K., Hammer, R.B. and V.C. Radeloff. 2003. Reaffirming social landscape analysis in landscape ecology: A conceptual framework. *Society & Natural Resources*, 16(4):349-361.
- Folke, C., F. Berkes, and J. Colding. 1998. Ecological practices and social mechanisms for building resilience and sustainability. In F. Berkes and C. Folke. *Linking social and ecological systems*, pp.414-436. Cambridge University Press, London, UK.
- Folke, C. Hahn, T., Olsson, P. and J. Norberg. 2005. Adaptive Governance of Social-Ecological Systems. *Ann. Rev. Environ. Resour.*, 30:441-73.
- Folke, C., S. Carpenter, T. Elmqvist, L. Gunderson, C. S. Holling, B. Walker, J. Bengtsson, F. Berkes, J. Colding, K. Danell, M. Falkenmark, L. Gordon, R. Kaspersen, N. Kautsky, A. Kinzig, S. Levin, K. Mäler, F. Moberg, L. Olsson, P. Olsson, E. Ostrom, W. Reid, J. Rockström., H. Savenije and U. Svedin. 2002. Resilience for Sustainable Development: Building Adaptive Capacity in a World of Transformations. International Council for Scientific Unions (ICSU), Rainbow Series No. 3. Paris. Online, available: <http://www.sou.gov.se/mvb/pdf/resiliens.pdf>
- Folke, C. 2006. Resilience: The Emergence of a Perspective for Social-Ecological Analyses. *Global Environmental Change*, 16(3): 253-267.
- Fraser, E., Dougill, A., Mabee, W., Reed, M., and P. McAlipne. 2006. Bottom up and top down: Analysis of participatory processes for sustainability indicator identification as a pathway to community empowerment and sustainable environmental management. *Journal of Environmental Management*, 78:114-127.
- Gadgil, M., Berkes, F., and C. Folke. 1993. Indigenous knowledge for biodiversity conservation. *Ambio*, 22:2-3.
- Gibbs, C.J.N. and D.W. Bromley. 1989. Institutional arrangement for management of rural resources: common property regimes. In Berkes, F. (Ed.). *Common Property Resources: Ecology and Community-based Sustainable Development*. Belhaven Press: London.
- Government of Canada, Department of Justice. 1867. Constitution Act. Author: Ottawa. Online, available: <http://laws.justice.gc.ca/en/const/>
- Government of Canada. 1969. Treaty No.5 Between Her Majesty The Queen and the Saulteaux and Swampy Cree Tribes of Indians at Beren's River and Norway House with Adhesions. Ottawa: Supply and Services. Online, available: http://www.ainc-inac.gc.ca/pr/trts/trty5_e.html
- Graham, J. 2002. Governance Principles for Protected Areas in the 21st Century: A Discussion Paper. Institution on Governance and Parks Canada: Ottawa.
- Graham, J and J. Wilson. 2004. Aboriginal Governance in the Decade Ahead: Towards a New Agenda for Change. Institute on Governance: Ottawa.
- Groenfeldt, D. 2003. The future of indigenous values: cultural relativism in the face of economic development. *Futures*, 35:917-929.
- Gross, L.W. 2002. The Comic Vision of Anishinaabe Culture and Religion. *The American Indian Quarterly*, 26(3):436-459.

- Gross, L.W. 2003. Cultural Sovereignty and Native American Hermeneutics in the Interpretation of the Sacred Stories of the Anishinaabe. *Wicazo Sa Review*, 18(2):127-134.
- Gunderson, L., and C. S. Holling, editors. 2002. *Panarchy: Understanding Transformations in Human and Natural Systems*. Island Press: Washington, D.C.
- Hallowell, A.I. 1937. Temporal orientation in Western civilization and in a pre-literate society. *American Anthropologist*, 39(1):647-670.
- Hallowell, A.I. 1955. *Culture and Experience*. University of Pennsylvania Press: Philadelphia.
- Hallowell, A.I. 1967. The Ojibway Self and Its Behavioural Environment. In *Culture and Experience*. Hallowell (Ed.) , pp. 172-183.
- Hallowell, A.I. 1975. "Ojibwa Ontology, Behavior, and World View." In *Teachings from the American Earth* by Dennis Tedlock and Barbara Tedlock, (Eds.). Liveright: New York.
- Hallowell, A.I. with Jennifer S.H. Brown (Ed.). 1992. *Ojibwa of Berens River, Manitoba: Ethnography into History*. Harcourt, Brace, Jovanovich.
- Hannigan, J.A. 1995. *Environmental Sociology*. London: Routledge. Qtd. In Adger, W.N., Benjaminsen, T.A., Brown, K. and H. Svarstad. 2001. Advancing a political ecology of global environmental discourses. *Development and Change*, 32:681-715.
- Hardin, G. 1968. The Tragedy of the Commons. *Science*, 162:1243-1248.
- Holling, C.S. and G.K. Meffe. 1996. Command and control and the pathology of natural resource management. *Conservation Biology*, 10(2):328-337.
- Holling, C. S. 2001. Understanding the complexity of economic, ecological, and social systems. *Ecosystems*, 4: 390-405.
- Holling, C. S., Carpenter, S.R., Brock, W.A. and L. H. Gunderson. 2002. Discoveries for Sustainable Futures. In Gunderson, L. H. and C.S. Holling (Eds.). *Panarchy: Understanding Transformations in Human and Natural Systems*. Island Press: Washington DC, pp. 395-417.
- Holzkamm, T., Lytwyn, V. and L.G. Waisberg. 1988. Rainy River Sturgeon: An Ojibway resource in the fur trade economy. *The Canadian Geographer*, 32:194-205.
- Hunn, E.S., Johnson, D., Russell, P. and T.F. Thornton. 2003. Huna Tlingit traditional environmental knowledge, conservation, and the management of a "wilderness" park. *Current Anthropology*, 44: Supplement.
- Huntington, H. P., S. F. Trainor, D. C. Natcher, O. H. Huntington, L. DeWilde, and F. Stuart Chapin III. 2006. The significance of context in community-based research: understanding discussions about wildfire in Huslia, Alaska. *Ecology and Society* 11(1): 40. [online] URL: <http://www.ecologyandsociety.org/vol11/iss1/art40>
- Ingold, Tim. 2000. *The Perception of the Environment: Essays in Livelihood, Dwelling, and Skill*. Routledge: London.
- Jacques, D. 1995. The rise of cultural landscapes. *The International Journal of Heritage Studies*, 1:91-101.
- Johnson, C. 2004. Uncommon ground: the 'poverty of history' in common property discourse. *Development and Change*, 35(3): 407-433.

- Johnston, B. 1990. *Ojibway Heritage*. McClelland & Stewart: Toronto, ON.
- Kant, S. and S. Lee. 2004. A social choice approach to sustainable forest management: an analysis of multiple forest values in Northwestern Ontario. *Forest Policy and Economics*, 6(3-4): 215-227.
- Karjala, M. and S. Dewhurst. 2003. Including aboriginal issues in forest planning: a case study in central interior British Columbia, Canada. *Landscape and Urban Planning*. 64:1-17.
- Kellert, S. R., Mehta, J.N., Ebbin, S.A. and L.L. Lichtenfeld. 2000. Community natural resource management: promise, rhetoric, and reality. *Society & Natural Resources*, 13(8): 705-715.
- Kijazi MH, Kant S. 2003. Conformance of Ontario's forest management planning with criteria and indicators of sustainable forest management. *The Forestry Chronicle*, May/June 79(3): 652-658.
- Kofinas, G. 1998. The costs of power-sharing: communities in Porcupine Caribou Herd co-management. PhD Thesis, University of British Columbia, Vancouver.
- LaDuke, W. 1999. *All Our Relations: Native Struggles for Land and Life*. South End Press: Cambridge.
- Lane, M. 2001. Affirming new directions in planning theory: comanagement of protected areas. *Society & Natural Resources*, 14:657-671.
- Langdon, S.J. 2003. Relational Sustainability: Indigenous Northern North American Logic of Engagement: Paper presented at the 102nd meeting of the American Anthropological Association, Chicago, IL. November 2003.
- Leach, M. and R. Mearns. 1996. Introduction. In Leach, M. and R. Mearns. (Eds.). *The Lie of the Land: Challenging Received Wisdom on the African Environment*. The International African Institute: Oxford, pp.1-33.
- Lee, K. 1993. *Compass and Gyroscope. Integrating Science and Politics for the Environment*. Island Press: Washington, D.C.
- Marshall, C. and G.B. Rossman. 1989. *Designing qualitative research*. Qtd In Creswell, J.W. 1994. *Research Design*. Sage Publications: Thousand Oaks, California.
- McCool, S., and G. Stankey. 2001. Representing the future: a framework for evaluating the utility of indicators in the search for sustainable forest management. Pages 93–105 in R. J. Raison and A. Brown, editors. *Criteria and indicators for sustainable forest management*. IUFRO (International Union of Forest Research Organizations) Series Number 7. CAB International Publishing, Oxford, UK.
- McGregor, D. 2004:390. Coming Full Circle: Indigenous Knowledge, Environment and Our Future. *American Indian Quarterly*, 28(3&4):385-410.
- Meadows, D. (1998) Indicators and information systems for sustainable development. Report to the Balaton Group. The Sustainability Institute, Vermont, USA.
- Meffe, G.K., Nielsen, L.A., Knight, R.L. and D.A. Schenborn. 2002. *Ecosystem management: adaptive, community based conservation*. Island Press: London.
- Merriam, S. 1998. *Qualitative Research and Case Study Applications in Education*. Jossey Bass Publishers: San Francisco.

- Meinig, D.W. 1976. The Beholding Eye - Ten Views of the Same Scene. *Landscape Architecture*, 66(1): 47-54. Qtd In Buggey, S. 1999. *An Approach to Aboriginal Cultural Landscapes*. Ottawa: Historic Sites and Monuments Board of Canada.
- Miles, M. and Huberman, M. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*, 2nd ed. Sage Publications
- Mitchell, B. 2002. *Resource and Environmental Management*. Prentice Hall: Toronto: ON.
- Mwesigye, F. 1996. Language and Grassroots Environment Indicators. In Hambly, H. and T. Onweng Angura (eds). *Grassroots Indicators for Desertification: Experience and Perspectives from Eastern and Southern Africa*. International Development Research Centre: Ottawa. Online, available: http://www.idrc.ca/en/ev-30806-201-1-DO_TOPIC.html
- Nassauer, J.I. 1995. Culture and changing landscape structure. *Landscape Ecology*, 10(4):229-237.
- Nadasdy, P. 2003 *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-state Relations in the Southwest Yukon*. UBC Press, Vancouver.
- Natcher, D. and C. Hickey. 2002. Putting the community back into community-based resource management: a criteria and indicators approach to sustainability. *Human Organization*, 61(4): 350-363.
- Natcher, D. and S. Davis. 2007. Rethinking Devolution: Challenges for Aboriginal Resource Management in the Yukon Territory. *Society & Natural Resources*, 20(3):271-279.
- National Aboriginal Forestry Association (NAFA), March 1995. An Aboriginal Criterion for Sustainable Forest Management. National Aboriginal Forestry Association Position Paper, online: http://www.nafaforestry.org/criterion/nafa_aboriginal_criterion.pdf (Accessed on 8 October 2007).
- Natural Resources Canada. 1998. Measuring Sustainable Forest Management: Criteria and Indicators. On-line, available: <http://canadaforests.nrcan.gc.ca/articletopic/87>
- Nelson, George. 1988. "The Orders of the Dreamed": George Nelson on Cree and Northern Ojibwa Religion and Myth, 1823. Jennifer S. H. Brown & Robert Brightman, (Eds). Winnipeg: University of Manitoba Press.
- North, D. C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press: Cambridge, U. K.
- O'Flaherty, R. M., I. J. Davidson-Hunt, and M. Manseau. 2008. Indigenous knowledge and values in planning for sustainable forestry: Pikangikum First Nation and the Whitefeather Forest Initiative. *Ecology and Society*, 13(1): 6. Online: <http://www.ecologyandsociety.org/vol13/iss1/art6>
- Olsson, P., C. Folke, and T. Hahn. 2004a. Social-ecological transformation for ecosystem management: the development of adaptive co-management of a wetland landscape in southern Sweden. *Ecology and Society*, 9(4): 2. Online: <http://www.ecologyandsociety.org/vol9/iss4/art2/>
- Olsson, P., L. H. Gunderson, S. R. Carpenter, P. Ryan, L. Lebel, C. Folke, and C. S. Holling. 2006. Shooting the rapids: navigating transitions to adaptive governance of social-ecological systems. *Ecology and Society*, 11(1): 18. Online: <http://www.ecologyandsociety.org/vol11/iss1/art18/>

- Ontario Ministry of Natural Resources (OMNR). 2001. Northern Boreal Initiative, a Land Use Planning Approach: Concept Document July, 2001. Author: Ontario.
- Ontario Ministry of Natural Resources. 2002. State of the Forest Report, 2001. Queen's Printer for Ontario: Toronto, ON.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press: New York.
- Ostrom, E., Dietz, T., Dolsak, N., Stern, P., Stonich, S. and E. U. Weber (Eds.). 2002. *The Drama of the Commons*. National Research Council, National Academy Press: Washington, D.C.
- Overholt, T.W. and J.B. Callicott. 1982. *Clothed-in-Fur and other Tales: An Introduction to Ojibwa World View*. University Press of America: Washington, D.C.
- Padilla, R.V., Treviño, J., Gonzalez, K., Treviño, J. 1997. Developing Local Models of Minority Student Success in College. In *Journal of College Student Development*, 38, 125-135.
- Pembina Institute. 2005. Counting Canada's Natural Capital: Assessing the real values of Canada's Boreal Ecosystems. Online, available: <http://www.pembina.org/pub/204>
- Peters, J. and J. Armstrong. 1998. Collaborative learning: People labouring together to construct knowledge. In Saltiel, I.M., Sgroi, A. and Brockett, R.G. (Eds.), *New Directions for Adult and Continuing Education*, 79, San Francisco: Jossey-Bass.
- Parlee, B. 2006. *Dealing with Ecological Variability and Change: Perspectives from the Denesoline and Gwitch'in of Northern Canada*. Phd thesis, University of Manitoba Natural Resources Institute.
- Parlee, B., Berkes, F. and Teetl'it Gwitch'in Renewable Resources Council. 2006. Indigenous Knowledge of Ecological Variability and Commons Management: A Case Study on Berry Harvesting from Northern Canada. *Human Ecology*, 35:515-528.
- Parks Canada 2004. *An Approach to Aboriginal Cultural Landscapes*. Online, available: http://www.pc.gc.ca/docs/r/pca-acl/sec4/index_e.asp Accessed November, 2005.
- Pikangikum First Nation (PFN) and Ontario Ministry of Natural Resources (OMNR). 2003. *Whitefeather forest and adjacent areas community-based land use strategy: terms of reference*. Ontario: Authors. Online, available: <http://www.whitefeatherforest.com/pdfs/terms-of-reference.pdf>
- PFN and OMNR 2006. *Keeping the Land: A Land Use Strategy for the Whitefeather Forest and Adjacent Planning Areas*. Ontario: Authors. Online: available: <http://www.whitefeatherforest.com/pdfs/land-use-strategy.pdf>
- Plummer, R and D. Armitage. 2007. Charting New Territory of Adaptive Co-Management: A Delphi Study. *Ecology and Society*, 12(2):10. Online: <http://www.ecologyandsociety.org/vol12/iss2/art10/>
- Plummer, R. and J. FitzGibbon. 2007. Connecting Adaptive Co-Management, Social Learning and Social Capital through Theory and Practice. In Armitage, D., Berkes, F., and N. Doubleday. *Adaptive Co-Management: Collaboration, Learning and Multilevel Governance*. UBC Press: Vancouver, BC. pp. 38-61.
- Pokharel, R. and H. Larsen. 2007. Local vs official criteria and indicators for evaluating community forest management. *Forestry*, 80(2):183-192.

Pokorny B., Prabhu R., McDougall C. and Bauch R. 2004. Local Stakeholders' Participation in Developing Criteria and Indicators for Sustainable Forest Management. *Journal of Forestry*, 102 (1), 35-40.

Prabhu, R., C. J. P. Colfer, and R. G. Dudley. 1999. Guidelines for developing, testing, and selecting criteria and indicators for sustainable forest management. The Criteria and Indicators Toolbox Series No. 1, Center for International Forestry Research, Bogor, Indonesia.

Preston, C.J. 1999. Environment and belief: the importance of place in the construction of knowledge. *Ethics and the Environment*, 4(2):211-218.

Royal Commission on Aboriginal Peoples (RCAPa). 1996. Looking Forward, Looking Back. Volume 1. Minister of Supply and Services Canada. http://www.ainc-inac.gc.ca/ch/rcap/sq/sq1_e.html#0

RCAPb. 1996. Restructuring the Relationship. Minister of Supply and Services. http://www.ainc-inac.gc.ca/ch/rcap/sq/sh1_e.html#Volume%202

RCAPc. 1996. Volume 3: Gathering Strength, Section 6: Arts & Heritage, Subsection 2: Language. Indian and Northern http://www.ainc-inac.gc.ca/ch/rcap/sq/sqmm_e.html

Roe, E. 1991. Development narratives, or making the best of blueprint development. *World Development*, 19(4): 287-300.

Roe, E. 1995. Except Africa: postscript to a special section on development narratives. *World Development*, 23(6):1065-9.

Roe, E. 1999. Except Africa. Remaking development, rethinking power. Transaction Publishers: New Brunswick, NJ.

Ross, Rupert, 1992. Dancing with a Ghost, Exploring Indian Reality. Octopus Books: Markham, ON.

Roth, R. 2004. Spatial organization of environmental knowledge: conservation conflicts in the inhabited forest of northern Thailand. *Ecology and Society*, 9(3):5

Salmon, E. 2000. Kincentric Ecology: Indigenous Perceptions of the Human-nature relationship. *Ecological Applications*, 10:1327-1332.

Sauer, C.O. 1956. The Agency of Man on Earth. In Thomas, W.L. (Ed.). *Man's Role in Changing the Face of the Earth*. Vol. 1. University of Chicago Press; Chicago, pp. 46-69.

Scott, W. R. 1998. Organizations: Rational, Natural, and Open Systems. Prentice Hall, Inc: Upper Saddle River, N.J., pp. 3-30.

Schlager, E. and E. Ostrom. 1992. Property-rights regimes and natural resources: a conceptual analysis. *Land Economics*, 68: 249-62.

Schlager, E. and E. Ostrom. 1993. Property rights regimes and coastal fisheries: an empirical analysis. In Anderson, T. and R.T. Simmons. *The Political Economy of Customs and Culture: Informal Solutions to the Commons Problem*. Rowman and Littlefield Publishers: Lanham, MD, pp.13-41.

Shotter, J. (1993). *Cultural politics of everyday life: Social constructionism, rhetoric, and knowing of the third kind*. Open University Press: Cambridge.

- Scott, J.C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition have Failed*. Yale University Press, New Haven, CT.
- Sexias, C. and B. Davy. 2008. Self-organization in integrated conservation and development initiatives. *International Journal of the Commons*. 2(1):99-125. Online: <http://www.thecommonsjournal.org/index.php/ijc/article/viewFile/24/20>
- Shields, D.J., Solar, S.V. and W.E. Martin. 2002. The role of values and objectives in communicating indicators of sustainability. *Ecological Indicators*, 2:149-160.
- Sherry, E. and H. Myers. 2001. Traditional environmental knowledge in practice. *Society & Natural Resources*, 15:345-358.
- Sherry, E., Halseth, R., Fondahl, G., Karjala, M., and B. Leon. 2005. Local-level criteria and indicators: an Aboriginal perspective on sustainable forest management. *Forestry*, 78(5):513-539.
- Sillitoe, P. 2002. Globalizing indigenous knowledge. In Sillitoe, P., Bicker, A. and J. Pottier (Eds.). *Participating in Development: Approaches to Indigenous Knowledge*. Routledge: London, pp.108-139.
- Smith, L. 1999. *Decolonizing Methodologies: Research and Indigenous Peoples*. Zed Books.
- Spry, I. 1983. The Tragedy of the Loss of the Commons in Western Canada. In Getty, I. and A.S. Lussier (Eds.). *As long as the sun shines and water flows: a reader in Canadian Native Studies*. University of British Columbia Press: Vancouver, pp. 203-227.
- Stevenson, M. and J. Webb. 2004. First Nations Measures and Monitors of Boreal Forest Biodiversity. *Ecological Bulletins*, 51:83-92.
- Stevenson, M. 2004. Decolonizing Co-management in Northern Canada. *Cultural Survival Quarterly*. 28(1):68-72.
- Stevenson, M. 2006. The Possibility of Difference: Rethinking Co-Management. *Human Organization*. 65(2):167-180.
- Stoffle, R.W., Toupal, R.S. and Zedeno, N.M. 2003. Landscape, nature, and culture: a diachronic model of human-nature adaptations. In *Nature Across Cultures: Views of Nature and the Environment in Non-Western Cultures*. H. Selin (Ed.). Kluwer Academic Publishers: Great Britan, pp.97-114.
- Striplen, C. and S. DeWeerd. 2002. Old science, new science: incorporating traditional ecological knowledge into contemporary management. *Conservation in Practice*, 3(3):21-27.
- Taylor, D. (Ed.). 2005. *Me Funny*. Douglas & McIntyre Publishing.
- Taylor-Holling, J. and S. Hamilton. 2007. Archaeological Survey of the Woodland Caribou Signature Site – Pikangikum First Nation Region. Poster Presented at the 2007 Richard Frucht Lecture Series: University of Alberta, Department of Anthropology 15th Annual Student Conference.
- Toledo, V., Ortiz-Espejel, B., Cortes, L., Moguel, P. and M. De Jesus Ordonez. 2003. The multiple use of tropical forests by indigenous peoples in Mexico: a case of adaptive management. *Conservation Ecology*, 7(3):9.
- Toupal, R. S. and N. Zedeno. 2001. Cultural landscapes and ethnographic cartographies:

Scandinavian-American and American Indian knowledge of the land. *Environmental Science & Policy*, 4:171-184.

Toupal, R.S. 2003. Cultural landscapes as a methodology for understanding natural resource management impacts in the Western United States. *Conservation Ecology*, 7(1):12.

Tuan, Yi-fu. 1974. *Topophilia: A Study of Environmental Perception, Attitudes, and Values*. Prentice-Hall: Englewood Cliffs, NJ.

Tuan, Yi-fu. 1977. *Space and Place: The Perspective of Experience*. University of Minnesota Press: Minneapolis.

van Manen, M. 1990. *Researching lived experience: Human science for an action sensitive pedagogy*. State University of New York Press: Albany, NY.

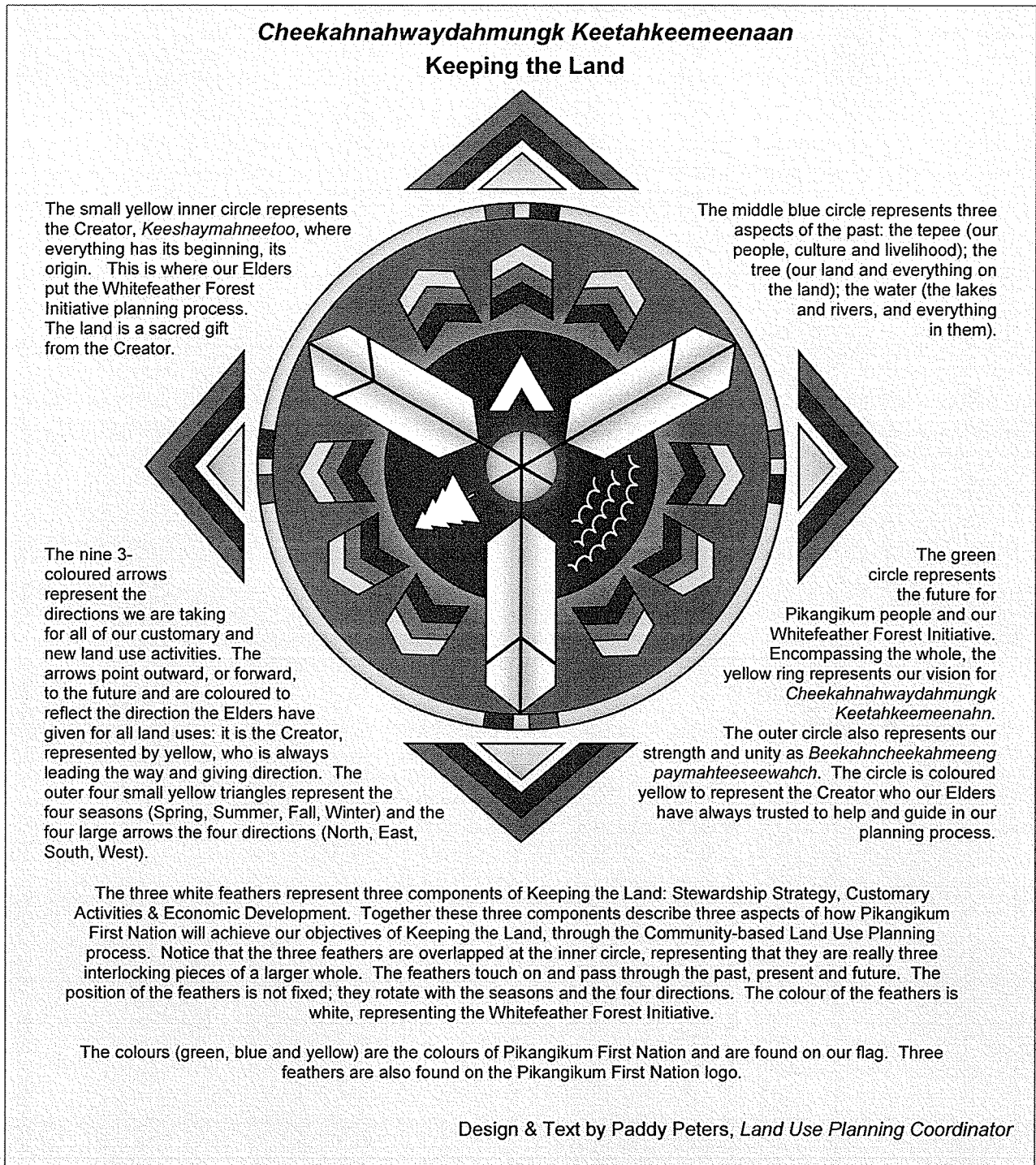
Warren, D. M., Slikkerveer, L.J. and D. Brokensha (Eds.). 1995. *The Cultural Dimension of Development: Indigenous Knowledge Systems*. London: Intermediate Technology. Qtd In Berkes, F., J. Colding and C. Folke. (Eds.). 2003. *Navigating social-ecological systems: building resilience for complexity and change*. Cambridge University Press: Cambridge, UK.

Whitefeather Forest Initiative (WFI). 2008. Quote – From Pikangikum People Sustaining Our Livelihood on the Land. Home-page of Whitefeather Forest Initiative Web-site. On-line, available <http://www.whitefeatherforest.com/>. Accessed April 12, 2008.

Whitefeather Forest Research Cooperative (WFRC) Agreement. 2004. On-line, available: http://www.whitefeatherforest.com/pdfs/WFRC_agreement.pdf Accessed November 12, 2007.

Wuttunee, W. 2004. *Living Rhythms: Lessons in Aboriginal Economic Resilience and Vision*. McGill-Queen's University Press: Montreal.

APPENDIX I: KEEPING THE LAND DIAGRAM



Source:

Pikangikum First Nation and Ontario Ministry of Natural Resources. 2006. Keeping the Land: A Land Use Strategy. Online: <http://www.whitefeatherforest.com/pdfs/land-use-strategy.pdf>, Pg 7.

APPENDIX II:

WHITEFEATHER FOREST MANAGEMENT COORPORATION TRANSCRIPT DOCUMENTS

Folder Name	Old Document Name	New Doc Name	Meeting / Workshop	Date of Meeting / Workshop	Subject / Theme	Elders & Participants	Translator
Elders Statements	Charlie Dunsford Jan 12	ES2005_01	C-LUP	January 12, 2005	Mining, Changes on the Land	Charlie Dunsford	Paddy Peters
	Charlie Peters Comments	ES_01	C-LUP	nd	Brief Comments Regarding Our Land	Charlie Peters	Paddy Peters
	Charlie Peters Dec 2004	ES2004_01	C-LUP	December 0, 2004	Prophecy	Charlie Peters	Paddy Peters
	Charlie Peters Jan 4 2005	ES2005_02	C-LUP	January 4, 2005	Prophecy, dreams, legend, teachings	Charlie Peters	Paddy Peters
	Comments from Chief Paddy Peters	ES_02	C-LUP	nd	WFI	Paddy Peters	N/A
	Comments from the Elders	ES_03	C-LUP	nd	Forestry, Livelihood, Traplines, Elders' Knowledge	Ellen Peters, Whitehead Moose, Gideon Peters	Unknown
	Dec 15-16.2004	ES2004_02	C-LUP	15-Dec-04	Traditional Food, Forestry, the Creator, Livelihood	Whitehead Moose, George K. Strang, George M. Suggashie, Solomon Turtle, Charlie Peters, William Strang, Reggie Peters	Paddy Peters
	Elders Statements Dec 1	ES2004_03	C-LUP	December 1, 200x	Changes on the Land	Whitehead Moose, Solomon Turtle	Unknown
	Elders Statements Dec 13	ES2004_04	C-LUP	13-Dec-04	Traditional Food, Medicine, the Creator	Lucy Strang, Gideon Peters, Solomon Turtle, Whitehead Moose	Unknown
	Elders Statements Nov.23.2004	ES2004_05	C-LUP	23-Nov-04	Place names, Traplines, Livelihood	Norman Quill, John George, Paul Peters	Charlie Turtle
	Elders Statements Nov.24.2004	ES2004_06	C-LUP	24-Nov-04	Traplines, Experiential learning & learning from Elders	Tom Quill, Larry Pascal, Lucy Strang	Unknown
	George K. Feb 4	ES2005_3	C-LUP	4-Feb-05	Trapline territories, naming ceremony, land use planning	George K. Strang	Paddy Peters
	Lillian Quill & Charlie P	ES_04	C-LUP	17-Sep-02	Children, plants, medicine, food	Lillian Quill, Charlie Peters	Unknown
	Lucy Strang	ES2004_07	C-LUP	13-Dec-04	Traditional Food, Medicine, the Creator	Lucy Strang, Gideon Peters, Solomon Turtle, Whitehead Moose	Unknown
	Norman Quill Jan 12	ES2005_04	C-LUP	12-Jan-05	OMNR, Keeping the Land, TEK, Fire	Norman Quill	Paddy Peters
	Norman Quill May5.2005	ES2005_05	C-LUP	5-May-05	Ecoregion Map, Fire, Land Types	Norman Quill	Paddy Peters
	Norman Quill on Trees	ES_05	C-LUP	nd	Forestry, Livelihood, Changes on the Land, Keeping the Land, the Creator	Norman Quill	Reggie Peters
	Oliver Hill Feb 2	ES2005_06	C-LUP	2-Feb-05	TEK, Kinship, Elders' knowledge, WFI	Oliver Hill	Unknown
	Paddy	ES2005_07	C-LUP	1-Feb-05	WFI	Paddy Peters	N/A
	Take only what you need	ES_06	C-LUP	nd	Additional Comments for land use: take only what you need, waterways, travel	Oliver Hill, Charlie Peters, Norman Quill, Paddy Peters	Paddy Peters
	Talbot Turtle.Feb2	ES2005_08	C-LUP	2-Feb-05	Trapline, WFI, adjacent areas	Talbot Turtle, Paddy Peters	Paddy Peters
	William Strang trapline	ES2005_09	C-LUP	2-Feb-05	trapline	William Strang	Paddy Peters
	g1	ES2005_09	C-LUP	19-Jan-05		George B. Strang, Gideon Peters, Whitehead Moose, George K. Strang, George M. Suggashie, Lizzie Turtle, Jake I. Quill, Charlie Peters	Unknown
	04.CD#23-GeorgeB	ES2004_08	C-LUP	January 12&13.2004	Travel Routes, TEK, Livelihoods	George B Strang, Lucy Strang, Gideon Peters, Ellen Peters, Solomon Turtle, Whitehead Moose	Unknown
	10.CD#36-AdjacentAreas	ES_07	C-LUP	nd	Traplines & Adjacent Areas	Gideon Peters, Ellen Peters, Oliver Hill	Unknown
	12.CD#18-SteeringGroup	ES_08	C-LUP	nd	Muskeg	Norman Quill	Unknown
	13-1-Lucy_court	ES2002_01	C-LUP	2002	TEK, Elders' knowledge, traditional activities	Lucy Strang	Unknown
	14.CD#16-PA_Accord	ES2002_02	C-LUP	10-Jun-02	Protected Areas	Ray (from MB), Andrew Chapeskie, Gideon Peters, Whitehead Moose	Paddy Peters
	15.CD#15-PA_Accord	ES_09	C-LUP	nd	Protected Areas	Solomon Turtle, Peter Quill, Whitehead Moose	Unknown
	16.#19-CBLUP_Steer	ES2001_01	C-LUP	10-Oct-01	Whitefeather Forest	Whitehead Moose, George M. Suggashie, George K. Strang	Unknown
	17.Trapline#87	ES_10	C-LUP	nd	Place names, Traplines, Livelihood	Tom Quill Sr., Harry C., Charlie Peters, Mathew Strang, George B. Strang, Jake P. Quill	Unknown
	Steering Grp Mtg nov25	ES2004_09	C-LUP	25-Nov-04	Keeping the Land, WFI	Paddy Peters, Gideon Peters, Solomon Turtle, Lucy Strang, George B. Strang, Oliver Hill, Whitehead Moose, Ellen Peters, Mathew Strang, Michael O'Flaherty, Alex Suggashie,	Unknown

Folder Name	Old Document Name	New Doc Name	Meeting / Workshop	Date of Meeting / Workshop	Subject / Theme	Elders & Participants	Translator
SAP	SAPMeetingJun9-10	SAP2005_01	SAP	June9-10, 2005	Travel Routes, Re-creation, Caribou, Mining	Solomon Turtle, Tom Quill, Charlie Peters, Oliver Hill,	Unknown
	SAP.Minutes.March30.2005	SAP2005_02	SAP	20-Mar-05	WFI	Andrew Chapeskie, Whitehead Moose, Oliver Hill, George B. Strang, George K. Strang, Gideo Peters, Paddy Peters, Lucy Strang, Charlie Turtle	N/A - notes by AC
LUS	LUS Open House Documents	Open House Panels and Posters	N/A	June.2003; June.2004; Nov.2005	LUS	N/A	N/A
	Draft LUS	Draft LUS	N/A	November.2005	LUS	N/A	N/A
	LUS	LUS	N/A	June.2006	LUS	N/A	N/A
Research Workshops	N/A	Nov 17&18, 2005	Collaborative Workshop - Notes	Nov 17&18, 2005	Keeping the Land, Values	Paddy Peters, Iain Davidson-Hunt, Janene Shearer	NA
	Voice 1	15-Dec-05	Collaborative Workshop - Audio & Notes	15-Dec-05	Keeping the Land Values Matrix	Paddy Peters, Elder Mathew Strang, Elder Norman Quill, Iain Davidson-Hunt, Janene Shearer	Paddy Peters
	Voice 2	15-Feb-06	Collaborative Workshop - Audio & Notes	15-Feb-06	Keeping the Land Values Matrix	Paddy Peters, Mathew Strang, Norman Quill, Charlie Peters, George B. Strang, Oliver Hill, Alex Suggashie, Iain Davidson-Hunt, Janene Shearer	Paddy Peters
	Voice 3	27-Mar-06	Collaborative Workshop - Audio & Notes	27-Mar-06	Keeping the Land, Reading the Signs	Paddy Peters, Mathew Strang, Charlie Peters, Danny Peters, Janene Shearer	Paddy Peters