COMMUNITY PERSPECTIVES, CARIBOU USER PARTICIPATION and the BEVERLY-QAMANIRJUAQ CARIBOU MANAGEMENT BOARD in NORTHCENTRAL CANADA.

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ABSTRACT

The conservation of wildlife species plays a profound part in development issues in northern areas. In recent years, northern wildlife management has become a complicated process of cross-cultural communication. This thesis begins with an outline of the relations between First Nations and Euro-Americans in the context of the dynamics between wildlife scientists and aboriginal subsistence-based communities. The current economic, social and political characteristics of subsistence systems are discussed. The emergence of co-management systems is described in a review of wildlife management institutions existing in northern Canada and Alaska. An analysis of the activities of the Beverly-Qamanirjuaq Caribou Management Board (B-Q CMB) and the relative participation of traditional users and government wildlife scientists forms the core of an exploration of the nature of wildlife co-management. In order to understand some of the perspectives of local caribou-using communities within the co-management framework, interviews were held with members of the Inuit community of Arviat, Nunavut and the Sayisi-Dene community of Tadoule Lake, Manitoba. Finally, the general role of co-management institutions in securing the viability of communal property regimes is discussed with specific reference to the case of the B-Q CMB.

RÉSUMÉ

La défense des espèces de la faune et la flore joue un rôle primordial dans l'enjeu du développement des régions du nord. Dupuis quelques années, l'aménagement de la faune et la flore est devenu un processus complexe impliquant la communication multiculturelle. Cette thèse commence par un aperçu des relations entre les Prémières Nations et les Euro-Américains, particulièrement entre les scientifiques de la faune et la flore et les communautés autochtones vivrières. Les caractéristiques actuelles économiques, sociales et politiques du système vivrier en sont discutés. La naissance des systèmes d'aménagement coopératif (c'est-à-dire la coopération entre l'aménagement des biologistes gouvernementaux et les communautés autochtones) est décrite dans une étude des institutions d'aménagement de la faune et la flore dans le nord du Canada et en Alaska. L'analyse des activités du Conseil d'Aménagement Beverly-Qamanirjuaq Caribou (CAB-QC) et de la participation relative de ceux qui se servent de méthodes traditionelles ainsi que des scientifiques gouvernementaux de la faune et la flore forme le noyau de l'exploration de la nature de l'aménagement coopératif de la faune et la flore. Afin de mieux comprendre certaines perspectives des communautés locales qui se servent du caribou dans la cadre d'aménagement coopératif, on a organisé des entretiens avec des membres de la communauté Inuite de Arviat, Nunavut et la communauté Sayisi-Dene du Lac Tadoule au Manitoba. Pour terminer, le rôle général joué par les institutions d'aménagement coopératif afin de rendre viables les systèmes de propriété commune est discuté, se rapportant spécifiquement au cas du CAB-QC.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

AES	Arctic Environmental Strategy
ALWC	Alaska Eskimo Whaling Commission
ANILCA	Alaska National Interest Lands Conservation Act
B-Q CMB CMB	Beverly-Qamanirjuaq Caribou Management Board
CNF	Canadian Nature Federation
CPMs	Caribou Protection Measures
CWA	Canadian Wildlife Act
CWF	Canadian Wildlife Federation
CWS	Canadian Wildlife Service
CMG	Caribou Management Group
COPE	Committee for Original Peoples' Entitlement
DFO	Department of Fisheries & Oceans
DIAND	Department of Indian Affairs & Northern Development
FAO	Food & Agricultural Organisation
FEARO	Federal Environmental Assessment Review Office
GHL	General Hunting Licence
GNWT	Government of the NWT
HTA	Hunters and Trappers Association
IFA	Inuvialuit Final Agreement
IUCN	International Union for the Conservation of Nature & Natural Resources
IWC	International Whaling Commission
ICC	Inuit Circumpolar Conference
IPCB	International Porcupine Caribou Board
ITC	Inuit Tapirisat of Canada
KWF	Keewatin Wildlife Federation
MAB	Man & Biosphere
MoU	Memorandum of Understanding
MBCA	Migratory Bird Convention Act
MOE	Ministry of the Environment
NATO	North Atlantic Treaty Organisation
NOAA	National Oceanic & Atmospheric Association
NWMB	Nunavut Wildlife Management Board
NWMAB	Nunavut Wildlife Management Advisory Board
PCMB	Porcupine Caribou Management Board
RCMP	Royal Canadian Mounted Police
SMADA	Sipanok Area Management & Development Agreement
TEK	Traditional Ecological Knowledge
TFN	Tungavik Federation of Nunavut (Nunavut Tunngavik Inc.)
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific & Cultural Organisation
WCED	World Commission on Environment & Development
WWF	World Wildlife Fund
YFWMB	Yukon Fish and Wildlife Management Board
YKDGMP	Yukon-Kuskokwim Delta Goose Management Plan

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CHAPTER 1. INTRODUCTION: A CONTEXT FOR FIRST NATION - EURO-AMERICAN RELATIONS

What is wildlife "management" (Nakashima 1991) and how has its meaning changed through time? As a description of a field of study, the term "wildlife management" is indeed a misnomer for a field some biologists agree would be more properly named "people management" (Riewe and Gamble 1988:31). When we talk of "wildlife management" we may be speaking of the monitoring and/or manipulation of animal population numbers and/or the control of human use of wildlife resources.

The discussion of the concepts of wildlife management are necessarily broad and are no longer confined by western historical interpretations and use of the term. This is why discussion of wildlife co-management can be simultaneously frustrating and stimulating; we are speaking in an inter-cultural context. This is where the challenge of defining co-management lies. There is no standard or prototype in which to slot this concept.

Co-management finds its birthing ground in a technicolour setting of linguistic, cultural, political, ecological and ideological differences. The interplay of these differences creates a mosaic-like context for exploration. The nuances and dynamism of co-management are best appreciated in exploration and not in any one tightly defined concept.

This particular exploration will be constrained by some geographical boundaries; co-management institutions in subarctic and arctic Canada and Alaska will be discussed most extensively. The path is further narrowed by concentrating on institutions interested in the interactions between human and animal populations, namely the harvest of wildlife by aboriginal people and the research of these wildlife populations.

1.1. OBJECTIVES AND CONCEPTIONS

The explorations of this thesis lead toward a dialogue on the nature of the current incorporation and understanding of aboriginal ecological knowledge within one of the most active and progressive wildlife co-management institutions existing today. The case study of the Beverly-Qamanirjuaq Caribou Management Board (B-Q CMB) examines the current dynamics of wildlife management infra-structures and their ability to broaden access to traditional ecological knowledge (TEK). The danger that the formal infra-structure may obscure or ignore the values defining local ecological knowledge is explored.

This study examines wildlife co-management practices from the broader interests of the co-management institution to the specifics of aboriginal community-level interests in wildlife conservation. A picture of contrasts, not of hierarchical interests, is presented. A presentation predicated on a "top-down" or a "bottom-up" examination of interests runs the danger of **ranking** rather than **comparing** the contributions of the socio-economic, political, biological and ideological paradigms of community versus institutional structures of co-management.

Co-management in this instance refers to the active participation of local caribou-using communities in the decision-making of an advisory wildlife management institution, the B-Q CMB. The practices of this and other wildlife management institutions are rooted in western scientific principles, so that co-management organisations represent some degree of compromise or amalgamation of local aboriginal caribou-user perspectives and western scientific perspectives.

The Beverly-Qamanirjuaq Caribou Management Board (B-Q CMB), has existed in the Canadian North since 1982 and is the first example of the co-management of a game animal (Usher 1991). The CMB is cited as an example of successful co-management (Osherenko 1988, Cizek 1990, Usher 1991). The CMB is an advisory body with non-signatory aboriginal members representing 19 Dene, Metis, Cree and Inuit communities in northern Saskatchewan, Manitoba and the Northwest Territories (Figure 1-1). User members participate in the board's activities alongside

representatives of signatory federal, provincial and territorial government management agencies.

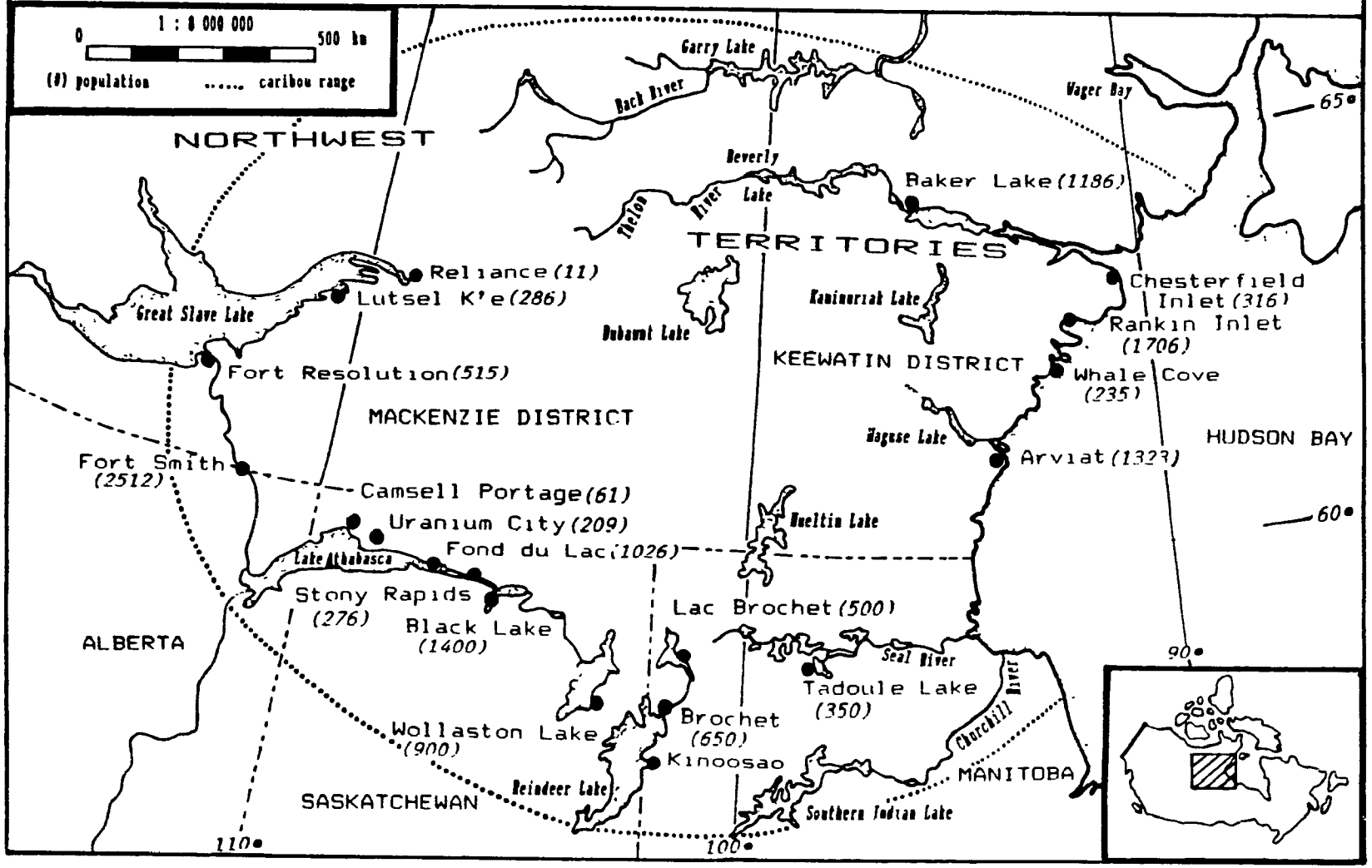
The CMB serves as a forum for the prolonged commitment to communication and knowledge transfer between and among caribou-user communities and government wildlife managers. The board provides a unique setting for the debate and definition of the collective interests of a number of different aboriginal communities who depend upon participation in subsistence activities as a way of life.

The past and continued success of the CMB may suggest that although aboriginal knowledge systems and customary laws are not visible within the workings of the board, the management systems inherent within local communities could be the factors which have largely defined the relative success of the conservation efforts of the board. Usher described the CMB as a "single window" (Usher 1991 in Caribou News 11(2):3) for the consultation of outside interests with caribou-users. The CMB may become an even more important mechanism for the channelling and expression of the collective interests of aboriginal communities as they become increasingly legally-distinct political units through the process of land claims settlement negotiations.

1.2. CONCEPTUAL BACKGROUND

It is often dangerous and self-serving to broadly generalize when considering the perspectives of any given issue. The distinction made between aboriginal and non-aboriginal ideologies in this thesis should not lead to the conclusion that this is to be a discussion ridden in stereotypes. Historically, however, indigenous and western world views in the "New World" have existed at polar ends of the range of human ideals about the nature of social development.

Figure 1-1. Map of Caribou-using Communities.
Source: CMB Minutes and Canada La Région Circumpolaire - Nord. Énergie, Mines and Ressources Canada. 1990.



Western societies' separation of the "thinking human being" from the surrounding environment still leads to the ability of humans to rationalize the unending exploitation of the world around them. Until recently, science reduced the biological world to automata controlled by the unfailing and inflexible physical and natural laws of existence. Thus, it was easy to justify the manipulation and development of such a world by the thinking and superior state of being represented by humans.

Evernden (1985) spoke of the loss of the ability of many human beings to connect themselves to the world they believe they can exist within as distinct entities. He describes the current crisis of human existence as the inability of humans to include themselves in a universal sense of being. Humans have become what Portmann described as "organisms without a niche" (Evernden 1985).

1.2.1. Evolution of Development

Where have the fields of ecology and environmental studies and the conservation and preservation movements germinated from? The concepts of progress, growth, efficiency, and modernisation associated with western development have not led us to the universal prosperity we had imagined (WCED 1987, Daly and Cobb 1989). We[1] are therefore constructing and grinding through an ideological grist mill, new concepts and terms of development.

Some western thinkers are realizing, however, that many aboriginal nations have lengthy legacies and intimate familiarity with the terms of sustainable human activity that western theorists are attempting to define in the post-industrial age of ecological crises. To learn from the ideologies of the "colonized" will be an essential process in the formulation of viable global development plans.

With the onset of the Industrial Age, Western society increasingly expected that every acre of land should be manipulated to produce as many services and products as possible with the aid of increasingly complex technologies. Multi-purpose rather than single-purpose exploitation has been emphasized (Usher 1986). Those who can make

[1] I will use "we" in the following discussion to describe those people whose culture is rooted in western thinking or more specifically Euro-American thinking.

the most economically productive use of land are considered to have a superior right to ownership of the land. This western concept of "legitimate development" has radically influenced the survival of aboriginal communities throughout North America (Elias 1991).

Aboriginal social visions are more often than not "invisible" or unacknowledged in global spheres. Global industrial forces are blind to or dominate alternative social visions whose roots are grounded in value systems based upon concepts of social co-operation rather than social competition (Berkes 1989).

Paradoxically, discussions of sustainable development are increasingly concerned with the contribution and validation of indigenous bodies of knowledge for aid in the transformation of western life toward long-term viable development goals (WCED 1987). It is the communication and understanding among cultures that is recognized to be so important to issues of international development. Contemporary discussion of development issues focusses on the centrality of recognizing and overcoming cross-cultural communication problems (Hanson and Regallet 1992).

Nonetheless, commitments to alternative social visions are often regarded by westerners, especially urban North Americans, as tiny pockets of insignificant, archaic exceptions to the homogenizing and dominant capitalist world view. Yet, the instance of northern aboriginal communities' desire to assert control of the management of wildlife resources represents the expression of this kind of fundamental difference in values. The co-management of wildlife resources can be seen as a facet of the transformation of development goals.

1.2.2. The Science of Wildlife Biology and Aboriginal Subsistence Systems

Biologists are now recognizing the need for an interdisciplinary approach to the management and conservation of wildlife (Gunn et al. 1988:28, Knudtson and Suzuki 1992, Stirling 1990). Debates about the future of wildlife management in northern areas are most heated and emotional when concentrated upon the discussion of aboriginal or traditional ecological knowledge (TEK) (Reeves 1992).

As adherents to a scientific tradition of the exploration and discovery of knowledge, biologists (more specifically ecologists) know that in theory, in order to

sustain viable wildlife populations, it makes more sense to pursue synecological (focus on systems) rather than autecological (focus on single species) thinking when developing conservation plans or wildlife management plans. Synecological thinking, however, has not proven practical in the modern industrial (or post-industrial) world and conservation efforts have necessarily been targeted or discussed at the level of the salvation of single keystone species rather than whole ecosystems for the most part. Livingston (1981) and Soulé (1986) provide valuable thoughts on these issues.

In addition, wildlife managers and biologists have until recent years tended to ignore or dismiss aboriginal knowledge systems. Statements such as: "Early examples of excessive and unnecessary slaughter of caribou [by aboriginal peoples] are legion, and modern-day counterparts are found for most." (Kelsall 1968:216) have firmed many biologists' resolves to continue to dismiss aboriginal ecological knowledge as irrelevant to the biological sciences.

The justification for the ignorance or dismissal of alternative world views is rooted in a selective and ethnocentric historical memory. A critique of the current and past use of archaeological, historical and anthropological studies by wildlife scientists could greatly aid discussion of the roots of conflict between wildlife biologists and aboriginal wildlife users (Drolet et al. 1986). The inappropriate use of such studies has, however, led to the misapplication of arguments about the ecological sustainability of current aboriginal harvesting **practice,** to questions about the applicability of aboriginal **knowledge** to conservation efforts. Freeman provides clear and succinct examples of such misapplications (Freeman 1985:266-9).

The use of the archaeological evidence of the massive die-off of large herbivore species during the Pleistocene was cited by Macpherson[2] (a prominent Canadian biologist) (1981) as positive evidence of the destructive exploitation of

[2] I will continue this discussion with an analysis of the comments of two biologists, Macpherson (1981) and Théberge (1981). I apologize if this section reads like an attack on these individuals; it should not. This section is intended to illustrate how easy it is to create divisive interdisciplinary commentary on shaky foundations, perhaps without even realizing that such territory has been entered.

wildlife by humans in North America in prehistoric times. However, this is hardly a resolved issue and much debate exists surrounding this matter (Martin and Wright 1967).

Moreover, Brody emphasizes the point that northern hunting societies "... are not representatives of an ancient world..." (1987:xiv) and that the structure of modern aboriginal hunting societies is not representative of European ancestry. Social scientists formerly adopted the anthropological studies of modern hunting societies as models through which to explore the structure of prehistoric hunting societies. This approach received heavy criticism in the 1960s (Lee and Devore 1968).

A second influential Canadian biologist, Théberge, concluded that "... at the time of European contact, [there was] little evidence of any broadly accepted tradition of husbanding or conserving food resources." (1981:281). Similarly, Macpherson concluded that:

> There seems no evidence, then, that wildlife was purposefully managed by Amerindian populations in northern Canada at the time of contact. Instead, we may conjecture that the impact of hunting on wildlife stocks was limited by the low technological level of the hunters and the fact that their populations were small and insecure. (1981:104).

Macpherson **can** conjecture this conclusion on the basis of human inclusion within a simple biological model[3] of predator-prey relationships without any need to recognize the potential contributions of the social sciences or of non-western scientific ideologies to the debate.

Théberge and Macpherson are looking for examples of agricultural society's notions of conservation within the organisation of fundamentally different hunting societies. This is hardly surprising when one considers that one of the founders of the wildlife conservation movement in North America, Aldo Leopold, wrote that "Its

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[3] We can and must accept the responsibility of recognizing the cultural and spiritual motivations determining human behaviour. The research of all scientists is a behaviour which necessarily has an impact on other human beings. Scientists engaged in the discussion of human behaviour cannot defend research guided by the techniques of ethology (the study of animal behaviour).

[game management's] nature is best understood by comparing it with the other land-cropping arts, and by viewing its present ideas and practices against a background of their own history." (1933:3). Macpherson writes that, "wildlife management for a sustained yield is today a sophisticated, scientific activity which seeks to accommodate social desires in wildlife without damage to the resource...It is a craft rooted in privilege and not in poverty." (1981:104). Macpherson implies that subsistence-based societies have been neither technologically nor culturally capable of regulating their exploitation of wildlife.

One of Théberge's prerequisites for the conservation of resources is the perception of the danger of over-exploitation and the option to do something about such over-exploitation (1981:281), conditions which he contends northern aboriginal peoples have historically been unable to meet. Both Bishop (1981:52) and Fienup-Riordan (1990) state that European-defined notions of conservation and consciousness that game could potentially be over-exploited were not apparent in pre-contact aboriginal hunting cultures. However, they and other anthropologists describe strict adherence to certain standards of the quality of human behavioural interactions with animals in both a physical and spiritual context (Brody 1981, Feit 1973, Fienup-Riordan 1990, Tanner 1973, Ridington 1988).

Feit, in a study of moose hunting by the Waswanipi Cree in Québec, found that a rotational system of hunting activity is important in the determination of where and when hunting occurs and that the sizes of harvests are directly related [i.e. 'inversely proportional'] to the frequency of hunting in a territory (Feit 1973:122). Laughlin described hunters' behaviour toward animals in the following manner: "Appropriate behaviour toward animals is prominently based upon familiarity with animal behaviour and includes ways of living peacefully with animals..." (1968:305). Lacking the skills of ethnohistorical analysis, neither biologist (Théberge and Macpherson) was able to recognize his ethnocentric bias and discussion of conservation suffers as a result.

Théberge described northern areas in the following manner:

> A wilderness frontier is a resource in itself, one deeply embedded in Canadian art and literature. Indeed, a wilderness frontier is part of the

> Canadian identity; once it is gone we will have lost a vital element of our heritage. (1981:284)

This description ignores the potentials of other world views for wildlife management goals. Théberge's "wilderness frontier" concept is one shared by a number of prominent wildlife conservationists and biologists and many other Canadians for that matter (see Brynaert in Anon. Caribou News 1(5):6). What is important to recognize is that the concept is often used to espouse the preservation of pristine wilderness considered to be virtually untouched by human beings and, therefore, overlooks the vital contribution of human populations who have lived in such areas for thousands of years. Berger's dialogue (1988) on the paradox of non-aboriginal conceptions of the north as a "frontier" and aboriginal conceptions of the north as a "homeland" has obvious parallels in the growing pains of the field of wildlife conservation.

Aboriginal concepts of conservation appear to explore the nature of qualitative rather than quantitative characteristics of human behaviour. Fienup-Riordan (1990) gives the reader sharp insights into the polemics of the relevance of the comparison of Euro-American conservation concepts with Yu'pik interactions with their environment. Aboriginal world views of humans living **within** Nature could greatly aid in the "preservation of wilderness" where human behaviour is modified to accommodate wilderness, rather than setting aside wilderness as a protected resource block under constant threat by encroaching human activity. Parks Canada's policies have changed remarkably, recently, with the incorporation of aboriginal wildlife use and management in the planning stages of a number of national parks (Morgan 1993).

1.2.3. The Need for Co-Management

Until recently, Western scientists have more often ignored or failed to recognize the existence of an extensive body of aboriginal knowledge of the physical and behavioral characteristics of natural resources. Randy Ames (1979) and Milton Freeman (1988) have written of the manner in which governments and government representatives have ignored the knowledge of subsistence hunters in the past.

The critical requirement for communication between aboriginal hunters and wildlife biologists is marked in a number of areas. For instance, biological sampling

methods in the north have proven to be faulty or damaging in a number of cases (Brody 1975, 1987; Freeman 1989a). Arctic species are marked by migratory animals such as caribou and geese which congregate at specific times of the year at particular sites. Biologists also have an incomplete understanding of the cycles of extreme population fluctuations noted in arctic species.

The difference between the estimations of the caribou population of northern Québec and Labrador predicted by Québec and Newfoundland biologists has been as high as 50,000 animals (Edmunds 1979.v). Such a difference can have significant effects on perceptions of the viability of northern hunting activities.

Poole (1981) cites a number of documented cases where scientists have bred mistrust in northern hunting communities of their actions through their research activities. Poole (1981) writes of an aboriginal community's concerns that a snow goose netting and banding programme on Bylot Island had contributed to a significant decrease in the snow goose population in the area. Inuit hunters also expressed their concern and inability to understand the need for the killing of 300 ringed seals in a number of studies looking at the effects of oil pollution and documented for the Mackenzie Valley Pipeline Inquiry (Poole 1981).

Aboriginal hunters have shown themselves to be the most credible and knowledgeable northern "animal behaviourists," and most likely have superior knowledge of the population dynamics of many animal species in the north (Nakashima 1991, Reeves 1992). In turn, aboriginal hunters in the north could benefit greatly from information about the global movements of the animals they hunt, as well as the manner in which the northern environment is affected by human activity throughout the world. Information concerning the effects of pollution and the overall harvest of the animals they depend on is vital to the ability of aboriginal hunting communities to continue to ensure the viability of their hunting activity.

It is probably quite reasonable to contend that an aboriginal hunting community represents a single tight-knit body equivalent to the chain of connected institutions represented by game wardens, biologists, managers, policy-makers, and legislators. Managers or policy-makers are a body of decision-makers whose management of

natural resources is influenced by biologists who might be thought of as an "expert" source of knowledge about the characteristics of the land and wildlife they study. Legislators represent a political environment influencing management decisions from quite a different perspective than that of the biologist.

The southern non-aboriginal public, ranging from a regional to an international scope, in turn shapes the actions of the legislators who write hunting regulations. This public force is characterized by an enormous diversity of cultural, political and economic drives. It has often been blind to the existence of aboriginal hunting communities. Furthermore, much of public thought in Canada lacks any recognition of the societies and laws which existed before the arrival of non-aboriginals to North America and the public is often convinced that aboriginal hunting and trapping activities are fated to disappear (Brody 1981:xi).

It is the lack of a significant link between aboriginal hunting communities and the southern public that makes the connections between biologists, managers, wildlife and land resources and northern communities so vitally important. Such ties can serve as avenues of communication between aboriginal hunting communities and the southern public.

Without this link it is perhaps impossible to expect any kind of solution to a social problem, where the southern public has been reluctant or unwilling to recognize its obligation to co-exist with traditional aboriginal forms of economic activity. As aboriginal hunting communities and biologists become more concerned about the effects growing and expanding non-aboriginal and aboriginal populations are having on wildlife and land resources (Weeden 1985:118), it is important that forums of communication be created and/or strengthened.

Biologists need to be individuals informed of the aboriginal public's needs and knowledge of wildlife and land resources in the north, where much of the population is especially aware of the environment in which it lives. To deny that the key to responsible wildlife and land management in the north lies within aboriginal communities would be to carry on the trend of cultural appropriation and domination which has marked much of non-aboriginal and aboriginal contact in the past. To

ignore the management skills and policies of aboriginal communities is to deny northern communities their right and ability to remain self-sufficient and successful within the context of the environments where they exist. In addition, such a denial will most probably rob many animal species of their optimal chance to survive the ecological consequences of industrialisation (Reeves 1992:271-2).

1.3. ORGANISATION AND CHAPTER SUMMARIES

The thesis is made up of five chapters, where Chapter 1 was the introduction.

Chapter 2 is a review of literature which discusses wildlife as a resource of socio-economic importance to northern aboriginal communities. The definition of subsistence as a dynamic social system is explored. The stereotypes often accorded to aboriginal hunting activities and examples of the subsequent damaging effects on northern communities are also described. Following the examination of market economic evaluations of country food production, the role of land claims settlements in the legal protection of subsistence systems is detailed.

Chapter 3 is a review of wildlife management institutions in northern Canada and Alaska. Wildlife agreements or organisations are grouped into sections divided by the regional extent of their influence. This chapter is meant to provide the reader with an appreciation of the wide variety of institutional approaches to wildlife management in general, and cooperative management schemes in particular. The review represents a "wash" of past and current organisations rather than an exhaustive listing.

Chapter 4 reviews the activities of the Beverly-Qamanirjuaq Caribou Management Board over the course of its existence. This is done with the intention of illustrating the evolution of the recommendations of the board by individually examining a number of topics. These topics are discussed under one of four broad categories of concerns: 1) information transmission and education and communication methods; 2) the varying users and types of use of caribou; 3) the ways in which the CMB has re-shaped its government-style bureaucratic format to the needs of traditional users and 4) the scientific management of the caribou herds.

The last section of the chapter is an attempt to provide a quantitative analysis of the relative degrees of participation and discussion of user and government members at CMB meetings. The analysis is based upon the minutes of the meetings and is useful only as a measure of frequency, rather than a true measure of the intensity or effectiveness of discussion or participation.

Chapter 5 provides a distillation of the thoughts of people from two user communities (Arviat, Northwest Territories and Tadoule Lake, Manitoba) about a range of caribou management issues posed during conversational interviews. Many of the "interviewees" knew very little about the current activities of the CMB or referred to wildlife management agencies as one homogeneous force. Interviews encompassed the discussion of a range of issues, including the importance of community hunts and land skills instruction, the potentials for waste, and attitudes about caribou monitoring methods.

Chapter 6 discusses the role of co-management institutions in the protection and shaping of communal property regimes. The role of the CMB in supporting social structures which promote and maintain the self-regulation of user subsistence activities is discussed along with the inevitability of the political ramifications of such support.

CHAPTER 2. WILDLIFE AS A SUBSISTENCE RESOURCE

One of the reasons aboriginal hunting economies are often dismissed as insignificant or of rapidly diminishing importance is the lack of officially tabulated data providing realistic pictures of the volume of aboriginal wildlife harvests (Usher and Wenzel 1987). In most regions of the Canadian Arctic the rights of priority of access of aboriginal subsistence users of wildlife resources are recognized to the exclusion of all other interests, unless conservation concerns are found to take precedence.

At first glance, such a policy seems a clear recipe by which to assure the continued utilisation of wildlife by aboriginal northerners. However, Poole (1981) relates the dangers of implementing such a policy where "subsistence" and "conservation" are two words of contentious definition, especially in the north (Reeves 1992).

2.1. SUBSISTENCE AND TRADITION

Many southerners and conservationists argue that subsistence hunting allows the hunting of wildlife by only "traditional means." Such definitions of subsistence hunting often equate traditional means solely with the tools of the activity, ignoring the intellectual component of subsistence activity. Laughlin's discussion of aboriginal hunting activity stresses "... the importance of the behaviour first, and the relevance and importance of tools second." (1968:318).

The hidden or perhaps unconscious racism behind the labelling of hunting activity as a "traditional" aboriginal activity with "immutable" historical roots is pointed out by Dahl (1989:24). Subsistence activities are often deemed incompatible with an "imaginary sphere of development and modernisation" of Euro-American origin (Dahl 1989:24). As expressed more generally by another author, "Only the West assumes that modernity and Westernisation must be synonymous" (Wright 1991:9).

The "object and characteristic of 'traditions', including invented ones is invariance" (Hobsbawm and Ranger 1983:2). In contrast, " 'custom' cannot afford to be invariant, because even in 'traditional' societies life is not so" (ibid:2). "Conscious invention [such as non-aboriginal conceptions of "traditional hunting practices"] succeed[s] mainly in proportion to its success in broadcasting on a wavelength to which the public is ready to tune in" (ibid:263). Thus, Euro-American society continues to accord aboriginal hunting communities a static, maladaptive status because non-aboriginal economic aspirations are usually contrary to the aspirations of aboriginal subsistence.

Government legislation in the north generally defines subsistence use as the individual and intra-community use of wildlife resources obtained by the members of an aboriginal community. Such a definition does not recognize the inter-community exchange of "wildlife products" which is known to be a common and important practice among many aboriginal communities in the north.[4] Dahl categorizes subsistence into two basic sets of activity:

> 1) a traditional form which integrates hunting and fishing as the mode of production and the household as the major economic unit;
> 2) as a subsidiary activity which is characterized as casual or seasonal or as a leisure time activity (1989:27)

Dahl warns that it is often an arbitrary and fictitious decision to make a distinction between subsistence hunting and the commercial harvest of many animals in northern regions (ibid:25). The "quantitative exploitation of resources takes place irrespective of fluctuations in the world market", where the hunting of many animals such as seal, caribou, beluga and narwhal is both commerce and subsistence-oriented (ibid:25, see Wenzel 1991).

Perhaps this quotation from Jonathon Solomon's testimony before the Alaska Native Review Commission is the best "undefinition" of the meaning of subsistence:

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[4] The variety of legislations existing in northern Canada are discussed in Chapter Three.

> When we talk about subsistence in the areas, we should be talking about Native culture and their land. I never heard the word subsistence until 1971 under the Native land claims act. Before that time when I was brought up in the culture of my people, it's always been "our culture" and "our land." You cannot break out subsistence or the meaning of subsistence or try to identify it, and you can't break it out of the culture. The culture and the life of my Native people are the subsistence way of life. And that's what we always used, the subsistence way of life. It goes hand in hand with our own culture, our own language, and all our activities. (Berger 1985:52)

The definition and application of conservation principles is of critical concern to aboriginal communities. The interruption of the pattern of "unhindered access" to wildlife resources has serious implications for the ability of aboriginal communities to supply their practical nutritional needs as well as for the social organisation of aboriginal hunting communities (Meredith and Muller-Wille 1982). Land use planning necessarily reflects the political as well as the ecological facets of resource management (Feit 1979), thus conservation practices can easily become a medium for the appropriation of natural resources from aboriginal communities (Keith and Wright 1978).

2.2. THE COUNTRY FOOD SECTOR

Few urbanites imagine that a physical dependence on country food still exists in many northern communities (Brody 1987, Berger 1985, Usher 1976a). Aboriginal hunters provide more than token contributions to the nutritional requirements of their communities. Studies of Cree, Dene and Inuit communities show that hunters provide one to two pounds of meat per day per person (Brody 1987:63).

A study examining the subsistence economy in the NWT found that the imputed value of the country food generated by subsistence activities was equal to approximately $55 million annually or the generation of approximately $13,095 annually per household involved in subsistence activities (Ames et al. 1988:v). Harvesting activity is concentrated in approximately 50 communities in the NWT, containing 75% of the aboriginal population of the region (ibid:23). These

communities are home to approximately 5,500 active harvesters (this number excludes small game hunting and gathering activities) (ibid). Through subsistence activities, aboriginal communities produce an average of 200 to 300 kilograms of country food per capita in the NWT (ibid:26). The addition of the imputed value of country food production raises the gross income of aboriginal people by approximately 50% (ibid:30) or more if all aspects of the informal sector based upon subsistence activities are included in community economic activity (Rees 1987:16). Notably, the food producing sector is the only sector in the NWT which "even approaches self-sufficiency" (Ames et al. 1988:31)

> Nobody recognizes, for instance, the country food industry as being an industry. Under the table it provides $30 million in this region alone and that does not control [include] the sales of snowmobiles, Hondas, fishing equipment and everything else that goes into the stores....Right now in this region, there are about $2 to 3 million spent on welfare. If that industry collapsed, I can imagine how the Canadian public would feel if all of a sudden they had to pay $40 million worth of welfare in one region alone. And you can go across the whole North that way. You are probably looking at an industry that is at least as big as the mining industry, if not bigger,...
> (Lloyd Gamble, Regional Resource Manager, Keewatin Wildlife Federation in Schellenberger 1986:17)

Studies defining hunters as those individuals engaged in full-time, economically self-sufficient hunting activity negate the majority of hunting activity which takes place at present. Hunting activity cannot be defined in a commensurate manner to southern definitions of an "employment position." It is a mistake to regard aboriginal hunting activity solely as a "livelihood." Hunting represents a way of life rather than an occupation to most aboriginal northerners, though hunting activity is also of extreme importance to many northern communities for the nutritional requirements it provides to communities who prefer to eat country food and cannot afford to buy food products from the south.

It is important to note that the less time a hunter is able to spend hunting, the higher the hunting costs of the household become. However, it is still very much in a

part-time hunter's household's economic interest to participate in hunting activity given the very high costs of store-bought food. As emphasized before it is not possible to participate in hunting activity without some degree of cash input, and in a community such as Holman Island (Victoria Island, NWT) many full-time hunters derive just enough income to maintain their hunting activity. Each full-time hunter in Holman Island produces enough surplus food to feed four people outside of the household (Smith and Wright 1989:93). The loss of the ability to produce country food is therefore very serious in a community such as Holman Island where 27% of households have no dependable wage-earner, and no one in the household hunts or guides (for trophy hunters) regularly (ibid:97). Food sharing activity is vital to the survival of such households.

Although it is dangerous to assume that a procedure for evaluating the complete value of country food to aboriginal communities can be formulated, a number of scientists have attempted to evaluate the full monetary value of wild meat to northern communities. Social scientists attempting to quantify subsistence activities continually emphasize their inability to express the cultural value of subsistence activities and therefore the inherent and troublesome weaknesses of their "evaluations" (Berger 1977, 1985; Bone 1992; Brody 1981, 1987; Meredith and Muller-Wille 1982; Müller-Wille 1978; Usher 1976a; Wenzel 1991). Bone qualifies the cultural value of subsistence activities to the equivalent of "psychic income" or "the difference between the higher economic gain that could have been derived from the optimum economic decision and the actual monetary gain resulting from the sub-optimal decision" (1992:206).

Many non-aboriginals fail to identify the utilization of wage labour by aboriginals as a means to facilitate the continuance of a subsistence economy. Most Inuit, Dene and Metis communities are perceived to be in a state of transition between subsistence on the land and wage employment. A **mixing** of the two worlds is not seen as a possible alternative to a **choice between** the two economic bases (Nahanni 1990).

There is a high capital investment involved in the acquisition of the equipment (as well as a short depreciation time for the cash value of the equipment) needed for modern subsistence activities (Müller-Wille 1978, Wenzel 1991). For this reason, anti-sealing and anti-wildlife harvesting movements have had critical impacts on subsistence activities when aboriginal communities lose whatever access to the market-place they once had.

In an extreme stance some animal rights organisations call for a complete ban of any form of wildlife harvest (Henke 1989). This is an ironic phenomenon; a number of authors (Herscovici 1985, Lynge 1992, Wenzel 1991) see such animal-rights movements as symptoms of the ill-health of western society. Influential voices of wildlife conservation such as the World Wildlife Fund (WWF) and the International Union for the Conservation of Nature and Natural Resources (IUCN) have disassociated themselves from the anti-harvest campaign (Young 1989:47).

It was in the romantic movement of the nineteenth century that values based on a "bioethic" or "a respect for all life beyond its utility" (Pepper 1984:67) was reborn or re-expressed in the western world. Today, however, most members of western society have long been separated from the realities of land-based production (see Young 1989:54). Very rarely are we aware day-to-day of the sources and production methods of our food:

> We (Canada) have a large population, and Europe has an even larger population of people who believe that food comes from the grocery store; that clothes come from textile mills; and that leather shoes come from Italy. These people no longer understand the origin of these items. We also have populations with an ever-increasing amount of leisure. This leisure is often used to watch T.V. and accept information without a critical mind. Progress has brought to Canadians, as well as other nations, many benefits, but of course there is always a price to pay. Right now Inuit and other native groups in Canada, and even many non-native Canadians who have supplemented their incomes with harvests from renewable resources are paying the price. (Peter Ernerk, Keewatin Inuit Association in Schellenberger 1986:9)

The most extreme and militant of "animal rights" lobby groups call for the complete abandonment of any human behaviour which brings about the death or

suffering of any animal on the grounds that any such behaviour is morally wrong (Young 1989:43). Such preservationist thinking conflicts with traditional aboriginal world views where the reciprocal relationships between animals and humans usually involve the obligatory harvest of wildlife by human beings.

2.3. SELF-DETERMINATION AND FIRST NATIONS

Resource management agencies in the north usually restrict their data set collections to the study of a particular group or species of wildlife (Usher and Wenzel 1987). As a result, the evolution of hunting controls in the north has taken the form of "distinctive conventions" toward the regulation of wildlife in the north. Conventions and regulations concerning the harvesting of migratory birds, small fur bearers, big game animals, large marine mammals, seal and fish exist (see Chapter Three).

These controls do not usually apply to the harvesting of wildlife by aboriginal northerners in the same manner that they apply to non-aboriginals hunting in the north. There are a number of regional philosophies and applications of hunting controls by the state upon aboriginal versus non-aboriginal hunters. In many cases, however, neither aboriginal nor non-aboriginal hunters in the north have been happy with the manner in which regulations and laws have been created and applied by southern-based institutions.

2.3.1. Aboriginal Rights and Subsistence

Ames' study The Social Economic and Legal Problems of Hunting in Northern Labrador (1979) documented that the game laws written by southern legislators were geared to suit the needs of sport hunters rather than those who hunt for a living. The historical roots of this bias can be seen in Aldo Leopold's acclaimed work:

> Hunting for sport is an improvement over hunting for food in that there has been added to the test of skill an ethical code, which the hunter formulates for himself, and must live up to without the moral support of bystanders. (Leopold 1933:391)

Bill Edmunds (then president of the Labrador Inuit Association) wrote of the poverty in northern Labrador hunting communities which he felt was directly attributable to the effects of game laws (in Ames 1979). The preservation of wildlife and the value of hunting as a tourist attraction have typified the overriding concerns of the governments and agencies which have controlled the contents of game laws in the past.

Regulations and laws which have direct implications for aboriginal hunting, trapping, and fishing practices figure prominently in discussions of aboriginal rights. Should bodies of legislation such as the Fur Seal Treaty, Marine Mammal Protection Act, Migratory Bird Treaties, or Game Acts apply to aboriginal peoples engaged in subsistence hunting? The great majority of aboriginal titles insist upon the importance of the right to hunt freely.

Before the passing of the 1982 Canadian Constitution Act, the courts periodically and reluctantly recognized the legal capability of the treaty rights of Indians to allow the exemption of treaty Indians from hunting laws and regulations. With the inclusion of section 35 in t e 1982 Constitution Act, the rights to exemption from bodies of hunting legislation were firmly recognized for many first nations groups.

However, the litigation process does not appear to offer much hope for aboriginal peoples attempting to assert their rights to hunt in a manner most sensible to traditional patterns of hunting activity. The governmental and legal policy of protecting aboriginal property and hunting rights only as long as they are compatible with resource development must be reworked if the survival of aboriginal communities is to be achieved. A push for relevant legislation is considered the most appropriate method by which the goal of realizing the protection of aboriginal hunting rights can be accomplished (Morse 1985).

2.3.2. Land Claims Settlements and Wildlife Resources in the North

Of all the land claims agreements negotiated in the arctic, the Nunavut agreement is the first agreement which was not initiated under the direct pressure of the development of an industrial mega-project. The Alaska Native Claims Settlement Act was implemented under the auspices of the Supreme Court of the United States in

1971, three years after major oil deposits were discovered at Prudhoe Bay in northern Alaska. The James Bay Northern Québec Agreement was ratified in 1975, four years after the construction of the first phase of a massive hydro-electric project had begun. Negotiations for the James Bay Agreement began only after the Cree of northern Québec managed to successfully bring about a very briefly upheld injunction to stop the development construction in their homelands. Oil and gas exploration activity in the Arctic Islands and the Mackenzie Delta region occurred until the mid-1970s when the oil and gas industry looked to the Beaufort Sea area in the hopes of discovering more profitable off-shore oil deposits. The Inuvialuit Agreement was ratified in 1984, only two years before the Amauligak structure, a major oil deposit, was found just off the Tuktoyaktuk peninsula. The Nunavut Agreement, ratified by local communities in November of 1992, is the latest and the largest comprehensive land claims settlement to be negotiated in North American history.

In the writing of the Alaska Native Claims Settlement Act, the United States government refused to recognize the territorial base of aboriginal groups and their organisations in Alaska and insisted instead on negotiating with village and regional corporations. Many native Alaskans now worry of the inability of aboriginals to prevent the take-over of aboriginal lands by outside investors following the opening up of private aboriginal stock shares to the open market in 1992. The possibility that aboriginal Alaskans will have lost not only their rights to hunt, but the collective possession of their lands is a grave and immediate concern. The ANCSA legislation embodies an ideal of southern conceptions of the protection of individual interests, and by its very nature rejects the ideals of societies rooted in a hunting way of life.

The James Bay and Northern Québec (Cree and Inuit) and the Northeastern Québec (Naskapi) Agreements are examples of contracts which arguably serve to guarantee hunting, trapping, and fishing rights in northern Québec. The agreements guarantee the priority of aboriginal harvesters over other users of wildlife resources based upon the levels of harvesting established to exist at the time of the signing of the agreements.

The Inuit Hunting, Fishing and Trapping Support Program is an example of one of the administrative bodies set up as a result of the James Bay Agreement to help preserve the viability of aboriginal hunting activities. With a grant from the Ministère du Loisir, de la Chasse et de la Pêche, the Kativik Regional Government in northern Québec has set up community programmes administered by Native Village Corporations. These programmes are designed to "favour, encourage and perpetuate the hunting, fishing and trapping of the Inuit as a way of life" (Kativik Regional Government 1985).

The James Bay agreements, are not endorsements of Cree, Naskapi and Inuit land rights. Without the guarantee of land rights the most solidly entrenched hunting rights mean nothing. Anyone who has followed the development of the Hydro-Québec James Bay projects recognizes the limited extent to which these agreements are able to protect aboriginal interests in the north thus far (Richardson 1991).

Land claims settlements have not assured the rights of access and use to land that a national body might enjoy; they have assured the rights of land owners within a state. Generally, claimants agreed to surrender all aboriginal title to future claims of land. The negotiation of land claims has been particularly prominent in Canada's north in the last twenty years because Inuit and some other aboriginal groups north of 60°N never signed treaties with the federal government. In the terms of the 1982 Constitution Act, the aboriginal rights of many northerners remained unextinguished (until the ratification of comprehensive land claims packages began in 1984).

In return for the "extinguishment" of their aboriginal rights, aboriginal groups have negotiated ownership of specified land areas as well as monetary compensation packages, and a number of other rights. These rights commonly include priority harvesting rights within and in many cases outside of settlement lands. Settlements usually insist on a significant involvement of claimants in land and wildlife management policy-making and implementation. Settlements include the terms of impact assessment procedures of development projects and the terms of compensation to wildlife harvesters in the event of environmental damage caused by industrial projects.

International bodies now speak about the importance of recognizing indigenous economic and cultural rights:

> Indigenous peoples are entitled to manage their traditional lands and resources....Indigenous peoples must set the objectives of managing their traditional lands and resources, decide the means of achieving the objectives, and undertake the tasks required to carry them out .. Development planning that directly or indirectly affects native peoples and their traditional resources must give priority to protection and sustainable development of those resources... Some aboriginal peoples have taken steps to defend and promote their subsistence-based economies. This effort should be expanded into a cooperative relationship between indigenous and non-indigenous peoples, to undertake an extended campaign promote sustainable use of natural resources, and in particular the use of products traded by indigenous peoples. ("World Conservation Strategy for the 1990s" in Smith 1991:48-49)

It is the maintenance of a food production base, "the basic element to any society and its economy" (Usher 1976a), which aboriginal communities are striving to defend from the proponents of economic development which is incompatible with aboriginal harvesting practices. Aboriginal communities have hoped to achieve a basic set of goals (described above) through the process of land claims negotiations. All settlement agreements in northern Canada share a number of features in common. These common goals all involve the protection of the viability of subsistence activities:

The goals the Inuvialuit have sought to achieve through negotiations of the Final Agreement (of the Inuvialuit Land Claims Agreement) are:

> (a) to preserve Inuvialuit cultural identity and values within a changing northern society;
> (b) to enable Inuvialuit to be equal and meaningful participants in the northern and national economy and society, and
> (c) to protect and preserve the Arctic wildlife, environment and biological productivity.
> (Keeping 1989:14)

Such goals can similarly be seen in the negotiation of the Nunavut agreement, where the following objectives defined the terms of negotiation:

> to provide for certainty and clarity of rights to ownership and use of lands and resources, and of rights for Inuit to participate in decision-making concerning the use, management and conservation of land, water and resources, including the offshore;
>
> to provide Inuit with wildlife harvesting rights and rights to participate in decision-making concerning wildlife harvesting;
>
> to provide Inuit with financial compensation and means of participating in economic opportunities;
>
> to encourage self-reliance and the cultural and social well-being of Inuit;
> (TFN and DIAND 1990:1-2)

In order to understand the role that land claims processes can and are playing in the protection and preservation of subsistence economies, it is important to understand why land claims settlements are considered by so many aboriginal communities to be vital to their survival in the future. As expressed in a publication exploring the viability of a "Wildlife Harvest Support Programme" for the NWT:

> Since the late 1960s, native people have grappled with resource use policies that are inimical to the harvesting way of life. Indeed, but for perceived development impacts, it is unlikely that aboriginal land claims settlements would be an issue today.... If development policies were more compatible with social and harvesting needs, people might rely less on common law and statute for redress. The issue of compensation might therefore be addressed more effectively at the policy development stage. (Ames et al. 1988:186 & 187)

CHAPTER 3. CO-MANAGEMENT

A limited number of biologists discuss the ultimate dangers of ignoring TEK or indigenous knowledge and are discovering many of the inadequacies of western ecological knowledge as a base for the formulation of wildlife management policy-making.

> In the case of the Hudson Bay eider, Inuit knowledge far outstrips the available scientific data which are by comparison meagre and narrow in scope. It is already apparent that biologists would have to establish a data set remotely comparable to that already extant in contemporary Inuit communities. (Nakashima 1991:267).

Knudtson and Suzuki express the need to acknowledge and incorporate the role of indigenous knowledge and ideologies into the global framework of international policy-making (1992:201). Suzuki urges us to see beyond our disillusionment with the hoaxes represented by Seattle's "All Things are Connected Speech" (ibid:xvi)[5] to realize "that it is time to look beyond the comfortable shallows of poetic, greeting-card-like formulations of Native ecological knowledge - to look **beyond** [original emphasis] the cliches of Chief Seattle - into deeper, more intellectually and spiritually challenging waters." (ibid:xviii).

It is obvious when reading papers describing biologists' conceptions of traditional knowledge (Freeman 1985, Fuller 1979, Gunn et al. 1988, Riewe and Gamble 1988, Stirling 1990), that wildlife biology as a discipline is grappling with the need to incorporate not only interdisciplinary thinking, but cross-cultural perceptions of wildlife and human-environment interactions. Gunn, a caribou biologist in the NWT, expresses the common dilemma of wildlife biologists: "...if conservation practices of hunters are not recorded, cannot accept a priori that they exist..." (Gunn et al. 1988:26)

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[5] Suzuki describes a speech delivered by a chief named Seeathl between 1853 and 1855 in present-day Washington state. Apparently, this speech was documented and after many different revisions received much attention from the environmental movement of the 1960s (Suzuki and Knudston 1992: xvi-xviii).

This statement describes a good part of the reason that wildlife biologists are hesitant to incorporate TEK (the knowledge of traditionally non-literate peoples) into their scientific methods in any more than a superficial capacity. Scientists are often reluctant or unwilling to accept the legitimacy of TEK as a valid knowledge system and unable to step beyond the bounds of their own ideologies. It is the entrapment of a discipline within the confines of its own ethnocentric parameters which led to the formation of the disciplines of ethnohistory (see Jennings 1982 and Trigger 1982) and ethnoscience. In the same manner, the precedence for the incorporation of TEK into wildlife management as a discipline is leading to the construction of a new paradigm of thought; theory developing within the practical experience of those involved with co-management structures, it is indeed a field with some very exciting prospects.

3.1. WILDLIFE MANAGEMENT INSTITUTIONS IN NORTHERN CANADA AND ALASKA

The following section is a general outline of wildlife management institutions influencing Alaskan and northern Canadian situations. Included are various international, national and regional wildlife management organisations which play some role in facilitating aboriginal participation in wildlife management institutions. These management bodies have been grouped and categorized within their regional political contexts according to the scope of their membership (i.e, the Alaskan Porcupine Caribou Commission, although concerned with the conservation of a caribou herd which crosses national borders, is categorized as an Alaskan institution).

3.1.1. International Wildlife Agreements

The Migratory Birds Convention Act (MBCA) was the second body of legislation (after the 1911 Fur Seal Convention) with wide-ranging implications for northern North America. The MBCA was signed in 1916 by Canada and the U.S.A. and came into effect in 1918. The convention espouses the regulation of migratory bird hunting such that spring hunting is prohibited (Belanger 1988:172).

The applicability of the Act to aboriginal peoples has been challenged for many years. In the late 1970s and early 1980s, the Canadian government failed in its efforts to legalize unrestricted subsistence hunting through the James Bay Northern Québec Agreement and the Inuvialuit Final Agreement (Inuit Circumpolar Conference (ICC) 1986:56, Dacks 1990:76-77). However, the MBCA's jurisdiction over aboriginal hunting practices has been legally waived in Canada (see section 3.2.4.). Interestingly, a 1984 addendum to the MBCA was an unprecedented regional agreement between the Yupiktak Bista subsistence hunters (of the Yukon-Kuskokwim Delta region of Alaska) and State of California sport hunters to limit bird hunting to protect declining species populations (ICC 1986:56, Berger 1985).

In 1942, the Provisional Fur Seal Agreement (a modification of the 1911 convention) was signed by Canada and the U.S.A., increasing Canada's share of the Pribilof Islands' harvest. In 1911, all pelagic sealing had been banned in the North Pacific (Belanger 1988:176).

The International Whaling Commission (IWC), an influential force in wildlife management, was established in 1946 following the 1937 signing of the International Whaling Convention by 15 nations. The IWC investigates and regulates whaling practices, but has not engendered much confidence in the aboriginal bowhead whale harvesting communities of Alaska and Canada.

In 1977, when a 1976 moratorium placed on bowhead whale hunting did not stop subsistence hunting of the whale (neither did the Marine Mammal Protection Act of 1972 nor the Endangered Species Act of 1973), the IWC declared a ban on subsistence hunting of bowhead as well (Freeman 1989:137). Immediately afterward, the Alaskan Eskimo Whaling Commission was formed (see section 3.2.3.). The Canadian government soon pulled out of the IWC over the declaration of the ban.

The North Pacific Fisheries Convention was established in 1952 by the U.S.A., Canada and Japan (Belanger 1988:178). As represented by U.S. membership, the Convention has allowed the Yup'ik to insist on the reduction of foreign interceptions of salmon.

In 1961, the International Migratory Birds Committee was established to represent the agricultural and wildlife interests of the U.S.A. and Canada in the absence of a convention on waterfowl management (Belanger 1988:178). The North American Waterfowl Management Plan of 1986 provided the missing convention. The U.S. and Canada agreed to concentrate efforts on restoring threatened waterfowl populations through the improvement of their habitat (Belanger 1988:183).

The International Convention for the Conservation of Migratory Species of Wild Animals ("Bonn Convention") of 1978 outlined the need for global conservation efforts. Although neither the U.S.A. nor Canada is a party to the convention (Belanger 1988:182), both countries had signed a 1940 convention to protect nature and wildlife (Belanger 1988:176). The U.S.A. - U.S.S.R. Agreement on Migratory Species worked to protect subsistence hunting rights.

However, the World Conservation Strategy of 1980 established global conservation goals and was developed by a wide swath of interests including the IUCN, UNEP, WWF, FAO and UNESCO. The World Conservation Strategy has shaped the forms of many future regional conservation strategies.

3.1.2. Arctic and Subarctic Wildlife Agreements

The framework for the Inuit Regional Conservation Strategy was adopted in 1986, and represents the views of Inuit from Greenland, Alaska, Canada and Siberia. The Strategy calls for the protection of harvesting rights and the resources and habitats that sustain Inuit resource use. The Northern Circumpolar Conservation Strategy and the Subarctic Indigenous Conservation Strategy call for similar actions.

An International Agreement on the Conservation of Polar Bears and Their Habitat was completely ratified in 1978 by Canada, Denmark, Norway, the U.S.S.R. and the U.S.A. The Agreement prohibits the hunting of polar bears except for local traditional harvests.

The 1988 Management Agreement for Polar Bears in the Southern Beaufort Sea involves two aboriginal parties; the Inuvialuit Game Council of Canada and the North Slope Borough Fish and Game Management Committee of Alaska. The Agreement is designed to minimize the harmful effects of human activities, to manage

polar bears on the basis of sustained yield and to facilitate the exchange of polar bear meat and products between traditional users in Alaska and Canada.

The International Porcupine Caribou Board (IPCB) has enjoyed a high profile in recent years due to the uncertain future of Alaskan calving grounds threatened by oil development. The IPCB is the result of a 1988 agreement between Canada and the U.S.A. to coordinate conservation efforts of the caribou subsistence resource for the people of northeastern Alaska, northern Yukon and the Mackenzie Delta region. The board is made up of eight members, four appointed by each of the U.S. and Canadian governments. The IPCB meets at least twice a year; in a user community where possible (IPCB 1990).

3.1.3. Alaska Wildlife Management Organisations[6]

The Alaska National Interest Lands Conservation Act (ANILCA) of 1971 instituted a legal compromise between the U.S. oil lobby and conservation interests. ANILCA's Section 1002 stipulates that the U.S. Department of the Interior must consult with Canada when carrying out resource assessments concerning wildlife that cross the Canada/Alaska border (Anon. Caribou News 11(2)). Pressure to form the IPCB stemmed largely from the lack of attention accorded to Section 1002 of ANILCA and helps to provide the coordination of the actions of the Alaska Porcupine Caribou Commission and the Porcupine Caribou Management Board of Canada which ANILCA did not provide.

The Alaska Eskimo Whaling Commission (AEWC) was set up in 1977 as a reaction to the IWC's ban of the Alaskan Inuit bowhead harvest (Freeman 1989b; Freeman, Wein and Keith 1992). The Commission is made up of representatives from nine Inuit villages which harvest bowheads. A memorandum-of-understanding has existed between the AEWC and the U.S. government's National Oceanic and Atmospheric Association to share the administration of IWC quotas. The AEWC's

[6] Huntington (1992) provides an authoritative background and analysis of the interaction between Alaskan subsistence hunters and wildlife management organisations.

management plan regulates the Alaskan bowhead harvest and supports scientific and harvest weapons research (Inuit Circumpolar Conference (ICC) 1986:50).

The Alaska Eskimo Walrus Commission was formed in 1978 to represent the walrus hunting villages of western and northern Alaska and to advise the U.S. Fish and Wildlife Service. The Commission encourages and participates in international cooperative research and management. In its advocacy of walrus habitat, the commission was able to halt commercial clamming in Bristol Bay, Alaska and successfully protect the food supply of walrus in the area (ICC 1986:50-51).

The Yukon-Kuskokwim Delta Goose Management Plan (YKDGMP) was drafted in 1984 through discussions of the U.S. Fish and Wildlife Service, the Alaska and California Departments of Fish and Game and the Association of Village Council presidents (Osherenko 1984). The Plan aims to improve the situation of declining numbers of Canada, cackling, white-fronted, emperor and black brant geese in the Yukon-Kuskokwim Delta area of Alaska.

The Kuskokwim River Salmon Management Working Group was formed in 1988. Participants in the working group include the founding members of Yup'ik Eskimo commercial/subsistence fishers and the Alaska Department of Fish and Game. The group receives no government funding and any interested citizen may become a member (Albrecht 1990:45).

The last Alaskan wildlife management institution to be described is the Yukon River Drainage Fisheries Association established in 1991. The association serves the interests of subsistence, commercial and sport fishers of salmon. The association establishes the seasons and catch quotas for salmon runs on the entire 1200-mile long stretch of the Yukon River in Alaska.

3.1.4. Canadian Wildlife Organisations - Interjurisdictional Arena

Wildlife resources were controlled by the federal government until the Natural Resources Transfer Act of 1930 relinquished the responsibility to provincial jurisdictions. However, the Yukon government (council) received jurisdiction over

game through the Yukon Act of 1900 (Dacks 1990:74)[7]. In contrast, it was not until 1967 that the wildlife staff of the NWT was transferred from federal to territorial responsibility. Initially, the NWT Game Act of 1948 meant that game management was covered in the Mackenzie District only, while the responsibility for the rest of the arctic lay with the RCMP and research was carried out exclusively by the Canadian Wildlife Service. The NWT Game Council was not created until 1974 (Dacks 1990:74-79).

Both the NWT and the Yukon drafted Land Use Planning Agreements with the involvement of aboriginal organisations in 1983 and 1987 respectively. A number of conservation strategies inspired by the World Conservation Strategy of 1980 exist in the Canadian north including: the Northern Québec, the NWT, the Sanikiluaq, the Vantat-Gwich'in (Old Crow) and the Yukon Conservation Strategies.

The federal government's Arctic Marine Conservation Strategy (of 1987) and Arctic Environmental Strategy (AES) (to run until 1996) encourage the cooperative management of renewable and non-renewable resource utilization. The AES has sponsored a number of community projects including ITA initiatives such as the Igloolik Polar Bear Management Plan, the Pond Inlet Narwhal Hunt Monitoring and Study program and Fort Good Hope's Ethics and Harvesting Techniques study (CMB 33:16).

In 1990, the Wildlife Ministers' Council of Canada publicized its Wildlife Policy. The Wildlife Policy calls on provincial and territorial governments to establish cooperative wildlife management programs with aboriginal peoples (Canada 1990).

Perhaps as a result of the Wildlife Policy, the Department of Fisheries and Oceans (DFO) drafted an Interim National Policy for the Management of Aboriginal Peoples Food Fishery in 1991. DFO's policy gives first priority to the aboriginal right to fish and promises to make every effort to negotiate management plans with aboriginal people. Aboriginal people are to be consulted before any decision or action

[7] see McCandless (1985) for a thorough account of the history of wildlife conservation in the Yukon.

is taken which may affect their food fisheries. The policy included the establishment of an Aboriginal Cooperative Fisheries and Habitat Management Programme (DFO 1991).

In the same year, the Attorney General of Canada wrote up legislation stipulating that if an aboriginal person is found by enforcement officials to have breached the MBCA or the Canadian Wildlife Act (CWA) the enforcement action is to be dropped where treaty or aboriginal status applies and safety and conservation values were not threatened. The policy also states that the harvest must be consistent with domestic use. An Interim Policy on the application of the MBCA or the CWA respecting closed-season hunting and egging by aboriginal peoples follows the same conditions listed above.

Finally, in a unique move, the Ontario government and first nation representatives signed the Ontario Statement of Political Relationship (1991). This statement is a promise by the province to deal with First Nations on a government-to-government basis and exempts status Indian people from normal wildlife enforcement policies under the same conditions outlined in the Attorney General's policy. However, it appears that the Temagami Stewardship Council, which was to be a precedent-setting co-management arrangement, is ineffectual in achieving its goals. It remains to be seen how the Wapseemong Agreement's MoU of 1991 will fare; it is a co-management agreement between the Ontario government and the Islington band for the management of fish, wildlife, forest and wild rice resources.

A couple of interjurisdictional northern national parks are in the process of incorporating aboriginal participation. The Wood Buffalo National Park Wildlife Advisory Board was established in 1986. Land claims settlements have included the negotiation of management rights in the south end of the park. Members are appointed by the Mikisew First Nation (4) (formerly the Fort Chipewyan Cree Band) and the Ministry of the Environment (MOE) (3). The superintendent of the park is an ex officio non-voting member (Morgan 1993:57). The Bluenose Lake National Park is proposed by the Inuvialuit community of Paulatuk. The park is designed to protect the calving and post-calving grounds of the Bluenose caribou herd and will include parts

of the Inuvialuit and Nunavut settlement regions as well as the Sahtu claim area (MacLeod 1992:4). The interim management guidelines of the Ellesmere Island National Park Reserve involve the cooperation of Canadian territorial departments with the Nunavut Wildlife Management Board and the Danish National Parks Board (Morgan 1993:34).

In Québec and Labrador, the Labrador Inuit Association has attempted since the early 1980s to see the establishment of a joint management board for the George River caribou herd with aboriginal participation (Anon. Caribou News 1(5):8). The Québec-Labrador Management Committee for the George River herd was disbanded in 1980. It is hoped that the George River Caribou Workshop to be held in 1994 may engender the atmosphere for the formation of a joint management board in the near future.

The Northern Buffalo Management Board of 1991 was set up to deal with the diseased bison issue. The board is composed of members from nine aboriginal communities (9); the federal (3), Alberta (1) and NWT (1) governments, the Canadian Bison Association (1), the Canadian Cattlemen's Association (1) and the Canadian Nature Federation (1) (Morgan 1993). The Polar Bear Technical Committee includes biologists from provincial, territorial and federal government agencies and invites aboriginal participation (Morgan 1993:36).

The most prominent big game management institutions in Canada are the PCMB and the B-Q CMB (to be described in the next chapter). The Porcupine Caribou Management Agreement signed in 1985 was preceded by a user community agreement signed in 1982 when the Yukon government refused to discuss the management of the Porcupine caribou herd until the resolution of the COPE land claim negotiations was achieved. The PCMB includes eight voting members; from the federal (1) and Yukon (2) governments, the Council for Yukon Indians (2), the Inuvialuit Game Council (1), the Dene Nation and Metis Association of the NWT (1) and the GNWT (1).

3.1.5. Canadian Wildlife Organisations - Provincial/Territorial Levels

Perhaps the longest standing "cooperative agreement" in Canada is the Beaver Reserves system in Québec. The system has become an institutionalized form of an original Cree management system (Feit 1973). Local Cree communities and the Québec government negotiate fish and wildlife habitat protection while prioritizing aboriginal subsistence and commercial harvests over other uses.

Land claims settlements have engendered a number of regional wildlife conservation boards. The James Bay and Northern Québec Hunting, Fishing and Trapping Coordinating Committee (JBNQ HFTCC) of 1976 is the first legalized aboriginal/government wildlife management institution. The JBNQ HFTCC represents 22 James Bay Cree, Inuit and Naskapi (as of 1978) communities of Québec. Voting members include eight aboriginal and eight Québec or federal government members. The Societé de développement de la Baie James is included as a non-voting member. Since the signing of the JBNQ Agreement, both the Cree Hunters and Trappers Income Security Program and the Northern Québec Inuit Hunters Support Program have been established.

The Inuvialuit Final Agreement (IFA) of 1984 is the first major comprehensive claim settled in northern Canada. The Inuvialuit Game Council is a corporate structure representing collective Inuvialuit wildlife interests with representation from local Hunters and Trappers Committees. The IFA outlined the formation of local Wildlife Management Advisory Councils (50% government and 50% Inuvialuit) and a Fisheries Joint-Management Committee which advises DFO on both fish and marine mammal populations (MacLeod 1993:7). An Inuvialuit Harvest Study involves various boards, Inuvialuit and government agencies in its work (Morgan 1993:47).

The Yukon Fish and Wildlife Management (Advisory) Board is made up of six Yukon First Nation members and six government members. Renewable Resource Councils are to be established for each First Nation traditional territory with three Yukon first nation members and three government members. A Salmon Subcommittee has been set up in the Yukon and experiences varying membership depending upon

the area of concern, i.e., the Yukon River drainage basin versus the Alsek River drainage basin (Swerdfager 1992:25). The YFWMB has established that if its mandate should conflict with the IPCB, the PCMB or the Canada-U.S. Pacific Salmon Treaty, it will allow these agreements to prevail (IFA 1984).

The 1992 Gwich'in Land Claim Agreement includes a mandate for the formation of a Renewable Resources Board made up of three Gwich'in and three government members along with an independent chair. The board is underlain by local Renewable Resource Councils who will aim to ensure the traditional harvest of wildlife by the Gwich'in as well as other aboriginal peoples in the area. The management decisions will take into full account the provisions of the Porcupine Caribou Management Agreement and the Bluenose Agreement (Gwich'in 1992).

The Nunavut Wildlife Management Board (NWMB) gained the potential for full decision-making authority in 1993 following the ratification of the Nunavut Agreement. A Nunavut Wildlife Management Advisory Board has been in existence since 1986 when a NWMB agreement-in-principle was negotiated between the TFN and the Canadian government (Anon. Caribou News 6(1):4). The operating procedures of the NWMB were set in 1991 (Morgan 1993:31) and the NWMB now has full legal control of wildlife monitoring and research activities in Nunavut. The board is made up of nine members; Inuit (4), MOE (1), DFO (1), DIAND (1), GNWT (1) and an independent chair nominated by NWMB members and is expected to commence activities by late 1994. An Inuit Impact and Benefit Agreement ensures that Inuit are involved in park management in the Nunavut region (Morgan 1993:32). The NWMB has agreed to coordinate its activities with the IFA Fisheries Joint Management Committee and the B-Q CMB.

A number of localized co-management institutions exist in Canada, but only a few will be discussed here. These conservation bodies advise upon the management of fisheries, marine mammals or big game animals, and forest resources.

Anguvigaq was a cooperative management system created in the 1980s by the Québec Inuit corporate and political organisations of Makivik and Kativik with the participation of the federal government and DFO. Anguvigaq is now defunct, but at

one time was made up of local organisations in each northern Québec Inuit community and focussed most of its concern on the management of beluga whales. In fact, a Northern Québec Beluga Management Plan exists, the result of the original involvement of DFO, Makivik Corporation and Anguvigaq.

On Baffin Island, at least two whale conservation organisations exist including the Southeast Baffin Beluga Management Committee and Iqalirtuuq, a strategy initiated by the WWF and the community of Clyde River for the creation of a bowhead whale calving ground sanctuary (Nickels 1991).

A growing number of fisheries-based co-management bodies have been instigated by DFO. These include the 1988 Great Bear Lake Management Committee (GBLMC) and the 1990 Great Slave Lake Advisory Committee (GSLAC). The GBLMC has voting members from the Satudene, the NWT Tourist Industry Association, DFO, GNWT Renewable Resources and GNWT Economic Development and Tourism. The GSLAC has voting members from the NWT Fishermen's Federation, Dene/Metis beneficiaries and the NWT Sport Fishing Lodge. DFO signed a major agreement with the Upper Stl'atl'amx Nation of Alberta for fisheries management in 1992.

This discussion has described some of the cooperative management agreements existing in northern Québec, the NWT and the Yukon. A number of cooperative management bodies exist in Manitoba including the Mathias-Colomb First Nation Moose and Woodland Caribou Co-Management Board signed between the first nation and the Manitoba government in 1991. The Pas Moose Management Agreement was formulated in 1990 and includes membership by three Manitoba aboriginal bands, two aboriginal community councils, an environmental organisation and the Manitoba government.

Manitoba has recently negotiated a number of co-management boards including participation by the Split Lake, Cross Lake and Norway House first nations. The boards are being established under the terms of Article 5 of the Northern Manitoba Flood Agreement. The Northern Flood Agreement Wildlife Advisory Board represents northern Manitoba communities, Manitoba-Hydro and the provincial government and

has for years attempted to compensate affected communities for damage caused by the Churchill River diversion.

The province of Saskatchewan and the Federation of Saskatchewan Indian Nations have drafted a Wildlife MoU which has not been signed as of yet. The MoU outlines the principles for establishing cooperative wildlife management bodies with 74 Saskatchewan bands. The 1992 Sipanok Area Management and Development Agreement (SMADA) is an example, however, of such a cooperative board. The SMADA Co-Management Council oversees the management of fish, wildlife and forest resources and its participants include the provincial and federal governments, the Shoal Lake and Red Earth Bands and the municipalities of Hudson Bay and Moose Range.

Alberta is in the process of formulating co-management policies (Alberta 1993). However, cooperative arrangements do exist in the province such as the Lac La Biche Regional Fisheries Committee set up in 1988. The committee's decisions are offered as advisory positions to the provincial Minister of Forestry, Lands and Wildlife.

The next chapter discusses the activities of the Beverly-Qamanirjuaq Caribou Management Board for the past twelve years of its existence. As will be seen in the light of the discussion of other interjurisdictional boards, the board is the most extensive representation of varied political interests in Canada. It is important to keep in mind, however, while reading Chapter Four, that the actions of the board are shaped by its advisory status.

It is self-evident that the board's actions are channelled in different ways than they might be if the board had final management decision-making authority. However, it is equally important to recognize that because the board's positions do not represent the positions of a single political body, its statements lack many of the political undertones of local or regionally bound management bodies.

CHAPTER 4. THE BEVERLY-QAMANIRJUAQ CARIBOU MANAGEMENT BOARD

Many authors (Gordon 1985, Osherenko 1988, Cizek 1990, Scotter 1991, Thomas and Schaefer 1991, Usher 1991) have described the conflict existing between caribou-using communities and government biologists prior to the formation of the CMB in the spring of 1982. A Caribou Management Group (CMG) (made up of government biologists) was set up in 1978 to develop a management plan to combat a perceived dramatic decline in caribou numbers. The CMG sought inter-agency agreement, but soon realized that a management plan could not be successful without local involvement in its formulation (neg.s 10/81:5,10[8]).

The Snowdrift Resolution of April 30, 1981 was a call by Dene and Metis groups in Manitoba, Saskatchewan and the NWT to form a user-only board including both non-treaty and treaty Indians as traditional hunters. Users were concerned that aboriginal participation in a user/government CMB would erode existing aboriginal and treaty rights (neg.s 12/81:3) and go too far to narrow the extent of eligible user membership.

Most jurisdictions, however, rejected the concept of a CMB composed solely of user members (neg.s 10/81:6). The final formula of user versus government representation (eight user and five government members) on the CMB was probably the most realistic means by which users could hope to achieve more influence in resource management decision-making. There was little scope for user involvement in any other forum. A user-only board would have had to fight a number of distinct political agendas and levels of political entities.

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[8] In this chapter only, references to the minutes of the negotiation of the B-Q Caribou Management Agreement of 1982 will use the following format:

(neg.s month/year of meeting:page reference of minutes). References to the minutes of the CMB will use a different format: (number of meeting:page reference).

Appendix 2 is a list of the meetings of the CMB held between 1982 (#1) to 1993 (#33) inclusive.

The financing of an annual budget of $75,000 since 1982 (cuts to the budget of 10% occurred in 1993) is shared by all government jurisdictions. NWT users are funded by the GNWT (two members from each of the Mackenzie and Keewatin districts), while Saskatchewan (two members) and Manitoba users (two members) are funded by DIAND. Keewatin user members are recommended by the Keewatin Wildlife Federation (KWF) while Mackenzie user members are recommended by the Dene Nation and the Metis Nation. Provincial user members are recommended by local band councils. User members are traditional users (almost always of Dene, Metis or Inuit background) as determined by their home communities. It is agreed by all governments involved (one member from each of the provincial and territorial governments and two federal members from DIAND and CWS) that the CMB is an advisory body whose recommendations are to be seriously considered and generally accepted by governments
(see Appendix 1 for B-Q CMB Agreement - includes the specifics of membership).

4.1. INFORMATION, EDUCATION AND COMMUNICATION

The "Kaminuriak Film/Video Project" and Caribou News: are the forerunners of the CMB's consultation and public relations programmes and are projects which were initiated and funded by DIAND in the early 1980s. The "Kaminuriak Film/Video Project" (National Film Board n.d.) documented local interviews with hunters and biologists in the Keewatin about the status of the Qamanirjuaq[9] caribou herd. The films were designed to promote understanding and discussion between and among biologists and hunters who were at odds over the causes or even the existence of a decline in the Qamanirjuaq caribou herd. The CMB was convinced that the films had facilitated communication and helped to change attitudes (1:6) pointing out that only

[9] The CMB changed the spelling of "Kaminuriak" to the more appropriate Inuktitut spelling of "Qamanirjuaq" in 1992.

two or three years previous to the signing of the Caribou Management Agreement it was impossible to freely discuss topics of caribou management in communities (2:7).

At the prompting of a Manitoba user member, the CMB began to look into possible sources of funding for a similar film/video project in Dene communities (1:7). However, the Indian Program of DIAND did not have the budget to launch such a project in Dene communities and rested its hopes for improved relations in the CMB.

Caribou News is the second of DIAND's Community Relations projects and was established before the 1981-82 negotiations of the Caribou Management Agreement. The CMB adopted the privately-produced publication in 1982 as its newsletter and distributes it free of charge to communities on the caribou range. Originally a bi-monthly publication (from May 1980 until 1988), the newsletter was cut back to three issues per year in 1989 and then to two per year in 1991.

At the inception of the board, a user member from Manitoba pointed out that Caribou News was a vital communication link especially in communities without radio, T.V. or telephone where such information could not be transmitted to users in any other way (3:5). A user member from the Keewatin later reported that Caribou News kept the presence of the CMB alive in the minds of local people (13:2).

Caribou News has attempted to increase readership by older members of Inuit and Dene communities by including translations of some of the key articles into Inuktitut and Dene-using syllabics. In 1989, when DIAND decided to cut the translation program which had financed the translation of Caribou News articles into Inuktitut and Dene, the board was left with the burden of an extra cost (23:4). A complete board evaluation completed in 1990 suggested that the CMB terminate the publication of the newsletter in part due to its high cost, but instead the board decided to reduce the frequency of its publication (28:9). In 1992, DIAND terminated its funding of the newsletter altogether, leaving the CMB with the task of supplying all funding for the production of Caribou News.

The **Schools Program:** represents the CMB's efforts to educate young people about caribou conservation by gearing educational materials toward children on the caribou

range (1:4). The program was financed by the CMB to a maximum of $120,000 (1:5) (a further $150,000 was contributed by DIAND) with background research contracted from two private firms (6:13).

In the spring of 1984, as a result of community consultation through community visits and questionnaires (2:6), DIAND commissioned the production of an audio-visual component to the Schools Program on the recommendation of both teachers and users (4:14). The board introduced the Schools Program to teachers in caribou range communities knowing that many teachers are new to the north and without any background in wildlife conservation (7:9).

By the spring of 1985, the four Schools Program units had been distributed free of charge to local schools. DIAND provided funds for the preparation of a Dene language supplement to the Schools Program for use in Saskatchewan schools in 1986.

A review of the Schools Program found that it was being used in every school but two on the caribou range and that approximately 80% of the teachers surveyed were aware of the program (Barren Ground Schools Survey Report 1987, p. 1 of summary). The review predicted that use of the Schools Program would increase even though it was not formally included in any of the jurisdictions' departmental curricula (ibid:2).

The CMB gave up its role as the main body controlling and maintaining the Schools Program on the recommendation of a needs assessment study (26:4). In 1991, the board formally requested all jurisdictions to take responsibility for regular teacher in-service as well as giving all caribou range school boards permission to reproduce any missing items from their kits (29:15, 30:4). Saskatchewan's Department of Education endorsed the Schools Program for use in its schools in 1992 (Anon. Caribou News 13(2):9).

Adult Education: remained an issue of concern to government and user members throughout the planning of the Schools Program that an adult education strategy was left out of the CMB's management goals (7:6-8). An adult educator from DIAND looked at the Schools Program from a young adult's perspective (7:8) and by the

spring of 1987, an Adult Educators Guide complementing the Schools Program kits were distributed to adult education centres in the NWT and Saskatchewan (15:2).

Scholarship Awards, School Competitions and Caribou Camps: are further attempts of the CMB to increase education and awareness of the needs of barren-ground caribou conservation.

In 1987, with seed money from the GNWT, the board set aside funds for the establishment of a scholarship fund (15:15, 18:12) to be made available to school-age children living on the caribou range (15:16). Scholarships were first distributed in 1989, but in 1990, the board widened the range of acceptable applicants, and made the awards available for studies relating to barren-ground caribou in any area of Canada. Awards are still preferentially distributed to residents of user communities and to research which specifically involves the Beverly and Qamanirjuaq herds (28:10).

The first prose and poster school competitions sponsored by the board were held in Manitoba in 1987 (17:3). The board approved the allocation of $2,000 per annum to each jurisdiction in order to run community school competitions (18:11). All schools have participated in the competition programme except for those in the NWT (20:9).

The sponsorship of "kids' caribou camps" by the CMB began in 1990 with the board's agreement to contribute $300 to a caribou camp organized by the community of Snowdrift (now Lutsel K'e) (25:11). Children were taken out on the land to experience a caribou hunt and to learn traditional meat and hide preparation skills from elders. The board later set aside $7,000 to support Kids' Caribou Camps in other user communities, allocating $500 for each community (26:12).

Contact with Outside Organisations: has obviously been important to the functioning of the board. The CMB determined from its outset that contact with other wildlife organisations would make it especially effective (2:16). The CMB exchanges minutes with closely-related institutions such as the PCMB and the Denendeh Conservation Board (DCB) (27:15-16). The board maintains casual contacts with a

number of other territorial and provincial aboriginal political organisations and conservation authorities (22:6, 29:4).

The board invited non-governmental wildlife organisations to attend its meetings, but has never received extensive interest beyond The Canadian Nature Federation's request for the board's support in opposing any changes to the Thelon sanctuary in 1988 (19:3). In 1989, the Wildlife Policy Analyst with the Assembly of First Nations offered support to the CMB should it ever need aid (23:4).

The PCMB has acknowledged the importance of the CMB's archetypal work, thanking the board for its example, and stating that the negotiation of the Porcupine Caribou Management Agreement had "relied heavily on the CMB's blazing of the trail" (11:11). In 1991, at the PCMB's request, the CMB and the PCMB publicized a resolution encouraging the establishment of a co-management board for the George River caribou herd whose ranges occupy areas of northern Québec and Labrador (28:3, 29:7) (the establishment of such a board is still not realized).

The CMB has kept occasional, but continuous contact with the Nunavut land claims body (TFN) and has extended invitations to the Inuit Tapirisat of Canada (ITC) to attend its meetings (8:9). Recently, two members of the CMB have been concurrent members of the NWMAB (Nunavut Wildlife Management Advisory Board) In 1991, the NWMAB and the TFN extended their support of the Beverly-Qamanirjuaq Caribou Management Agreement's renewal (28:6) and both groups stated that they looked forward to the advice the Nunavut Wildlife Management Board (NWMB) would receive from the CMB in the future (28:14). The CMB had been somewhat worried that such support would not be forthcoming. Appropriately, in 1992, the CMB budgeted funds for the translation of relevant material into Inuktitut for the NWMAB (31:8). ITC received the CMB's support in 1993 to express its concern over the proposed development of new uranium mines in Saskatchewan (32,33).

The CMB first had contact with the Denendeh Conservation Board in 1988, when the DCB contacted the CMB for support in expressing its opposition to federally-proposed changes to the boundaries of the Thelon sanctuary in the NWT

(19:3). The DCB invited the board to participate in a public review process of forest fire management in 1989 (21:8).

The CMB has attended or been represented at a number of academic conferences including the periodic meetings of the International Reindeer/Caribou Symposium, the North American Caribou Workshops and a 1990 Common Property Resource Conference in Winnipeg (25:7). In 1990, a Man and Biosphere (MAB) research team based in Alaska received the board's support for a comparative study of caribou management systems. The MAB research involves extensive study of the Beverly-Qamanirjuaq and the Western Arctic (Alaska) caribou management systems (30:4, 30:8).

Other Communication Methods including Television, Radio and Posters: have been discussed as media to which could aid the role of the CMB as an information disseminator. Discussion of possible T.V. and radio coverage of the CMB's activities showed, however, that the costs of producing such coverage would prove to be prohibitively high (7:13). Nevertheless, the CMB has been careful to be sure that it contacts local radio and newspapers directly wherever meetings are held (8:10).

In 1989, a private consultant was contracted to produce a series of Inuktitut, Cree and Dene pre-recorded radio programs to complement the information coverage provided by Caribou News (22:14). The CMB has also produced a portable CMB display outlining the board's history and functions and in addition had promotional posters made (23:8).

4.2. THE USE OF CARIBOU

Discussion of the commercial use of caribou has led to many heated and divided arguments between proponents and detractors of the sale of caribou meat; this is one of the most controversial set of issues that the board has dealt with. The board has always based its advice on the precept that traditional users have the highest priority of use while non-resident hunters have the lowest priority of use.

Commercial Quotas: became a major topic of debate for the CMB when Nunavut Furs and Country Produce approached the board with the first request from a private enterprise for a commercial quota from the Qamanirjuaq herd in 1984 (7:3) while the Fort Smith HTA requested a quota from the Beverly herd in 1985 (11:9). The board decided to oppose both applications because of the limited access to caribou of provincial users (7:15). Furthermore, neither provincial government would support commercial wild meat production (7:10) and the board was not confident that it had adequate information about actual herd sizes to recommend additional harvests (7:14).

A commercial use committee (formed in 1985 (10:15)) produced a series of prioritized use categories based upon estimations of sustainable harvest levels (11:7)[10]. A Manitoba user member abstained from voting at the motion to approve the adoption of the use categories, feeling that the commercial use of caribou was an unacceptable break with tradition (11:6-7).

In 1986, the CMB rejected the Fort Smith HTA's second request for a commercial quota in a vote held by secret ballot (1986). This was the only motion to be defeated in the CMB's eleven years of existence. The HTA made it clear that it questioned the ability of the provinces to prevent NWT hunters from taking caribou in well-organized hunts when all meat was to be used by aboriginal people (14:4). When the GNWT supported the Fort Smith HTA's third appeal in the spring of 1987, the CMB voted to approve the Fort Smith HTA's request on the condition that it submit an operating plan and yearly reports on the use of the quota to expire in two years time (15:14). It is evident that the board attempts to formulate recommendations by consensus as much as possible. This means, therefore, that controversial items are seldom tabled in a forum necessitating a formal vote.

At the same 1987 meeting, the CMB cancelled the Keewatin's existing intersettlement trade quota (approved by the CMB in 1986) in order to replace it with a commercial quota of 350 caribou from the Qamanirjuaq herd. Members requested

[10] see "The Caribou Management Plan"

that the Keewatin communities follow the same conditions required for the approval of the Fort Smith HTA quota (15:14).

Soon afterward, the board learned that the commercial quota was receiving little interest in the Keewatin, but that meat was being sent to Inuit health centres in Churchill and Winnipeg. The board was concerned that this constituted a contravention of the conditions set by the board that there be no export of meat out of the Keewatin (18:13).

When neither the Fort Smith HTA nor the KWF submitted detailed interim nor final reports of the use of their commercial quotas, the CMB withdrew its support of commercial quotas altogether in November of 1988 (20:11). At that time, the GNWT asked the board to rethink its position (21:2). The KWF stated that it had received unreasonable pressure to report on the use of the quotas and a representative intimated his view that these sorts of regional needs and problems should be solved at regional levels (21:10).

The board then extended the KWF and the Fort Smith HTA quotas (in 1989) for a further two years (21:11). The CMB also approved a request of the Whale Cove HTA for a quota of 100 animals (subtracted from the Keewatin's commercial quota) to send caribou meat to Manitoba for Inuit consumption at the Churchill and Winnipeg Transient and Health Centres (21:11). At the board's recommendation, the GNWT Department of Renewable Resources promptly prepared changes of its legislation to allow the export of meat from Whale Cove for Inuit use at Transient Centres (22:3).

The CMB recognizes the conflict in philosophy toward the commercial use of caribou that it faces within its own membership. A division still exists between those that consider the commercialized use of caribou to pose cultural problems and those that see it as a means of economic development (14:4, 33:).

Antler Sales: became a topic of discussion when users reported in 1988 that caribou were being killed in the Lutsel K'e area almost exclusively for their antlers and sold later in Yellowknife. The CMB immediately expressed its concern to the GNWT Minister of Renewable Resources (18:13). Concern rose again at a 1990 meeting when

a Keewatin user member voiced his desire to see the practice controlled (25:11). Apparently, it was possible to sell velveted antler for $25 per pound, while dropped antler sold for $6 per pound (25:11). Caribou had been killed just for the acquisition of antler in Whale Cove and the HTA had put a stop to the practice (25:11).

By the time the December 1990 meeting of the board was held, the CMB had received notices from both the Dene Nation and the PCMB calling for the cessation of the sale of caribou antler (26:12). The DCB joined the voices of the Dene Nation and the PCMB in the summer of 1991 (28:3).

The board decided to gain a sense of user communities' concerns about the sale of caribou antlers before taking a position. The GNWT made it clear that it would support community opposition to the sale of antler if this was the chosen position (28:8). However, less than a year after a Keewatin user had complained about an incident of waste in Whale Cove, a GNWT government representative informed the board that the communities of Whale Cove and Baker Lake were selling antler without any evidence that meat was being wasted (28:8).

The 1992 meetings of the board made it clear that user support of any kind of antler trade was split by the degree of accessibility of communities. The communities of Whale Cove and Baker Lake supported a regulated trade which restricted antler buying to hunters with commercial tags or during the seasons when caribou shed their antlers (31:12). The KWF thought that there was not sufficient trade in antler to consider banning the practice (31:12). The GNWT said that the antler trade was legal in the Keewatin because there was no road system, therefore, the trade could be more easily controlled (30:10). Users south of the treeline were opposed to the trade feeling that the potentials for abuse were too high where hunters were much closer to road systems (30:10).

"**Community Service Quotas**": are quotas recognising caribou use which could perhaps be considered distinct from other commercial and intersettlement trade quotas. The board supported a request for a quota of 30 caribou for school lunches at a school in northern Manitoba in December of 1991 (29:12), but stipulated that it did not want

to set a precedence for further requests. In contrast, in the spring of 1992, the CMB rejected in principle the Baker Lake HTA's request for the GNWT to change the NWT Wildlife Act to allow the feeding of caribou to dogs (30:3). Keewatin user members suggested that the HTA seek funds for a fishery to support the need for dog food (30:12-13).

In December of 1992, the CMB supported a request for a commercial quota of 15 animals per year to be taken by Treaty 8 hunters for patients in Uranium City, Saskatchewan (31:11). A request for approval of the harvest of 20 caribou for the use of students at the Lynn Lake (Manitoba) Friendship Centre was also supported by the board (31:12).

Non-Resident Sport Hunting: was not an issue that received much attention by the board until the summer of 1991, when both the Fort Smith HTA and the KWF asked for second renewals of their commercial quotas. There was a new twist to the KWF's request. The board decided to support the KWF's request to use 35 animals of its 350 animal commercial quota as a non-resident sport hunt quota (29:11). GNWT regulations for a sport hunt were in place by the spring of 1992, but the Keewatin regional biologist stated that he expected no demand in the communities of the range because outfitters were located only in the communities of Repulse Bay and Coral Harbour (30:9). The non-resident sports hunt quota remained unused by the close of 1992 (31:11), however, the GNWT informed the board that it had opened a meat processing plant in Rankin Inlet and the non-resident quota was to be reallocated for commercial use by communities (31:11).

The first request for a privately-run non-resident hunt was referred to the board by the Manitoba government in 1988. The request came from an outfitter based in northern Manitoba (20:4). The Manitoba government only began to consider issuing non-resident caribou hunting licences to outfitters in the fall of 1990 (21:6), while a Manitoba user member expressed his consternation (21:6).

The GNWT member stated that the NWT experience with the issuance of 400 non-resident tags had been positive. The tags generated 40 seasonal positions and $1.3 million in community revenues per annum and all outfitters were NWT residents often

collaborating with local HTAs; most of the meat was distributed in local communities (21:6-7). The Manitoba government members later announced that there would be no non-resident hunt if aboriginal communities were not going to benefit (22:13).

In 1993, the Manitoba government virtually approved non-resident caribou hunting in the province. The Manitoba government member asked the board for support of the move, however, the Saskatchewan government member was wary to provide support and a motion to endorse Manitoba's actions was tabled at the September 1993 meeting (33) (this motion was later approved at the January 1994 meeting).

Resident Hunting: was an issue of contention in 1984 when the GNWT asked the CMB to support a change of the NWT game laws to allow Keewatin residents without General Hunting Licences (GHLs) to increase their take from one to three caribou per year (6:14). The Manitoba government member expressed concern that with such a change, residents of Churchill, Manitoba would also demand increased access to caribou and would subsequently choose to harvest Qamanirjuaq caribou instead of taking animals from the Cape Churchill herd (7:10). The proposed increase in the non-aboriginal harvest in the Keewatin exceeded the actual total harvest in Manitoba (7:10).

When the CMB voted to defer discussion of the Keewatin Bag Limit increase (7:15), the GNWT member of the board raised the non-aboriginal take in any case in 1984. The GNWT considered the matter to be a procedural matter which filled existing and not new requirements (8:11). In contrast, DIAND and a Keewatin user member felt that the matter was actually a fundamental policy problem and not an operational problem (8:11).

At the spring 1987 meeting, the CMB supported the NWT Wildlife Federation's request for a further increase of the resident bag limit to five caribou per hunter (15:13). The board was informed that the GNWT Minister of Renewable Resources had waited on the advice of the Bathurst and the Beverly and Qamanirjuaq

Caribou Management Plans before making its decision to increase the bag limit (15:13).

In 1989, the Manitoba government decided to introduce a licensing system to allow resident hunting of the Qamanirjuaq herd for the first time since the 1950s. Just as predicted, the Manitoba government had received pressure from the community of Churchill to increase opportunities for resident and non-resident hunting in 1987 (16:5). The CMB supported the Manitoba request to institute resident hunting licences subject to adequate community consultation (17:6).

In 1989, Manitoba user communities were asked to be vigilant about reporting any violations by resident hunters to the Manitoba government (21:6). The Manitoba user member was upset with the circumstances stating that he had been unaware that the licences had already been issued and blamed lodge operators for any abuses that were taking place (21:6).

The Manitoba user member had explained in 1987 that it was very difficult to differentiate between the different types of commercial use of caribou by Dene concepts. Most users saw the resident hunt to be the same as any other commercial use of caribou (17:6). Manitoba user communities appear to be in an uncomfortable position where they are the unofficial "watch-dogs" of lodge operations which potentially hold the only key to economic development in their areas.

The CMB has supported the efforts of groups **Affirming Aboriginal Access to Caribou:** The Saskatchewan government revised regulations in 1985 in order to permit non-status hunters to provide caribou meat for their families (11:10). The expected response to the permit system included 431 non-status hunters already taking 1,568 caribou (approximately) in 1985 (11:10). In 1992, Subsistence Use Caribou Licence holders saw their quota increase from two to four caribou, at Saskatchewan's suggestion and the CMB's approval (31:15).

The Fort Chipewyan band of Alberta approached the CMB in 1985 for support of its traditional hunt of Beverly caribou in the NWT as an alternative to appealing for aid from the courts (11:8). Hunters had recently experienced problems with NWT

officials when trying to export meat across the Alberta/NWT border back to the predominantly Cree community of Fort Chipewyan (11:8). The CMB resolved to support the Fort Chipewyan hunt immediately (11:9).

The GNWT approved the CMB's resolution (12:2) and issued a licence for a quota of 300 to 600 animals annually to be taken by Cree, Dene and Metis traditional hunters in Fort Chipewyan who were to retain the meat within the Fort Chipewyan area (12:10-11).

As a result, the CMB passed a motion of support for Manitoba traditional users' request for access to caribou in the NWT (11:9) as well as a reciprocal motion supporting the access of Keewatin Inuit to Beverly and Qamanirjuaq animals in the provinces (11:14). A Manitoba user expressed his support for the Fort Chipewyan hunt in the NWT, but asked the CMB to see the irony of the situation where Manitoba users had asked for similar rights to hunt in the NWT for years and no action had yet been taken (12:11). The GNWT later instituted cross-border hunting licences (Border A and B licences) hoping to remedy this situation.

Waste: and its definition has been a fundamental matter plaguing discussions of caribou conservation for decades. The CMB has tackled issues of waste ranging from the spoilage of meat to crippling losses due to poor marksmanship. In 1983, the board discussed plans for the coordination of the use of community freezers in the Keewatin (4:9). Users attending the user assembly to approve the CMB's Caribou Management Plan in 1986, asked the board to persuade governments of the need to fund community freezers (UA:5). Community freezers now exist in the NWT.

Efforts to set up community rifle ranges in order to improve marksmanship, especially that of young people, were made by the KWF, but the federation quickly discovered that the insurance liabilities were too high (UA:12). Users attending the 1986 assembly heard that the CMB wished to fully understand the nature and degree of crippling losses (UA:11). One user stated that it was a lot easier to retrieve wounded caribou in tundra rather than forested areas. The user implied, therefore, that

it was not possible to estimate crippling losses from a study of the experience of deer hunters in Manitoba previously mentioned by a government member (UA:12).

A Saskatchewan user member suggested in 1989 that the CMB produce life-size target posters to improve marksmanship (20:10, 20:12). By the summer of 1990, the CMB had put together a "target shooting competition" package to encourage shooting competitions at community festivals that would be open to all members of the community (25:8).

In 1991, a conservation officer from Uranium City documented incidents of caribou wastage by hunters near the NWT/Saskatchewan border (29:17). The Saskatchewan wildlife biologist was greatly concerned about the incidents, but was quick to indicate that there existed a variety of possible usages of caribou and called for a redefinition of the term "wastage" so that it would be acceptable to caribou-using people (30:13).

The board responded by requesting the GNWT to make a caribou wastage video (30:13) and set aside money for its production. The board invited the PCMB to participate in the production of the video (31:10), but has yet to receive an answer. In addition, the MAB Project research team was asked to include wastage as one of the topics of its research (30:13) and researchers will interview users in a number of communities about wastage in the winter of 1994 (33). Government members are reviewing current wastage regulations to determine whether changes are advisable (31:10).

4.3. THE CMB AND TRADITIONAL CARIBOU USERS

This section discusses the specific administrative and organisational concerns of user members. The reader should not interpret this section to be a representation of all of the interests and concerns of user members, which are largely intermingled with the concerns of government members in the other sections of this chapter.

Public Meetings and a User Assembly: have been the primary mechanisms through which the board has provided first-hand experience of the CMB's activities to members of caribou-using communities. The CMB holds public meetings in user communities when possible, usually in conjunction with regular board meetings held in user communities. It has not been possible, however, for the CMB to visit all communities on the range given logistical (not all user communities have community halls or adequate accommodation facilities) and financial restraints. This has led to the problem of a lack of representation of those users indirectly represented by CMB members who do not live in their communities and who do not have the financial means or the time to get to such communities.

In 1986, a user assembly was held in Arviat in order to allow at least two user delegates from each user community to review the board's caribou management plan. The CMB employed a professor from the University of British Columbia to gage public reaction to the plan.

Following the user assembly the CMB set aside $25,000 to finance special sub-committees to attend community meetings outside of the CMB's regular meeting schedule (15:16). In 1988, the CMB committed a further $20,000 to the continuation of sub-committee meetings in communities (18:12).

Discussion at a series of public meetings centred around Manitoba and Saskatchewan users' consternation concerning the GNWT's implementation of a cross-border licensing system. Provincial users worried that if they accepted the need to obtain such border licences in order to hunt in the NWT, they would compromise their treaty rights (22:7-8). This issue was continually brought up at independent sub-committee meetings and regular public meetings held in ten territorial and provincial user communities between 1989 and 1992[11].

The CMB's Organisation and the Needs of User Members: It is too easy to present a simple dichotomy of interests when discussing a management organisation composed

[11] see "Cross-border Hunting Rights" for the results of these discussions

of government employees and local community members. However, the fact that government members are supported by an employment position and a salary to carry on with action and discussion of wildlife management issues in and outside of the CMB meeting setting gives such members a certain inherent advantage over user members.

User members do not usually have the ability to consult departmental policies or mandates when making proposals or decisions at board meetings. It is unrealistic to expect that user members can fully represent the wide variety of aspirations coloured by generational differences within their home communities, while at the same time trying to represent the perspectives of neighbouring communities within the same jurisdiction.

The board has introduced a number of changes to the format of its operations in order to allow user members to participate more effectively. At each meeting, time is alloted for user members to meet and discuss common concerns on their own, while government members discuss the administrative details of the board's functioning. In 1984, the board supported a proposal to allow user members to budget for telephone calls to other members of the board to discuss issues of mutual concern (9:5). The CMB also expressed support for the financing of the travel of user members to the communities they represent (9:6). Furthermore, money was committed by thamber of Mines' comment by pointing out that whether or not the caribou population was experiencing an increase, the location of the calving grounds had been consistent since the CPMs monitoring programme began (15:7-8).

However, in 1991, when DIAND experienced severe budget cutbacks, the department significantly reduced monitoring because there was little evidence of industrial activity in the area (28:9). The board became very concerned about this precedence (28:9) and DIAND attempted to quell the CMB's alarm by promising to consult with user communities on the range in the spring of 1992 (29:15). Such consultation never took place due to lack of funds once again (30:11). The fate of the monitoring programme is as yet unclear and the CMB is attempting to discover where

the responsibility for the programme will lie with the settlement of the Nunavut land claim (30:12).

User Involvement With Research: The GNWT appears to be the only government that had any kind of policy on the involvement of aboriginal people in research surveys in the early days of the CMB. The GNWT's policy is to involve HTAs in all wildlife population surveys (5:1). The GNWT has expressed interest in signing contracts with communities for the collection of harvest data, given that its methods for collecting data are very expensive, but prefers to do so en masse rather than one community at a time (5:1).

Users have pushed their desire to see the management plan include strategies to involve users in the work of biologists (7:6, 20:15) In 1988, a technical committee was formed specifically to discuss possible strategies (20:15). Users have been very involved with the CMB's fire history mapping project[12].

Snowdrift Caribou Research Project: The proposal for research on historical to contemporary caribou usage in the NWT was submitted by the Snowdrift (now Lutsel K'e) band council to the board in 1983 (4:15). The board supported the proposal, but would not supply funds from its own budget. It was felt that this would be a divisive issue with the Inuit since the proposal was part of an overlapping land claim with the Nunavut land claim (4:15). DIAND's Office of Native Claims eventually rejected the application for funding for the project.

The Keewatin Wildlife Federation: was established in 1980 to represent the collective interests of the Hunters and Trappers Associations of the Keewatin. One of the KWF's most significant projects to date was the completion of a harvest study to determine the extent of caribou usage in Keewatin communities. The KWF was extremely careful to keep these harvest statistics distinct from government agencies' work. Relatively high rates of participation were achieved along with a great deal of

[12] see "Fire Management"

detail of information from hunters who had been hesitant to reveal too much to government employees in the past.

Cross-Border Hunting Rights: came to the forefront as a predominant topic of discussion beginning in 1983, when the GNWT made a number of changes to its Wildlife Regulations. Consequently, the user communities of northern Manitoba and Saskatchewan found themselves restricted from exporting more than 50 kilograms of meat from the NWT per annum. In addition, hunters travelling by aircraft to hunt in the NWT were obliged to wait twelve hours after landing before beginning to hunt animals of the Beverly herd.

GNWT officials stated that the twelve-hour wait rule was not applied except in cases where there was a legitimate worry of a decline in caribou numbers (5:5). However, users were very concerned that these changes in regulation had occurred without prior community consultation. The CMB called on the GNWT to amend its regulations to provide exemption from the meat exportation limit and twelve-hour wait rule to provincial users who had traditionally hunted in the NWT (4:16, 5:10).

The GNWT moved quickly to remove the twelve-hour waiting period from its wildlife ordinance (by February of 1984) because of its satisfaction with the CMB's position of responsibility for hunter education (6:2). The GNWT eventually changed its restrictions on exportation, first overcoming legal obstacles to the issuance of General Hunting Licences to hunters in provincial border areas (6:2).

The controversy of cross-border land use did not end there. The CMB felt compelled to call on DIAND to help resolve the land use rights of Manitoba Dene in the NWT and of Inuit in Manitoba (5:11). The CMB suggested that DIAND do research to determine traditional aboriginal land use in the transboundary area (5:11). Such research was eventually carried out by the Prince Albert Tribal Council (PATC) of Saskatchewan (1990) and the Manitoba Keewatinowi Okimakanak (Bussidor 1993, pers. comm.) of Manitoba. In 1986, the Manitoba Northlands (of Lac Brochet) and Fort Churchill (now Sayisi-Dene of Tadoule Lake) first nations signed a

Memorandum-of-Understanding with the TFN (25:11-13) which was rescinded by the two first nations in 1990 (26:3).

In 1989, employees of the GNWT visited provincial communities to explain the purpose of a new Border A licence. The licence was instituted at the CMB's recommendation, to be applied for by individual hunters from the provinces who traditionally hunted in the NWT. The CMB requested Caribou News to publish information about the regulations and offered to pay the costs of translating the Border A licence material into Dene dialects (20:7).

Provincial users worried that the licences would infringe on their treaty rights (22:7-8). Users also worried that the licences, now free of charge, would inevitably acquire a cost (as occurred with trapping licences).

The PADC passed a resolution in opposition to the GNWT Border A licences and the boundaries defining the "overlap area" of territorial and provincial land use in 1989 (23:9). Meanwhile, the PATC was in the process of completing their land use and occupancy studies (24:7). By 1990, in a radical change of opinion, a Saskatchewan user member was able to say he felt the licences actually helped to confirm traditional use of land in the NWT (25:11). Manitoba users, however, were still skeptical of the Border A licences (27:11). A meeting in Tadoule Lake attended by NWT representatives in 1991, showed that the Manitoba community was still divided over the issue of Border A licences (29:7). In 1993, provincial user members requested that the Border A licences be re-named "Hunter Identification cards" to relieve the suspicions of users about the licences (33:) This has not been done as yet, but the GNWT has agreed to consider such a change when the NWT Wildlife Act is due for revision (Anon. Caribou News 13(2):5).

General User Concerns: User members have been very concerned over the years that the CMB's management plan reflect the issues of utmost importance to users (primarily fire control) and the perspectives of user communities on those issues. User members worried in 1984 that the CMB's draft management plan did not include the perspectives of users on trapping, logging, fishing and the effects of fire on traditional

lifestyles, but only included issues of protection of caribou winter feeding grounds. Users also felt that the plan's discussion of wolf control did not address the public's questions; it only attempted to answer the questions of biologists (9:7). There was pressure on the CMB from users not to become yet another bureaucratic institution which glossed over users' wishes to see increased suppression of forest fires (9:8).

A Saskatchewan user member stated that user communities probably did not provide the CMB with much feedback because most users do not have the technical experience to communicate with the CMB (20:9). Saskatchewan Trappers did address the CMB in 1989 about an interjurisdictional dilemma for compensation for equipment and livelihood lost due to fires on traplines in the NWT (22:7). Unfortunately, the trappers were informed that the NWT Hunters and Trappers Compensation Directive only covered NWT residents eligible for GHLs in the NWT (23:10). Furthermore, users have also expressed their concerns over the years about the increased impacts of tourist outfitters.

4.4. MANAGEMENT

The Caribou Management Plan: A number of draft management plans have explored strategic plans including goals for the achievement of anything from caribou habitat protection to the education of young people about caribou conservation. The CMB received pressure from government (especially the GNWT) to come up with detailed and practical action plans as soon as possible and warned against developing a management plan which laid out only the principles and not the mechanics of caribou management (8:8-9).

In November of 1985, an ad hoc technical committee recommended that a crisis herd size of 150 000 animals be established for each of the two herds (12:12). However, as Usher pointed out in his evaluation of the CMB, no contingency plan exists outlining emergency action in the event of a crisis (Usher 1991:33). Although the 1986 user assembly in Arviat endorsed the CMB's management plan, the board

remained worried that most users were relatively uninformed about the goals of the CMB.

At the meeting following the user assembly, the CMB formally moved to recognize use categories for meat and meat products in descending order of priority (the motion passed with two members voting against and two members abstaining from the vote) (15:11). The list of priorities are as follows:

1. traditional users - domestic use
2. residential users - domestic use
3. traditional users - intersettlement use
4. traditional/residential user - non-resident hunting and guiding
5. local use for commercial purposes
6. export use for commercial purposes

(Usher 1991:33)

The CMB included the sixth priority presumably at the Keewatin user members' insistence, who appeared to disagree with the CMB's firm stance against the use of caribou for export for commercial purposes (15:12).

Discussion of a 1992 to 2002 version of the Caribou Management Plan began at the December 1991 meeting of the board with the renewal of the 1982 Caribou Management Agreement for a further ten years. Revisions are still being made in 1993. However, a definitive fire management plan was produced in 1993 receiving enthusiastic support from fire managers in Saskatchewan and the NWT (33).

Wolf Control: At early meetings, all user members related the desire of communities to see wolf control measures put in place (4:11), but the CMB was hesitant to come up with an immediate position. In 1983, the GNWT and CWS reported on a combined four-year research project to examine the movement of wolves with respect to caribou in the barren-grounds, and to look at the rate and times of the year when wolf killings of caribou occur (5:8). Government biologists felt that the CMB could not form a legitimate position on wolf control until the nature of territoriality of wolf populations on the caribou range was understood (5:8). The Manitoba biologist pointed out that a different wolf management program would be needed in boreal versus tundra areas where wolves might exhibit more spatially-defined territorial social behaviour.

In the summer of 1985, the GNWT appealed to other agencies for cooperation with its wolf research program because it was unable to carry the full burden of its cost (11:13). At the same meeting, the user member from Fort Smith voiced the need for the CMB to create a constructive dialogue with southern interests about the potential need to control wolves (9:10). At the user assembly, Professor Fred Bunnell (at the University of British Columbia) addressed the specifics of a potential wolf control program on the caribou range.

Bunnell spoke of wolf culls in British Columbia and predicted that in order to have an effective wolf control program on the Beverly and Qamanirjuaq ranges, 8,000 wolves would have to be killed to affect a herd of 330,000 caribou (UA:13). Bunnell encouraged the CMB to be as open as possible about any future wolf control program given that managers could expect to face opposition from academics and politicians (who would be very likely to side with the growing outcry from large urban population centres against the consumptive use of wildlife resources) (UA:13). Bunnell argued that without proper knowledge of wolf population dynamics, determined while caribou populations are in a state of growth, politicians would support the option to reduce human consumption rather than to cull wolves if caribou numbers started to decline (UA:13). The issue of wolf control seemed to fade away following the user assembly in 1986, perhaps as fire management grew as an overriding concern with the occurrence of devastating fires on the caribou range in the late 1980s.

Fire Management: The issue of fire control has been of grave concern to user members in Manitoba, Saskatchewan and the Mackenzie district for many years. A GNWT representative made the point at the second meeting of the board, that the contemporary argument that wildlife had survived for thousands of years in natural fire conditions and should therefore be left free from human intervention was not valid. Caribou might survive as a species without fire suppression efforts, but would they survive as a resource? (2:9). Members agreed that the CMB should encourage the protection of older forest areas of greater importance as productive caribou feeding grounds (2:9).

At the second meeting of the CMB, a DIAND representative asked the board to make recommendations to the NWT DIAND office for fire protection for caribou in the NWT. The board's early attempts to communicate with government ministers went unheeded. User members worried that if fires continued to burn along the territorial-provincial border, there might be a time when caribou no longer travelled into the provinces (3:10).

The board sent very firm messages to DIAND in the fall of 1983 regarding DIAND's lack of action as two very large fires burned out of control north of the Saskatchewan/NWT border. These communications resulted in little resolution of users' concerns and in 1984 the board passed a motion supporting the transfer of fire-fighting responsibility from DIAND to the GNWT (7:16). The NWT Dene felt that this transfer of powers would give Dene people greater control of fire-fighting responsibilities (2:12)

Fire-fighting priorities have only coincidently included caribou range land in the past. The board has encouraged fire managers to consult with user communities in order to place priorities on protecting unburned corridors between burns important as routes for caribou migration and winter feeding grounds (3:17, 7:16). In 1984, the NWT Fire Management Committee expressed interest in accommodating the CMB's concerns. The committee stated frankly, however, that the board's request to protect land for caribou was in competition with other requests for fire suppression and that it was up to the CMB to identify critical areas on the range which were in need of protection (8:1-2).

Within the year, user members were encouraging the board to change the tone of the Caribou Management Plan such that it emphasized the need for fire suppression over the need for further fire research studies (10:12). A user member from Saskatchewan had earlier voiced his opinion that it was ludicrous to state that little was known about the effects of fire on caribou movements and the ability of burns to support caribou (9:9). Users were privy to lifetimes of observations about the effects of fire on caribou.

By the fall of 1985, government members had begun to coordinate the organisation of a uniform information base about caribou winter range and burn areas and to formulate classification levels for productive winter range habitat (12:12). That same fall, the federal and territorial governments had signed an MoU regarding the transfer of fire-fighting responsibilities (13:12).

Fire-fighting responsibilities appear to have been a significant topic of discussion at the 1986 user assembly. Users reiterated their desire to see fire-fighting mandates include the protection of caribou habitat (UA:6-8). A Manitoba government representative admitted that most fire-fighting in the province was based on the needs of the forest industry and did not recognize many wildlife values (UA:6). A GNWT representative argued that the CMB must examine how it could most effectively influence the decision-making of fire-fighting agencies (UA:7).

The CWS representative presented the preliminary results of his five-year study of fire on the Beverly herd's winter range in 1988 (18:5). A GNWT proposal introduced a process to incorporate values-at-risk decision-making in the fire management strategies used on the Beverly range (18:18). Provincial government representatives sitting on the board agreed to provide their input into the GNWT employee's ideas for a study (18:10).

In response to the presentation of the CWS fire study, the GNWT asked the CMB if it could provide detailed maps of the caribou range and burn sites (19:3) (fire mapping was first conducted on the Beverly range in 1966 (2:9)). The CMB subsequently established a Fire Map Working Group in the fall of 1988 (20:5). The Manitoba government appointed a working group to map priority areas for fire protection in northern Manitoba (20:5), but the Saskatchewan government member found that there were no funds available to finance research on forest fire impact unless the land area to be studied was home to merchantable timber (23:8).

By December of 1989, the GNWT presented its values-at-risk study to the CMB and suggested that the board explore the potentials of Geographical Information Systems (GISs) as a management tool (23:12). At the spring 1990 meeting, the GNWT member suggested that the values-at-risk study needed further data and analysis.

Needed improvements included data on fires more than twenty years old as well as the input of communities regarding the past and current usage of land (24:6). The board provided $9,500 to complete the input of the fire history into a GIS system (24:6).

In 1991, the CMB was in a position to identify caribou migration corridors, older forest, and "green areas" for each community (27:10). The board contracted the services of an employee of the PATC to identify "green" areas to be protected on the Beverly range in the NWT, Saskatchewan and Manitoba (27:11). The end of 1992 saw the establishment of a CMB Fire Management Committee composed of four user members and four government members (31:16).

Protecting Habitat From Development: The board has promoted caribou habitat protection in the face of a variety of development projects. In 1983, the Saskatchewan Power Corporation announced plans to run powerlines from Lake Athabasca to Rabbit Lake (5:13). The Saskatchewan government member immediately informed the board that SaskPower's proposed favoured route ran right through the Beverly herd's range. The Saskatchewan user member told the board that many local people in northern Saskatchewan welcomed the possibilities of an improved powerline infrastructure and road to the area (5:13). However, some users did worry that the number of non-residents hunting in the area would increase. The Saskatchewan government member also worried that if resource development increased as a result of the new powerline, this would increase the chances that other roads would be opened up in the area (7:12).

A technical group of the CMB suggested areas for caribou study for SaskPower's required environment impact assessment (12:13). By 1987, the Saskatchewan government had approved the construction of the powerline. The Saskatchewan government member informed the board that restrictions on hunting in right-of-way zones could be applied by the province to non-treaty hunters, but not to treaty hunters (15:15).

The next development which concerned the board was the Cullaton Lake gold mine in southern Keewatin. In 1984, the Keewatin user member was concerned with

the possible pollution emanating from the mine. Both Manitoba and Keewatin members worried about the possible effects of the construction of a road to the mine following communication from the Chief of Tadoule expressing his concern about the proposed road (14:7). This issue has faded away for the time being because the owners of the mine were unable to make it an economically feasible operation.

A second mine, the Kiggavik uranium mine near Baker Lake, became an issue for the board in 1988, as the Federal Environmental Assessment Review Office (FEARO) carried out hearings regarding the mining proposal west of Baker Lake in the NWT (19:9). Users from Saskatchewan related their problems with the Rabbit Lake uranium mine, while all provincial users were worried that the FEARO hearings would not allow them to express their concerns (21:9). In 1989, the board expressed its complete opposition to the Kiggavik mine (21:10). That same year, FEARO decided to hold public hearings in Saskatchewan. Saskatchewan users invited Manitoba users to attend the public hearings in Wollaston Lake while the CMB paid the travel costs of two users to attend the Saskatchewan hearings (22:5).

It is apparent that the CMB had trouble defining its role in this issue given that neither the GNWT nor DIAND would take a position until the FEARO hearings were completed (24:4). In the end, the mining company was unable to secure a financial future for the uranium mine just as had occurred with the Cullaton Lake gold mine.

The low-level flights of the Canadian Air Force worried users near Lutsel K'e in 1986. Discussion of possible future flight programmes by NATO out of Baker Lake or Rankin Inlet was invoked as a result. In 1987, the GNWT member expressed his department's formal opposition to the NORAD flights in the NWT (near Lutsel K'e) (15:15). The military, however, would not recognize a need to change its flight programs in the NWT and Alberta.

Caribou Protection Measures: Since the early 1970s, the hunters of Baker Lake have demanded the federal and territorial governments to implement a land freeze to stop all exploration activity on Inuit-occupied land. Finally, in 1978, the Hamlet of Baker Lake (1980) and the ITC took six exploration companies and DIAND to court. The

subsequent trial saw the implementation of a court injunction to stop all land use activities in caribou calving and post-calving areas as well as within a few mile radius of important caribou water crossings. Soon after the injunction was imposed, DIAND implemented its own CPMs which furthered the extent of controls on land use activities. These controls still exist today even though the court's 1979 ruling found that mining activity had not been proven to have detrimental effects on caribou (Tennenhouse 1986:3).

Five years after the implementation of the CPMs (1982), it appeared that GNWT Wildlife representatives and the NWT DIAND were prepared to support industry's criticisms of the criteria for caribou protection (2:13). Nevertheless, the CMB voted to support the maintenance of the measures wishing only to see changes which expanded the controls of the CPMs (2:15) User members urged the board to take action to ensure that calving grounds would be protected into perpetuity as a reserve, park or sanctuary (3:15).

In 1987, the NWT Chamber of Mines tried to persuade the board to recommend the removal of spatial boundaries restricting land use activities in favour of contingent decision-making on the restriction of land use. The Chamber of Mines believed that the CPMs could be self-enforced by land permittees, most board members expressed incredulous reactions to the idea of self-enforcement (15:7-8).

It is important to note that the Chamber of Mines representative honed in upon the uncertainties of scientific knowledge of caribou population dynamics. He argued that population numbers could be cyclical when a biologist asked whether the CPMs might be contributing to the achievement of very high reproductive rates in recent years (15:7-8). Another biologist countered the Chamber of Mines' comment by pointing out that whether or not the caribou population was experiencing an increase, the location of the calving grounds had been consistent since the CPMs monitoring programme began (15:7-8).

However, in 1991, when DIAND experienced severe budget cutbacks, the department significantly reduced monitoring because there was little evidence of industrial activity in the area (28:9). The board became very concerned about this

precedence (28:9) and DIAND attempted to quell the CMB's alarm by promising to consult with user communities on the range in the spring of 1992 (29:15). Such consultation never took place due to lack of funds once again (30:11). The fate of the monitoring programme is as yet unclear and the CMB is attempting to discover where the responsibility for the programme will lie with the settlement of the Nunavut land claim (30:12).

Harvest Data Collection: In 1983, all three jurisdictions agreed that the standard for the report of harvest information would be the collection of data on the basis of the caribou biological year from June 1 to May 31. The CMB required the minimal harvest data of the following sets of information on an annual basis: month of kill, location, sex and age of animal (5:9). All members agreed that it was extremely difficult, but important, to include estimations of crippling losses in harvest figures (6:8).

The Keewatin Wildlife Federation's Harvest Study: The KWF encountered a number of financial obstacles to the completion of its autonomous (from government participation) Harvest Study and appealed to the CMB for support when it needed extensions of time and money for the completion of the study in 1983 (5:16) and 1986 (10:9). However, in the spring of 1986, when the study was still not completed and despite CMB appeals to government, DIAND decided to withdraw its support. The federal government stated that it was not willing to fund harvest studies on a long-term basis (13:14). The KWF consequently deposited the data from the study in the library of the TFN, rejecting the GNWT's proposal to assume responsibility for the completion of the study (13:14).

The feasibility of collecting harvest data in the NWT appeared to have reached an impasse in 1988 not only in the Keewatin, but also in the Dene/Metis area of the NWT where the absence of a land claims settlement made it very difficult for the GNWT Renewable Resources to collect harvest data (20:10). In 1992, the regional biologist for the Keewatin reported that harvest statistics were in the process of being

collected for the Keewatin (30:15). The board remained concerned, however, that the Keewatin would be unable to supply harvest statistics for several more years (30:15).

Movement and Distribution Research: The CMB has been very anxious to encourage the participation of users in survey research. A Saskatchewan user member said that he was sure that in order for population information to be believable to user communities, users would have to be involved with population surveys (4:4). A CWS representative emphasized in 1983 that in order for the board to avoid the misinterpretation of population figures, it should go on record using confidence intervals rather than using exact population numbers (5:3). The board has made a marked effort to explain the methodology of population surveys through Caribou News.

The January 1984 meeting saw the release of the results of the first aerial photographic surveys. The NWT biologist presenting the results expressed his shock at the difference in the results obtained by the photographic aerial surveys versus the observer aerial surveys. The differences in the results of the two survey techniques revealed that there were many more animals (almost double) in the herds than had been previously estimated. However, the biologist firmly believed that the observer aerial surveys had accurately revealed a declining trend in the population of the animals in the 1970s anyway (6:4). User members were now in the very difficult position in 1984 of explaining to their communities why caribou numbers had "doubled" (6:6).

The board has struggled over the years to determine the range of advice it feels it can legitimately provide, especially given the large confidence limits of the population data that it has to work with. In 1989, the CWS representative worried that population estimates might not be sensitive enough to pick up population swings when surveys showed that recruitment levels (the number of calves surviving through one year of life in a given year) were good, but the population itself was stable when it was expected to be rising (23:12).

That same year the board discussed whether or not to implement strategies to bring the population of the Beverly herd up to 500,000 in order to match the 3.5% increase in the user population (23:12). The consultant hired to evaluate the board's effectiveness pointed out that future change in user harvest demand would not necessarily be a proportionate increase to the increase in user communities' population sizes (Usher 1991).

The board passed a follow-up motion to its decision in 1985 to set an emergency action threshold crisis herd size, which stated that a goal of the CMB was to base the population targets for the herds on user demand (11:12). The CWS and GNWT biologist representatives opposed the follow-up motion. It was obviously a matter of contention within the board whether to allow human use to dictate the manipulation of other factors affecting caribou population numbers such as wolf predation or fire.

Radio-collaring: The board first discussed the use of radio-collars in 1983, hoping that by tracking a number of animals in this manner it could finally lay to rest the controversy surrounding the relationship between the Qamanirjuaq herd and caribou north of Chesterfield Inlet (5:3). The KWF had approached the CMB about addressing the need for such research at the board's first meeting.

There were two trains of thought about the definition of the herds; should the Qamanirjuaq herd and the caribou north of Chesterfield be considered a single management unit or should the Qamanirjuaq herd be dealt with as it had been conventionally understood, thereby considering the Wager Bay herd a segment of the Qamanirjuaq herd only as an option (6:9). Meanwhile, the GNWT appealed to the other jurisdictions for financial aid for a radio-collaring programme which would cost approximately $400,000 over four years.

It was clear that the CMB had to consult with user communities quite extensively in order to gain support for the radio-collaring programme. All user members were supplied with sample collars to take to communities in the winter of 1984 (6:6). Upon consultation it was found that Manitoba communities were opposed

to the collaring programme (7:11). In contrast, the KWF supported the program stating that it was still important to settle the question of herd movement north of Chesterfield despite Inuit cultural misgivings regarding the disturbance of animals other than for harvesting purposes (7:11).

The CMB passed a motion supporting the radio-collaring program in 1984 (the Manitoba government member abstained from voting) (7:14). A private film-maker from Tadoule Lake was retained in 1985 in order to produce Dene, English and Inuktitut versions of a documentary of the collaring process to be shown in local communities (10:3). That same year, over 60 female caribou were collared in the Keewatin (11:11). The four-year study of herd discreteness finally revealed (in 1988) that there were no large-scale migrations between the Beverly and Qamanirjuaq herds and that Wager Bay and Lorillard caribou belong to a distinct Northeast Mainland herd (20:12) (see Hall 1989 for a description of caribou herds in the NWT).

Following the presentation of the radio-collaring research project, the GNWT biologist announced that no further radio-collaring would take place, as promised to user communities (21:6). Four years later, however, the board supported the GNWT proposal to collar five Qamanirjuaq females for two to three years when it could not locate animals to carry out its 1992 spring composition surveys (30:14). Dene and Metis user members were apprehensive about the decision to use radio collars once again, but supported the move nevertheless (30:14).

4.5. QUANTITATIVE ANALYSIS OF PARTICIPATION AND DISCUSSION AT MEETINGS

The breakdown of the issues covered between 1982 and 1993 through the passage of 187 motions is approximately:

33% communication,
7% specifically of traditional users,
15% the use of caribou,
27% the mechanics of caribou management and
18% the day-to-day functioning of the CMB and its meetings
(see Table 4-1).

Table 4-1 shows that approximately 81% of the motions were passed by consensus, while 19% were passed with some members choosing to abstain, with votes against the motions, or by secret ballot. Only one motion was defeated in the entire history of the board's operation (a motion to support one of the Fort Smith HTA's requests for a commercial use quota).

This analysis explores more than just the records of motions presented at CMB meetings. The meticulous minutes of the meetings of the board make an analysis of the discussion and the actions of the CMB possible[13]. This is especially valuable because it would be inappropriate to base a comparative study of member participation on records of the movers and seconders of motions alone. The mover and seconder of a motion may actually have very little to do with the instigation of the ideas of the motion (personal observations at 32nd meeting of the CMB).

(text continues on p. 75)

[13] This analysis includes only the minutes of regular board meetings and does not include a detailed analysis of special committees set up by the CMB periodically; no minutes are available.

Table 4-1. A tally of the motions passed by the B-Q CMB between 1982 and 1993. Source is the minutes of the CMB regular meetings.

ISSUE	TYPES OF MOTIONS: C*	AB	VA	SB	D	AB & VA	SB & D	TOTAL #
Information, Education & Communication:								
-Awards/ Camps	15	-	-	-	-	-	-	15
-Caribou News	11	2	-	-	-	2	-	15
-Communi-cation	7	1	-	-	-	-	-	8
-Contact	6	-	-	-	-	-	-	6
-DeneFilm	2	1	-	-	-	-	-	3
-Film/ Video	1	-	-	-	-	-	-	1
-Schools Program	13	-	-	-	-	-	-	13
Subtotal:	**55**	**4**	**-**	**-**	**-**	**2**	**-**	**61**
Traditional Users:								
-Organi-sation of CMB	6	1	-	-	-	-	-	7
-Public Meetings	6	-	-	-	-	-	-	6
-Snowdrift Research Proposal	-	-	1	-	-	-	-	1
Subtotal:	**12**	**1**	**1**	**-**	**-**	**-**	**-**	**14**
Caribou Use:								
-(Cross-) Border (Access)	1	1	-	-	-	-	-	2
-Commer-cial	7	-	-	4	-	-	1	12
-Dogs	1	-	-	-	-	-	-	1
-Export	2	-	-	-	-	-	-	2
-Fort Chipewyan	-	1	-	-	-	-	-	1
-Gen'l Concerns	4	3	1	-	-	-	-	8
-Inter-settlement Trade	1	-	-	-	-	-	-	1
-12-Hour Wait	1	1	-	-	-	-	-	2

Table 4-1. (continued)

ISSUE	TYPES OF MOTIONS: C*	AB	VA	SB	D	AB & VA	SB & D	TOTAL #
Caribou Use: (cont'd)								
Subtotal:	**17**	**6**	**1**	**4**	**-**	**-**	**1**	**29**
Management - General:								
-Caribou Protection Measures	9	1	-	-	-	-	-	10
-Contamination	20	5	1	-	-	-	-	26
-Development	5	-	-	1	-	-	-	6
-Fire	13	4	-	-	-	-	-	17
-Gen'l	2	-	-	-	-	-	-	2
-Harvest	1	1	-	-	-	-	-	2
-Monitor	4	3	2	-	-	-	-	9
-Caribou Management Plan	2	-	-	-	-	-	-	2
-Wolf Control	1	-	-	-	-	-	-	1
Subtotal:	**38**	**9**	**2**	**1**	**-**	**-**	**-**	**50**
Functioning:								
-Administration	22	2	1	-	-	-	-	25
-Organisation	5	-	-	-	-	-	-	5
-Self-Evaluation	3	-	-	-	-	-	-	3
Subtotal:	**30**	**2**	**1**	**-**	**-**	**-**	**-**	**33**
GRAND TOTAL:	**152**	**22**	**5**	**5**	**-**	**2**	**1**	**187**

* C = motions passed by consensus
AB = " " with abstentions
VA = " " with votes against
SB = " " by secret ballot
D = motions defeated

Every entry of discussion (TALK), of action taken (ACTION), or of motions approved (MOTION) and recorded in the CMB's minutes was included in a participation category and an activity category as can be seen in Figures 4-1 to 4-11. Figures 4-1 to 4-6 show the proportionate division of activities recorded in the minutes

of CMB meetings. Figures 4-7 to 4-11 show the proportionate participation of CMB members in CMB activities.

Participants in the CMB's activities are classified into 11 groups:

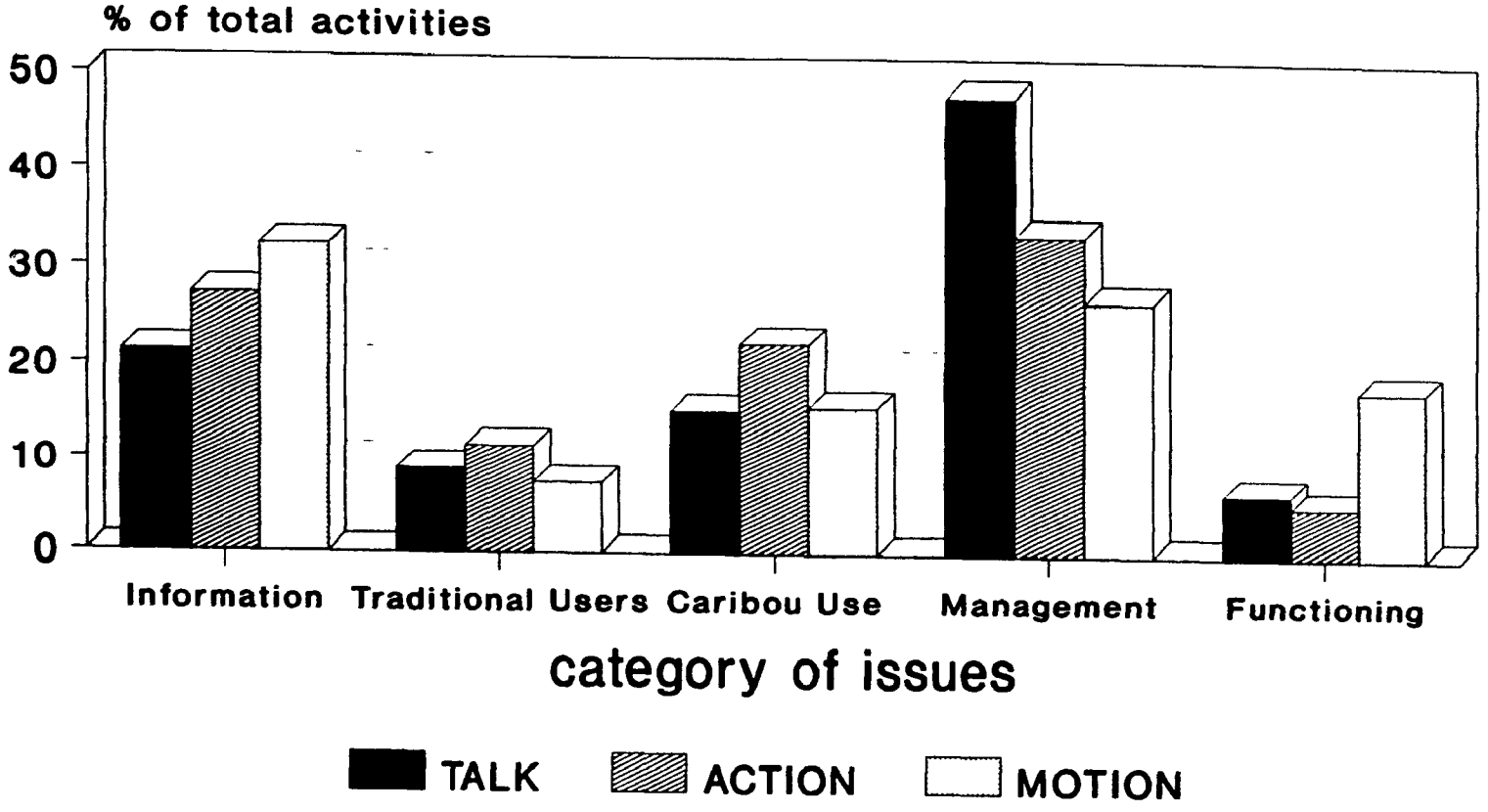
CMB - the secretary-treasurer or actions comments which were attributed to the entire board
O - observers
U_MB - user member from Manitoba
U_S - " " " Saskatchewan
U_M - " " " Mackenzie district of NWT
U_K - " " " Keewatin " " "
G_MB - government member from Manitoba
G_S - " " " Saskatchewan
G_NWT - " " " NWT
CWS - " " " CWS
DIAND - " " " DIAND

Short forms used to describe issues listed in Figures 4-2 to 4-5 are explained below:

Adult Ed - adult education
Awards - refers to scholarships, caribou camps and school competitions
Border - cross-border hunting
C.News - Caribou News
Comm. - communication
Commerc. - commercial
Contact - contact with organisations outside the jurisdiction of CMB members
Contam - contamination
Denel lm - proposals for Dene equivalent of Kaminuriak film/video project
Dev't - development
F.Chip - discussion of Fort Chipewyan access to Beverly herd in NWT
Gen'l - general (miscellaneous) issues
Harvest - collection of harvest information
Monitor - monitoring caribou movements
Organis. - organisation
Plan - caribou management plan
Public - public (community) meetings
Schools - schools program
Snowdrift - Snowdrift research proposal
Video - Kaminuriak film/video project
12-HrWait - NWT law which required individuals flying to "hunting areas" to wait 12 hours after landing to begin hunting

(text continues on p. 82)

CMB Activities
General Breakdown (1982-1993)



TALK: discussion of issues
ACTION: accomplishment
MOTION: endorsement of a position

Breakdown of Activities

Figure 4-2: Issues of Information

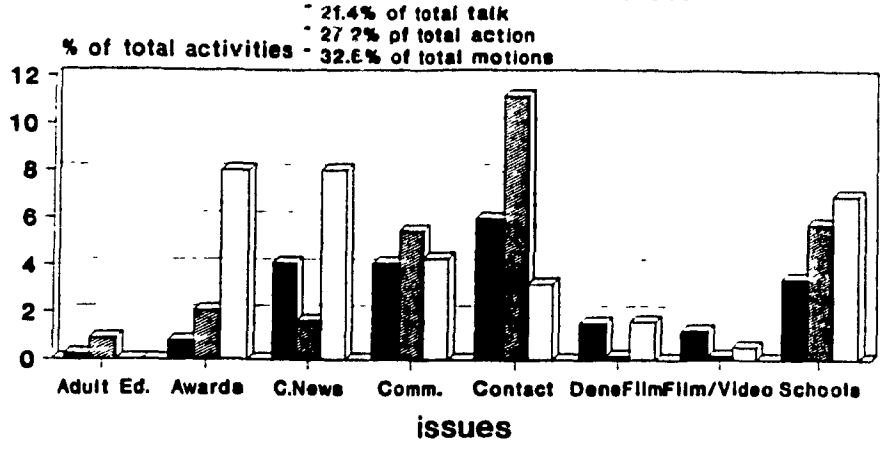


Figure 4-3: Issues of Traditional Users

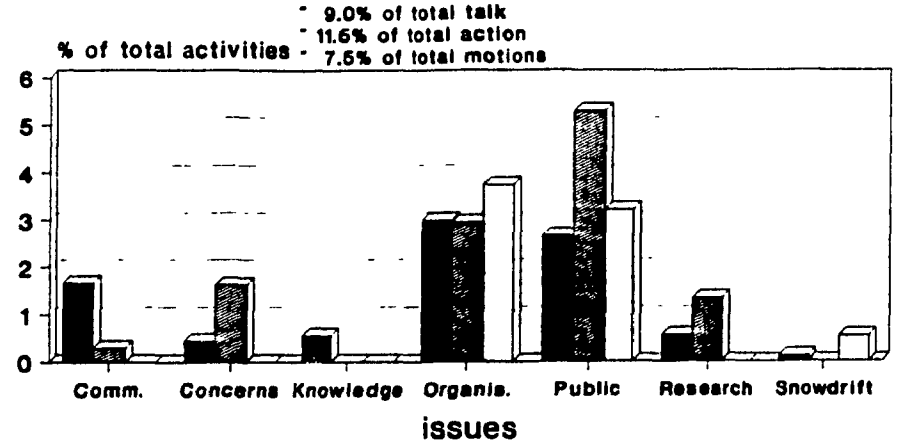
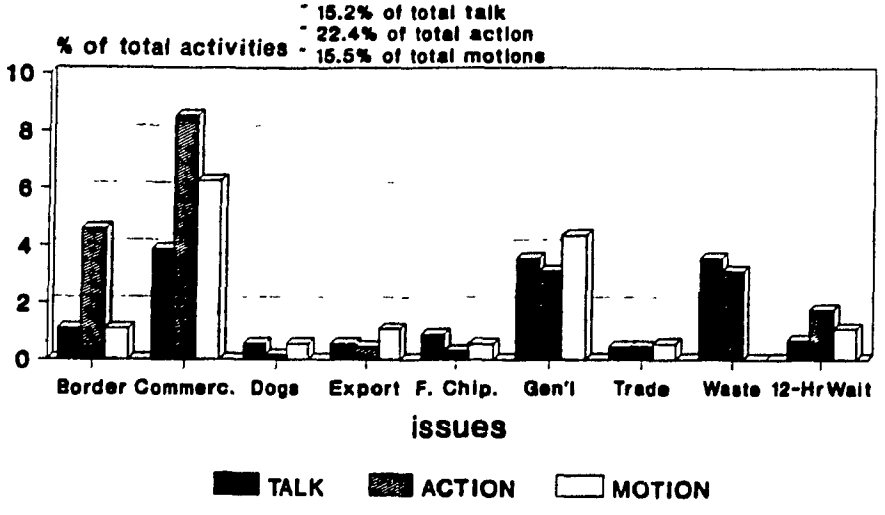


Figure 4-4: Issues of Caribou Use



Breakdown of Activities

Figure 4-5: Issues of Management

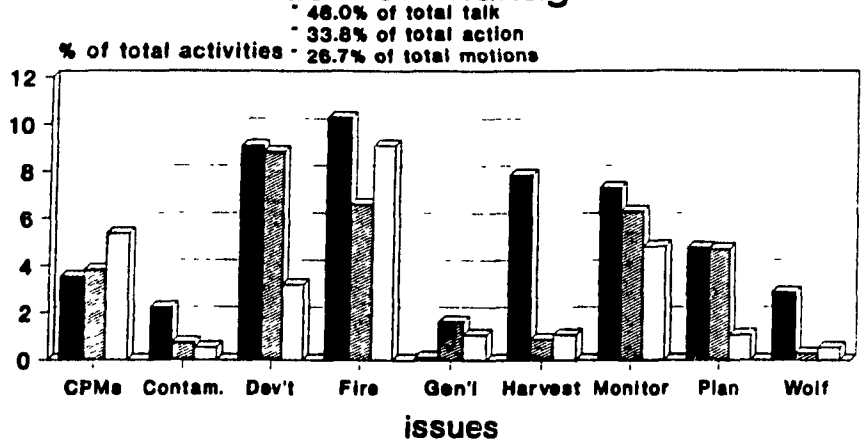
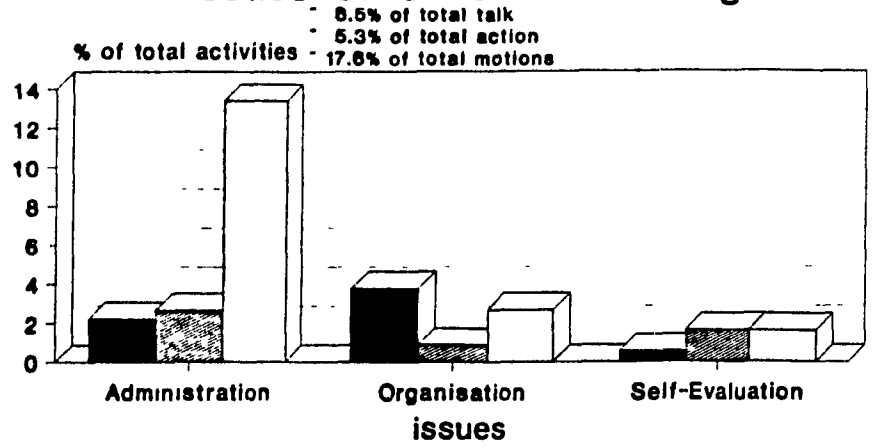


Figure 4-6: Issues of CMB Functioning



Breakdown of Participation

Figure 4-7: Issues of Information

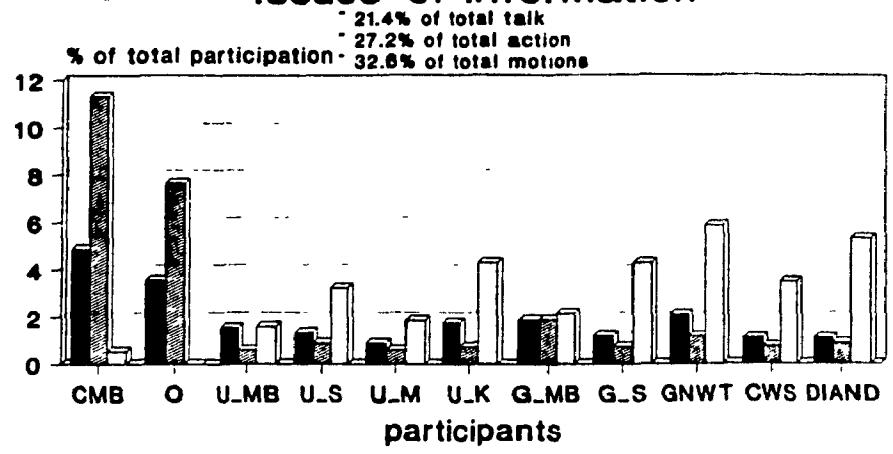


Figure 4-8: Issues of Traditional Users

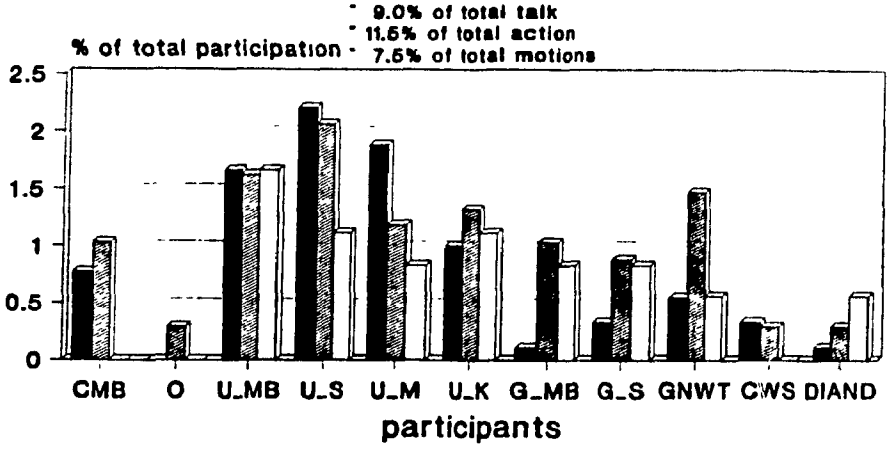
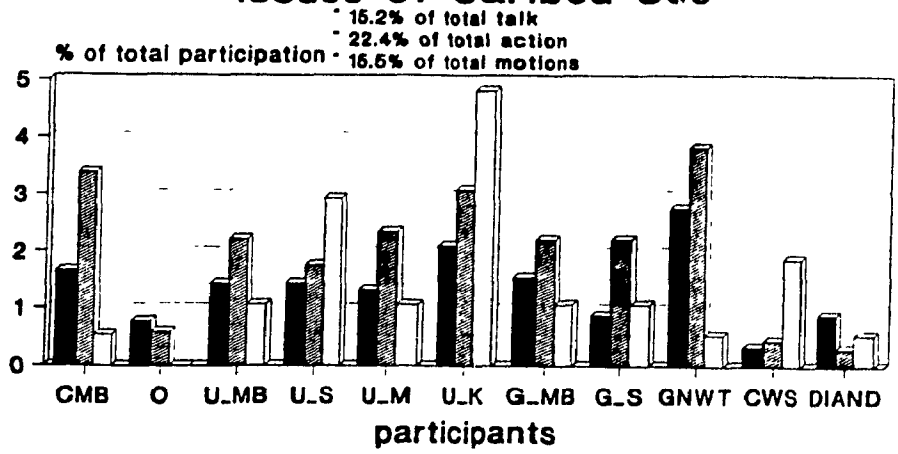


Figure 4-9: Issues of Caribou Use



TALK ACTION MOTION

Breakdown of Participation

Figure 4-10: Issues of Management

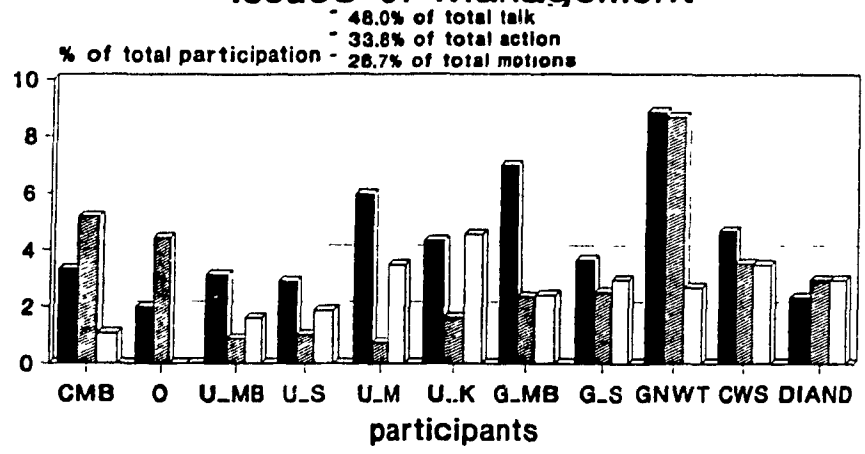
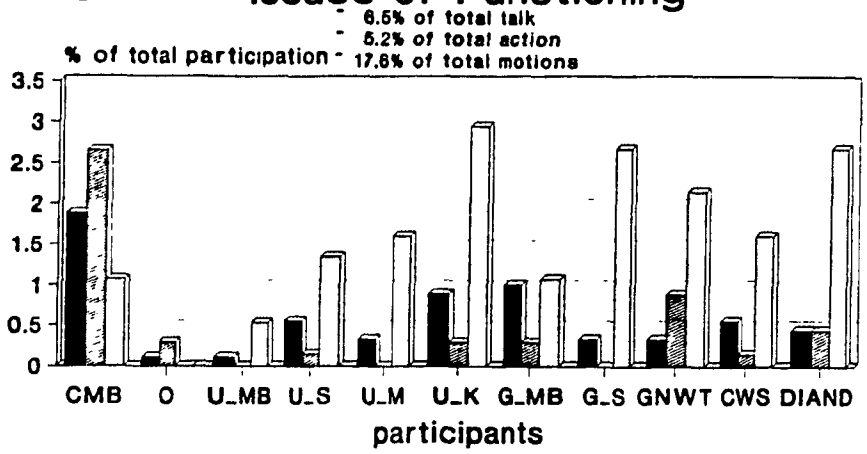


Figure 4-11: Issues of Functioning



TALK ACTION MOTION

Management issues made up almost half (~48.0%) of the discussion of the board for the past 12 years. The topics which most pervaded management discussions were fire control (~10.3%), the effects of development on caribou habitat (~9.1%), harvest studies (~7.8%), and caribou monitoring (7.3%) (fig. 6). Action on management issues made up 33.8% of all CMB action on topics covered at its meetings. The CMB was most active in attending or advising reviews on development projects (8.8%) while action on fire control issues is calculated at 6.6% of all CMB actions[14]. Harvest studies, calculated to be the third-most discussed management topic, ranks seventh out of nine management topics for actions taken (0.9%). Monitoring jumps to third position as the topic upon which the CMB has taken then the most action at 6.3%.

Discussion of information (education and contact) is the second-most discussed broad category of activities (21.4%). Within this category, contact with other wildlife organisations was discussed the most (6.0%) while topics of communication methods (4.1%), Caribou News (4.1%) and the Schools Program follow in close succession (Fig. 3). The most action was taken on issues of contact (11.2%) while the Schools Program (5.7%), communication (5.4%) and the implementation of scholarship awards, school contests and caribou camps (2.1%) followed behind.

The use of caribou made up 15.2% of all discussion at CMB meetings. The commercial use of caribou was the most discussed topic (3.9%) while the discussion of waste (3.5%) and general issues of use (3.5%) followed close behind. Most action was taken to resolve questions about the commercial use of caribou (8.5%). Compared to discussion at meetings, cross-border hunting issues received a fair degree of action (4.6%) while the topics of waste (3.1%) and the NWT's former 12-hour wait rule (1.8%) received lesser degrees of attention.

The third-most discussed set of issues, that of traditional users (at 9.0%), is an attempt to classify topics of sole concern to user members. These issues do not even

[14] The CMB has dedicated a tremendous amount of study and effort into its fire history mapping project in recent years. This is not quantitatively reflected in the minutes of the board because a fire technical committee has handled most of the organisation of the project.

begin to represent the all the concerns of user members. The re-organisation of the CMB to meet the needs of user members was the most prominent topic of discussion (3.0%). Public meetings (2.6%) and communication (1.7%) were the second and third-most commonly discussed topics. Public meetings received the most action (5.3%) while organisation (2.9%) was the topic to receive the second-most amount of action.

The functioning or day-to-day workings of the CMB's activities received 6.5% of the CMB's attention in its discussions and represents 5.2% of its action.

As mentioned previously, management issues have been the foremost issues of discussion. Each of the participants contributed an average of 4.4% participation to management discussions and 3.1% participation in action taken on management issues. The GNWT contributed significantly more to both discussion (8.8%) and action (8.7%) on management issues. Participants discussed information issues an average of 1.9% of total discussion and acted on such issues an average of 2.5% of total action. The CMB category of participant contributed significantly more to both discussion (4.9%) and action (11.3%) on information issues.

Moving on to topics covered in the category describing the use of caribou, each participant group discussed an average of 1.4% of total discussion and acted an average of 2.0% of total action taken on any issue. Only the GNWT commented on caribou use topics (2.8%) significantly more than any other group.

Traditional users' specific concerns were commented on an average of .8% by each participant group. The quantity of user groups' comments were above average, while government groups' comments were below average. Participant groups acted an average of 1.0% on topics of specific concern to user members.

Last of all, comments concerning board functioning represent an average of .6% of all discussions and .5% of all board actions. The CMB participant group contributed significantly more to discussion (1.9%) and action (2.6%) on functioning issues than any other group.

Summary: The quantitative analysis of the CMB's activities suggests or hints at the effectiveness of the board and the manner in which it has contributed to caribou conservation. It is necessary, however, to qualify the trends the analysis outlines. The

CMB has devoted tremendous effort to communicate scientific knowledge and perspectives to user communities through the Schools Program and Caribou News. However, the incorporation of local knowledge (TEK) and elders' participation is lacking. Undoubtedly, this is in major part due to inadequate funds and the inability to dedicate time to the strengthening of communication between wildlife scientists and communities. There is little communication and knowledge flowing from user communities to wildlife managers and scientists.

Regional differences significantly affect the participation of CMB members. The north/south divide in the provinces is not a factor in the NWT, especially now that land claims settlements are decentralizing political power structures in the territories. Nunavut and Denendeh (in particular the Keewatin and Mackenzie districts respectively) are home to a majority of traditional users. In comparison, the interests of traditional users of the provinces are decidedly outnumbered by the political influence of southern climes. The GNWT Department of Renewable Resources plays a far more prominent role in government in the NWT than the Manitoba Department of Renewable Resources or the Saskatchewan Department of Environment and Resource Management do in their provinces. Caribou remain externalities to the economies of the provinces. This was evident in the 1980s, when Saskatchewan would not sanction funding of fire studies in regions of the province of non-commercial timber. Manitoba still refuses to finance fire suppression activities in northern regions of the province.

The CMB has discussed many issues of development, especially of mining activity. Proposed uranium mines in the NWT have not materialized due to a combination of impractical economic situations and public and political outcry. However, Saskatchewan appears prepared to allow the development of further uranium mining in its northern regions in 1994.

Attitudes toward both the accessibility of caribou to users and definitions of commercial use also illustrate divisive regional differences. Questions of accessibility and commercial use are intimately tied. This can be seen in the unease of provincial users toward non-resident hunting. Once non-resident hunting quotas are introduced, non-traditional and non-resident hunters are able to buy access to a resource for

recreation **while** many traditional users still have limited or no access to a resource which is historically a mainstay of their economies. It is disturbing to see this situation emerging when the board has officially laid out priorities of caribou use. The non-resident use of caribou ranks much further down the list than traditional use. There has been very little discussion by the CMB of what constitutes reasonable and adequate access of traditional users to caribou, although the 1993 draft management plan indicates that this will change.

It is clear that the subset of the commercial use of caribou might be prioritized just as the overall use of caribou is prioritized by the board. Should the intracommunity and intercommunity exchange of caribou meat have the same "commercial" ranking as the sale of caribou antler or the allocation of non-resident hunting quotas?

The CMB has discussed the inherent difficulties of collecting harvest data and adequate knowledge of caribou population dynamics to manage the herds at minimum viable population levels. Government members express reservations about their ability to predict trends in the population status of the caribou herds. It is apparent that industry will continue to highlight the scientific uncertainties of animal population dynamics when the board advises government to curb or place moratoriums on development.

It is also not obvious that the CMB has any strategy other than the advisement of an obligatory enforcement of quota systems should the herds reach designated crisis levels. Perhaps scientific monitoring methods should be more accountable and accessible to questioning by local communities. This is an enormous task of course. However, if local communities envision caribou population estimates to be the equivalent of "guesses," their response to future quota systems will probably be: what makes that biologist's guess any better than mine? Explanations of monitoring methods might do well to explain the weaknesses of surveys just as well as they explain the strengths of the survey methods.

CHAPTER 5. COMMUNITY PERSPECTIVES

During the summer of 1993, I spent time in two user communities. I wanted to gain a sense of the profile of the B-Q CMB in user communities, as well as users' general concerns about the management of caribou, hunting practices and the condition of the animals. Almost all of the people I spoke with were over 30 years of age and either Dene or Inuit.

I chose to spend time in Arviat, NWT and Tadoule Lake, Manitoba. Arviat and Tadoule are both "fly-in" communities, which hunt animals from the Qamanirjuaq caribou herd. However, there are a number of prominent differences between the communities.

Arviat is a primarily Inuit community with a population of over 1300 people. The community is situated in a marine-tundra environment and houses an extensive institutionalized wildlife management infrastructure including local and regional government offices and local and regional hunters and trappers associations.

Tadoule Lake is a much smaller Dene community with a population of approximately 350. Tadoule is situated in a spruce-lichen woodland environment on the shores of a large freshwater lake. The Sayisi-Dene community is represented by a local band council, which is the only formal infrastructure available to act as a link between hunters and trappers and anyone from outside the community.

It is hoped that the descriptions of the two community situations in this chapter make differences self-evident. The communities are shaped by contrasting political realities which make their perceptions of the potential and importance of cooperative wildlife management relatively distinct.

Arviat, as a member community of the newly emerging Nunavut government, has a secure base from which to express its plans for its future use of wildlife resources. Tadoule Lake, on the other hand, is plagued by uncertainties that outside forces will undermine its ability to negotiate its future on its own terms. Both communities expressed similar ideas about the importance of the education of young

people about the use of wildlife. The incorporation of the knowledge of elders was also expressed as a common concern.

However, no matter what the political and ideological differences between the two communities may be, it is clear that the existence of a forum for the discussion of their diversified interests must continue to grow and develop deeper roots. Jurisdictional boundaries may create artificial separations between user groups, but the ecological realities which unite them represent a fundamental and shared base which cannot be ignored.

In order to understand user participation on the board it is important to have a good sense of the variety of situations and philosophies of user communities. With the high costs of travel I could only afford to visit a couple of communities. I was overwhelmed by the openness and the patience of the people I had the chance to speak with.

It is important to recognize that the community views of this chapter are best represented by the qualitative rather than the quantitative presentation of interviewee responses to the questions I posed. In most cases, questions were asked and/or answered in such a way that it is not possible to form elementary conclusions about the nature of the responses. It is important to see the context of the respondents' comments when attempting to make any comparisons. A predominantly qualitative approach to the analysis of interviews carried out in Arviat was taken because my questioning format was fairly rigid. In Tadoule Lake, a more flexible interview approach was taken because I knew I would be able to talk with a much smaller number of people. It was encouraging to discover the depth and scope of discussion such an approach fostered in comparison to the questionnaire formatted interview-style used in Arviat. For these reasons it is not possible to directly compare the perspectives of Tadoule Lake versus Arviat interviews, although generalized conclusions of the parallels and contrasts in the situations in the two different communities can be made.

5.1. ARVIAT, NWT. AND WILDLIFE MANAGEMENT

Arviat (formerly Eskimo Point) is the southernmost community in the Keewatin, and sits on the shores of western Hudson Bay (see Figure 1-1.). The town site is a traditional camping area of Paallirmiut Inuit (Caribou Eskimo). A permanent settlement has existed in this area since the 1920s. However, it was not until 1958 that Inuit families in the area settled year-round in Arviat in order to continue to benefit from social assistance programs contingent on the Inuit children's attendance at Canadian schools. Arviat is today home to over 1300 people, mostly of Inuit (Paallirmiut, Harvaqturmiut, Hauniqturmiut, Qairnirmiut and Ahialmiut and Sallirmiut) background (Eskimo Point Chamber of Commerce n.d.:2-3). The community houses both regional and local GNWT Renewable Resource offices as well as a Hunters and Trappers Association and the offices of the KWF.

While in Arviat I spoke with 33 men, 10 women and 4 couples in distinct interviews. Thirty-one of the forty-seven interviews were carried out with the help of a translator[15] The questions were designed to bring about discussion of the CMB and the issues which people felt most concerned about with respect to their relationships with wildlife officers, biologists and caribou. Table 5-1 is a list of the questions which formed my interviews. Some of the questions required only simple affirmative or negative responses and are summarized in Table 5-2.

Knowledge of the CMB: Of the total number of interviews completed, nineteen interviewees (~40%) responded that they had heard of the CMB, 18 (~38%) said no and 9 (~19%) people responded with what I have called an "uncertain yes". In the case of an uncertain yes, it became clear that the response was a yes to being aware of the activities of the wildlife officers or the HTA in Arviat.

(text continues on p. 91)

[15] Twenty-six of these interviews were completed with the help of one female translator while the remaining five were carried out with the help of two different male translators.

Table 5-1. Interview Questions used in Arviat NWT, July 1993.

1.	Have you heard of the activities of the Caribou Management Board (CMB)?
2.	Do you believe that the CMB has done a good job of representing your community's concerns?
3.	Have you ever talked with the person in your community who is a member of the CMB to express your thoughts or concerns?
4.A	Have you sat in on any of the CMBs meetings?
B	If so, did you participate in any way ?
5.	Do you read Caribou News?
6.	What are the issues you feel the CMB or biologists should be most concerned about? - e.g. fire management/border restrictions/wolf control/etc
7.	How important do you think community hunts are to the future of caribou hunting in your community?
8.	Can you afford to hunt without the financial support of a community hunt?
9.A	Do children get enough opportunities to learn skills out on the land?
B	Do kids who drop out of school get involved with trapping/hunting/fishing activities?
10.	What is the best way to handle/prevent any waste of meat that may occur? e.g. crippling losses or rotten/freezer-burned meat
11.	What do you think of caribou population estimates?
12.	Would you like to see more of the information biologists collect about where caribou are moving through the year?
13.	Do you keep in regular contact with neighbouring communities about caribou movements? How? (i.e. by phone, CB radio)
14.	Have you ever been involved with a biologist's research?
15.	Do you think there is more need for local participation in research?
16.	What do you think of the methods by which biologists monitor caribou (i.e., aerial surveys, radio collars)
17.	- a presentation of possible future scenarios: A: If caribou were a great distance from town and most hunters were unable to afford the time or the money to hunt, how would you feel about a programme set up to fly hunters out to areas where caribou are located? B: If caribou numbers decreased so much that most people could not get as much meat as they needed, how would you react if someone brought reindeer to this area?
18	What kind of information do you feel is important for the community to share with wildlife managers?
19.	Do you have any comments you would like to share with people in other caribou-using communities or to the CMB?

Table 5-2. Summary of affirmative/negative responses to interview questions 1-5, 12-15 & 17 (see Table 5-1).

ID #	SEX	AGE	I*	I**	Q #1	Q #2	Q #3	Q #4A	Q #4B	Q #5	Q #12	Q #13	Q #14	Q #15
1	M	60s	Y	Y	N	-	-	-	-	Y	N	-	N	-
2	M	30s	N	N	N	-	-	-	-	Y	N	-	N	N
3	M	30s	N	Y	Y	-	-	-	-	Y	-	Y	-	Y
4	M	50s	Y	Y	N	-	-	-	-	Y	Y	Y	Y	-
5	M	50s	N	Y	Y	Y	N	N	-	Y	N	Y	N	Y
6	M	40s	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7	M	20s	N	Y	N	-	-	-	-	-	N	Y	N	-
8	M	30s	N	Y	Y	-	-	-	-	Y	Y	-	-	Y
9	M	50s	Y	Y	N	-	-	-	-	N	N	Y	N	Y
10	M	40s	Y	Y	N	-	-	-	-	N	-	Y	N	Y
11	M	40s	Y	Y	N	-	-	-	-	N	-	Y	Y	Y
12	F	40s	N	Y	Y	Y	Y	N	-	Y	N	Y	N	Y
13	M	30s	N	Y	Y	-	-	-	-	N	Y	Y	N	Y
14	F	50s	Y	Y	N	-	-	-	-	N	Y	Y	N	Y
15	M	60s	Y	Y	Y	Y	N	N	-	N	Y	Y	N	N
16	M	60s	Y	Y	-	-	-	-	-	-	Y	Y	N	Y
17	C^	50s	Y	Y	UY'	UY	UY	UN	-	N	Y	Y	N	Y
18	M	50s	Y	Y	UY	UY	UN	UN	N	N	Y	Y	N	Y
19	F	50s	Y	Y	N	-	-	-	-	Y	Y	Y	N	Y
20	M	20s	N	Y	N	-	-	-	-	N	Y	N	N	-
21	M	20s	Y	Y	Y	Y	N	N	-	Y	N	Y	N	Y
22	F	60s	Y	Y	N	-	-	-	-	Y	Y	Y	N	-
23	M	~16	N	Y	Y	Y	N	N	-	N	Y	Y	N	Y
24	M	~16	N	Y	Y	Y	N	N	-	N	Y	Y	N	Y
25	F	40s	Y	Y	N	-	-	-	-	N	Y	Y	N	Y
26	M	50s	Y	Y	Y	-	N	N	-	N	N	N	N	Y
27	M	50s	Y	Y	Y	Y	-	N	-	Y	N	Y	N	Y
28	C	40s	N	Y	Y	Y	N	N	-	Y	Y	N	N	Y
29	C	50s	Y	Y	UY	UY	UY	N	-	N	Y	-	N	Y
30	M	70s	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	Y
31	M	30s	Y	Y	Y	Y	-	N	-	N	Y	Y	N	Y
32	F	60s	Y	Y	N	-	-	-	-	UY	-	-	N	Y
33	F	50s	Y	Y	UY	-	N	N	-	Y	Y	Y	N	Y
34	M	40s	N	Y	Y	Y	Y	Y	Y	Y	-	Y	N	Y
35	M	40s	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
36	M	30s	N	N	Y	-	N	N	-	N	N	Y	N	N
37	M	60s	Y	Y	Y	N	-	N	-	N	Y	Y	Y	Y
38	M	50s	Y	Y	N	-	-	-	-	N	Y	-	UY	Y
39	M	50s	Y	Y	UY	UY	-	-	-	N	N	Y	Y	Y
40	M	50s	Y	Y	UY	UY	-	-	-	N	Y	Y	N	Y
41	F	60s	Y	Y	N	-	-	-	-	Y	-	Y	N	Y
42	F	50s	Y	Y	N	-	-	-	-	Y	N	Y	N	Y
43	M	60s	Y	Y	N	-	-	-	-	N	Y	Y	N	Y
44	M	60s	Y	Y	UY	UY	N	N	-	Y	Y	Y	N	Y
45	C	60s	Y	Y	UY	UN	-	UY	UN	Y	Y	Y	N	-
46	M	40s	Y	Y	N			-	-	N	Y	N	N	Y
47	F	20s	N	Y	Y	-	N	N	-	N	Y	N	N	Y

* T = translation from Inuktitut to English
** I = Inuit?
^ C = couple
' UY/UN = uncertain yes or no

Almost half of the people who responded yes were politically active with local government, land claims negotiations, the KWF or were past members of the CMB.

I did not continue to ask Questions 2 to 4 if the answer to Question 1 was not yes. Of the twenty people (~42%) who responded yes to the first question, thirteen (65% of those who responded in the affirmative) replied that they felt that the CMB was doing a good job at representing the concerns of the community of Arviat.

One respondent replied that the people she had spoken with about the CMB felt that they were getting good feedback, but that she had heard from settlements without community representatives that they were not getting enough feedback (#12[16]). Such people felt that the only time they communicated with the KWF or the CMB was in the case of a change in regulations. These communities are heavily dependent on newsletters for information.

Only four (~8%) of the people I interviewed had spoken with their CMB representative at one time or another to express a concern. One man replied that when hunters were concerned about the inappropriate behaviour of other hunters, they discussed the problem among themselves and often used CB radio to continue or aid such discussion (#27).

Again, only four people had ever sat in on a CMB meeting while the same number had spoken at CMB meetings. A few people offered reasons to explain why they did not attend meetings. These reasons included being out on the land when meetings were held (#15) or only attending meetings that concerned fish or polar bear (#27, #44). One of the women interviewed said that she was sure that if she went "they would say she's just a woman" (#47).

[16] For the rest of this chapter interviewees will be referred to by an interview identification number: (ID#). See Table 5-2 for identification numbers.

Caribou News: Twenty-one (~45%) of the 47 people formally interviewed had read Caribou News at some time or another whether frequently or infrequently. One man said that he felt that the community should make better use of Caribou News especially in schools where it could be a very important way to help kids learn about caribou and conservation. I asked some people what they thought of the translation of occasional articles into Inuktitut. One man said that "sometimes it is hard to understand dialects, [since] not all articles use the same dialect" (#1). Another man that I spoke with has done quite a bit of translation work. He replied that with the mixing of Inuktitut speakers from all areas, the amalgamation of dialects used could deteriorate Inuktitut, but that it was possible to use language that everyone could understand (#5). Of those who have read Caribou News, twelve (~57%) said that they read it infrequently or that they had read it in the past. Ten people (~21% of all interviewees) appeared to read it often.

Caribou News used to be sent to every household and one man replied that he did not read it anymore because it did not come to his mailbox (#26). Another man felt that most elders do not read Caribou News very much and that it would be a good idea to have radio announcements or to have someone come in to speak with the elders (#35). A woman in a subsequent interview who does not read the newsletter very often also felt that it would be more interesting to hear spots on the radio (#22).

Hunters and Wildlife Management: I then began to ask people general questions about caribou that did not specifically involve the CMB. I asked about the issues which interviewees felt the CMB or biologists should be most concerned about (Question #6). Nineteen people (~40%) had no reply or felt that wildlife managers were doing a good job and did not have any suggestions. However, a number of interesting issues were brought up by others.

One man replied that the CMB should think of the manner in which to control hunting activity should it ever become necessary (#2). In another interview a woman felt that there were too many people interested in hunting animals and that the only people who should be guaranteed access to meat should be the unemployed (#33).

Another man felt that the issue of commercial quotas needed to be dealt with given that some communities had been granted quotas and others had not. He worries that the potential exists for major centres (like Cambridge Bay or Rankin Inlet with their meat packing outlets) to become central distributors and he opposes such centralization of meat distribution (#5). In another interview someone pointed out that many living things depend on caribou including cranes, seagulls, jaegers and foxes. This man worried about the wide-ranging and long-term effects of contamination by industrial developments such as uranium mining. He wondered how a management agency could address such inter-species dependencies (#6).

The issue of the effects of the market economy on hunting decisions came up. One hunter expressed his dilemma about how better to expend his effort, whether to hunt caribou for food or wolves for the money from the sale of pelts. This was a dilemma that the hunter faced whenever he was out on the land because he would not go out on the land only to hunt one or the other species (#11).

One man was concerned about the feeding of caribou meat to dogs; the issue which this man brought up is really about conceptions of waste. The man had been upset to read that a man in Baker Lake was charged with an illegal act after feeding the meat of sick caribou to his dog team. He felt that the ability of the hunter to distinguish between sick and healthy meat should have been respected and that it made more sense for the hunter to feed the meat to his dogs than to leave the meat lying out on the land. The man I spoke with stated that most young people would not be able to tell the difference between a sick and a healthy caribou before they shot it unless the caribou was very skinny or limping (#21).

A couple of the women that I spoke with were concerned about changes occurring in the meat over the past few years that they had not encountered before. They felt that the meat tasted different and that meat was often white and suppurated or hard. One woman said that there were instances when meat looked very different, when she and her family would not bother to bring the meat home (#25). Another woman felt that biologists should do more research on the changes in the "heart and

insides and gut" of caribou and wondered what caused the meat to look yellow at times. She said that if the meat looked very yellow it was given to dogs (#41).

An elder who has participated in many land claim and management meetings emphasized his concern that talk should revolve around the sharing of land and not the control of land. It is important to him that discussion of management does not become a discussion of "who's land is this" (#30).

Two women were very concerned about the effects of drugs injected into animals by researchers (e.g. tranquillizers). One woman said that her family had stopped eating polar bear meat after watching researchers drugging polar bears in a T.V. documentary. She felt that the researchers might be putting poisons into the bears (#32).

Concerns about the presentation of research methodology to the community were also expressed. A couple of men felt that it was very important that local communities be made aware of research far in advance of its proposed starting date so that people in the communities had the time to amend or make changes to methodologies that worried the community (#35, #38).

Community Hunts: Questions 7 and 8 of the interview asked about the importance of community hunts to the future of affordable caribou hunting. I realized fairly quickly that Question 8 was not phrased very appropriately at all. There was a great possibility that interviewees would think that I was questioning their abilities to provide for their families. I changed Question 8 to "Do you have the time and money to hunt as often as you would like?".

Forty-three of the forty-seven interviews strongly supported the community hunt that the local HTA and renewable resource officers had organized in the past. Only one person said that he did not approve of the hunt and this was a man who felt that the hunt should not be carried out in the spring when females were pregnant. However, the same man said he was not sure that any of the caribou distributed by the HTA were pregnant when shot (#26).

It was felt by many people that the community hunt programme was very important for elders in the community, for single mothers and for those without the financial resources to afford hunting equipment. The community hunts are organized by the HTA and the decision to go ahead with a hunt primarily depends upon the distance of caribou from the community. Social services gives the HTA or renewable resources a list of names of elders and others in need of meat. The number of caribou taken in the community hunt can vary quite a bit from one year to the next, i.e., if caribou are relatively inaccessible then the hunt is expanded. In 1993, 100 caribou were taken in the community hunt; in 1992 only 37 caribou were harvested (#8).

One man described the need for community hunts saying that good hunters are often asked for pieces of meat and that many people used the radio to announce that they needed meat. This sharing of meat rarely involves an exchange of money for meat although occasionally someone may offer money for good meat (meat with lots of fat) (#21).

A number of people wished to see an increase in the frequency or extent of community hunts in the future. Others emphasized that it was important to provide meat especially when people were going hungry and that elders should never be left hungry for meat (#30, #35). A couple of the people I interviewed emphasized the strong support of community hunts by all the communities in Nunavut and said that the organisation of a formal Hunter Income Support Programme was now underway following the final signing of the Nunavut Agreement (#34). An elder also talked about the importance of implementing such a programme. He said that hunters had talked about such a programme among themselves or on CB radio for years and voiced his opinion that with such a programme in place, meat might not be wasted as much (#30).

There were people, however, who had concerns about the community hunt. One woman worried that some of the people involved with past hunts were most interested in getting money for gas and grub for the hunting trip and would harvest animals in any condition (sick or thin) to bring back to the community. People in need of meat would not complain about the relative quality of the meat, but she felt that the

organizers of the hunt should be sure to involve experienced hunters who would bring back healthy meat (#42).

Young People and Land Skills Instruction: Question 9 was a two-part question asking interviewees about young people's opportunities to learn skills out on the land. I also asked whether young people who dropped out of school expressed interest in getting involved with trapping, fishing or hunting activities. Four people (~8%) said that young people definitely expressed interest in learning land skills and in becoming involved with activities out on the land once they left schools. Seven people (~15%) said that young people expressed little if any interest in activities out on the land.

The rest of the interviewees did not give such "black and white" answers. One man described the situation in this manner: there are three groups of young people; some are "townies" and never go out on the land, some go out all through the year and the third group goes out on the land only in the spring (#36).

Twenty-four people (~51%) felt that young people did not go out on the land because they did not have the financial resources to equip themselves properly or because they needed more instruction about how to look after themselves on the land, how to orient themselves in bad weather conditions and needed to know more about traditional forms of conservation. In one of the discussions I had with an older woman, she mentioned that young people did not know very many of the ways to cook caribou that she had learned as a child (#32).

A couple of men mentioned that they did not feel particularly comfortable about the instruction of land skills in the schools because these skills involved ways of looking at the world (life skills) that should be left up to parents to teach their children. Many people were primarily concerned, however, that because of the high costs of hunting, many children would only get the opportunities to learn land skills through the school.

Parents often cannot afford to take their kids out on the land given that it is not safe to buy a cheap snowmachine for this area (cost approximately $ 5,500) and it is

advisable to replace machines once every two years (#2, #3). Gas cost approximately $16 for 5 gallons in the winter of 1993 (#5).

Children in school until Grade 12 do not have the time to learn the educational skills of their own culture, yet if they do not stay in school they are unable to compete for the very few jobs available which can fund hunting activities (#6). It is also difficult to find employment that keeps a hunter in good physical condition to be out on the land hunting (#6); most jobs are seasonal and very few jobs exist in the winter (#35). One young woman mentioned that many young people have very low self-esteem because they have almost no hope of employment and feel constantly criticized by others in town who say that they are lazy and uninterested (#47).

I spoke with one man who had been involved with the school board in the past teaching young people land skills as well as carving skills (part of cultural inclusion programme). He mentioned that there were always more students interested in the classes than space to accommodate them (#27). Students are also occasionally taken out on camping trips with renewable resources staff (#17). Two young people (both have been involved with teaching kids in the local school) mentioned that it would be beneficial to start teaching kids about caribou conservation and land skills at a much younger age than presently occurs (before grade 3) (#21, #47).

The young offenders programme makes use of land skills instruction to take troubled youth out on the land. Young offenders are sometimes taken out on the land for weeks or months at a time. One man mentioned that such young people come back to town calmer, relaxed, better fed and with a better sense of self-respect (#34). It was mentioned to me a couple of times that people often wished they could be out on the land more often in order to "clear their head" (#36, #47).

Waste: Question 10 asked about the wastage of meat due to crippling losses or rotten/freezer-burned meat, etc. Twenty-three people (~49%) mentioned that they felt waste did occur and that the community should work to eliminate such waste. Waste included meat that was left out on the land, crippling losses, excessive hunting in fall months (especially October) (#46) and inadequate knowledge of how to process meat.

Four people (8%) felt that any waste that was occurring was insignificant. The remaining twenty-five interviews were composed of comments about hunting practices and ways to prevent waste. Six people (13%) specifically mentioned that they felt young people were responsible for hunting excesses which led to waste.

A few people remarked that they did encounter wounded animals out on the land, but did not indicate whether they observed this occasionally or frequently (#2). Some interviewees mentioned that if they found caribou carcasses or crippled animals out on the land they would bring such meat back to the community where it could at least be used as dog food (#20,42,44,45).

People did mention that they felt that it was the job of the renewable resources officers to deal with those hunters who were wasting meat. A few people felt that it was very important that the community be constantly reminded of the need to be responsible about the number of animals they harvested (#15,16,21,44). Some members of the community (the HTA) do use the radio to tell people not to leave caribou on the land and that they should hunt responsibly (#28).

In one discussion of waste, a man mentioned that elders had taught him never to shoot or bother caribou in areas that they used frequently, such as river crossings. The first caribou encountered in a group should be left unharmed so that the caribou would not become lost. Meat was not to be left on the land and animals should be skinned as soon as they were shot. Caching is usually done in late September for retrieval in the winter (#5). One older woman mentioned that when she was a child, people would never leave meat even if it were temporarily cached; if the family was moving on, they would wait for the meat to "cool" and then travel. She felt that the practice of leaving meat "raw" out on the land was a recent phenomenon (#32).

Elders try to remind younger people not to hunt caribou as often during the summer because they are bothered by the flies (#38). One man observed that caribou do break their legs in the summer months when they are running from bugs (#38).

Another man also mentioned the importance of the knowledge of the elders in any campaign to emphasize that edible meat should not be wasted. He stated that especially young people needed to be made aware that an Inuit law exists which

speaks of not taking what you do not need and that the expression of this unwritten law passed on by elders' knowledge was still necessary even with the existence of the laws implemented by Department of Renewable Resources (#35).

I talked about fall hunting with one man who mentioned it was possible to interpret that it was inadvisable to take meat during the rutting season because it had a bad smell. However, he said there was no reason not to use the meat because it was not bad (#6). In contrast, if a sick animal was mistakenly harvested the meat would not be used (#6,13).

The same man mentioned that crippling losses could be reduced by encouraging education in firearms use such that a hunter knew enough to determine by the sound of a shot whether the bullet was stray or not (#6). It was added that there was the problem that sometimes inadequate (not powerful enough) firearms were being used to hunt caribou (#6). Of course, as one younger man pointed out, you would have to be a highly skilled hunter in order to recognize whether or not a bullet had met its mark or had gone stray (#21).

Many people mentioned that older meat was used to feed dogs at times, especially by elders (#7). The community radio station is also used to advertise the availability of extra meat if a family finds themselves with more than enough to eat (#14). Community freezers are maintained from early spring until freeze-up for those members of the community who do not have their own freezers (#34).

Those people who spoke of hunting excesses mentioned that it was most likely to occur in the fall (#36,40). One man felt that it might occur because in the past they (Inuit) had tried to get as many animals as possible in the fall and that they would then cache the meat which would be retrieved during the winter (#40). A woman mentioned that in the fall she did occasionally see caribou carcasses out on the land with their tongues removed. She and her husband brought such animals back to the community for dog food (#42).

Finally, one hunter expressed his disappointment with some hunters that he had observed leaving harvested caribou out on the land if they did not have a lot of fat or

were judged to be too skinny (#28). The same hunter said that other hunters put pressure on hunters who caused such wastage to refrain from such practices (#28).

Interestingly, a younger woman felt that if there was an organized attempt to demonstrate to young people how to prepare meat, less meat would be wasted. She also felt that it was important to document traditional methods of preparing meat even though she knew that at this time in her life she would not use such methods. However, she felt that in the future her tastes might change and that she would not want to forget the traditional ways (#47).

Attitudes Toward Caribou Population Surveys: I asked people what they thought of scientific caribou population estimates in general. Twenty-one (~45%) of the people I spoke to replied that they did not believe that biologists could determine the numbers of caribou. People cited a number of reasons for coming to this conclusion including that they felt that caribou were always moving and that this would make it too difficult to count them. Others said that they knew that biologists do not count all animals and that the number they came up with was a "guess".

Nine (~19%) of the people that I spoke with felt that the population estimates were quite accurate. Nine of the people which I spoke to (these people are not all the same people who feel that population estimates are accurate) had either been involved with population surveys or had watched them at close hand. Only one of these nine people said that he felt the population surveys came up with accurate numbers. Five of the men did not think that the surveys came up with accurate numbers saying that biologists did not count resting caribou (sitting or lying down) (#9) or that caribou could look like rocks and be missed (#10).

The other three men felt that the numbers were "random" (#11) or that the surveys did not take into account possible changes in the migration routes of the animals (#35). One of the men who had been involved with population surveys said that local people are displeased with population surveys because they feel that the surveys have been carried out too close to town in the past and that the activities of

the survey caused the animals to become scared. This made hunting difficult for local people because they prefer to hunt the animals that are closer to town (#30).

The seventeen people (~36%) who expressed no definite positive or negative opinion about the surveys spoke about their reservations with the surveys. One man felt that most people in the community automatically recalled the decline announced by biologists in the late seventies/early eighties when population estimates were mentioned (#5). He said that people know that when caribou are not around they must be somewhere else, leaving time for the ground to recuperate (#5).

Both this man, and a woman I interviewed later, said that people know that animals such as caribou, fish and ptarmigan can be more plentiful one year than the next. This pattern or cycle was something to be expected of many aspects of life, not just of animals; the woman I spoke to described this thinking as a "custom" (#5,12). The man said that Inuit do not usually work with numbers (#5). Another man said that he was not too concerned with actual numbers stating that if he spent enough time out on the land he could gain a general sense of herd size (#6).

A second man also commented about the "aftermath" of feelings surrounding the reported decline of caribou in the early eighties (#34). He said that one of the reasons that Nunavut was so important to many Inuit communities was that it would prevent the communities from ever being placed in the position again where a quota system could be forced upon them from "outside", such as with polar bear, musk-ox or narwhal (#34). He said that if there were ever future reports of a decline, he would want to check the reports before he accepted the results very quickly (#34).

The typical reaction of those people that did not believe in population estimates was that it could not be possible to come up with an estimate because caribou are always moving. A woman explained this skepticism saying that many hunters remain doubtful when told that there are X number of caribou in any particular location, as she expressed; "how can there be an estimate for one spot?" (#12).

One of the men commented that he was concerned that the community never heard the results of population surveys and that biologists were collecting information only for themselves (#43). Although, when I was in Arviat, there were displays in both

the airport and the local government building indicating the latest results of radio tracking surveys.

Biologists' Knowledge of Caribou Movements: I asked people whether they felt that the community would benefit from increased information from wildlife officers or biologists about caribou movements. Twenty-nine people (~62%) responded that they would find such information useful. I often asked people whether they felt that young people or those without a lot of money or time to spend hunting would benefit especially from such information. One person replied that such information would help young people, but that "older people [were] usually ahead of biologists [with knowledge about the whereabouts of caribou] (#6).

Two other people replied that it was better for young people to get knowledge from other people in town who were doing a lot of travelling (#9), or that elders knew where caribou were travelling (#42). One man replied that biologists "should not give out any information about where caribou are or a whole bunch will go out and kill as many as they want" (#26).

Those who felt that they would like to see more information about caribou movements said that they would appreciate the information if caribou were a great distance from town (more than 50 miles from town) or if caribou movements were not as predictable as normal (#8,18,35). Two older men mentioned that the information that biologists collected with the use of radio collars could be very useful to hunters (#38, #44).

Three hunters replied that they found wildlife officers to be very helpful in helping them locate caribou, one of these men stated that, " they [wildlife officers] are helping out and they always tell where caribou are". Another of the men said that, "we always help each other out; wildlife officers and hunters" (#30).

Those interviewees that felt that they would not benefit from biologists' information usually said that they already knew where to expect to find caribou from their own experiences out on the land (#1,7,12). Some hunters stated that if their own experience was not adequate, they could obtain the information they needed by talking

over the CB or HF radio or by phoning friends or relatives such that they would arrive at places in time to intercept animals (#5,21,27,36,39).

Intercommunity Information Exchange: I wanted to know how important the exchange of information about caribou between communities was to hunters. Thirty-six people (~77%) responded that they spoke at least periodically with members of other communities about caribou movements over the phone or by HF or CB radio. Twenty of these people specifically mentioned the use of CB radios, ten spoke of HF radio, while thirteen people spoke of communication by phone or radio in general. One man said that he would not share or expect information about caribou movements (#26).

Another man said that there was not enough information about caribou movements on either CB or HF radio (#29). He surmised that the community would benefit if it had experienced people spend time out on the land in order to let the community know where the herds are (#29).

The range of the CB radio allows people to speak to hunters as distant as Baker Lake and Whale Cove about caribou movements (#3, #7). The HF radio is in use almost twenty-four hours a day and it is possible to hear people out on the land hunting almost always (#5) HF radios can be used to speak with people about caribou in communities as far away as Coral Harbour, Iqaluit (#10), Yellowknife and Sanikiluaq (#34).

The CB radio is used most often in the summer-time with all-terrain vehicles when hunts usually last no longer than a day (#21). The HF radio has a much greater range and is used for winter hunting when the range of a CB is too short for the longer distances travelled (#21).

I was told that people in the community regularly volunteered information to other Inuit communities, but that there was not much contact with Dene communities further south (#6). The radios are also a means by which to facilitate the intercommunity trading of country food such as walrus, caribou and fish with communities like Chesterfield Inlet and Rankin Inlet (#12).

One elder told me that before radios were available he used to get together with inland people to talk about areas where caribou would be stopped in their migration paths (#30). The same man said that in the past they had kept in contact with Dene people in Manitoba in order to speak about which direction the caribou were travelling (#30). Another elder who had told me of losing her husband and her mother and mother-in-law to sickness (tuberculosis?) and starvation near Ennadai Lake in the late 1950s, spoke of the present-day announcements of caribou movements by CBC Rankin (#41).

Participation in Biologists' Fieldwork: Six of the interviewees (~13%) said that they had been involved with some kind of wildlife research work. Three of these men had participated in caribou population surveys once each (#4,11,35). One man had helped with a research project to count geese (#39), while another had been hired by Nunasi Development Incorporated to watch the reactions of birds and sea mammals to air blasting (#6).

Eighty-seven percent of people replied that they had never been involved with the research of a biologist. Three people said they had seen either the flights of planes carrying out aerial surveys of caribou or had observed spring composition surveys (#14,40,45). I did not pursue this inquiry further except to ask occasionally whether these people would participate in surveys if they were asked. Many people said they would be interested. Two men said that they would participate in research if their work was paid (#11,18).

In answer to my question about the possible need for more local participation in research, thirty-seven people (~79%) responded that would like to see more local involvement. Three people (~6%) felt that there was no need for increased involvement (#2,15,36) and seven people (~15%) had an indifferent response (#1,4,7,11,20,22,45).

One of the people who expressed interest in increased community participation commented that since the HTAs and settlement councils were established such involvement was "much better than the old days... [when the community] hardly knew anything [about field research]" (#5). Another man expressed his interest in seeing the

occasional presence of researchers within the community to explain surveys and their methods (#21).

An older man felt that if there was an effort to bring young people along on surveys, they would learn not to hunt more animals than they needed once they appreciated the determination of the actual number of caribou that exist (#37). One man mentioned that the participation of young people would be a valuable way for them to learn skills they would need in the future (#39).

Caribou Monitoring: My sixteenth question asked interviewees about their thoughts of the techniques of caribou monitoring surveys. Twenty-four people (~51%) said that they were generally comfortable with caribou surveys. Four people (~8%) felt that the surveys were advantageous because they helped people in the community to locate caribou (#1,9,27,31). Sixteen people (~34%) worried that aerial surveys and/or radio-collaring was detrimental to the health of caribou, although nine of these sixteen were also part of the group of people who were accepting of the techniques. Four people were quite worried about the effects of drugging and/or netting on caribou (#5,6,11,33); two of these four felt, however, that the methods were justified (#5,11). Thirteen people (~28%) were unsure of their thoughts about this issue.

Thinking of the Possibilities of the Future: My seventeenth question was an attempt to open up discussion of users' perceptions about the goals of caribou management. How did people feel about a management scheme that would attempt to influence the population dynamics of caribou? For the first thirteen interviews I phrased the question in this way, "How do you feel about management practices by which managers would attempt to increase caribou numbers or users' accessibility in order to meet users' needs?". I changed this question for the remaining 34 interviews because I felt that it was probably a difficult question to translate and a fairly difficult question to answer "on the spot".

My second version of this question was split into two parts. I asked interviewees about their reactions to two possible future scenarios. I emphasized as I

presented the scenarios that I had made them up and that they did not represent anyone else's ideas or the predictions of any research. The first scenario (17A) asked people what they would think of a system to fly hunters out to caribou, in years when caribou did not follow migration paths reasonably close to the community. The second scenario (17B) asked interviewees about their thoughts of the introduction of reindeer to the area in the case that caribou numbers were greatly reduced for a long period of time.

I will first present the responses to the first 13 interviews. Six people (~13%) stated that they would welcome attempts to increase accessibility to caribou and/or to increase caribou herd sizes (#1,4,7,9,10,13). One person felt that there was no need to make these efforts (#2) while two others felt that such efforts would be damaging (#5,12). One man expressed his opposition saying that, "animals are born to roam, domestication could be bad; disease, etc. could develop; [do] not believe in bothering animals; something could happen that cannot control..." (#5). A woman cited a case where harp seal were purported to be overpopulating an area near Tuktoyaktuk. She said she had heard that there was talk of giving "some kind of vaccination" to the seals to reduce numbers by decreasing fertility (#12). The woman felt that this was "going totally against nature" (#12).

Those people that expressed support for increased accessibility or numbers really only answered in the affirmative without stating any reasons. However, one man who supported such proposals indicated in his answer that it was important that managers and users help each other out (#1). He spoke of bringing samples of unhealthy caribou tissue to the renewable resources office in order that it be tested. This man did state that "caribou are on their own, they can survive on their own" so I do not feel that he necessarily supported any future programme to decrease wolf fertility for instance.

The discussion will now turn to interviews 14 through 47. Twenty-eight people (~60%) said that they would support a programme to fly hunters out to caribou, but only if caribou were a great distance from town. Only three (~6%) said no, and three people did not have an opinion. Fourteen people (30%) were comfortable with the

future introduction of reindeer. Another fourteen people said they would not support such a plan; five of these people felt that caribou numbers would never drop to such a level that the community would need another supply of meat. Six people (13%) were unsure of their feelings about reindeer.

A number of interesting comments were made to explain the various stances of the interviewees. One woman was careful to point out that many people would have no access to fresh food products if they could not get country food (#14). The same woman said that she worried about the present situation where some families could not afford to hunt and were going hungry as a result (#14). A man reiterated these ideas when he said that if caribou were to migrate at a far distance from the town, the community "would be very deeply stuck" (#34). One young woman said that she would want meat especially if she were unemployed (#47). One man talked of the community of Coral Harbour whose hunters had been flown to the mainland in the past in order to obtain meat (#37).

The following comments represent thoughts of those people who worried about the detrimental effects of the introduction of a reindeer herd: One man said, "[it would be a] bad idea since caribou would not have any food left" (#15). Another younger man said such a plan would upset the elders because it would upset the traditional ways of hunting caribou (#21). The same man acknowledged that "there are all kinds of people, there would be different people concerned about the past and tradition; good for people without means to buy gas..." (#21). The reasons of another man were that reindeer would by definition be animals that were "disturbed by people" and he would not want to eat such an animal (#46). A woman who opposed reindeer introduction made reference to caribou she had seen in the Winnipeg zoo. She felt sorry for the animals and suspected that they did not have any fat (#33). Those people that did not like the idea of flying hunters out to distant animals worried that the animals would then be overhunted (#21).

A man who said he would support reindeer introduction, said that he had heard that there was a "farm" in Coral Harbour where the low population numbers prevented people from sustaining themselves on caribou alone (#44). A man who said he could

not believe that caribou numbers would ever fall to dangerous levels talked of the fact that females give birth to one calf a year (#18). However, he then discussed the fact that if there were ever a big fire caribou would not be fat and he would not want to eat caribou that had no fat (#18).

Communication with Wildlife Managers: Question 18 asked people to describe the information wildlife managers needed (or should have) from the community in order to do a good job. Most people felt that it was important that a dialogue be maintained between renewable resources staff and the community. Most of the interviewees described that a comfortable situation for communication existed and felt that the community and renewable resources worked to help each other out.

The local HTA was mentioned as an easy forum for government employees to get feedback from people in the community (#12). One of the wildlife officers that I spoke with said that hunters dropped by the renewable resource offices frequently to describe animals that were acting strangely, etc. (#3). The wildlife officers are able to learn a lot about the concerns and knowledge of the community from listening to CB or HF radio (if they know the land and they can speak Inuktitut) (#3).

Some people said that they would like researchers to spend even more time consulting the community about their research. One man said that research was often announced on the radio, but that consultation did not take place (#46).

One man had an interesting idea about creating "community wildlife officers" (the term is my construction) analogous to the designation of special constable that the RCMP has created (#6). The RCMP allows candidates to choose whether to train for years to become peace officers or to be appointed as special constables on the spot. An analogous wildlife officer designation would be a recognition of the knowledge obtained by community members through experience on the land (#6).

It was suggested that biologists should spend more time consulting the elders who would know more about the timing and routes of caribou movements than their children were likely to know (#11,21). One elder said that he was satisfied that

renewable resources were making a good effort to speak with people in the community, even with elders who no longer hunted (#30).

One man felt that it would be a good idea to establish a workshop to get hunters and biologists together to discuss different approaches to monitoring and learning about caribou (#35). These workshops would need to be held more often than conferences or meetings and would be best attended by community members if held in winter months (#35).

My last question (No. 19) asked for comments directed toward people in other caribou-using communities or toward biologists or the CMB itself. A number of people commented about the potential for wasteful hunting practices. A hunter felt that waste was a problem when caribou were near communities. He said that when caribou were close by many "amateur" hunters were out on the land who would not ordinarily hunt caribou (#2). Another man was concerned that hunting practices had become much more lax than when he lived out on the land with his parents (#5). He felt that the answer to such problems lay not with enforcement, but with the ability of leaders to educate people by distributing information to people so that they can be wise and show respect (#5).

I had an interesting discussion with one man about the implications of the community health centre's policies on the preparation of wild meat (#21). He felt that there was a conflict between health policies and traditional food preparation practices which left people confused about whether to adopt "white" ways or to follow Inuit ways. People are warned to protect themselves from botulism and brucellosis when at the same time they are told that traditional food is the best diet. The community is told not to leave meat sitting around, but many older people like to age their meat and do not like to eat freshly-killed meat.

A second suggestion for community wildlife officers or by-law officers was put forth by one man at the end of his interview (#26). Approval of the practice of wildlife officers or the HTA to discourage hunters from over-hunting was expressed (#39). One hunter spoke of the changes in caribou consumption over the years. He felt that it was important for the CMB to recognize that in the past families needed 200 to

400 animals per year to keep a single family adequately supplied. This man now takes from 20 to 40 caribou per year for the needs of the seven people that he hunts for (#6).

Two interviewees were concerned about the implications of the commercial use of caribou. One man felt that at this time commercial use was at a minimum and he felt confident that a system could be devised to expand commercial use with careful controls in place (#6). In contrast, one elder that I spoke with was completely opposed to any sale of caribou meat, although she did not mind the sale of fish (#32).

A number of people expressed their concern with the mess left out on the land by some people who did not clean up their camps. One man was concerned about land for another reason. He worried about the threat of camp fires that were not properly extinguished (#44).

A couple of comments centred on wildlife officers and management. One older man said that wildlife officers first came to his community when he was a teenager and at that time he really hated them (#37). However, now he realizes that they are "useful". Another man had the same thoughts about the wildlife officers (#37). He found that now the officers worked on the side of the people and concluded that this might be because they are both native. Only one person commented on the organisation of management boards (#42). She was concerned that elders are not involved with the boards because they are unable to speak English. She worried that the boards are missing important knowledge about animals that younger people do not have.

5.2 TADOULE LAKE, MANITOBA AND WILDLIFE MANAGEMENT

Interviews carried out with people of the Sayisi-Dene First Nation in Tadoule Lake in August of 1993 were characterized by a casual conversational style. On my arrival in Tadoule, members of the community suggested I not use the sequential questioning approach I had used when interviewing people in Arviat. Most interviews lasted twice as long as the interviews carried out in Arviat. I spoke with 11 men, one woman and four married couples in separate interviews. A female translator worked as a moderator between the Dene and English languages for over half of the conversations[17], the rest were conducted in English.

Table 5-3. Simple profile of interviews in Tadoule Lake, Manitoba, August 1993.

ID#	SEX	AGE	Translation between Dene and English
1	M	40s	N
2	C*	40s	N
3	C	60s	some
4	M	30s	N
5	M	40s	N
6	M	70s	Y
7	C	60s	Y
8	M	40s	N
9	M	30s	N
10	M	70s	Y
11	M	70s	Y
12	F	80s	Y
13	C	60s	Y
14	M	50s	N
15	M	30s	N
16	M	30s	N

* C = couple

History of the Community: In order to begin to understand the relationship of the people of Tadoule Lake with wildlife management institutions it is necessary to hear the story of the relocations of the Sayisi-Dene. The Sayisi-Dene documentation of their

[17] The translator was present at some interviews when translation was not needed, but interviewer and interviewee were more at ease because of her role as a liaison!

history is available in a locally-produced film called "Nu Ho Ni Yeh" ("Our Story" in English) (Treeline Productions 1992). Members of the community are still grappling with the legacy of a government relocation of the people from Duck Lake to Churchill in the late 1950s. The community relocated itself back on the land in the early 1970s. Nevertheless, it is vital to recognize that the Sayisi-Dene were socially and economically devastated by the original relocation[18]. The community is suspicious of government in general which is not unusual for many first nations. However, a good number of the older people I spoke with are specifically suspicious of wildlife managers who they feel justified the government's assimilationist policies by asserting that Dene were over-hunting caribou in northern Manitoba and should therefore be moved into a settlement[19]. One of the men I spoke with expressed a common frustration; it is very difficult now to accept marginal caribou use such as the recreational hunting of caribou. This is because the Sayisi-Dene people, who have survived on an economy based on caribou, are still recovering from the legacy of a policy which at one time destroyed their ability to hunt caribou and thereby denied them their self-sufficiency (#15[20]).

Settlement living is a relatively recent phenomenon. One man explained that the Sayisi-Dene have never lived year-round in one location as long as they have at Tadoule Lake, for the last twenty-odd years (#4). Many people in Tadoule Lake have become "urbanized" even though they live in a very isolated community (approximately 45 minute flight from the nearest all-season road) (#4). One man sees future and expanded life on the land as a necessary part of helping people to escape the self-destructive introspection which can occur in a small, isolated place (#4). There

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[18] See Koolage's 1968 study of the socio-economic conditions of the Sayisi-Dene at Churchill. The Churchill Archives contain revealing information about the conditions in Churchill, especially the records of the Community Development Officer.

[19] A game warden's account of that time is contained in Robertson's memoirs (1991).

[20] Numbers contained in parentheses in section 5.2 refer to the identification numbers of interviews outlined in Table 5-3.

is a degree of confidence that as a result of contact with the Manitoba Department of Natural Resources, a moratorium will continue to exist on land leases, transactions or outpost camp permits until land entitlement issues are settled (#4). The self-determination of the community depends upon such a moratorium.

The Community and Wildlife Management: Most people said that they were quite aware that there are government employees who manage caribou (#1). The majority of people said that they know that wildlife managers somehow count caribou, but they do not know much else about their activities (#1). A couple of men stated that caribou management should be a strong force, but did not like the word "management" (#1,2,14). One man explained that the translation of management concepts is extremely difficult where the word "management" is most closely translated as "looking after" in the Dene language. It would seem nonsensical to most people to envision "looking after" wildlife animals (#14). He also feels that most people automatically feel defensive when they hear about the existence of a management board (#14).

A man who had spent a good deal of time talking with wildlife biologists and managers in the past was happy with the CMB. He feels that it has overcome the lack of communication between government and the people in the past (#2). He feels the board is effectively planning for the future, not only of his generation, but for the future of generations to come (#2).

Another man was not aware of the recent activities of the CMB, but values it as a "safeguard" (#9). He felt that biologists had made a large effort to communicate with users in the last several years. However, he felt that when cut-backs in funding occur, biologists choose to prioritize the use of "high-tech." information rather than community information and spend their time "down south" rather than financing consultation with communities (#9).

One of the men who said that he had little knowledge of the CMB voiced an example to illustrate his doubts about whether the CMB really helps the community. One of the prominent concerns of the community is the Border A licence dispute and he said he still did not know whether that controversy was solved or not (#14). The

Border A licence issue was the single issue that he currently associates with the board and he is uncomfortable that it is still an unresolved issue from his perspective. He felt that because of this, and other questions of adequate community participation, it would be a good idea to set up a local community-owned management board.

Elders said they knew little or nothing about the CMB and are quite distrustful of government representatives (#6,7,10-13). One elder said that one of the reasons he is wary of biologists is because he is not comfortable with the manner in which harvest information is collected (#11). He said he has never had feedback about what is done with harvest data once it is collected. He wants this information brought back to the community along with information about who is using the data and how it is used (#11).

The CMB was described as the only avenue by which Dene and Inuit communities can communicate with each other about caribou (#4). One man worries that the influence of the CMB will be diminished once the NWMB takes hold of caribou management decision-making (#4). He also discussed the variation in acceptance of the commercial use of caribou. He described this situation as a competition where the short-term economic valuation of caribou threatened to dissolve the traditional sense of the value of caribou. This is especially true because there is no significant communication between Inuit communities interested in developing commercial markets for caribou and Dene communities that are not (#4). Without such communication provincial communities such as Tadoule feel a growing frustration and desperation that traditional values of caribou cannot be retained with the instigation of commercial quotas (#4).

The concerns about harvest data collection stretch to population estimates. One man mentioned that he did not think the counts were always accurate. He knows that not all people are willing to provide provide full information about the number of caribou they harvest because they are suspicious of what will happen to the information (#1).

One hunter often finds it difficult to reconcile biologists' estimates of the number of caribou in his area with his own observations and understanding of how

scientists estimate their numbers (#2). Elders said that they do not believe what biologists or natural resources employees tell them about the caribou population (#3,6,7). Some people in the community want the chance to speak with biologists about why they felt caribou numbers were decreasing in the early 1980s and then increased. Some members of the community would also like the chance to discuss changes in caribou movements and the results of biologists' monitoring studies (#14).

More effort should be put into relaying information about wildlife studies into a format and language that local communities can understand (#9). It was felt that there would be great interest if biologists came into the community at least once a year to explain what they have learned from radio-collaring caribou and other monitoring methods (#14).

People feel that their thoughts have no influence on policy making, so why bother to try to make their thoughts known (#14). The CMB is strongly associated with government and is spoken of in the same context as one man spoke of the his worries of Manitoba-Hydro's plans for future development (#14). By this it is meant that the CMB is considered by some people as one of a number of many other government and outside interests external to the community.

There has been some involvement of the community with wildlife research. A couple of men mentioned that in past years elders were occasionally asked to participate in population surveys (#1, 14). One of the men I talked to had participated in the tagging programme at Duck Lake in the 1950s when he was quite young.

People in the community were asked to turn in caribou jawbones to wildlife officers, but the man I spoke with about this was not sure to what degree people complied (#14). He did feel, however, that many people in the community would turn their thoughts back to the 1950s relocation from Duck Lake and become uneasy about contributing to a study that might have direct and considerable impacts on their lives in the future (#14). Over the years, usually one person in the community at a time has held an employment position with the provincial Department of Natural Resources to collect harvest data and/or help out with aerial surveys.

Thoughts on Fire Control: A couple of the interviews involved discussion about fire control. The Manitoba provincial government does not have a policy to suppress fires in northern areas of the province unless human lives are endangered. One man said he finds it frustrating and disappointing to see that people from Manitoba communities are hired to fight fires in Saskatchewan, but there is nothing they can do to control fires in their home province (#5,6). People are frustrated that communities down south receive training in fire-fighting methods, but this is not an option in communities in the extreme north of the province (#5). It appears to be important to the community to fully understand why the province's priorities for the control of fire do not include northern Manitoba (#1).

One man tried to explain that it is very important for wildlife managers to recognize that changes in hunting regulations or policies must be introduced gradually and with consultation. He cited the example of the introduction of Border A licences, a case where most people were told at a meeting without any warning that these licences were to be instituted. People felt that the licences were being forced on them (#1). Another man said that he had heard that licences were to be issued to sports hunters and felt that consultations should be held with the community first (#14).

Caribou News does enjoy a readership from the young to elders. Most people over fifty-five read in syllabics only (#4,14). However, some people did ask if the newsletter was still being published (#4).

Concerns about the South: A couple of people were concerned about animal rights groups and the possibility that they might continue to demand changes in trapping and hunting activities in the future. One man expressed his incredulity that some people "down south" felt justified in campaigns to stop northerners from eating country food. He said that he found this offensive especially because most people in small northern communities have very few opportunities for employment and would go hungry without wild meat (#1). The same man also felt that many southerners do not understand the dynamics of the relationship between animals and the people that harvest them (#1).

A number of people expressed worries about the activities of private aircraft which fly over huge tracts of unsupervised airspace and land in northern Manitoba and the NWT. It is felt that it is too easy for small aircraft to take advantage of the lack of monitoring of their activities and therefore felt safe to chance the risks of hunting caribou illegally (#1,4,7,15).

"Bad Press"

Social science researchers and media are, of course, other influences that concern the community. Elders mentioned that the documentation of the interviews I was carrying out in the community meant that the words I used to communicate the thoughts they shared with me, could conceivably be used to hurt people in the community at a later time (#7,11,13)[21]. This is especially worrisome to elders because they have no way of knowing whether their ideas are being translated and then later understood in the context and sense in which they intended.

Development: Tadoule Lake was in the midst of voting about whether to construct a road to connect it with all-weather roads when I was visiting. There was much discussion of the advantages and disadvantages of increasing the accessibility of the community. The community eventually voted to reject the proposal to construct a road, but issues of economic development are never very far from the surface. There are very few jobs available in the community and the recognition exists that although employment opportunities are desperately needed, short-term economic gains can bring with them irreversible destruction of the community and the environment. These feelings are equally prevalent whether one talks about development such as road

[21] A few people explained their hesitancy to speak to me (and other outsiders) by speaking of the predicament of a newspaper photographer. She had taken pictures of caribou carcasses washed up on the shores of Duck Lake for employees of the Department of Natural Resources in the 1950s. These pictures were published in southern newspapers without her knowledge and cited as evidence of the slaughter of caribou by native peoples in northern Manitoba. For greater explanation see "Nu Ho Ni Yeh" (Tadoule Lake 1992).

construction, rumours of the hydro-development of the Seal River or the effects of sport lodges.

Sport Lodges: There were a number of mixed and guarded reactions to the topic of sport fishing and hunting. A prominent sentiment expressed by most people I spoke with is a lack of trust of lodge operators. Many people feel duped by a number of operators whose promised employment opportunities and commitment to local people disappeared following the establishment of the lodges (#6,7,13). One elder named four sites where sport lodges have been established at specific locations which have been very important to the Sayisi-Dene in the past and are no longer available for their use (#7). Only licensed outfitters are able to acquire and sell sport licences in the province, band councils may not sell licences unless they establish an outfitting business.

Some people said that they felt at odds with the concept of "sport" harvesting. One man said he was repulsed with the cruelty of fish catch-and-release programmes and wondered how anyone could object to trapping when such an obvious example of unnecessary suffering exists (#13). An older woman felt it was immoral to hunt animals that were not needed for food and survival (#12). People feel that lodges are affecting the viability of trapping and having noticeable effects on caribou movements (#5,12). In this way, it is felt that sport lodges are undermining the community's past way of life as well as the potential of present and future ways of life (#4).

A man who supports the concept of a community-owned lodge, felt the pressure of the encroachment of lodges on Dene traditional lands. He wondered whether there would be a suitable area left to support a successful lodge for the community if the band did not establish one fairly soon (#3).

A couple of people said that they were mistrustful of lodges because they had been told by a game warden that lodge operators needed permission from the band council to hunt caribou in the vicinity of the community. However, such hunting has gone on without permission from the community (#8). An older man stated that the lodges set up in the surrounding area are by their very nature meant to improve personal gain and he could not see how they would ever be beneficial to all members

of local communities (#11). The people I spoke with felt a general malaise that they did not know enough about the activities of lodges in the area such as how many licences they are selling to sport hunters and what is happening to the meat (#14). There is a great deal of worry about the implications of non-resident caribou hunting. It is felt that the CMB should consult directly with local communities about strategies to deal with the issue of non-resident hunting (#4).

Respect for Caribou: Waste, Hunting Practices and Tagging: A couple of people mentioned that elders and band councillors continually stress that hunters must be careful not to take more animals than they need (#1). Such practices include being sure of the knowledge of how to make a clean fast kill, getting close enough to assess the condition of an animal before shooting and being careful not to chase animals (#1,14,16).

Older men and women felt it important to explain how changing times had changed the nature of respect for the land, especially the respect of people for the animals they counted on for food. Only two or three generations ago people relied very heavily on caribou for food. People had a very profound and fundamental spiritual obligation to hunt caribou in a responsible manner because they had represented their only means of survival (#11). This respect for animals permeated all aspects of life, from cooking to childbirth practices (#3). If caribou were not available for food, people knew they would very likely starve to death (#8,12).

It was suggested to me that I not bring up the topic of radio-collaring in the community because many heated and unresolved arguments about collaring still exist. However, some people brought up the subject of caribou monitoring methods on their own. One woman described monitoring methods as an invasion or attack of agricultural society's ideas on Dene culture, explaining that in contrast, she would never presume to tag or place limits on the killing of cattle (#7).

An older man told a legend of a long ago attempt to mark caribou which ended in the closing of a time when caribou and people actually trusted each other enough to live together (#11) (see Appendix 3 for a version of this legend published in Caribou

News). This precept, that caribou are not to be harassed, along with a belief that the tagging of caribou in the 1950s led to the deaths of many animals (#11,14), has sparked stiff opposition to any mention of radio-collaring programmes.

People talked of how angry the community felt about caribou tagging. One can gain a sense of how deep the outrage with the tagging programme must have run after seeing a segment of the community's film (Nu Ho Ni Yeh) where a man explains the spiritual significance of a caribou river crossing. Caribou were tagged from canoes as they swam across water bodies; crossings considered to be sacred sites. One of the sites where much tagging occurred was at the Duck Lake site which has been so important to the Sayisi-Dene.

Access to caribou is a long running concern of the community. The community certainly worries what the effects of commercial quotas will mean to changing patterns of access to caribou meat. For example, will Baffin Islanders end up with indirect access to Qamanirjuaq caribou through the meat processing centre in Rankin Inlet? Should Dene and Inu't communities living near the Beverly caribou range also have access to Qamanirjuaq caribou (#4)?

Caribou Condition: Many people mentioned that caribou are very thin in recent years (#5-14). Elders noticed that the texture of meat has been notably tougher in the past several years. Some people worry about skinny animals that are shot and then not consumed because people worried that the animals were sick (#8). One man noted that last fall full-grown bulls were quite skinny and still had velvet on their antlers when usually they were fat and antlers were free of velvet (#10). Tadoule Lakers have also encountered caribou with unusually white foamy meat that they decided was not edible (#10).

People are very interested in hearing about the levels of contaminants in caribou meat and the relative effects that incidents like the Chernobyl nuclear accident have had on the environment in their area.

Education: One man expressed the importance of teaching land skills to children explaining that children often become disillusioned with school thinking that it is a "white man's deal" that leaves them with little opportunity to learn of their own culture (#2). Land skills are a culturally-meaningful way in which children can explore and develop ideas about life and independence (#2).

Many parents do not have the equipment or the knowledge to teach their children land skills so he feels that it is necessary for schools to take a role in providing children with such opportunities. A few people feel that it is crucial that land skills be incorporated into the school curriculum (#2,7,13).

There are gaps in the education of bush skills where someone in their mid-twenties may know less about how to skin a caribou than a twelve year old who has had more opportunity to learn from a skilled parent (#2). However, although many children do know how to skin a caribou, few know which caribou are the best to shoot for good meat (#16). Young people may assume that the biggest caribou are the best caribou to shoot and do not know that they can gather information about the likely condition of a caribou by looking at its position in the herd (these positions change depending upon whether the caribou are in the woods or on a lake) (#16). Waste could therefore be avoided if hunters were less likely to shoot skinny or sick caribou that they preferred not to eat. If skills like marksmanship and the dressing of meat were taught through a school programme, the programme would act as an assurance that each child in the community has the opportunity to learn basic bush skills.

One woman made the analogy, however, that a young person living in a community like Tadoule Lake and learning about bush skills in a classroom setting without spending time out on the land, is like an illiterate person entering a store and purchasing a good for which (s)he is unable to read the instructions. It is in the demonstration and the use of the skills that the values and knowledge is retained and understood. Again, it was emphasized that land skills are about far more than just learning effective techniques to kill animals (#6).

Children learn about survival, about life and about how to think and make their own decisions so that they can determine their own direction. Elders felt that without

these land or life skills, children in the community were likely to stagnate because they currently have little incentive to focus their thoughts about their goals for life (#6,10).

Another elder had very interesting views about education and technology change (#13). He stated that the kind of education and knowledge that he had acquired living on the land could not be compared to education that children acquire in government schools. However, he felt it important that children and outsiders realize that his life on the land had provided him with an education and an ability to understand the world in every way as valuable as classroom schooling (#13). He worries that at present his knowledge and experience is unrecognized and is frustrated when he sees how the use of the tools of formal schooling are diminishing his way of life. He feels very saddened to be accompanied by a formally educated person out on the land who cannot read a caribou trail in order to know which way to travel to find animals.

It was suggested that the CMB could help communities such as Tadoule Lake to negotiate the adoption of a land skills programme into the formal school curriculum (#2). Such programmes should be developed within individual communities given that skills such as butchering methods vary from one area to the next (#2). Children in the local school do make use of the CMB Schools Program year after year. Children quickly learn the contents of the kits, however, and then have no means to further explore questions about caribou and conservation (#16).

One man suggested that one of the important reasons for developing a community-owned lodge is to provide a place outside of the community to teach children about land skills in the bush (#3). Another man touched on the same idea, pointing out that if young people spent more time on the land and out of the community they might break free of the frustrations they felt in the community (#4). He feels that it would be profoundly beneficial to slowly re-implement a seasonal round of movement into people's lifestyles hoping that as a result people would be a lot happier and more balanced (#4).

Community Hunts: A number of people said that the community hunt is quite important especially for elders (#1,2,8). One elder said that the community hunts should become an established means for children to get the opportunity to learn how to hunt on the land (#7). However, the hunt as it exists has become quite an expensive proposition which is difficult to carry out as many times as it may be needed (#14). The cost of the hunt can vary substantially depending upon the distance of the caribou from the community. In some years (depending upon the time of year!) it may be possible to travel by boat while in other years hunters must travel long distances by snowmobile. Access to air travel was invaluable to the community when a former chief (and CMB member) owned a plane. The community could then locate caribou more easily and save travel costs because less time was spent searching for animals.

Communication with Other Communities: Tadoule Lake does not use an extensive HF or CB radio network such as exists in Arviat. Apparently, this kind of radio communication was used quite extensively when many people trapped, but radios are not used very much now in part due to the interference from hydro-lines (#1). High quality radios capable of filtering out background noise are too expensive for most households to buy (#1). For the last three or four years, since the installation of telephones, people phone neighbouring communities if they have information about the movements and condition of caribou in the area (#14).

CHAPTER 6. CO-MANAGEMENT AND THE SECURITY OF COMMUNAL PROPERTY REGIMES

There is a huge variety of themes which arise from the discussion of the management of a common property resource like wildlife. In the last decade, theorists have discussed the basic misconception western academics have held about the use of natural resources lacking any apparent ownership; Hardin's work detailing the "Tragedy of the Commons" is cited as the epitome of a definitive metaphor of this misconception (Berkes 1985, 1989; Feeny et al. 1990, McCay and Acheson 1987).

Co-management systems, representing a dynamic process of compromise between state and aboriginal wildlife management systems (Usher 1986), could not have evolved without the unveiling or reinterpretation of the "Tragedy of the Commons". Wildlife biology has in the past concentrated on simple "predator-prey" models of human-environment interactions with questionable predictive capabilities, especially in northern areas (Freeman 1985:268, 276). Co-management systems function as forums for cross-cultural education and communication (Osherenko 1988, Usher 1991). Such regimes work to promulgate social systems which combine socio-economic interests and ecological principles. Co-management systems promise to recognize customary indigenous infrastructures of resource management and to replace infrastructures which place restrictive controls on individual common property resource users with controls of incentive to the well-being of community interests ("voluntary collective actions" Feeny et al. 1990:11).

There is a sea of conflicts and miscommunications to wade through before co-management systems can deliver on such a promise. Wildlife science has much work to do to accept the applicability of traditional ecological knowledge to its own field. Conversely, the legitimacy of scientific thinking and methods is suspect to many traditional aboriginal wildlife users. In addition, it is important to realize that innumeracy leaves a large segment of society unable to understand the language of science. It is not only northern communities that are overwhelmed by the mystifying jargon and methodologies of many sciences.

Scientists, on the other hand, believe that ultimately their methodologies work to make knowledge universally accessible and acceptable to all. Conversely, TEK appears to be rooted in a context of spiritually-derived values. Perhaps this is the root of the currently irreconcilable differences that make true co-management an impossibility.

Spiritualism is intangible, extrinsic to the theorizing of science and therefore meaningless to science. It may not make sense then, to think that to try to incorporate facets of TEK into scientific thinking is a valuable exercise. What may be possible is mutual and respectful recognition. Each system of knowledge to be retained within its own medium, instead of expending effort to extract and dissect dynamic systems and stick them in inappropriate mediums where they are unable to sustain themselves.

It might be useful to form an analogy between the mutual exploration of science and TEK and a SCUBA diver exploring the ocean. The diver uses equipment developed to make a human being capable of surviving in a medium entirely ill-suited to his inherent nature as an air-breathing, gravity-bound organism in order to explore a world he has encountered and wants to understand. The diver cannot remain underwater for an indefinite period of time because the human body ultimately suffers the effects of pressure that SCUBA equipment cannot control. The diver can return to land and air following underwater exploration. Newly acquired knowledge will be used to increase understanding of the foreign medium of water and inspire the diver to learn from and appreciate the differences between land and water. It is my feeling, from the study of the B-Q CMB, that wildlife science and aboriginal ecological knowledge systems have yet to develop adequate and complementary SCUBA equipment, but that the process remains dynamic as long as neither knowledge system is drowned or suffocated in the process!

6.1. CO-MANAGEMENT AND PRIORITY OF ACCESS TO WILDLIFE

Contemporary western society is only beginning to recognize that common property resources have not necessarily been fated victims of open access property-rights regimes. Hardin had pictured an open access system where individual resource users could do nothing but maximize their exploitation of a common resource; doomed in time to be the unwitting depletors of the resource of their dependence.

Academics now recognize four basic precepts of common property resources regimes: open access, private property, communal property and state property (Berkes 1989, Feeny et al. 1990:4). Common property resources are defined by two main characteristics; excludability and subtractibility (Feeny et al. 1990:3). Thus, the success of a communal property regime is indicated by its proficiency at maintaining the sustainability of communal property use in the face of other potential users or deleterious use by existing users (Feeny et al. 1990:5).

Co-management systems are often institutional frameworks which uphold communal property regimes. They are, therefore, by their very nature, forums which must address social and political issues as well as ecological issues. Chapter Three's exploration of the Beverly-Qamanirjuaq Caribou Management Board's activities outlines the manner in which the diverse players of the organisation have grappled with many issues which are essentially social justice concerns. As a body attempting to provide advice about wildlife management, the CMB has continually addressed fundamental questions about the applicability of aboriginal and non-aboriginal value systems to the survival of caribou. The CMB has adopted a mandate based on the negotiation between the extremes of non-aboriginal and aboriginal values. The negotiation between these extremes includes the **range** of values existing **between** the polarity of thinking between non-aboriginal values of the market economy and scientific principles, and aboriginal values of subsistence activity and TEK.

I would argue that co-management systems are by definition about the **negotiation** of the success of communal property regimes. Co-management in practice is about the process of securing a balance of interests, and should not be regarded as

the definition of this balance. As can be seen in Chapter Four's discussion of the CMB's activities, it is a lengthy process to establish a forum for the communication of diverse world views. The reconciliation of community and government approaches to wildlife management will involve lengthy and continuous commitment. The sharing and recognition of the power of a variety of knowledge and thought encompasses profound change. Co-optation and domination have overwhelmingly marked cultural conflict in the past. Co-management is in many ways a challenge to such historical precedence. Current co-management regimes are defined by a number of successes. It is difficult to rank their various successes because their structures and mandates tackle cross-cultural conflicts in a number of different ways. The AEWC might be described as the most successful co-management regime in existence in North America. It is an affirmation of the ability of aboriginal subsistence communities to manage a resource and involves the cooperation of government scientists (through NOAA) with subsistence hunters.

However, given the roots of conflict between the Alaska subsistence bowhead whalers and the decisions of the International Whaling Commission, how secure is the bowhead whale population beyond the regional applicability of the AEWC and its decisions. Commercial whalers may rationalize their rights to harvest whales, despite the recommendations of the IWC because they choose not to differentiate between commercial and subsistence harvests and thereby undermine the values of a communal property regime which lacks far-ranging jurisdiction over its migrating resource. The careful socio-ecological reasoning of a regional resource management can rapidly be obliterated where global forces continue to homogenize diverse resource needs into the terms of short-term economic competition. It is, of course, much more complex to defend communal property regimes on a broad scale than when one chooses to isolate regional situations from their positions in a universal context. This is especially apparent when the resources (communal property) are wildlife populations which continually migrate over vast expanses of land or sea.

6.2. THE CMB AND USER COMMUNITIES

It would take years to fully understand the nature and extent of self-regulation of subsistence activities by user communities on the Beverly-Qamanirjuaq caribou range. Berkes describes four basic stresses which endanger the viability of self-regulation including, "1) loss of community control, 2) commercialization, 3),rapid population growth, 4) rapid technology change" (Berkes 1985:202). It is argued that the key, however, to preventing the co-optation or ruin of existing self-regulation lies in supporting social systems where economic activity is integral with social relationships (Berkes 1985:204, Dahl 1989, Freeman 1985:276, Usher 1981).

This is no easy task where it is difficult to argue that market forces will not inevitably divide and separate the social and economic drives in traditional user communities. But it is patronizing to assume that these communities do not house the basic tools to maintain dynamic social systems which can withstand the stresses described above. It would also be dangerous to impose outside preconceptions of what constitute "traditional community social structures".

These are delicate issues as can be seen in the CMB's discussion of requests for commercial quotas. These requests are often questions about the degree to which market forces can influence intersettlement exchange before user communities collectively feel they are no longer in control of the process. If CMB user communities are going to manage caribou resources in a collective manner, then the political relationships between the communities need to be addressed.

One of the CMB's mandates is to ensure the priority of access of traditional caribou users while maintaining the viability of the caribou population. As mentioned previously, it is critical to recognize the political differences between the territories and the provinces. Why is it that Keewatin communities are relatively eager to welcome non-resident sport hunting and caribou meat production outlets while provincial communities are still wary and suspicious of such ventures?

It is important not to ascribe only cultural differences to the reasons behind varying user perceptions to commercialization. The political situation in Nunavut and

the rest of the territories means that the social structures of communities play significant roles in economic decision-making and control of sport hunting (especially through HTAs). The social structures of provincial user communities play next to no part in influencing the activities of established provincial outfitters.

The proposal to set up the equivalent of hunter income support programmes in Nunavut is another example of political incentive to provide Inuit user communities with further support of social structures. Provincial user communities have no prospects of such support of community hunts; hunts which users in both Tadoule Lake and Arviat emphasized were fundamentally important. Similarly, both Arviat and Tadoule Lake users emphasized the importance of land skills instruction. Keewatin schools have cultural inclusion programmes which provincial user schools do not. The CMB has supported the need for educational support through the development of the Schools Program and caribou camps. However, there exists the danger that the excellent intentions of such programmes in the long-term become band-aid solutions to deep-seated social needs.

The reader should not be left with a discouraging view of the slow-paced progress of co-management institutions in the face of restricted scenarios for change. The demands of developing a fire management control plan using the expertise of both user communities and government fire managers is one of the encouraging examples of substantive cooperation between scientific and community perspectives. The political will to protect caribou wintering ranges from massive fire damage has improved dramatically in the past decade. Fire managers and biologists are recognizing the technical applications of community knowledge of fire history to broad-based fire management plans. One can see this as an encouraging sign of increasingly interactive cooperation between aboriginal wildlife users and scientists.

APPENDIX 1

Beverly-Kaminuriak Barren Ground Caribou Management Agreement

THIS AGREEMENT made on the 3rd day of June A D 1982

BETWEEN

THE GOVERNMENT OF CANADA, as represented by the Minister of Indian Affairs and Northern Development and the Minister of the Environment, (hereinafter referred to as "Canada"),

- and -

THE GOVERNMENT OF MANITOBA, as represented by the Minister of Natural Resources, (hereinafter referred to as 'Manitoba"),

- and -

THE GOVERNMENT OF SASKATCHEWAN, as represented by the Minister of Northern Saskatchewan, (hereinafter referred to as "Saskatchewan "),

- and -

THE COMMISSIONER OF THE NORTHWEST TERRITORIES, (hereinafter referred to as the "Commissioner")

WHEREAS the Kaminuriak herd and Beverly herd of barren ground caribou historically migrate across provincial and territorial boundaries,

AND WHEREAS the continued well-being and restoration of these herds and their habitat requires co-ordinated management, goodwill and co-operation amongst the above governments and the traditional users of these caribou

AND WHEREAS the parties hereto recognize that, as well as the value of the caribou to all Canadians generally, a special relationship exists between traditional users and the caribou,

NOW THEREFORE THIS AGREEMENT WITNESSETH that the parties hereto under the authority of

(a) The Canada Wildlife Act - sections 5, 6 and 9,
(b) The Northwest Territories Wildlife Ordinance section 27,
(c) The Manitoba Wildlife Act - section 84,
(d) The Saskatchewan Wildlife Act - sections 10, 63(b) and 63(f), and The Saskatchewan Federal-Provincial Agreements Act - sections 3, 4 and 5

agree that

A. Definitions

In this Agreement

1 "Kaminuriak herd" means that herd of barren ground caribou which regularly bears its young near Kaminuriak Lake in Keewatin, Northwest Territories and historically moves southward into Manitoba and Saskatchewan for the winter,
2. "Beverly herd" means that herd of barren ground caribou which regularly bears its young near Beverly Lake in Keewatin, Northwest Territories and historically moves southward into Saskatchewan and Manitoba for the winter,
3. "Traditional Users" means those persons recognized by the local population on the caribou range as being persons who have traditionally and/or currently hunted caribou for subsistence

B. The Beverly and Kaminuriak Caribou Management Board

1 A joint management board shall be established to be known as the Beverly and Kaminuriak Caribou Management Board, hereinafter referred to as the "Board", having the following objectives
   (a) to co-ordinate management of the Beverly and Kaminuriak herds in the interest of traditional users and their descendants, who are or may be residents on the range of the caribou, while recognizing the interest of all Canadians in the survival of this resource
   (b) to establish a process of shared responsibility for the development of management programs between the parties hereto and the traditional users of the Beverly and Kaminuriak herds
   (c) to establish communications amongst traditional users, between traditional users and the parties hereto, and amongst the parties hereto in order to ensure co-ordinated caribou conservation and caribou habitat protection for the Beverly and Kaminuriak herds
   (d) to discharge the collective responsibilities for the conservation and management of caribou and caribou habitat within the spirit of this Agreement
2. Support shall be provided by the parties hereto to the Board in its efforts to achieve co-ordinated management of the Beverly and Kaminuriak herds by responding promptly to recommended measures

C. Board Responsibilities

Without restricting the generality of clause B of this Agreement, the parties agree that the Board shall have the following duties and responsibilities

1. To develop and make recommendations to the appropriate governments and to the groups of traditional caribou users for the conservation and management of the Beverly and Kaminuriak herds of barren ground caribou and their habitat in order to restore the herds, as far as reasonably possible, to a size and quality which will sustain the requirements of traditional users Such recommendations may include, but are not necessarily limited to

(a) limitations on the annual harvest of the Beverly and Kaminuriak herds and the allocation of that harvest amongst the Northwest Territories and the provinces of Saskatchewan and Manitoba,
(b) criteria for regulating the methods of harvest,
(c) methods of traditional user participation to assist in the management of the Beverly and Kaminuriak caribou herds,
(d) caribou research proposals,
(e) recommended standardized data collection and presentation,
(f) a herd management plan for each of the Beverly and Kaminuriak herds which may include consideration of predator management

2 To monitor the caribou habitat over the entire ranges of the Beverly and Kaminuriak herds so as to facilitate the maintenance of productive caribou habitat

3 To conduct an information program and hold such public meetings as are necessary to report on and discuss with users its responsibilities, findings and progress

4 To assess and report on the operation of its herd management plan to appropriate governments and traditional user groups

5 To submit to the parties hereto annual reports which shall include
(a) a summary of Board activities, recommendations and responses by governments and traditional users,
(b) a review of the state of the Beverly and Kaminuriak caribou herds and their habitat,
(c) a summary of harvests by jurisdiction and community,
(d) a financial statement for the operation of the Board,
such reports to be arranged by the parties hereto to be translated into the languages of the traditional users

6 To consider any other matters respecting the management of barren ground caribou that are referred to the Board by the parties hereto

D. Membership of the Board

1 Thirteen members shall be appointed to the Board as follows
(a) the Minister of Indian Affairs and Northern Development, Government of Canada, the Minister of the Environment, Government of Canada, the Minister of Northern Saskatchewan, Government of Saskatchewan, the Minister of Natural Resources, Government of Manitoba, and the Minister of Renewable Resources, Government of the Northwest Territories shall each appoint one senior official from their respective ministries for a total of five members
(b) the Minister of Renewable Resources Government of the Northwest Territories shall
(i) where recommended by the Keewatin Wildlife Federation, appoint two residents from the communities in the southern Keewatin region of the Northwest Territories,
(ii) where recommended by the Dene Nation appoint one resident from the communities in the South Slave Region of the Northwest Territories,
(iii) where recommended by the Metis Association of the Northwest Territories, appoint one resident from the communities in the South Slave Region of the Northwest Territories,
for a total of four members
(c) the Minister of Northern Saskatchewan, Government of Saskatchewan, shall appoint two residents from the communities of Northern Saskatchewan for a total of two members,
(d) the Minister of Natural Resources, Government of Manitoba, shall appoint two residents from the communities of Northern Manitoba for a total of two members

2 The members of the Board shall be appointed for a term of three years, subject to the right of the parties to terminate the appointment of their respective appointees at any time and reappoint Board members in accordance with the above

E. Board Rules and Procedure

1 The Board shall establish in writing from time to time rules and procedures for its functioning, provided however that
(a) the Chairman and Vice-Chairman shall be elected from amongst the members of the Board by secret ballot,
(b) the election and replacement of the Chairman and the Vice-Chairman shall be by simple majority,
(c) thirty days notice of meeting shall be given by mail, telephone or telegram, as appropriate,
(d) seven members shall constitute a quorum
(e) decisions of the Board shall be by consensus wherever possible, and shall always require a majority voting in favour with each member having one vote
(f) no voting by a proxy shall be allowed
(g) the Board shall hold formal meetings twice yearly or more often as necessary at the call of the Chairman,
(h) the Board shall keep summary minutes and records of all its meetings and circulate them amongst its members
(i) the Board may establish or dissolve standing committees as it deems necessary to carry out its functions, and set the terms of reference for such standing committees and

(j) the Board members unable to be present at Board meetings shall receive notice of Board recommendations thirty (30) days in advance of submission to any minister for action, except where there is consent of all Board members in which case recommendations to the Minister(s) can be made forthwith

F. Finances

1 Subject to the terms and conditions of this Agreement and to funds being appropriated by the legislative authority in respect of each party on an annual basis, the parties hereto shall annually provide funds necessary to ensure the Board functioning in a manner hereinbefore stated provided, however, that all costs for the Board shall not exceed $75,000 00 annually and that all such annual costs shall be shared amongst the parties to this Agreement in such proportion as hereinafter provided in section 2

2 Prior to the administrative costs for the Board being eligible to be shared by the parties hereto, the Board shall be required to submit to each party an annual estimate of the financial administrative costs, not exceeding $75,000 00 in each year, and each party shall in writing within thirty days of receipt thereof, indicate its approval or disapproval for such budget and provide reasons therefore In the event that a majority of the parties hereto approve the annual budget for the administrative costs, the budget shall be shared by all parties hereto in the following proportions accordance with the following
   (a) two-fifths by Canada, and
   (b) one-fifth by each of the remaining parties

3 Administrative costs to be shared amongst the parties hereto shall include expenditures related to
   (a) a secretariat to provide for and follow up on meetings, record and distribute minutes, provide members with informational support, and undertake such other organizational arrangements as the Board may require
   (b) the production of an annual report and its distribution,
   (c) a modest independent research review capability,
   (d) the production of a newsletter, and
   (e) such other costs as the parties may agree upon

4 Each party shall be responsible for funding the expenses for salaries or honoraria and other incidental travel expenses, including transportation, meals, accommodation related to Board members appointed or confirmed by that party The provisions for said expenses shall be in addition to the annual administrative costs provided in section 1 hereinabove

5 On the anniversary date of this Agreement, the Board shall annually account for all monies received and disbursed and said records shall be available to any of the parties for inspection upon thirty days written notice to the Chairman

G. General

1 The parties hereto shall jointly and severally indemnify and save harmless the Board and the individual members thereof, against any and all liability, loss, damage, cost, or expenses, which the Board, or its individual members jointly or severally incur, suffer, or are required to pay as a consequence of any contractual obligation undertaken in accordance with the terms of this Agreement

2 All reports, summaries or other documentation prepared or otherwise completed under the terms of this Agreement shall become the joint property of all parties hereto and any and all income derived therefrom shall be jointly shared amongst the parties in proportion to expenditures incurred by each party in generating such income

3 This Agreement shall take effect on the 3rd day of June, A D 1982, and shall terminate on the 3rd day of June, A D 1992, unless sooner terminated by any party upon six months' notice in writing to the other parties

4. This Agreement may be amended at any time by an exchange of letters following unanimous approval by the parties hereto

APPENDIX 2

Caribou Management Board Meetings - Dates and Venues:

*A - August 18-19, 1981 - PRINCE ALBERT
B - October 6-7, 1981 - YELLOWKNIFE
C - December 1-2, 1981 - WINNIPEG
D - March 9-10, 1982 - YELLOWKNIFE
E - May 26-27, 1982 - WINNIPEG
1 - August 18-19, 1982 - SASKATOON
2 - January 12-14, 1983 - EDMONTON
3 - March 22-24, 1983 - SNOWDRIFT
4 - June 14-16, 1983 - YELLOWKNIFE
5 - September 13-16, 1983 - BLACK LAKE
6 - January 10-12, 1984 WINNIPEG
7 - April 6-10, 1984 RANKIN INLET
8 - August 14-17, 1984 FORT SMITH
9 - November 20-22, 1984 SASKATOON
#10 - April 16-18, 1985 BAKER LAKE
#11 - August 20-22 1985 WHITEHORSE
#12 - November 19-21 1985 EDMONTON
#13 - April 15-17 1986 THOMPSON
UA - USER ASSEMBLY - August 12-13 1986 ESKIMO POINT
#14 - August 14-15, 1986 ESKIMO POINT
#15 - April 14-17, 1987 SASKATOON
#16 - August 11-13 1987 WINNIPEG
#17 - November 17-18, 1987 FORT SMITH
#18 - April 11-13, 1988 WINNIPEG
#19 - August 9-11, 1988 STONY RAPIDS
#20 - November 15-17, 1988 WINNIPEG
#21 - April 25-27 1989 BAKER LAKE
#22 - August 23-24 1989 LAC BROCHET
#23 - December 5-7 1989 WINNIPEG
#24 - April 23-26, 1990 FOND DU LAC
#25 - August 28-30 1990 SNOWDRIFT
#26 - December 4-6, 1990 WINNIPEG
#27 - March 16-18, 1991 YELLOWKNIFE
#28 - August 20-22, 1991 PRINCE ALBERT
#29 - December 3-5, 1991 FORT SMITH
#30 - April 10-13, 1992 ARVIAT
#31 - December 8-10, 1992 URANIUM CITY
#32 - April 20-22, 1993 WINNIPEG
#33 - September 28-30 1993 PRINCE ALBERT

* Meetings A-E occurred before the signing of the Caribou Management Agreement in 1982.

APPENDIX 3

(Source: Caribou News April 1983, 2(6):15)

WHEN CARIBOU HAD NO FEAR

Narrated by the late John Clipping,

Tadoule Lake, Manitoba

Translated by Mary Code

Illustration by Robert Code

A long time ago the caribou had no fear of man. It was very easy to get close to them and kill them. Each year they would go through the villages of the Dene. Some young girls who were just fooling around, decided they would mark the caribou. They wanted to see which one came back the next year. They tied pieces of clothing and leather to the caribou and marked their ears, noses and legs with knives.

What the girls did was very bad, but they did not find that out until much later. The next year, when it came time for caribou to return to the land of the Dene, the people waited for them for a long time, but no caribou came.

One day a man who had been hunting up north brought back this news.

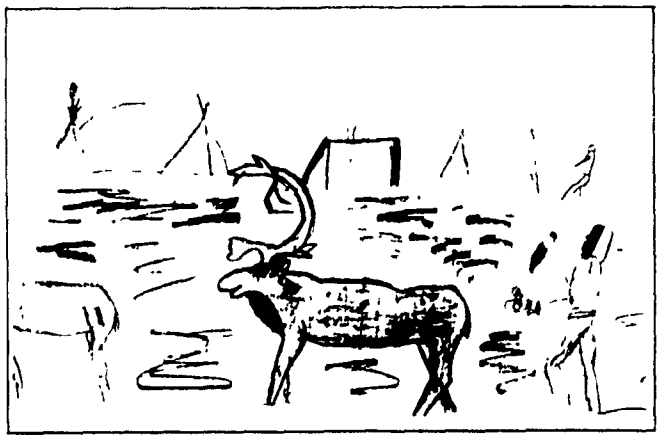
The caribou herds are still far to the north. They stopped at a lake because of the caribou that were marked by the girls of the village last year. The marked caribou won't go any farther into this country because of what was done to them. The other caribou have become alarmed and won't move south either. Nobody in the village knew what to do and were afraid they might starve. One man called Edegué (eh-day goo ay) knew what to do. He told the people he would bring back the caribou. He started walking north.

On the way, he picked up caribou antlers, looking for ones with worms. Finally he found an old set with a worm half in, half out. He asked the worm if he had any friends. The worm did not want anyone to think that he was a lonely worm and said, "You think I've got no friends? Take a look over that hill—that's where all my buddies are!" Edegue climbed the hill and sure enough, down in the lake below were caribou. The marked animals were nearest shore, but they didn't want to get out of the water.

The animals that were not marked were trying to get past them, but could not. Unless something was done, the caribou were not going to get anywhere.

As Edegue came close to the herd, he noticed a thunderbird on a nest near the lake. Edegue went on toward the caribou. He watched them for a while, but could not think of what to do. Finally he had an idea: even if the thunderbird said no, he would ask anyway. He went to the Thunderbird and said, "Thunderbird you see our problem, could you give me one of your children?"

After thinking about it for a while, the thunderbird agreed and gave him one of the eggs. Edegue threw it behind the caribou and the tremendous thunderclaps that followed drove the caribou out of the water. Edegue caught the caribou that the girls had marked with knives and tied things to. He took the markers from each one. After that, he rubbed the knife marks on their noses, ears and legs. By doing this he made sure that the caribou would be afraid of man.



forever and they would never be bothered by people the same way again.

Edegué also did something to the bottom of the caribou's feet that would protect them from man—a caribou would know whenever it touched a human trail. The caribou were now out of the water, but still confused. They were walking around in circles. Edegue caught a young calf and carried it. Its mother followed, at a distance, and the rest of the herd began to follow their trail--the way caribou always do.

Edegue began leading the herd back to the people. On the long trip back, the calf began to like the man who carried him. After a while, Edegue could put the calf on the ground and it would run and play around him like a puppy. When they were near the village, the people saw Edegue first but didn't know that he had the whole herd behind him. One of the women said, "Here's the great Edegue, after all his big talk, coming back with nothing."

Edegué heard the insult and hoped that something might happen to her husband that would keep him from getting caribou.

When the people learned that the caribou were near, they all ran out after them. They thought the caribou were still easy to kill, as they were before. Now, the animals were afraid and at first the men could not get close enough to kill any. It was only with great difficulty that people got enough caribou to eat and of course there were few chances for people to bother them as they did before, when the caribou were not afraid.

A strange thing happened to the husband of the woman with the big mouth. His legs suddenly became crippled just as the hunt began. His crippling sickness disappeared just as suddenly as it began, only a few days after the caribou had left.

From that day to this, when the sound of thunder is heard, that is a sign that the caribou are still around.

LITERATURE CITED

Alberta April 1993. Treaty Indian Hunting and Fishing in Alberta - Background Paper. Fish and Wildlife Services, Alberta Environmental Protection.

Albrecht, D.E. 1990. Co-management as Transaction: Kuskokwim River Salmon Management Working Group. M.A. Thesis, Department of Anthropology, McGill University.

Ames, R. 1979. Social Economic and Legal Problems of Hunting in Northern Labrador. Labrador Inuit Association.

Ames, R. and D. Axford, P. Usher, G. Wenzel 1988. Keeping on the Land. Ottawa: Canadian Arctic Resources Committee.

Anonymous 1982. Wildlife Group Threatens Court Action to Fight Native Management of Wildlife. Caribou News 1(5):6.

Anonymous 1993. Caribou Schools Program piques national interest. Caribou News 13(2):9.

Anonymous 1993. Barren-Ground Briefs - Un-Licensed. Caribou News 13(2):5.

Attorney General of Canada 1991. Policy of the Attorney General of Canada Respecting the Prosecution of Aboriginal Persons for Hunting Offences Under the Migratory Birds Convention Act and the Canada Wildlife Act & Interim Policy on Application of the Migratory Birds Convention Act and the Canada Wildlife Act Respecting Closed-Season Hunting and Egging by Aboriginal People. In Alberta 1993 Appendices 8.4 & 8.5.

Belanger, D.O. 1988. Managing American Wildlife: A History of the International Association of Fish & Wildlife Agencies. Amherst: The University of Massachusetts Press.

Berger, T.R. 1977. Northern Frontier, Northern Homeland - The Report of the Mackenzie Valley Pipeline Inquiry, vol. 1 & 2. Toronto: Minister of Supply & Services Canada with James Lorimer & Co.

Berger, T.R. 1985. Village Journey - The Report of the Alaska Native Review Commission. New York: Hill and Wang.

Berkes, F. (ed.) 1989. Common Property Resources: Ecology and Community-based Sustainable Development. London: Belhaven Press.

Beverly and Kaminuriak Caribou Management Board 1987. Barren Ground Caribou Schools Report - Usage and Distribution of the Barren Ground Caribou Schools Program. Ottawa: Nortext Information Design Ltd.

Beverly-Qamanirjuaq Caribou Management Board minutes, Meetings 1-33, August 1982 to September 1993.

Beverly-Qamanirjuaq Caribou Management Agreement Negotiation Minutes, August 1981 to May 1982.

Bishop, C.A. Northeastern Indian Concepts of Conservation and the Fur Trade: A Critique of Calvin Martin's Thesis. In Krech, S. III (ed.) 1981 Indians, Animals and the Fur Trade. A Critique of Keepers of the Game. Athens: The University of Georgia Press, 39-58.

Bone, R. M. 1992. The Geography of the Canadian North. Toronto: Oxford University Press.

Brody, H. 1975. The Peoples Land. London: Penguin Books.

Brody, H. 1981. Maps and Dreams. Vancouver: Douglas and McIntyre Ltd.

Brody, H. 1987. Living Arctic: Hunters of the Canadian North. London: Faber and Faber.

Bussidor, E. 1993. Personal Communication, Tadoule Lake, Manitoba, August 1993 interview.

Canada 1990. A Wildlife Policy for Canada. Ottawa: Wildlife Ministers' Council of Canada.

Cizek, P. 1990. The Beverly-Kaminuriak Caribou Management Board. A Case Study of Aboriginal Participation in Resource Management. Background Paper #1. Ottawa: Canadian Arctic Resources Committee.

Dacks, G. (ed.) 1990. Devolution and Constitutional Development in the Canadian North. Ottawa: Carleton University Press.

Dahl, J. 1989. The Integrative and Cultural Role of Hunting and Subsistence in Greenland. **Inuit Studies** 13(1):23-42.

Daly, H.E. and Cobb, J.B. 1989. For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future. Boston: Beacon Press.

DFO 1991. Interim National Policy, Principles and Procedural Guidelines for the Management of the Aboriginal People Food Fishery & For Enforcement Within the Aboriginal Peoples Food Fishery In Alberta 1993 Appendices 8.2 & 8.3

Drolet, C.A. and A. Reed, M. Breton, F. Berkes 1986. Sharing Wildlife Management Responsibilities With Native Groups: Case Histories in Northern Québec. 56th North American Wildlife Conference, Washington, D.C.

Elias, P.D. 1991. Development of Aboriginal People's Communities. Toronto: Captus Press.

Eskimo Point Chamber of Commerce n.d. Eskimo Point: A Guide to Historic Sites. Eskimo Point, NWT: Inuit Cultural Institute.

Evernden, N. 1985. The Natural Alien: humankind and environment Toronto: University of Toronto Press.

Feit, H.A 1973. The Ethno-ecology of the Waswanipi Cree: Or How Hunters can Manage their Resources. In: B. Cox (ed.) Cultural Ecology: readings on the Canadian Indians and Eskimos. Toronto: McClelland and Stewart, 115-25.

Feeny, D. et al. 1990. The Tragedy of the Commons: Twenty-two Years Later. **Human Ecology** 18(1):1-19.

Feit, H.A. 1978. Waswanipi realities and adaptations: resource management and cognitive structure. Ph.D. Thesis, Montréal, Québec: Department of Anthropology, McGill University.

Feit, H.A. 1979. Political Articulations of Hunters to the State Inuit Studies 3(2):37-52.

Fienup-Riordan, A. 1990. Eskimo Essays. New Brunswick: Rutgers University Press.

Freeman, M.M.R. 1985. Appeal to Tradition: Different Perspectives on Arctic Wildlife Management. In Brøsted, J. et al. (ed.s) 1985. Native Power: The Quest for Autonomy and Nationhood of Indigenous Peoples. Bergen, Norway: Universitetsforlaget, 265-81.

Freeman, M.M.R. 1989a. Graphs and Gaffs: A Cautionary Tale in the Common Property Resources Debate. In Berkes, F. (ed.) 92-109.

Freeman, M.M.R. 1989b. The Alaska Eskimo Whaling Commission: Successful Co-management under Extreme Conditions. In Pinkerton, E. 137-153.

Freeman, M.M.R. and L.N. Carbyn (ed.s) 1988. Traditional Knowledge and Renewable Resource Management in Northern Regions. Occasional Publication #23, Edmonton: IUCN Commission on Ecology & Boreal Institute for Northern Studies.

Freeman, M.M.R. and E.E. Wein, D.E. Keith 1992. Recovering Rights: Bowhead Whales and Inuvialuit Subsistence in the Western Canadian Arctic. Edmonton: University of Alberta.

Fuller, W.A. 1979. Of Conservation and Mysticism, Democracy and Things. **Arctic** 32(3):179-188.

Gordon, D.M. 1985 Caribou Management and the Caribou Management Board: Eskimo Point Perspectives. Winnipeg: University of Manitoba.

Gunn, A. and G. Arlooktoo, D. Kaomayok 1988. The Contribution of the Ecological Knowledge of Inuit to Wildlife Management in the NWT. In Freeman, M.M.R. and L.N. Carbyn, 22-30.

Gwich'in Land Claim Agreement 1992. In Alberta 1993. Appendix 8.26.

Hall, E. (ed.) 1989. People and Caribou in the Northwest Territories. Yellowknife, NWT: Department of Renewable Resources, GNWT.

The Hamlet of Baker Lake, et al. v. The Minister of Northern Affairs and Northern Development, et al. in **Musk-Ox** 26, 1980:65-78.

Hanson, A.J. and G. Regallet 1992. Communicating for sustainable development. **Nature & Resources** 28(1):35-43.

Henke, J.S. 1989. Contribution to Workshop 3: "Conservation Strategies and the Animal Protection-Animal Use Debate." In Keith, R.F. and A. Saunders (ed.s) 1989. A Question of Rights: Northern Wildlife Management and the Anti-Harvest Movement. Ottawa: Canadian Arctic Resources Committee.

Herscovici, A. 1985. Second Nature: The Animal-Rights Controversy. Toronto: Stoddart Publishing Co.

Hobsbawm, E. and T. Ranger (ed.s) 1983. The Invention of Tradition. Cambridge: Cambridge University Press.

Huntington, H.P. 1992. Wildlife Management and Subsistence Hunting in Alaska. London: Belhaven Press.

International Porcupine Caribou Board March 1990. First Annual Report of the International Porcupine Caribou Board.

Inuit Circumpolar Conference 1986. Towards an Inuit Regional Conservation Strategy. ICC: Kuujjuaq, Quebec.

Inuvialuit Final Agreement 1984. In Alberta 1993. Appendix 8.27.

Jennings, F. 1982. A Growing Partnership: Historians, Anthropologists and American Indian History. **Ethnohistory** 29(1):21-34.

Kativik Regional Government 1985. Inuit Support Programme for Hunting, Trapping & Trapping Activities - Annual Report of the Kativik Regional Government. Kuujjuaq.

Keeping, J.A. 1989. The Inuvialuit Final Agreement. Calgary: Canadian Institute of Resources Law, University of Calgary.

Keith, R.F. and J.B. Wright (ed.s) 1978. Northern Transitions vol.2 Second National Workshop on People, Resources and the Environment North of 60. Ottawa: CARC.

Kelsall, J.P. 1968. The Migratory Barren-ground Caribou of Canada. Ottawa: DIAND.

Knudston, P. and D. Suzuki 1992. Wisdom of the Elders. Toronto: Stoddart Publishing Company, Ltd.

Koolage, W.K. 1968. Chipewyan Indians of Camp-10. Chapter 4 In Honigmann, J.J. (ed.) Urbanization in the Arctic and Subarctic - Ethnographic Survey of Churchill. Working Paper #3. Institute for Research in Social Science, University of North Carolina at Chapel Hill.

Laughlin, W.S. 1968. Hunting: An Integrating Biobehaviour System and Its Evolutionary Importance In Lee, R. and I. Devore 1968, 304- .

Lee, R. and I. DeVore (ed.s) 1968. Man the Hunter. Chicago: Aldine Publishing Company.

Leopold, A. 1933. Game Management. New York: Charles Scribner's Sons.

Livingston, J.A. 1981. The Fallacy of Wildlife Conservation. Toronto: McClelland and Stewart Ltd.

Lynge, F. 1992. Arctic Wars: Animal Rights Endangered Peoples. Hanover: University Press of New England.

MacLeod, J. April 1993. First Nations' Involvement in Northern National Parks: The Co-Management Option. Paper for the Geography of Aboriginal Canada, Dep't of Geography, McGill University.

Macpherson, A.H. 1981. Commentary: Wildlife Conservation and Canada's North. **Arctic** 34(2):103-107.

Martin, P.S. and H.E. Wright 1967. Pleistocene Extinctions - The Search for a Cause. New Haven & London: Yale University Press. 75-120.

Mathias-Colomb First Nation, Government of Manitoba, Moose and Woodland Caribou Co-Management Agreement 1991. In Alberta 1993 Appendix 8.10.

McCandless, R.G. 1985. Yukon Wildlife: a Social History. Edmonton: University of Alberta Press.

Meredith, T.C. and L. Müller-Wille 1982. Man and Caribou: The Economics of Naskapi Hunting in Northeastern Quebec. McGill Subarctic Research Paper No. 36.

Morgan, J.P. 1993. Cooperative Management of Wildlife in Northern Canadian National Parks. Master's Degree Project. Environmental Science. Calgary: University of Calgary.

Morse, B.W. (ed.) 1985. Aboriginal Peoples and the Law: Indian, Metis and Inuit Rights in Canada. Ottawa: Carleton University Press.

Müller-Wille, L. 1978. Cost-Analysis of Modern Hunting Among the Inuit of the Canadian Central Arctic. **Polar Geography** 2(2):100-114.

Nahanni, P. 1992. Dene women in the traditional and modern economy in Denendeh, Northwest Territories, Canada. M.A. Thesis, Montréal, Québec: Department of Geography, McGill University.

Nakashima, D.J. 1991. The Ecological Knowledge of Belcher Island Inuit: A traditional basis for contemporary wildlife co-management. Ph.D Thesis, Montréal, Québec: Department of Geography, McGill University.

National Film Board n.d. "Kaminuriak Herd Crises Series" Programs 1-33. 6 hours 30 minutes.

Nickels, S. 1992. Northern Conservation and Tourism: Inuit Perceptions M.A. Thesis, Montréal, Québec: Department of Geography, McGill University.

Ontario 1991. Interim Enforcement Policy In Alberta 1993. Appendix 8.6.

Osherenko, G. 1988. Sharing Power with Native Users: Co-management Regimes for Arctic Wildlife. CARC Policy Paper #5.

The Pas Moose Management Agreement 1990. In Alberta 1993. Appendix 8.11.

Pepper, D. 1984. The Roots of Modern Environmentalism. London: Routledge.

Pinkerton, E. (ed.) 1989. Co-operative Management of Local Fisheries. Vancouver: University of British Columbia Press.

Poole, P. 1981. Conservation and Inuit Hunting: Conflict or Compatibility. Ph.D. Thesis, Montréal, Québec: Department of Geography McGill University.

Prince Albert Tribal Council 1990. Recent and Current Land Use in the NWT by Chipewyan-Denesoline Bands (Saskatchewan Athabasca Region).

Rees, W.E. 1987. Introduction: A Rationale for Northern Land-Use Planning In Fenge, T. and W.E. Rees (ed.s) 1987. Hinterland or Homeland?: land-use planning in northern Canada. Ottawa: CARC, 3-17.

Reeves, R.R. 1992. What is a Narwhal Worth?: An Analysis of Factors Driving the Narwhal Hunt and a Critique of Tried Approaches to Hunt Management. Ph.D. Thesis, Montréal, Québec: Department of Geography, McGill University.

Richardson, B. 1991. Strangers Devour the Land. Vancouver: Douglas and McIntyre.

Ridington, R. 1988. Trail to Heaven: Knowledge and Narrative in a Northern Native Community. Vancouver: Douglas and McIntyre.

Riewe, R. and L. Gamble 1988. The Inuit and Wildlife Management Today In Freeman, M.M.R. and L.N. Carbyn 1988, 31-37.

Schellenberger, S. (chairman) 1986. "The Fur Issue: Cultural Continuity, Economic Opportunity." Report of House of Commons Standing Committee on Aboriginal Affairs and Northern Development. Ottawa: Canadian Government Publishing Centre.

Scotter, G.W. 1991. The Beverly and Kaminuriak Caribou Management Board: An Example of Cooperative Management. Transactions of the Fifty-sixth North American Wildlife and Natural Resources Conference.

Sipanok Area Management and Development Agreement (Saskatchewan). 1992. In Alberta 1993. Appendix 8.17.

Smith, P. 1991. A Survey and Evaluation of Natural Resource Agreements Signed with Aboriginal People in Canada. B.Sc. thesis, Lakehead University.

Smith, T. G. and H. Wright 1989. Economic Status and Role of Hunters in a Modern Inuit Village. **Polar Record** 25(153):93-98.

Soulé, M.E. (ed.) 1986. Conservation Biology: The Science of Scarcity and Diversity. Sunderland, Massachusetts: Sinauer Associates, Inc.

Stirling, I. 1990. Guest Editorial: The Future of Wildlife Management in the Northwest Territories. **Arctic** 43(3):iii-iv.

(Upper) Stl'atl'amx Nation and DFO Agreement 1992. In Alberta 1993. Appendix 8.21.

Sweetlager, T. 1992. Cooperative Wildlife Management. In Alberta 1993. Appendix 8.35.

Tanner, A. 1973. The Significance of Hunting Territories Today. In Cox, B. Cultural Ecology, 101-113.

Tennenhouse, E. 1986. Keeping Track: Caribou Protection Measures for the Beverly and Kaminuriak Caribou Herds. Northwest Territories: Renewable Resources.

Théberge, J.B. 1981. Commentary: Conservation in the North - An Ecological Perspective. **Arctic** 34(4):281-5.

Thomas, D.C. and J. Schaefer, 1991. Wildlife Co-Management defined: The Beverly and Kaminuriak Caribou Management Board. **Rangifer**, Special Issue No.7.

Treeline Productions 1992. Nu Ho Ni Yeh (Our Story). Tadoule Lake, Manitoba: Sayisi-Dene First Nation. (film/video - 54:23 minutes).

Trigger, B. 1982. Ethnohistory: Problems and Prospects. **Ethnohistory** 29(1):1-19.

Tungavik Federation of Nunavut and DIAND 1990. The Nunavut Agreement-in-Principle.

Turpel, M.E. (Dalhousie University) Feb. 1991 - seminar for "Native Awareness Week" McGill University.

Usher, P.J. 1976. Evaluating Country Food in the Northern Native Economy. **Arctic** 29:105-120.

Usher, P.J. 1981. Sustenance or recreation? The future of wildlife harvesting in Northern Canada. In Freeman, M.M.R. (ed.) Proceedings of the First International Symposium on Renewable Resources and the Economy of the North. p. 56-71. Ottawa: Association of Canadian Universities for Northern Studies / Canada Man and Biosphere Program.

Usher, P.J. 1986. The Devolution of Wildlife Management and the Prospects for Wildlife Conservation in the Northwest Territories. Ottawa: Canadian Arctic Resources Committee.

Usher, P.J. 1991. The Beverly-Kaminuriak Caribou Management Board: An Evaluation of the First Ten Years and Recommendations for the Future. Report prepared for the Beverly and Kaminuriak Caribou Management Board by P. J. Usher Consulting Services.

Usher, P.J. 1991. The CMBs First Ten Years. In Caribou News 11(2):3-4.

Usher, P.J. and G. Wenzel 1987. Native Harvest Surveys and Statistics: A Critique of Their Construction and Use. **Arctic** 40(2):145-160.

Wapseemong Agreement Memorandum-of-Understanding 1991. In Alberta 1993. Appendix 8.8.

Weeden, R.B. 1985. Northern People, Northern Resources, and the Dynamics of Carrying Capacity. **Arctic** 38(2):116-120.

Wenzel, G. 1991. Animal Rights Human Rights: Ecology, economy and ideology in the Canadian Arctic. Toronto: University of Toronto Press.

The World Commission on Environment and Development 1987. Our Common Future. Oxford: Oxford University Press.

Wright, R. 1992. Stolen Continents: the Americas through Indian eyes since 1492. Boston: Houghton Mifflin.

Young, O. 1989. The Politics of Animal Rights: Preservationists vs. Consumptive Users in the North. **Études/Inuit/Studies** 13(1):43-59.