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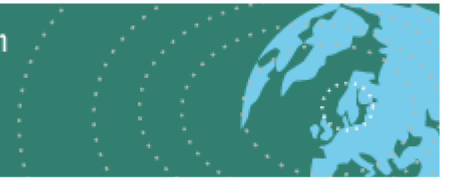

Beyond Bureaucracy: Collaborative Relationships in the Transition to Co-Management

A Case Study in the Sahtu Region, Northwest Territories, Canada

Ruaraidh Carthew

Natural Resource Management, Governance and Globalisation
Master's Thesis 2007:17

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Natural Resource Management, Governance and Globalisation
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a transdisciplinary programme held by the Centre for Transdisciplinary Environmental Research, CTM, at Stockholm University. The one-year programme consists of four courses and the writing of a Master's thesis on a subject related to at least one of the courses.

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Abstract: The Canadian model of cooperative resource management (known as co-management) is based on a framework that purports to be based on power sharing, participation and multiple modes of knowing. These factors are considered to be forms of "social capital", whereby membership in a social network is beneficial, and is important for managing resources adaptively. However, various authors have begun to question the merits of such arrangements, particularly insofar as they involve indigenous/state partnerships. Critics allege that indigenous groups suffer under co-management regimes as a result of unequal power sharing with the state, reduced participation in decision-making, and a lack of integration of indigenous traditional ecological knowledge with science. While there have been studies focused on evaluating co-management regimes, there is no known research that traces how conditions change during the transition to co-management. This study takes as its starting point the hypothesis that manager-harvester relationships are a key indicator of successful co-management processes. Interviews were conducted with senior resource managers from the Sahtu Region of northern Canada to obtain their assessment of evolving manager-harvester relationships before, during and after the establishment of co-management institutions. Interview narratives were analysed to shed light on changes and continuities in the participation of indigenous people in decision-making This led to the conclusion that the institutionalization of collaborative relationships within the bureaucratic framework of co-management has had a negative affect on indigenous participation. Nevertheless, the co-management regime was found to be surprisingly adaptive as a result of certain key continuities in the resource management system; a history of strong relationships between resource managers and harvesters, and a problem-solving approach by managers appeared to be stronger than the depersonalized and bureaucratic aspects of co-management institutions. Thus the study confirms the ongoing significance of social capital as a determinant of successful co-management.

Key words: co-management; social capital; resource management; harvester; traditional ecological knowledge; power sharing; relationships; participation; institutionalization; Sahtu Settlement Area; land claim agreements

Acknowledgements

Major dissertations and publications always seem to have dramatic acknowledgements sections. As a reader, I'm always surprised at the Herculean efforts of the author's supporters and collaborators, and am somewhat embarrassed at the superlatives expressed. "How on Earth," I often wonder, "did these authors ever manage to do anything on their own?" Or, at other times "Gee, they sure were lucky to have gotten the best supervisor, best interviewers and best bestest best-ever help on their project! It would sure suck if they messed it up…"

Having just completed one of these projects, I find that I have a better understanding of how and why these sections tend to be so…expressive. It's not just that it's the only time the writer can give thanks, but it's the only time they're able to do anything in their own words and without risk of being unscientific, imprecise, or off-track. Which basically is me. The more flowery and extravagant the better! So those of you who always get sucked into reading these sections (you know who you are)- this is your day! In fact, I came close to writing an entire chapter for the acknowledgement just to make sure I didn't leave anybody out. Karma and all that.

Then being me, I realized that I really didn't have the luxury of time and opted for a more standard (while still unconventional!) format. And so…

Many thanks to all of my contributors, whose opinions and experiences I highly respect. So much so that I lost sleep worrying that I'd let you all down. I hope that I haven't. This little insight into the professional and personal camaraderie of key personnel in the Sahtu has further endeared the region into my hopes and dreams. This includes all of the interview participants who were so generous with their time, assistance and patience, those who volunteered for interviews but for whom I could not afford the time, and Jody Snortland, who was a great support on getting this project started. For Deborah Simmons, my supervisor, I look forward to meeting you in person… and feeling taller than you. And then give you a hug. You really challenged me to work, work and re-work the material and I can't thank you enough for that. Katarina Käll, I couldn't have imagined a better life partner than you. You've become family and we've even begun one of our own in this process, which is infinitely more exciting and wonderful than completing a thesis. I love you. My study group at CTM: Ola Tjornbo, Clara Bird, Fanny Pellegrinelli, and Steven Zeff sure, you guys are great too. Glad to see you on the flip-side, and thanks for the helpful tips. And of course my family, who's always there in the background wherever I go.

A special thanks to those already mentioned who provided additional editorial assistance.

Mahsi cho to you all. I hope that I have done well.
-Ruari

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List of Acronyms/Glossary

Adaptability- the ability of people to manage for resilience (Walker and Salt 2006:163).

GAC- Game Advisory Council

GNWT- Government of the Northwest Territories

GoC- Government of Canada

Harvester-Dene or Metis (indigenous) resource user

HTA(s)- Hunters and Trappers Association

Land claim- Sahtu Dene and Metis Comprehensive Land Claim Agreement, 1994

Manager/Harvester- a conceptual term for the association of resource managers and indigenous resource users.

MGP- Mackenzie Gas Project

MVRMA-Mackenzie Valley Resource Management Act

MVPI-Mackenzie Valley Pipeline Inquiry

NWT- Northwest Territories

Relationships- the mutual dealings, connections or feelings that exist between two parties, countries, people, etc. (Collins 2003).

Resilience- the amount of change a system is able to absorb without altering its functions, structure or feedbacks (Walker and Salt 2006:164).**RRC(s)**- Renewable Resource Council

Sahtu ENR-Sahtu division of NWT Environment and Natural Resources

SDMCLCA-Sahtu Dene and Metis Comprehensive Land Claim Agreement, 1994

SLWB- Sahtu Land and Water Board

SLUPB- Sahtu Land Use Planning Board

Social Capital- the ability of actors to secure benefits by virtue of membership in social networks or other social structures (Portes 1998:6). Social capital is an important aspect for building resilient and adaptable systems (Petty 2003; Westley 1995; Olsson et al 2004; Wondolleck and Yaffe 2000).

SRRB-Sahtu Renewable Resources Board

SSA- Sahtu Settlement Area

SSI- Sahtu Secretariat Incorporated

TEK- Traditional Ecological Knowledge

1 Introduction

1.1 Is co-management useful?

Collaborative partnerships based on power sharing, participation and multiple modes of knowing are considered to be important aspects in managing for resilience[1] and adaptability[2] (Gunderson and Holling 2002; Carlsson and Berkes 2005; Berkes 2004; Olsson et *al* 2004). The ability to be adaptable and manage for resilience are especially important in areas where complex social and ecological systems interact in unknown and unpredictable ways, such as in natural resource management. Collaboration is a basic component of a co-management system (Carlsson and Berkes 2005), which commonly refers to natural resource power sharing involving government agencies and non-governmental groups (Jentoft 1985; Pinkerton 1989). One of the strongest features of these arrangements is the incorporation of multiple modes of knowing from the different management participants, which allows for a more diverse range of knowledge, experience and perspectives to be used in decision-making. Despite its potential for innovative solutions to complex problems (Ludwig 2001), the co-management model practiced in Canada has taken some criticism by various authors (e.g. Spak 2001; Irlbacher 1997; Nadasdy 1999; Berkes 1999) who argue that power is not shared equally amongst stakeholders and multiple modes of knowing are not incorporated, what is referred to as an 'imbalance issue' in this paper.

In this thesis, these alleged imbalances are investigated by analyzing narratives from the perspective of resource managers on the relationships between resource managers and indigenous resource users (hereafter referred to as 'harvesters') in a co-management regime, and the implications of these relationships on management for a successful outcome. Relationships are considered in their basic form for this study, e.g. the mutual dealings, connections or feelings that exist between two parties, countries, people, etc. (Collins 2003). Relationships provide a good means of evaluating how practical resource management regimes are because they combine aspects of trust, communication, influence and accountability between managers and harveseters. Petty, 2003, considers these aspects as important for generating social capital between people, which is a necessary component for building resilient and adaptable management systems (Petty 2003; Westley 1995; Olsson et al 2004;

1 Resilience is defined as the amount of change a system is able to absorb without altering its functions, structure or feedbacks (Walker and Salt 2006:164).

2 Adaptability is the ability of people to manage for resilience (Walker and Salt 2006:163).

Wondolleck and Yaffe 2000). Social capital is described by Portes (1998:6) as the "ability of actors to secure benefits by virtue of membership in social networks or other social structures."

While there have been studies focused on evaluating co-management regimes, there is no known research that traces how conditions change during the transition to co-management. This study takes as its starting point the hypothesis that manager/harvester[3] relationships are a key indicator of successful co-management processes. The strength of manager/harvester relationships thus underpins the quality and effectiveness of management. How the transition to a co-management regime affects the relationship of managers and harvesters is assessed in this study as a means of evaluating co-management success. In analyzing perspectives on continuity and change in a shifting resource management regime, this study will attempt to shed light on manager/harvester relationships.

1.2 Issues for adaptability

Collaborative arrangements such as co-management are important aspects of an adaptive system. The criticisms of the Canadian co-management process would imply that the ability of co-management regimes to manage shared resources adaptively is not possible. The imbalance issue presents particular challenges to practitioners of adaptive management to incorporate multiples modes of knowing, in this case the challenge of incorporating Traditional Ecological Knowledge (TEK) with Scientific Knowledge. A TEK perspective is one that is generally more holistic, adaptive and more nested (Berkes 1999). Berkes (1999:8) defines Traditional Ecological Knowledge as a:

> …cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.

Many adaptive managers view the incorporation of indigenous knowledge into decision-making as providing increased flexibility by providing a wealth of trial-by-error experience and observations in social and ecological interactions. Holling et al (1998:358) refer to this as "learning by doing", which they see as providing a better mechanism for responding to changing social-ecological conditions (Holling et al 1998; Berkes 1999). While the incorporation of TEK into management decisions has

[3] I use 'manager/harvester' to refer to the association of resource managers and indigenous resource users.

great adaptive potential, the imbalance issue suggests that this does not take place in practice. It is important that managers hoping to embark on a collaborative process do so with a comprehensive understanding of the challenges involved in such initiatives. By investigating the issue of imbalance in manager-harvester relationships, the affect that transition to co-management has had on the adaptability of the management regime will be deduced.

1.3 Investigating Co-management

To investigate this problem of imbalance, a narrative analysis of how resource managers perceive changes in their relationships with harvesters was selected. The study occurs within a Canadian resource management regime that has undergone the transition to co-management. The narrative analysis has been accomplished through a series of interviews with senior resource managers in the Sahtu Region of Canada's Northwest Territories. Perspectives will be analyzed for continuity and change in the strength of relationships.

It was expected that the strength, or quality, of manager/harvester relationships had decreased following the implementation of co-management, with an associated loss in adaptability. If the issue of imbalance has adverse impacts on resource management in the Sahtu region, supporting comments should emerge from the interviews. In this instance their experience and perspectives may provide insights on increasing the strength of relationships and encouraging future collaborative arrangements.

1.4 Limitations

Limitations outlined in this section pertain to factors affecting the quality of the results. The largest limitation was that of timing. Doing research in northern areas in Canada requires a lengthy research licence application process (around two months). This delay, which subtracted significantly from the time able to gather information and process it as work was put on hold until a licence could be procured. The importance of the follow-up questions, clarifications and authentication for each respondent added to the timing pressures, but were crucial to the richness of the responses. The researcher was located in Sweden for the duration of the study; geographic distance of the researcher from the study region was a significant factor that reduced the quality of information received. It was difficult to acquire key documents within the timeframe, which made for a less comprehensive historical analysis. I also acknowledge a gap in female perspectives from the interviews. A

larger study scope could have resolved this. Finally, the assigned page limit for the thesis meant that considerable detail had to be omitted.

2 Theory- Critiques of Co-management

2.1 Overview

This section begins with a discussion of co-management models as they have evolved in Canada. This is followed by a review of critical perspectives on co-management, as they relate to power sharing, participation and the incorporation of knowledge. The section concludes with a brief analysis of how this study fills a research gap and contributes to resource management.

2.2 Co-management models

This paper focuses on the co-management model as it was forged and is practiced in Canada. The study focuses on the model of co-management that has emerged from land claim settlements. This represents the original co-management arrangement and offers greatest possibility for a large scale and long-term management of natural resources[4]. Land claims-based arrangements are the most comprehensive of the models because they involve permanent management over all resources on specific lands (Rusnak 1997:8). Co-management institutions also exist throughout the world, and have demonstrated strong adaptive potential (e.g. see Yandle 2001; Hahn et *al* 2006). Nadasdy (2005) also considers community-based and participatory-based development initiatives as co-management models. This thesis focuses on the issues of imbalance associated with Canadian claims-based co-management. Consequently, it does not discuss these other models. For the remainder of the paper (unless otherwise stated), the term co-management refers to claims-based co-management models.

Co-management in Canada

The recognized model of co-management in Canada arose from the resolution of aboriginal rights settlements between First Nations groups and the Government of Canada (GoC). Co-management has come to represent an ideal in aboriginal/state

[4] Two other Canadian co-management models exist: crisis-based and conflict-based. Crisis co-management are issue-specific conflict resolution partnerships that arises between indigenous communities, government and industry to address a "real or perceived resource crisis and/or are set up in order to avert potential crises," (Spak 2001:68). Crisis-based co-management agreements tend to be weaker than land-claims based agreements because they have limited regulative powers, and usually function as working groups where individual members are not bound to consensus or action (Spak 2001:69).
Conflict-based arrangements "generally adopt a holistic and ecosystem approach to land and resource management" (RCAP 1997). These arrangements tend to be less "compartmentalized" and have greater "co-jurisdiction" than claims-based co-management (Rusnak 1997:10).These two models offer more adaptive potential than claims-based models by being more responsive and less bureaucratic, but operate on a much smaller scale and timeline.

collaborations[5] (Bateyko 2004). More specifically, the resolution of these aboriginal rights settlements resulted in shared jurisdiction over natural resources, thereby mandating a joint management system between settlement beneficiaries and the GoC (Rusnak 1997). The resulting co-management involved a "change from a system of centralized authority and top-down decisions, to a system which integrates local and state level management in arrangements of shared authority, or at least shared decision-making" (Rusnak 1997:2). The effect of co-management arrangements has been the decentralization of Territorial and Federal state control over resources and an "institutionalized role for indigenous peoples" via joint aboriginal/state boards and committees (*ibid*: 18). The decentralization of government and increased collaboration with indigenous members is thought to improve management of wildlife and natural resources in several ways (Nadasdy 2005:215). First, the joint collaboration improves management decisions through the incorporation of traditional ecological knowledge (TEK) with resource management disciplines (e.g. ecology, conservation biology). Secondly, the decentralization allows for greater responsiveness of the co-management regime to local environmental changes. Thirdly, the incorporation of TEK into management decisions is thought to empower the knowledge holders of TEK, thereby empowering the aboriginal communit(ies) involved (*ibid*).

2.3 Critique of co-management

The benefits derived from following a co-management model are questioned due to an imbalance of power between aboriginal groups and the government.

Power Sharing

The main critique of co-management is that, although co-management boards/committees receive equal aboriginal/state representatives, their policies procedurally favour the state (Rusnak 1997; Spak 2001; Nadasdy 1999; Nadasdy 2005). A large part of this critique comes directly from the "institutionalized role" indigenous managers joininga co-management structure. This institutionalization of indigenous resource management into the larger federally legislated "Institution of Public Governance" is seen to have a limiting effect on the power sharing, participation, and integration of aboriginal/state perspectives. These are the same features used to build adaptability and improve management decisions. In such an arrangement, the marginalized group (here represented by the indigenous beneficiaries of rights settlements) may have less power than they did prior to co-management

[5] The degree and type of collaboration are discussed in greater detail in section 2.1.

because their use of power is more limited. Put differently, power and decision sharing is capped within the bureaucratic system of the dominating partner, e.g.the Canadian bureaucratic system. Containment of power serves to increase the sphere of influence of the dominant group. For this reason, Nadasdy (2005:216) suggests: that "co-management may actually be serving to extend state power into the very communities that it is supposedly empowering." In his article on the institutionalization of resource management, Sandlos (2001) cites resource management as an active tool of assimilation of First Nations people in northern Canada by the federal government. According to Sandlos, the bureaucratic structure of resource management has been built with the explicit design of disadvantaging Dene and Metis people. The critiques levelled by Sandlos and the others suggest that co-management is a flawed and bureaucratic system that opposes power equity and a balanced co-management system.

Participation and the incorporation of TEK

The worldview of different stakeholder groups influences their degree of acceptance of uncertainty and their capacity to adapt to change (Berkes 1999; Danter et al. 2000). In co-management, two worldviews are being made to integrate: the Canadian worldview, which is represented by the bureaucratic structures that it has built and institutionalized (Spak 2001:ii), and the indigenous worldview embodied in traditional ecological knowledge (TEK). A TEK knowledge base is cultivated through seasonal observations tied into the cultural memory of indigenous peoples. Indigenous social learning is facilitated by informal narratives[6], which are not widely used by formal institutions (Fairhead and Leach 1995; Nadasdy 1999). Nonetheless, Pelling (1999) found that an unequal base of power allows for certain perspectives and objectives to dominate governance structures through a biased narrative. If a narrative is controlled then the rules and norms of governance can be manipulated to benefit the individuals with power (*ibid*). Cummings et *al* (2006) argue that this can lead to scale mismatches in decision-making. Participation of indigenous resource users within a formal co-management arrangement therefore seems to be either "lost in translation" or easily manipulated.

On the integration of TEK, Spak (2001:79) and Irlbacher (1997:45) claim that a colonial framework still exists whereby Aboriginal values, represented through the

[6] Narratives are powerful tools that formulate the stories and beliefs of individuals and organizations that make up a social network. Narratives therefore have a direct bearing on the formation of the rules and norms that guide a social system (Fairhead and Leach 1995; Adams et *al 2003*).

worldview of TEK, are compromised by having to conform to the dominant Canadian parable of science. Other authors agree with this assessment (e.g. Nadasdy 1999; Berkes 1999; Bateyko 2003). Nadasdy (1999:12) believes that the attempt to integrate TEK and science serves to further "concentrate power" to administrative centres, because the resulting 'integrated' knowledge is used for the benefit of resource managers and scientists and not for the indigenous knowledge holders. In areas of co-management, this criticism might not have as much weight because management is supposed to be shared between government and indigenous representatives.

Another problem lies in the dispersal and development of TEK into decision-making, which can result in peripheral social groups being omitted from consultation or knowledge integration. TEK is socially and culturally based and varies from group to group and from individual to individual. A lack of participation or exclusion of one group can therefore result in the incorporation of policies or knowledge that are not supported by community members (Natcher 2002; Bateyko 2003).

The perspective derived from these criticisms on the ability of co-management systems to increase indigenous participation and the integration of TEK is not promising with respect to building resilient and adaptive systems. A marginalized narrative limits participation, and TEK does not appear compatible with a bureaucratic or scientific model.

2.5 Knowledge Gap and Contribution

Previous studies have been made to evaluate the degree of participation in co-management boards (see Bateyko 2003; Spak 2001). To date, no known studies have explored resource manager perspectives on participation levels before, during and after the implementation of co-management. If a problem of imbalance exists, future co-management initiatives will benefit by accounting for and adjusting the design of co-management processes. This study accordingly draws upon the experience and perspectives of study participants in order to reveal factors that influence manager/harvester relationships and thereby affect the adaptability of co-management institutions.

3 Case Study- the Sahtu Region

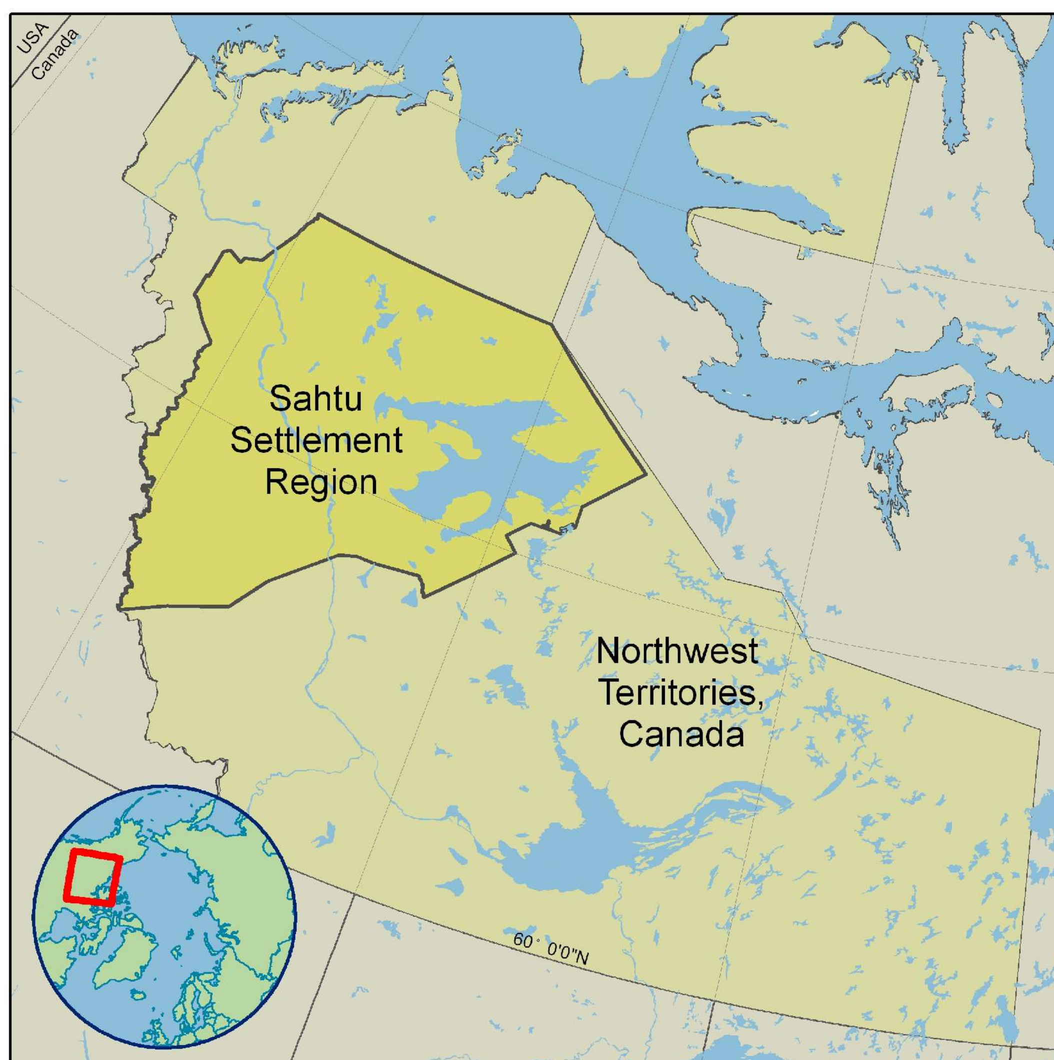

Figure 3.1. Map of the Sahtu Settlement Region, Northwest Territories, Canada. The region lies within the Mackenzie Valley and is bisected by the Mackenzie River (Photo courtesy of http://assets.panda.org/img/original/sahtu_mapforarcticbulletin_0805.jpg).

3.1 Overview

The selected case study focuses on the resource management regime in the Sahtu Region of Canada's Northwest Territories. This region provides an ideal case study for three principle reasons. First, the indigenous Dene and Metis of the Sahtu region signed a land claim agreement in 1994, the Sahtu Dene and Metis Comprehensive Land Claim Agreement[7], which resulted in the establishment of a co-management system. This regime was subsequently legislated through the Mackenzie Valley Resource Management Act. Second, the Sahtu region has undergone an extraordinary

[7] In the interest of brevity, the Sahtu Dene and Metis Comprehensive Agreement will be referred to henceforth as "the claim" or "the land claim".

amount of social and ecological change in the last 50 years. This has created much potential for adaptive responses. Third, the researcher is familiar with the resource management institution in case study and consequently has access to more information sources in conducting my investigation.

The Sahtu Settlement Area (also referred to as the Sahtu Region) is in Canada's Northwest Territories (Figure 3.1). There are roughly 2,581 residents, roughly 70% of who are aboriginal (GNWT 2006). Indigenous residents of the either Dene orMetis. In 1993, the Sahtu Dene and Metis Comprehensive Land Claim Agreement was signed, establishing a homeland of 41,437km^2 for the land claim beneficiaries (the original Dene and Metis). The land claim created multiple co-management arrangements between Sahtu beneficiaries, the Government of Canada (GoC), and the Government of the Northwest Territories (GNWT) to jointly manage the region's social, economic and environmental resources. The Sahtu Renewable Resources Board (SRRB) is the main instrument of wildlife management. Prior to the claim, resource management was entirely under government control. Power sharing, participation, and the incorporation of knowledge were uncharacteristic of early manager/harvester relations. In the following section, a brief overview is provided of the development of resource management in the Sahtu. How the region's past and present resource managers provide a unique perspective on the transition to co-management and its relative adaptability is then described.

3.2 Contemporary historical overview of Manager/Harvester Relations

Relations between resource managers and resource users in the Sahtu Region have been strained since the first state-representative assumed management "control" over traditional resources (Smith 1999). State-based resource management became a reality in the region following the signing of Treaty 11 in 1921 (Smith 1999:177). This treaty was signed between the Government of Canada (GoC) and the aboriginal residents who lived along the Mackenzie River in northern Canada[8]. For the GoC, the treaty signified extinguishments of native land rights over the area (Sahtu GIS 2003:8). The oral terms of the treaty were quite different though, and the Dene and Metis residents understood Treaty 11 as a guarantee of native land rights in return for their cooperation and agreement to enter the Canadian governance system. Generally speaking, the signing of Treaty 11 was a combined peace treaty and declaration of

[8] This region is more commonly referred to as the Mackenzie Valley, and encompasses all of the communities included in Treaty 11.

friendship in return for Government support and assistance for aboriginals in the Mackenzie Valley region to continue their traditional ways without interference and with aid in times of scarcity or change (Smith 1999:177).

Notwithstanding Treaty 11, management of resources remained in the jurisdiction of state agents (ibid.). The state-based period of resource management was characterized by the overlay of laws and regulations constructed in southern Canada, without due consideration to the peoples, lifestyles and resources of the North (Spak 2001:63). As management institutions developed, regulations became regionally specific. The authenticity of these regulations were questioned for their lack of sufficient scientific understanding and design with respect to the Sahtu (Bateyko 2003;91). The disregard for the traditional livelihoods and lifestyles of indigenous Northerners, and the GoC's disrespect of the terms of Treaty 11 created an adversarial relationship between native harvesters and government representatives (Spak 2001:65; Bateyko 2003:90). State-based resource management policies were often impractical when applied to a northern context (Saldos 2001) and enforcement of resource infractions was minimal. Non-compliance of regulations became common (Bateyko 2003:91) and a means of political demonstration by Aboriginal people against Treaty violations (Spak 2001:65).

The unwillingness to cooperate and abide by state rules exacerbated already weak relationships between Dene and resource managers (Spak 2001:67). For its part, the GoC felt that scientific perspectives were a more legitimate basis for policy and decision-making than traditional ecological knowledge (Abel 1993:222). A general tension between traditional and state-based management and between harvester and resource manager persisted in the Sahtu to the point where, to keep the peace and to get the job done, resource managers might ignore wildlife transgressions committed for traditional or spiritual reasons (Bateyko 2003:90). Abel (1993) and Saldos (2001) argue that the early form of state-based management significantly contributed to the social, cultural and economic deterioration of Aboriginal peoples during the twentieth century.

State-based resource management began losing credibility during the 1970s when indigenous groups came together to fight for rights guaranteed to them under Treaty 11. Significant events affecting indigenous land rights during that period include the Paulette Case (1973), the Dene Declaration (1975), the Mackenzie Valley Pipeline Inquiry (1974-77), and the amendment to section 25 and 35 of the Canadian

Constitution in 1982. The Paulette Case established that Dene and Metis had outstanding rights of land entitlement with the Government of Canada. The Dene Declaration was also launched at this time, which marked a switch in the aboriginal political strategy from recognition to negotiation with the Government of Canada. The Mackenzie Valley Pipeline Inquiry (MVPI) made a strong statement about indigenous homeland and attachment to place. The MVPI influenced a Supreme Court of Canada ruling of a 10 year moratorium on development activities within traditional homelands until aboriginal rights settlements could be resolved. The need to resolve land claims issues before large development projects could occur became a central factor in acquiring the political will to finalize land claim agreements between Treaty members and the Canadian Government (Berger 1977). The 1982 amendment of the Canadian Constitution to include aboriginal harvesting rights and privileges in its pages paved the way for the transition to co-management. These shifts in politics raised the political voice of First Nations peoples in Canada, reinforced their Treaty rights, and increased their participation in decision-making processes[9].

3.3 Current Management Authorities in the Sahtu

Early forms of resource management in the Sahtu and throughout the Northwest Territories have been characterized as state-centric forms (Sprak 2001; Saldos 2001; Donihee 2003). Current resource management in the Sahtu was established with the ratification of the 1993 Sahtu Dene and Metis Comprehensive Land Claim Agreement (‘land claim’). The Sahtu land claim gave formal recognition of entitlement to the K’asho Got’ine (Hare), Sahtu Got’ine (Great Bear Lake), Káálo Got’ine (Willow Lake) and Shita Got’ine (Mountain) people. The land claim also gave beneficiaries the political power to participate in the management of natural resources in their region. Co-management boards established through the land claim agreement (1993) and the Mackenzie Valley Resource Management Act (MVRMA) (1998) are responsible for resource administration. **“**The purpose of the establishment of boards by [the Mackenzie Valley Resource Management Act] is to enable residents of the Mackenzie Valley to participate in the management of its resources for the benefit of the residents and of other Canadians.”[10] From an adaptive management perspective, these boards succeeded in formalizing a shared relationship between Dene and Metis stakeholders

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[9] For a more detailed review of contemporary history, refer to *Appendix D-Contemporary History and Participation*. For a comprehensive account of the Sahtu’s history, see Sandlos 2001; Blondin 1997; Berger 1977; Sprak 2001; Abel 1993; Bateyko 2003; or Donihee 2003.

[10] Canada, Justice. 1998, c.25; 9.1. Mackenzie Valley Resource Management Act. Ottawa: Department of Justice.

with state representatives that would guarantee the use of TEK and shared decision-making.

The Sahtu Renewable Resource Board (SRRB) was established through article 13 of the *Sahtu Dene and Metis Land Claim Settlement Act* as the co-management board to manage over wildlife and forestry in the Sahtu. The SRRB represents all of the land claim beneficiaries, non-beneficiaries and non-aboriginals living in the Sahtu and has equal representation from communities and territorial/federal government agencies (SRRB 2007). The SRRB is composed of six locally and government appointed board members who convene on resource management decisions encompassing the Sahtu. Decisions of the SRRB are passed on to the Minister of Indian and Northern Affairs as recommendations for policy and/or law. The Minister has the power to veto these recommendations, but not without substantive cause or negotiation with the SRRB.

The Renewable Resource Councils (RRCs) and the Sahtu division of NWT Environment and Natural Resources (Sahtu ENR) are additional resource management bodies operating in the region. The RRCs were established under section 13.9.4 of the SDMCLCA (1993:63); these community organizations are primarily focused on managing harvesting and harvesting related interests. The Sahtu ENR serves as an advisor to the SRRB and RRC in resource issues.

3.4 Setting the stage for relationship development

Efforts to establish an equitable resource co-management regime continue today. Since the 1970s the political, cultural, economic and ecological environments of the Sahtu Region have undergone considerable change. The state-based model of resource management has given way to one of co-management. What remains to be seen is how the relationship of resource management has developed during the same time.

Compounding the difficulties of structural reformation under the land claim was the influx of resource exploration and development. The signing of the land claim opened the Sahtu Region up to resource development for the first time since the MVPI ruling in 1977. Resource managers have been caught in the middle of this changing social and ecological environment, as most of the economic and political events have a direct bearing on resource access and quality. Managers from the Sahtu and similar northern regions have winessed heightened change and dynamism within the social and environmental spheres. This makes their perspectives and experiences unique. As individuals at the centre of controversy, these managers have the dual role of enforcer

and facilitator. They are subject to both Territorial and Federal legislation and policy implementation, and to local community and resource needs. Accordingly, resource managers are in a position to comment critically on how the changes affecting resource management in the past half-century have impacted relationships with community members and power balances in decision-making. Gaining insight into how their relationships with harvesters has evolved and how they bridgebridging the transition to co-management may better inform the wider resource management community.

4 Methodology

4.1 Overview

To investigate the problem of imbalance, a series of semi-structured interviews with resource managers was undertaken to learn about their relationships with resource harvesters. A narrative analysis was selected because the method allowed accounted the majority of the limitations the study faced, while still allowing for meaningful and relevant data to emerge. This section begins by providing a theoretical overview of narratives and their application to the case study. A description of the methodology follows, including a discussion on the literature reviewed, the semi-structured interview process, a description of how the adaptive potential of the resource management regime was assessed, and finishes with the practicalities of doing such an investigation.

Narratives

Narratives represent the recording and examination of life events in the words of the subject/participant. Washbourne and Dicke (2001:94) define a narrative as a "representation of a series of events meaningfully connected in a temporal and casual way" (Onega and Landa, 1996:3), whereby an event is deigned as the transition from one state to another state (Bal 1985:5). Franzosi (1998:4) likens narratives to stories that imply a change in conditions by the "unfolding of a specific sequence of events." The chronological sequence is a significant aspect of any story, with the events linked logically together (ibid). This perspective makes narratives an excellent analytical tool for studying events that involve multiple perspectives and a broad timeframe. Because narrative texts are packed with sociological information, and empirical data to be evaluated is already in narrative form, Franzosi believes that narratives present a

powerful investigative tool (ibid:2). Fisher (1984) applies a narrative paradigm to human communication. The narrative paradigm posits that (ibid:7):

1. humans are essentially storytellers;
2. the paradigmatic mode of human decision-making and communication is "good reasons" which vary in form among communication situations, genres and media;
3. the production and practice of good reasons is ruled by matters of history, biography, culture and character;
4. rationality is determined by the nature of persons as narrative beings- their inherent awareness of *narrative probability*, what constitutes a coherent story, and their constant habit of testing *narrative fidelity*, whether the stories they experience ring true with the stories they know to be true in their lives;
5. the world is a set of stories which must be chosen among in order to live the good life in a process of continual recreation. In short, good reasons are the stuff of stories, the means by which humans reach their nature of reasoning-valuing animals.

Human communication should, in Fisher's perspective, be viewed as both historical and situational. Fisher believes that reason and rationale are conducive to human communication through narrative (ibid). Following his logic, narratives represent a method for deriving a sound argument and logic from conversation. Communication is dependent on an individual's perspective though, which is biased according to his or her views and experiences. Alongside rationale and reason, narratives thus frame communication as subjective.

Narratives are used in this study to categorize the perspectives of interviewees into themes of reason or rationality. These themes are then used to address relationship changes in resource management regimes. The history and identity of individual resource managers' experience are linked through narrative with the reality of the resource management institution. By exploring personal narratives which demonstrate the evolution of relationships in resource management, an understanding of what processes have impacted manager/harvester relationships can be developed. The use of narrative analysis provides an ability to compare the experiences of interviewees to the resource management institution on which they comment.

The use of narratives is extended in this study to encompass a narrative of the institution of resource management. This narrative is based on the values and driving forces that impact the institution. The findings from this narrative are used to assess the regime's adaptive potential.

Manager/harvester relationships will be assessed according to the level and

quality of interaction managers describe in their narratives. These include harvester participation and the role of harvester TEK in decision-making. TEK is used for analysis because it embodies a worldview of the Dene and Metis harvesters living in the Sahtu Region (case study area). Irlbacher (1997:20) argues that TEK "forms the foundation of Aboriginal culture, upon which political, economic, and personal aspirations depend." As such, TEK cannot be disassociated from the perspectives of indigenous resource users. Accordingly, the inclusionof TEK into decision-making is an indicative of harvester engagement in resource management.

It was expected that the strength, or quality, of manager/harvester relationships had decreased following the implementation of co-management, with an associated loss in adaptability. If the issue of imbalance is a reality in co-management models, it is reasonable to expect resource managers to comment on it. Corroborative perspectives from the interviews will support or oppose critiques. Such being the case, the experience and perspectives of the senior resource managers interviewed may shed light on how to increase relationship strength and encourage future collaborations.

4.2 Methods

The research was conducted through a comprehensive literary review, interviews, and a mixed qualitative-quantitative analysis. Collectively, the areas of review have provided a rich context and background from which the comments and insights from the interviewees could be gauged to assess the common themes that have affected manager/harvester relationships in the Sahtu Region.

Literature Review

A literature review was conducted with the purpose of enriching the context of the narratives and to verify the accuracy of the interview material. The theoretical review took a detailed look at co-management models and, particularly, their existence within a Canadian context. The historical review looked at how resource management emerged in Canada, especially in the Northwest Territories, how it impacted indigenous cultures, and how co-management has developed in the Sahtu Region.

Semi-Structured Interviews

The purpose of the interviews was to gain an understanding of how the transition to a co-management regime has affected the relationship of managers and harvesters

in the case study region. To this end, three research questions were explored:

1. What are the different turning points of resource management in contemporary history?
2. What are the strengths of the relationships that have existed?
3. How has the use and role of traditional knowledge changed in decision-making?

Interviews were transcribed and organized according to these questions. Subsequently, each question "category" was analysed for emergent themes that had an impact on the quality of relationships and the resource management regime. These themes were used to frame arguments that responded to the issue of imbalance and how the transition to co-management has affected relationships. Themes found to impact resource management were combined with the perspectives of the resource managers to form a narrative of the resource management institution in the Sahtu. This Sahtu-narrative is based on perceived values and practical concerns and opposing factors impacting the regime. The narrative for the institution of resource management was then used to assess the regime's adaptive potential.

Interviews

Interviews were conducted by email and by telephone during the month of May, 2007. Where time allowed, email interviews were followed up with further questions for clarification or elaboration. With telephone interviews, conversations were recorded with the interviewees' permission and later transcribed. Conversations were very rich in detail and interviewees were generous with their time, allowing questions to be pursued right away or in a follow-up session.

The semi-structured interviews were done through consultation with past and current resource managers in the Sahtu Region. Interviewees were selected according to their availability and experience in resource management in the Sahtu Region and in the Northwest Territories. A snowball method for choosing specific individuals was used based on the recommendations of my supervisor and experienced professionals in the Sahtu Region. The respondents appear in Table 4.1. All respondents have had extensive experience as resource managers in the case study region. Their experiences overlap and extend back to the early 1960s. This managerial timeline provided rich perspectives on the resource management regime throughout its transition from a state-based model of management to one of co-management. The majority of the respondents have also been resource users in the case study region, and their experiences resource gathering have likely informed their perspective as managers. A

summary of the interview statistics is given in Table 4.2

Table 4.1 Interview respondents and their relation to the case study.

Respondent	**Experience**
Walter Bayha	Chairperson- Sahtu Renewable Resources Board (2003-present); Forestry Manager, Government of the Northwest Territories (1970s-1990s)*; Chief of the community of Deline.
Norman Simmons, Dr.	Past Board Member and former Executive director- Sahtu Renewable Resources Board; Superintendent, Northwest Territories Fish and Wildlife Service (1975 –1982), Regional biologist, Canadian Wildlife Service (1966-1975).
Alasdair Veitch	Supervisor, Wildlife Management- Department of Environment and Natural Resources (2005-present); Supervisor, Wildlife Management- Department of Resources, Wildlife and Economic Development (1996-2005); Sahtu Area Biologist- Department of Renewable Resources (1994-1996).
Robert Ruttan	Caribou biologist 1950s+; Former CWS biologist in the Sahtu Region, 1962-65.
Executive Director, SLUPB	Executive Director/Senior Planner, Sahtu Land Use Planning Board (2005-present).
John Donihee, Dr.	Lawyer specializing in Aboriginal Rights Settlements; former Sahtu Region biologist (1980s)*.

*dates are rough estimates

Table 4.2 Summary of key interview statistics

Number of people interviewed	**6**
Male respondents	**6**
Female respondents	**0**
Total number of pages from interview documents (submitted + transcribed)	**97**

Institutional Narrative

A mixed qualitative and quantitative analysis was done to develop a conceptualised resource management narrative of the case study region. Telephone and electronic interview transcripts of each interviewee were run through an electronic data analysis program called "QSR Nvivo". A word frequency query was conducted for each of the transcripts, and a list of the 100 most common words to appear in the text was recorded. This list was used to determine what words and concepts were being most emphasized by each respondent. Key words and concepts were isolated from the list and combined with the interviewer's perspective, and with knowledge of contemporary resource management history into a short paragraph summarizing the resource management perspective of each interviewee (see Appendix B-*Six Become One*).

The experiences from these perspectives were overlaid and considered in relation to the resource management institution to which the managers belonged. Together, the independent perspectives allowed for a conceptualisation of the main

values, practical concerns, and limitations of resource management, what I refer to as the "institutional narrative" of the Sahtu's resource management regime. The institutional narrative was used in conjunction with the emergent themes to assess the adaptive potential of the resource regime.

4.3 Practicalities

Ethical Protocols and Licensing

A research application was filed through the Aurora Research Institute of the Northwest Territories. For the full terms and conditions of the research application, please refer to "Appendix C- Research Licence and Documents." In conjunction with the licence, the following measures were also taken: interviews were done in accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans* (TCPS 1998); specific codes of conduct that were adhered to during the project included the code of Confidentiality (p.37), and the best practices outline for conducting research with Aboriginal peoples (p.57). Where private information was gathered, the code of Accessing Private Information was applied (pp.44-45).

Audience

The main audience for this proposal are present and future resource managers and stakeholders who work in the Sahtu. The secondary audience are proponents of adaptive management. In conducting this study, insightful management experiences were recorded that offer much practical value for resource managers. These experiences and a summary of the reports findings will be made available to resource managers upon completion of the study.

5 Results- emergent perspectives

5.1 Overview

Three research questions (see section 4.2-*Semi-Structured Interviews*) were explored to analyze the participation level of aboriginal resource users in resource management from the perspective of senior resource managers. The questions explore managerial perspectives on the history of resource management, the relationships that have existed between resource managers and resource users, and the use and incorporation of Traditional ecological knowledge (TEK) into decision-making. The

interviews revealed nine themes on how the transition to co-management affected manager/harvester relationships in the Sahtu Region. These findings are discussed under the research question to which they best apply. Due to the restraints of space, many of the perspectives and historical accounts on resource management relationships were removed from the document. To see this material and information on historical events, see *Appendix D-Contemporary History & Participation.* Athe interviewees' responses varied according to their experiences and personal perspectives during their time in management. Their appearance in the text may be unbalanced and/or limited to certain themes.

5.2 Turning points of resource management in contemporary history

In Chapter 3, a concise overview of resource management in the Sahtu was provided from the perspective of local resource users and harvesters. This analysis was concerned primarily with the sharing of power in resource management decision-making, bureaucratic arrangements, and the extent of freedom to partake in traditional activities. Appendix D, section II provides a chronological listing of contemporary events identified by the respondents as having impacted resource management. The events are too numerous to list, and providing a brief overview of them would not do them justice. This result section focuses instead on themes that emerged from the historical events that have impacted manager/harvester relationships.

Co-management in the making for 30+ years

Officially, co-management has only been a reality in the Sahtu since the Sahtu land claim came into effect in 1994. As part of this agreement, a co-management board, the Sahtu Renewable Resources Board (SRRB), was set up to govern over all renewable resource issues in the Sahtu Region. Dr. Norman Simmons highlighted a less known fact, or perhaps one that is easily overlooked; that locals have played a significant role in resource management decisions for a much greater period of time. Co-management broadly defined has arguably been a reality in the Sahtu for more than thirty years.

In 1972, Territorial resource managers led comprehensive consultations with native harvesters on revisions to the wildlife ordinance laws then in effect. Ruttan commented that, prior to the wildlife ordinance changes, changes to wildlife management laws were done "almost entirely in-house", and had not been significantly altered since the North West Games Act of 1917, and the Migratory

Birds Convention Act of 1918. Both of these acts had been designed to limit the accessibility of important harvesting species to Aboriginal Peoples. According to Ruttan, the passing of these Acts resulted in "considerable hardship and hard feelings toward government," soured relations, and necessitated a need for enforcement activities.

The wildlife ordinance consultation[11] process occurred from 1972-73 and focused on the recommendations of Dene, Metis and Inuit hunters and trappers. This was the first comprehensive consultation process to involve native (and non-native) hunters and trappers (resource users) in the design and implementation of wildlife laws and regulations. Dr. Simmons says, "as a result, the indigenous people and others became co-authors of new laws and policies, and our enforcement activities dropped to nearly zero." The consultation process appears to have done much to improve the trust and reciprocity between resource users and managers. The revision of the law in 1976-1977 was thought to further solidify this trust that managers were accounting for the needs of the resource users.

One of the recommendations from the wildlife ordinance consultation was the "delegation of authority from the Yellowknife headquarters to the Game Advisory Council in 1975" (Simmons 2007). The Game Advisory Council (GAC) was formed to assist native and non-native hunters and trappers as much as possible, and to serve as a voice to express concerns back to the Government of the Northwest Territories (GNWT). The GAC promoted an information network between managers and harvesters through the Hunters and Trapper's Associations (HTAs):

> Wildlife officers were instructed to consult the HTAs and to keep them informed about fish and wildlife management activities.
>
> …[A]lthough legally the HTAs could only recommend management practices to the government, the Territorial Government treated most of their recommendations as "decisions" except in the areas of migratory birds and barrenland caribou. *Simmons 2007.*

In providing all harvesters with an opportunity to have their needs officially represented, the GAC became the first co-operative management structure in the Northwest Territories. The relationship between the GAC and the HTAs became a central aspect of resource management in the Sahtu Region. It provided an early shift in the roles, responsibilities and power of native and non-native resource users in resource decision-making as resource managers sought out and listened to advice from

[11] Originally known as the Game Ordinance, but later changed to Wildlife Ordinance. I have chosen to use the currently used version for ease of reference.

local harvesters.

According to Simmons, managers and aboriginal groups considered the GAC-HTA "co-management" a success because it improved relations and reduced enforcement activities significantly. The benefits of having local individuals involved directly in resource management became a goal of resource managers, including the recruitment of "indigenous people in wildlife management even though they lacked the formal training required of wildlife officers" (Simmons 2007). The "Assistant Wildlife Officer" program likely marked a change in management strategies towards empowering locals in resource management decision-making and a commitment to improving co-operative management conditions.[12]

Power of HTAs goes through reversal

Related to the switch in community priorities is the power reversal that resource users have gone through from the early days of co-operative management to the present day regime of co-management. Interviewees commented on how resource users went from a government-run system of resource management to a system designed to prioritize Sahtu interests. However, other interviewees also remarked on how resource users went from being able to directly comment and participate in resource management decisions to having their voices reduced through lower representation.

The reversal took place following the land claim agreement in 1994 and resulted in more legal control of locals in resource management decisions but a reduced presence of locals in decision-making. Prior to the land claim, the government co-managed resources with resource users. This was achieved through the Game Advisory Council (GAC), whose members facilitated harvesting activities for local Sahtu residents, and consulted harvesters on important resource management decisions. Following the land claim and the rise of co-management boards, the role of government resource management was reversed. Government managers operated officially under an advisory role to the resource co-management board and had minimal human and financial resources to contribute to resource users. The GAC, which for so long had acted as a facilitator between managers and harvesters, ceased to operate shortly after the claim.

The switch in role of government resource managers to management advisors

[12] Walter Bayha, one of the managers interviewed, was one of the early graduates of this program. His long career and contributions to resource management in the Sahtu are a sign of the program's success.

coincided with a decline in power of the Hunters and Trappers Associations (HTAs). Ironically, this occurred at the same time that the HTAs were being granted official legal rights by the Government of the Northwest Territories (GNWT) and Government of Canada (GoC). In the 1994 Sahtu land claim agreement, the HTAs were recognized as Renewable Resource Councils (RRCs) and significant legal powers related to resource management were bequeathed to them. According to some respondents, oversights in the implementation plan on finances, and a loss of financial support from the government had an immediate impact on the RRCs. Regarding the role that RRCs now play, Bayha remarked: "[t]oday it's switched around: today [the RRCs] have everything on paper- they legally have those responsibilities- and yet they don't have the people or the resources to get those things done anymore." Bayha summarizes the situation as so:

> …traditionally with the HTAs, …the resource managers, and certainly the government, had put a lot of support [into the HTAs]- even the wildlife act… [The government] had a responsibility to make sure that [the HTAs] had all the help that they can to get… So whenever they needed help, and they sometimes didn't have a secretary or they'd sometimes they didn't have enough people for, we'd usually get involved. The officers would get involved, maybe the superintendents gets involved or somebody else from the GNWT gets involved and helps them get things done. So [the government] played a major role in that sense.
>
> Since the claims, and the claim is very clear on a lot of these things- [the HTAs] get a certain portion of money, and that's it. The GNWT still gives them what they call the Trap Funding, but that's all they do. They don't send an officer over there to help them with their books, or to help them with some harvesting or some study activity or some project that they want done…
>
> Governments don't feel the need to do that anymore, for some reason- and I don't know what it is…Legally and on paper, prior to 1982,even if they didn't have the resource management rights and powers that were being eroded, practically on the ground things were very different- everybody was helping that organization so that they could get work done, so they were a little more successful. *Bayha 2007*

The ability of the RRCs to function properly following the land claim appears to have been compromised by a lack of finances and government assistance. This is either ironic or an oversight of the claim, because the RRCs assumed considerable power of local resource use and control under its new mandates (e.g. management over local harvesting activities and catches, establishing trapping areas, and advising the SRRB on harvesting issues) (SDMCLCA, 1993:63). The ratification of the land claim left the RRCs with a higher degree of management responsibility but a reduced ability to manage.

The lack of resources available to resource managers in the Sahtu emerged in the

interviews as the most limiting factor affecting management ability to get things done. This issue was raised in discussions on consultation, on the declining power of HTAs/RRCs, as a reason for poor community understanding of the land claim terms, and also as a limiting factor in the ability of the Sahtu Land Use Planning Board (SLUPB) to create an adequate land use management plan that beneficiaries can be happy with (discussed later). From talking to the various managers, it seems like much of their role revolves around project collaboration with the hope of securing more money for mutual aims. Funding ultimately comes from the territorial and federal government, so research projects must also appeal to the regional and national interests. Government funding is also limited and Sahtu agencies must compete for it. This means that Sahtu concerns and initiatives will have a greater chance of being resolved if they are allied with external interests.

Resource Management a service for resource users

An interesting theme that emerged from the interviews was the role that resource managers have played as service providers to resource users. This dates back to the 60s, when government planes were used to transport caribou carcasses from hunting camps to communities (Simmons 2002). In the early phase of co-operative management, services increased substantially under the GAC/HTA partnership. The GAC was meant to advise government on resource user concerns, and to serve as a voice to express concerns back to the Government of the Northwest Territories (GNWT). According to Bayha, resource officers working through the GNWT were encouraged to assist harvester needs:

> …in those days, resource management people made a lot of programs that assisted the trappers…. [Jim Bourque] sorta made sure that the wishes of the HTAs, and certainly the community, were a priority… A lot of the role that they played was assisting, always assisting people to make sure that, if they had a shortfall in fishing equipment, they would provide those kinds of assistance. And they … provided a lot of assistance. And that's where a lot of their work went. In terms of other things like enforcement and some of the studies that needed to be done, I don't think those were a priority in those days. **Priority was assisting people out in the filed. So they built some pretty good relationships**. … So that created a lot of trust, respect, and a pretty good relation**. I don't think people saw the relation as a relation with the GNWT or the federal government. That was different, that was totally different. They didn't really look at it like that those days.** *Bayha 2007* (author's emphasis)

Resource managers had taken on a role that seemed relatively autonomous from government.

When the SRRB was formed, managers became separate from the government

but nevertheless bound by their regulations. The government office, the Sahtu ENR, assumed a purely advisory role to the Renewable Resource Board (SRRB) and RRCs. The SRRB adopted the role of the GAC, and resource management discussions were reported to revolve around how to assist Sahtu residents in their pursuit of local resources. Under this new set-up, consultation with Sahtu residents helped shape management goals and priorities. These discussions centred on community concerns/needs versus board needs, making the residents principle editors behind board directives.

How a more bureaucratic system is limiting co-management

Responses from the interviews suggest that the switch to a more bureaucratic system has made the development of manager/harvester relationships more complicated by reducing harvester familiarity with the management regime and by creating a management system that takes more time and energy to navigate. These bureaucratic challenges are exacerbated by the financial limitations mentioned above. The SLUPB Executive Director, Dr. Simmons, and Bayha all commented on a lack of understanding shown by many claim beneficiaries on the terms of the land claim agreement. This resulted in confusion over the roles and responsibilities of the different co-management boards that emerged from the claim:

> …they never really had any money for implementation to let people really know about what the claims is all about. I don't think there's any monies anywhere in the implementation plan to educate people in the land claims. Or what certain clauses or certain mandates mean. So I think that was a huge…something that nobody really saw. *Bayha 2007*

Another aspect of confusion and scepticism identified by the SLUPB Executive Director revolves around the question of authority that the Sahtu Renewable Resources Board (SRRB) has under the claim. While other Sahtu boards and councils have legislative authority under the land claim, all SRRB recommendations on resource management must ultimately be approved by the GNWT:

> In the case of the SRRBs, my feeling is that it seems to be working fairly good there, although there's going to always be a question there about whether people have any real management control through the SRRB. But the reason for that is in the claim itself, where there's a clause in the land claim agreement, which it says that Government retains ultimate jurisdiction… for- I forget the words they say, but essentially for renewable resources-. Therefore, although they're consulted, the SRRB… doesn't have a veto on legislation on any kind of decision that comes out. **They're more in the nature of an advisory board**. And I suppose that over the long-term, that issue will probably come out.

> …the clause I'm referring to is 13.3.1[13], which says that "Governments shall retain the ultimate jurisdiction for wildlife and wildlife habitat. Governments shall continue to have jurisdiction to initiate programs and to enact legislation to the settlement area, which are not inconsistent to this area." So what this means, Ruari, is that, in terms of legislation,…[the SRRB] can just advise and make recommendations to government. And depending on how they do it, government can either listen to them or not listen to them. *SLUPB Executive Director 2007*

As of the date of this study, no recommendations have yet been turned down by the Territorial Government. It is not known if any politically contentious recommendations have yet been passed by the SRRB that would clarify their position.

The financial and bureaucratic impositions of the new system are highlighted nicely in the example of the Sahtu Land Use Plan (SLUP). The SLUP is regarded as one of most important components of the land claim. Its purpose is to develop a plan to govern future development activities in the Sahtu region according to the interests of the Sahtu beneficiaries. The Sahtu Land Use Planning Board (SLUPB) was established as part of the land claim in order to create this land use plan. Once the plan is produced and has met with government and Industry approval, it will become a legally binding document that all future activities must accord to. According to the SLUPB Executive Director, while extensive community consultations and resources have been expended to develop a comprehensive land use plan, the plan itself has yet to materialize. This is partly due to a lack of resources available to develop the plan. Based on comments from the Executive Director, the current budget allotted to the SLUPB does not cover the annual expenditures, forcing the staff to expend energy on short-term money acquisitions and to work within their means, which generally means overworking individual employees.

Another factor contributing to the stalled process is related to the power dynamics of the plan. In its current draft state, the Executive Director feels that government and industry benefit from the plan at the Sahtu's expense. Industry and government benefit from a draft plan because development proposals must be issued within a specific timeframe. But, according to the Executive Director, the Mackenzie Valley Environmental Impact Review Board and the Sahtu Land and Water Board are both mandated through legislation (MVRMA and the SDMCLCA) to issue a permit license to development companies after a set time has passed. With the SLUP

[13] Sahtu Dene and Metis Comprehensive Land claim Agreement (LAND CLAIM) (1993). Chapter 13: Wildlife Harvesting and Management- Section 3: General. Published under the authority of the Honourable Ronald A. Irwin, P.C., M.P., Minister of Indian Affairs and Northern Development, Ottawa, Canada.

undeveloped, development activities can proceed at a comfortable pace and with minimal delays. Locals (and resource managers), however, are without legal means to further their own control over the situation. Without a plan in place, locals have as little control over development activities as they did prior to the signing of the land claim.

The stalling of the plan takes place in the bureaucratic circles through which the draft SLUP documents must travel. While the Executive Director felt that good relations existed between the SLUPB and their government and Industry counterparts, he was not convinced that priority to resolve the plan was shared equally. This has forced the SLUPB to look at alternate methods of speeding up the approval process. At the time of writing, the strategy was to appeal to the Joint Review Panel of the Mackenzie Gas Project (who approve or disapprove the project) (MGP) that the Land Use Plan be implemented prior to approval of the MGP. Some proponents of the plan now believe that resolution of the plan is only possible with significant outside pressure.

The current draft of the plan marks the most progressive resource management strategy to appear in the Sahtu and is geared towards the long-term sustainability of the region. The stalled process is a critical milestone for resource management to overcome in the Sahtu because failure to do so will mean failure to adapt to changing social and ecological conditions, and a failure to incorporate traditional and western resource ideals.

At the end of the day, you have to smile…

Despite the many challenges still facing resource management in the Sahtu, an overwhelming sense of future optimism was found from resource managers. This is perhaps in view of all of the challenges that managers and community members have successfully overcome as the regime has evolved. In the Sahtu there is a long memory of teamwork and hard work that leads to perseverance. According to one respondent, one of best things about participation under the new management regime is the enshrinement of rights of Sahtu beneficiaries. Beneficiaries no longer have to be concerned about what the GNWT does, as their rights are protected by the Canadian constitution. The difficulty that managers and beneficiaries have now is in implementing and understanding this change and the powers it entails- a process likely to take years- these things are complicated and must sink in. As one respondent

put it,

> I think we should be careful about this new management regime that was set up under land claims with boards under each region. We don't want to criticize it right away…And people have had no management roles for generations in the land around them, and all of a sudden they're required [to manage their land]. So it's going to take some adjusting. But it needs to be given a chance to work. That's my feeling. So before you throw the baby out with the bath water… You don't really know that this system is any better than any other one, because you haven't tried anything else. Finish what you started, and then assess it in 20 years or something like that. At least one generation to get a good sense of where it's at. My sense of it is that it's still developing. *SLUPB Executive Director 2007*

5.3 Strengths of relationships

An important consideration in evaluating co-management regimes is the professional and personal relationships between stakeholders. The stronger these ties are, the more likely that individuals will be able to work with one another in developing and implementing mutually agreeable solutions to the challenges they face. The purpose of this result section is to establish the strength of collaboration that has existed between resource managers and harvesters in the Sahtu. The strength of collaborations has been recorded based on participatory themes that emerged in the interviews with respect to Sahtu harvesters and decision-making.

Strong relationships equal strong collaborations

Respondents were of mixed feelings regarding the strength of relationships. The general response from the informants was that managers and harvesters received reciprocal treatment. Successful management/harvester relations were built on a respect for the methods and lifestyles of the harvester/manager. For managers, respect and understanding from harvesters was facilitated by time spent living in the Sahtu and by their professional or personal integration into the communities. Positive relationships were seen to result in strong co-management initiatives and favourable policies for all stakeholders.

In reviewing the successful relationships described by the interviewees, strength can be measured by three indicators: respect, degree of consultation, and how open and transparent each party is.

a. Respect for indigenous worldviews

For specific relationships between managers and aboriginal resource users, a familiarity with Dene and Metis culture was considered an asset, as was the respect and appreciation for traditional ecological knowledge (TEK) and traditional ways.

Respect for the land and resources on the land are very important aspects of Dene tradition:

> …we didn't come from anywhere else. I think we have a very different sense of homeland than people who find it easier to migrate here and there. It's more difficult, I know, for us to do that as aboriginal people from the North because we like to stay on the land that we're familiar with. And it's where we know to find animals that we need for our country foods. And we're the most familiar with where we live… You always see that at meetings, this underlying sense of homeland. If you go to many meetings… people are always talking about the love of their land and their homeland. *SLUPB Executive Director 2007*

Dene and Metis harvesters were "…always concerned about what's going on on the land, and …the pace of it" (*Ibid*). This traditional perspective is much different from that of the standard resource manager, whose education and learning stem from a scientific school of thought. Understanding the distinctions between the traditional and scientific perspectives and how they apply socially and ecologically is crucial to establishing a common level of rapport. Consider the contrast between the following scenarios:

> (1) Federal biologists did research on fish and wildlife, information from which was reflected in regulations, without participation of indigenous residents. The indigenous people largely ignored the regulations and continued their traditional hunting and fishing. *Simmons 2007*
>
> (2) I hired an extended family of indigenous people who worked full-time with me. But I kept the Fort Norman Chief and Council and elders advised of the progress of my work. I also accompanied Fort Norman people on their March hunts of mountain caribou by dog team, and we helped each other with the hunt and with autopsies of the slain animals. I became known to the people of Fort Franklin (Deline), and Fort Good Hope… *Simmons, 2007.*

In the first instance, the resource managers had not bothered to include the perspective of the aboriginal harvester and had continued to manage the resource in a way that best suited their needs and understandings. The result was a lack of compliance by the aboriginal resource user and indifference towards the resource managers. In the second quote, Dr. Simmons adopted himself into the aboriginal social group and worked with his acquaintances to carry out his scientific investigations. In this example, Dr. Simmons benefited from the traditional ecological knowledge of his aboriginal companions, and they benefited from the exchange of knowledge and inclusion in Dr. Simmons' management considerations. In this example, respect is achieved through the willingness to learn from and share with a different perspective. As Dr. Simmons later noted,

> The Fort Norman people kidded me about my lack of the skills they took for granted amongst themselves. They said that it would be a long time before I

> became an Honorary Mountain Indian. But I think they respected me for the fact that I was a willing student, and would travel with them and live like them summer and winter. Of course that gave them the opportunity to kid me frequently for my ineptitude... But beneath the mirth, I found out years later, was their respect for the fact that this white man admired them and tried to learn their skills and live as they did. *Simmons 2007*

b. Consultation

The reduction of enforcement activities witnessed after the wildlife ordinance changes (see *Co-management in the making…*) provide a good example of how consulting processes can result in improved conditions for both harvester and manager. This view was strengthened by Dr. Simmons' comment that enforcement of wildlife infringements dropped to "nearly zero" following the ordinance revisions, and relations between managers and harvesters improved. Resource management in the Sahtu Region is much different today than in the '70s. Ruttan remarked that prior to and during the '70s, consultation was "the exception and not the norm." But when consultations were done, they were done really well. Ruttan and the SLUPB Executive Director felt the process had reversed with time: consultation is a norm, but quality is an exception. The aspect that most separates today's consultation process from earlier ones are the reduced time-spans and available resources allocated for the consultation process.

Interviewers identified three cases involving an example of an ideal consultation: the Paulette Case, the Mackenzie Valley Pipeline Inquiry (MVPI) , and the Wildlife Ordinance Changes[14]. Federal and territorial governments initiated the consultations involved to gain an unbiased aboriginal perspective on the relevant topic. Each of the consultations revolved around a key issue and each had considerable financial backing to ensure that a lengthy and thorough consultation process could be achieved. The Paulette Case and MVPI involved topics of aboriginal identity and recollection of treaty rights, whereas the Wildlife Ordinance involved considerations for resource management. The SLUPB Executive Director recalled the Paulette Case and MVPI as two good examples of a successful consultation from an aboriginal/community perspective. The wildlife ordinance was referred to by Dr. Simmons from a managerial perspective. Because of the different natures of the consultations, a clear comparison is not possible. One distinction that can be made though is that the Paulette Case and MVPI involved senior state legislators engaged in

[14] Refer to the Case Study for a description of the Paulette Case and Mackenzie Valley Pipeline Inquiry, and to the earlier talk on the existence of an early co-management regime for a description of the Wildlife Ordinance Changes.

a listening role with the aboriginal residents of the Mackenzie Valley. An interesting issue worth future investigation is how the inquiry mode of listening (versus informing) impacts indigenous/state consultation processes.

Regarding contemporary consultation, several respondents commented on the effectiveness of the SRRB and Sahtu division of Environment and Natural Resources (ENR) for their consultation efforts. According to Alasdair Veitch, the Sahtu ENR has invested heavily in its consultation process:

> The research that we do now has to have the approval and support of the Renewable Resource Councils and the SRRB. We have to let people know what we want to do, why we're doing it, how we're going to do it, where and when we'll do it, and what will be done with the information. We have regular meetings with the SRRB and representatives of the RRCs, and we go to the communities to meet with the RRCs and with the public. *Veitch 2007*

The variety of projects initiated by the Sahtu ENR are notable for each involving a wide demographic of community members- from elders to school kids. As such, resource management activities in the Sahtu seem to be very well received by its residents, many of whom are active or passive participants in the projects themselves. The staff's enthusiasm for a healthy ecosystem and future wildlife is passed on to the public through the many consultation processes held. From Veitch's account, residents now maintain an active interest in project developments and help to work with the Sahtu ENR where possible.

Blending the Sahtu ENR approach of consultation with the listening mode reflected in the Paulette Case and MVPI is perhaps the optimal for producing a strong collaboration. "[T]he best way to consult people on something…is through workshops that are not rushed and those kind of things. Where people have plenty of time to look at things comprehensively" (SLUPB Executive Director 2007). This is the approach that has worked so well for the Sahtu ENR and the SRRB, who initiated frequent, and annual community workshops, visits, and consultations shortly after the implementation of the land claim. For the Sahtu ENR, Veitch credits the development of technology[15] for the increase in community consultations. While this reduced the number of personal associations of managers with harvesters in the field, the greater influx of information allowed for more community consultation and information exchange. Veitch felt that spending more time in the communities has allowed government biologists and the SRRB to provide much greater communication and feedback of on-going resource developments. The SRRB and Sahtu ENR now

[15] Refer to Appendix D, section II

maintain a positive and strong relation with the communities through their active communication meetings and consultations. According to him, this has greatly increased the level of information flow to the communities and allowed full-time and part-time harvesters the opportunity to contribute, learn, and stay up-to-date on the most recent developments on wildlife health and movement patterns. Time and effort are at the source of this success:

> It was the direct result of a heck of a lot of work, that's how it happened! But, it's also the result of the fact that after many years of holding meetings to talk about caribou and caribou management – I think that people listen and respect what we say (we being GNWT and SRRB), even if they do not necessarily like what we have to say or even agree with our conclusions. This doesn't happen overnight and it is the end result of a lot of work on the part of staff with the SRRB and the GNWT. *Veitch 2007*

The ongoing involvement of locals and the maintenance of respect and local interest are successful components of this process. Time and interest had also factored importantly in the SLUPB Executive Director's evaluation of the Paulette case and MVPI. These similarities allow one to predict that values of time, commitment and interest are a constant in consultation processes.

Good effort and consistency alone are not guaranteed measures of success though, as noted by Ruttan in the following comment:

> While I was there [in Fort Good Hope] I asked the people what's the caribou situation like. Most people didn't know what caribou population was happening to them, and some said they thought it was going down, and some said it was going up. And I said what about this survey? "What survey?" Some people saw the survey, and some didn't attend the meetings. But most people didn't know what [the government] people were really saying… I had to show them what the report really said. I think part of the work [the biologists] did was really good, but that the good stuff never got across to the communities. *Ruttan 2007*

Ruttan cautions information overload and improper learning forums as likely reasons for failure in community consultation processes. He suggests that greater care is needed in how information is given to communities during presentations. Bayha and Veitch also commented on the difficulties presented by language barriers and having to provide costly and timely translation services for some Dene and Metis elders.

c. Transparency of motives

Relations between the Government of Canada and Dene and Metis people were very poor for most of the 20th C (e.g. see Sandlos 2001; Abel 1993; Smith 1999). A major cause of mistrust was Canada's (GoC) refusal to acknowledge the Treaty rights as they had been agreed to in principle, namely the right of aboriginal treaty members

to harvest and continue a traditional livelihood. Canada's neglect in this matter, along with policies aiming to assimilate aboriginal peoples, led to widespread distrust among aboriginals and the GoC. Positive relationships with respected individuals have helped to reduce this divide. Despite this, the feeling that the GoC is out for its own self-interest still persisted in some of the interviews. This feeling stemmed from comments (e.g. Dr. Donihee; SLUPB Executive Director) that developers and government tend to deal with communities and resource managers in "double-speak"; saying one thing but doing another. Negotiations and discussions are smooth processes for Sahtu managers, but it was felt that motives given by the state are often different from the ones being used behind closed doors or at higher levels of government. This makes for a confusing process where trust between stakeholders is negotiated based on disputed outcomes. An observed result of "double-speak" was prolonged negotiations, increased expenditures, reduced trust between parties, and a lack of discernible action.

The stalling of the Sahtu Land Use Plan (SLUP) provides a good example (see Appendix D, section II) of perceived government "double-speak" and a reason why transparent motives are needed in harvester/government relations. Managers commented on how a long and arduous bureaucratic process has prolonged government approval of the plan, which is set to be the main resource management tool and conservation plan of Sahtu beneficiaries. At a glance, it would seem that the need for a deliberate and thorough bureaucratic process is the reason for the stall. A couple of the informants were more sceptical and felt that the government is hiding behind the slow bureaucratic process. They felt the government does not want to implement the plan and would rather play a waiting game with the planners. Whatever the case, the reality of the delay is that government and industry benefit by having greater resource development access with fewer restrictions and permitting conditions. Conversely, Sahtu beneficiaries and resource managers must sit back and watch development activities occur on their land at a record pace with little that they can do. The sceptics feel that their ability to control the development process is being put on hold by the same actors benefiting from development activities.

This person's important

Several of the interviewees remarked on the importance that individuals played during the early period of resource management. These individuals were prominent in

being outspoken for aboriginal interests, in defending aboriginal harvesting rights, for facilitating harvesting wherever possible, and in respecting traditional ecological knowledge and giving it a position in decision-making. Such support for aboriginal harvesters was exceptional for the time, and would occasionally put the managers at odds with their superiors in government. The protest against the Migratory Birds Convention Act by a Deputy Minister, Jim Bourque, serves to illustrate the point. The Act was contentious for aboriginal people because it directly conflicted with aboriginal Treaty Rights that allowed harvesting of migratory birds.

> I remember Jim Bourque saying "I'm pulling all my officers. They're not going to be game officers when it comes to the Migratory Birds Convention Act… But you know, right off the bat, we have a deputy minister at the time who was supporting us out in the field who actually publicly states these cases! Now nobody, if you look at anybody in the history of that whole Ministry of Renewable Resources, nobody had any guts to say that in front of anybody- certainly to the federal government, and certainly to all the other wildlife organizations across Canada! So here's a guy that's going to stand up for his own people out in the field, saying this is not right, and we're not going to participate in it if you guys don't change it…So he stood by ourselves. *Bayha 2007*

In identifying the concerns of the harvesters and working to facilitate them, even when in opposition with other government agencies, Mr. Bourque set a standard for what he and his department would and would not tolerate. These sorts of actions sent a clear message to communities that this individual was willing to risk his own interests/career for the sake of the communities/harvesters. Because Mr. Bourque was defending Dene and Metis rights and addressing aboriginal concerns, he likely had an easy time of gaining the support of community members to help in his efforts. The Migration Birds Convention Act was eventually amended to allow for aboriginal harvesting of migratory game birds. There were seven additional narratives about the role of champions in the interviews (e.g. Frank Bailey[16], Justice Morrow[17], Justice Berger[18], Jim Bourque[19]), as well as references among respondents to each other.

In the current resource management regime, issues of protecting aboriginal rights factor less prominently. Amendments to Sections 25 and 35 of the Canadian Constitution in 1982 protected aboriginal treaty rights. The later signing of the Sahtu land claim provided Dene and Metis a level of control over management activities and a right to negotiate self-government. From the perspective of the interviewees, the role

[16] Frank Bailey was in charge of the wildlife ordinance consultation, 1972-1973.
[17] Supreme Court of Canada Judge, presided over the Paulette Case, 1973.
[18] Justice Berger was commissioned to conduct the MVPI, 1974-1977.
[19] Jim Bourque defied the Migratory Birds Convention Act as Deputy Minister of the NWT Fish and Wildlife Service.

of champions had passed because the initial issues of rights and recognition had been fought and won. Comments on contemporary champions were that, while charismatic and influential leaders are nice, they are no longer necessary because local interests are safeguarded by law and require no defender.

The affect of the constitution amendments, the legal ability of Sahtu beneficiaries to take part in resource decision-making, and the importance that managers credit to the implementation of the Sahtu Land Use Plan suggest that legislation has replaced the role that champions used to play in defending indigenous rights. The switch to formal institutional methods of rights protection (i.e. legislation) is further supported by the observation that manager/harvester relationships switched from a personal focus to an institutional one following the signing of the land claim in 1993.

5.4 Use and role of traditional knowledge in decision-making

The inclusion and respect of traditional ecological knowledge (TEK) is of vital importance to Dene and Metis residents of the Sahtu. For a resource management system to be successful, it must be able to incorporate this aboriginal perspective into its decision-making processes or account for it as well as possible. Failure to do so is equivalent to disregarding local aboriginal advice altogether. When it comes to relationships between resource managers and harvesters, the proper inclusion of TEK in decision-making is essential to maintain the respect and trust of the aboriginal stakeholders. This result section looks at how the use and role of traditional knowledge has changed in resource management decision-making during the transition to co-management.

TEK also goes through a reversal

There was widely accepted agreement among the managers interviewed that TEK is beginning to get the attention that it deserves. However, TEK was also seen to have gone through a development change. Use of TEK in resource management has gone from being “the exception and not the rule” to being considered in most if not all management decisions. Through the signing of the land claim and the passing of the Mackenzie Valley Resource Management Act (1998), locals must now be consulted for their TEK and considered in all major decisions. These events have resulted in a dramatic increase in the collection of TEK by public and private researchers. The frequency at which TEK is being studied and ‘used’ is a concern for some because the

information is, in many cases, still being inferred according to the (scientific) researcher's needs and not from the context and rationale from which the TEK was provided.

Despite the increased demand and frequency of TEK in decision-making, Dr. Donihee felt that its use had not altered much. Managers must now incorporate TEK into their considerations, but this was being done informally before the land claim. In his perspective, scientific advice is still used as the default form of knowledge. TEK must reflect those scientific principles and adhere to the status quo for it to be used.

This complementary nature means that TEK is always being 'incorporated' into scientific decisions. That TEK is only a complementary perspective to science is echoed in the following comment by Simmons, "I know of no situation in my research experience in which Dene knowledge of the environment was 'more valid' than scientific knowledge". If TEK is never a prime factor used in decisions, its role becomes one that is persistently subservient to science. Ruttan commented on the scientific dominance over TEK in the 1950s and 1960s. Then TEK was largely ignored or not given credibility by most government researchers. Dr. Donihee commented on a similar dominance of science in contemporary years. Relative to their times, both respondents felt that TEK was frequently manipulated by government resource managers and used to complement science rather than to generate new knowledge. Given the similarity in perspectives and the criticism that TEK is subservient to science (as a "complement"), one could argue that the use of TEK has not altered over time. Dr. Donihee's feeling on the integration of science and TEK was that, for the scientist, TEK amounted to "advice only" and would be "trumped" by science should the two perspectives differ.

Resource managers recognize and account for this discrepancy by looking at the context within which TEK is used and applied- that its use has an appropriate time and place. Dr. Donihee also recognizes this discrepancy, saying:

> …we need to recognize that there are areas where TEK simply has nothing to offer. TEK has a context and content. It does not extend to areas such as complex engineering issues. *Donihee 2007*

> A lot of what we do in relation to sensitivity to local knowledge has to do with listening, explaining, communicating and how we decide. Even when the content of TEK is not relevant, we can still ensure that the way we do things is sensitive to this local context. *Donihee 2007*

Where Dr. Donihee differs from the norm is that he considers the other side of TEK's relevance; "[t] here are decision-making contexts where [TEK] **must** be given weight

equal to science, such as wildlife management" (author's emphasis). In this case, TEK should be "secured and considered along with western science and engineering," (*ibid*). For Dr. Donihee, shifting how TEK is used and adopted by decision-makers would contribute to a stronger set of relationships.

At the same time that TEK is being used and implemented into more decisions, the interviews highlighted that its use in practice is taking a sharp decline. It was observed that TEK is slowly being lost in the communities and the knowledge of younger harvesters tends to be limited to specific areas of interest. If the worldview on which TEK depends is no longer being practiced, concerns are raised about its relevancy.

> Over the years until about the early 60s at the latest, many of the Sahtu resource users they lived on the land for probably ten months or more of the year. And by the time the 60s were well underway, very few people lived on the land and worked out from settlements, which reduced their contact with the resource base but not a great deal. *Ruttan 2007*

Ruttan believed that TEK is something that is learned not through words and lectures, but from life experiences- living and spending time on the land. Bayha also commented on the changing indigenous lifestyles in the community, and the decline of TEK 'students'. For him, this learning begins once children are weaned from their mother's breast milk and continues for the rest of their lives.

> Traditionally, Grandparents would raise the children while the parents were gathering resources. This allowed for knowledge to be passed directly from the elder teachers to the next generation while they were still growing and learning about the world. *Bayha 2007*

As with most modern families, grandparents, or elders, no longer play as important a role in the upbringing of Dene and Metis children. Parents are around more, and aren't going out on the land, and kids have to stay in school. The loss of culture and knowledge being passed on to the next generation is evident in the inability of many Sahtu youth to speak their traditional Dene language. As remarked by Bayha, "anybody that's younger than 12 would barely speak the language anymore[20]." The lack of language skills is so significant because many elders only speak Dene. Not being able to understand the 'teachers' of TEK is devastating from a learning perspective and more so culturally. Many traditional Dene laws are also being forgotten or discarded. For example, youth no longer respect other people as much (especially strangers), which was an important tradition in Dene society (Blondin

[20] According to a GNWT language census, less than half of children below the age of 15 speak the slavey language in the NWT (GNWT 1997).

1997). Says Bayha: "And that has broken down a lot over the years, because **the traditional lifestyle is not there anymore**" (my emphasis). If the TEK is not being properly taught or experienced by the younger generations, its use and relevance in resource management will have to be assessed.

Changing Authenticity of TEK

The incorporation of traditional ecological knowledge (TEK) into decision-making was seen to have increased significantly from past to present. Despite its increased use and consideration in decision-making, the level of integration that TEK has with science was not seen to have developed much. The increased use of TEK in policies and in research is transforming it into an acceptable and valid form of knowledge in the public and academic eye. But this is a slow and steady process that can easily reverse if the information gathered or its sources are shown to be inauthentic. In the Sahtu there is a wealth of archived material containing valuable TEK (e.g. Deline Knowledge Centre Action Group 2004). There is a need for TEK practitioners to develop a method of interpreting this knowledge so that it can be applied in an appropriate modern context. This is a challenge that must be addressed by the practitioners of TEK in order for TEK to maintain its growing status. Bayha had several keen insights that were shared during the interviews of direct relevance to this challenge.

A solution being proposed by Bayha and others is for the creation of a (traditional) Knowledge Centre- an institution where TEK can be stored and studied, where the "interpretations and rationales…would make sense." Bayha sees TEK as a form of knowledge that is equal and similar to western science. He illustrates the rational nature of TEK with the following example on caribou:

> Let's talking about caribou for instance, all the behaviour, anything that you want to learn about caribou you're going to have to observe. You can't go up there asking caribou questions and getting answers, you know. And that's how the information is gathered from any of the studies that I know of from caribou. The Dene people have been observing caribou for the past 10,000 years, maybe even longer than that. So what better knowledge to have, even if a lot of it is done in storytelling. There is information, there is rationale for those stories that they have. *Bayha 2007*

In this argument, TEK is a system of knowledge built up through long-sequence observations and social experimentation. The methodologies of a harvesting society versus those of a scientist doubtlessly differ, but the principle of analysing through rationale and sensory observation is the same as scientific investigation. Another

example illustrates this point:

> I mean it's totally different from what you learn in school, but the end result is the same thing. When I started looking at weather, one day, I was sitting with my grandfather on the lakeside here and there was fog. And he was sitting there, having his tea and smoking his pipe, and he was talking about the weather like a person, a character that behaves in a certain way, you know. "This is the way he behaves."… he was talking about what the weather's going to do. And then when I was taking meteorology in school, especially in school, I started connecting. I said, "Well that's what my grandfather was telling me, why in the world didn't I listen to him a little closer?!" **Because it's the same thing, it's just said in a different manner**. *Bayha 2007* (my emphasis)

Seeing the close connection between science and TEK is easier for Bayha because he has grown up with both systems- as a boy getting a traditional education living on the land and being taught by his grandfather, and as a young man getting a formal education in resource management at established Canadian colleges. The difficulty for Bayha of using TEK as a decision-making tool is not in its compatibility or context, but in its translation. Where academic and traditional experiences overlap, Bayha feels that the use of TEK is easy and appropriate:

> In fact that's where it works the best. When you're talking about resource management, you're talking about all sorts of things. You're talking about trees; you're talking about wildlife. Talking about wildlife biology, forestry management… Those areas are very very easy to translate.
>
> …A big part of me would like to bring the TEK back to become a major part of decision-making. In fact, in most cases, that's the only thing we've got anyway. The only thing we've got a challenge with today is, is that we don't have it written down… Today we have to put those things in perspective. We need to give a good rationale to it and put it in its place… this is conservation education.

Putting "things in perspective" is still a large problem. One example from the interviews stood out where TEK and science were used equally. In it, the different perspectives and knowledge areas of TEK were used to complement science and to 'problem-solve' for (scientific) gaps of knowledge. In such a manner, biologists would apply TEK to scientific problems and then 'back-track' to find a scientific explanation:

> My colleagues and I often used Dene knowledge to guide us in our research and interpretation of research results. For example, the Mountain Dene of Fort Norman (Tulita) intimately knew the movements and behaviour of the caribou that ranged along the Moose Horn (Redstone) River Valley and into the Barrens in the area of the Canol Road. I studied the movements, health, and calving potential and success of these caribou, actually confirming what the elders had told me about these subjects. With their approval and guidance, I accompanied the Mountain Dene by dog team on their caribou hunts along the river in March. They helped me do the autopsies that I performed on as many caribou as I could during this hunt. Thanks to the Mountain Dene, my samples of this caribou population are probably the largest on record. These data were used in governing our caribou

sport hunting management policies, and were a response to concerns expressed about the annual hunt of pregnant caribou. *Simmons 2007*

In the case above, the Mountain Dene readily gave the TEK knowledge to Dr. Simmons, and the study results helped to protect the pregnant caribou that the Mountain Dene were so concerned about. This example occurred in the 70s, which raises questions as to why future collaborators failed to routinely seek out and incorporate TEK into their methodology.

6. Discussion- Impacts of co-management

6.1 Overview

In the discussion section the findings from the narrative analysis are placed into the critique of power imbalances in the Canadian co-management model. The three subject areas described in section 2.4 *Critiques of Co-management* delineate the debate: power sharing, participation, and the incorporation of TEK. Each section incorporates the key themes highlighted in the interviews related to evolving manager/harvester relationships in the transition to co-management. The Institutional Narrative is then presented and the adaptive potential of the regime is assessed in light of the emergent themes and critiques. The issue of imbalance is resolved at the end of this section according to how the transition to co-management affected manager/harvester relations in the Sahtu Region. The section closes with a list of recommendations that might mitigate the issue of imbalance and promote manager/harvester relations.

6.2 Alleged Imbalance Issues

Power Sharing

Of most interest to the question of power sharing were manager's perspectives on the effect that the land claim has had on institutionalising resource management; and the effect of legislation in power sharing.

The narrative shed light on how the transition to co-management led to the institutionalization of resource management within the larger model of the Canadian. "Institution of Public Governance," the co-management system. The transition to co-management was seen by some to have resulted in a more inflexible approach to management actions for several reasons: management decisions appeared to be constrained by bureaucracy; important actors in resource management seemed to be disempowered by the transition; and power sharing between Sahtu managers and the

Government of Canada (GoC) remained imbalanced.

Managers used a variety of examples to illustrate the inflexibility of the new bureaucratic regime: The Sahtu Land Use Planning Board (SLUPB) demonstrated the effect that bureaucracy had on resource management initiatives whereby processes that did not favour the GoC were halted or delayed, either inadvertently or explicitly. The reduced operating ability of the Renewable Resource Councils (RRCs) following land claim implementation demonstrated a flawed implementation process that resulted in the displacement of a key bridging organization (the RRCs[21]) between resource users and managers. Comments on the Sahtu Renewable Resources Board's (SRRB) legal limitations under the claim also raise questions about authenticity in the design of the co-management structure. In this case, the SRRB's role is effectively that of a powerful advisor to the GoC. This does not give the partnership opportunities to the Sahtu beneficiaries that the land claim was purported to deliver. Thus from the perspective of managers themselves, the institutional constraints of the bureaucratic system, the reduction in practical ability of the RRCs, and the limited power of the SRRB have had a negative impact on state/aboriginal power sharing. The critique by Nadasdy (2005) and others that resource managers become more limited by joining the larger "Institution of Public Governance" seems to hold true for this study.

To balance aboriginal/state power relations, Nadasdy (2005) and Sandlos (2001) suggest that the underlying structure and process of state bureaucratic systems must be deconstructed by those in charge and redesigned to support genuine participation of the marginalized group. Differences in power relations can then be resolved through the development of a joint structural and operational narrative (Fairhead and Leach 1995; Pelling 1999). In the case of the Sahtu, this could mean developing a joint Sahtu/GoC narrative and then redesigning the power dynamics that influence decision-making in the co-management process accordingly. The institutionalization of resource management in the Sahtu Region has resulted in some perceived power imbalances. However, the political empowerment of indigenous Sahtu residents in the Sahtu's contemporary history was acknowledged by respondents to have resulted in significant gains for the Treaty 11 beneficiaries. This dichotomy between being empowered through legislation (which represents the act of becoming institutional) and becoming disempowered through institutionalization is very interesting. The

[21] The RRCs were meant take over the function and role of the Hunters and Trappers Associations (HTAs) following the land claim implementation. This role was not filled, and it is this loss that is referred to.

dichotomy suggests that the integration into an institution is not a two-dimensional ‘good’ or ‘bad’ thing. Rather, institutional integration can perhaps be thought of as a three-dimensional sphere dominated by smaller actors and agents, who in turn influence the pull of other actors towards a ‘good’ or ‘bad’ domain. A systemic analysis of this integration might shed light on the interactions and challenges faced by resource managers. Relating back to the Sahtu co-management regime, it suggests that the problem of imbalance might not be a bureaucratic one, but a problem of structural design and implementation of the land claim process. This conclusion is supported by the lack of finances and poor comprehension of the land claim by beneficiaries and external government agents were often cited as being responsible for decreasing manager/harvester relationships.

Wonddolleck and Yaffee (2000) focus on such practical reasons for failed collaborations. They identify conflicting goals, inflexible procedures, limited resources and sceptical attitudes of collaborators as barriers to collaboration. In relation to the Sahtu management regime, the different worldviews being represented by participants and the apparent unfamiliarity with the bureaucratic process are potential factors contributing to the challenges being faced. The authors recommend a focus on reciprocity between participants engaged in difficult collaborations (2000;67). This reciprocity between actors was a common theme in manager discussions about relationships with harvesters. This theme brings the discussion on relationships full circle. It suggests that the lessons learnt on how to build relationships between managers/harvesters may have been disregarded when the focus shifted from relationship building to institutional development. If so, current challenges inhibiting manager/harvester relationships imposed by the transition to co-management might be improved by adopting a reciprocal attitude towards one another.

Participation

Themes that emerged related to participation in resource management decision-making were: the presence of an earlier co-management arrangement; the strength of relationships between managers and harvesters, and the presence of bridging organizations to provide an outlet for harvester concerns and management feedback.

The notion that an informal co-operative management system predated before the present institutionalized co-management regime is significant. It means that

collaborations have existed between resource managers and harvesters for sometime, and not just in recent years. This can allow for positive experiences and examples from the earlier form of co-operative management to be interpreted and applied in the contemporary context. Comments from the respondents also imply that this earlier collaborative arrangement was successful, despite having a looser structure than the present legislated regime. From the description of its operation and design, this arrangement seems to be a blend of claims-based and conflict-based models of co-management, as outlined by Rusnak[22] (1997). Such a model would be a more adaptive form of management because it offered more shared ownership and management between aboriginal/state actors and greater flexibility and response to resource challenges. The Sahtu region is much more institutionally complex following the 1993 land claim agreement as compared with when the earlier system operated. Whether or not such an informal system would work under the terms of the land claim would make an interesting query for future research. Yandle (2006:275) sees the evolutionary development of co-management as a critical factor of success. The appearance of co-management in the 1970s had a significant bearing on manager/harvester relationships in the chosen case study.

The land claim transition was another important factor that contributed, rather than took away from the power of co-management because of its establishment of "property rights" (Yandle 2006). Once established, Yandle argues that property rights are important tools for linking management incentives to participation of resource users. Such participation could be local, regional or federal. She does not sees co-management success as a product. Success is seen as a process that is contingent on long-term support, investment, and commitment from aboriginal agents, government and industry (*ibid*). This concept of process was echoed by all of the respondents, who felt that good co-management takes time before it can really work. Revitalizing early experiences of co-management in the Sahtu might encourage more learning and development of resource management approaches.

The quality of manager/harvester relationships was found to be most affected by the degree of respect, trust, consultation, and interest that managers could evoke from harvesters. In the early management days, respondents attributed the success of relationships to the close interaction and friendships that managers had with resource users. Many good examples of relationships emerged from the earlier collaborative

[22] See footnote 5 in section 2.2.

system where individuals played an important role as "champions" of aboriginal issues. Hahn et *al*, 2006, and Westley, 2002, found that the individual managers could play a vital role in the success of adaptive strategies as organizational and networking bridges between organizations, through the creation of common visions and goals, and by encouraging the growth of social capital amongst stakeholders. Some early resource managers seem to have fulfilled this leadership and bridging role. This increased the social capital between managers and harvester and allowed for greater integration and vision-building for all resource stakeholders. It was clear from the managers interviewed that this bridging and facilitating role was no longer as prevalent or sought after under the co-management model. The cited reason for this was that "champion" roles were being replaced with legislation. It was not clear from the respondents though that the legislation, which is static, was providing the vision-building function fulfilled by the more dynamic "champions". The success and importance of consultations in today's co-management regime suggests that the function of "champion" might have survived the transition to co-management by becoming a function of institutional practice. In effect, by having institutions actively replacing the role of individual champions. The changing role of champions is a good example of how the transition to a co-management regime altered individual manager/harvester relations by depersonalizing management functions.

At the same time that institutional roles were increasing in importance, managers seem to have expanded the scope of their relations from an individual harvester level to a community level. The interviews indicate that this switch has been very effective in manager/harvester relationships. Relationships appear to be as strong and potentially as inclusive as ever. The basis for this success is from the emphasis placed on community consultation (whether they be undertaken to fulfill a legal obligation or as part of a communication strategy). Respondents were consistent in their description of a successful consultation. Key consultation elements included transparency, continuity, involvement, community interest and active listening.

The hard work and effort of managers seems to be paying off in the redevelopment of a good working relationship, albeit on an institutional versus a personal level. Perhaps the largest limitation to this relationship comes from the maintenance of a formal and impersonal management regime. Individuals did play an important role in building relationships and social capital. The noted difference being that the individual role of present-day managers is attributed to the organization for

whom they work (e.g. the SRRB or Sahtu ENR) rather than to the individual proper. Using this knowledge can be useful in encouraging greater community support and institutional trust. The ideal to transform the formal system from an image as 'something government' to being readily recognized as 'something Sahtu' is now occurring. By focusing on the communities and building a sense of co-ownership of resource management, managers appear to be forming regional institutions that nurture community trust and support. In doing so, they are also contributing to a much stronger social capital. Should the need for "champions" resurface, perhaps there is room for the organizations to provide their employees with more freedom.

Integration of Indigenous Worldviews

Themes that emerged pertaining to the integration of traditional ecological knowledge (TEK) were: the increased use of TEK in decision-making; TEK being marginalized as a complement to science; and the changing authenticity of TEK. These themes are used to address the critiques on the integration of TEK: that TEK has a marginalized narrative that limits its participation in co-management; and that TEK is not compatible with a bureaucratic or scientific model, which makes its integration impossible.

The complementary nature that TEK serves to science is symptomatic of what Pelling (1999) referred to as a biased narrative- that an unequal level of power allows for certain perspectives to dominate governance structures. Similar to the discussion on power sharing, the effect of this biased narrative is to coerce TEK into a position amenable to science. However, the growing use of TEK is changing its relationship with science from 'complementary' to one that is valued. The narrative used to define this relationship will likely dictate the success of how TEK is used and incorporated into management decisions. Science and politics seem slow to change though. Bateyko (2003:150) found that creating an equal participatory playing field remains a challenge in the Sahtu that continues to divide Aboriginal and non-Aboriginal organizational relations. The comments of Nadasdy (1999), and Fairhead and Leach (1995) that institutions do not readily use narratives are supported by these results.

According to the interviews, the use of Traditional Knowledge has changed considerably in the Sahtu with respect to the frequency through which it is considered and how often locals are consulted. The influx can be attributed in part to the legal requirements stipulated under the Mackenzie Valley Resource Management Act

(MVRMA). Under the MVRMA TEK must be consulted for and considered in environmental impact assessments (Canada 1998). The rise of resource co-management boards has also increased the influx of TEK as the boards readily include TEK in their decision-making (e.g. the Sahtu Land Use Planning Board and Sahtu Renewable Resource Board SRRB). This increased use has resulted in a large collection of TEK on a variety of issues. Respondents from the interviews were of mixed feelings on how well this information was being used. From the perspectives of Dr. Donihee and Ruttan, the use of TEK is, and always has been, subjective. For them TEK is being appropriated into management or scientific decisions based on how well it complements the managerial/scientific perspective. Both respondents felt that TEK was unfairly treated as a secondary information source in decision-making and not as a form of knowledge that could contribute meaningful information on its own. According to this perspective, the increased use of TEK is superficial, as the implementation of TEK knowledge has not been achieved in management decisions. Harvester perspectives on resource issues have thus also been neglected. Given this assessment, the transition to co-management has not improved the integration of TEK with science.

Though this assessment supports the critique put forth by Nadasdy (1999) and others, it does not preclude that co-management has been futile with respect to knowledge sharing. The integration of TEK and science does not appear any closer. But integration is a very high ideal and by no means an exclusive solution for the successful incorporation of these different perspectives. The increased use and frequency of TEK as a result of co-management has greatly improved the conditions and potential for its incorporation with science. The authority of the co-management boards and the importance that TEK holds in environmental impact assessments in the region provide growing acceptance of TEK as a credible form of knowledge. This acceptance has also advanced considerably in academia, where innovative planners often look to TEK for insight on managing complex problems (e.g. Berkes 1999; Holling et al 1998). Over the course of this study, each respondent commented on the importance of having harvesters actively contributing and participating in co-management decision-making, with TEK being the most obvious form of contribution. Arguably, the increased use of TEK since the transition to co-management has been accompanied by an increased authenticity of TEK and desire for its use in management decisions.

These are substantial advancements that should not be readily discarded as they bring the incorporation of TEK with science (or science with TEK) that much closer. From the interviews, this incorporation was possible and had been achieved in practice. Dr. Simmons remarked that the use of TEK could benefit and inform scientific investigation. The important aspect being that the knowledge is used and interpreted in the correct context and by competent individuals. Bayha expressed a similar point of view and was the most optimistic on science and TEK working together. His training in traditional and scientific knowledge made the translation of knowledge practical and easy in areas where his scientific and traditional experiences overlapped. Nowhere was this more relevant than in resource management. Given an informed interpretation of TEK, he felt TEK had as much to offer resource management as science. Interpreting the rationale behind TEK provided the greatest potential at combining it with science.

An alarming theme that emerged during the study also presents a paradox to the authenticity and potential of TEK: its practitioners are fading. This presents a dilemma for resource managers. On the one hand, TEK is being used more frequently than before and with improved regard. On the other hand, it seems that the scope and quality of knowledge is declining among indigenous resource users. Initiatives to record TEK and develop methods to interpret its rationale, (e.g. the Deline Knowledge Centre Action Group) offer a possible method of resolving this paradox.

6.3 Institutional Narrative and the Adaptability of co-management

The Institutional Narrative was put together from respondent transcripts and contrasted with the influencing events that shaped contemporary resource management history (see Appendix D), and with observations from the interviewer. The resultant perspectives were then combined for the six most prominent values, practical concerns and opposing factors influencing resource management in the Sahtu Region. The results appear in Table 6.1 and are described in greater detail below. Appendix B-*Six Become One* describes the 6 perspectives that emerged from the analysis and provides a more detailed account of the values, practical concerns and opposing factors that make up the Institutional Narrative.

My analysis of alleged power imbalances in a co-management regime was done with the expectation that manager/harvester relationships would decline following the implementation of co-management, with an associated loss in adaptability. It was a pleasure to discover both counts to be wrong. Participation of harvesters in resource management has gone through much change during the transition to co-management. There is no discernible way to measure if conditions have improved or not. Based on appearances, conditions have improved. This is concluded based on the described growth in manager/harvester relationships and community participation in recent years. Issues of power imbalances were alluded to in the Sahtu case study, but the interviews indicate that the main effect of power disparities was on management decision-making and not on the ability of managers to problem solve. This is a critical difference that is addressed below.

Table 6.1. Values, practical concerns and opposing factors contributing to a resource ideology in the Sahtu Settlement Area. Columns are independent and values under each heading are listed in descending order in terms of importance.

Values	Practical Concerns	Opposing Factors
Cooperation	Stakeholder needs	Unrestricted resource development
Conservation	Existing relationships and Community Support	Financial limitations
Respect and Cultural Sensitivity	Social Ecological Change	Restrictive bureaucracy
Leadership	Information and Knowledge	Capacity of an 'Advisor'
Scientific Discovery	The larger Political System	Power imbalances
Flexibility	Time	Double-faced negotiations

The descriptions of contemporary processes in the Sahtu's resource management institutions revealed values, practical concerns and opposing factors (issues that offset the ability of managers to fulfil their values) indicative of an adaptive system (Table 7.1). In particular, developing social capital with resource users (e.g. trust, cooperation, respect, valuating knowledge and different perspectives) was seen as a driving value through the regime's contemporary history, up to and including the transition to co-management. The development of practical approaches to addressing harvester needs and social-ecological changes, and the collaborative work of resource managers are indicative that the management regime has been responding to external pressures of change and has been flexible and/or proactive enough to adapt to change.

The perceived adaptability is misleading however, because the regime was seen as adaptive despite the bureaucratic formation of co-management as opposed to because of it. Westley (1995) criticizes bureaucratic institutions as being less susceptible to change and typically only embrace learning during times of crises. Pritchard and Simmons (2002:168) agree with Westley's assessment, and believe that simplifying the relationship between organization and community affords greater resiliency, although this is difficult to achieve. Early cooperative management processes provide evidence of the importance of this factor. The basic values of flexibility and adaptability described as having emerged in the earlier manager/harvester interactions became institutionalized when co-management was initiated on a less formal basis 30 years ago. These values and approaches to problem-solving have likely buffered the regime through the transitory period of co-management.

The Sahtu resource management regime represents an adaptive model of resource management because of a noted ability of managers to focus on problem solving over decision-making. Pritchard and Simmons (2002) and Carlsson and Berkes (2005:74) make a ready distinction between the two processes: "Decision-making implies choices between different alternatives while problem-solving has to do with the process of generating these alternatives". Like Yandle (2005) the authors see co-management both as an arrangement that evolves organically, and forged through "deliberate problem-solving" (*ibid*). Decision-making is more rigid in responses or reactions to processes. By contrast, problem solving stems from innovative and experimental hypotheses, two key features of adaptive management (Berkes and Folke 1998). A method to bypass the constraints of bureaucracy suggested by Berkes (2002) is to focus on community (or, as in this case, "regional") capacity–building. In this case, resource management boards would not be looking to solve particular problems themselves so much as developing the capacity of individuals and agencies within the community to resolve problems. In the Sahtu, such a focus would effectively return the role of the former Hunters and Trappers Associations to the Sahtu communities, and perhaps strengthen the functional ability of the Renewable Resource Councils (RRCs).

6.4 Implications of the Study- contributions

The study results support the critiques of power imbalance in formal

aboriginal/state arrangements established through co-management institutions. At the same time, the effect of this imbalance is mitigated by strong manager/harvester relationships. This serves as a reminder that caution is warranted in considering each collaborative arrangement on a case-by-case basis. In the Sahtu case study region, the existence of a highly developed collaborative management system, operational for decades prior to the formal transition to co-management, resulted in a strong level of social capital between managers and harvesters. This social capital contributed to a positive transition to co-management. Collaborative processes thus have potential in creating lasting resilient and adaptable relationships between stakeholders and institutions.

6.5 Recommendations

From the investigation, the following recommendations are made to improve power relations and increase adaptability:

Power Sharing

- Attempts to improve collaborative relations involve the financial stability of resource management agencies until the terms of co-management arrangements are met- in the Sahtu this would mean the stable financial support for co-management institutions, including RRCs;
- Difficult collaborations make use of transparency and values of personal respect;
- Heavy criticisms of the co-management regime be postponed until at least all mandates of the land claim have had the time to become implemented.

Participation:

- Focus on problem solving rather than decision-making to build up community capacity and participation;
- Creating greater community support and institutional "leadership" by encouraging social and community capacity building;
- Revitalizing early experiences of co-operative management to encourage learning and development in the resource management regime;

Knowledge Incorporation

- Encourage initiatives like the Deline Knowledge Centre to research, collect, and develop rationale explanations and applications of TEK;
- Encourage learning initiatives among youth that build traditional and scientific understandings.

7 Conclusion

7.1 Summary of findings

This thesis investigation set out to explore critiques of power imbalances in aboriginal/state co-management arrangements. Manager narratives about changes in

manager/harvester relationships were used to provide insight into how the transition to co-management affects social capital and management success. Information was gathered through interviews with senior resource managers. Narratives were formed from the interviews to gain an understanding of the impacts co-management has had on relationships. An Institutional Narrative was deduced from the narrative themes and used to assess the adaptive potential of the resource management regime. The interviews indicate that:

- Power sharing between managers/harvesters was reduced in the transition to co-management;
- Harvester participation improved relative to levels before co-management institutions were established.
- The integration of traditional ecological knowledge was not seen to have improved despite its increased use in decision-making. However, the potential to incorporate the knowledge sets fairly had improved.
- The resource management institution's apparent focus on social capacity values and problem solving is indicative of an adaptive regime.

These indications have led to the conclusion that the institutionalization of collaborative relationships within the bureaucratic framework of co-management has had a negative affect on indigenous participation. Nevertheless, the co-management regime was found to be surprisingly adaptive as a result of certain key continuities in the resource management system; a history of strong relationships between resource managers and harvesters, and a problem-solving approach by managers appeared to be stronger than the depersonalized and bureaucratic aspects of co-management institutions. Thus the study confirms the ongoing significance of social capital as a determinant of successful co-management.

7.2 Future Research

Six research questions emerged from the investigation that would prove valuable for resource managers and collaborative planners. They are:

- Can claims-based models of co-management be successfully combined with conflict- or crisis- based models to encourage more flexibility and responsiveness for managers?

- What qualitative differences arise when the mode of inquiry in a consultation process is changed from listening to public representatives versus informing and soliciting?

- Is it possible to create a common narrative that different institutions can relate to and use to communicate with?

- Explore which poses the greatest obstacle to incorporating traditional ecological knowledge into decision-making: science or bureaucracy.

- An investigation into the dichotomy of legislative empowerment and disempowerment through institutionalization.

- An investigation that covers the transition of other co-management regimes to see if the findings from this study can be extended.

7.3 Parting thoughts

Below are two epigraphs from the interviews that I found particularly relevant to resource management in the Sahtu. The first quote relates the vision that drives one resource manager, placed in contrast with the outside realities affecting the Sahtu Region. The second quote decries the vanity of ignorance and greed and how both vices now threaten the North. The epigraphs speak for themselves and in a powerful and descriptive manner. What they also do is inform us that strong narratives can cross boundaries and bring people together. Stories offer a way of bridging social and cultural divides and presenting perspectives in a unique way. This is especially true in areas where perspectives overlap, as with the goals of resource managers and resource users. Collaborative measures offer a lot of potential to resolve complex problems but require much cooperation, experimentation and innovation to function. Co-management is a reality, and this study has shown that it can work provided its participants support one another. If people want co-management to work and contribute to a stronger future, then surely learning to read and write from the same page is a worthwhile ideal.

> *If any one of us could stand on the shore of Great Bear Lake in two or three thousand years and see grizzly bear tracks in the sand, hear the sound of distant howling wolves, and see the crystal clear water twinkle in the setting sun all while the sound of caribou hooves click as a herd moves past the camp – then the co-management mode of resource management can be considered a success. And even if our resource management model is a success, what of the rest of the planet? The Sahtu does not exist in a vacuum.* ***Alasdair Veitch***

> *I have the unpleasant privilege of a long-term perspective from which to evaluate*

the trends to which many seem to be oblivious. Enthusiastic people with no real experience believe they can solve all the problems, dodge the bullets, and have the cake.. This notion that has buried civilizations for centuries and threatens to do so again on a large scale. The alarming factor is the increasing rate of change, as well as the nature of the changes. The far north has long been buffered by isolation and the rigours of its climate. But it is the most vulnerable of Canadian landscapes if it is to continue to sustain its indigenous people, it. ***Ruttan 2007****.*

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Appendix A- Interview Guide

Interview Guide

Purpose: To explore how relationships have evolved between communities and resource managers in the Sahtu Settlement Area.
Format: Two open-ended interview sessions by telephone or email. The first round of discussions will address the interview questions below. The second interview will be less structured, allowing for follow-up clarification or discussion of key issues.
Timeline: Interviews are to be completed by May 15, 2007.

Questions

1. Setting the Context

How did you first get involved with wildlife management in the Sahtu?
How has your role changed over time?

2. Before Co-Management

Can you describe your earliest experiences with resource management in the Sahtu? What were the biggest concerns of community members when it came to resource management?

Do you feel that there were ways in which community members could contribute to resource management decisions and policies? How much influence did locals have on decisions or policies? Can you give examples from your experience?

Did this relationship satisfy locals? Was it satisfying for managers?
What were some of the most positive changes that you observed in resource management?

Can you give detailed examples from your experience?
Were there any difficulties that came with this change? Can you give detailed examples from your experience?
Do you feel that Dene and Métis knowledge was properly used in early resource management decisions?

3. Transition to Co-Management

What are your thoughts, with respect to community relationships, on the new co-management regime in the Sahtu Region?

Have there been difficulties in the transition to co-management? Give examples.

How do you think that the new co-management regime has affected community participation in resource management?

What is the role of Dene and Métis knowledge in the new management regime?
What are some of the best aspects of the new co-management system? What are some of the worst?

Do you feel that there is a noticeable difference that Dene and Metis have in managing wildlife resources following the settlement of land claims? Can you describe these differences?

4. Decision-Making and Participation

When do you feel that relationships between resource managers and communities have been at their strongest and most positive? How did this happen?

When has there been the most difficulty in these relationships? Were there particular factors that made the relationships more difficult?

What are some of the most positive experiences that you have had in working with resource managers?
What were some of the difficulties or challenges?
What do you think might be an ideal resource management decision-making process? What would be an example that comes close to this ideal?
Describe an example of a decision-making process that you feel didn't work well.

5. Conclusion

What are your thoughts on the role of communities in resource management in the NWT?

What kind of role should Dene and Metis knowledge play in resource management in the North?
Do you feel that Dene and Metis beneficiaries are equal in decision-making processes? If you haven't already done so, can you elaborate on this?
How do you envision the future of resource management in the Sahtu Region?

Thanks for your participation. Is there anything else that you would like to add?

Do you have any recommendations of other people you think should be interviewed? Please provide contact information.

Appendix B- Research License

Appendix C- Six Become One

Merging Perspectives on Resource Management

Six perspectives on resource management contributed to the emerging institutional narrative. These perspectives all contribute to the overall narrative that guides resource managers in the Sahtu. In essence, the Institutional Narrative can be thought of as an ideology of the Sahtu's resource management regime. The perspectives are summarized below:

1) **Hard work and VECs**: Management that is focused on people and wildlife, that works with and by discovering information on valued ecosystem components (biophysical and cultural) (VECs) through active joint projects that have community support and backing. Resource management is a regime that perseveres through hard work, hard data and a respected relationship with locals.

2) **Institutional Context:** Management that is all about context- management is part of a larger institution where aboriginal concerns are not given equal weighting to those of science or higher authorities. Processes are skewered to favour science, and while Dene and Metis will be consulted for advice, the system has difficulty in applying those considerations. When decisions are being made, we must consider who is benefiting from the decisions, and recognize that resource management is part of a larger government institution. In this regard, resource management must ultimately be accountable to the goals and priorities of that higher system. Aboriginals are disadvantaged in this process because of historical transgressions and power imbalances. The claims allow hope that this process and regime of management will become more equal

3) **Negotiation:** Resource management is an institution defined by negotiation battles between aboriginals and government over recognition of aboriginal settlement claim rights. This is reflected in the co-managing of resources between aboriginals and government agents. There are two faces to management- the one that the public sees and the one that the government plays at. This is synonymous with the management work and consultations done in the communities versus the bureaucracy of the system and how it favours government needs over local needs. The land claim has made things different in that rights are formally recognized and legislated. This has given more community/local control over the resources. However, the new system of resource management (i.e. of numerous boards and an inactive land use plan) remains to be proven. Only time will tell if the new system is good or bad for the management of local resources for local needs.

4) **Respect and Relations:** Resource management is an institution based on mutual respect and orientation. It is the job of managers to develop strong relationships with local resource users in order to successfully manage the game and wildlife resources. Policies are created that respect the cultural and physical needs of locals in consideration of the health of wildlife and knowledge generated from scientific investigation. Resource management is more like a family regime or community council mode of operation that works with time, people and information to create successful policies that make sense for people on the ground.

5) **Knowledge and Action:** Resource management is an institution that should be

based on finding and developing the best information on animal populations and creating policies accordingly. Management is about providing the best reality of cause-and-effect interactions that human resource users have with wildlife resources and then developing policies that limit the extent of interactions threatening natural sustainability. This requires managers to work in close conjunction with biologists and harvesters and to incorporate both sets of knowledge and experience sets for problem-solving. Resource management also serves as a communication liaison between government and resource users. In order to have credibility, resource managers should have the authority to limit/enforce the extent of resource development that occurs to a region, and the ability to communicate important information to resource users.

6) **Learning and Extrapolating:** Resource management in the Sahtu is about righting history and creating a form of resource management that allows locals to have a say in their future. Resource management is about providing a future resource to local resource users. It is best done by consulting history of what does and does not work, and asking "why?"- uncovering the truths of why those things did or did not work. Resource management is about finding a solution to resource problems by using language that encourages communication, dialogue and critical thinking based on experiences and knowledge of multiple stakeholders.

From these six perspectives emerge the values, practical concerns and opposing factors (Table C) that represent the resource management Institutional Narrative. Following is a description of these findings.

Table C. Values, practical concerns and opposing factors contributing to a resource ideology in the Sahtu Settlement Area. Columns are independent and values under each heading are listed in descending order in terms of importance.

Values	Practical Concerns	Opposing Factors
Cooperation	Stakeholder needs	Unrestricted resource development
Conservation	Existing relationships and Community Support	Financial limitations
Respect and Cultural Sensitivity	Social Ecological Change	Restrictive bureaucracy
Leadership	Information and Knowledge	Capacity of an 'Advisor'
Scientific Discovery	The larger Political System	Power imbalances
Flexibility	Time	Double-faced negotiations

Values

Above all, the ideology of resource management is one of cooperation Sahtu resources. Since the start of co-management in the 70s, resource managers have progressively sought to include and empower locals in decision-making activities. From the Wildlife Ordinance consultation experience, local managers learned the

value of including the Sahtu residents in management planning. Greater harvester satisfaction, compliance and support for management plans were the advantages of encouraging participation in resource activities. The support and compliance were critical factors for managers, as their main concern was for the conservation of the Sahtu's natural resources.

Conservation has evolved from a concern of preserving charismatic fauna (e.g. caribou and migrating geese) to a more ecosystem approach of ensuring the preservation of natural habitat for Sahtu species. Over time, the cultural preservation of Sahtu Dene and Metis has also become a fixture of resource managers. This desire for cultural preservation grew out of an economic concern for regional harvesters. Early co-managers would support local economies by facilitating harvesting related activities for communities and individuals. When Sahtu beneficiaries assumed more control of decision-making following the land claim, the concern for economic livelihood changed to one of traditional livelihood.

Unsurprisingly, respect and cultural sensitivity to Sahtu Dene and Metis are two more distinct aspects of resource ideology. Respect was freely given by early resource managers in appreciation of the knowledge, skills and perspectives that resource users had to share. The respect given to the resource users necessitated a certain cultural sensitivity as a buffer between Euro-Canadian and traditional perspectives. When the utilization of respect and cultural sensitivity was seen to increase the strength of relationships and the ease of management, these values became ingrained into resource management as necessary skills and tools. Since that time, these values have been passed on from manager to manager.

Leadership is a more recent value that has grown out of earlier developments. Harvesting plays a central role in traditional livelihoods. Successful harvesters were recognized as leaders in their communities for their ability to provide resources for anybody who was lacking. Modernization has reduced the frequency and necessity of harvesting activities. Successful hunters that were leaders have been replaced first by locals capable of defending Dene and Metis rights and then by locals able to empower regional beneficiaries. Most of the political and empowerment challenges take place in a Euro-Canadian context, with which Sahtu Dene and Metis have only a brief knowledge of. Resource managers have stepped in to fill this knowledge gap in providing support and resources to communities and community initiatives. Jim Bourque's defence of aboriginal hunting rights in the 70s was an example where a

manager used their position to put aboriginal rights on the Canadian political agenda. In modern times, Alasdair Veitch and Jody Snortland have, through extensive community consultations, galvanized residents into participating in decisions that will affect their future. Walter Bayha has helped to launch a "Traditional Knowledge Centre" whose creation might restore the rationale and authenticity to Dene TEK. John Executive Director, SLUPB has worked tirelessly on promoting the Land Use Plan in order to turn a regional vision of development into reality. These leadership roles have been assumed by resource managers because they have been put in a position to act on them. It is conceivable now that all actions that resource managers carry out must now uphold the dignity and respect expected of leaders. This value is one that has been adopted and one that will continue to be passed on through resource managers until local individuals are ready to take on the same community challenges.

Another area that has always been at the background of resource ideology is scientific inquiry. Science and ecology have always been the lens through which management decisions were made concerning wildlife and habitat conservation. Over time, these decisions have been complemented with local input and TEK. The incorporation of these perspectives have been based on how well they are supported by scientific investigation. In modern times there has been a slight switch in management strategies from managing natural resources to managing resource users. While this has increased the emphasis of incorporating community perspectives, the implementation of management goals and resource strategies are still carried out by scientific inquiry.

Flexibility rounds off the list of main ideological values. Flexibility is another value that has been handed down over the years by resource managers. In early days, managers had to make do with what few resources and data that was available to them. The attitude of "making do" has persisted among managers, so that new challenges are looked at critically in terms of what local capacities and strengths can help out. Much like the harvester who's snow machine breaks down miles from help, resource managers have developed a problem-solving attitude of "fix it with what you've got, or look for an alternate solution and keep looking until the problem- being stranded- is fixed." In this sense, Sahtu managers have always been adaptive.

Practical Concerns

Carrying out the mandates of resource management according to the ideology

are tempered by the practical concerns identified in Table 6.1. Foremost among these is addressing community needs. Resource management acts as a middle-man between harvesters and the state, provides a resource service to residents, and broadens the understanding of the Sahtu social-ecological system. Sahtu residents determine the issues, service and knowledge that are in demand. Management must therefore always be aware of and concerned about community needs. Similar to knowing what demands are being made, the success in carrying out these demands while simultaneously keeping with management goals will be determined by the existing relationships that managers have with harvesters and the level of community support for management initiatives.

Another practical concern managers that influences management decisions is the degree of social-ecological change occurring in the Sahtu and in neighbouring regions. As quoted by Veitch; "The Sahtu does not exist in a vacuum." Large and small drivers of change will always affect the health of the Sahtu's ecological and cultural systems. The Sahtu social and ecological system is always being impacted by regional, national and international changes. Related to this is the effect that outside politics has on management decisions and community demands.

For both of the above concerns, information and knowledge are two limiting realities that shape the ability of managers to resolve issues. Information gaps could significantly affect the quality of a decision. Similarly, not knowing enough about baseline environmental conditions can and does affect how well managers can predict the effects of resource development, and what mitigative strategies are appropriate.

Finally, time is a practical concern that overshadows everything. How much time is there to act? Is the effect of resource development too much? Who knows, only time will tell. Time affects the ability and swiftness of action on and against management ideals.

Opposing Factors

Opposing factors are realities that limit the ability of managers to manage and reflect the system in which the management ideology must exist. These factors were all identified as significant during the interview process. Foremost among these factors is the extent of resource development occurring in the Sahtu and the inability of managers to curb the social and ecological impacts.

Available finances limit the resources that managers have in finding solutions to

the challenges they face. So to does a restrictive bureaucracy by slowing down how swift action can be taken, and in what capacity that action will take. Compounding this factor is the "Advisory" nature of the SRRB and the question of what extent of their recommendations will take.

Power imbalances, in the form of political sway and financial ability, between government, industry and Sahtu beneficiaries also affect the ability of managers to address a problem. These imbalances are sometimes reflected in double-faced negotiations, which complicate problems by adding confusion and extending the timeline of a constructive resolution.

Appendix D **-Contemporary History & Participation**

a. Overview

Three research questions were explored to analyze the participation level of aboriginal resource users in resource management in the Sahtu Settlement Area from the perspective of resource managers. The first question sought to identify the historical events that most impacted resource management since the 1960s. 22 events emerged from the interviews as defining historical moments. 16 of these events were treated as major events based on their impact on resource management relationships. A key finding from the timeline is the convergence of milestone events between government and First Nations perspectives following the settlement of Aboriginal Rights in 1994. Prior to this event, all key events represented either a government or First Nation perspective. These perspectives were split along political and functional categories, suggesting that significant changes for Sahtu Dene and Metis came with greater political powers and responsibility, while significant changes for resource managers involved alterations to administrative protocol and methodology. The sole exception is resource development/extraction, which has been a constant unifying theme of mutual concern for both harvesters and managers. Two possible explanations for the mergence of perspectives are that government and First Nations groups have become more similar in their outlook of resource management, or that both groups have achieved a status of mutual content that has allowed them to more easily set aside differences and work more closely together.

The second question sought to identify the strengths of relationships that have existed. Relationship strengths were measured based on the impact or inclusion that the aboriginal resource users had in decision-making. The results from the interviews reveal a mixed perspective of strong and weak relationships between managers and harvesters. The common trend is that managers who worked hard to gain the respect of resource users and honoured the role of traditional knowledge and aboriginal cultures enjoyed a better relationship with local resource users than those who chose to ignore traditional ways. Under these managers aboriginal participation in management decisions was strongest. Successful managers all had spent considerable time living in Sahtu communities and were typically integrated members of the community, either through family or from hard-won respect of community members. Positive relationships typically resulted in strong co-management initiatives and

favourable policies for all stakeholders.

The third question sought to identify how the use of Traditional Knowledge (TK) has changed in resource management over time. Perspectives from the interviewers revealed two large developments. First, TK has gone from an infrequently used management tool with no guarantee of use, to a tool that must legally be used and considered in all management decisions today. Secondly, interviewers revealed a change in the authenticity of TK over time, with today's providers of TK and the youth not nearly as educated in the traditional worldview due to significant departures from a traditional lifestyle.

b. Turning points of resource management

This analysis was concerned primarily with the sharing of power in resource management decision-making, bureaucratic arrangements, and the extent of freedom to partake in traditional activities. Table 5.1 details the contemporary history of resource management development through the events deemed most important in shaping the resource management regime. The events are listed in chronological order with a brief description of the event and a list of its effects on community-management relations. From the results, 16 milestone events emerge as turning points in the development of relationships between resource users and resource managers in the Sahtu Region. These milestone events can be broken into two broad categories: legal and functional. Legal events represent legal changes affecting resource use and management, while functional events are characterized by non-legal developments that affected resource use and management. The legal and functional events will be explained in chronological order in the context that they were provided and will form a reference for research questions 2-4.

Table I-a. Important milestones in recent resource management history identified as turning points affecting government and Community/local relationships. Milestones are separated into Government and First Nation fields according to which group was most impacted by the event. Events that appear in **bold** represent significant themes in the evolution of resource management, based on frequency of mention from respondents.

Milestone		Year	Effect
Government	**First Nation**		
Inuvik Office 1 Gov't biologist			Management from afar with little resources
Oil and Gas Development		1960s-1970s	Habitat degradation becomes noticeable and disrespect of local resources and jurisdiction unites locals into action.
		1970s-present	Decrease in traditional activities
	Indian Brotherhood if the Northwest Territories (the Dene Nation) is formed	1970	**Land Use Occupancy Study** -mapping of all important cultural and natural features in Denedeh **Dene Declaration 1975** -official declaration seeking recognition of independence and self-determination within the state of Canada
Wildlife Ordinance Changes		1972-73	First comprehensive community consultations. Resulted in "unofficial" policy of co-management
	Calder Case	1973	Challenged GoC to examine aboriginal entitlement to land
	Paulette Case	1974	Caveat against federal GoC questioning land ownership Community consultations
Decentralization		1975	**Formation of Game Advisory Council**
	Aboriginal Rights Settlement talks begin	1974	Talks about Treaty Rights and terms begin. Formal negotiations begin 1981.
	Mackenzie Valley Pipeline Inquiry	1974-1977	Formal consultation by Supreme court Judge Berger to listen to community concerns over resource development and management. Raises political awareness and is spread by media to rest of Canada. FN cause now becomes mainstream.
	Amendment to the Canadian Constitution, s. 25 and 35.	1982	Affirmed and protected Treaty Rights of Aboriginal Peoples within the constitution of Canada
	Inuvialuit Final Agreement	1984	Gave control of natural resources over to the Inuvialuit people in an attempt to preserve the wildlife and cultural diversity of the region.
	Gwich'in Comprehensive Land Claim Agreement	1992	Supported effort for a stronger Sahtu land claim

Technology	1994+	Changed methods and relations in how resource management information was collected and used
Sahtu Dene and Métis Comprehensive Land Claim Agreement	1994	Creation of Sahtu Settlement Area and transfer of power for resource management decisions to Sahtu beneficiaries
Formation of SRRB, SLWB, SLUPB and RRCs	1994-1996	Creates formal boards to manage over Sahtu resources and development activities. Brings more professionals into the region to work on local issues.
Renewed interest in oil and gas development	1994+	Land claim settlement opens up area to development again. Development opportunities and activities change local priority towards access and benefit agreements (economic payoffs) rather than resource health and preservation. Development concerns launch a rush of research projects by government scientists and resource users to catalogue the Sahtu's baseline social-ecological conditions.
Decentralization continues	1994-1996	**Transfer of Power to Sahtu Regional Office**
GNWT Department merger into Resources, Wildlife and Economic Development	1996	United resources and jurisdiction of two government departments and altered reporting requirements of Regional Office manager
HTA/RRCs declining role	1996+	Central role in resource management activities and decision-making reduced and declines in reality, while on paper role is granted formal authority.
Mackenzie Valley Resource Management Act	1998	Created higher standards for development initiatives in the SSA, provided more impetus for community consultation and incorporation of TEK
Mackenzie Gas Pipeline Project	2003	Large development proposal to construct pipeline through Mackenzie Valley, united FN in protest of their inability to manage or benefit from their land and resources. Launched research projects and monitoring programs by government biologists and wildlife officers.
Land Use Plan stalls	2003?	Development continues at regular pace without local control. Stalls neutralize ability of Sahtu beneficiaries to impact development activities.

1. The Indian Brotherhood of the Northwest Territories, 1970

The first event that emerged from interviews was the political formation of the Indian Brotherhood of the Northwest Territories in 1970, now known as the Dene Nation. This organization was a northern chapter of the National Indian Brotherhood, which was created in 1969 as a lobby group for Aboriginal Rights. The Indian Brotherhood of the NWT was made up of all the First Nations Chiefs from the NWT, and marked the first northern aboriginal interest lobby group in the NWT made up and run by aboriginals. The Indian Brotherhood represented the Dene of Denendeh in the settlement of outstanding land and governance issues, with the strategy of negotiating Aboriginal Rights by establishing a political relationship between Dene and the Government of Canada[23]. One of the first tasks of the Brotherhood was to show to the Government of Canada that the Dene had claim to the land. This resulted in the "Landuse and Occupancy Study", which involved many Dene field workers working with elders to map all important resource use areas, wildlife habitat, place names, historically important areas, and cultural landscapes of Denedeh. This study marked the first large scale Dene project geared to assert Dene Treaty Rights and to provide a case for future self-determination.

2. Wildlife Ordinance Change Consultation Process, 1972-1973

Prior to the wildlife ordinance changes, wildlife laws had not been significantly altered since the North West Games Act, 1917, and the Migratory Birds Convention Act, 1918. Both of these acts had been designed to limit the accessibility of important harvesting species to Aboriginal Peoples. Changes to wildlife management laws were done "almost entirely in-house" (Ruttan 2007). Sahtu Dene and Metis were not consulted in the negotiations of these Acts, and the legal hunting seasons did not support their traditional hunting practices. This resulted in "considerable hardship and hard feelings toward government" (Ruttan 2007), soured relations, and necessitated a need for enforcement activities. The Commissioner of the time responsible for

[23] Canadian Encyclopedia, The. 2007. "Dene Nation". Available on-line at: http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0002221. Accessed 04.06.2007.

wildlife management, the Honourable Stuart Hodgson, "realised that wildlife law was a hot political potato, and [the laws] would be less of a contentious issue if the hunters and trappers of the NWT felt ownership in the laws. He wisely called for an NWT-wide consultation process as a prelude to the drafting of a new Wildlife Ordinance and Regulations" (Simmons 2007). The Commissioner's decisions to "launch and fund a lengthy consultation process…was an excellent decision that resulted in major improvements to wildlife management in the Territories" (*ibid*). Consultations focused on the recommendations of Dene, Metis and Inuit hunters and trappers.

This consultation process was an important milestone because it marked the first comprehensive consultation process to involve native (and non-native) hunters and trappers (resource users) in the design and implementation of wildlife laws and regulations. The consultation process did much to improve the trust and reciprocity between resource users and managers, and the revision of the law in 1976-1977 helped to solidify this trust that managers were considerate of the needs of the resource users. "As a result, the indigenous people and others became co-authors of new laws and policies, and our enforcement activities dropped to nearly zero" (*ibid*).

3. The Paulette Case, 1973

In response to the growing unrest among Dene over reduced access to resources and ability to influence development activities, and as a political demonstration against the Government of Canada to recognize Aboriginal Rights under Treaty 8 and Treaty 11, the Indian Brotherhood filed a caveat, the "Paulette Case", with the supreme court of Canada putting into question the ownership of Treaty lands. The immediate result of the case was a halt on all development activities in the disputed territory while the question of land ownership was being resolved. After one and a half months the caveat was overruled, but Justice William Morrow acknowledged that the Aboriginal Rights of Treaty 11 signatories had not been extinguished. The Paulette Case marked the first comprehensive community consultation done in the region, as Justice Morrow travelled the entire Mackenzie Valley to speak with surviving signatories of the Treaties to understand, firsthand, the oral agreements that had been established in the Treaties. Also, the case provided a legal basis for comprehensive Aboriginal Treaty Rights settlement agreements in the region by asserting Aboriginal entitlement to traditional territories.

4. The Dene Declaration, 1975

The Dene Declaration marked the official political position of the Dene people on their approach and position to self-government agreements with the state of Canada. Entitlement to traditional territories and their resources was now recognized and the declaration marked the political switch from recognition to negotiation.

5. Decentralization, 1975

Decentralization is a recurring theme for the resource managers that marked a functional milestone event in resource management. The first episode of government decentralization occurred with the “delegation of authority from the Yellowknife headquarters to the Game Advisory Council in 1975” (Simmons 2007). The idea for the Game Advisory Council (GAC) was formed during the Wildlife Ordinance Changes consultation process. The role of the GAC was to assist native and non-native hunters and trappers as much as possible, and to serve as a voice to express concerns back to the Government of the Northwest Territories (GNWT). Unofficially, the GAC were to co-manage resources with the local Hunters and Trappers Associations. The GAC marks a milestone event in resource management because it made the Territorial headquarters in Yellowknife less powerful, altered the role of resource managers to being more service-oriented, and gave more power to regional resource users in the form of a louder voice and increased operating resources.

6. The Mackenzie Valley Pipeline Inquiry, 1974-77

The Mackenzie Valley Pipeline (MVPI) Inquiry was launched in1974 by the Supreme Court of Canada amid concerns of an oil and gas pipeline development in the Mackenzie Valley and its impact on affected populations. Justice Berger was commissioned to listen to community concerns about resource development. He and his team travelled to all of the communities in the Mackenzie Valley to hear local concerns and perspectives. The MVPI was more elaborate than the earlier Paulette and Wildlife Ordinance consultations, as it “involved an Inquiry Appraisal Team of lawyers and other professionals who advised [Justice] Berger” (Simmons 2007). Justice Berger ruled that a development moratorium should be placed on the pipeline project for 10 years and that land claim settlements should be resolved before large developments take place.

The MVPI is a milestone event in resource management in the Sahtu for two main reasons. Firstly, it put community concerns and the resolution of Aboriginal Rights above National and private economic interests. This altered the hierarchy of resource use from government- and industry-dominated to a system where Aboriginal and local needs were as important, if not more so. Secondly, the Inquiry made a “very serious statement about [native] homeland” (SLUPB Executive Director 2007). This statement raised the political consciousness of Aboriginal peoples locally and

nationally. The Inquiry helped to politicise and organize communities in the Mackenzie Valley: "[a]fter the pipeline inquiry, I think there was a lot more consciousness about what was going-on on the land. I think all the communities started focusing more on that management part and how they could have input into activity on the land" (*ibid*). Nationally, the media attention generated by the Inquiry and its findings brought the issue of Aboriginal Rights into the consciousness of the Canadian public. In doing so, Aboriginal Rights gained more publicity than they ever had previously, and were put onto the Canadian political agenda.

7. Amendment to the Canadian Constitution, 1982

Aboriginal-state relationships were an important political issue in Canada during the 1970s. In 1982, Section 25 and 35 of the Canadian Constitution were amended to protect Treaty Rights as they had been promised in the signing of the Settlement Treaties. The Amendment of the Canadian Constitution marked an important political and functional event in resource management relationships because it meant that First Nations groups could switch focus from **proving** that their Rights existed to **enacting** their Rights and working towards self-government. More practically, S.25 and S.35 restored the hunting and harvesting rights of Aboriginal resource users; effectively vetoing some of the wildlife Acts that had prevented Aboriginals from continuing their traditional activities.

It should be noted that while the Amendment to the Canadian Constitution was a remarkable turning point, the amendments themselves were done without the consultation of First Nations peoples[24] (Dene Nation 2007).

8. Inuvialuit Final Agreement, 1984

The Inuvialuit Final Agreement (IFA) was a political turning point for the Sahtu because it marked the first settled comprehensive land claim agreement between Canada and a First Nations group in the Mackenzie Valley as well as the NWT. The IFA gave control of natural resources to the Inuvialuit people, putting them in charge of resource management. Because the IFA was the first self-government agreement in the NWT, it formed the template for the future negotiation of the Sahtu

24 Dene Nation. 2007. Dene History. Available on-line at: http://www.denenation.com/denehistory.html. Accessed 29.05.2007.

comprehensive land claim agreement.

9. Technology

Technology has played a dramatic role in the north in shaping new customs and altering traditions. In the field of resource management, the advancement of technology made an equally large impact in how information was collected, processed, informed and stored. The advancement of technology also reshaped the role of wildlife managers and officers by altering their time spent working alongside native and non-native resource users. The largest technological innovations to change resource management were the development of Satellite tracking abilities and the introduction of internet to the Sahtu communities.

> …we got satellite phones, the Internet, and email. These all made our field and office work that much easier in some ways, but infinitely more complicated in other ways. GPS has totally changed how we record information in the field – we can design survey routes on our computer prior to flying and then print out an actual track of where we flew and what we saw during a survey as soon as we get back into the office. You were now never really "out of the office" anymore. *Veitch 2007*

Satellite tracking of caribou began in the Sahtu in 1994, and Satellite mapping of important cultural and wildlife areas was soon to follow. These two events altered the relations of managers and government researchers by switching their time priorities from the field to the office. While this reduced the number of personal associations with harvesters in the field, the greater influx of information allowed for more community consultation and information exchange.

The internet made administrative resource management work in the Sahtu much easier. Prior to the internet "[y]ou lived a rather isolated existence and were acutely aware that you were not part of the 'mainstream' for North American scientific research!" (Veitch 2007) Following the introduction of the internet, outside communication was no longer a problem and Sahtu office work became 'mainstream'.

> With these sorts of advancements in technology – some of the disadvantages of working in a far-flung remote location have been obliterated; at the same time – so have some of the <u>advantages</u> of working in a far-flung remote location! We can obtain the latest information via the Internet as easily from our offices in Norman Wells as someone working in a major university in Calgary or Washington. We can work on documents and trade data with people instantly. Pictures are now taken on digital cameras and no longer do we have to send off rolls of film for processing in southern Canada – everything has been sped up and in the field

we're taking digital pictures, GPS track files of where we flew and what we saw, and we're downloading those into laptop computers at the end of the day. We can have much of our trip reports done before we even come home to Norman Wells – and we can send the information to our colleagues instantly. When we're in the field we can call/email back to Norman Wells to get the latest satellite/GPS maps of locations of our collared caribou. *Veitch 2007*

10. Sahtu Dene & Metis Comprehensive Land Claim Agreement (land claim), 1994

The land claim marked a political turning point in resource management in the Sahtu for all stakeholders. Following the singing of the land claim in 1994, resource management decision-making was transferred from government to locally appointed Renewable Resource Councils (RRCs) and a formal co-management Board, the Sahtu Renewable Resources Board (SRRB) composed of mixed government and community members. The Councils and Board established in the agreement recommendations on renewable resource issues, specifically on fish, wildlife and forestry to the appropriate government Ministers. From a management perspective, these boards succeeded in formalizing a shared relationship between Dene and Metis stakeholders with state representatives that would guarantee the use of Traditional Ecological Knowledge (TEK) and shared decision-making. These co-management boards were much anticipated in the region as they were designed to balance power between the state and the Sahtu beneficiaries over traditional harvesting pursuits and wildlife management.

11. Formation of SRRB and RRCs, 1994-1996

While the land claim marked a political turning point in the power-relations of Sahtu residents and government, the functional turning point came with the formation of the various co-management boards that were created. Apart from providing a shift in power-base for local resource users and communities, the formation of the Sahtu Renewable Resources Board (SRRB) and Councils (SRRCs) also resulted in an increase in available financial resources and in the number of resource professionals based in the Sahtu. The finances were a direct result of the agreement, and were intended to 'jump-start' the councils and boards into working shape so that they could fulfill their mandates as outlined in the land claim agreement. The influx of

professionals marked a special turning point for resource management because local beneficiaries could make use of specialists to research and develop community concerns. Very few beneficiaries were considered trained specialists in professional managerial occupations. The addition of specialists allowed local resource issues to be translated into the working political and bureaucratic languages.

12. Decentralization continues, so do Government Mergers, 1994-1996

One of the outcomes of the land claim was more decentralization from the Yellowknife Headquarters to regional resource managers. As part of this decentralization, a regional Sahtu office, the Sahtu division of Environment and Natural Resources, was created to deal with all management issues relevant to the Sahtu. The new role of government resource managers became one of consulting for the councils and boards, as well as to provide baseline scientific research to support management decisions.

In 1996 the GNWT merged the resources and responsibilities of the Department of Minerals, Oil and Gas with the Department of Economic Development and Tourism into a single department, the Department of Resources, Wildlife and Economic Development (RWED). This merger had an impact on resource managers because it altered their reporting requirements by streamlining the communication hierarchy, and broadened the knowledge-base of managers by combining input from the realm of Economic Development, making the department more interdisciplinary.

13. RRCs/RRCs declining role in resource management, 1983-1996+

Since the amendment of the Canadian Constitution in 1982, many organizations have arisen in the Sahtu Region. The amendments provided a legal basis of aboriginal ownership in the Sahtu Settlement Area. While the extent of ownership was being negotiated in the land claim agreements, the entitlement of land meant that developers needed aboriginal approval and permission to extract resources. To meet this demand, local and Sahtu-wide Land Corporations were developed to serve as mediators between the people and the companies, to negotiate access and benefits agreements

for using Sahtu resources, and to distribute the generated capital back to the community. The formation of these Land Corporations gave an economic rise in power to Sahtu beneficiaries and quickly became the centre of attention socially and politically. At the same time as the popularity of the Land Corporations was growing, government offices in the Sahtu began shifting from a more managerial role to a more supportive role.

The effect of these changes on local resource management marks a functional milestone event. The increased popularity of the Land Corporations led to human and financial resources being diverted from the community wildlife organizations, then known as the Hunter's and Trapper's Association (HTA), in favour of supporting the Land Corporations and their investments. This diversion of resources led to a sharp decline in the ability of the HTAs to operate.

On the government side, the switch to an active advisory role reduced the availability of government funding towards resource management activities. Prior to the Constitution's amendments, the government unofficially co-managed resources with resource users. This was achieved through the Game Advisory Council, whose members facilitated harvesting activities for local Sahtu residents, and consulted harvesters on important resource management decisions. Following the Constitution's amendments and the rise of co-management boards, the role of government Resource Management was reversed. After the land claim the government operated officially under an advisory role to aboriginal co-management boards and had minimal human and financial resources to contribute to resource users. The Game Advisory Council effectively and literally ceased to operate.

Ironically, the decline in power of the HTAs occurred at the same time that the HTAs were being granted official legal rights by the GNWT and GoC. In the 1994 land claim agreement, the HTAs were recognized as Renewable Resource Councils and significant legal rights on resource management were designated to them. Regarding the role that the HTAs/RRCs play, one respondent remarked: "[t]oday it's switched around: today [the RRCs] have everything on paper- they legally have those responsibilities- and yet they don't have the people or the resources to get those things done anymore." (Bayha 2007). The respondent summarizes the situation as so:

> …traditionally with the HTAs, …the resource managers, and certainly the government, had put a lot of support [into the HTAs]- even the wildlife act… [The government] had a responsibility to make sure that [the HTAs] had all the help that they can to get… So whenever they needed help, and they sometimes didn't have a secretary or they'd sometimes they didn't have enough people for, we'd usually get involved. The officers would get involved, maybe the superintendents gets involved or somebody else from the GNWT gets involved and helps them get things done. So [the government] played a major role in that sense.
>
> Since the claims, and the claim is very clear on a lot of these things- [the HTAs] get a certain portion of money, and that's it. The GNWT still gives them what they call the Trap Funding, but that's all they do. They don't send an officer over there to help them with their books, or to help them with some harvesting or some study activity or some project that they want done…
>
> Governments don't feel the need to do that anymore, for some reason- and I don't know what it is…Legally and on paper, prior to 1982,even if they didn't have the resource management rights and powers that were being eroded, practically on the ground things were very different- everybody was helping that organization so that they could get work done, so they were a little more successful. *Bayha 2007*

As the main interface of local harvesters, the decline of power of the HTAs/RRCs has resulted in a social and cultural turning point for Sahtu beneficiaries. The economic

priority of Sahtu beneficiaries has resulted in a focus on monetary gain by the Land Corporations at the expense of traditional organizations such as the RRCs. With all of the institutional restructuring that has been occurring in the Sahtu over the past decade, the RRCs seem to have been left behind or temporarily forgotten. As one respondent commented:

> Ask anybody here in Deline "What's the role of the RRCs?" I'm sure very few people would say anything about the RRCs. But I'm sure that after 15 years, many people will say: "What the HTAs used to do…" *Bayha 2007*

14. Mackenzie Valley Resource Management Act (MVRMA), 1998

"The purpose of the establishment of boards by [the Mackenzie Valley Resource Management Act] is to enable residents of the Mackenzie Valley to participate in the management of its resources for the benefit of the residents and of other Canadians."[25] The MVRMA marked a political turning point in resource management because it gave local residents and communities the authority to set development standards and to approve or disapprove of development proposals. The main element of the MVRMA is the establishment of a land use plan to determine which areas of the Sahtu can be set aside for conservation, and which areas can be left open to development. This is done through the Sahtu Land Use Planning Board. Once this plan is set and approved by government, the SLUPB and Industry, it is given legal binding and all future development proposals must abide by the tenets outlined within the plan. The Sahtu Land and Water Board is the operational side of the SLUPB, and reviews development proposals. If the proposals meet with the specifications of the SLUPB, then a land use or water permit is subscribed. If not, then no permit is granted.

Another important aspect of the MVRMA was the legal stipulation that all future significant development activities undergo a comprehensive Environmental Impact Assessment (EIA) review prior to receiving an approved development permit, and that Traditional Knowledge be used as part of the EIA review process. The inclusion of Traditional Knowledge was especially relevant for Sahtu beneficiaries as it meant that aboriginal perspectives and views on development activities must be

[25] Canada, Justice. 1998, c.25; 9.1. Mackenzie Valley Resource Management Act. Ottawa: Department of Justice.

considered for significant projects.

15. Mackenzie Gas Pipeline Project, 2002

The Mackenzie Gas Pipeline Project, MGP, marks a milestone event in Sahtu resource management for many reasons, as it represents the largest proposed development project in the history of the Northwest Territories, and because it challenged local Sahtu beneficiaries to choose between modern and traditional lifestyles. The MGP was a political milestone because it allowed Sahtu beneficiaries to test the resolve of the GNWT and GoC on honouring the land claim. The MGP also provided the first large project that the new Boards and Councils could jointly work on. Additionally, the MGP helped to bring many government and Aboriginal groups closer by working together on common goals.

Functionally, the MGP "initiated a flurry of research activity along the Mackenzie Valley" (Veitch 2007). This demand for research by industry, Aboriginal Boards and Councils, and government also led to an influx of money that resource organizations in the Sahtu Region could tap into. The MGP helped to fill the lack of financial resources available to resource organizations, and money could be found for research projects and the hiring of additional staff members. From this money important projects and resource knowledge information gaps could be studied.

16. The Sahtu Land Use Plan stalls, 2003+

Perhaps the most important component of the land claim was the creation of a land use plan to govern future development activities in the Sahtu region according to the interests of the Sahtu beneficiaries. The Sahtu Land Use Planning Board was established as part of the land claim in order to create this land use plan. Once the plan is produced and has met with government and Industry approval, it will become a legally binding document that all future activities must accord to. While extensive community consultations and resources have been expended to develop a comprehensive land use plan, the plan itself has yet to materialize. This is in part due to a lack of resources available to develop the plan. The current budget allotted to the SLUPB does not cover the annual expenditures, forcing the staff to expend energy on short-term money acquisitions and to work within their means, which generally means overworking individual employees.

Another factor contributing to the stalled process is related to the power dynamics of the plan. In its current draft state, the government and Industry benefit from the plan while the only the Sahtu suffer. Industry and government benefit from a draft plan because development proposals must be issued within a specific timeframe. This is mandated within the land claim. With the Land Use Plan undeveloped, development activities can proceed at a comfortable pace and with minimal local restraints- an outcome favourable to government and Industry. Conversely, the stall of the Land Use Plan has neutralized the ability of locals to impact development activities. Without a plan in place, locals have as little control over development activities as they did prior to the signing of the land claim.

The stalling of the plan takes place in the bureaucratic circles through which the draft land use documents must travel. While good relations exist between the SLUPB and their government and Industry counterparts, the priority of resolving the plan is not shared equally. This has forced the SLUPB to look at alternate methods of speeding up the approval process. At the time of this writing, the strategy was to appeal to the Joint Review Panel (JRP) of the Mackenzie Gas Project (who approve or disapprove the project) that the Land Use Plan be implemented prior to approval of the MGP. Some proponents of the plan now believe that resolution of the plan is only possible with significant outside pressure. The current draft of the plan marks the most progressive resource management strategy geared towards long-term sustainability that the Sahtu Settlement Area has ever seen on paper, and is widely supported by other local and Territorial resource management institutions. The stalled process is a critical milestone for resource management to overcome in the Sahtu because failure to do so will mean failure to adapt to changing social and ecological conditions, and a failure to incorporate traditional and western resource ideals.

i. Summary

A key finding from the timeline is the mergence of milestone events between managers and First Nations groups following the settlement of the land claim in 1994. Prior to this event, all key events represented either a management or First Nation perspective. These perspectives were split along the political and functional categories, suggesting that significant changes for Sahtu Dene and Metis came with greater political powers and responsibility, while significant changes for resource

managers involved alterations to protocol and methodology (Table Ia). The sole exception is resource development, which has been a constant unifying theme of mutual concern for both harvesters and managers. Two possible explanations for the mergence of perspectives are that government and First Nations groups have become more similar in their outlook of resource management, or that both groups have achieved a status of mutual content that has allowed them to more easily set aside differences and work more closely together.

c. Relationships

An important consideration in evaluating co-management regimes is the professional and personal relationships between stakeholders. The stronger these ties are, the more likely that individuals will be able to work with one another in developing and implementing mutually agreeable solutions to the challenges they face. The purpose of this section is to establish the strength of collaboration that has existed between resource managers in the Sahtu and the dominant group of aboriginal resource users on whom management decisions had a significant impact. I have measured the strength of collaborations based on the impact or inclusion that these aboriginal resource users had in decision-making. The results from the interviews reveal a mixed perspective of strong and weak relationships between managers and harvesters. The common trend is that managers who worked hard to gain the respect of resource users and honoured the role of traditional knowledge and aboriginal cultures enjoyed a better relationship with local resource users than those who chose to ignore traditional ways. Successful managers all had spent considerable time living in Sahtu communities and were typically integrated members of the community, either through family or from hard-won respect of community members. Positive relationships typically resulted in strong co-management initiatives and favourable policies for all stakeholders.

Relationships between resource managers and harvesters are a complex affair. To best represent the development of these relationships, I have separated the relationships into three separate categories: Pre-Claim, Negotiation Phase, and Post-Claim. Each category represents a shift in relationships between resource managers and harvesters, which were shaped by the milestone events identified in section 5.2.1.

i. Pre-Claim, 1960s-1974

The majority of aboriginal resource users in and before the 1960s maintained a traditional way of life on the land. Respect for the land and resources on the land are very important aspects of Dene tradition:

> …we didn't come from anywhere else. I think we have a very different sense of homeland than people who find it easier to migrate here and there. It's more difficult, I know, for us to do that as aboriginal people from the North because we like to stay on the land that we're familiar with. And it's where we know to find animals that we need for our country foods. And we're the most familiar with where we live… You always see that at meetings, this **underlying sense of homeland**. If you go to many meetings… people are always talking about the love of their land and their homeland. *SLUPB Executive Director 2007* (author's emphasis)

Dene and Metis harvesters were "…always concerned about what's going on on the land, and …the pace of it" (*Ibid*). Resource development activities were only just beginning in the Sahtu region in those days though, and their combined effects were still small enough that they did not grossly interfere with Dene and Metis ways. Part of Dene custom is to share resources with others, and so initially there was no loud opposition to these development activities. Power relations were also quite different between Dene and the government of Canada, which contributed to this acceptance of externally imposed processes:

> But I think in those days, there was generally just an acceptance that people didn't have a say in who was allowed to do whatever, and [the people] just didn't recognize that [Dene] might have a say, or how to organize so they might have input and that kind of things. *SLUPB Executive Director 2007.*

As development activities increased, concern over the land grew proportionately along with a feeling of unfairness that outsiders were benefiting financially from Dene resources while the Dene themselves received nothing:

> And you're concerned all the time that the land doesn't get overrun by development and that sort of thing, and that you have some kind of a handle and input into it, and are able to benefit from it in some way. *SLUPB Executive Director 2007.*

For Dene and Metis harvesters in the Sahtu Region, the growing activities, disempowerment and lack of income were beginning to wear thin their patience and tolerance levels.

Resource managers and government field workers of the time did not have close ties to local resource users and were consequently stigmatized as government agents. During the 60s and previous to, there was no official policy for aboriginal consultation; "[c]onsultation with Dene was the exception rather than the rule." (Ruttan 2007). Management decisions affecting the Sahtu Region were created by outside resource managers. These managers had little firsthand knowledge of the resources and state of wildlife that existed in the Sahtu Region, and yet their decisions had a direct bearing on resource harvesters. Because decisions affecting hunting and trapping were done with little to no consultation, First Nations groups often did not know of the changes until confronted by a government official. Or, as was often the case, the regulations made no sense when applied to a northern context, and were ignored by aboriginal harvesters:

> Federal biologists did research on fish and wildlife, information from which was reflected in regulations, without participation of indigenous residents. The

> indigenous people largely ignored the regulations and continued their traditional hunting and fishing. *Simmons 2007*

This caused much confusion and resentment for the harvesters, who were being told to change their traditional ways without reasonable cause. This was also frustrating for managers, as lack of compliance was putting the managers and enforcement officers in an awkward position. A shift in attitudes between managers and resource users in the Sahtu begun in the mid 60s when field agents were assigned to the Sahtu Region who did were more flexible in their work and respectful of local customs. One of these agents was assigned to the Sahtu region with the Canadian Wildlife Service. Dr. Simmons' example provides a good illustration of how relationships between managers and harvesters developed.

To facilitate living and working in the remote regions and communities of the Sahtu, Dr. Simmons hired an extended indigenous family. This move allowed Dr. Simmons to familiarize himself with the local culture and peoples, and led to a mutual level of respect and appreciation between himself and his associates. In his own words:

> I hired an extended family of indigenous people who worked full-time with me. But I kept the Fort Norman Chief and Council and elders advised of the progress of my work. I also accompanied Fort Norman people on their March hunts of mountain caribou by dog team, and we helped each other with the hunt and with autopsies of the slain animals. *Simmons, 2007.*

The professional and personal relationships that were developed between Dr. Simmons and the people of Tulita had a lasting affect for Dr. Simmons. On the management side, Dr. Simmons was able to learn much from the local people on habitat ranges, wildlife populations and species' habits. Working with the local harvesters allowed Dr. Simmons to perform much broader studies and to catalogue much more of the Mackenzie Valley than had previously been done. These experiences were an important step in understanding and appreciating the value that Traditional Knowledge had for scientific inquiry. It also served to illustrate how management decisions handed down from Yellowknife and other far away administrative centres had a direct impact on local harvesters and how many of the regulations had little rationale when applied to a northern context. For the individuals that Dr. Simmons was working and living with, they benefited from their relationship by being able to express their voice and concerns on resource management through a trusted government field agent. The shared experiences, trust and respect were crucial

factors to improving management:harvester relationships.

Dr. Simmons experiences spent among the Sahtu Dene and the relationships that he developed with the communities were transferred to his later position of Superintendent, Northwest Territories Fish and Wildlife Services. The transferral of experiences and empathies of local First Nations groups to a senior Government position was significant.

> …When I moved into administration, I continued involving the Sahtu people and other indigenous populations in the NWT in wildlife management, such as the re-writing of the Wildlife Ordinance and Regulations, and decisions on hunting areas and sport hunting quotas. My relations with the Sahtu people were excellent. S*immons, 2007.*

The revision of the Wildlife Ordinance Act during 1972-73 provided an opportunity for Dr. Simmons and others to make resource management more user-friendly for the aboriginal harvesters. The consultations done during this time improved relations between managers and resource users considerably. The consultation process was organized and implemented by a well known Sahtu resident, Frank Bailey[26]. Locals felt more assured to have trustworthy people acting on their behalf at high levels in Government, and were keen on contributing their own insights into resource management regulations:

> Wildlife Officers and biologists consulted indigenous people as sources of information as they had more experience on the land and passed on what they learned from their elders. Some of their traditions were reflected in management policies. *Simmons 2007.*

[26] Simmons, 2007, on Mr. Bailey's work: "…the success of the Ordinance consultations is 90% to his credit."

Changes from the Act were immediate and well-received in the communities. The strongest opposition that arose from the changes came from non-indigenous hunters and trappers who felt that their needs were being overlooked. The creation of the Game Advisory Council in 1975 helped to remove these barriers by providing all stakeholders an opportunity to have their needs officially represented on resource management issues. The GAC became the first co-management structure in the Northwest Territories. The GAC promoted an information network between managers and harvesters through the Hunters and Trapper's Associations (HTAs):

> Wildlife officers were instructed to consult the HTAs and to keep them informed about fish and wildlife management activities.
>
> …[A]lthough legally the HTAs could only recommend management practices to the government, the Territorial Government treated most of their recommendations as "decisions" except in the areas of migratory birds and barrenland caribou. *Simmons 2007.*

It is contentious how often and to what extent the Territorial Government did in fact treat HTA recommendations as "decisions". One former GNWT employee noted that decisions were heavily biased in favour of the scientific perspective, and that traditional advice would be implemented only if it supported scientific advice: "[the HTAs] gave advice only. "Biology" or science would trump their advice," (Donnihee 2007). Other interviewees did not repeat this perspective, so it is unknown how common an occurrence the "trump"-ing was. Enough criticisms on state 'authenticity' emerged from the study that support this claim, and it is worthy of follow-up investigations.

Compared to previous relations, this period and the period immediately following marked a growing high point between managers and harvesters. Resource users were now being involved, albeit 'unofficially', in management decisions for the first time since the Government of Canada had intervened in resource management affairs. Management was happy with the positive outcomes that came from working together, appreciated the participation of local harvesters, and enjoyed a reduced cost on enforcement. The benefits of having local individuals involved directly in resource management became a goal of resource managers, with the intent that resource management would become more accepted in the communities and that locals would feel more empowered about resource management. To support this initiative, the government launched an "Assistant Wildlife Officers" program "intended to involve

indigenous people in wildlife management even though they lacked the formal training required of wildlife officers" (Simmons 2007).

While aboriginal harvesters were enjoying added influence in resource management, Dene and Metis were still fighting for greater rights and roles in decision-making. The Dene Brotherhood, Dene Declaration, Calder Case and Paulette Case were all occurring during this time, and were quickly changing the landscape of aboriginal politics and power. As discussed in section II, these political milestones led to the recognition by the Government of Canada that aboriginal peoples were entitled to the lands and provisions given to them under their respective Treaties. Negotiations began occurring throughout the Northwest Territories between aboriginal groups and the Government of Canada to restore these treaty Rights. These negotiations had a large bearing on resource relations.

ii. Negotiations, 1975-1993

"There was some tension during negotiations of aboriginal rights claims. Young leaders sometimes lapsed into posturing" (Simmons 2007). The main reason for this revolved around the close association of harvesting with aboriginal identity and traditional culture. Harvesting played such an important and historic role for aboriginal peoples, and was likely the most contentious issue related to infringing aboriginal rights that its use as a political statement and fighting mark was constantly being sought:

> …because [harvesting issues] were always at the forefront, people always wanted to see these things get into court… [P]eople from across the territories were beginning to see their rights, to reaffirm their treaty rights. You know they always had it…but… the governments never really recognized it, and certainly the courts didn't show that appreciation either, so I think they wanted to see some of these things get into court. *Bayha 2007.*

This made it so that managers and wildlife enforcement officers had to constantly "walk the line" in order to avoid getting themselves involved in larger politics. A good example of this comes from the protest by Metis people over hunting rights. Metis people at the time were not recognized as aboriginal people and so did not enjoy the same harvesting rights as full-fledged Dene.

> At the time wildlife officers tried to avoid the hot politics of Metis claims. Some of our wildlife officers were themselves Metis. So if Metis hunted as Dene for food for themselves and their families and did not waste the animals they killed, and if their hunting did not contribute to the decline of wildlife populations, our officers unofficially ignored such activity. *Simmons 2007.*

Another important case that strengthened aboriginal-manager relations came in the departmental protest against the Migratory Birds Convention Act by Deputy Minister Jim Bourque in 197?. The Act was contentious for aboriginal people because it directly conflicted with aboriginal Treaty Rights that allowed harvesting of migratory birds. Many aboriginal harvesters were using this contradiction as a political statement by harvesting birds in the presence of renewable resource enforcement officers. As a young Dene officer of the time remarked:

> I remember Jim Bourque saying "I'm pulling all my officers. They're not going to be game officers when it comes to the Migratory Birds Convention Act… But you know, right off the bat, we have a deputy minister at the time who was supporting us out in the field who actually publicly states these cases! Now nobody, if you look at anybody in the history of that whole Ministry of Renewable Resources, nobody had any guts to say that in front of anybody- certainly to the federal government, and certainly to all the other wildlife organizations across Canada! So here's a guy that's going to stand up for his own people out in the field, saying this is not right, and we're not going to participate in it if you guys don't change it…So he stood by ourselves. *Bayha 2007*

This action made enforcement much easier in the Sahtu Region, as officers were spared the pressure of arresting and charging community leaders. Enforcement officers took good advantage of this truce by cracking down on illegal poaching done by outsiders. In doing so, they garnered the respect of the locals quite quickly by "[acting] more like protectors of wildlife for the people." Wildlife officers[27] were developing a well-earned reputation as fair enforcers working alongside for the interests of local resource users.

Because resource officers were able to successfully maintain a neutral stance, and because the few times they had been forced to take a position, they tended to favour aboriginal sentiment, relationships with resource managers remained strong despite the hot political climate. The fact that the HTAs and Game Advisory Council remained strong helped to support this relationship. Many of the most respected individuals in the communities were the lead harvesters. These individuals had a good working relationship with local resource officers through the HTAs and GAC. Resource officers working through the GAC, including individuals like Jim Bourque, assisted harvesting needs, particularly with trapping, through which locals could generate an income:

> And I think in those days, resource management people made a lot of programs that assisted the trappers…. [O]rganizations like the HTAs in Deline, or [Dene] society, I think at that time were the main organizations in the community,

[27] Wildlife Officers and wardens are considered as wildlife managers because they influence the management of wildlife habitat.

> because everything was to do with resource harvesting. The groups they made their own decisions…I'm sure Jim had a lot to do with it. He sorta made sure that the wishes of the HTAs, and certainly the community, were a priority. … **Priority was assisting people out in the filed. So they built some pretty good relationships**. Everybody, I'm sure if you mentioned to anybody in the Territoties the name Jim Burke, I'm sure everybody my age and older would remember him. So that created a lot of trust, respect, and a pretty good relation**. I don't think people saw the relation as a relation with the GNWT or the federal government. That was different, that was totally different. They didn't really look at it like that those days.** *Bayha 2007* (author's emphasis)

Another important distinction that gave more credibility to resource management officers and supported strong aboriginal relations was the political make-up of the Northwest Territories.

> Dene and Metis influence in the NWT Legislative Assembly was strong even before aboriginal rights claims were settled. There were Dene and Metis Ministers in the Assembly, and they were highly sensitive to what their constituents advised them about hunting, fishing, and trapping legislation. At least one of my Ministers was a Dene. My Ministers listened to advice given them by the HTAs and by the Game Advisory Council, as well as to my Department's interpretation of that advice. Hunting, fishing, and trapping were issues that received a lot of attention by the Legislative Assembly, and I found the Assembly to be most supportive of our Department's advice… this advice resulted from the melding of traditional and scientific knowledge, primary tools in policy development. *Simmons 2007*

Saying that relations were only good would not be truly accurate. Government workers of any sort were quick targets of discrimination during the negotiation period. All the more so if one were an outsider visiting on business only. An interviewer commented on the dual-role that locals would play when a government worker or outsider came to town, and how locals would put on a "mask" representing the reality the outsider expected to see. In good times, this led to the government official leaving town under positive and potentially false impressions. During bad times, the government worker would leave town feeling downhearted and like an evil enemy of the people.

Perhaps the strongest local resentment was felt not by those who came from the outside to work, but by those locals who chose a career in resource management. These individuals were ostracized by their community for choosing a non-traditional lifestyle that supported the Canadian regime. The viewpoint being that the local renewable resource officer had turned their back on their people in favour of an easy life with the white people:

> Even for myself as a person coming back to this community …People don't recognize you as part of their community anymore. Especially when they know you've gone through formal education and gone to this system that they don't really recognize. And they never have.
>
> You know going to school, becoming a game officer, you know I'm like a police for the government, I'm not a Dene anymore. A Dene in the sense that I'm not part of that resource harvesting system that they don't have anymore. So yes, I ran into many issues at the beginning. *Bayha 2007*

The social resentment given towards young leaders at the time who were seeking a career in resource management was doubtlessly discouraging. The low number of young Dene to go through the professional training programs sponsored by the department of renewable resources is perhaps in part explainable from this social pressure.

Aboriginal resource managers were not the only ones having a difficult time. Within government circles, there was much criticism and a lack of support for co-management regimes in resource management. This was particularly the case in the bureaucratic centres where senior management decisions were being made. With respect to resource management in the Sahtu, this applied to the Yellowknife headquarters. Co-management regimes were considered "time-consuming". When positive results began returning, attitudes were slowly, if not forcibly, changed:

> When my headquarters colleagues learned that the recommendations by indigenous people were practical, and that their involvement ensured eventual approval of the new ordinance and regulations by the indigenous majority, they began to relax into co-management. Some still complain about the financial and time cost of the process, but realise that there would be no turning back. Land claims settlements were on the horizon, and that fact contributed to their feeling that co-management was the future. *Simmons 2007*

Dr. Simmons attributes a lack of "understanding of the history or ethnology of traditional indigenous knowledge" as the leading antagonism. "My colleagues were trained to base wildlife management on scientific biological research. Social sciences were not part of their training nor interest," (Simmons 2007). Yellowknife headquarter staff respected the experience of staff members who had lived in the Sahtu communities and trusted these members to have good judgement. When the land claims were negotiated and came into effect in 1994, co-management was already being practiced in the Sahtu through the GAC and HTAs. The strong relationships that had developed between managers and resource users facilitated the implementation of changes that came with the aboriginal rights settlement. The scope of the changes were such though that the relationships did not survive in their present

state.

iii. Post-Claim, 1994+

The effect of ratifying the land claim on resource management relationships was significant. The perspective is that, up until this point, relations between managers and resource users had been developing positively in a vacuum mostly outside of larger regional and federal politics. This was largely because of the strong relationships that had been established through the informal co-management structure of the HTAs and GAC and thanks to a strong group of government directors and supervisors supporting aboriginal claims and pursuits. This informal arrangement allowed people to work with each other towards a common goal. At the time, the common goal seems to have been one of looking after the needs of local harvesters and trappers. As discussed in section II, the amendment of the Canadian Constitution, the decline in power of the HTAs and subsequent rise in power of the Land Corporations upset this relationship. The link between the HTAs and the GAC had been integral to the strong relationships between managers and harvesters. With this link eroded, there was no longer a foundation upon which the relations could be based. The many co-management boards and renewable resource councils that were established from the land claim were able to maintain the positive relationships with each other, the government, and the public, but the combined strength of the relationships was weakened as a result of being split up. No longer was there one voice of the people being filtered through the HTAs directly to the decision-makers. Nor was it particularly clear who was the decision-maker. What had been a simple and efficient system was now a complicated collection of boards and agencies caught up in an increasingly bureaucratic structure. To make matters worse, it was not uncommon for the boards, Land Corporations and councils to compete for each other for financial assistance.

Relations between resource managers and harvesters were further complicated because of the high expectations of locals following the signing of the land claim. The negotiation process for the land claim had been a long and hard fought-over process that was very celebrated by Sahtu beneficiaries. Many leaders had emerged from the land claim negotiation to champion the cause for the Dene and Metis people. The negotiations had been an exhausting process and many of the leaders retired from political involvement when the land claim was settled. An unfortunate consequence of the retirement of these individuals was that much of the understanding of the claim

was removed from the public sphere, with regards to its legal connotations, pros and cons. Following the claims' implementation, "only a minority, at least in Fort Norman, understood the significance of the land claim settlement," (Simmons 2007). To compound this problem was that no monies had been allotted within the claim for education and awareness of beneficiaries (SLUPB Executive Director 2007). Those beneficiaries who had not been directly involved in the claims were expecting that all of their demands (and benefits!) from the claim would come into effect immediately following its inception. What was overlooked by a lot of individuals was the long and difficult process of getting the boards and councils operating efficiently and finalizing the terms of the land claim, as with the necessary completion of the Sahtu Land Use Plan. When the Boards and Councils were formed and began the long process of fulfilling their mandates, the lack of tangible progress and financial return was regarded as a bit of a disappointment. Because many of the boards had to hire outside professionals until local people could assume those positions, the boards began taking on the appearance of a government agency rather than a Sahtu agency. This was made worse by the fact that the boards were now operating according to a fairly strict bureaucratic form of management. Talks and meetings were now official and were occurring more between different government agencies than with the Sahtu beneficiaries themselves. This was the case with the Sahtu Renewable Resources Board (SRRB), which was created to be the leading institute for renewable resource management in the Sahtu Settlement Area. Public consultations and feedback on resource management issues were reduced because of the of the declining role of the HTAs who, at the same time as they were struggling for attention and finances, were also struggling to fulfill the added responsibilities allotted to RRCs under the claim. As the RRCs were not operating at full capacity, communication with the SRRB was less than ideal. The transformation to an official co-management regime of resource management had been done with a breakdown in communication and personal relations- the two key successes of the earlier HTA/GAC consortium and the two elements that had led to the positive relationships. Such marked the tensions immediately following the signing of the claim.

In a short space of time, the different boards and agencies responsible for resource management have managed to turn things around and 'restore order'. This has in part been a result of hiring qualified people who are known and respected by the Sahtu beneficiaries, and through the chance hiring of very competent and

enthusiastic outsiders who have taken a vested interest in the management and protection of the Sahtu's natural and cultural resources. In all cases, it has required a lot of hard work as relations had to be re-established between the new managers (representing the SRRB, the SLUPB, and the Sahtu ENR) and the various communities (along with the RRCs). This process begun with the re-hiring of a well-known and respected individual to the interim position of executive Director of the SRRB until a permanent replacement could be found:

> The Government had considerable trouble filling the position of SRRB Executive Director with people who were competent and respected in the area. I received an appeal for help in finding a good Executive Director since I knew and was known and trusted by people of the Sahtu, especially the people of Fort Norman. *Simmons 2007*

Dr. Simmons' return to the Sahtu restored some faith in the new system and lent much support and credibility to the professional worker he eventually hired, Mrs Jody Snortland. Mrs. Snortland gained a lot of respect from the communities both professionally and personally by further integrating herself into one of the local communities and families. Mrs. Snortland's strong work ethic and professionalism was also appreciated by the communities who identified her as a serious individual competent enough to be looking after resource issues for Sahtu beneficiaries. Mrs. Snortland's has held the position of Executive Director of the SRRB since Dr. Simmons' intervention and is currently the most senior staff member. Six other well-respected community- and government-elected members serve on the SRRBs Board of directors take part in important discussions and actions of the Board. In 2002, Walter Bayha was hired as the Chairperson for the SRRB, further endearing the agency to local resource users. Mr. Bayha is a long-standing resource manager from the Sahtu, a Deline Chief, and an active advocate of Traditional Knowledge. The quality of workers associated with the SRRB, the consistency at which they work towards Sahtu beneficiary needs, and the feedback that the board provides back to the communities now earn the SRRB respect and creibdility in the Sahtu.

At the same time that the SRRB was being formed, another fortunate hiring occurred for the Department of Renewable Resources by way of Mr. Alasdair Veitch. As an outsider coming into the government position, Mr. Veitch was faced with many of the initial resentments that had developed during the aboriginal rights settlement negotiations from local beneficiaries and resource users. Mr. Veitch's enthusiasm, knack for collaboration, novel project ideas, and ability to roll-with-the punches,

quickly diffused the situation. Within two months of being hired, both of Mr. Veitch's superiors had been reassigned, leaving him relatively free to interpret how to do his job. As mentioned in section 5.2.1, new technologies were emerging as tools for resource managers around this time. Many projects and collaborations quickly ensued that took advantage of these technologies. Previous functional limitations, e.g. few staff to study a massive area, could now be overcome. Among these projects was the launch of a Bluenose Caribou Herd Management Plan and a newly planned Sahtu Geographic Information System project (later to be known as the Sahtu GIS project). Both of these projects were very large, complicated and required as much professional and local collaboration as possible to succeed. Both projects also resulted in the generation of new knowledge that touched to the heart of scientists and harvesters alike. The Bluesnose Caribou study involved much local consultation to ensure that the Caribou were treated well and not disrespected. Local knowledge of caribou ranges, numbers and habits were also of high input. When the study revealed the presence of an unknown herd and calving ground, the surprise of local harvesters was transformed to respect. The GIS project revealed the wealth of traditional information and cultural activity across the Sahtu Region by Dene and Metis. Mr. Veitch and his team took an aggressive stance against their Yellowknife supervisors to do the GIS 'their way'. This meant higher risk, more community visits and consultations, and much collaboration with the SRRB, RRCs and SLUPB. The Sahtu Atlas, published in 2005, is the public outcome and available as a resource tool for all Sahtu residents.

For building relations with resource users, the most rewarding project and successful one to date is not an impressive scientific study but the annual community school visits:

> We also now spend a lot of time and effort working with the staff and students in the Sahtu's five schools. We not only promote science and resource management as a possible career for students, but we also highlight the research we're doing on locally important species … and emphasize how that information is then used by the communities, the Land Corporations, the SRRB, the SLUPB, and the NWT Protected Areas Strategy to make informed and important decisions that will affect the Sahtu for generations yet to come. The schools project has become one of our key projects and we've completed five years of it to date and plan many more for the future. It's one of the most rewarding and satisfying aspects of my job now, and my colleagues involved in the project all agree. It's a lot of work, but has big payback! *Veitch 2007*

The variety of projects initiated by the Sahtu ENR are notable for each involving close collaboration with other local professionals, agencies and the public. Perhaps most importantly, they include and impact multiple generations. As such, resource

management activities in the Sahtu are very well received by its residents, many of whom are active or passive participants in the projects themselves, and all of whom have an opinion. The staff's enthusiasm for a healthy ecosystem and future wildlife is passed on through the many consultations. By all accounts, residents now maintain an active interest in project developments and help to work with the Sahtu ENR where possible.

iv. Summary

The foundations have been set for a new form of manager:harvester relationships, and the hard work of developing the networks and garnering support has already been done. Little over ten years has passed since the ratification of the land claim and it is too early to judge how effective these relationships have become or if the present relations are better and more effective than relations before the land claim. The previous regime begun from a level of poor relations and developed into something positive and strong thanks to close personal ties of community and government leaders. The present regime has a stronger and more developed base but has had a shaky start. The stronger political power and authority that beneficiaries now have under the claim removes the largest criticism of the earlier regime- that there was too little control by the locals. Optimizing that control remains a challenge. Ultimately, time will tell how the new regime of resource management shapes relations. It seems clear though that relations between resource managers and harvesters have come a long way and have improved steadily.

d. Traditional Knowledge then and now

The inclusion and respect of traditional knowledge is of vital importance to Dene and Metis residents of the Sahtu. For a resource management system to be successful, it must be able to incorporate this aboriginal perspective into its decision-making processes or account for it as well as possible. Failure to do so is equivalent to disregarding local aboriginal advice altogether. When it comes to relationships between resource managers and harvesters, the proper inclusion of traditional knowledge in decision-making is essential to maintain the respect and trust of the aboriginal stakeholders. Section 5.2.3 looks at how the use and role of traditional knowledge has changed in resource management decision-making.

i. Early use of Traditional Knowledge

As quoted earlier, “[c]onsultation with Dene was the exception rather than the rule” (Ruttan 2007). The Sahtu Region, however, seems to have been fortunate in attracting open-minded government workers who respected local aboriginal knowledge and embraced the opportunity to learn from them. This early respect was generally received after having spent time in the field living and adapting to aboriginal lifestyles and practices. Sahtu-biologists like Mr. Ruttan and Mr. Simmons quickly learned to appreciate the wealth of knowledge accumulated by traditional resource gatherers who had grown up and lived off of the land. A lifetime of experiences and observations of specific ecosystem characteristics and workings was far in excess of the little scientific data that had been gathered in northern regions. The early relationships were very much a courting between two different world views- that of the scientist and that of the harvester. Both individuals brought their perspectives to bear on a problem or situation and, with time, grew to except, learn from, respect and appreciate the perspective of the other. Within the Sahtu, the development of relationships has thus favoured the use of traditional knowledge. As this next example illustrates, the different perspectives and knowledge areas of TK were often used to complement science and to ‘problem-solve’ for gaps of knowledge. In such a manner, biologists would apply TK to scientific problems and then ‘back-track’ to find a scientific explanation:

> my colleagues and I often used Dene knowledge to guide us in our research and interpretation of research results. For example, the Mountain Dene of Fort Norman (Tulita) intimately knew the movements and behaviour of the caribou that ranged along the Moose Horn (Redstone) River Valley and into the Barrens in the area of the Canol Road. I studied the movements, health, and calving potential and success of these caribou, actually confirming what the elders had told me about these subjects. With their approval and guidance, I accompanied the Mountain Dene by dog team on their caribou hunts along the river in March. They helped me do the autopsies that I performed on as many caribou as I could during this hunt. Thanks to the Mountain Dene, my samples of this caribou population are probably the largest on record. These data were used in governing our caribou sport hunting management policies, and were a response to concerns expressed about the annual hunt of pregnant caribou. *Simmons 2007*

In the case above, the Mountain Dene readily gave the TK knowledge to Dr. Simmons, and the study results helped to protect the pregnant caribou that the Mountain Dene were so concerned about.

I have already talked about how Dene and Metis were consulted in later resource management decisions and activities through their respective HTAs and the GAC. The

unofficial co-management practices that developed during the mid-70s led to a good use of TK. Based on the strong relationships that had developed between managers and harvesters, this system seems to have worked well. TK would have therefore been considered, if not implemented, for resource decisions as in the example above. The creation of the "Assistant Wildlife Officers Program" in the mid 70s helped to further incorporate TK, as local harvesters became employed as resource officers (see section 5.2.1) and were able to apply their TK directly to the challenges that they faced, including recommendations given to their superiors.

The exception is that TK was always complementary to science and was only 'incorporated' into scientific decisions. That TK is only a complementary perspective to science is echoed in the following, "I know of no situation in my research experience in which Dene knowledge of the environment was "more valid" than scientific knowledge," (Simmons 2007). If TK is never the prime factor used in decisions, its role becomes one that is subservient to science. This was supported by Donnihee's earlier criticism that TK amounted to "advice only" and would be "trumped" by science should the two perspectives differ.

Resource managers recognize and account for this discrepancy by looking at the context within which TK is used and applied. Donnihee also recognizes this discrepancy, saying:

> …we need to recognize that there are areas where TK simply has nothing to offer. TK has a context and content. It does not extend to areas such as complex engineering issues. A lot of what we do in relation to sensitivity to local knowledge has to do with listening, explaining, communicating and how we decide. Even when the content of TK is not relevant, we can still ensure that the way we do things is sensitive to this local context. *Donnihee 2007*

Where Donnihee differs from the norm is that he considers the flip-side of TK's relevance; "[t] here are decision-making contexts where [TK] **must** be given weight equal to science, such as wildlife management,"(my emphasis). In this case, TK should be "secured and considered along with western science and engineering," (*ibid*).

Practitioners of TK are more likely to agree with Donnihee about the ability of TK as a singular tool for management. For example, Mr. Bayha sees TK as a form of knowledge that is equal and similar to western science. He illustrates the rational nature of TK with the following example on caribou:

> Let's talking about caribou for instance, all the behaviour, anything that you want to learn about caribou you're going to have to observe. You can't go up there asking caribou questions and getting answers, you know. And that' how the

> information is gathered from any of the studies that I know of from caribou. The dene people have been observing caribou for the past 10,000 years, maybe even longer than that. So what better knowledge to have, even if a lot of it is done in storytelling. There is information, there is rationale for those stories that they have. *Bayha 2007*

In this argument, TK is a system of knowledge built up through long-sequence observations and social experimentation. The methodologies of a harvesting society versus those of a scientist doubtlessly differ, but the principle of analysing through rationale and sensory observation is the same as scientific investigation. Another example illustrates this point:

> I mean it's totally different from what you learn in school, but the end result is the same thing. When I started looking at weather, one day, I was sitting with my grandfather on the lakeside here and there was fog. And he was sitting there, having his tea and smoking his pipe, and he was talking about the weather like a person, a character that behaves in a certain way, you know. "This is the way he behaves."… he was talking about what the weather's going to do. And then when I was taking meteorology in school, especially in school, I started connecting. I said, "Well that's what my grandfather was telling me, why in the world didn't I listen to him a little closer?!" **Because it's the same thing, it's just said in a different manner**. *Bayha 2007* (my emphasis)

Seeing the close connection between science and TK is easier for Bayha because he has grown up with both systems- as a boy getting a traditional education living on the land and being taught by his grandfather, and as a young man getting a formal education in resource management at established Canadian colleges. The difficulty for Bayha of using TK as a decision-making tool is not in the compatibility, or context, but in translation. Where academic and traditional experiences overlap, Bayha feels that the use of TK is easy and appropriate:

> In fact that's where it works the best. When you're talking about resource management, you're talking about all sorts of things. You're talking about trees, you're talking about wildlife. Talking about wildlife biology, forestry management… Those areas are very very easy to translate.
>
> …A big part of me would like to bring the TK back to become a major part of decision-making. In fact, in most cases, that's the only thing we've got anyway. The only thing we've got a challenge with today is, is that we don't have it written down… Today we have to put those things in perspective. We need to give a good rationale to it and put it in its place… this is conservation education.

Fast-forward to resource management today, and "putting things in perspective" is still a large problem.

ii. Present use of Traditional Knowledge

There was widely accepted agreement among the managers interviewed that TK is beginning to get the attention that it deserves. The signing of the land claim

followed by the Mackenzie Valley Resource Management Act (1998) made the use and consideration of TK a legal reality in the Sahtu for all resource management decisions. These events have resulted in a dramatic increase in community consultations on TK. The frequency at which TK is being studied and 'used' is for some a concern because the information is, in many cases, still being inferred according to the researchers needs and not from the context and rationale from which it was provided. Western scientific perspective, political mandates, and economic deadlines still take precedence over TK perspectives. The rationale behind Traditional Knowledge is often lost in translation. Most of the time, researchers collecting information are genuinely interested in the information and its application. The loss of rationale is something that occurs inadvertently when inexperienced researchers interpret the knowledge according to their outside perspective and apply it to a specific issue.

There are also logistical problems of using TK that are not considered by outside researchers. TK varies from community to community and from person to person. Depending on who is consulted, researchers are likely to get a very different response. If only one individual is consulted (which is all that is needed under legislation), the researcher might come away with a very limited interpretation of a topic or a wrong interpretation altogether. Broader consultations are not as common because they cost a lot of money. The social nature and world perspective behind TK make it difficult for researchers to apply their own standards to the quality of information being received. In other words, there are no institutionally recognized criteria on what is quality TK. This applies equally to Sahtu beneficiaries.

Traditional Knowledge is something that is learned not through words and lectures, but from life experiences. Very few Sahtu beneficiaries are dependent on harvested resources for their livelihoods compared with 30 years ago. This learning begins once children are weaned from their mother's breast milk and continues for the rest of their lives.

> Traditionally, Grandparents would raise the children while the parents were gathering resources. This allowed for knowledge to be passed directly from the elder teachers to the next generation while they were still growing and learning about the world. *Bayha 2007*

Grandparents, or elders, no longer play as important a role in the upbringing of Dene and Metis children. Parents are around more, and aren't going out on the land, and kids have to stay in school. The loss of culture and knowledge being passed on to

the next generation is evident in the inability of many Sahtu youth to speak their traditional Dene language. As remarked by Bayha, “anybody that’s younger than 12 would barely speak the language anymore.” The lack of language skills is so significant because many elders only speak Dene. Not being able to understand the ‘teachers’ of TK is devastating from a learning perspective and more so culturally. Many traditional Dene laws are also being forgotten or discarded. For example, youth no longer respect other people as much (especially strangers), which was an important tradition in Dene society. “And that has broken down a lot over the years, because **the traditional lifestyle is not there anymore**” (*Ibid*) (my emphasis). If the TK is not being properly taught or experienced by the younger generations, the implications for resource management are significant.

The common solution heard by resource managers with regards to development concerns is that the developments must have “monitors on this project,” (Bayha 2007).

> …traditionally everybody was a monitor, because they were out on the land… we don’t have that anymore. We don’t have people out and living off of the land and being stewards of the land, protectors of the land, so that’s the reason they come out with these monitors. And yet, they’re not the same as the people out living on the land. They probably don’t know much, they probably know much about certain areas, but we have to train them a little different

A better solution being proposed by Bayha and others is for the creation of a (traditional) Knowledge Centre- an institute where TK can be stored and studied by experienced users of TK, where the “interpretations and rationales…would make sense.”

iii. Summary

The use of Traditional Knowledge seems to have changed considerably in the Sahtu with respect to the frequency through which it is considered and how often locals are consulted. In some cases it has reached an information overload with no discernible format for how to process the information into a correct rationale and interpretation. Between resource managers and resource users, the use of TK has not altered much. Managers must now incorporate TK into their considerations, but this was being done informally before the land claim. Western scientific perspectives are still used as the default form of knowledge, and TK must reflect those principles and adhere to the status quo. From the given perspectives, probably the most important development in TK over time has been the changing legitimacy of TK as practiced by

its users, and the changing relationship that Sahtu Dene and Metis are experiencing with TK. This is an internal cultural struggle that must be addressed by the practitioners of TK in order for TK to maintain its growing status. The increased use of TK in policies and in research is transforming TK into an acceptable and valid form of knowledge in the public and academic eye. This is a slow and steady process, which can easily reverse if the information gathered or its sources are shown to be false.

When it comes to the incorporation of Traditional Knowledge into resource management, it has had a very unbalanced evolution. On the one hand, it is being used more frequently than before and with improved regard. On the other hand, its practitioners are fading. For Traditional Knowledge to maintain a positive relationship with resource management, a compromising balance must be found and this discrepancy fixed. Failure to do so will ensure that TK never amounts to more than a 'complementary' source of info that must legally met.