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**ADDRESSING NORTHERN DECISION MAKING CAPACITY:
THE CASE OF HEALTH ADVISORIES AND THE LABRADOR INUIT**

by
Christopher M. Furgal

A thesis
presented to the University of Waterloo
in fulfillment of the
thesis requirement for the degree of
Doctor of Philosophy
in
Planning

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ABSTRACT

The purpose of this study is to increase our understanding of decision making processes and decision making capacity at the community level. It studies the decision making processes and components of decision making capacity within Inuit communities and organizations and links in the surrounding decision making system by investigating the issue of contaminants in country foods in the community of Nain, Labrador. It identifies the components related to community decision making capacity in order to do be able to identify existing capacities and areas of needed attention. It is argued that a community's decision making ability is characterized by a set of components, and that communities exhibiting strength in a number of these components are flexible, and able to adapt and make decisions more effectively in complex, rapidly evolving environments.

To investigate the selected case, a conceptual and analytical framework was developed from theory and practice in the fields of information and knowledge systems, community organization and planning, and benefit and risk management. From the conceptual framework, sub-components were developed in an analytical structure through which the research examined the decision making cases and components of community capacity. Document review, key-informant interviews, open-ended survey interviews, and participant observations were utilized to collect qualitative information on the decision making context, and three case decisions related to contaminants in country foods.

The six components of community decision making capacity (institutional, organizational / coordinative, decision processes, participatory, information / communication, and resources) synthesized from these areas of literature were not mutually exclusive. The results show the links and areas of overlap between them and their impacts on the community's ability to make decisions and act in the decision making environment. This thesis shows how a level of competency in a number of these "capacity areas" supports the community's efforts towards a greater degree of self-determination. The framework developed and utilized in this thesis is assessed, and recommendations to strengthen the community's decision making capacity, and for future research in this field are made.

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Research Department
 Labrador Inuit Association
 Nain, Labrador A0P 1L0
 Tel: (709) 922-2847
 Fax:(709) 922-1040
 Email: natsiq@cancom.net

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CHAPTER 1

Introduction

Health and Environment Decision Making in the Canadian North

Through the ongoing processes of colonization and consequent acculturation, the state of aboriginal societies in Canada and their relationships with mainstream Canadian society have evolved, either over a period of time or very rapidly into a state of relative “turbulence”. In this sense, “turbulent” environments refer to those which are characterized by such things as high rates of change, multiple simultaneous changes and problems, and uncertainty and complexity of related problems (Emery and Trist, 1965, Trist, 1980; Morley, 1986). The frustration of aboriginal peoples in dealing with these complex and rapidly changing environments has resulted in incidences such as those experienced at Restigouche, New Brunswick, as well as Oka, and Okwasasne, Québec (Government of Québec, 1991). In the field of environmental health they have been seen in such cases as the fear and confusion experienced in relation to the reports of PCB contamination in mothers’ breast milk in Broughton Island, N.W.T. (Wheatley and Wheatley, 1981) and mercury in fish in Salluit, Nunavik (Jetté, 1994). Often these “crises” situations are related to a lack of genuine involvement in decision making as aboriginal groups attempt to gain control through asserting force against those with decision making power regarding their affairs.

The predicament of the Canadian North, referred to here as the Arctic and sub-Arctic regions, is that of the latest stage in the history of North American colonialism (Brody, 1978; Dacks, 1981). The processes of “encapsulation” by a dominant culture and the problems faced by “marginal” cultures such as northern Canadian natives are typical of vulnerable societies in “frontier” locations (Swift, 1978). Because of the high costs and risks associated with northern development, research, and industry, the Canadian Arctic and sub-Arctic has been the last of these “frontiers” to be developed in North America (Brody, 1978). This delayed encroachment is due in part to rapidly changing and dynamic northern physical, socio-

economic, cultural and political environments which present various constraints and opportunities.

The issues confronted by indigenous peoples, public officials, researchers, and decision-makers in these “turbulent” environments cover many policy areas and are all related through a basic incapacity to deal with recurring problems and opportunities (Keith and Neufeld, 1988). In this sense of the word, “capacity” refers to a group’s or individual’s ability to perform, respond, adapt, act or react, or choose to remain inactive in response to changes in their external environment. The definition intended here refers to the ability to do so in the present as well as the future through being able to take advantage of and create opportunities, while maintaining some sense of direction and control. In order to do this, an individual or group must be able to mobilize the necessary resources from either internal or external sources. “Decision making capacity” can be characterized by systems of knowing, organizing, deciding and implementing.

The loss of decision-making power and breakdown of northern traditional food collection and consumption patterns has resulted in inter-generational discontinuities in these rapidly evolving communities and seriously threatens their social cohesion and well-being. Many northern communities face a complex situation of inter-related issues including unemployment and underemployment, inadequate health care, substance abuse, domestic violence, inadequate housing, and a lack of appropriate education and training (e.g. Rees, 1988; Grondin et al., 1994). Specifically, the role of public health and its relationship to the environment is central to the well-being of indigenous peoples and communities. Issues related to environmental health are especially complex when considering the dynamic nature of the northern cultural, social, economic and physical environment. With the devolution of decision making power on many issues to regional and local governments fast becoming a reality, policies and organizations are in a state of flux regarding their roles and responsibilities. Conventional approaches to decision making regarding these issues have been associated with a lack of cooperation, coordination, and communication as well as an

increasing sense of distrust, ambiguity and isolation among indigenous people in the North (e.g. Peters and Légare, 1998).

The Country Food and Public Health Problem

Traditional food is the anchor to cultural and personal well-being. It is essential to the nutritional and social health of indigenous individuals (Kuhnlein, 1992; Condon et al., 1995). Despite the vital importance of traditional food sources, significant changes in their collection, use, consumption and attitudes towards these food sources have occurred over the past two decades (Berkes and Farkas, 1978; Kuhnlein, 1992, Kinloch et al., 1992; Condon et al., 1995). Much of this change can be attributed to the reported presence of industrial pollutants in the Arctic ecosystem (Kinloch et al., 1992; Jetté, 1994).

In the past, the Arctic has been viewed as a region free from much of the environmental damage seen at lower latitudes due to industrial activity. Recently, significant levels of persistent organochlorines and heavy metals have been found in northern ecosystems and people. Public discussion and policy decisions have often overlooked the health, economic and social benefits of a traditional diet and lifestyle in the North (e.g. Kuhnlein, 1989, 1990; Kinloch et al., 1992; Jul et al., 1994). A lack of communication between researchers, public officials and community residents has been seen in the North in the past (Usher et al., 1995). As a result, significant changes in traditional cultural practices have been seen in aboriginal populations based on the perceived risks of human contamination through country food consumption (Wheatley and Wheatley, 1981; Dewailly et al., 1994; Jetté, 1994). These changes result in significant impacts to physical, social, and economic health of individuals and communities.

Despite advances in our knowledge of the risks imposed by environmental contaminants and the benefits provided by traditional foods, attempts to manage the balance of benefits and risks associated with country foods in the Canadian Arctic has proved difficult and at times contentious. Many have reported the difficulties experienced with past application of conventional models to decision making and communication of issues surrounding the

presence of environmental contaminants in northern country foods (e.g. Wheatley and Wheatley, 1981; Archibald and Kosatsky, 1991; Wheatley, 1993; Moffat et al., 1994; Usher et al., 1995; Peters and Légare, 1998). These inadequacies include: a lack of community participation in the decision making process; the difficulties of applying current risk assessment methods to northern cultures; the inability to deal effectively with uncertainty in current risk management frameworks; a lack of cultural context in the setting of exposure standards for aboriginal groups; a variety of issues related to challenges in risk communication; and issues regarding jurisdictional and inter-organizational coordination and communication. Therefore, the issues surrounding future decision making processes regarding the benefits and risks related to environmental contaminants in country foods present various challenges and opportunities.

A central theme underlying these problems is the capacity of a community to act or make decisions in “turbulent” environments. Community, in this sense, refers to a group of individuals involved in or affected by a decision making process. The ability to adapt, evolve and succeed in making effective decisions and respond to, or take advantage of, circumstances in the contextual environment is dependent upon a number of factors. Actors in the decision making system must first understand the decision making processes followed, the factors influencing these processes, and identify the components related to their capacity to make these decisions. Only then, can communities existing in these environments identify areas or components needing attention, and those strengths that already exist, in order to begin to enhance their capacity to make decisions to better deal with the issues they face and take advantage of, and create opportunities in the future.

Goals and Objectives

The purpose of this study is to increase our understanding of decision making processes and decision making capacity at the community level. It studies the decision making processes and components of decision making capacity within Inuit communities and organizations but also makes links with non-Inuit, and external actors in the surrounding decision making system. It identifies the components related to the capacity to make decisions in turbulent

environments, in order to be able to identify existing capacities and areas of needed attention when dealing with community decision making issues. It is rooted in the notions that individuals have a right to be involved in decision making processes that affect them, and that they have information gained through personal experiences that are valuable to problem solving scenarios and that decision making processes benefit from their involvement.

It is hypothesized that a community's decision making ability is characterized by a set of components, and that communities exhibiting strength in a number of these components are flexible, and able to adapt and make decisions more effectively in complex, rapidly evolving environments.

Specifically, the objectives of this study are to:

1. To elucidate the components of community decision making capacity in turbulent environments;
2. Develop and assess a framework to investigate community decision making capacity in the context of public health advisories in the Canadian North;
3. Make recommendations for future applications of the designed framework.

Organization of the Thesis

This thesis is organized into 6 chapters describing, and assessing the components of community decision making capacity through a review of case examples of decisions made within the decision making system of Labrador. Chapter 2 describes the decision making system of Labrador, its history and present state as a turbulent environment. Chapter 3 describes and justifies the methods used to collect data on the decision making system and three case decisions (health advisories), and to analyse that information in relation to a proposed conceptual and analytical framework. Chapter 4 reviews the literature relevant to environment and health decision making in "turbulent" environments, focusing on the issue of country foods and environmental contaminants. A conceptual and analytical framework to be used in the study is developed through this review. Chapter 5 presents the results of the data collection and analysis, a brief introduction to the decisions reviewed, and the data crossing

the six areas of community decision making capacity as outlined in the conceptual and analytical framework. In Chapter 6, a discussion of these results is presented, conclusions are drawn, a review of the framework and its utility in this and future studies, and recommendations for supporting and enhancing the community's decision making capacity are provided along with recommendations for future research in this area.

CHAPTER 2

Labrador as a “Turbulent” Environment

Introduction

This chapter summarizes the history and contemporary state of major contextual forces acting on the environmental health decision making system in Labrador. It is argued that the political, socio-cultural and economic changes, as well as ecological complexities and uncertainties, have resulted in a very difficult context within which to make decisions. This chapter goes on to characterize this decision making context as a “turbulent environment” (Trist, 1980; Morley, 1986). For Mulvihill (1990), this has important implications for the adaptive design of institutions and organizations for decision making.

Uncertainty in the Canadian North

The Canadian North has been characterized by a certain degree of uncertainty and change with respect to its political, social, economic and environmental systems not seen in other regions of the nation. In this case, the North here is referred to as the Arctic and sub-Arctic regions of Canada covering those areas north of 60° in the Northwest Territories and Nunavut, north of 55° in Québec in the settlement region of Nunavik, and the coastal zones of the Labrador north coast predominantly inhabited by the Innu and Inuit. The Labrador north coast is characterized by similar biophysical conditions to more northerly regions. It experiences many of the same climatic and environmental conditions, and is home to a predominantly aboriginal population (Figure 2.1).

The systems designed to deal with decision making and policy issues for the North exhibited significant gaps and faced many challenges in the past. In the field of environmental health, examples include “mercury scares” in Sugluk and Salluit, Nunavik (Wheatley and Wheatley, 1981) and the PCB scare in Broughton Island, NWT (Wheatley, 1993). Similar difficulties are discussed by Usher et al. (1995). Four major, interrelated forces add to contextual turbulence in

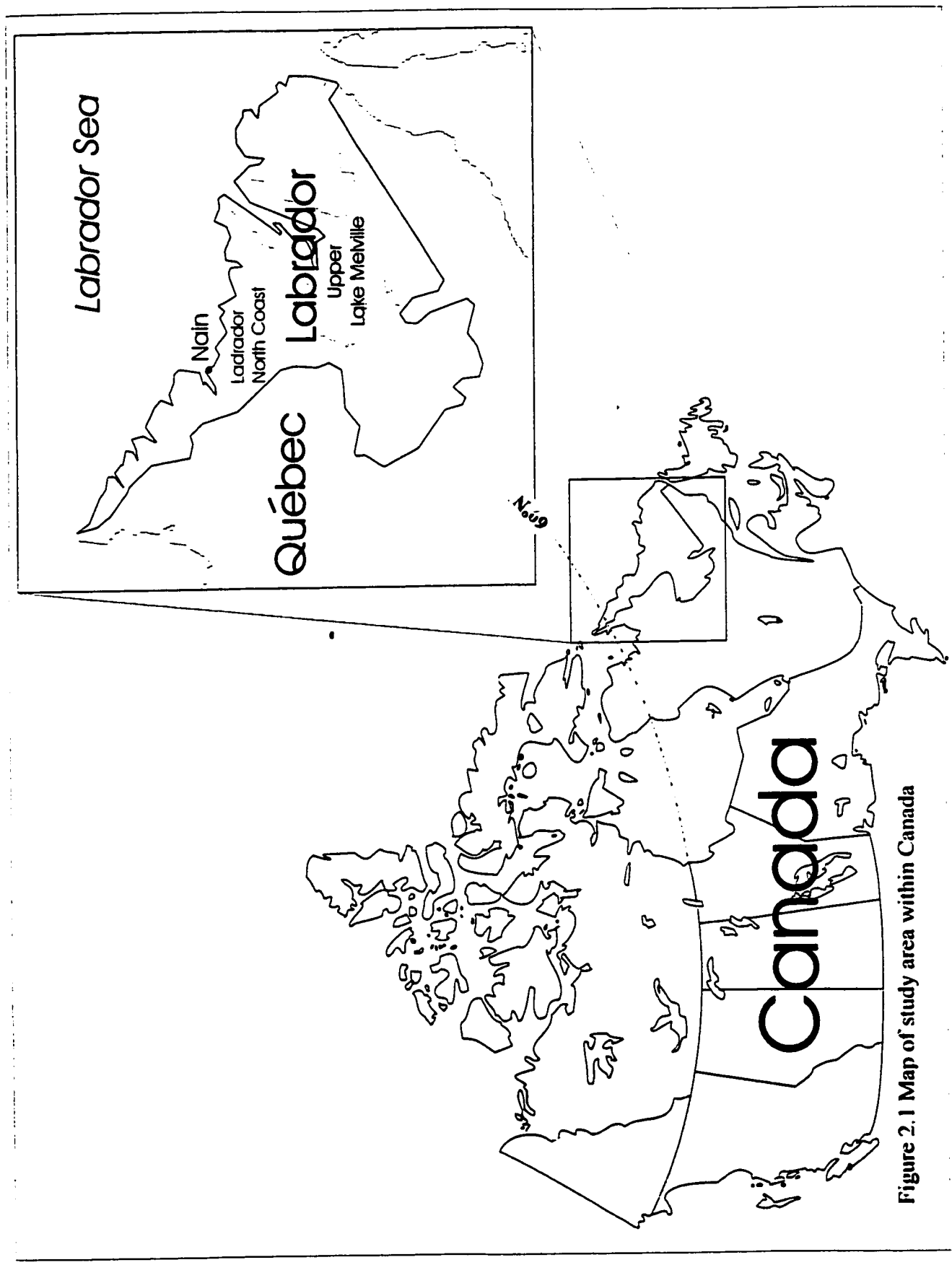


Figure 2.1 Map of study area within Canada

Labrador and pose difficulties for environmental health decision making processes. They are listed below and are traced and discussed in this chapter.

1. Fundamental political changes have taken place and will continue to unfold in this region in the very near and distant future. The nature of this evolution and magnitude of the changes make it very difficult to predict the future state of the roles and responsibilities of actors and organizations involved in making decisions in this environment.
2. Social evolution and transformations within this society over time have resulted in a society that is increasingly pluralistic.
3. The northern Labrador economy is characterized by uncertainty and change. Historically based on subsistence activities, the regional economy is now a mix of both market and traditional, small and large scale initiatives. However, a strong dependence on some subsistence activities and products is still a reality for many individuals today.
4. Northern Labrador ecological systems, like many others in the Canadian North, are not well understood. Scientists are learning more about the sensitivities, vulnerabilities and uncertainty inherent in these systems. However, information to date lags behind the challenges faced.

History and Contemporary State of Decision Making Context in Labrador

Social and Political Development and the Labrador Inuit

This section begins with an overview of the social and political development in this region. This history is important to the discussion of the factors adding to the contextual turbulence as many of these developments influence the decision making relationships to this day. The history of aboriginal settlement and European interaction prior to 1949 is different in Newfoundland and Labrador from other regions in Canada. This legacy still very much influences the provincial administration today (Tanner et al., 1994; Williamson, 1994). The

institutional framework of relations between the groups and the province is unlike any other in the country (Tanner et al., 1994). These differences are based on the fact that the province holds no special status for aboriginal people. The special role assumed by the province of Newfoundland emerged from conditions prior to their joining in Confederation in 1949 (Tanner et al., 1994). The issues that aboriginal people in this province face are very similar to those elsewhere in the country, but the approach to dealing with them is quite different.

Life in Labrador has been well documented since the 18th Century through the writings of Moravian missionaries. Early Inuit lived in small scattered groups, were mobile and semi-nomadic following the seasonal migrations of wildlife. At this time the only discernible political unit was that of the winter household including the extended family. The leadership of this household (*angajokok*) was usually held by a skilled hunter (Williamson, 1994). According to Taylor (1974) leadership was weak and undeveloped at the settlement or community level. Beyond this family unit, leadership was exercised by a skilled hunter in group activities such as whaling (Tanner et al., 1994; Williamson, 1994). Along with these skilled individuals, shamans (*angokok*) had some authority in the small settled groups directing spiritual practices and providing healing services. According to Tanner et al. (1994) institutions of group leadership, dispute resolution and decision making were flexible. Following the Treaty of Paris and the Royal Proclamation of 1762 a number of specific efforts were directed towards addressing the issue of aboriginal people in Newfoundland. The Moravian Missionaries arrived in Labrador and came in contact with the Labrador Inuit.

Inuit gathered in missionary settlements as missionaries tried to make “ideal” Christian communities. Emphasis at this time was on congregation participation in the affairs of the church and the community. The congregation was divided into “choirs” according to age, sex, and marital status. This designation then decided one’s role in both church and community life (Tanner et al., 1994). Missionaries appointed chapel servants, usually men of strong and good character, with this group being augmented in 1901 with an elected council of Elders (*angojukKauKattiget*) (Williamson, 1994). This council of men resolved all social issues and disputes in the community, and imposed a code of behaviour with the support of the

missionary (Kleivan, 1966; Peacock, 1947; Williamson, 1964). This was the first form of organized self-government for the Inuit, however, even the elected council had to be church members in good standing and decisions were referred to the missionary for approval on all occasions. The Moravian Mission controlled the social, political, and economic life of the Inuit for 200 years as they were the liaison with the outside world and controlled trading in the region between 1771 and 1926 (Tanner et al., 1994). Missionaries operated their own stores and kept traders away from the settlements citing the “Lands Grants” issued under the Royal Proclamation by the King of England as authority allowing them control over 100,000 acres of land surrounding the settlement. The missionaries encouraged subsistence activities, however forbid all traditional spiritual practices. Moravian Christian teachings were introduced into the communities along with western medicine and Germanic music, transforming the culture into what some refer to as “Moravian Eskimos” (Ben-Dor, 1966; Kennedy, 1988). This remained the case until the first world war.

Throughout the 19th Century an increasing number of Europeans came to Labrador. By the beginning of the 20th Century, greater than 30 % of the population of northern Labrador were Europeans (Tanner et al., 1994). Many European men married Inuit women, adopted the Inuit culture and ways, and learned to speak Inuktitut (more common north of the settlement of Hopedale). In successive generations many married within their own groups and formed something of an endogenous culture. They were referred to by the Inuit as “*Kablunagajuit*” (Kleivan, 1966). Unlike the Inuit, Tanner et al. (1994) describes sharing among *Kablunagajuit* as mainly within their own close relations, and reports that they accumulated and saved capital. However, the fundamental values of these two groups were essentially the same. In many ways, the equal dependence on the land brought the Inuit and *Kablunagajuit* together.

The turn of the century also saw the arrival of other organizations in northern Labrador. Originally concerned with Newfoundland fishing settlements, the International Grenfell Association extended their health and social services to the Inuit and Innu of Labrador. Also, as of 1926, the Missions leased their trading rights to the Hudson’s Bay Company (Tanner et

al., 1994; Williamson, 1994). Fur incentives were implemented and the diversified economy of the Moravians was discouraged. The following decades were very difficult times for the Inuit of Labrador (Brice- Bennett, 1994a,b). In 1942 trading was eventually turned over to the Northern Labrador Trading Operations of the Newfoundland Government. Following the union of Newfoundland with Canada, this agency was brought into the department of welfare and made the Division of Northern Labrador Affairs (DNLA) and the focus was switched from economic development to the provision of social services (Tanner et al., 1994).

According to Tanner et al. (1994) the 1948 Terms of the Union of Newfoundland and Canada contains no reference to aboriginal people. This is despite the fact that the Proceedings of the National Convention included a series of statements by delegates concerning the assumption of federal responsibility towards aboriginal people in both Newfoundland and Labrador. During the 1947 negotiations, a joint committee discussed the issue of Indians and Inuit and concluded that if Union were to occur, they should become federal responsibility as they are in the rest of Canada. At the time however, aboriginal people were recognized, in policy, as equal citizens with regards to their legal capacity and access to programs and services in Newfoundland. Both governments thought that putting them under the jurisdiction of the Indian Act or other federal policy would implement certain changes representing a form of regression in their status compared to other citizens in the province. According to Tanner et al. (1994) and others (e.g. Moss, 1988; Tomkins, 1988) it would have been possible to extend federal jurisdiction to aboriginal people however in the end, the decision to not do so was made. This created confusion and uncertainty over constitutional powers to define "aboriginal people" and legislate for them. Tanner et al. (1994) however, point out some contradictions; the province of Newfoundland continued to put some restrictions on aboriginal people (e.g. alcohol consumption). Following union with Canada in 1949, and the divisional adjustments made for provision of services in northern Labrador, all policy decisions regarding political, social and economic development were made by the Director of the Division of Northern Labrador Affairs and the Director of Medical Services for the International Grenfell Association (as the International Grenfell Association was now providing health and some socio-economic development services to the communities of the north coast on behalf of the

province) (Jeness, 1965). Political power of Inuit was restricted solely to community affairs, settling disputes of shared resources, family disputes, and infractions against church regulations.

In combination with the other changes in the world, Labrador experienced an influx of “outside world” influences during the early 1950s. When Newfoundland joined Canada this brought statutory payments to individuals along the coast, representing an increase in the amount of available cash in the settlements. With the construction of a military base at Goose Bay, Labrador, wage employment became more accessible as well. Many Inuit and *Kablunagajuit* moved south for temporary work, returning home with ideas of materialism and individualism not present in the settlements before (Brice-Bennett, 1986). Confederation also removed the responsibility of schools from the Moravian Missions and put them under the Provincial Department of Education. The number of “outsiders” employed by various agencies grew, adding to the rapid increase in the rate of change in these northern settlements. The 1950s brought more Americans and Canadians to the north coast with the construction of coastal radar sites. The prospect of wage employment and access to the market economy led some Inuit to abandon their traditional hunting and fishing activities and replace them with temporary construction and labour positions. A return to these traditional ways, following the completion of construction projects, proved very difficult for some. Perhaps the negative social impacts of this influx of new influences on the northern settlements was off-set by the positive economic benefits however, Peacock (1947) argues that this period transformed many into a “semi-dependent” labour class and this experience with the world outside northern Labrador was more disorienting than empowering for most.

To maintain the policies towards aboriginal people held by the government of Newfoundland prior to their union with Canada, and to provide some financial assistance for provision of services to these groups, special transfer agreements were made with the federal government (Tanner et al., 1994). However, to maintain the provincial policy position of equality for all residents, no programs were targeted towards specific individuals. Instead, programs were administered on a community by community basis (Tanner et al., 1994). The federal

government assumed 2/3 of the costs for Inuit welfare, health (services still provided by the International Grenfell Association) and educational services and full costs for hospital services and a program for the diagnosis of tuberculosis (Tb) (Tanner et al., 1994). As these agreements targeted communities, albeit with a majority aboriginal population, they created problems for those aboriginals moving out of the traditional settlements and into areas such as the larger communities of Upper Lake Melville (Happy Valley Goose Bay, Northwest River, Mud Lake). Some of the larger communities provided greater access to wage employment, however aboriginals relocating to them would not have access to the assistance programs under federal and provincial funding. Further constraints on service delivery resulted in a number of forced relocation events in northern Labrador in the mid 1950s.

Because local agencies were unable to provide needed services to Inuit in some of the more northern settlements the Moravian Mission, the International Grenfell Association and the Newfoundland Government decided to close the settlements of Nutak and Hebron in 1955 (Brice-Bennett, 1994a,b). It was believed that the out-migration of individuals from Nain moving to the south for wage employment could be off-set with relocation of individuals from the more northern settlements (Government of Newfoundland, 1956). The forced relocations of residents from Nutak and Hebron, in 1956 and 1959 respectively, resulted in social upheaval for those being moved and for those in the receiving communities of Nain, Hopedale and Makkovik. The details of these events are discussed by Brice-Bennett (1994a,b). The combination of increasing Newfoundland bureaucracy in the 1960s and resettlement has had severe impacts on the culture of northern Labrador communities and increased the sense of powerlessness and dependency of individuals in the Inuit communities along the north coast (Williamson, 1994). An increase in alcohol abuse, family violence, homicide and accidental death was seen in the region (Tanner et al., 1994).

The coming of the 1970s saw community and town councils incorporated in northern Labrador under the provincial Municipalities Act. Acting under the authority and direction of the province, the Town Councils were comprised of elected individuals of any descent and held office for four years in the community. They assumed some of the responsibilities

previously held by the Council of Elders. The Inuit in communities, such as Nain, agreed to a council (in 1970) because they saw it as an instrument of local government and a supplement to the council of Elders, however, the Elders saw it as a replacement of their roles in the community (Williamson, 1994). Brantenburg (1977) argues that this transition resulted in a loss of Inuit hegemony in many of the northern communities. Following community incorporation, voluntary community participation all but ceased and residents came to expect and demand that the Town Council look after all community services (Williamson, 1994). Community councils and provincially run schools increased the provincial government presence in the communities, resulting in a sense of loss of power, and decreased importance of the Elders. As a result, the responsibilities of the Elders were restricted to church matters at a time when the church was quickly losing influence and power in the community. At the same time, many *Kablunagajuit* were valued for their cross-cultural abilities and therefore recruited as middlemen in many businesses and economic ventures in the community, ultimately increasing their influence in community affairs. By the early 1970s approximately 75 % of all full time work with Euro-Canadian agencies were filled by *Kablunagajuit* (Williamson, 1994). The increase in wage employment opportunities saw the increased dominance of *Kablunagajuit* in the regional economy (Brantenburg, 1977).

Since the Indian Act (1972) was not an issue in Newfoundland and Labrador, the “White Paper” did not have the same effect for aboriginal people in this province as in other regions of the country. However, it did cause controversy leading to the formation of other aboriginal political organizations for the first time in Newfoundland and Labrador (Tanner et al., 1994). On the advice of the Northern Québec Inuit Association, Labrador Inuit began the process of forming their own aboriginal organizational arm of the national Inuit organization, Inuit Tapirisat Canada. Initial discussions between community councils and Elders revolved around which communities were “Inuit”. Rigolet and Postville were not originally included in this group and there was some recognition that Inuit from the Upper Lake Melville area, but originally from the north coast mission settlements, needed representation as well. Against the advice of the Québec Inuit and Inuit Tapirisat Canada, the Inuit Elders insisted on the inclusion of the *Kablunagajuit* in the membership of the organization. In October 1972, the

Labrador Inuit Association was formed and later incorporated under the laws of Newfoundland in 1975.

The Labrador Inuit Association (LIA) played a regional role, leaving community matters to the councils and committees, and the affiliates of LIA as they formed. Their early agenda was to meet government on regional issues concerning fish and game access and management, health and education (Williamson, 1994). The organization experienced some resistance from the more southern communities (as they were being persuaded to join the Newfoundland and Labrador Native Association at the time) and provincial departments (such as the Northern Labrador Services Department - formerly DNLA) implementing the provincial federal funding agreements, as they perceived LIA as a hindrance to carrying out their role. Eventually, LIA gained respect in the communities as they were able to lobby to bring some attention and programs to the communities they represented (Nain, Hopedale, Makkovik, Postville, Rigolet, and Inuit living in the communities of the Upper Lake Melville area). With the support of the communities, they began to focus efforts on land claims negotiations (Haysom, 1992). Meanwhile, their affiliate organizations furthered the efforts of the Inuit and *Kablunagajuit* in the region.

Confusion over responsibility for aboriginal peoples in the province of Newfoundland and Labrador led to the development of the federal - provincial funding agreements. With support from these agreements the International Grenfell Association continued to provide health and hospital services on behalf of the province to the north coast communities until 1981 (Baikie, 1990). Over time the province assumed more responsibility for the delivery of health and social services and the International Grenfell Association was eventually replaced by the Grenfell Regional Health Services Board. The board consisted of an international group of representatives from the original association, that were now responsible to a regional board. Baikie (1990) argues that the regional board assuming some aspects of the socio-economic development roles that the International Grenfell Association filled were poor substitutes. Health facilities and health services became uncoordinated and out of touch with each other. The Labrador Inuit Association tried to negotiate for control of health programs that other

aboriginal groups in Canada were directing for their people. With funding from the federal government, LIA set up the Labrador Inuit Alcohol and Drug Addiction Program (LIADAP). The health affiliate of the LIA, the Labrador Inuit Health Commission was then established in 1985 when funding was secured for a community health representatives program (Baikie, 1990; Williamson, 1994). In 1989, LIHC gained control of the administrative duties associated with the non-insured health benefits program which included the delivery of a community health representatives program (CHRs), interpreter / translator services for medical purposes, medical transport services, ophthalmic services, drugs, medical and surgical supplies.

The Labrador Inuit Development Commission was established in 1982, and mandated to promote the use of traditional Inuit resources and economic activities, and to seek new opportunities for employment and development in Labrador. Although short on capital and somewhat restricted by provincial regulations they have had some success in counteracting the declining sealing and fishing industry through a mixture of small scale land and marine based ventures (Hall, 1990; Williamson, 1994). Other affiliates established to further the interests of Inuit and *Kablunagajuit* of the region included the Torngasök Cultural Centre, the Torngat Regional Housing Association, and the OKalakatigêt Communications Corporation.

The 1974 Royal Commission on Newfoundland and Labrador highlighted the shortfall of federal and provincial funding agreements in providing services to aboriginal people in Newfoundland and Labrador. As a consequence, there was an increase in financial support as well as Inuit involvement in the administration of these funds for the first time (Tanner et al., 1994; Williamson, 1994). Communities were to apply for funding to a board which, for the first time, included Inuit representation. In reality though, less than 5 % of the funds were not pre-committed and the provincial government retained their veto power. Many recommendations for projects from Inuit were subsequently declined on many occasions (Lee and Williamson, 1983). Since 1972, the number of provincial agencies and departments involved in the administration of funds earmarked for aboriginal people has increased, however, aboriginal organizations in the province have become far more active (Williamson,

1994). Regardless, the provincial policy of administering services to all individuals as equals remains, and is a contentious point. Funding is now administered by a management committee comprised of community mayors, representatives from the provincial and federal governments and agency representatives. The provincial government retains veto power, and LIA has observer status on the committee. However, noted by Williamson (1994) and Tanner et al. (1994), the aboriginal organizations and provincial and federal governments are operating in a financially and constitutionally constrained system leading to frustration on all fronts. Some have argued that funding increases have not met inflation increases in this region and therefore the services provided fall short of the community needs (Tanner et al. 1994).

Today many of these issues persist in the relationships between actors in this decision making system. It is important to consider this history in any analysis of the current context. A more specific discussion of certain areas of the contemporary state of the decision making environment is presented below.

Political Change

Much of the political history as discussed in the earlier section of this chapter is still relevant today. The increase in social and economic issues facing the Labrador Inuit has made it a receptive field for federal and provincial support efforts to meet community needs. However, the result has been an increased dependence on outside authorities and lack of Inuit involvement in decision making processes (Payne, 1977; Brody, 1975; Dacks and Coates, 1988).

“It is not necessarily the change itself that threatens aboriginal communities but the loss of control over the change” (Usher, 1993: 116) (as in VBNC, 1997)

“The greatest problem the Labrador Inuit have is that we are treated as if we do not exist. When our rights are recognized we are treated as we have no Aboriginal rights. When we are recognized as having any rights they are minimized.” (LIA, 1996)

Since its incorporation in the laws of the province of Newfoundland and Labrador in 1975, the Labrador Inuit Association has struggled to gain recognition (Haysom, 1992). As a regional affiliate of Inuit Tapirisat Canada, the Labrador Inuit Association remains the political voice for the approximately 4800 Inuit and *Kablunagajuit* in the region. Fifty percent of these individuals recognize themselves as Inuit while the others recognize themselves as *Kablunagajuit* (Tanner et al., 1994; VBNC, 1997). Approximately 55 % of the membership live in the communities along the north coast while the majority of the remainder reside in the communities of the Upper Lake Melville area (Happy Valley-Goose Bay, Northwest River and Mud Lake) (Tanner et al., 1994; Williamson, 1994; VBNC, 1997). Greater than 50 % of these living outside the north coast communities recognize themselves as *Kablunagajuit* (Tanner et al., 1994). The goals of the organization are to promote and protect Inuit aspirations, involvement, access, culture and language, traditional rights, general welfare, well-being, health and education, and respect the rights of *Kablunagajuit* in the organization and to advance and negotiate the settlement of land claims for the Inuit and *Kablunagajuit* of Labrador (LIA, 1996). LIA and its affiliates operate as the largest administration in the region in order to achieve these goals. They must cooperate with communities and community councils, and organizations to deal with issues of regional relevance to their membership.

The organization faces a number of complex issues in the region today. Definition of organization membership, concern over the loss of language and culture, and a lack of appropriate education and training for current and future employment are among others discussed later in this chapter. These are all ongoing issues adding to the context of decision making for the Labrador Inuit today (Haysom, 1992; Tanner et al., 1994; Williamson, 1994; Brice-Bennett, 1994a; VBNC, 1997).

Since the public announcement of potential benefits gained through the proposed settlement of the Labrador Inuit land claim with the provincial and federal governments, a large number of applications for membership have been received by the organization from both inside and outside the Labrador Inuit Settlement Area (LISA) (Haysom, 1992; Williamson, 1994). Since

services are currently delivered on a community basis and not specifically targeting aboriginal people, and the governments interact with the aboriginal organization as a corporation, there is no need for accurate membership numbers. However, given the actual potential claims to status, land and rights being negotiated for, the question of membership has become a very controversial issue, especially for those residing outside the LISA in the Upper Lake Melville communities, an area with a large *Kablunagajuit* population (Tanner et al., 1994). To not include these individuals in the membership would create a very unstable political situation in all communities (Tanner et al., 1994; Williamson, 1994).

Many of these struggles internal to the region, are being dealt with through the negotiations for settlement of a land claim and self-government with the provincial and federal authorities. The LIA has attempted to gain some form of recognition and official power over issues faced within communities as well as those faced at the regional level, through the land claims process (Haysom, 1992). Beginning with the Labrador Inuit land use and occupancy study ("*Our Footprints are Everywhere*") in 1975, the commencement of negotiations in 1980, the placement of the Labrador Inuit claim on the government short list in 1984 and tripartite negotiations since 1989, this process has dealt with overlapping claims between the Inuit of Labrador and Northern Québec (Nunavik), as well as the Innu and Metis to the south. It has been subjected to the confusion, and lack of political will, in assumption of roles and responsibilities between the provincial and federal governments (Haysom, 1992). The complex nature of land claims and negotiations has forced LIA to negotiate and operate within the rules of the dominant society requiring a high level of outside legal and technical assistance. This has caused some internal pressures between staff and left some Inuit feeling marginalized and removed in the process (Williamson 1994). More than anything else this quest for self-determination through negotiations, during a time when many other daily issues face the residents of the communities, has driven the ethnopolitics of the region (Haysom, 1992; Williamson, 1994).

The devolution of authority from federal and provincial governments to the regions also creates uncertainty in the current context. In Labrador, the provincial government still holds

much of the decision making power. Some examples exist of the federal government supporting aboriginal organizations in assuming more responsibility through these tripartite arrangements. This process of negotiating for recognition and assumption of responsibility by the Labrador Inuit has shown promise in the delivery of some services to communities in the region. The transfer of administrative responsibilities for the delivery of the Post Secondary Education Support Program and Non-Insured Health Benefits Program to LIA and its affiliates have seen marked improvements in their delivery and acceptance (Haysom, 1992; Tanner et al., 1994). Haysom (1992) argues that the number of organizations and vehicles for service delivery in the region is a testament to the commitment of Labrador Inuit to achieve their goals as Labrador is the “committee capital” of the world. Nain alone has over 3 organizational committees and 6 sub-committees. With a population of approximately 1200 individuals, some sit on up to 6 committees. However, problems occur as this stretches the human resources in the community beyond limits and often there is confusion between committees as a number compete for the same funds, or many residents defer community involvement to those active individuals and “the committees” (Haysom, 1992). However, many of the problems contributing to the turbulence in the current decision making arrangements and relationships still rest in the current and future lack of definition of roles and responsibilities and recognition for Labrador Inuit in this system.

The nature of the relationships between the federal and provincial governments and aboriginal organizations has not evolved past the struggles illustrated by the federal - provincial funding agreements. The provincial fear is that of being left with full responsibility for aboriginal people in the province as in the past (Tanner et al., 1994). There now exists a patchwork of agreements, some programs administered by the federal government, some by the province, and in some cases by aboriginal organizations, with most supported by some federal funding, and targeted to aboriginal people specifically, or in part (Tanner et al., 1994). Some of the federally administered programs are for aboriginal people regardless of location, while some provincially administered programs are marked for communities where aboriginal people are in a majority, but the programs are not exclusively targeted at aboriginal peoples (Tanner et al., 1994). The Province sees itself as financially and legally unable to assume responsibility

for aboriginal people, stating that they lack the constitutional competence to legislate for aboriginal people and financial ability to establish programs to deal with the issues that confront them. According to Tanner et al. (1994), aboriginal groups in Newfoundland and Labrador feel that the province's inability to deal with them and unwillingness to do so conflicts with their rights as aboriginal people and precludes any possibility of aboriginal self-government beyond the municipal level.

Another example of this lack of definition in roles and responsibilities can be seen in the review of environmental health advisory processes conducted in Newfoundland and Labrador by Peters and Légare (1997). The number of organizations involved, overlap of organizational mandates, lack of funding for inspection services, expertise and facilities, and lack of clear jurisdictions causes confusion. Additionally, transitions in federal and provincial government inspection departments leaves aboriginal organizations playing a secondary role in a process which strongly affects their membership (Peters and Légare, 1997).

These processes for land and resource acquisition, and recognition of rights and responsibilities are taking place in one of the most economically challenged provinces in the country. Added turbulence in this system has been provided by the 1993 discovery of a large deposit of one of the highest grades of nickel ore in the world, 35 km southwest of the community of Nain, Labrador. The deposit sits in an area of land being officially claimed by five aboriginal groups as well as the province of Newfoundland and Labrador (VBNC, 1997). It occupies a significant amount of land, rich in natural resources, and represents a great potential to an otherwise devastated economy (as discussed in a later section of this chapter). In addition to the assertion of Inuit rights through land claims negotiations, the Labrador Inuit Association, and the other organizations and residents of the region are involved in Environmental Assessment and Impact and Benefit Agreement negotiations attempting to define and divide the potential benefits and define roles and responsibilities for mitigation of impacts of the proposed mine development and operation.

Due to these processes of negotiation, their potential impact, and the struggles within the region, a great deal of uncertainty exists in this decision making environment. Land claim negotiations are unresolved, which will have significant political impact in defining roles and responsibilities for aboriginal people and governments in Newfoundland and Labrador in the near and distant future. The agenda and timelines regarding the processes of devolution of authority to the regional level, and in some cases, to aboriginal organizations, is unpredictable. The prospects of some form of self-government for aboriginal people in Labrador adds further uncertainty to the political environment. This makes it very difficult to predict the final state of the actors and their positions in any decision making context regarding environmental health or other issues. Also, there exists the realization that the signing of an Agreement in Principle, and its ratification and implementation are simply the beginning of very long processes of defining roles and assuming responsibility at the regional level (Haysom, 1992) as is seen in the cases of the James Bay Northern Québec (1976), Inuvialuit (1989) and Nunavut Agreements (e.g. Jacobs and Chatagnier, 1985). Larger national and international initiatives regarding aboriginal people and the North may also have an impact on the future state of the decision making environment in Labrador, and in some cases already have. Such things as the Royal Commission's Report on Aboriginal Peoples' thrust for healing and recognition for devolution, large scale national cooperative research programs (such as the Eco-Research Program and Northern Contaminants Program focusing on health and the environment), and international initiatives both with a research focus (such as the Arctic Monitoring and Assessment Program) and political thrust, such as the initiatives of the Arctic Council, could, through circumpolar cooperation, illuminate issues and have some impact on the relationships between aboriginal and non-aboriginal actors in these decision making systems.

Social Evolution

The social evolution of Labrador has been characterized by the movement of non-aboriginal people into the region and their influence on Inuit culture and lifestyles. Gradual and sometimes rapid changes have been documented since the arrival of the Moravian Missionaries, European settlers, Hudson's Bay Company and provincial agency

representatives and have seen an increase in the number of outside individuals in positions of political and economic power in the communities and region. Along with this, the Labrador population is increasing at seemingly alarming rates. At one time, the growth rate of Nain was thought to have been the highest in Canada. Hall (1990) reports an increase in population of 8.5 % for 1980-81, while Williamson (1994) reports an annual growth rate of 4 % for the community. As well, the growing percentage of youth in these communities is similarly disproportionate to other regions in the country. Thirty six percent of the population are reported to be under the age of 14, while 58 % are reported to be under 25 years of age (Statistics Canada, 1992). This young, rapidly growing population is experiencing, and expressing concern for the social change. Participants at a local workshop on Social Change and Environmental Health in the region expressed concern for such things as division within communities, loss of respect for elders, increasing drug, alcohol and substance abuse, family violence, teen pregnancy, increase incidences of disease including sexually transmitted diseases, problems related to prostitution, racism and a lack of community cohesion and community spirit (LIA, 1996). The transitions over time in the communities of the north coast have left them in a state of poverty and powerlessness. As communities have modernized and the Moravian church influence has decreased, symptoms of cultural breakdown are on the rise (Tanner et al., 1994).

According to Tanner et al. (1994) and Williamson (1994), the social indicators in Labrador show suffering from poverty, powerlessness, loss of culture, social dysfunction, and an inability to influence or benefit from development within their territory. Further social breakdown has been caused by forced relocation in the late 1950s which has not been publicly addressed to this day. A link between increased dependency and loss of self-esteem and an increase in social problems in these communities is discussed by Brice-Bennett (1986).

The communities of the north coast face high youth suicide rates (2 times the national aboriginal average and 5 times the national average (Baikie, 1992)), low education (42 % of individuals older than 15 years old have less than a grade 9 education compared to 16.2 % and 20.4 % for Labrador and the province respectively (VBNC, 1997)) and high unemployment

(discussed in next section). The social breakdown has affected mental and physical well-being through alcohol related accidents, substance abuse, family neglect and interpersonal violence in an area with high social work case loads and low resources. Poor nutrition is further hindered by lack of financial resources to collect nutritionally superior country foods (VBNC, 1997). Residents also express a concern over loss of language and culture as a result of the rapid changes taking place.

Until the 1960s Inuktitut was the first language spoken by most Inuit of northern Labrador. The language was taught and supported by the Moravian Missionaries. Unilingualism was promoted among Inuit and bilingualism among *Kablunagajuit* (Williamson, 1994). By the 1960s, through the transition from Moravian to provincial educators, the emphasis on Inuktitut had been lost. Elders insisted that children be taught English in school in order to deal with the changes they saw taking place inside and outside their communities and region. By the end of the decade, through the removal of children from the community to residential schools for upper grades, and forced English education in which Inuktitut speaking was restricted inside and outside of the classroom, a generation of youth had been educated unable to speak Inuktitut and therefore communicate with their elders (Williamson, 1994). With the implementation of upper grades in the communities, and some Inuktitut classes required and offered through the current educational system, there is an attempt being made to retain some of this language in the region. However, it is estimated that approximately 15 to 20 % of the population between the ages of 20 and 30, and 10 to 15 % under the age of 15 in Nain, are able to speak their aboriginal language (Williamson, 1994). Also, there exists little incentive to learn Inuktitut among youth as its link to future employment opportunities is unclear as English is required in all businesses with an attempt to maintain Inuktitut speaking ability being made in few (Tanner et al., 1994).

The social problems in this region are accentuated by housing and service delivery issues. In many of the communities shortage of appropriate housing is a problem. The individual / room occupancy rate in the communities of the north coast are nearly twice the provincial average (0.9 / room as compared to the province 0.5 / room) (VBNC, 1997). It is reported that 50

families in Nain need houses, while 50 % of the homes in Hopedale are in need of repair (Urban and Rural Planning Division, 1997).

The tensions between traditional lifestyles and what is the reality today in a more “southern” culture and society make this region a more dynamic setting for decision making as time progresses. Regardless of influences of outside culture and society, this region and its population are still distinct from other regions in Canada. It will continue to be defined to some extent, by the resident aboriginal population. The decision making system for environment and health issues must recognize and consider the implications of this rapidly changing pluralistic society. It must be able to consider and adapt to these local circumstances in methods of consultation and decision making processes.

Economic Uncertainty

Prior to Confederation, the economy of the Labrador coast was diversified, based on a mixture of trading, hunting, trapping and fishing activities during Moravian times (Williamson, 1994). Communities pooled resources in times of hardship and in some cases resources were shared between communities. As permanent residency in communities slowly became a reality the nature of the economy changed. Easier access to equipment (snow machines etc.), meant an increased dependence on some form of wages in order to maintain and operate these machines that quickly became integrated into the hunting society (Williamson, 1994). Over time this increased the need for money, and this was met by an increase in the price for seal pelts. The sale of food, fishermen’s unemployment insurance in the winter, and the expansion of accessible wage employment through the construction of fish processing plants met some of the financial needs of the communities. However, a number of rapid changes in the nature of the economy have now left the communities of Labrador in a very uncertain state.

The sudden collapse of the cod fishery in the mid 1960s and destruction of the sealskin market in the late 1970s created a crises for those dependent upon this sector, and thus increased the reliance on wage employment (Tanner et al., 1994). A previously healthy industry such as seal netting along the coast is reported to have disappeared practically over night (Williamson,

1994). Many that could not earn enough money harvesting wildlife resources, doing part time work, or qualify for unemployment insurance, experienced real poverty.

“Once to be Innu or Inuit meant a proud birthright and implied a lifestyle that involved activity on the land as hunters, fishers, and trappers. Now to be Innu or Inuit generally means to be poor and dependent on social assistance; to live from day to day locked in a community because with little cash income it is virtually impossible to hunt or fish; to have a low level of education and very limited prospects for finding wage paying work; to suffer from alcohol abuse, poor health, strained family relations and low self-esteem.” (Brice-Bennett, 1986)

Country food has become increasingly difficult to get for many as they cannot afford the maintenance costs on equipment necessary to hunt and fish. However, a significant proportion of the total economy of households and communities is still accounted for by the traditional economy (Wenzel, 1981; 1986 in Condon et al., 1995; Rees, 1988). Forty percent of households in Nain report getting “most” of their food from the land, while 40 % reported getting “some” (CRS, as in VBNC 1997). Also, the increased cost of equipment has decreased the access to country food for many (Williamson, 1997). This has continued to increase the gap between the poor and those able to get by in these communities.

The commercial caribou hunt, started by the Labrador Inuit Development Corporation (LIDC), brought a great sense of pride and social well-being to the communities of the north coast. Harvesting of the George River caribou herd provided employment for 70 hunters, haulers and processors from the Inuit communities. However, this hunt has been on hold for a number of years now since required structural repairs to the processing plant have not been completed. After the fall of the cod fishery attention was turned to salmon and char species. By the mid 1980s fishermen started noticing smaller sizes and numbers of char and salmon in the areas they were harvesting. Subsequently, the Federal Department of Fisheries and Oceans bought back salmon and char fishing licenses from north coast fishers in 1993. This left 19 licensed fishers in Nain (Williamson, 1997). However, a number of small scale

initiatives have been developed by the LIDC including the sharing of shrimp licenses providing some employment and income for coastal fishers.

“The economy of the north coast is based mainly on the inshore fishery and also depends on government funding. The meager income from both provides neither a stable economic base nor an adequate standard of living.” (Hall, 1990: 23)

The economics of the north coast go far beyond the difficulties exhibited within the provincial-federal funding agreements (Haysom, 1992). The current situation is that these communities are small, economically depressed, remote and politically marginalized, and a growing population is adding to the unemployment base in the region. Newfoundland and Labrador is the weakest performing economy in the country and is characterized by high rates of unemployment, and dependency on primary production, and federal transfer payments. Local economies are based on a number of government programs, subsistence use of local resources and a limited number of permanent jobs (Tanner et al., 1994). Seasonal unemployment in some communities reaches as high as 90 % (personal communication, HRDC rep., Nain, 1997). Most of these communities are threatened by economic and environmental change beyond their control.

The recent boom of non-renewable resource discovery and its potential impact on communities is large. The mean number of stakes claimed in previous years has shown promise for potential employment and development in the region (mean 1990-93 - 1708; 1994 - 20,788; 1995 - 230, 842; 1996 - 5,633; 1997 - estimated 5,000) (VBNC, 1997). However, the success of such a project is strongly influenced by provincial politics, world market prices, and aboriginal land negotiations. Because of overlapping interests and provincial policies towards aboriginal people, this is a very complex and unpredictable economic scenario. This rapidly changing economic environment has had profound implications on the social fabric of many northern communities (Condon et al., 1995). Decision making regarding environmental health issues in this environment is exceptionally difficult due to the inter-related nature of the

economy and potential environmental and social benefits and impacts of large scale economic development.

Northern Ecological Environment

Northern climates are characterized by low average temperatures, minimal precipitation, difficult and unstable seasonal ground conditions due to the presence of permafrost, and a brief summer season. Labrador is at a transition between Arctic and sub-Arctic climates. Prevailing arctic air masses create a harsh climate for a more southern latitude. Intense low pressure weather systems dominate during the fall and winter seasons and bring gale force storms. The Labrador current, and associated salinity, strongly influence the climate and biology of the region. This combination of influences creates conditions permitting the survival of both arctic and boreal life (Williamson, 1997). The Labrador coast is home to large populations of marine life, while the interior is inhabited by, or in the path of, migration routes of a number of large and small terrestrial mammals and avian species (e.g. Banfield, 1974; Erskine, 1977; Lien, 1985).

Northern ecosystems are sensitive and poorly understood natural systems differing significantly from their southern counterparts. They are characterized by fewer longer-lived, fat rich species, occupying places in shorter, simpler food chains than those described in temperate and tropical systems. Although plentiful in numbers in some cases, these organisms have adapted to occupy positions in a very fragile ecosystem. These climatic, physiological, and ecological characteristics result in comparatively longer residence times for industrial pollutants reaching this system than in more temperate regions of the world (CACAR, 1997). This adds to the complexity and unpredictability in the inter-relationships between development, humans and the environment in the North. It is therefore difficult to make predictions of impacts (direct and indirect) on northern systems.

Our knowledge of arctic and sub-arctic ecosystems is not as advanced temporally and spatially as our ecological understanding of temperate and tropical systems. Reports exist from local or traditional ecological knowledge (e.g. Doolan, et al., 1990; Furgal, 1994; LIA,

1996) of changes in these systems not documented in the scientific literature. In fact, little long term data exists for many of the species resident in the North today. It is therefore imperative that environmental health decision making systems be able to adapt and incorporate all available information on these complex systems. As stated, the inter-related nature of northern residents and the environment, through a continuous pattern of renewable resource use, adds complexity to the decision making processes surrounding environment and health issues in the North. Recognition and understanding must be gained of the important and dynamic role the environment and its resources play in the physical, social, cultural, and economic health of northern people and communities. Decision making arrangements and processes must be able to respond to the unique nature of the social and biophysical environments that exist. They must be able to deal with a variety of variables adding to the contextual uncertainty within which decisions are made. These variables include information gaps, variable information sources, and a complex and unpredictable ecosystem which includes a unique and dynamic relationship with humans.

Contextual Turbulence

In addition to the contextual forces outlined above, the nature of the decision making system in Labrador contributes to the existing uncertainty. The current drive for self-determination by aboriginal groups and devolution of authority to the regional level by the federal government, and future of land claim settlements and self-government negotiations are creating new roles and responsibilities for existing organizations and individuals. As well, these processes are creating new organizations, institutions and mandates for environment and health issues. Research, wildlife management, public health, social services, and economic development organizations and committees currently share the environment between governments and aboriginal organizations. The nature of these actors and their relationships change, and will continue to do so, unpredictably. Overlapping mandates and functional gaps exist, and these will change with time. Additionally, it is expected that it will take some time for this system to settle and mature. Currently, this decision making system is in a state of adaptation and transition.

Trist (1980) defined four types of organizational environments. The first three are “placid random”, “placid clustered” and “disturbed reactive”. In the “placid random” environment goods and bads are randomly distributed and the response tactic or best strategy to engage in this environment is to do one’s best on the local level. In the “placid clustered” environment the field is still relatively unchanging, but the goods and bads are clustered. The response tactic in this environment is to find the optimal location within the environment. In the “disturbed reactive” environment the environment itself is dynamic. Other organizations wanting the same optimal location in the environment are present and the response tactic becomes one of building power to make and meet confronted challenges with resources and abundant expertise. Everything eventually gets “centralized” in this environment (Trist, 1980). Trist (1980) argues that as the environmental fields become more inter-connected and joined, it creates more mutual causality. As the system becomes more densely populated, the strains more frequently become enmeshed in one another. Therefore, the context penetrates the organizational relationships, creating an environment of “turbulence” (Trist, 1980). These three previously described states have been replaced by the “turbulent” environment according to Trist (1980). Dynamic properties now arise from the environment itself as well as the actors (Trist, 1980). In the “turbulent” environment competing organizations act independently, in many directions, producing unanticipated and dissonant results and consequences. This increases as the environment becomes more densely occupied, creating “contextual commotion”. Morley (1986) states that these “turbulent” environments are characterized by such things as accelerated rates of change, an increasing scale of disturbance, increasing unpredictability of events, a continuing sense of crisis, frequent confrontations with problems of high complexity, resulting in an increased amount of time spent dealing with unintended effects of previous actions. It is experienced as a loss of the “stable state” (Trist, 1980).

The Labrador environmental health decision making system, its institutions, actors and organizations, in its present and changing form resembles Trist’s (1980) description of a “turbulent environment”. It is characterized by many of the aspects discussed by Morley (1986). Trist (1980) advocates “continuous learning” and “adaptive planning” and an

increased “response repertoire” for actors in turbulent environments. Morley (1986) argues that these environments require new decision making processes involving adaptive systems based on collaboration of a wider range of interests to confront these system-wide problems and to generate social learning. Organizations must follow a process of continuous self-evaluation and modification and need “redundancy” or “reserve capacities” to provide flexibility and innovation (Emery, 1976; Trist, 1980). All of these recommended components of organizations and actors, and processes recommended to deal with the contextual turbulence in the environment, add to their capacity to navigate and cope in such circumstances. However, organizations, actors, and processes are not always designed with this context in mind, as they adapt or evolve to this state.

This chapter presents information describing the characteristics and trends in the political, socio-cultural and economic systems and ecological complexities in this region. It shows how these attributes create a challenging context within which to make decisions. These attributes are considered in the collection and analysis of data in this thesis as described in later chapters.

CHAPTER 3

Methods

Introduction

This thesis adopts a qualitative, inductive approach to inquiry (Creswell, 1994). It is exploratory in nature and investigates dimensions of decision making capacity at the community level. This has required the development of a detailed understanding of a single decision making system, the actors involved, their roles and responsibilities, and the changing nature of these components within the greater external environment. A qualitative study allows this investigation into topics where little previous work has been done, and yet there exists a need to explore and explain phenomenon and develop theory (Morse, 1991). To conduct this research a case study approach was adopted (Creswell, 1994; Yin, 1989). The decision to investigate a single community was determined by the detailed data needed to gain an understanding of the context, actors and inter-relationships involved. Within the selected community, the thesis examines selected cases, or events, in order to gain insight into the dimensions of decision making. While the results of case study research are often limited by the contextual environment of the case examined, it allows the researcher to investigate a specific series of questions or factors in detail and attempts to gain a comprehensive understanding of the factors and relationships involved (Yin, 1989). Further, the results may have wider application than the case study examined.

Role of the Researcher

The thesis research required a period of field residency time and was aided through the establishment of relationships with key members of the community. Relationships between the researcher and members of the community were formed over a period of two years beginning in December 1994. During this time the researcher was involved in related work as a research assistant with the Eco-Research project in Labrador (Avativut/Ilusivut Final Report, 1999) investigating the risk management aspects of food chain contamination in northern diets. This work required some field research in the selected community prior to the development of this thesis. The relationships established during this period, and prior

knowledge of the region, were vital when developing and proposing the current thesis. A draft proposal was developed and reviewed by the regional Research Steering Committee of the Labrador Inuit Association before the field research was conducted. This allowed the researcher some initial feedback and suggestions for adaptation to the field conditions. Knowledge was gained on the potential for support or challenges that might be faced in conducting such work in the community, what documentation and individuals would be accessible during field time in the community, and acceptable approaches to recruit community organizations and individuals into the research project. Upon arrival in the community, a final proposal was prepared and a research contract was signed with the regional Inuit organization. This agreement was guided by the regional Ethical Guidelines for Research established by the Labrador Inuit Association. The relationships with key individuals having extensive knowledge of the region helped the researcher in making contacts in the community and were also important in the evolution of this work. Informal discussions with community contacts provided the researcher with feedback on final research design and contextual constraints, aided in the selection of case decisions, facilitated researcher access to documents and information, and provided the basis for establishing the grounds upon which the researcher became a volunteer in one organization in the community in order to collect some of the data required for this thesis. Further relationships were developed through the researcher's volunteer work to enhance basic and advanced computer skills in the community and its specific organizations.

The decision making system selected for this research was that of the five north coast Inuit communities and Happy Valley-Goose Bay region of Labrador and the regional and local organizations and committees involved in health and environment issues in the region. The town of Nain, Labrador was selected as the community within this decision making system in which to focus the study as it is the largest of the Inuit communities and headquarters to the head office of the Labrador Inuit Association, Torngasôk Cultural Centre, Nain Town Council, and regional offices of the Labrador Inuit Health Commission and Labrador Inuit Development Commission (Figure 3.1). Williamson (1994) describes Nain as “the community in which Inuit lifestyle,

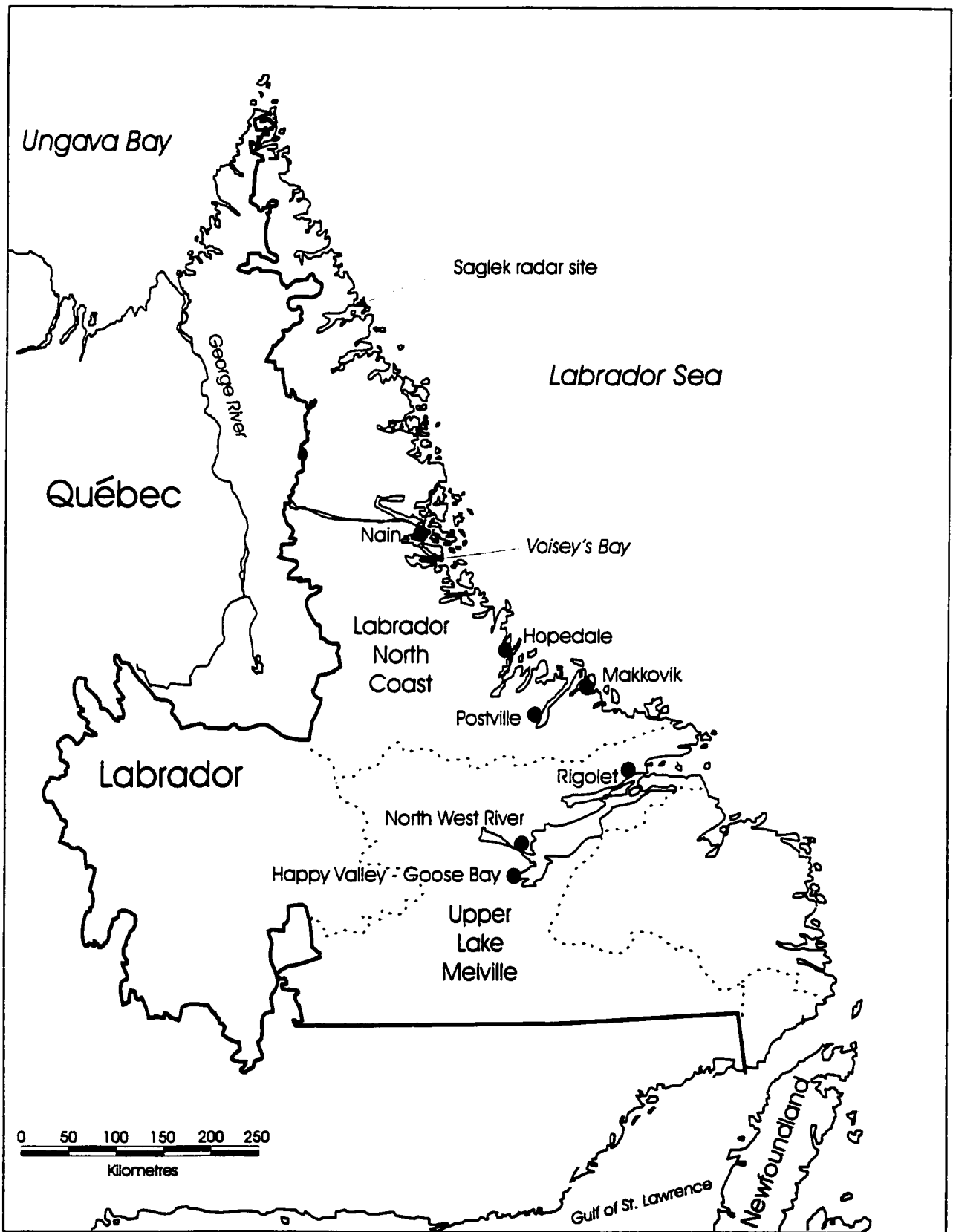


Figure 3.1. Map of Labrador Inuit communities in study area.

language and values are most intact in Labrador". The decision making processes involved in providing health advisories on environmental contaminants in country food sources in this region formed the case decisions within the community to be examined.

To collect the data for this thesis the researcher became a volunteer in the regional research office of the Labrador Inuit Association. This facilitated gaining access to local information, allowed the collection of participant observation data on the thesis research as the researcher was immersed in the community and in contact with many actors in that context through involvement in other projects, and aided in recruiting individuals for survey interviews as some assistance was provided by local research staff. In addition to collecting data for this project the researcher assisted in other regional environmental projects. However, the researcher had little or no involvement in the case decisions selected for review within the decision making system. This enabled some "distancing" from the studied cases and differentiated this work from participatory action research in which the researcher takes an active role in the subject being studied, trying to bring about change with participants (Brown, 1986). Specifically, two of the three selected cases had taken place before the researcher arrived in the community, while one was an ongoing issue during the field research period and the researcher's involvement was limited to providing minimal advice on communication material being delivered to the public.

Research Design

Conceptual and Analytical Framework

To investigate the selected case, a conceptual and analytical framework was developed from theory and practice in the fields of information and knowledge systems, community organization and planning, and decision making processes. Through a review of these bodies of literature, areas of convergence were identified and used to develop a conceptual framework outlining components of decision making capacity. From the conceptual framework, sub-components were developed in an analytical structure through which the research examined the decision making cases and the components of community capacity.

The components highlighted in the framework are an exploratory attempt to outline the elements of decision making capacity at the community level.

Although the conceptual and analytical framework are constructed through a review of literature comprised of theory and practice from a variety of fields and geographic locations, many are related to cross-cultural, and in some cases, northern environments. Also, it is important to note that a significant amount of variation in perspectives and opinions exist in most contemporary northern societies and communities. Canadian northern communities are not the “traditional” homogeneous groupings of predominantly aboriginal individuals that many understand them to be. A variety of traditional and contemporary views and lifestyles exists in these rapidly evolving locations. A spectrum of social, political and cultural views exists in the North, as in the south. Therefore, the application of a conceptual and analytical framework of this nature, utilized as a focus for field research, and as a result, adapted through assessment as part of the work, should prove to be a valuable exercise.

The notion of data triangulation in qualitative research (collecting information on one topic from a variety of sources) is based in the assumption that any biases inherent in any particular source of data or method would be neutralized when used in conjunction with other sources and methods (Jick, 1979). Greene et al. (1989) propose that triangulation seeks a convergence of research results. Triangulation is the use of multiple methods from complementary sources to collect data on the same subject in an attempt to increase the degree of accuracy of the information collected. This thesis utilized a number of data collection methods while in the field to gather information on community decision making capacity. In this study the use of methods evolved as the study progressed and a form of “sequential triangulation” was utilized in that data gathered through one method directed the selection of preceding methods and data collection efforts as the researcher learned more about the context and community (Greene et al., 1989). As Nelson (1991: 115) states, “it is difficult to envision the selection of a research path which will lead without deviation to an anticipated end point”.

Methods of Data Collection

Several types of data were gathered using a number of methods. Qualitative information was gathered on the decision making context, and included information on organizations and actors and their changing roles and responsibilities. As well, specific qualitative data on three case decisions was gathered. Document review, key-informant interviews, open-ended survey interviews, and participant observations were utilized throughout the study (Table 3.1).

Table 3.1. Organization of data collected, methods used and dates collected.

Data Focus	Collection Methods	Dates Collected
Decision Making Context	Document review	March - July 1997
	Key-Informant interviews	March - July 1997
	Participant observation	March - July & Nov. - Dec. 1997
	Survey-open ended interviews	Nov. - Dec. 1997
Case Decisions	Document review	March - July 1997
	Key-Informant interviews	March - July 1997
	Participant observation	March - July 1997 & Nov. - Dec. 1997
	Survey-open ended interviews	Nov. - Dec. 1997

Document Review

The identification, collection and review of primary and secondary documentation is a valuable source of information in qualitative studies. Once access has been gained to the required documentation, it allows the researcher some freedom in collection time, it represents little intrusion, and can save the researcher time and money as compared with some methods such as solely relying on key-informant interviews to collect such information. However, in some cases document review can be difficult in that it may be difficult to gain access to the necessary documentation, it requires some time to locate the necessary information, and transcribe it for research purposes (Creswell, 1994; Merriam, 1988). All documents reviewed in this study were collected from the offices of the Labrador Inuit Association, Labrador Inuit Health Commission, Nain Town Council, Voisey's Bay Environmental Assessment Panel Office in Nain, or from the University of Waterloo library. Documentation took the form of memos, personal notes, meeting minutes, research review and discussion papers, press

releases and newsletters. Access to organization documents was allowed in the signed research agreement with the community.

Key-Informant Interviews

Key-informant interviews are a valuable source of information in social research and can provide a great deal of information on a specific subject. Informants can often provide information not attainable through document searches or survey interviews. However, the value of key-informant interviews is dependent upon the selection of the informants. They are representative of one individual's views, and are the result of interviews or discussions with the researcher present, which may bias responses (Creswell, 1994; Merriam, 1988). In this study, key-informants were selected based on their experience in the field of health and environment decision making and communication through their position of employment in the community. Those individuals employed in these positions and directly involved in these processes were contacted and asked to participate in the study. Those individuals identified as being directly involved in case decisions by their presence in documentation or by being identified by others involved in the case as an active party were also contacted and asked to participate in interviews. Additionally, those individuals in the community identified by at least two other previously selected key-informants as being knowledgeable and experienced in the areas of environment and health issues were approached for key-informant interviews during this study. Informal discussions with community residents, health and environment workers, and elected officials in the community aided in initially identifying these individuals.

Survey of Population Sub-Groups

Open-ended interviews conducted by survey sampling can provide the researcher with a representation of the population's perspectives (Babbie, 1990). Sampling from a population is done to make estimated assertions about the nature of the total population without the costly, and often impossible task, of sampling all members of the population. Thus sampling can save time, effort, and financial resources, and make a project possible.

“Occasionally it might be appropriate to select your sample on the basis of your knowledge of the population, its elements, and the nature of your research aims. This

method of sampling is sometimes called non-probabilistic sampling” (Babbie, 1990: 97).

Quota sampling is a type of non-probabilistic sampling often used when a researcher has target groups within the population they want to learn more about, when probabilistic methods are expensive, or when precise representation of the total population is not necessary (Babbie, 1990). In quota sampling, a matrix of population characteristics is developed, individuals are assigned to cells in the matrix based on their attributes, quotas are set for each cell and individuals are sampled from cells to fill the desired quotas. Bias in this form of sampling comes from inaccurate assignment of individuals to cells, or from preferentially selecting individuals that are easy to contact or are cooperative (Babbie, 1990; Bernard, 1994).

Quota sampling was used in this study to gain an indication of perspectives on environmental health decision making issues, challenges faced, knowledge of case decisions, and needs for decision making in the community from individuals in specific sub-groups of the population. Sub-groups targeted for interviews were identified through key-informant discussions, a review of regional research projects on health and environmental issues, literature on country food and contaminant issues in the Canadian North, and the researcher’s knowledge of the community. They were identified as sub-groups with specific concerns and perspectives on country food and contaminant issues. To minimize the possibility of sampling bias, all individuals within target groups were selected randomly using a random number generator, except for those individuals selected from groups with a desired quota of 100 %.

Participant Observation

Collecting data through observation is a valuable method as the researcher is able to record events and information as it happens. In participant observation, researchers have several options as to the role they play in interacting with the informants. These roles vary from “complete participant” in which the researcher conceals their role, to “complete observer” in which the researcher observes without participating. During participant observation the researcher can notice unusual aspects of the events or information being collected, and can draw on personal first hand experience with the context within which the data exists.

However, participant observation can be viewed as an intrusive manner in which to collect data, “private” information may be observed that the researcher cannot report, and certain informants may be very difficult to observe or gather information from (Creswell, 1994; Merriam, 1988). In this thesis, participant observation in which the researcher’s role was known (“observer as participant”) took place while the researcher volunteered in the regional research office of the Labrador Inuit Association located in Nain, Labrador. Participant observation notes were taken to gather information on the decision making context, organizations’ and actors’ roles, responsibilities and relationships, as well as the events of one selected case decision.

Prior to conducting the field research a preliminary proposal was developed and reviewed by the Steering Committee of the Labrador Inuit Association in Nain, Labrador. Adaptations took into consideration regional requirements to meet the Ethical Guidelines for Research established by that organization. Additionally, the proposal was reviewed and approved by the Office of Human Research at the University of Waterloo.

Collection of Field Data

The first group of data collection took place in the community of Nain, Labrador from 10 March to 22 July, 1997 (Table 3.1). Through informal discussion with key-informants, preliminary document review and participant observation while in the community, the organizations and actors involved in environmental health decision making and communication were identified. Informal discussions with key-informants and preliminary document review also aided in the selection of three case decisions regarding country foods and contaminants for review. Case decision selection was based on the following criteria:

- the case must be a decision affecting the members of the community
- the case must be related to country foods and environmental contaminants
- documentation for the case must exist and be accessible
- actors (individuals and organizations) involved in the events related to the case must be accessible and open to discussion through interviews and informal discussions

Document Review

Primary (direct information from individuals or the situation being studied) and secondary (second-hand accounts of individuals or the situation) documents were collected from the offices of the Labrador Inuit Association, Labrador Inuit Health Commission, Labrador Inuit Development Corporation, OKalakatigêt Society, and Nain Town Council. Documentation regarding the Newfoundland and Labrador Provincial Departments and Canadian Federal Departments involved in environmental health decision making were collected from documentation submitted to the Canadian Environmental Assessment Panel Office, Nain as submissions for the hearings on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project, April, 1997. When possible, documentation was photocopied and transported back to the University of Waterloo for review and analysis. Documentation was reviewed to identify organizations' and actors' roles and responsibilities, and relationships within the decision making system. Documents were also reviewed to identify information relating to the components of decision making capacity identified in the conceptual and analytical framework (see Chapter 4).

Primary and secondary documentation was also collected from organizations involved in the case decisions selected for review. Available documentation of organizational roles, data collected and involved in cases, decision making processes, and information disseminated relating to the cases was collected. These documents were photocopied for transportation back to the University of Waterloo, or reviewed on site. Case decision documents were reviewed to map decisions made and actors involved, and to search for information relating to the components of decision making capacity outlined in the conceptual and analytical framework (see Chapter 4).

Key-Informant Interviews

Semi-structured, key-informant interviews (Patton, 1980; Bordens and Abbott, 1991; Creswell, 1994) were conducted with individuals from identified organizations and groups within the decision making system relating to environment and health issues (see Appendix

A). Prior to the commencement of interviews, the outline, purpose and intent of the study was explained to each participant and a consent form was signed by the participant acknowledging their participation in the study, the right to decline commenting on any topics discussed, or stop the interview at any time, as well as providing authorization for the use of their name in the acknowledgements of the final report. Topics to be discussed were identified prior to interviews and were investigated through a discussion format, posing open-ended questions followed by probes, or suggestions of specification (Creswell, 1994). This format was chosen for these interviews as it allowed a broader survey of informants' knowledge of topics being discussed, and allowed informants to discuss related topics not anticipated by the researcher (see Appendix B). When required, an Inuktitut - English interpreter was used to conduct interviews. Discussions were held between the researcher and interpreter prior to interviews to clarify the content of interview discussion topics and areas of interest. Written notes were taken during interviews through sequential, or non-simultaneous translation. Interviews were taped only when permission was given by the participant. Notes and tapes were reviewed and participants were contacted again, if necessary, to clarify answers or provide additional information. These key-informant interviews discussed topics of organization or group roles and responsibilities, involvement in environment and health decision making issues, challenges and changing needs as well as relationships to other actors in the decision making system (see Appendix B).

Semi-structured, key-informant interviews (Patton, 1980; Bordens and Abbott, 1991; Creswell, 1994) were also conducted with individuals identified as actors involved in each of the three selected case decisions. Informants were selected through the document review of the cases chosen, or by their identification by more than one previously identified key-informant. Interviews were conducted following the same protocol as that described for key-informant interviews focusing on organization roles, responsibilities and relationships. As many key-informants as possible were identified and interviewed for each case decision. In some cases, few key-informants were available for interviews. Whenever possible, interviews were conducted face to face, but in some instances telephone interviews were required. These interviews discussed aspects of the case related to the components outlined in the conceptual

and analytical framework as well as discussing participants' recollection of case events, their involvement and perspectives, challenges faced and perception of overall process strengths and weaknesses (see Appendix B).

Participant Observation

Participant observation notes were recorded on a daily basis during the time spent in the field while working within the regional research office of the Labrador Inuit Association (Creswell, 1994). Daily observations were recorded on both a descriptive (actions, actors, events, dialogues) and reflective (thoughts, speculations, problems, ideas, prejudices) level in a journal format during field time. During the time spent in the field, observations recorded were often further investigated or clarified during informal discussions between the researcher and residents, or other informants. Additionally, observations of dialogues were occasionally utilized to guide further document searches. Observations recorded included information relating to the components of decision making capacity outlined in the framework, as well as actors, roles, relationships, informant's perspectives, and decision case events (see Appendix C).

Further data was collected while in the community between 23 November and 17 December, 1997. During this time the researcher acted as a volunteer in the regional research office of the Labrador Inuit Association. Participant observation notes were recorded on a daily basis to supplement the data gathered during the previous time in the community. Protocol and nature of observations recorded followed that described for the previous field trip.

Survey of Population Sub-Groups

Survey interviews were conducted with randomly selected individuals from targeted sub-groups within the community through a process of quota sampling (Babbie, 1990). Six categories were developed based on past environmental and health research projects in the region (see LIA, 1997), discussions with key informants in the community, and literature on country food and contaminant issues throughout the North (Table 3.2). The categories represented different user and decision maker groups within the decision making system and

community. An organization membership list was obtained from the offices of the Labrador Inuit Association and individuals in Nain were identified and assigned to one of six categories. Individuals were assigned to a category in descending order as listed in Table 3.2, such that each individual was only assigned to one category. Local researchers assisted in assigning individuals to categories based on their knowledge of the community and its residents. If further information was required to define an individual's placement in the sampling matrix, an individual with that knowledge, or the particular individual in question was contacted. Target quotas for each group were determined based on time, resources available for translation, and knowledge of the community and potential information available from each sub-group. A target sample of 10 % of individuals in all categories but "health and environment workers and elected officials" and "active citizens" was selected to represent the perspectives, knowledge and concerns of individuals in those groups. As health and environment workers, and those individuals voluntarily involved in issues in the community were expected to have the greatest knowledge of, and experience with decision making regarding the issues in focus, target quotas of 100% and 50 % respectively, of these groups were used. Once assigned to specific categories, individuals were selected using a random number generator. Generally, no replacements for interviews are required, however, if a refusal rate of 50% or greater in any one category was reached, one replacement for each refusal was allowed in order to ensure all quotas were at least partially filled. The total numbers in each category, percentages of sub-groups targeted for interviews and the number of respondents, taking into consideration refusals, are presented in Table 3.2.

Table 3.2. Identified target groups for quota sampling within community. Individuals were assigned to groups sequentially from Health and Environment Workers and Elected Officials to Youths.

Group	Description	Total Number (N)	Target Quota & Sample (S)
Health Care, Environment Workers and Elected Officials	All individuals (male and female) employed in the health or environment fields involved in decision making regarding public access to, or advice on environment or health issues, or who are elected officials in the community	N=21	target=100 % sample N=18 sample %=86
Active Citizens	All individuals (male and female) volunteering on a committee related to health or environmental issues in the community or region in the last year	N=12	target=50 % sample N=5 sample %=83
Elders	All individuals (male and female) over the age of 65 or elected as an Elder in the community of Nain	N=49	target=10 % sample N=5 sample %=100
Hunters	Men aged 26-40 who go hunting at least twice a month and are providers of traditional food for their families	N=133	target=10 % sample N=9 sample %=69
Mothers and Women of Child Bearing Age	Women aged 18 to 25 with children, and women 26 to 40 years of age in Nain	N=132	target=10 % sample N=9 sample %=69
Youth	All individuals (male and female) aged 18-25 with no dependents (children)	N=111	target=10 % sample N=9 sample %=81

Questions were designed to investigate issues related to decision making capacity and the chosen case decisions being reviewed (see Appendix B). Questions were adapted to increase understanding and for ease of translation through discussions with key-informants and regional researchers. Protocol for conducting and recording interviews followed that described for key-informant interviews performed during the previous field period. Interviews were conducted in an open-ended manner, with questions and probe questions used to discuss topics (see Appendix B). In some cases, the assistance of a regional researcher was utilized in both contacting individuals and conducting interviews. This was especially effective in recruiting randomly chosen individuals in the categories of “youth” and “mothers and women of child bearing age” as some of these individuals expressed some apprehension

in taking part in interviews when initially contacted by the researcher but agreed to do so following discussion with a regional researcher. The fact that the regional researchers knew most of the interview participants and in the case of the category of “mothers and women of child bearing age”, were women, may have assisted the recruitment rate as participants may have felt more comfortable speaking to someone more personally familiar, or of the same gender. Similarly, this may have also biased the recruitment rate and interviews in which an assistant was present in that individuals may have been more apprehensive speaking to someone they knew in the community. All participants were assured of confidentiality in the study and if they showed signs of apprehension, they were asked if they would prefer to discuss the interview topics with either a regional researcher or the principal researcher.

Additional key-informant interviews were conducted with individuals from the Newfoundland - Labrador Provincial Department of Lands and Municipal Services, the Labrador Health Corporation, in Goose Bay, and Health Canada, in Halifax between 17 and 22 December, 1997. These interviews were conducted to complete the organizational interviews. They followed the same interview outline and protocol as discussed for key-informant interviews conducted with organization representatives between 10 March and 22 July, 1997.

Data Organization and Analysis

Numerous authors have reported processes for organizing and analyzing the content of qualitative data (e.g. Marshall and Rossman, 1989; Yin, 1989). Qualitative content analysis proposes a flexible procedure for making content descriptive observations (George, 1959). In qualitative content analysis, the value of data groups are not reduced to simple frequencies of their occurrence. An attempt is made to consider the context, content and value of all responses given. However, it is often difficult to manage the amount of data gathered in many qualitative studies (Creswell, 1994). To organize qualitative data, Marshall and Rossman (1989) discuss a process of data reduction and interpretation, reducing the data to patterns, categories or themes, and interpreting these patterns using some determined scheme. Miles and Huberman (1984) support the concept of displaying qualitative data in a spatial format through tabularization of categories and themes found in the data. Through processes of

coding the data into categories and sub-categories, the data can then be summarized into tables which show the relationship between otherwise disparate groups of information (Bogdan and Biklen, 1992; Marshall and Rossman, 1989). In case study research, Yin (1989) proposes a search for patterns through a comparison of results with patterns predicted based on theory or literature, with the analysis of data conducted somewhat simultaneously with data collection and organization.

Criticisms against content analysis often attack the quantitative methods sometimes used (Berelson, 1952; George, 1959; Berg, 1989). It is argued that quantitative content analysis is deficient in recognizing the qualitative features of communicated information (Berelson, 1952; Berg, 1989). Although the frequency of similar responses is reported from survey interviews in this study, they are used for summary purposes only and are not dependent upon for statistical analyses. Increased frequency of a theme or category of information may indicate the possible prevalence of that view among a group of participants, however the consideration of the text of all responses is included in this analysis.

In this study a process of iteratively reviewing data and developing groups or categories of related information, as described by Tesch (1990), was used. As many of the interview discussions focused on the concepts of decision making capacity in the designed framework, they were used as guiding categories for information groupings. If information was collected that did not fall into the concepts related to decision making capacity in the framework information was categorized accordingly, identified and included in the analysis. Groups or categories were then reviewed and revised if necessary, or sub-divided into smaller categories identifying more specific groups of related information. Once groups were developed for each data set (e.g. key-informant interviews on decision making context) all data was coded and summarized into tabular form. An analytical table was developed to gather and organize the information coming from the different sources collected. Coded and tabularized data was then transcribed into the analytical table and associated with one or a number of particular sub-components of decision making capacity. Data was evaluated as providing support for the presence of a particular sub-component of decision making capacity, or detracting from

the sub-component. Additional information that did not relate to any of the specific sub-components of decision making capacity outlined in the framework, are considered in the analysis of the case study and the framework itself.

Limitations related to factors hindering communication between informant and researcher, the nature of observations made, or documents reviewed were taken into account in the analysis. Although such limitations are unavoidable, the content analysis conducted in this study allowed for the identification of common categories and sub-categories among responses and other data collected in order to relate them to components of community decision making capacity.

CHAPTER 4

The Conceptual and Analytical Framework

Introduction

This chapter presents a review of areas of theory and practice related to decision making capacity. It critically reviews and presents information from theory and practice in the areas of western science, traditional knowledge and co-management, planning and community development, and benefit and risk management. It assesses areas of convergence between these fields and develops a conceptual framework, comprised of components of capacity, for investigating the notion of decision making capacity at the community level. Finally, from the components of decision making capacity, sub-components are derived which are utilized to guide the collection of field data in this thesis.

Theory

Western Science ,Traditional Knowledge and Co-Management

The areas of western science and traditional knowledge represent the knowledge bases involved in decision making in these “turbulent” environments discussed. Relevant knowledge to be considered in decision making on the issues faced by northern communities includes that collected through scientific inquiry and analysis as well as that experienced through observation during time on the land and in the community over long periods of time. Therefore, a review of these areas and their contribution to decision making on environmental health issues is included in the development of this framework. These two knowledge bases are collected, analysed, organized and communicated in very different ways, yet each has relevant contributions to make to the issues of decision making capacity. The area of cooperative management programs, have been the first attempts to reconcile the differences between these sources of information and utilize both, in unique institutional arrangements, to make decisions regarding resource use and management and are therefore included in this analysis of the literature.

While scientific research has significantly improved our understanding of the nature of contaminants in northern latitudes, much has yet to be learned about ways in which to effectively identify, assess and make decisions considering the benefits and risks. In the recent past, a great deal has been learned about the sources, pathways and fate of contaminants and their potential impacts on the Canadian Arctic and its inhabitants (e.g. Barrie, 1986; Jones et al., 1990; Barrie et al., 1992; Dewailly et al., 1994; Hild, 1995). Similarly, a great deal has been documented regarding the benefits of country food consumption in relation to the physical, socio-economic, and cultural well-being of northerners (e.g. Ross and Usher, 1986; Wenzel, 1986; Kuhnlein, 1992; Kinloch et al., 1992; Kuhnlein and Soueida, 1992; Morrison and Kuhnlein, 1993; Condon et al., 1995).

Little specific traditional knowledge exists regarding environmental contaminants. As traditional systems are based on extensive observational data they are more inclined to collect information at the macroscopic level. However, reports of traditional knowledge indicate significant changes in wildlife populations and behaviour (e.g. Doolan et al., 1990; Furgal, 1994) possibly related to the impacts of environmental contaminants. Perhaps the most valuable information gained from these systems to address the issues of decision making related to contaminants and public health is in the institutional arrangements designed to manage resources such as those reported by Usher (1993), Osherenko (1988), and Berkes (1989). These arrangements inform our understanding of traditional epistemologies and management of environmental systems. Indigenous management institutions are a widely recognized and valuable utilization of traditional knowledge. Traditional knowledge has also been collected for the development of indigenous knowledge bases for decision-making and land use planning and directing indigenous research with some success (Bird, 1995; Kemp and Brooke, 1995).

In the North aboriginal people argue for self-determination through knowledge generation and control (Kemp, 1992), while others agree that the highly heterogeneous and complex nature of society needs a more pluralistic approach than that proposed through western scientific thought alone. Some argue that integration of traditional knowledge into the institutions

servicing aboriginal people is essential to retain cultural identity and reverse the cycle of dependency (Hobson, 1992). Others reason that scientific models require information and knowledge which are often unavailable, and managerial decisions often begin to depend heavily on assumptions (Feit, 1988). However, when traditional knowledge and western science are brought together they are often isolated or viewed as a dominant and subordinate source (Howes and Chambers, 1980). Therefore, the issues surrounding the utilization of both sources of information in decision making processes are not easily reconciled. The co-management regimes discussed by Osherenko (1988) are the best attempt at addressing the epistemological and ideological differences in utilizing both knowledge systems to make decisions.

Co-management regimes are cooperative institutional arrangements in which government agencies, with jurisdiction over resources, and user groups enter into an agreement covering a specific geographic region spelling out : 1) a system of rights and obligations, 2) a list of actions subjects are to take under certain circumstances, 3) procedures for making collective decisions (Osherenko, 1988). These co-management systems are usually comprised of management boards with equal representation by active parties with varying degrees of decision-making power. They have the ability to protect declining resources and improve communication between involved parties (Osherenko, 1988). Dale (1989) reports on their ability to foster a learning relationship between parties improving the process with time. Usher (1993) outlines how the Beverly-Kamanuriak Caribou Management Board also gives users a chance to communicate with each other and learn about the managed system. Osherenko (1988) argues a successful arrangement includes a strong link to native communities, native decision-making power in all aspects of the management regime, appropriate operating funds for the arrangement to succeed, and removal of cultural and linguistic barriers to native participation in the agreement. Berkes et al. (1991) argue that, in order to provide any source of community empowerment, co-management regimes must be based in pre-existing self-management systems. Many argue that the two knowledge bases must be considered as equivalent and complementary sources of information for their effective use in the decision making arrangements (Johnson, 1992a, Berkes, 1993; Anon.,

1993).

Planning and Community Development

A number of approaches and theories developed from the areas of community planning and decision making and community development lend themselves to supporting the idea of decision making capacity in turbulent environments proposed in this thesis (Furgal, 1996). These areas of literature inform our understanding of the modes through which people interact, organize and act or participate to achieve individual and collective goals. They inform our knowledge of ways in which to involve individuals in decision making processes, and ways in which people overcome challenges in order to become involved. Those that are argued to be of value to this research perspective are those based on the human centered approaches, stressing effective participation through transactive relationships, based on mutual learning. These “humanist” approaches to planning promote cellular institutional arrangements permitting a dialectic process of ongoing actions among actors engaged in planning relationships (Hampden-Turner, 1975; Dunn, 1971; Friedmann, 1973, 1978, 1987, 1992; Ndubisi, 1992). In cross-cultural planning environments, this dialectic process provides the opportunity to make these cultural differences explicit. Many have discussed the influence of culture and values on the planning process and have developed “culturally informed” approaches to planning (Appleyard, 1976; Peattie, 1967; Ndubisi, 1982; Shkilnyk, 1984; Smith, 1985; Lachapelle, 1995).

The key concepts of culturally informed planning processes are related to the components of community decision making capacity in the North as many of the decision making processes involved in the issues faced are cross-cultural in nature between aboriginal and non-aboriginal actors. Many of the issues faced in the communities and regions are related to their external environment involving non-aboriginal management or decision making systems and actors. The focus of these culturally informed processes is to reach agreed upon goals necessary to integrate relevant aspects of cultural knowledge of both groups in order to establish common grounds for stable communication (Smith, 1985). They are based on and respectful of existing local capacities to make decisions. They incorporate local knowledge and utilize

local institutions and individuals from the conception of such planning processes (e.g. Smith, 1985; Forester, 1989; Boehmer, 1992; Rich, 1994). Such processes also utilize recognized and accepted forms of decision making, and the relationships involved in these processes are based on the dialectic “transactive” forms of mutual learning as stressed in Friedmann’s theory of planning as social learning (Friedmann, 1973, 1978).

In “turbulent” organizational environments, a network of forming and reforming, task-oriented groups in a format stressing fluidity and temporality, requiring decentralized administration depending more on multidirectional communication than formal authoritative structures is recommended (Friedmann, 1987). Etzioni (1968) proposed the mixed scanning technique as a way of developing alternative options to plan successfully in such complex and uncertain environments. The social learning approach advocated by Friedmann has been adapted to rural development in the third world (Korten, 1980; Korten and Klaus, 1984; Friedmann, 1992) in a process of “people-centered development” arguing for individuals’ involvement in actions which leads to their empowerment. In fact, these theories of social learning are inherent throughout the citizen participation literature in the realization that individuals have valuable knowledge and experience to contribute to the planning process, and have a moral right to be involved in decisions which affect them (Smith, 1981) and that the process benefits from their involvement (Sewell and O’Riordan, 1976). However, the willingness to participate and capacity to do so depend on a number of personal, institutional, organizational, legal, cultural and other factors (Riedel, 1972; Lamb, 1975; Fagence, 1977). Often participation is limited because individuals do not have the knowledge or expertise to address complex issues (Ventriss, 1987). Murphy (1983 as in Ventriss, 1987) argues that effective community participation must be an integral part of the learning process. An approach based on these principles implies community empowerment through an ongoing process of participatory action (Sewell and O’Riordan, 1976).

In their endeavour to develop a conceptual model for the assessment of social impacts of development in northern communities, Blishen et al. (1979; Figure 4.1) define and utilize the concepts of “social vitality”, “economic viability” and “political efficacy”, in attempting to

derive indicators permitting an understanding of community processes. Social vitality is defined as “the process by which individuals become bonded in relationships of trust and obligation to share knowledge, obtain resources, and resolve mutual problems”; economic viability refers to “the ability of a community to create and maintain its own locally initiated and controlled system of material production, exchange and consumption at a level that provides sufficient opportunities for the adequate survival of members of the community”; and political efficacy focuses on this notion of participation in that it “refers to the process by which a community creates and maintains some commonly accepted basis of power mobilization and distribution...these enable the social and economic needs of community life to be legitimately developed within the community boundaries and be effectively negotiated beyond these boundaries with agents of the outside world” (Blishen et al., 1979: 35-36). The terminology of “political” in this sense, is used to refer to all formal and informal activities that relate to the mobilization of power and is therefore rooted in the other two dimensions developed in the framework (Blishen et al., 1979).

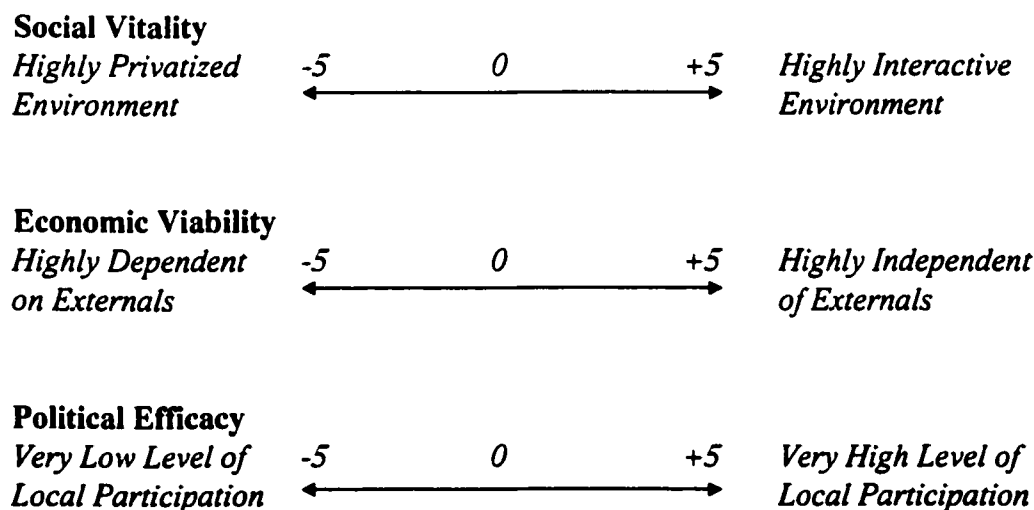


Figure 4.1 Community variables in Blishen et al.'s (1979) socio-economic impact model for northern development. Assessment on scale was determined by measurement of a number of objective and subjective indicators in the community.

Communities showing measures of social vitality more towards the “interactive” or “communitarian” end of the spectrum (away from the “privatized” end) were ones in which

strong social networks existed providing assistance to its members in obtaining information, services and access to resources. In these communities all the citizens became involved in attempting to overcome social problems, and routes of entry into the community, mechanisms of socialization and means of rejection of individuals were all well evolved. A universal access to opportunities existed and status recognition or mobility norms did not rest solely on formal credentials in these more “communitarian” settlements (Blishen et al., 1979).

Communities showing strong economic viability more towards the “independent of externals” end of the spectrum were ones in which new work force members were recruited as much as possible from the local pool and formal certification and credentials were de-emphasized. In these communities local resources were accessible to people and organizations in a way that did not require highly specialized organizational skills or access to large amounts of capital, and creative incentives existed to attract and ensure local participation in the work force in the face of outside employer presence. Further, it was stressed that in order to support this “locally independent” trend in the community, government transfer payments must take forms that encourage economic alternatives (Blishen et al., 1979).

Communities showing strong political efficacy towards the “highly participative” end of the spectrum were ones in which individuals had access to the political decision making process, and the political structure was open to the processes of communicating critical information in ways (formal and informal) and within time frames that permitted informed responses. In these communities there was wide access to and local control of the mechanisms of internal mediation and external negotiation and a more informal and generalist approach was taken to the internal formulation of social issues and presentation of these issues to the outside world (Blishen et al., 1979).

Through a case study review of an environmental assessment organization, Mulvihill and Keith (1989) incorporate many of the components presented in here in a list of design principles for adaptive decision making structures in the turbulent environment of Northern Québec. Adaptive organizations are characterized by what Morgan and Ramirez (1983) term

“minimum critical specification” and what Trist (1983) terms as an “open-ended unfolding process”. They are “referent” organizations which are non hierarchical, region-centered, and stakeholder controlled organizations, with a required amount of organizational redundancy, a lean number of members, and which are strategically located. Mulvihill and Keith (1989) argue that adaptiveness is enhanced by the organization having multiple accountability, appropriate legislation to act, and being open to public scrutiny. The ability to link diverse interests in a continuous, self-learning process exploring new approaches to problem solving, through scanning techniques by knowledgeable staff characterize adaptive organizations for problem solving. These characteristics allow the organization to adapt to the quickly changing pressures of its’ environment and deal with issues effectively. Neufeld (1985, as in Mulvihill, 1990) outlines a “cooperation assessment framework” in his analysis of organizational capacity for cooperative, coordinative action. Components such as organizational motivation, intervention mechanisms, coordinating mechanisms, role structure, resource and communication flows, type of conflicts and outcomes are involved in this framework. Many of the components and characteristics described by Mulvihill and Keith (1989) and Neufeld (1985, as in Mulvihill, 1990) can be applied to the issue of decision making capacity on a larger community scale. To address the issues of decision making capacity at the community scale, one must widen the approach to include a larger peer audience, or wider scope of stakeholders. In doing this, a number of issues related to power structure are confronted. The traditions of social mobilization and community development inform our understanding of how to address some of these challenges.

Further knowledge is gained in our attempt to better understand the concepts related to community decision making capacity from the traditions of social mobilization. The ideas of social mobilization are rooted in the belief that individuals have a right to co-determine their destiny. Individual’s capacities are joined in a collective movement “from below” against the political structure, empowering individuals in the process (Friedmann, 1987). The social action approach to community organization emphasizes volunteer cooperation and self-help efforts in a form of organizing the disadvantaged to make demands on the larger community (Wandersman, 1981). Community development approaches are argued to best improve

communities and engender support and participation of residents (Yates, 1976).

Community development focuses on ways of enabling people to collectively achieve goals. Etzioni (1993) proposes a communitarian view of rebuilding communities in which self-help, social justice, equity and responsibility are stressed. He argues for the development of a community of communities to strengthen the capacity of individual efforts (Etzioni, 1993). McKnight (1987) argues for a different view of communities, focusing on the recognition of the value of each member and developing on this basis rather than the traditional “policy map” view of addressing community problems. An expansion of this idea, Kretzman and McKnight (1993) propose a framework for building communities from the “inside out” on the inherent capacities and assets of communities. Leaders with a “capacity-oriented” view utilize strategies including a comprehensive mapping of community assets, mobilizing assets, convening a broadly representative group to build community vision, and leveraging activities, investments and resources from outside the community to support asset-based, local development (Kretzman and McKnight, 1993).

Benefit and Risk Management

Risk management is a public decision making process with cultural and value-laden assumptions and is intended to identify and evaluate risks, and select and implement preferred options in response to a specific or perceived risk (Byer, 1988). It is a process for deciding on a desirable or preferred balance between social, physical and economic risks and associated benefits (Morgan, 1993; Canadian Standards Association (CSA), 1996). These decision making frameworks have been applied to risk issues elsewhere in more southern regions, and more recently, have been used in addressing issues related to environment and health in the Canadian North at the national and regional levels. The evolution in benefit and risk management frameworks for decision making also address issues related to community capacity to make environment and health decisions in the North.

Traditional frameworks or models for managing risks are comprised of both a risk assessment and management component (Krewski and Birkwood, 1987). All models vary in the

placement of risk assessment, management and communication activities within the process as well as their involvement of public participation. All of the traditional risk management and assessment models are science based, technical frameworks focused exclusively on risk and dealing primarily with quantitative, expert driven data. Human health risk assessment processes have resulted in the delivery of health advisories which have had significant negative cultural, social, and physical implications in northern communities in the past. However, many have recognized the problems faced by contemporary risk management frameworks and have called for some significant evolutionary steps in their progression (e.g. Hood et al., 1992; CSA, 1996; Hrudey, 1996; Furgal, 1996).

Hrudey (1996) argues against the traditional separation of the risk assessment and management aspects of the decision making framework on the basis that the interaction is needed to make the best use of the scientific information for risk assessment. Hood et al. (1992) outline the arguments for and against the inclusion of both qualitative and quantitative information in the decision making process while others (e.g. Covello et al., 1986; NRC, 1989; Vaughan, 1995) emphasize the need for early community involvement and a process of listening to participants and respecting their perspectives. Interactive, and participatory programs appear to offer the greatest promise for more effective decision making strategies (Covello et al., 1986). Funtowicz and Ravetz's (1993) idea of participation goes one step further stating the need for the involvement of an "extended peer community" on issues such as large scale global environmental concerns. Kasperson (1986) goes further to argue that public participation depends on the development of indigenous technical and analytical resources and recommends such resources be made available to the risk bearers for the purposes of independent assessment of the risks. Many have addressed the increasing need for greater, more efficient, effective and ongoing risk communication throughout the process (Slovic, 1987; Krewski and Birkwood, 1987; Usher et al., 1995) as well as the need for specific institutional designs to deal with the issues confronted by risk managers. Hood et al. (1992) examine the effects of institutional arrangements on the effective management of risks stating that different arrangements create specific barriers to effective participation, management and communication, and the realized complex nature of risk scenarios is driving

trends in organizational type, regulatory instrument development and use, and institutional rules.

As our understanding of risk issues expands, we realize their complex, multi-jurisdictional, and contentious nature. The trends in organizational type to address these problems appear to be in the direction of more complex, multi-level and multi-organizational structures so collective action and preference-merging, or what has been referred to as consensus building primarily among a group of experts, becomes harder to predict and less controllable by a single group of actors. The emphasis in regulatory instruments appears to be laid heavily on public authority and the structuring of information, rather than on public spending or “direct action” public organization, so issues of balancing risks and benefits become more salient. The trends in organizational rules, as summarized by Hood et al. (1992), point towards more public participation, a broadening of what is addressed by risk management processes and an integration of the understandings of risk management in other management structures and processes, increased general access to information and increasing “obligation to notify” on hazard monitoring and hazard creating organizations, as well as increasing pressure for more procedural formality as the risk management field becomes more juridified. These trends do not mean that they are desirable or “better” in some way but are simply the direction in which they are interpreted to be moving. However, the pattern is not interpreted to be a random set of movements. Increased juridification demands extra access to information and decision making, and a move away from consensual modes of decision making may be linked to greater cultural shifts. Therefore, these trends should be considered in the debate regarding future risk management organizational types, regulatory instruments, and institutional rules.

An alternative model explicitly offering the advantages of a staged, iterative approach with ongoing communication and which attempts to address many of the others issues raised by risk management critics has been proposed in the draft Canadian Standard for risk management (CSA,1996). This model attempts to address issues of requirements for greater and wider participation, management and assessment interaction, qualitative and quantitative information consideration and more effective and ongoing risk communication through an

approach to addressing identified “needs, issues and concerns” (CSA, 1996). However, many of the benefit and risk management issues confronted by northern decision makers involve significant cultural and social components that are not well understood by risk managers.

The Conceptual and Analytical Framework

Through a review of the bodies of literature presented, and an assessment of areas of convergence among them, main themes or components related to, and influencing, community decision making capacity have been derived. A conceptual framework for decision making capacity, comprised of six components, is presented. The six components related to decision making capacity discuss: 1) the strength of institutions dictating decision making arrangements; 2) the ability of communities to organize and coordinate actions; 3) the nature of decision processes followed; 4) the ability of communities to involve members in addressing issues; 5) the strength and limitations of information utilized in decision making scenarios and the abilities to communicate this and other information to community individuals and; 6) the strength and use of a resource base supporting community actions in decision making scenarios. Sub-components and field evidence for their existence in a community are then derived in an analytical portion of the framework to direct the collection of field data in this thesis.

The overarching philosophy of this framework is based in the ideals of justice and equity, in individual’s rights to be involved in decision making processes that affect them. Further, it is based in the belief that individuals have valuable knowledge and experience to contribute to the decision making process and that the process benefits from their involvement (Smith, 1981). It draws on Mulvihill and Keith’s (1989) components of adaptive organizations and the structures and processes described within those organizations as well as those described as being effective at addressing issues of decision making within the fields of benefit and risk management (Covello et al., 1986; NRC; 1989; CSA, 1996). It also draws from the notions of “social vitality, economic viability and political efficacy” developed by Blisshen et al. (1979) relating to participation, communication and organization. However, many of the components are taken one step further and applied to the issues involving decision making capacity at the

community level. Finally, the frameworks draw on the philosophy of Kretzman and McKnight (1993) in an attempt to address community decision making capacity from the “inside out”.

Component 1

Institutional Capacity

In this thesis “institutions” refer to social bases of shared classification and ways of thought that underlie even apparently “individual” decisions (Douglas, 1994). More specifically, in decision making arrangements they are the agreed upon, legally binding rules and policies that guide the decision making relationships and practices involved. Institutions form the basis for outlining decision making roles and responsibilities, assignment of power and authority, and processes to be followed. Thus they are central to the notion of community decision making capacity.

Many of the institutional characteristics of “effective” and successful cooperative management regimes and culturally sensitive planning processes can be applied to the concept of community decision making capacity as used here. Osherenko (1988) describes the cooperative management regimes as institutional arrangements between agencies or actors involving a system of rights and obligations, a list of actions subjects are to take under certain circumstances, and procedures for making collective decisions. Mulvihill and Keith (1989) argue that adaptive organizations are semi-autonomous, yet have appropriate legislation in place in order to be empowered to make decisions for themselves. According to Friedmann (1973; 1978), processes must recognize and utilize accepted forms of decision making. Successful arrangements must have a strong link to native communities, native decision making power at all stages of the management regime and, equal representation of native actors in the arrangement (Osherenko 1988). The use of local institutions and individuals is critical to the success of any culturally sensitive planning processes (e.g. Smith, 1985; Forester, 1989; Boehmer, 1992; Rich, 1994). Berkes (1992) argues that in order for these arrangements to provide any source of community empowerment they must be based in pre-existing local self-management systems, or in other words, in local existing capacities and

institutions. In the areas of risk and benefit decision making, Hood et al. (1992) report on the trend of increasing public authority in these arrangements.

Institutions directing environmental health decision making arrangements in the Canadian North, similarly are expected to be able to better deal with the complex and turbulent environments in which they exist, if they possess many of these characteristics discussed above. Community decision making capacity is influenced by the presence of strong, flexible, and clear institutions providing the community with “institutional powers” and directing and involving local individuals in the processes. It is further argued that institutions based in and respecting local management systems are more effective and thus influence communities’ abilities to make decisions.

Component 2

Organizational / Coordinative Capacity

The ability of a community, formally through structured organizations and informally through individual and collective involvement, to organize and coordinate organizations’, committees’, and individuals’ activities influences their ability to make decisions and deal with challenges. In this sense, there are formal organizations within the community, but also the larger community within which these organizations exist which can benefit from possessing or adopting some of the characteristics of effective, adaptive organizations in turbulent environments. The characteristics proposed here refer to structure, membership, coordination, location and characteristics of adaptiveness and are applied to the notion of communities in this thesis.

The human centered approaches to planning and decision making, stressing transactive relationships, based on mutual learning, inform our view of enhanced decision making capacity at the community level. Applied to the community level, these “humanist” approaches to planning promote cellular organizational arrangements permitting a dialectic process of ongoing actions among actors engaged in planning relationships (Hampden-Turner, 1975; Dunn, 1971; Friedmann, 1973, 1978, 1987, 1992; Ndubisi, 1992). In “turbulent”

environments Friedmann (1987) argues for a network of forming and reforming task-oriented groups in a format stressing fluidity and temporality, requiring decentralized administration more dependent on multi-directional communication than formal authoritative structures. The social action approach to community organization emphasizes volunteer cooperation and self-help efforts as ways through which marginalized individuals are able to make demands on the larger community (Wandersman, 1981). Communities in which individuals are able to informally come together as a collective, organize and act on community issues are argued to have greater decision making capacity.

Because of the complexity of many risk issues, and the realization of issues involving overlapping jurisdiction and the need for resources external to the organization or risk management group, Hood et al. (1992) propose multi-organizational structures for dealing with these issues. The capacity of communities and organizations are also influenced by their ability to adapt to their fast changing and complex surroundings. Many of the characteristics of adaptive organizations proposed by Mulvihill and Keith (1989) can be applied to both communities and organizations in this context. The criteria of "minimum critical specification" can be applied to both communities and their organizations where no more than is necessary for initial operation is specified at their outset to allow the organization or community the ability to partially determine their own design and in a process that might be self-organizing. Organizations stressing inter-organizational cooperation of non-hierarchical, region-centered and stakeholder controlled organizations remaining in close contact with their environment are argued to be adaptive "referent organizations". In this sense, "referent communities" are more likely to be adaptive in turbulent environments as well. According to Mulvihill and Keith (1989), adaptive organizations also have a lean number of members and a required amount of organizational redundancy to off set the loss of personnel. The criteria for adaptive organizations of having semi-autonomy and multiple accountability, and being open to public scrutiny can also apply to the community level as studied here. Communities operating in turbulent environments require some decision making autonomy as their members and context may differ somewhat from the environment in which other actors in the decision making process may be located. Also, to be accurate and accountable on complex

and potentially contentious benefit and risk issues, multiple channels of accountability are required as decisions may have far reaching effects at the regional, territorial, and national scales. In order to be sensitive to members' needs and concerns, and therefore be able to perceive the need for new approaches, adaptive communities must be open to public scrutiny. Mulvihill and Keith (1989) argue that adaptive organizations are able to link diverse interests in a continuous, self-learning process. Communities need to be able to fulfill this criteria as well as many of the problems faced in turbulent environments require a pluralistic approach, addressing the needs of public / private sectors, individuals / groups concerns, or local / regional needs. A community will only realize the need to change through a process of active self-evaluation as suggested through Mulvihill and Keith's (1989) review of adaptive organizations.

Component 3

Decision Process Capacity

Decision process capacity refers to the ability of the processes followed to deal with the uncertainty, complexity and demands of various actors existing in these environments and arrive at decisions directing action to address the issues of concern. These processes may be outlined and dictated by policies or legislation, or may be of an ad hoc nature. The processes are integral to a community's capacity to make decisions and are influenced by the ability to organize and coordinate group and individual actions, involve required information and individuals, and communicate the information involved to those affected. According to Blishen et al. (1979) those communities with greater political efficacy had decision making processes that were open and accessible to the public. Effective decision making processes in turbulent environments are argued to be those that are iterative, open, self-learning, and adaptive (Furgal, 1996). The co-management regimes discussed by Osherenko (1988) and others, and the culturally informed planning processes reported by Friedmann (1973, 1978) include recognized and accepted processes for making collective decisions among actors. As well, these processes incorporated local knowledge early in the process. Mulvihill and Keith (1989) state that adaptive processes are those that are continuous and self-learning, exploring new approaches and scanning opportunities for problem solving. Etzioni (1967, 1968)

proposed this technique of “mixed scanning”, evaluating long and short term possibilities while maintaining long term goals to generate problem solving alternatives in turbulent environments. To address many of the problems faced by risk and benefit managers, Hrudey (1996) calls for the integration or linking of what have been traditionally viewed as the assessment and management decision making phases with early involvement of both benefit and risk considerations in the process. Hood et al. (1992) also report on the trend in risk management organizations for increased integration of benefit and risk management approaches into other management processes, the need for consideration of both qualitative and quantitative information, and increased procedural formality to deal with the issues confronted by organizations and communities of individuals.

The decision making processes followed by communities in addressing risk and benefits issues of concern, their recognition and acceptance, ability to incorporate local, qualitative and quantitative information, their ability to involve local individuals and be iterative and open, influence the capacity of the community to make decisions. Decision processes possessing these characteristics are argued to enhance community decision making capacity.

Component 4

Participatory Capacity

The increasing support for public participation in decision making is based on the realization that individuals have a right to be involved in decision making processes affecting them, that they have valuable knowledge and experience to contribute to the planning process (Smith, 1981) and that the process benefits from their involvement. A community’s ability to involve individuals and their ability to individually or collectively overcome barriers and influence the process is related to the community’s capacity to make decisions. Forms of participation may be formal, such as through legislation or required organizational policies or they may be informal through individual or collective action efforts. This ability to involve and be involved is thus influenced by the capacity of the institutions guiding decision making processes and the organizational and coordinative ability of the community.

Covello et al. (1986) argue that early community involvement and a process of listening to participants and respecting their perspectives in interactive and participatory programs appears to offer the greatest promise for more effective decision making strategies for risk issues. Similarly, Hood et al. (1992) report an increasing trend in risk management organizational rules to involve public participation. The communities described by Blishen et al. (1979) as being more “interactive” were those in which the citizens became involved in attempting to overcome collective issues and individuals had universal access to opportunities. When “transactive relationships” are based in the ideals of mutual learning the relationships built through public participation have the ability to foster learning relationships, improving the decision making process with time (Dale, 1989; Usher, 1993). Effective participation is based on relationships involving a wide consideration of stakeholders from the beginning of the process (Smith, 1985; Forester, 1989; Boehmer, 1992; Rich, 1994). However, individuals are often excluded, or do not have access to processes because of lack of knowledge or expertise, or a number of other personal, cultural or other factors (Riedel, 1972; Lamb, 1975; Fagence, 1977). In what Osherenko (1988) classifies as the “effective” cooperative management regimes, there are provisions to remove cultural and linguistic barriers to native participation in the process.

Communities in which a wide variety of individuals become involved in addressing issues of concern, are supported and listened to in their efforts, and their involvement has some effect on the process are argued to have greater decision making capacity. Further, participatory capacity is strengthened by efforts to remove challenges or barriers to community involvement in addressing issues of community concern.

Component 5

Information / Communication Capacity

The nature of information, its content, complexity and application, as well as the ability to communicate this information in an understandable and usable manner influences a community’s capacity to make decisions and address issues of concern. Clear, concise and accessible information allows complex issues and the related uncertainty to be better

understood and dealt with. Effective communication supports informed involvement of individuals and groups affected by decisions and enhances their ability to influence the processes dealing with the issues of concern.

In the North, aboriginal people argue for self-determination through a number of processes including knowledge generation and control (Kemp, 1992), while others agree that the multi-dimensional, complex nature of society requires a pluralistic approach. Johnson (1992a) argues that both traditional knowledge and western scientific knowledge bases must be considered as equivalent and complementary systems for their effective use in decision making arrangements. Some argue that the integration of local traditional knowledge into the institutions serving aboriginal people is essential to retain cultural identity and reverse the cycle of aboriginal dependency on outside resources (Smith, 1985; Forester, 1989; Boehmer, 1992; Hobson, 1992; Rich, 1994) and that the inclusion of qualitative and quantitative information is important for effective decision making on benefit and risk issues (Covello et al., 1986; NRC, 1989; Vaughan, 1995). It can be argued that community capacity to make decisions is influenced by the ability of a community to generate and control information of both a qualitative and quantitative nature, inclusive of local traditional and experiential information, integrate it into local institutions and use it in approaches to problem solving.

The focus of the culturally informed approaches to planning is to reach agreed upon goals necessary to integrate relevant aspects of cultural knowledge of both groups in order to establish common grounds for stable communication (Smith, 1985). Friedmann's (1987) theory of planning as social learning is dependent upon forming and reforming task oriented groups stressing multidirectional communication. Blishen et al. (1979) report on "highly participative" communities in which communication was conducted in ways (formal and informal) and within time frames that allowed informed responses. Osherenko (1988) stresses the importance of the removal of cultural and linguistic barriers to native participation in cooperative decision making arrangements and many argue for greater, more efficient and effective ongoing risk communication from the beginning of, and throughout benefit and risk management processes (Slovic, 1987; Krewski and Birkwood, 1987; Hood et al., 1992; Usher

et al., 1995).

Therefore, it is argued that community decision making capacity is related to and influenced by the ability of a community to inform, and update community members through effective communication. As an increasing amount of information arrives in communities from a variety of sources, communities must have the capacity to direct and control their own communication delivery to their members. Further, effective communications rely on early involvement of participants and ongoing monitoring, evaluation and adaptation to assess and enhance communications effectiveness and understanding among the audience population. Further, communication must be done in a timely manner to allow and support informed responses from community individuals.

Component 6

Resource Capacity

All of the previously discussed components of community decision making capacity, with the exception of institutional capacity, rely on, and to some degree are influenced by the access to and presence of an existing and continuously developing, and supported resource base. In this case, resources refer to those of a human and financial nature. The resource capacity of the community influences the ability for its members to become involved, for the community to gather and communicate information, support and direct community processes and deal with issues of concern.

According to Mulvihill and Keith (1989), adaptive organizations are characterized by their ability to link diverse interests in a continuous, self-learning process, exploring new approaches to problem solving by knowledgeable staff. Similarly, communities require knowledgeable, dynamic and able members. Communities need to support processes to educate and train individuals in areas being addressed in the future so that these individuals can guide and influence the processes to make informed decisions. As Kasperson (1986) notes, public participation in benefit and risk management issues depends on the development of indigenous technical and analytical resources for the independent assessment of risks.

Kretzman and McKnight (1993) argue, that in order for the process of community mobilization to occur from the inside out, not only must members be knowledgeable, but leaders with a capacity-oriented view of the community or organization are required. Decision making and development must be based on, supportive of, and involving local capacities. This resource base must be maintained, supported, accessible, and utilized in achieving community goals. Osherenko (1988) argues that successful cooperative management agreements require appropriate operating funds while Hood et al. (1992) report on the need for risk and benefit management organizations to have the resource capacity to deal with “direct action” needs for risk management. Therefore, community decision making capacity can be influenced by the ongoing development, support, and utilization of existing resources. These include knowledgeable and healthy individuals, capacity oriented leaders, and accessible funds for community decision making and related activities. It is expected that this would also involve a commitment to planning, support and utilization of both financial and human based resources in the community.

Components of Community Decision Making Capacity

The following list of sub-components of community decision making capacity are derived from the conceptual framework and will be used to identify and evaluate the study community’s capacity to make decisions. They are organized under the same components of community capacity as that presented in the conceptual framework (Figure 4.2). Where necessary, examples of potential field evidence, indicative of their presence, are outlined. This analytical portion of the framework is used to direct the collection and analysis of field data.

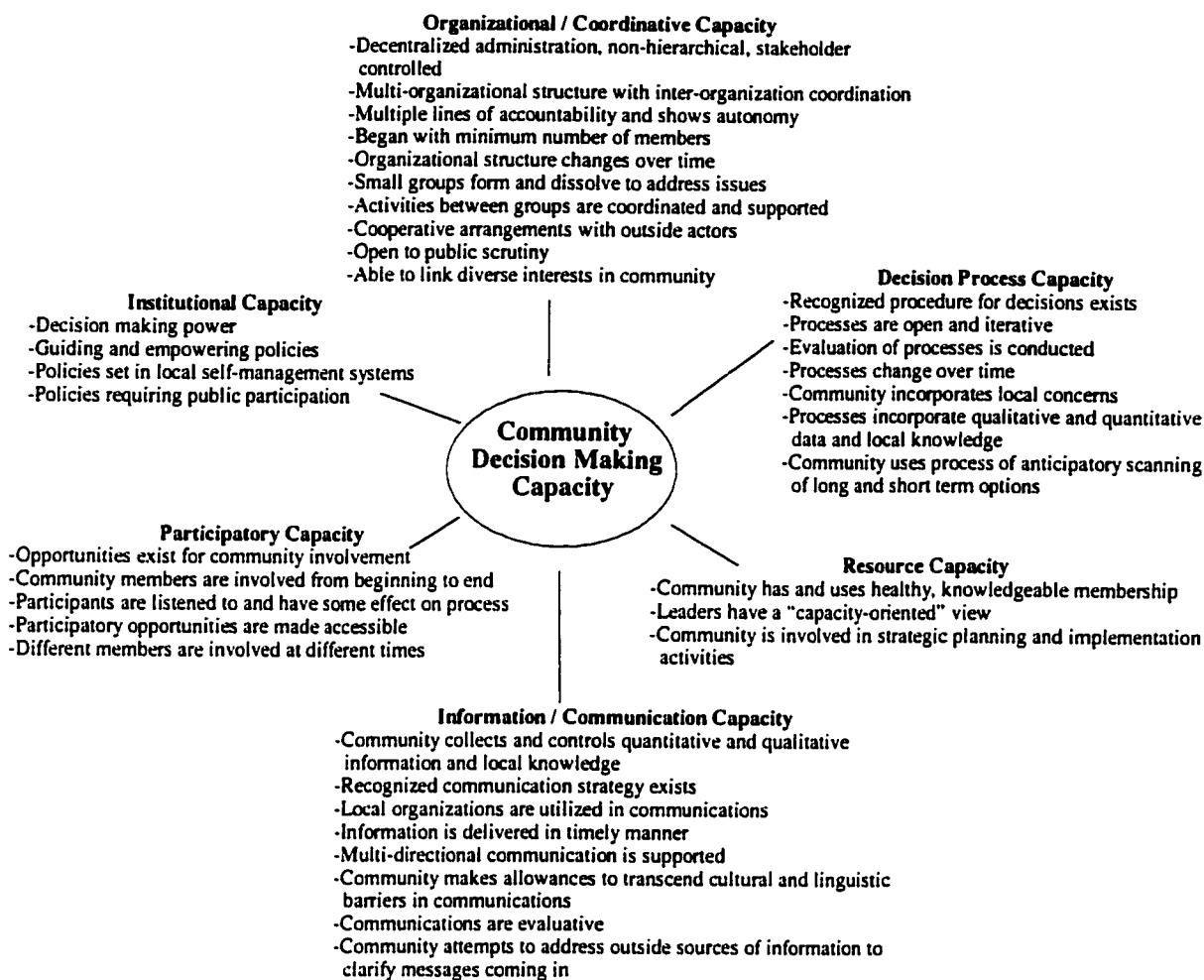


Figure 4.2. Conceptual and analytical framework of components and sub-components of community decision making capacity

Sub-components of Institutional Capacity

- the community has decision making power in issues affecting its members
 - institutions guiding decision making arrangements outline a degree of legislated or recognized power, authority and jurisdiction of the community to make decisions individually or cooperatively on issues affecting its members
- the community has a basic set of understood policies that guide and empower people in decision making arrangements with other actors
 - individuals know of policies outlining decision making processes in the community (formal or informal)
 - the community utilizes these processes to make collective decisions on issues of concern

- institutions guiding community decision making processes are based in pre-existing local self-management systems
 - decision making arrangements and processes recognize and incorporate local processes and guidelines
- policies exist requiring public participation in the decision making processes
 - some form of participation (ranging between consultation and power sharing) of local individuals and organizations is required within decision making arrangements

Sub-components of Organizational / Coordinative Capacity

- the community has a decentralized administration of non-hierarchical, stakeholder controlled organizations
- the community has a multi-organizational structure and some form of inter-organizational coordination
- the community has multiple lines of accountability and yet exhibits some degree of decision making autonomy on issues affecting its membership
 - responsibility for some decision making issues rests with a number of actors or organizations inside and outside the community, but examples of decisions made by the community, independent from other actors exist
- community organizations began with the minimum number of members necessary to address issues at hand
- the community organizational structure has changed over time and adapted its policies / structures to address changes in its external environment
 - examples of changes in organizational structures and policies to meet changes over time in the community exist
- small groups form and dissolve within the community as issues are addressed
 - examples exist of informal groups coming together to address issues in the community
- activities between groups within the community is supported and coordinated
 - individuals and organizations within the community recognize the existence of informal groups and support their activities
 - multiple group activities in the community are coordinated in some way

- at various times, the community is involved in a number of cooperative arrangements with actors outside the community to address issues and the community directs their formation and re-formation
- the community is open to public scrutiny and comment and engages in self-evaluation exercises
 - individuals speak out in the community at times and concerns are not dismissed
- the community is able to link diverse interests through utilization of a variety of members with differing expertise in decision making cases
 - a variety of community individuals are involved in different decision making scenarios and utilized for their different perspectives and experience

Sub-components of Decision Process Capacity

- a recognized and accepted procedure for making collective decisions exists
 - individuals express knowledge of the ways in which decisions are dealt with in the community
- decision making processes are open and iterative, collecting and incorporating new information as required and allowing feedback from the public
 - cases exist in which decision processes have been slowed or halted to collect or include new information
 - cases exist in which community members have spoken out and had some effect on the course of the decision making process
- some form of evaluation of these processes exists and compares goals and objectives to achievements and results
 - some form of evaluation of critical decisions takes place and considers set goals and objectives and actual results to adapt future processes
- the process followed changes over time dependent upon the actors, issues and factors involved
 - different decision making cases follow different processes through time
- the community incorporates local concerns, cultural values into the decision making process

- cases exist in which cultural considerations have had some impact on the decision being made
- cases exist in which local concerns, expressed during the process, have had some impact on the decision being made
- the processes followed incorporate qualitative and quantitative information, and local knowledge
 - cases exist in which both qualitative and quantitative information has had some bearing on the decision being made
 - cases exist in which local traditional knowledge has been recognized and utilized
- the community promotes and utilizes a process of anticipatory scanning and consideration of long and short range options for solutions to problems
 - the community meets often to discuss issues, scan future concerns, take proactive approaches to issues
 - examples exist in which the community considers long and short range options in making decisions

Sub-components of Participatory Capacity

- opportunities exist for community members to become involved in decision making processes
 - a variety of forums exist which are open to community participation
- community members are involved in decision making processes from the beginning of problem identification phases
 - examples exist in which community members take part in collective decision making processes early in its progress
- participants are listened to and their input has some effect on the decision making process
 - examples exist in which community involvement efforts slow, adds additional information, or halt decision making processes or change the final decision through collective efforts
- the community attempts to make participation opportunities accessible (e.g. culture, language)

-the community takes measures to create accessible opportunities for involvement in issues

-what barriers to participation in community issues exist (real or perceived by community members), and can they be easily addressed ?

-to what extent do these barriers hinder participatory efforts ?

- different members from a variety of sub-groups within the community are involved as participants at different times and in different issues

-a variety of individuals from different demographic, professional and cultural segments of the population are involved in community decision making processes

-do certain individuals repetitively dominate community processes or is there a wide variety of individuals involved over time ?

Sub-components of Information / Communication Capacity

- the community collects and controls both quantitative and qualitative information, including traditional or local knowledge
- the community has a recognized communication strategy and goals for issues to deliver information to a variety of groups within the community as well as other organizations
 - communicators and other community individuals are aware of the modes of communication utilized and most effective within the community and continue to use these for dissemination of information
- the community utilizes local organizations and individuals to communicate information to members of the community regarding local issues
 - local individuals and organizations have access to and control some forms of communication within the community
 - examples exist in which these individuals and organizations are used to disseminate information within the community
- the community delivers information on local issues in a timely manner to allow informed responses and involvement in community issues
 - examples exist in which lead time is given prior to decision making events (meetings etc.) in the delivery of background information, announcements etc.

- the community supports multi-directional communication between organizations, groups, and individuals within the community
 - community communication flows (formal and informal) are continuous and active and individuals feel they have access to information through a number of different individuals or sources
 - individuals in the community are aware of community issues
 - assess to what extent do individuals perceive barriers to communications within the community
- the community makes allowances to transcend cultural and linguistic barriers in all communications
 - examples exist in which information is communicated in a number of different forms considering differential access to technology, educational levels, as well as potential language and cultural challenges
- communications are evaluative comparing goals / objectives to achievements / results and changes to address areas of needed attention in communications
 - examples exist in which some form of evaluation of communication methods and content are conducted and used to adapt formal communication strategies over time
 - methods used to communicate within the community change over time and as issues and context dictate
- the community attempts to address outside sources of information to clarify messages arriving in the community
 - examples of formal communications on issues affecting the community addressing outside sources delivering conflicting messages exist

Sub-components of Resource Capacity

- the community has and utilizes a healthy, able and knowledgeable membership in decision making cases
 - assess to what extent individuals do not participate because of a lack of understanding of community issues
 - assess to what extent health and social issues interfere with community involvement in

decision making processes

- **community leaders have a “capacity-oriented” view of the group and support this through a commitment to an “inside out” philosophy towards decision making processes**
 - to what extent are external resources (individual and organizations) used in addressing issues when these resources exist within the community ?
 - do community leaders express support for the use of internal resources in decision making processes ?
- **the community is involved in strategic planning sessions to estimate future resource needs for decision making activities (information generation, collection, integration, communication, evaluation, staff needs, training needs) and these activities are used to make a commitment to building resources internally**
 - examples exist of the community engaging in planning processes
 - what training opportunities, educational opportunities, resources exist in the community related to the issues of concern and are they easily accessible to all ?

Six components related to community decision making capacity were synthesized from three large areas of literature. Sub-components were then derived from these six components to guide the collection of field data in this thesis. The results of this collection and analysis are presented in the next chapter.

CHAPTER 5

Results and Discussion

Introduction

This chapter presents the data collected in Nain, Labrador between 10 March and 22 July, and 23 November and 22 December, 1997. The chapter first outlines the three case studies selected and reviewed for this study. A presentation of the criteria used to assess the data under each of the components and sub-components of community decision making capacity follows. All data relating to community decision making capacity are then presented in textual form. This presentation includes the assessment of evidence found to support or detract from each sub-component in the framework presented in Chapter 4. All data presented are derived from the analytical tables contained in Appendix C.

Case Studies

This thesis reviewed three case studies regarding country foods and environmental contaminants. The first resulted in an advisory to stop all consumption of caribou liver and kidney in the province of Newfoundland and Labrador. The second, resulted in health advice regarding the consumption of marine mammal fats, specifically ringed seal blubber and beluga whale blubber and skin. The third, is an ongoing case in the region dealing with the clean-up of PCB contaminated soil from a Department of National Defense Long Range Radar site in a region of Labrador that is traditionally, economically, and environmentally important to the Inuit. A number of key-informants expressed concern for this case as it may result in the release of a health advisory regarding the consumption of country foods from that region in the near future.

Case 1

Cadmium in Caribou

For many years caribou has been the primary country food for the Labrador Inuit. Every year, Inuit travel inland to the barrens of the Labrador / Québec Ungava Peninsula to hunt caribou

which supply individuals, families and communities with an important traditional food source (LIDC, 1987). Caribou liver is an excellent source of iron and is considered an important traditional food item in many regions across the Canadian North. The George River caribou herd occupying this territory is one of the largest in the world. Since 1985, the Labrador Inuit Association has operated a commercial caribou hunt on the George River herd to combine traditional hunting skills and knowledge of local hunters with the economic opportunities of harvesting and exporting caribou meat and products. The factors related to the ecology and politics surrounding this caribou herd, make its' future, and the Inuit's dependence on it a complex issue.

The George River herd migrates across the Northern Québec-Labrador border during its seasonal migration. This fact has caused some difficulties in coordinating cooperative efforts in its management. Following concerns of reported high levels of cadmium (Cd) in reindeer tissue in northern European countries, provincial officials began sampling herds in Eastern Canadian provinces in 1985. This resulted in advisories being released in Québec, New Brunswick and Ontario. From the beginning of the commercial hunt, LIA was interested in collecting data on animal health for herd management and had concerns regarding the advisories released in adjacent provinces. As a result, tissue samples were collected cooperatively by provincial and aboriginal representatives during the commercial hunt in 1986. These samples were sent out of the province for analysis. Preliminary reports of the analysis on liver and kidney tissue from Labrador caribou came to LIA officials in the late spring of 1987. This information indicated that levels in these samples were high and that the province would likely be advising the public to stop all consumption of kidney and livers, but that consumption of the muscle tissue was still considered safe. This information released in Labrador was preliminary and the public was told that a confirmation on the results would follow later that year. On September 4, 1987 a press release was given out by the Newfoundland Labrador Provincial Wildlife authorities stating the status of advisories in other eastern provinces, and that analysis was underway on samples collected in Labrador. At this time, advice was given for hunters to use their own discretion...." *With the caribou season now underway in Labrador, and with the rest of the big game seasons fast approaching, the*

Minister is suggesting that in light of this ongoing - although still inconclusive - research, hunters should use their own discretion as to eating the liver and kidneys of moose and caribou” (Minister responsible for Wildlife, Province of Newfoundland and Labrador, 1987). More definite information on the analysis of Labrador levels would be released when it became available.

The levels found in the 65 samples collected and analysed from Labrador caribou were greater than those resulting in an advisory to stop all liver and kidney consumption in Québec. Based on an average consumption of 100 g / week, the levels of Cd in liver (1.56 ug/g, N=65) and kidney (12.5 ug/g, N=65) from Labrador caribou would result in individuals exceeding the World Health Organization (WHO) guidelines (0.5 mg Cd/wk, 0.06 mg Cd/day) for Cd intake. At this time, the LIA was informed that the data was to be analysed by the provincial Health Department, and in cooperation with the Wildlife Division, a press release would be issued. The LIA was informed that when this release was issued, they would be notified. On October 16, 1987 a press release was issued by the Minister responsible for wildlife to stop all consumption of caribou liver and kidney tissue in the province (Appendix E).

As stated in key-informant interviews, and illustrated in documents reviewed, there was no consultation or involvement of representatives of the aboriginal communities in the making or delivery of this advisory. Furthermore, no update on this advisory has been conducted since its release. According to provincial wildlife officials, no follow up is required yet as this is a slow moving substance in the ecosystem and thus 10 years is the normal follow up period for heavy metals.

The results of the target group interview questions relating to this advisory and the consumption of caribou liver and kidney, conducted for this thesis, show that few remember hearing of this advisory. A total of 16 of 55 individuals interviewed reported knowledge of this advisory, 11 individuals were from the category of “health and environment workers and elected officials”. A total of 5 individuals identified the origin of the advisory as provincial authorities. However, when asked whether or not people eat caribou liver, the large majority

(N=43), including Elders, reported having never consumed liver. The majority (N=26) of individuals said they did not know anyone who ate caribou liver and therefore they have never had the opportunity to eat it. Few (N=5) reported that knowledge of the benefits or risks involved in its consumption explained why they did not eat caribou liver.

Case 2

PCBs in marine mammal fat

On 1 November, 1995 Health Canada and Environment Canada officials presented research results on the levels of organochlorines in Arctic marine mammals to the Northwest Territories Technical Committee on Arctic contaminants. This committee is comprised of northern aboriginal, government health and research representatives, as well as representatives from the national Inuit organization, Inuit Tapirisat of Canada (ITC). The report indicated the presence of a number of organochlorines, including toxaphene, dieldrin and PCBs, in high concentrations in ringed seal fat and beluga whale fat and skin. This report was of concern to the Committee as these items are consumed widely across the North, and have been important components of many northern traditional diets for hundreds of years.

The Labrador Inuit Association heard of this report on 10 November, 1995 through their contact as an associate member of ITC. Were the data to be taken at face value, advisories would call for some individuals in “high risk” groups of the population (e.g. pregnant women) to decrease consumption of these food items. ITC proposed to coordinate Inuit involvement in this issue at the national level.

Data included in the analysis showed high levels of these substances in marine mammal tissues as early as 1982. This data was collected across the North, as far east as Northern Québec, but not in Labrador. National health and wildlife researchers expressed belief that this information could be extrapolated to the Labrador coast. Other concerns expressed to the LIA in the outline and background information included:

- uncertainty regarding the Safety Factor (SF) being applied to these substances;
- lack of toxicological data known for some of the substances included in the analysis

(chlordan and toxaphene);

- an advisory would exclude many from eating beluga mattak and ringed seal blubber;
- food was the only exposure pathway considered in this analysis;
- no consideration for those perhaps at higher risk (mothers, children, and elderly);
- lack of agreement on the standards for use with Arctic populations;
- no Labrador data included;
- delay in use of this data, and Inuit have been exposed to these levels during that time;
- lack of benefit information included in assessment;
- concern that any communication may scare people away from consuming these items.

The concerns of the Labrador Inuit representatives at that time focused on:

- their lack of involvement in these matters at a national scale and reliance on ITC for inclusion;
- these food items were consumed in Labrador and no Labrador data was included;
- this advisory may come at a time of high consumption with the Christmas season approaching and the resulting perception from it may have significant effects on consumption behaviour;
- uncertainty involved in the data;
- direct concern for human health.

As a result of the human health connection in this issue, the LIA Environmental Advisor involved the Community Health Advisor in this process and all communications.

On December 8, 1995, ITC gathered representatives from the Inuit organizations, government officials and researchers in Ottawa to discuss this issue. In the planning stages of this meeting it was decided that coordination of the public release of this information was required and would be directed by ITC.

The “Contaminants Experts Meeting” allowed government officials and scientists to discuss the issues surrounding the data and processes and associated responsibilities with regional

representatives, and invoke some form of consensus building to direct future action. National health researchers explained that current high levels of some organochlorines in Yukon lakes provided the impetus to investigate past levels of these substances in main traditional diet components, thus the inquiry into these substances in marine mammal fats across the North.

Regional representatives participating in this meeting, and interviewed for this study, expressed a number of concerns at this meeting. They indicated the need to ensure coordination of the release of this information, that the approach of providing “advice” and not a restrictive advisory or warning must be taken, and that the communication of any message must come from regional Inuit leaders and be in a plain language, easily understood manner. The LIA perception was that the government officials felt a need to act because data existed. Although the Ottawa meeting intimidated some regional representatives, key-informants indicated that through their involvement in this meeting they had the opportunity to provide a regional perspective to others in the process. The meeting provided an opportunity for LIA representatives to forge new relationships and strengthen existing ones with outside researchers and actors dealing with these issues.

Following the directives of the Ottawa meeting, ITC communicated with regional representatives to provide, and explain, further background information and coordinate the drafting of the press release. On 18 December, 1995 a national press release was issued by the President of ITC (Appendix E). Regional leaders presented the information to their communities in a strategy coordinated by ITC. The basic message of this advice was that the benefits of consuming these foods outweighed the risks, and that these were individual decisions. As stated:

“So far as we are aware, the risks to public health from continuing to eat beluga and seal blubber are very small and are outweighed by the benefits to you of these foods. However, Inuit must judge for themselves what is an acceptable risk for themselves and their families.”
(President, ITC)

This release was presented in Labrador communities by the LIA President, William Barbour,

over the regional radio station. An overview of the issue and LIA's involvement was forwarded to the president of the Labrador Inuit Health Commission for internal communications.

The results of the target group interviews showed that a total of 8 individuals report knowledge of this advice on the consumption of marine mammal fats. Seven of these were "health and environmental workers or elected officials". Five individuals reported knowledge of the source of this advice as ITC. When asked to report on their consumption of ringed seal blubber and beluga whale mattak, the majority of individuals (N=42) reported they do consume these food items. Eleven reported never having tried it, while 2 reported that they used to eat it but no longer do. Those reporting current consumption stated "preference" (N=41), "knowledge of benefits or risks" (N=19) and "tradition" associated with its consumption (N=7) as their reasons for consumption. Of those individuals reporting never having consumed these foods, "preference" (N=8) and "knowledge of benefits or risks" (N=2) were reported as reasons. A preference (N=2) or dislike for fats, and knowledge of the benefits or risks associated with the consumption of these items (N=1) were given as the reasons why 2 individuals no longer consumed ringed seal blubber or beluga whale mattak.

Case 3

PCBs at the Saglek radar site

As part of the North American Air Defense Monitoring program (NAADM) the United States Department of National Defense constructed a number of long and short range radar sites throughout the Canadian Arctic, including along the Labrador Coast. Those sites throughout the Northwest Territories were known as the Distant Early Warning (DEW) line sites and those along the Labrador coast were part of what has been referred to in documentation as part of "polevault or pinetree" systems. These radar sites were designed to provide early warning of a northern military air attack. Sites were composed of radar towers, an airstrip and support structures for year round operation. The sites in Labrador were manned and operated during the 1950s and 1960s and thereafter some were deconstructed and abandoned. This is the case for the long range radar base at Saglek fjord, Labrador.

Saglek fjord is located approximately 240 km north of the community of Nain and has been a traditional hunting and fishing location for Labrador Inuit for hundreds of years (Brice-Bennett, 1977; Figure 3.1). The area is composed of high land plateaus and steep cliffs to the shore line. An airstrip was constructed by the beach and the radar tower and housing facilities were constructed on the headland overlooking the bay. In the 1950s and 1960s the U.S. Air Force owned the sites and paid for their operation and maintenance. Under the *Shamrock Agreement*, signed by Canadian and American governments, the Canadian Department of National Defense assumed full responsibility for all NWS sites and 40 % of the costs by the end of 1989. As part of the modernization of the NWS, the Canadian Department of National Defense had a plan to construct a long range radar site at the Saglek location. The contractor responsible for deconstruction of the earlier site burned much of the infrastructure present and left debris behind. A consulting group contracted by the Department of National Defense to assess the sites' previous decommissioning and its' suitability for the construction of the planned LRR site found some sources of contamination in the soil and water at Saglek. Electrical transformers containing PCBs had been either burned in the fire or placed in a land fill and were now leaking PCBs into the soil. It is noteworthy, that the site had been given a clean bill of health by the Newfoundland Department of the Environment following the previous deconstruction. The site was found to now contain PCB contaminated soil, drums of oil, and some containers still holding organochlorines such as DDT and chlordane. It was recommended that the soil be removed from the site and re-testing be conducted to assess the effectiveness of the clean up. By June, 1986 the DND had developed a proposal to clean the site before the planned construction of the LRR facility. A report published by the DND consulting group outlined the future plans for the site. As required by the Federal Environmental Assessment Office an environmental screening report was prepared. The consultants reported no adverse environmental affects of building the planned LRR site in this location. The Labrador Inuit Association received this report the following year in June of 1987.

Upon hearing of the proposed construction of the site at Saglek, the Labrador Inuit

Association notified the provincial Minister of the Environment expressing their concern and requesting that this project come under full review of the Environmental Assessment Act. They were notified at this time that all NAADM projects were exempt from the Federal Environmental Assessment Act regulations. The Labrador Inuit Association argued that the Initial Environmental Evaluation (IEE) of the planned construction was unacceptable because it had been prepared without their consultation and this was required due to the importance of the region to Inuit residents of the north coast communities. The IEE stated that no environmental threat was posed by the site and that due to its remote location, potential socio-economic impacts in the region were negligible. It recognized that the area was used for hunting and fishing and LIA was trying to establish a commercial char fishery in this location. Labrador Inuit concerns at this point included the potential damage to the area for wildlife, its link to human health through the consumption of wildlife, and the lack of consultation with the LIA in this process.

In the following months a number of removal methods were proposed for the contaminated soil at Saglek. Due to restrictions under the Transportation of Dangerous Goods Act, shipping the soil out remained to be the only alternative. Greater pressure was added to remove the contaminated soil from the northern Labrador site with the September, 1988 Federal Action Plan on PCBs requiring the destruction of all PCB waste in excess of 50 parts per million (ppm). In the spring of 1989 the DND set up a plan to destroy PCB waste in Labrador. Transport to Goose Bay and storage there, transport to other sites for destruction and use of a mobile incineration unit at the remote sites in Labrador were considered. As mobile incineration at remote sites was viewed as too costly, it was planned to ship the contaminated material to Goose Bay for incineration. All impacts of the plan were deemed mitigable by the involved agencies. The DND set up a committee to oversee this process and inform the appropriate agencies and individuals. The committee was composed of representatives from the DND, Newfoundland Provincial Department of Lands and Environment, Environment Canada, Canadian Forces Base Goose Bay, and the local municipality of Happy Valley Goose Bay as this was the proposed storage site and potential mobile incineration location for this material.

The Labrador Inuit Association was concerned about the shipping of this material down the coast because of the potential impact a spill might have on the marine life of the area and therefore the human health of the Inuit along the coast because of their dependence upon the sea for subsistence purposes. The LIA expressed concern that the proponents did not have enough information on the potential risks of a spill yet were proceeding with the proposed plan. Around this time, scientific reports were beginning to explain northern oceans as sinks for environmental contaminants and studies had reported organochlorine contamination in Inuit populations in Northern Québec and Broughton Island, NWT. Links were drawn between consumption of marine animals and other traditional foods and risks to human health from organochlorines in the North. The LIA threatened to halt progress of shipping through a court injunction if their concerns were not addressed. The LIA requested a public radio phone-in show involving DND and LIA representatives to inform north coast residents of the issues, that an Inuit observer be on board during the shipping activity and that the shipping contractor abide by dates and routes specified by experienced Labrador Inuit fishermen with knowledge of the coastal environment. The Labrador Inuit Association appealed to the Federal Ministers of Health, Environment, and National Defense, to stop the shipping activity. Frustration was felt on the part of the LIA representatives as they did not have any "hard data" of their own to argue their position. Four days later, the DND reported to the LIA representatives that their concerns would be taken into consideration, and some changes would be made, but the plan to ship PCB contaminated soil down the Labrador Coast for incineration in Goose Bay would proceed. A radio phone-in show was conducted with an LIA representative, DND official and the shipping contractor and broadcast in the communities along the Labrador north coast. PCB contaminated soil was excavated, placed in containers and shipped to Goose Bay in the second week of September, 1989.

LIA representatives attribute the late cooperation of the DND, in part due to the change of negotiators for the federal department. The belief at this time was that the site was now clean and no reasons for concern existed regarding interests in the development of a commercial char fishery in Saglek fjord.

In 1991, the consulting group, the Environmental Sciences Group (ESG), contracted by the Department of National Defense, conducted studies to evaluate the effectiveness of the previous clean up at Saglek. They found contaminated soil at concentrations greater than the federal guidelines (50 ppm) by the radar tower and beach. The group contracted to do the operation and maintenance of the site (Frontec) excavated the soil and held it in containers on site.

In October of 1993, LIA representatives heard of more PCB contamination at the Saglek radar site during a CBC regional radio news report. The information included in the report was part of an official DND press release. Later that month, a DND public liaison officer contacted LIA to inform them of the situation. In a maintenance survey of the site that year more contaminated soil was found, excavated and remained on the site until the following year when plans included removing it from the region for incineration. In the last clean up culminating in the 1989 shipping of PCBs from Saglek, some soil exceeding 3500 ppm was removed. In 1992 the Environmental Sciences Group (ESG) at Royal Roads Military College in British Columbia (contracted by DND for the environmental studies on site) found soil exceeding federal guidelines of 50 ppm outside the area previously used for construction. Due to lack of funds and limitations of transportation of this material imposed by the Transportation of Dangerous Goods Act, the excavated soil remained in containers on site until the following year. Ongoing discussions were held between DND representatives, Newfoundland Departments of the Environment, and Health, as well as federal Department of Fisheries and Oceans officials to determine the best plan of action for this situation. During 1994, ESG carried out further sampling and began testing some on-site alternatives for bio-remediation of the contaminated soil. Another year passed as finances limited the removal of this material from the northern Labrador site. Early in 1996, the DND consulting group responsible for all on-site testing (ESG) forwarded all reports on Saglek to LIA in preparation for a requested meeting to discuss future action. These reports outlined that concerns now included the fact that the beach area at Saglek had been eroded by wave action and PCB contamination had dispersed into the surrounding marine environment. Other reports

conducted by this group had provided evidence that DEW line sites were local sources for organochlorine and heavy metal contaminants in other Arctic locations. There was a promise at this time, from the consulting group conducting the studies, that LIA would be involved in the study process including its design and release of any further information to the residents of the north coast.

By January 1997, ESG was in charge of contamination studies and clean up for the Saglek radar base and expressed a desire for LIA involvement and direction in the clean up and communication processes for this issue. A meeting, held in February of that year, including representatives of the LIA, DND, and provincial and federal environment and natural resource representatives discussed the current state of the site and actions for clean up. The 1996 sampling studies had included the investigation of contamination in some components of marine life as requested by LIA the previous year. Some fish species (sculpins) were found to have extremely high levels of PCB contamination in them (> 100 ppm) and other species of commercial importance to the LIA (e.g. Arctic char) to contain background levels. ESG proposed a three year clean up program and promised to involve LIA in this process. LIA's concerns at this time included:

- interest in developing a commercial fishery in the area and potential threats to public health;
- socio-economic development prospects of the commercial fishery project;
- potential land selection of the area in the ongoing land claim settlement negotiations;
- interest in the site by Parks Canada;
- that this site had been reported to the public as having been cleaned twice before.

LIA representatives planned on discussing these issues with the Executive and Board, developing a communications program for this issue with the Eco-Research office in Nain, and involving local representatives in the cooperative development of future sampling and clean up processes. This information was reported to the LIA membership at the 1997 AGM held in Nain that year. Eco-Research office staff cooperated with DND consultants, ESG, in the development of communications material to present the information known to date to the

LIA membership and traveled to the coastal communities to deliver this information. The LIA, DFO and DND representatives were involved in the development of the sampling program to further delineate the extent of contamination at the site. LIA environmental representatives involved local hunters and fishermen in suggesting areas and species for the sampling program and aided in the collection of wildlife samples. Sampling and analysis of contamination on this site is ongoing.

Key-informant interviews showed support for progress made to date in the relationships between LIA, DND and their consulting group, ESG. The LIA representatives stated that their involvement is increasing, but they are still not recognized by the province in this case. They express frustration in being limited by provincial regulations and regimes for northern issues. Individuals expressed concern that they (LIA) still “react” to events.

Results of target group interviews in the community of Nain show that very few (N=3) individuals reported hearing the latest information released that year of the issues at Saglek radar base. A large number (N=41) reported knowing of some issues of environmental contamination at the radar base in the past. Individuals expressed concerns about contamination at the site relating to: wildlife (N=17); risks to human health (N=17); concerns for contamination at other radar bases along the coast (N=9); and risks to the commercial char fishery at Saglek (N=5) as their top concerns. Twenty-nine individuals stated that they have questions regarding these issues that they would like answered.

Community Decision Making Capacity

Data Organization and Analysis

The data presented in the following section are originally derived from raw data tables¹. From the raw data, analytical tables were constructed to organize this data for evaluation (Appendix C). Data relevant to the components and sub-components of decision making capacity were

¹ For reasons of confidentiality, as outlined in the research agreement signed between the author and the Labrador Inuit Association, the raw data are not included in the printed copy of this thesis. A copy of the raw data tables can be obtained, following approval, from the Labrador Inuit Association, P.O. Box 250 Nain, Labrador, A0P 1L0. Contact information is included in the Table of Contents of this thesis.

transferred from the raw data tables into the analytical tables. The data is listed according to its source (e.g. document review, key-informant interview, case study documentation, etc.) and whether it supported or detracted from a particular sub-component of decision making capacity. Data originating from document review is accompanied by a code (e.g. [D-1]) identifying its full reference as listed in Appendix D. In some cases data was summarized in the transfer from raw data tables to allow its' presentation in the analytical tables in this chapter.

A subjective scale ranging from 1 (information substantially detracts from sub-component) to 5 (information substantially supports the sub-component) was used for the evaluation. The sub-components were assessed and "scored" in the following manner:

- (5): Substantial support for the presence of sub-component;
- (4): Slight support for the presence of sub-component;
- (3): Equally supports and detracts from the presence of a sub-component;
- (2): Slightly detracts from the presence of sub-component;
- (1): Substantially detracts from the presence of sub-component;
- (INS): Insufficient evidence to assign a rating.

Components of Decision Making Capacity

Institutional Capacity

A review of the legislative base of the organizations making decisions affecting the members of the community, reveals a strong lack of official authority and jurisdiction in environmental health issues (Table 5.1.1: Appendix C pages C-1,2). Historically, the Labrador Inuit have experienced transitions in structure and organization from the arrival of Moravian Missionaries, through the Hudson's Bay Company, and later the provincial government and its associated agencies. Through this evolution the Labrador Inuit have lost decision making authority on the issues that affect them (Brice-Bennett, 1994a, b; Tanner et al., 1994; Williamson, 1994). Further, the lack of a settled land claim in the region, and thus any land and resource based jurisdiction, hinders the decision making power of the Labrador Inuit

Association on environmental health issues (Table 5.1.1: Appendix C pages C-1,2).

According to Tanner et al. (1994) traditional forms of decision making and governance in Labrador Inuit society were flexible, decentralized and consensus based. However, these have changed significantly with the transitions to the provincial government administrative systems of today. The current situation is one of limited legislative authority to make decisions or to appeal decisions made at the provincial and national levels on environmental health issues in the region.

The LIA acts under the Corporations Act of Newfoundland and Labrador and makes decisions regarding its membership following a set of outlined by-laws. These by-laws describe decision making procedures, require some forms of participation, and assign a certain amount of power to officers (Tables 5.1.1, 5.1.2, 5.1.3: Appendix C pages C-1 to C-6). Additionally, LIA has recently implemented a set of Guidelines for Ethical Research, outlining decision making arrangements and procedures with outside scientists. Local participation is required and decision making authority is assigned to the aboriginal organization (LIA, 1997c). However, these guidelines are not always strictly abided by, and enforced, in the community.

At the regional level, the LIA has representation on the Health Labrador Corporation Board which makes decisions on health policies for the delivery of medical services to Labrador communities. This Board has a democratic voting system for making collective decisions on changes and implementation in policy issues yet, no specific number of representatives for the Labrador Inuit is assigned for this Board; individuals are appointed from coastal communities by the Minister (Government of Newfoundland and Labrador, 1995). As a member of the national Inuit organization, ITC, LIA is supported on a national scale (ITC, 1977).

Some policies and legislation attempt to incorporate local decision making processes, local knowledge, and some forms of local participation (e.g. Municipalities Act followed by the Town Council of Nain, Government of Newfoundland and Labrador, 1990; LIA by-laws, LIA, 1994b; LIA Ethical Guidelines for Research, LIA, 1997c; Canadian Environmental Assessment Memorandum of Understanding for the Voisey's Bay project, CEAA, 1997a).

However, some exist in writing only and are not always enforced in practice (e.g. Ethical Guidelines for Research, LIA, 1997c).

A lack of power and feeling of powerlessness is expressed by key-informants in the community, however discussions with key-informants reveal that this is changing. Through the Health Transfer Agreement, the Labrador Inuit Health Commission has gained some decision making power in health programming in the region. Additionally, the LIA has gained some control over post-secondary education programming.

The Town Council of Nain has power granted through the provincial Municipalities Act. This is exhibited in the case of the initial rejection of proposals for mining exploration within the town boundaries (Town Council of Nain, 1996b). The Town Council of Nain follows procedures for making community decisions outlined in the Municipalities Act (Government of Newfoundland, 1990), and Town Emergency Plan (Town Council of Nain, 1997c). Community meetings rely on forms of consensus building. In some cases, plebiscites are required, allowing democratic representation of opinions to decide issues (Town Council of Nain, 1996b; Table 5.1.2: Appendix C pages C-3,4). Furthermore, provincial planning and municipalities acts require some form of public review in making significant changes or development in the community.

Traditionally accepted forms of dealing with issues (e.g. community meetings) are sometimes still used in the community to make community decisions. Others (e.g. use of council of Elders) have been replaced by other policies and recognized processes. As expressed in key-informant interviews, the customary laws that governed wildlife use and treatment and social behaviour in the community are no longer followed and Elders' roles have been all but removed from community affairs.

In their review of food chain contaminant events in Nunavik and Labrador, Peters and Légare (1997) found that there was little opportunity for local concerns or observations to initiate investigations of food chain contamination in the province. The system designed to monitor

these issues (contamination in country foods) was targeted at investigating and protecting the public from problems reported in the market and sale of country food products (e.g. sale of caribou meat in restaurants) and not in their collection for subsistence use. Observation of wildlife and wildlife abnormalities was mentioned as a source of knowledge on which people reported their belief in the safety of traditional foods. Knowledge gained through observations was also reported as a reason by some for stopping consumption of caribou liver.

A review of the case studies reveals evidence similar to that from the documentation and key-informant interviews. Often, the only way the community is able to gain entrance into decision making processes with outside actors is through the appeals process. Even when the community is involved, their local decision making practices are often ignored. Decisions are based on guidelines and standards not understood or accepted by local representatives; a point that was mentioned by some representatives as a significant point of contention (Table 5.1.3: Appendix C pages C-5,6).

Appeals in the case of the shipping of PCB contaminated soil from the Long Range Radar site at Saglek for incineration at Goose Bay, Labrador resulted in some involvement in decision making by the LIA. Greater access and involvement in the decision making process is provided through the current arrangement with the Environmental Sciences Group handling the remediation of these contaminated radar sites in Labrador for the Department of National Defense (Table 5.1.1: Appendix C pages C-1,2).

The informal approach taken in the PCBs in marine mammals case was valuable in involving and empowering local and regional officials. The organization followed internal policies in place to hold some form of public consultation after review by their Executive Board which resulted in a community meeting, consultation with the local Fishermen's Committee and a phone-in radio program to inform the public and allow feedback (Table 5.1.2: Appendix C pages C-3,4). Additionally, as illustrated through the case studies, informal policies exist within the community to consult individuals on specific issues (Table 5.1.4: Appendix C page C-8).

The community has decision making power in issues affecting its members

The efforts made through appeal processes, and opportunities arising through involvement with outside actors and contextual trends, shows some inherent capacity to make decisions within the community and its organizations. However, the general lack of legislative base upon which the community is able to directly influence the decisions affecting its membership in the environment and health fields strongly detracts from their decision making capacity in this area (Table 5.1.1: Appendix C pages C-1,2).

OVERALL RATING = 1

The community has a basic set of understood policies that guide and empower people in decision making arrangements with other actors

Although few provincial and federal policies and legislation guiding decision making processes for environmental health issues in Labrador are what could be referred to as “empowering”, the appeals process can be used effectively by the community. Partnerships built with outside actors can partially compensate for the policies’ shortcomings based on this sub-component. Internally, the community has, and follows, a number of policies that attempt to empower local individuals through involvement and communication of information involved in issues at hand (Table 5.1.2: Appendix C pages C-3,4).

OVERALL RATING = 3

Institutions guiding community decision making processes are based in pre-existing local self-management systems

Although some examples of processes that recognized local processes or involved local representatives were found, and through this experience convey some basis for empowerment, they are not based in pre-existing local self-management systems, primarily because such systems for these specific issues do not exist (Table 5.1.3: Appendix C pages C-5,6).

OVERALL RATING = INS

Policies exist requiring public participation in the decision making processes

Despite the evidence for institutions requiring public participation in decision making processes, the levels of participation or efforts to be taken in consultation are not specified. Additionally, in some processes outlined in provincial legislation, public participation simply “may” be provided for. Key-informants from the community also expressed a need to get more people involved as there was a lack of current involvement of the public (Table 5.1.4: Appendix C pages C-7,8).

OVERALL RATING = 3

Table 5.1. Summary of analytical scores of sub-components of institutional capacity.

Sub-Components of Institutional Capacity	Overall Rating
The community has decision making power in issues affecting its members	1
The community has a basic set of understood policies that guide and empower people in decision making arrangements with other actors	3
Institutions guiding community decision making processes are based in pre-existing local self-management systems	INS
Policies exist requiring public participation in the decision making processes	3

Organizational / Coordinative Capacity

Decision making on environment and health issues in the community of Nain is directed by a small number of organizations and both formal and informal committees. The organization representing the political interests of the Labrador Inuit, the Labrador Inuit Association, is based in the community of Nain, with a regional office in Goose Bay, land claims office in St. John’s Newfoundland, and field offices in each of the coastal communities. LIA’s affiliates, the Labrador Inuit Health Commission (LIHC) and Labrador Inuit Development Corporation (LIDC), are based in Northwest River and Goose Bay respectively with regional offices in Nain. Also, the Torgasôk Cultural Centre is based in Nain. The LIHC has nursing stations in each of the coastal communities. These affiliates compose a multi-organizational structure dealing with issues related to renewable and non-renewable resources, politics, education, health and economic development in the region (LIA, 1997h; LIHC, 1997c).

The LIA and its affiliates are directed by a group of Advisors (Environmental, Legal, Land

Claims Director, Mineral Resources, Educational), a Board of Directors, an Executive Director, President and Vice-President. The Board, Vice President, and President are elected positions with three year terms. The Board is subdivided into sub-committees which direct the affiliate organizations (LIA, 1994b, 1997h; LIDC, 1997; LIHC, 1997c). Both the Board and the staff of the organization are from a variety of backgrounds, communities, and professions. Advisors include individuals with expertise in environment and resource management issues, mineral exploration and development issues, law, education, and regional politics. The Board meets when necessary, but as reported by key-informants, not very frequently as they are scattered along the coast and meetings are therefore often logistically difficult and expensive. The organization takes direction from the Board on major issues such as land claims negotiations positions, and environmental situations, as was seen in the clean up of PCBs at the Saglek radar site. The three member Executive (President, Vice-President and Executive Director) decide when issues require Board review and approval. The LIA is accountable to its membership through the by-laws of the organization, and to provincial and federal agencies through the legislation in place (LIA, 1994a; LIHC, 1997b). This legislation makes it difficult for the organization to express a great deal of decision making autonomy.

As Tanner et al. (1994) and Williamson (1994) report, the structure of Labrador communities have evolved since their inception with the arrival of the Moravian Missionaries. Change continued with the arrival of the Hudson's Bay Company, the International Grenfell Association and then the provincial government and its associated agencies. Structural changes were imposed by outside actors, resulting in an increase in government presence and decision making power in community affairs. Since incorporation in 1973, the LIA has expanded to include their affiliates LIHC and LIDC to address health and economic development issues while the central organization has maintained a focus on negotiating a land claims settlement for the membership (LIHC, 1991a; LIA, 1997h). The organization has added positions to address educational, research, wildlife management and communications issues. The LIA assembled a Research Steering Committee to review proposals and oversee projects in the communities. However, this Committee remained unofficial and did not have sub-committee status within the organization at the time this thesis research was conducted,

three years after its inception (Table 5.2.5: Appendix C page C-14).

The LIHC has adapted and changed its structure in response to changes both internal and external to the organization. They have expanded since their beginning in 1985, and have added the positions of Psychology Advisor, Health Researcher and Health Educator in response to assuming greater responsibility with the signing of the Health Transfer Agreement (LIHC 1995a, 1997b). Additionally, they have included their own public health nurses in each community; positions previously filled by employees of the Health Labrador Corporation (Table 5.2.5: Appendix C page C-14).

The LIA and its affiliates have been involved in arrangements with university and government researchers on various issues. Since the spring of 1997, they have utilized their Ethical Guidelines for Research to direct the formation of these relationships (Williamson, 1996; LIA, 1997c, 1997i). The LIHC has brought in outside specialists to participate in community workshops, has cooperated with national health representatives to provide training for staff, and has built relationships with outside researchers to conduct studies on health and nutrition issues in coastal communities (LIHC, 1995a, 1995c, 1996a).

The LIA show evidence of being open to public scrutiny and comment through their expression for the need for community consultation (LIA, 1997b), and through research projects conducted through the Eco-Research Office focused on members' perspectives on environment and health issues in the region (LIA, 1997j), as well as through the participatory channels for comment and feedback present and provided for in the organization's by-laws (LIA, 1994b). The LIHC directs some community evaluation exercises through a "Healthy Communities" program (LIHC, 1995a), has held workshops and solicited comments through questionnaires as part of a strategic review, and invited public comment on programs and initiatives such as their review of the community tuberculosis monitoring program (LIHC, 1996b). According to key-informant interviews, LIHC has also conducted needs assessments in the communities and used these to direct community health programming.

The LIA and LIHC have made attempts to bring together, coordinate and support activities between organizations and individuals in the community dealing with health and environmental issues in the past. Workshops held by the LIHC have brought together diverse groups of individuals from coastal communities including Elders, hunters, women, youth, governmental and non-governmental representatives, as well as health and environment related officials (LIHC, 1996a). They have provided funding for the position of coordinator for the Nain Action Group (Nain Action Group, 1997). The LIA has surveyed and documented local ecological knowledge from a diverse group of individuals in preparation for the Voisey's Bay EA process, and in their consultation with specific resource user groups in the committee during the commercial caribou hunt and clean up of Saglek radar site (LIA, 1997i; Williamson, 1997). The Eco-Research group of the LIA directs the Waste Management Action Committee bringing together different organizational representatives in the community (LIHC, 1996a). The position of Community Health Advisor was filled in the past linking LIA and LIHC on environmental health issues as illustrated in the case of the health advice on PCBs in marine mammal fat. However, this position is currently vacant. LIA has been involved in cases where there has been some degree of inter-organizational coordination on issues, however, in the two cases where this was observed, the coordinating role was played by outside agencies.

A review of case studies shows that the LIA has multiple lines of accountability which have restricted decision making autonomy at times, as the cadmium in caribou, and the clean up of the Saglek radar site cases show. Key-informants indicated that their partnership in ITC allowed them input into a collectively autonomous position by northern aboriginal organizations. In the development of a communications program for the issues surrounding the clean up of PCBs at Saglek radar site, the Environmental Sciences Group (ESG) of DND took direction from LIA (Table 5.2.8: Appendix C page C-20). The LIA has involved community individuals, reported progress on issues to their membership at Annual General Meetings, and traveled to coastal communities to inform the public and receive feedback on various issues. LIA Advisors responsible for dealing with these issues are involved regularly and continuously. In some cases, consultations are held with specific individuals in the

community. LIA officials have consulted with hunters or fishermen's groups regarding their position on an issue and to gather local concerns and perceptions. However, challenges to involving others among the public such as a lack of official decision making authority held by the community and the often fast-paced and time restricted nature in which these issues are dealt with was reported (Table 5.2.10: Appendix C page C-23).

The Town Council of Nain is the municipal government elected from community residents, and is comprised of individuals of either Inuit, *Kablunagajuit* or non-Inuit descent. Councilors come from a wide variety of background and professions. This diversity is not required nor assured by the electoral process. The Council is overseen by a Mayor and deputy Mayor. The Town Council is stakeholder controlled through the electoral system and holds monthly meetings open to the public (Tanner et al., 1994). The Town Council of Nain is accountable to the residents of the community and directed through such pieces of legislation as the Municipalities Act (Government of Newfoundland and Labrador, 1990) and the Provincial Public Health Act (Government of Newfoundland and Labrador, 1995). They have utilized their authority under these pieces of legislation to express some form of autonomy such as in cases of rejecting applications for mineral exploration in the town boundaries (Town Council of Nain, 1996b) (Table 5.2.3: Appendix C page C-12). Over time, the Town Council of Nain has adapted its' structure in response to the increasing demands imposed upon them by the influx of mineral exploration and development companies to the region surrounding the community (Table 5.2.5: Appendix C page C-14).

The Town Council of Nain has made efforts to coordinate inter-organizational activity through their lead in the development of an Emergency Plan for the community (Town Council of Nain, 1996c, 1997b; Table 5.2.2: Appendix C page C-11). They have brought together community leaders to discuss issues of social health and well-being in the community, as well as mineral exploration and development concerns (Town Council of Nain, 1991a, 1992, 1996c, 1997a, 1997b; Williamson, 1994). Additionally, they coordinated and supported the formation of a Task Force on mineral development issues (Webbs, 1997; Table 5.2.7: Appendix C page C-17).

The OKalakatigêt Communications Society, the only Inuktitut broadcaster in the region, is based in Nain and directed by a Board comprised of representatives from the region. The Nain Town Council and OKalakatigêt Communications Society have entered into cooperative arrangements with outside support staff from volunteer organizations to provide review and recommendations for community development and action on certain issues (CESO, 1996; Jim Lotz Associates, 1996; Town Council of Nain, 1996b; Table 5.2.9: Appendix C page C-21). Additionally, the OKalakatigêt Communications Society has cooperated with the Innu Nation to hold an Elders conference on issues along the Labrador coast (Table 5.2.8: Appendix C page C-19).

Some overlap exists in the issues that are addressed by the organizations described above, some are not coordinated with others, and some are competing for funds (Williamson, 1994; local representatives). Additionally, some key-informants report a lack of support for community groups by local and regional organizations. A number of challenges to involvement in community issues reported in target group interviews included structural and power related barriers (Table 5.2.7: Appendix C page C-17).

The community of Nain has a large number of committees, service groups and groups that form and reform around various issues (e.g. Williamson, 1994; Nain Action Group, 1997a; TIA, 1997; Webbs, 1997). While some of these are informal, many (approximately 20) formal committees existed during the period of data collection (Town Council of Nain, 1996a; Nain Action Group, 1997; TIA, 1997). Some difficulty and frustration is expressed regarding their coordination and the fact that many appear to disband prior to the completion of their tasks (Table 5.2.6: Appendix C page C-16).

Two noteworthy community groups formed as a result of community concerns for mineral exploration and public health. The Concerned Citizen's group evolved out of the Task Force on mineral exploration and development started by the Town Council of Nain. It gathered and disseminated information through the community on the impending development and its

potential impacts on the community and region (Webbs, 1997). The Nain Action Group was formed to address health and social issues in the community and boasts a diverse membership including social services representatives, health workers, youth, women, hunters, Elders, Church officials and RCMP representatives, to address the issues identified (Nain Action Group, 1997; Table 5.2.10: Appendix C page C-23).

Key-informant interviews with local representatives indicate interest in increasing community involvement in decision making issues, the need for a more active and knowledgeable membership, and the need for outside expertise in dealing with some issues. Provincial officials also reported the need for more training for, and support from, community representatives. It appears that there are a few very active individuals in the community and a strong belief among residents that most decisions are made at levels out of their reach within LIA and the other organizations. There are too few resources to develop this level of organizational capacity.

Target group interviews found that a large number of respondents (N=34/46) believe that a more diverse set of community interests should be involved in making environment and health decisions, including Elders, hunters, women, youth, and “anyone who is affected by the decision”. A number of respondents (N=19/52) also reported that insufficient communication, limited access to information, information complexity, and participatory and structural barriers often limit their involvement (Table 5.2.10: Appendix C page C-24).

Organizational representatives mention the need for more active members. Some key-informants expressed concern with the increasing formalization of community structure, stating that many individuals defer participation in community issues believing it is the committees’ responsibility to address them. A number of challenges to being involved, and getting others involved, were mentioned in target group interviews. They included: structural or power related barriers; social issues within the community; personal challenges such as a fear of speaking out or being involved; financial challenges for committees or groups; and information and communication issues (e.g. lack of understanding of complex issues faced,

lack of access to information, and a lack of communication on issues of concern to community members) (Table 5.2.6: Appendix C page C-16).

Key-informants reported a consistent trend of increasing demands being placed on the community to address issues previously dealt with by outside actors and agencies. Local representatives expressed a need for expertise in the community not currently present while some expressed a concern that organizations are apprehensive about building these links with outside actors and allowing their involvement. Some challenges to coordinating and controlling these links with outside actors were reported. They included a lack of time, funds, and experience to take advantage of opportunities offered by cooperation with actors and organizations outside the system (Table 5.2.8: Appendix C page C-19).

As expressed in key-informant interviews in this study and others (Williamson, 1994) community residents express discontent with the lack of consultation and closed nature of the community. Some state that *“we need to be able to freely comment on the things that are affecting the community, we need to be open and honest about the problems before we can start fixing things and healing”* (Town Council representative). Others reported having difficulties in speaking out due to social, and job pressures against doing so. The target group interviews found a large number of individuals (N=25/37) expressing feelings of not being informed on issues that affect them, while a few (N=5) reported specific challenges such as lack of access to information and lack of trust in leaders and organizations. Additionally, organizational representatives expressed a desire to conduct reviews of decision making cases to learn from their processes and direct future decision making scenarios as no such evaluation or review has been conducted to date (Table 5.2.9: Appendix C page C-22).

The community has a decentralized administration of non-hierarchical, stakeholder controlled organizations

The organizations representing community interests are decentralized in structure and hierarchical. Despite the fact that LIA, its affiliates, and the Town Council are stakeholder controlled organizations, community perceptions contradict this notion. Thirty-seven people

in the community report barriers or challenges to being involved in issues. Seventeen of these individuals report structural or power barriers hindering their involvement in community issues (Table 5.2.1: Appendix C page C-9). It therefore appears that these organizations are stakeholder controlled in theory, but perhaps not in practice as the stakeholders perceive some barriers to their input.

OVERALL RATING = 4

The community has a multi-organizational structure and some form of inter-organizational coordination

The community has a multi-organizational structure designed to address issues related to economic development, health, culture, communications and political development.

However, examples of a lack of coordination between organizations on environment and health issues in the community exist. No official link exists between the Town Council and LIA, between LIHC and the Provincial Department of Social Services or the Health Labrador Corporation. The potential for overlap and confusion between these organizations exists and is exhibited to some degree in cases reviewed and was also expressed as an existing challenge by some key-informants interviewed (Table 5.2.2: Appendix C page C-11).

OVERALL RATING = 4

The community has multiple lines of accountability and yet exhibits some degree of decision making autonomy on issues affecting its membership

The community and its organizations have multiple lines of accountability in the areas of environment and health issues, however, it appears these lines severely limit the community's decision making autonomy (Table 5.2.3: Appendix C page C-12).

OVERALL RATING = 3

Community organizations began with the minimum number of members necessary to address issues at hand

Not enough information available to make valid assessment (Table 5.2.4: Appendix C page C-13).

OVERALL RATING = INS

The community organizational structure has changed over time and adapted its policies / structures to address changes in its external environment

Evidence exists for structural change within the community in response to changes in the external environment, however, little evidence exists for changes in policy. Also, key-informants reported that changes were challenged or limited by a restriction of human and financial resources (Table 5.2.5: Appendix C pages C-14,15).

OVERALL RATING = 3

Small groups form and dissolve within the community as issues are addressed

Some groups have formed temporarily in the community to address specific issues. However, organizational representatives mention the need for a more active membership. Key-informants expressed concern with the increasing formalization of structure in the community, stating that many individuals defer participation to “the committees”. As well, a number of challenges to being involved and getting others involved were mentioned in target group interviews (Table 5.2.6: Appendix C page C-16).

OVERALL RATING = 3

Activities between groups within the community are supported and coordinated

There exists some overlap in the issues that are addressed by organizations and committees. Some key-informants reported a lack of acknowledgment and support for community groups by local and regional organizations. A number of challenges to involvement in community issues reported in target group interviews included structure related barriers (Table 5.2.7: Appendix C pages C-17,18).

OVERALL RATING = 3

At various times, the community is involved in a number of cooperative arrangements with actors outside the community to address issues and the community directs their formation and re-formation

Some examples were found of organizations and individuals reaching out and building links with outside actors. Local representatives expressed a need for expertise in the community not currently present while some expressed a concern that organizations are apprehensive towards building links with outside actors and allowing their involvement. Some challenges to coordinating and controlling these with outside actors were reported. These challenges included a lack of time, funds, and experience to take advantage of these opportunities (Table 5.2.8: Appendix C pages C-19,20).

OVERALL RATING = 3

The community is open to public scrutiny and comment and engages in self-evaluation exercises

A number of opportunities exist for public comment and feedback in the community. Some organizations may make greater efforts than others in providing these forums, however the challenges perceived by individuals and lack of evaluation of the handling of issues inhibits the community from learning from past experiences. Further, the social pressure felt in the community to remain quiet and not comment on community issues, as expressed by some individuals, suppresses the opportunity to involve all perspectives and concerns (Table 5.2.9: Appendix C pages C-21,22).

OVERALL RATING = 3

The community is able to link diverse interests through utilization of a variety of members with differing expertise in decision making cases

The degree of diversity present in the Board of LIA and the Town Council are not guaranteed and can be a matter of chance. Additionally, a number of individuals (N=19/52) reported challenges to becoming involved and felt that a number of individuals should be involved in making decisions that are currently not consulted. Despite the challenges of pace and time

faced in dealing with many of these issues in this environment, a number of examples exist in which a very small group of the same individuals are repetitively involved in cases (Table 5.2.10: Appendix C pages C-23,24).

OVERALL RATING = 2

Table 5.2. Summary of analytical scores of sub-components of organizational / coordinative capacity

Sub-Components of Organizational / Coordinative Capacity	Overall Rating
The community has a decentralized administration of non-hierarchical, stakeholder controlled organizations	4
The community has a multi-organizational structure and some form of inter-organizational coordination	4
The community has multiple lines of accountability and yet exhibits some degree of decision making autonomy on issues affecting its membership	3
Community organizations began with the minimum number of members necessary to address issues at hand	INS
The community organizational structure has changed over time and adapted its policies / structures to address changes in its external environment	3
Small groups form and dissolve within the community as issues are addressed	3
Activities between groups within the community are supported and coordinated	3
At various times, the community is involved in a number of cooperative arrangements with actors outside the community to address issues and the community directs their formation and re-formation	3
The community is open to public scrutiny and comment and engages in self-evaluation exercises	3
The community is able to link diverse interests through utilization of a variety of members with differing expertise in decision making cases	2

Decision Process Capacity

The community of Nain and its organizations follow both formal and informal practices for making decisions. Many community issues are dealt with, and consultation is held, through a “town or community meeting” in an open format, consensus building manner (e.g. Williamson, 1994; Nain Action Group, 1997). However, a large number of individuals (N=25/32 from Elders, hunters, women, youth) in target group surveys reported that they did not attend community meetings (Table 5.3.1: Appendix C page C-25). Under the Municipalities Act, the Town Council has held plebiscites to decide action on issues with significant community implications and strongly expressed opinion (e.g. Town Council of Nain, 1991a). The Town Council also follows the processes outlined in the development plan for the community. The Labrador Inuit Association follows the procedures outlined in their policies and procedures manual. Issues are brought to the Executive, who then decide

whether Board approval is necessary. Organizations are also involved in decision making processes outlined under provincial and federal legislation (Williamson, 1996, CEEA, 1997a,b; Table 5.3.1: Appendix C page C-25). As reported by one key-informant, the decision making processes for food chain contaminant issues is ad hoc, flexible, and heavily dependent on the identity of the initiating agency (Table 5.3.4: Appendix C page C-30). Approximately half of those interviewed in the target groups (N= 15/32), indicated some knowledge of who was involved in making decisions on health and environment issues in the community (Table 5.3.1: Appendix C page C-25)

Despite the potential effectiveness of the ad hoc processes illustrated in the case studies, confusion relating to the increasing trend to deal with a greater number of issues, a changing context, and a lack of clear jurisdiction in some cases was expressed by some key-informants. Health representatives interviewed reported uncertainty about roles and the ways in which the decision making system was evolving. One regional health representative noted, *“we need to be very flexible in how we address and plan to address issues now and in the future as we do not know what things will look like down the road.”*

A number of examples of decision making processes being iterative and open exist in the data collected. Federally legislated processes that the community is involved in include opportunities for public input through hearings, and some include reviews to determine the adequacy of information involved during the process (Williamson, 1996, 1997; CEEA, 1997a, 1997b; LIA, 1997b). In some cases, efforts were made by the community to force iterations in processes by presenting new information and public concerns to the extent that decisions were reconsidered (LIA, 1997b). Review within the LIA at the executive level shows the potential for iterations in decision making processes, however it also closes some decisions to public and Board input. Policy making within LIA is open to public feedback through the Annual General Meeting format required to pass any policy changes (LIA, 1994b). The LIHC utilizes an open process in some cases as seen in their solicitation of public input for some program (LIHC, 1995a). The Nain Action group and Town Council of Nain illustrate some examples of iterative and open processes in their use of community

consultation methods to gather public input, and the Town Council has implemented plebiscites to gather more information, which in some cases reversed earlier rulings on decisions in the community (Town Council of Nain, 1991a, 1991b, 1992, 1995a, 1996b; Table 5.3.2: Appendix C page C-27).

No examples of evaluation were found among the data collected from the community. However, a number of potential barriers or challenges to carrying out evaluative exercises were evident in the data. The number of issues dealt with, the increasing responsibilities assumed by community organizations, and the time frame for decisions appears to restrict their ability to evaluate past scenarios and adapt for future issues. *“Challenges include more responsibility, more authority, faster environment, more issues to deal with at the same time...feeling like you are playing catch up” (LIA representative).* Respondents reported the lack of review or evaluation; *“...there is a lack of funding for us to do some work ourselves....there is a need for some evaluation of this case”; “...the process was rushed, there was no reflection on the process and message, it was just done.” (LIA representatives)* (Table 5.3.3: Appendix C page C-28).

The Labrador Inuit Association participate in a number of externally driven processes due to their lack of jurisdiction on certain health and environment issues and their attempts to play a meaningful role in these processes. They also follow those processes outlined in their organization by-laws and policies for issues in which they have jurisdiction. The processes followed change dependent upon actors and issues addressed (LIHC, 1995a; Town Council of Nain, 1995a).

The Labrador Inuit Association incorporates local concerns into decision making processes through a number of forms of consultation (Williamson, 1996; LIA, 1997b). The LIHC has incorporated local interests and cultural values through consultation on community health programming initiatives (LIHC, 1995a, 1997a). The Town Council of Nain has conducted community consultation to gather concerns and perspectives on social issues in the community that have directed action (Town Council of Nain, 1991a, 1992, 1995a, 1996b).

Despite these examples of incorporating local concerns and cultural values, some barriers exist. Local representatives expressed a need for more communication with the public and greater public involvement. Key-informants interviewed indicated the potential for single actor decisions to be made regarding food chain investigations based on legislative power, not having to consider community concerns or cultural values in the process.

The LIA and LIHC uses local and traditional ecological knowledge of both a qualitative and quantitative nature through research conducted in the region (LIHC, 1997a; Williamson, 1997). The Town Council considers both benefits and risks of impending changes and qualitative and quantitative information in some decision processes as shown in their consideration of the application for mineral exploration within the town boundaries (Town Council of Nain, 1995b, 1995c). All health and environment workers and elected officials interviewed (N=18) agreed that there is a role for local or traditional knowledge in decision making processes in the communities. However, half (N=9) are unsure as to whether or not it is currently used and indicated some challenges to including it in decision processes. These challenges included getting it recognized as a valid and valuable source of information, and a lack of resources required for its collection and organization (Table 5.3.6: Appendix C page C-34).

The Labrador Inuit Association appears to stress long and short term goals of the community in their consideration of present and future training and employment needs for the Voisey's Bay mine and mill project (LIA, 1997a, 1997b). Some members of the LIA arranged a Research Steering Committee to review proposals for work to be conducted in the region and this committee meets monthly. According to organization by-laws, the LIA Board meets four times per year, and more often when required (LIA, 1994b). The LIHC has done needs assessments in the coastal communities to assess long term and short term needs for programming and used this information to direct initiatives and efforts. The Town Council of Nain meets monthly, holding meetings open to the public on all town issues and they have explicitly considered long and short terms goals in their concerns regarding mineral

exploration proposals in and around the community of Nain (Town Council of Nain, 1995b, 1995c; Table 5.3.7: Appendix C page C-35).

Data exists illustrating challenges or barriers to the community's ability to utilize some form of scanning technique and be proactive in decision making scenarios. The LIA Executive meets only when needed to address issues. As well, a number of challenges to being proactive were mentioned by key-informants. These include "*...we have to deal with more, changing things; faster pace than before; more issues at the same time; we are feeling like we are playing catch up...it is very hard just to keep up with everything going on.*" As reported by another key-informant, "*there is no process for many of these decisions, we are having to be reactionary.*" (LIA representatives). Further, one key-informant expressed some weaknesses of the LIA Research Steering Committee in that its' role and responsibilities are unclear, and they are only able to work from project to project as no funding base for the committee exists and they are not a recognized sub-committee of the LIA Board (Table 5.3.7: Appendix C page C-35).

The case decisions reviewed found that legislated processes exist for making some decisions, however, they do not include the community or representatives of the community. Local representatives stated that this was one of the greatest challenges. As stated by key-informants interviewed, "*LIA had no process for handling this, we never heard until it was an advisory...there is no process in place that people know of and are comfortable with*"; "*...there is no planned process, it was made up along the way and hoped it would work*"; "*it is still a reactionary process and role for the community...we are still unsure of the process at this time.*" However, some cooperative arrangements, initiated by outside actors, to consult community representatives compensate for this absence. The involvement of the LIA in the PCBs in marine mammal fat case was made possible through their relationship with ITC. The involvement of LIA in the PCB clean up at Saglek radar base was made possible by the initiative of the Department of National Defense representative, and later their consulting group, the Environmental Sciences Group (ESG). As stated by one organization representative, "*...it is agreed now to go slowly, there is no agreed process, but there is an*

agreed partnership...there is consensus building for the first time with this issue." (Table 5.3.1: Appendix C page C-26).

Challenges commonly faced in these cases included time constraints, jurisdictional issues, and logistical constraints as a number of organizations are involved in these issues and are separated considerably by time and distance. Few target group respondents (N=16/55 - cadmium in caribou; N=8/55 - PCBs in marine mammals; N=3/55 - recent cleanup of PCBs at Saglek) reported knowledge of these advisories or the actual content of the advice that was released. Of those that did, the large majority (N=11/16 - cadmium in caribou; N=7/8 - PCBs in marine mammals; N=3/3 - recent cleanup of PCBs at Saglek) were from the "health and environment workers and elected officials" sub-group. Fewer reported knowledge of the source of these advisories or advice (N=6, N=5, N=3, respectively) (Table 5.3.1: Appendix C pages C-25,26).

Two of the three case studies also illustrated some examples of iterative and open processes. The contaminants experts meeting held in Ottawa to deal with the PCBs in marine mammal fat case allowed feedback from regional representatives. As stated by LIA representatives interviewed, *"the government officials felt they needed to do something with the information....the workshop brought in the regional context and benefits information..."*. In the PCB clean up at Saglek, LIA was able to force some iteration in the process through their appeal to the agencies directing the proposal to ship the contaminated soil down the coast by barge. *"It required more information and we were prepared to stop it...got more information on shipping involved and this gave us time to consult our fishermen's committee, our involvement forced iteration"* (LIA representative). The nature of the partnership developed in this case allowed for future iteration; *"...it is very different with ESG involved, they deal with us, the process is open to iteration because of the actor"* (LIA representative). However, this was not always the case as the process followed in the case of the health advisory given on cadmium in caribou liver and kidney was based on one set of sample data and there was no opportunity for public involvement or feedback involved. (Table 5.3.2: Appendix C page C-28).

The processes followed appear to change dependent upon the actors involved and issues at hand. However, the lack of recognized processes for many of these issues, makes the assessment of the changes in these processes difficult, “...*still reactionary, no process in place that people know and feel comfortable with...*” (LIA representative speaking on PCBs in marine mammal fat case) (Table 5.3.4: Appendix C page C-31).

The case decisions reveal a variety of perspectives on the inclusion of local concerns for these issues. The decision to release an advisory to stop all consumption of caribou liver and kidney in the province did not consider any local concerns. The investigation and subsequent advisory was based solely on concerns initiated at the provincial level and assessed using standards set at the international level. The coordinating role assumed by ITC in the case of PCBs in marine mammal fat incorporated concerns at the regional level through the involvement of aboriginal organization representatives. The workshop orchestrated by ITC brought in “regional context” and benefits information. In the case of the shipping of PCBs down the Labrador coast from the Saglek radar site, LIA had to force their concerns to be taken seriously through appeal. As one key-informant stated, “...*in the initial clean up they wanted to base it all on economics and not consider aboriginal issues, public health, dependence on the environment, and environmental knowledge*” (LIA representative) (Table 5.3.5: Appendix C page C-33). In the most recent and ongoing clean up of this site, the DND contracting environmental research group (ESG) consults LIA to include local concerns in the process. The local concerns in this case include those related to: health of wildlife; the importance of the site as both an historical and contemporary hunting and fishing area; protection of human health from consumption of these wildlife resources; location of a commercial fishing venture adjacent to the radar site; legacy issues related to prior incomplete clean ups; other military sites along the Labrador coast; and public perception of an area cited for potential Inuit land claims selection (Table 5.3.5: Appendix C page C-33).

The case studies showed that the information included and considered in the processes was dependent upon the lead actor in each case. In the case of cadmium in caribou tissue, a small

amount of local information was utilized to select the camp location and hunting quotas and techniques. No local knowledge was utilized in making the decision on the advisory. The information utilized in the decision was limited and very narrowly focused. As stated by one key-informant, “...the information was all risk based, no benefits to aboriginal people were considered” (LIA representative). Local knowledge was incorporated and used to balance the western scientific information in the PCB in marine mammal case as regional perspectives included qualitative information in the decision...”; “...people (regional representatives) said it was unrealistic (the advisory), no advisory was to be given” (LIA representative). Similarly, through the appeals process, LIA utilized local knowledge of coastal environmental conditions and the importance of marine resources to Inuit in the clean up PCBs at the Saglek radar site. In designing a sampling and clean up program of this site, DND consultants ESG, used local knowledge along with the western scientific information gathered on the area (Table 5.3.6: Appendix C page C-34).

Some examples of barriers to the inclusion and use of qualitative and quantitative local knowledge in decision making processes were found. “Traditional knowledge that people have of their area is discounted and not generally accepted” (Labrador community resident). Barriers to the inclusion and use of some qualitative and quantitative western scientific information were also identified. Case decisions follow guidelines set by outside agencies or legislation developed in different regions and contexts. Provincial, federal and international guidelines are applied in these environments often with little consideration of the contextual constraints and challenges. Many of these processes directed by outside agencies are based primarily on quantitative, western scientific information and disregard local knowledge as a valuable or credible source of data. Additionally, the community faces challenges to collecting and organizing local knowledge for its use in decision making processes; “...it costs to get the local information...we are unclear on how the local knowledge is meshing with the science” (LIA representative) (Table 5.3.6: Appendix C page C-34).

A limited amount of scanning by the community and its organizations is shown in the cases reviewed. In the case of the advisory on cadmium in caribou, “LIA was forced to be

reactive". Time constraints, and their exclusion from a northern technical committee on contaminants issues, forced the LIA to play a reactive role in the PCBs in marine mammal case as well. In the latest stages of the case of PCB clean up at the Saglek radar base, LIA demonstrated some form of scanning ability (identification and consideration of long and short term options) in that the long term priorities to clean up the site took precedence over the short term concerns of shipping the contaminated soil down the coast. In the most recent stages of this case, through their partnership developed with the DND consulting group (ESG), LIA has been able to take a more proactive position and consider long and short term options for the final clean up of this site.

A recognized and accepted procedure for making collective decisions exists

Although some decision processes for community issues exist, many appear to operate on an ad hoc basis. Some repetitively used forms of making decisions in the community, popular in the past, are no longer supported by many today (community meetings). Additionally, no recognized formal process involving the community exists for the environmental health issues reviewed in this study. Key-informants expressed the desire to develop such a process rather than continuously being forced into a reactionary role in these issues (Table 5.3.1: Appendix C pages C-25,26).

OVERALL RATING = 2

Decision making processes are open and iterative, collecting and incorporating new information as required and allowing feedback from the public

Some examples of iterative processes attempting to be open to public comment and input exist in the data collected. However, a number of challenges in getting people involved were identified by key-informants and a variety of barriers to participation were expressed in target group interviews (Table 5.3.2: Appendix C pages C-27,28).

OVERALL RATING = 3

Some form of evaluation of these processes exists and compares goals and objectives to achievements and results

The lack of evaluation of cases and processes, and the presence of barriers to conducting such exercises, appears to limit the community's ability to adapt internal decision making processes (Table 5.3.3: Appendix C page C-29).

OVERALL RATING = 1

The process followed changes over time dependent upon the actors, issues and factors involved

The decision making processes internal to the community appear to change in response to the context and issues involved. Those controlled by actors outside the community are influenced indirectly by the community and their representatives dependent upon the nature of the relationships built with outside agencies and individuals. The adaptation of these processes is difficult to assess as the cases involved different issues, actors, agencies, legislation and relationships with the community (Table 5.3.4: Appendix C pages C-30,31).

OVERALL RATING = 4

The community incorporates local concerns, cultural values into the decision making process

The evidence collected illustrates consideration for local concerns and cultural values and incorporation into the decision making processes directed by actors within the community. However, the cases reviewed exhibit the potential for lack of consideration and incorporation of these concerns and values. Partnerships built with outside actors directing these processes can allow the opportunity to involve them in the processes followed (Table 5.3.5: Appendix C pages C-32,33).

OVERALL RATING = 4

The processes followed incorporate qualitative and quantitative information, and local knowledge

There are some examples of the inclusion of local knowledge and information of both a

qualitative and quantitative nature in decision making processes illustrated in the collection of field data. However, there exist a number of barriers or challenges to the consideration of this information as well and it is unclear whether this information is actually involved in some instances (Table 5.3.6: Appendix C page C-34).

OVERALL RATING = 3

The community promotes and utilizes a process of anticipatory scanning and consideration of long and short range options for solutions to problems

It appears that limited opportunities exist for the community to be proactive on many of the issues being addressed. They are therefore forced into reactive roles and unable to consider long and short term options in decision making scenarios (Table 5.3.7: Appendix C page C-35).

OVERALL RATING = 2

Table 5.3. Summary of analytical scores of sub-components of decision process capacity

Sub-Components of Decision Process Capacity	Overall Rating
A recognized and accepted procedure for making collective decisions exists	2
Decision making processes are open and iterative, collecting and incorporating new information as required and allowing feedback from the public	3
Some form of evaluation of these processes exists and compares goals and objectives to achievements and results	1
The process followed changes over time dependent upon the actors, issues and factors involved	4
The community incorporates local concerns, cultural values into the decision making process	4
The processes followed incorporate qualitative and quantitative information, and local knowledge	3
The community promotes and utilizes a process of anticipatory scanning and consideration of long and short range options for solutions to problems	2

Participatory Capacity

A number of opportunities exist within the community for public involvement or representation in decision making processes. Some organizations including the LIHC and LIA, hold workshops on issues and invite community representatives to address issues of concern (LIA, 1997i, 1997j; LIHC, 1996a). Workshops attempt to transcend linguistic barriers through translation and publication of all materials in English and Inuktitut (LIA, 1994a, 1997i; Town Council of Nain, 1995a, 1995b, 1995c; LIHC, 1996a). Participation is

legislated in some processes in the community as well (Williamson, 1996; CEAA, 1997b). The LIA and the Town Council have a number of elected positions allowing public representation in daily decision making processes (LIA, 1994a; Town Council of Nain, 1991a, 1995a; Nain Action Group, 1997a). Town organizations hold community meetings open to the public to address issues (Town Council of Nain, 1991a, 1995a; Nain Action Group, 1997a) and the Town Council holds plebiscites to decide action on issues of large concern to the community (Town Council of Nain, 1991b, 1996b). Also, a number of service groups and community action groups exist, open to individual participation and involvement, that address issues within the community related to a variety of concerns (Tanner et al., 1994; Williamson, 1994; TIA, 1997). A number of people in the community are active on a number of committees identifying and addressing potential issues of concern to community residents (Williamson, 1994). Despite these opportunities there exists concerns within the community that not enough opportunities exist for participation (Williamson, 1996), and as seen in the lack of representation by the community on some environmental health issues (Peters and Légare, 1997) (Table 5.4.1: Appendix C page C-36).

Some evidence of participants' concerns having direct impact on decision making processes exist. Local concerns voiced through EA scoping sessions were incorporated in the process of drafting guidelines for the EA process for Voisey's Bay (Williamson, 1996; LIA, 1997b; TIA, 1997). The LIHC has held workshops in which local participant's perspectives directed future action on issues (LIHC, 1995a, 1996a, 1997a). The Nain Action Group took direction on addressing social issues in the community from community concerns voiced at meetings, and the Town Council of Nain has made decisions based on community desires expressed through plebiscites (Town Council of Nain, 1991a, 1992, 1995a, 1995b, 1996b). Direct action in the form of public protests by individuals has resulted in changes in decisions in some cases. As well, in regional radio interviews some election candidates for LIA positions reported concern over the lack of local Inuit involvement in some issues including land claims negotiations (Table 5.4.3). Key-informants expressed knowledge that the community would only be directly involved in food chain contamination investigations and decisions if they collected the information and identified the problem themselves. Some expressed the belief that they

are not listened to in current participatory efforts. One community workshop participant stated, “*..government is still not listening to the people who are knowledgeable in these areas; the end result is people must take a stand and have our voices heard...we have lost too much of our identity, culture and way of life*” (Workshop participant) (Table 5.4.2: Appendix C page C-38).

Respondents reported a number of challenges to participation including, people’s lack of ability to comprehend and remember information from one meeting to the next, the prevalence of a number of social issues that inhibit people’s involvement (e.g. social pressures not to speak out in the community, personal social and health needs needing attention) and a loss of language creating barriers to participation for some. “*People want to be consulted but don’t want to respond, we sometimes have a very hard time trying to get people involved in or responding to programs*” (local organization representative). Some respondents noted that “*... people are getting tired of the length of these processes, they feel nothin’ will be decided at the meetings...*” (local organization representative).

Data collected for this thesis found some examples of direct attempts to involve a wide range of perspectives in decision making processes. Workshops and projects held by LIA and LIHC appear to target individuals from a variety of sub-groups within and external to the community (LIHC, 1996a; LIA, 1997i; Williamson, 1997). However, a small number of individuals appear to be highly active through their involvement in workshops, meetings and participation in a number of committees and organizations (Williamson, 1994; Webbs, 1997). In reference to a perceived lack of involvement by general community population, one organizational representative expressed the following belief, “*..and some people have larger issues they want to deal with at these meetings than what the meeting is set to address...I think many basic needs are not being met so they want to talk about that...*” (local organization representative). Key-informant interviews found that some groups (e.g. Elders) are very concerned about their lack of involvement in community issues. Political candidates in LIA elections, expressed concern over the lack of youth involvement in issues and the fact that there were many committees in town addressing issues, but few youth actually involved. The

majority (N=37/55) of respondents in the target group survey, reported experiencing some barriers to participation (Table 5.4.5: Appendix C page C-44). Discussions with a number of community individuals found the perspective that participation in community issues has been discouraged at times through a number of methods. Meanwhile, some key-informants reported that organizations continue to struggle to get individuals involved. There appears to be a low interest in political processes in the community as illustrated in a low voting turnout for LIA nominations and elections (Table 5.4.2: Appendix C page C-38).

Some respondents reported that many do not think they have important information to add, that they will not be listened to, and therefore do not attempt to become involved. Also, the belief that many default to the committees in town in the belief that they will address all issues, the concern that some are very intimidated to speak out in the community, and that some are confused as to who to approach with concerns and therefore remain quiet was expressed (Table 5.4.4: Appendix C page C-42).

Target group interviews showed that a few individuals are involved and a large number of committees exist in the community. Few (N= 7/32) report regularly attending community meetings. When asked about challenges to participation, individuals reported personal problems and issues (N=30), information and communication related problems (N=19), and structural or power related barriers (N=17) as the top items restricting or hindering their involvement.

A review of the case studies reveals a limited number of opportunities for community involvement in these decision making processes. Those that exist appear controlled and limited in the degree of involvement allowed. Some local hunters involved in the commercial caribou hunt were also involved in the collection of samples with provincial wildlife representatives which led to the release of the advisory to stop all consumption of caribou liver and kidney in the region. Two regional representatives were involved in the decision making and communication process for the release of information regarding PCB contamination in marine mammals. Local researchers were involved in the dissemination of

information regarding the clean up of PCBs at the Saglek radar base. LIA environmental representatives, hunters and fishermen were involved in the design of the sampling study for the delineation of contamination at the site (Table 5.4.3: Appendix C page C-41). The relationship between the LIA and the consulting group of DND is changing in a direction that is allowing for more cooperative efforts on issues affecting the community. Representation in both of the latter cases was made possible through the relationships developed with outside actors. However, this involvement had to be argued for and forced, and the relationship in all cases still leaves the community and its representatives in a reactionary role... *“LIA was forced to be reactive, and had no context to put it in...”*; *“...the province is still not recognizing our involvement...”* (LIA representatives).

Another barrier to participation is jurisdiction which restricted involvement in the case of cadmium in caribou tissue and PCBs at the Saglek radar site, *“...it took a long time to get to this point...we are stuck in a provincial regulatory regime and it is an Arctic problem...it is hard to keep up and stay in a driving role...the organization is stretched but we need to be involved in these things...”* (LIA representatives) (Table 5.4.1: Appendix C page C-37). However, through experience in these issues community representatives identify and build contacts that spread responsibility and expand their ability to address these issues.

Opportunities exist for community members to become involved in decision making processes

While the data suggest that a number of opportunities for community participation exist, participatory opportunities are generally limited and controlled (Table 5.4.1: Appendix C pages C-36,37). Additionally, community members express strong perceptions of barriers to their involvement in some cases.

OVERALL RATING = 3

Community members are involved in decision making processes from the beginning of problem identification phases

A number of opportunities exist for individuals to become involved in community issues early

in some processes. This is only the case for those issues in which the community has legislated power to make decision though. Also, the perception that participation is blocked or difficult for a number of reasons may be stopping individuals from taking advantage of these opportunities. Through public representation in community organizations and the development of relationships with outside actors, the community has a limited voice on issues affecting them at the regional level (Table 5.4.2: Appendix C pages C-38,39).

OVERALL RATING = 3

Participants are listened to and their input has some effect on the decision making process

Some examples exist of participatory efforts having impact on decisions. Both formal and informal forums for involvement make this process possible. It appears, that community representation and its potential impact in decision making processes are possible through relationships developed with outside actors when issues outside community jurisdiction are faced. These relationships tend to allow the community to transcend jurisdictional and regulatory barriers to some extent. However, generally, the community must appeal in processes to be heard in most cases and this limits their potential impact (Table 5.4.3: Appendix C pages C-40,41).

OVERALL RATING = 3

The community attempts to make participation opportunities accessible (e.g. culture, language)

The community attempts to address linguistic barriers through a variety of methods. However, other challenges to participation identified that may hinder individuals access to processes do not appear to be addressed both within the community and with community representatives addressing issues within the region on behalf of the community (Table 5.4.4: Appendix C pages C-42,43).

OVERALL RATING = 2

Different members from a variety of sub-groups within the community are involved as participants at different times and in different issues

When the opportunity exists, the community attempts to involve a wide variety of individuals, however some groups still express concern over a lack of consideration of their perspectives. It appears that a few individuals are repetitively involved in issues and time, financial and other constraints limit their abilities to involve others (Table 5.4.5: Appendix C pages C-44,45).

OVERALL RATING = 2

Table 5.4. Summary of analytical scores of sub-components of participatory capacity

Sub-Components of Participatory Capacity	Overall Rating
Opportunities exist for community members to become involved in decision making processes	3
Community members are involved in decision making processes from the beginning of problem identification phases	3
Participants are listened to and their input has some effect on the decision making process	3
The community attempts to make participation opportunities accessible (e.g. culture, language)	2
Different members from a variety of sub-groups within the community are involved as participants at different times and in different issues	2

Information / Communication Capacity

Both the LIA and the LIHC continue to be involved in a number of projects collecting both qualitative and quantitative information. The majority of these projects appear to be qualitatively focused (LIHC, 1995a, 1997a; LIA, 1997i; Williamson, 1997). Additionally, LIA has collected local knowledge in the community on land use and environmental issues (Brice-Bennett, 1977; Williamson, 1997). The LIA has developed a set of Guidelines for Ethical Research in the region that includes issues of information control and ownership (LIA, 1997c). The LIHC regional health survey is collecting both qualitative and quantitative information (Table 5.5.1: Appendix C page C-46). The OKalakatigêt Communications Society collects both qualitative and quantitative information in their reporting of issues in the community and includes a significant amount of local knowledge in some cases. The Town Council of Nain has gathered a limited amount of quantitative information on community concerns through votes held on issues (Town Council of Nain, 1996b).

Some organizations utilize workshops as a method to communicate and educate residents and decide what actions to take (e.g. LIHC, 1996a). The LIHC and local LIA researchers utilize a variety of methods to communicate including local and regional radio broadcasts, the local television broadcasts, posters, pamphlets, open houses and in some cases door to door visits (LIA, 1997i). Additionally, the LIA has started a monthly newsletter (LIA, 1997d) and re-staffed the position of Communications Officer. This individual communicates with the membership through community fieldworkers, and uses the newsletter, press releases to radio and television stations and announcements at annual general meetings and community meetings as basic forms of disseminating information. The use of community or town meetings to convey information to the population is common to all organizations in the community (Town Council of Nain, 1995a, 1995b, 1995c). The OKalakatigêt Communications Society delivers daily programming in both Inuktitut and English and publishes a quarterly magazine on issues of importance within the region (OKalakatigêt Society, 1995). In some cases, local volunteer groups have taken the initiative to communicate information to the general public to raise awareness on issues affecting the community (Webbs, 1997). Despite the variety of methods used to communicate, residents report a lack of information being released, and poor communications between organizations, between organizations and the community, and among community members. Some individuals made specific suggestions for improving communications both within the community and between the community and outside actors (Williamson, 1994, 1996; Town Council of Nain, 1995b, 1995c, 1996b; LIHC, 1996a, 1996b). Key-informants from the LIA expressed that they had no current general communications plan, but were interested in developing one (Table 5.5.2: Appendix C page C-48).

Key-informants reported a number of challenges for local communications. These challenges include: rapid turnover in trained local communications staff; difficulty in addressing complex issues; difficulty in dealing with a number of issues simultaneously; local communicators not being utilized enough by organizations, and lack of communications staff at some times (Table 5.5.4: Appendix C page C-52). A significant proportion of communications on issues affecting the community are reported by outside sources before they are delivered by local

individuals. The results of the target group interviews show that community residents approach a variety of individuals to get information, and that an equal number of individuals reported local sources or individuals (either official figures in the community or other individuals) (N=29 / 39) as they did regional sources or individuals as key information sources on health and environment issues (Table 5.5.3: Appendix C page C-51). The target group survey questions show that the most commonly reported method of hearing environmental health advisories or advice was through word of mouth from other individuals in the community (N=22/55). Sources of knowledge regarding the safety of traditional foods included personal observations (N=17/40), and word of mouth (N=14/40).

Key-informants reported that an ad hoc approach to communications support was taken on the issues they felt were important. The results of the survey interviews also indicated that the majority of people (N=31 / 55) report not feeling informed, and 22 of 55 interviewed reported challenges faced in gathering information to address their questions and concerns. Seventeen individuals reported that information dealing with issues is often too complex and interpretation was difficult, while 7 reported challenges related to information access. The majority of individuals (N=24 / 27 including health and environment workers and elected officials; N=10 / 11 excluding this group) stated that the solution to these problems are directly related to the nature of the information and methods used to communicate in the community (Table 5.5.5: Appendix C page C-54).

A number of examples were found in which organizations and individuals in the community attempted to transcend linguistic barriers and communicate all information in both Inuktitut and English (LIHC, 1996a; Williamson, 1997; LIA, 1996; OKalakatigêt Society, 1995; LIHC, 1995a; LIHC, 1995c). However, community residents still complained about a lack of communication and lack of consideration for the linguistic challenges faced by some in the community (Williamson, 1996; LIA, 1997a). The loss of aboriginal language in the community is a great concern to some and others reported not only the need for communication in both languages, but more culturally appropriate information. The majority of individuals interviewed in the target groups (N=39 / 55) indicated information and

communication related needs for personal decision making on environmental health issues. These needs included an increased in the quality and quantity of information released, more understandable information, and more accessible and regionally applicable information (Table 5.5.6: Appendix C page C-56).

Very few examples of any form of communication evaluations were found in the data collected. The OKalakatigêt Communications Society conducts listener surveys which are then used to direct changes in programming and delivery and the organization is open to informal evaluations through individual listener comments (OKalakatigêt Society, 1995). The Town Council is open to comments on all matters during open Council meetings and some comments are used to direct communications improvements in the community (Town Council of Nain, 1995b, 1995c, 1996b). Key-informants indicated that time and money are the main restrictions to conducting some form of communication evaluation exercises (Table 5.5.7: Appendix C page C-58).

Messages concerning community issues often arrive in the community from outside sources and sometimes contradict or confuse messages delivered by internal communicators. Some individuals expressed concern for this issue, "*...we often hear about something on CBC before we hear it from our own organizations*" (local communications representative). Key informants expressed a need to begin to address these issues originating outside the community (Table 5.5.8: Appendix C page C-59). The Town Council has addressed confusing messages relating to mining and exploration in the region by bringing in provincial government officials for Town Meetings (Town Council of Nain, 1995a). The LIA Communications Officer acts as a liaison with outside communicators in an attempt to ensure that the information they receive regarding issues affecting the community is through this one source. Some key-informants reported challenges in keeping up with all the information flowing into the community as many of the issues required a great deal of background knowledge to understand and in some cases key sources of the information were very difficult to contact for clarification (Table 5.5.8: Appendix C page C-59).

The cases reviewed show that little opportunity existed for the community to collect and control information on these issues because of jurisdictional challenges and the abilities of outside actors or organizations to conduct the work. In the case of cadmium in caribou tissue, all the information involved was risk based, quantitative information and the community had no control over the information delivery. In the case of PCB contamination in marine mammals, all the original data provided by federal researchers was of a quantitative risk focus. The Ottawa contaminants experts meeting brought in qualitative and benefit oriented information. Key-informants expressed concern that no Labrador data was included in this decision. In the case of the PCB clean up at the Saglek radar base, the LIA argued for action on the basis of local knowledge of the coastal environment. This information played a role in the final decision. Challenges faced by the LIA in this case included the fact that they did not have any “hard data to compete” in the decision making process. The eventual relationship that developed with the ESG has since directed the cooperative collection of both qualitative and quantitative information (and some local knowledge) on this issue. However, financial limitations constrain the organization’s ability to collect and organize all the information desired in this case (Table 5.5.1: Appendix C page C-47).

Key-informants reported communications difficulties due to a constant shortage of time, inadequate internal communications, and the limited effectiveness of AGM announcements as a form of communication to communities. Interviews in the community reveal that only those in positions related to the health and environment field, or elected officials, were aware of the latest clean up efforts at the Saglek radar site (N=3/18) (Table 5.5.2: Appendix C page C-49; Table 5.5.3: Appendix C page C-51).

A review of case decisions indicated that few knew of these advisories, advice or recent information communicated. In some cases, communications strategies did not include Labrador communities, while in others, key-informants thought the community ignored the information. The cases stress the need for “context” as well as language to be considered in making information “accessible”. Information was communicated by local sources, in both languages and with some “regional” context only when a community representative was

involved in the message creation and delivery through partnerships built with outside actors. Otherwise, information was delivered by outside agencies, without a context that was understandable to most in the community, and was at times very technical and difficult to understand even to those trained to deal with these issues. Some forms of communication that were more accessible in the community (face to face contact with fieldworkers and AGM delegates) depended upon time available and the effectiveness of individuals responsible for communicating this information (Table 5.5.6: Appendix C page C-57). Although there is an interest to do so, no follow-up or evaluation of the communications involved in these cases has been conducted (Table 5.5.7: Appendix C page C-58).

The community collects and controls both quantitative and qualitative information, including local or traditional knowledge

The community attempts to collect, organize and control information of both a qualitative and quantitative nature. They have developed guidelines to protect ownership of this information. However, human, time and financial restrictions appear to limit their ability to do so. The collection and use of traditional or local knowledge for decision making processes faces similar challenges and some key-informants expressed concern in its use with scientific information (Table 5.5.1: Appendix C pages C-46,47).

OVERALL RATING = 3

The community has a recognized communication strategy and goals for issues to deliver information to a variety of groups within the community as well as other organizations

Although the community utilizes a number of communication methods, it appears that these pathways are not consistently utilized to disseminate information on environment and health issues. A number of reports or complaints are made by local individuals regarding the lack of communication, quality of communication and methods used. Key-informants report communication challenges internal to the organizations, and the lack of a recognized communications plan within the community for regular dissemination (Table 5.5.2: Appendix C pages C-48,49).

OVERALL RATING = 2

The community utilizes local organizations and individuals to communicate information to members of the community regarding local issues

Local individuals are used to communicate information to the community on a regular basis and a number of individuals are experienced in this ability. Some individuals express not being utilized enough and a review of the case studies revealed that the involvement of local individuals in communicating information is challenged by such things as jurisdiction, human resource and time related factors (Table 5.5.3: Appendix C pages C-50,51).

OVERALL RATING = 4

The community delivers information on local issues in a timely manner to allow informed responses and involvement in community issues

Although some regular communications on these issues occur in the community, challenges were reported in keeping up with issues, and jurisdictional limitations resulted in the community learning about issues affecting them after decisions had been made. This left the community and the delivery of communications in a reactionary role. As a result, information is communicated to the community too late for individuals to become involved as knowledgeable participants (Table 5.5.4: Appendix C pages C-52,53).

OVERALL RATING = 2

The community supports multi-directional communication between organizations, groups, and individuals within the community

A number of examples exist in which individuals report barriers to communication in the community. A large number of individuals also report a reliance on local individuals other than official health and environment or communications representatives as a main source of information. The majority of individuals surveyed in the community report not feeling informed on issues affecting them relating to health and the environment (Table 5.5.5: Appendix C pages C-54,55).

OVERALL RATING = 2

The community makes allowances to transcend cultural and linguistic barriers in all communications

A number of examples exist of the community taking into consideration linguistic and cultural factors in making information accessible in communications. Some of these are required through organizational policies and outlined in mandates. The community relies strongly on the bilingual communication provided by the regional television and radio station. However, some indication that information is still not provided or accessible in an easily understandable and useable format is found (Table 5.5.6: Appendix C pages C-56,57).

OVERALL RATING = 4

Communications are evaluative, comparing goals / objectives to achievements / results and changes to address areas of needed attention in communications

Few examples exist in which formal evaluations of communication activities in the community are conducted and utilized to direct future adaptation. Most, if any, are ad hoc in nature and restricted by time and money (Table 5.5.7: Appendix C page C-58).

OVERALL RATING = 1

The community attempts to address outside sources of information to clarify messages arriving in the community

The community is challenged by the amount of information arriving in the community from a variety of sources. Issues are reported to be complex, large and developing at a very fast pace, such that identifying and addressing these sources is often difficult. Yet frustration of their existence and the confusion they can create, and a knowledge that they must be dealt with is expressed (Table 5.5.8: Appendix C page C-59).

OVERALL RATING = 1

Table 5.5. Summary of analytical scores of sub-components of information / communication capacity

Sub-Components of Information / Communication Capacity	Overall Rating
The community collects and controls both quantitative and qualitative information, including local or traditional knowledge	3
The community has a recognized communication strategy and goals for issues to deliver information to a variety of sub-groups within the community as well as other organizations	2
The community utilizes local organizations and individuals to communicate information to members of the community regarding local issues	4
The community delivers information on local issues in a timely manner to allow informed responses and involvement in community issues	2
The community supports multi-directional communication between organizations, groups, and individuals within the community	2
The community makes allowances to transcend cultural and linguistic barriers in all communications	4
Communications are evaluative, comparing goals / objectives to achievements / results and changes to address areas of needed attention in communications	1
The community attempts to address outside sources of information to clarify messages arriving in the community	1

Resource Capacity

Policies exist within the LIA requiring hiring priority to be given to local members, hiring of local individuals within research programs, and allowance and financial support for education and training leaves from the organization (OKalakatiġêt Society, 1995; LIA, 1996; LIA, 1997c). Local individuals hired as researchers gain experience through being involved in projects with outside actors conducting work in the community (OKalakatiġêt Society, 1995; LIA, 1997i; Williamson, 1997). Additionally, the LIA is considering a number of future internal needs in the community and within its membership in land claims, and impact and benefit agreement negotiations they are currently engaged in (LIHC, 1996a; Williamson, 1996; CEAA, 1997b; LIA, 1997a). The LIHC exhibits a capacity oriented view through their “Building Healthy Communities” initiative, attempting to develop and enhance abilities within the communities to address social, physical and mental health (LIHC, 1995c). LIHC provides a number of ongoing training opportunities for staff as they assume greater responsibility through the Health Transfer Agreement (LIHC, 1995d). The LIDC mandate and focus in some projects to combine traditional practices with contemporary economic development projects for employment for Labrador Inuit shows an example of internal capacity orientation (LIDC, 1997). Additionally, the OKalakatiġêt Communications Society and Town Council employs local people in staff positions. The OKalakatiġêt

Communications Society and the LIHC have hired individuals from outside the community to work and act as trainers for local individuals in some positions.

The knowledge that resource restrictions exist in the community was expressed by some key-informants, yet many reported the use of local resources and individuals to the best of their abilities, before looking outside the community. The need and desire to build local capacity was expressed at the local, regional and national levels by key-informants. In the case of the Eco-Research office, respondents stated, “...*having our own research department has been a strength, we have branched out into more than just the Eco-Research program projects*”.

Key-informants interviewed expressed concern over the lack of educated and active community individuals, funds to train individuals, and regulatory regimes limiting the community's future ability to direct funds to capacity building in the community (Table 5.6.2: Appendix C page C-63). As one key-informant stated, “*There are just about 100 University graduates living along the coast, 3 are from environment related programs, we are very concerned about this*” (LIA representative). Women's leaders in the community have expressed concern for women's needs in training and education to develop skills necessary to make the transitions imminent in the face of community economic development and change (TIA, 1997). Few training opportunities for individuals in the community appear to exist in some areas, and individuals stress the concern over a shortage and need for training and education. Some key-informants expressed concern over the extent to which funding and time constraints limited training for staff.

Participants at community workshops have raised concerns that some health and social issues are not being addressed (LIHC, 1996a). The Town Council has expressed concern over health of the community and its members while some individuals report facing a variety of physical and social health problems including lack of adequate housing and waste facilities, historical and contemporary social issues relating to relocation and substance addictions (Brice-Bennett, 1994a; Town Council of Nain, 1997a, 1997c). As one organizational representative interviewed stated, “...*we need to be open and honest about the problems before we can start*

fixing things and healing.” Some individuals report that they are intimidated by public participation and express a lack of knowledge of how to become involved in decision making processes. Other challenges expressed include a lack of control over the regulatory regimes for human resources and education and a lack of funds and time to plan programs. Some key-informants speculated as to whether the community will have the resources to address all the changes imminent in the near future (Williamson, 1994). One key-informant indicated concern for the lack of awareness of interim steps required between the present and future desired states of the community; “...*this is scary, because many people don't know how to go there from here and we don't talk about it.*” (LIA representative).

The results of the target interviews indicate a number of individuals reporting challenges to being involved in community issues (N=37 / 55). Many of these individuals (N=30) report human or personal challenges such as a lack of education, basic health and social needs as inhibiting peoples' involvement. Others (N=4) report social or inter-personal related challenges such as a lack of community cohesion, and being dismissed from community involvement for a variety of reasons as inhibiting their involvement (Table 5.6.1: Appendix C page C-60).

Few examples emerged of organizations engaging in formal planning processes and considering long term goals and needs, and using these in the implementation of present programs. LIHC argues for training and educational needs and healthy work conditions in the current EA process (LIHC, 1997), and have committed some funds to the ongoing training and development needs of its staff (LIHC, 1995c). They are actively involved in strategic planning processes and have used this information to support and make a commitment to training and development programming in the organization (LIHC, 1995d). The LIA runs a student employment program for summer students to provide them with work experience in the region and expose them to potential job opportunities for the future. This program has received mixed but positive reviews (LIA, 1997g; Table 5.6.3: Appendix C page C-65).

Individuals express a concern over the lack of training and potential problems related to a

short term vision being taken by the community today (Tanner et al., 1994; Williamson, 1994; LIA, 1997i). As one participant at an LIHC workshop expressed, *“Things are changing so fast it seems you always have to get more training to keep up with things. People need to be trained as new things develop. Can training be geared towards Inuit culture though ?”* (LIHC, 1996).

The case studies reviewed reveal the need to collect and organize information, deal with issues, and direct investigations in areas of concern. Few individuals were able to obtain experience through involvement in these cases due to financial, jurisdictional and temporal constraints present. In the case of cadmium in caribou tissue individuals from the community were kept out of the process, other than some involvement in sample collection, because of jurisdictional restrictions. In the organization’s subsequent collection of data for radionuclide monitoring in the caribou herd they lacked resources to deal with this issue. In the issue of PCB contamination in marine mammals one regional health and one environmental representative became involved in representing the community’s concerns. Both are knowledgeable individuals with a great deal of expertise in their areas, but were still challenged by the lack of background information provided and the pace at which the issue was dealt with. In the clean up of PCBs at the Saglek radar site, one environmental representative from LIA was initially involved, with another joining later in the process. Information was communicated to the public, some knowledgeable hunters and fishermen were involved in the sampling program, and local researchers were involved in the communication of this information. During this case the LIA Board and some hunters in the community were consulted, and their concerns and perspectives were included in the community’s appeal to be involved in the case. Key-informants interviewed also expressed a number of challenges to involvement in this case. These challenges included the pace of the process, the complexity of the data involved, and the lack of funds, time and people to direct the involvement of the community’s perspectives (Table 5.6.1: Appendix C page C-61). As one key-informant stated *“...there was a lack of funding for us to do some work ourselves”,* and *“...LIA didn’t have any hard data to compete in the process” (LIA representative)* (Table 5.6.2: Appendix C page C-64).

The community has and utilizes a healthy, able and knowledgeable membership in decision making cases

A limited number of individuals appear to be involved regularly in community issues. Additionally, a variety of challenges to becoming involved, including physical, and social restrictions to doing so are reported (Table 5.6.1: Appendix C pages C-60,61).

OVERALL RATING = 2

Community leaders have a “capacity-oriented” view of the group and support this through a commitment to an “inside-out” philosophy towards decision making processes

Some organizations and leaders appear to have a capacity oriented view to involving and building local capacities. However, some limitations exist in the results of these efforts. Due to a lack of funds and time there remains a need for training and support in a number of areas. Few are involved and gaining experience as many issues being dealt with are complex and decisions are made in a very short time frame and thus the most experienced individuals are left to deal with a great amount (Table 5.6.2: Appendix C pages C-62,63,64).

OVERALL RATING = 3

The community is involved in strategic planning sessions to estimate future resource needs for decision making activities (information generation, collection, integration, communication, evaluation, staff needs, training needs) and these activities are used to make a commitment to building these resources internally

The Labrador Inuit Health Commission is involved in strategic planning processes, and the Town Council has a master plan for development in the community that is updated and reviewed when required. However, the LIA does not appear to be involved in any formal planning processes to determine the future needs of the community. Needs and implementation of long term vision seems to happen in an informal manner, if at all, and some express the concern that the intermediate steps are not recognized or known. There is some concern over a lack of trained individuals in some areas and some skepticism expressed regarding the community’s ability to meet future resource needs (Table 5.6.3: Appendix C

pages C-65,66,67).

OVERALL RATING = 2

Table 5.6. Summary of analytical scores of sub-components of resource capacity

Sub-Components of Participatory Capacity	Overall Rating
The community has and utilizes a healthy, able and knowledgeable membership in decision making cases	2
Community leaders have a "capacity-oriented" view of the group and support this through a commitment to an "inside-out" philosophy towards decision making processes	3
The community is involved in strategic planning sessions to estimate future resource needs for decision making activities (information generation, collection, integration, communication, evaluation, staff needs, training needs) and these activities are used to make a commitment to building these resources internally	2

CHAPTER 6

Conclusions and Recommendations

This chapter presents conclusions on the Labrador decision making context and the components and sub-components of community decision making capacity. It suggests strengths and limitations in the case of public health, country foods and contaminants issues in the decision making system studied. The chapter then discusses the utility of the conceptual framework and areas of the framework requiring further study or adaptation.

Recommendations for research and action in addressing the issues of community decision making capacity in Labrador and the future utility and application of the framework are then presented.

Decision Making Context

The case study and contextual data collected support the argument that the decision making system reviewed is not in a perpetual state of turbulence, but rather is dynamic over time between states similar to those described as “turbulent” and “disturbed reactive” by Trist (1980). It is characterized, at different times, by many of the aspects discussed by Trist (1980) and Morley (1986). Several organizations wanting the same optimal location in the environment are present and they attempt to build power to make and meet confronted challenges with resources and expertise. As the environment has become more densely populated with an increase in the number of agencies and individuals involved in health and environment issues in Labrador, both the environment and the actors have become dynamic. Organizations and agencies compete, acting independently, and often in different directions, and have produced unanticipated and often dissonant results. The system is characterized by such things as accelerated rates of change, an increasing scale of disturbance, increasing unpredictability of events, a continuing sense of crisis, and frequent confrontations with problems of high complexity. This situation has significant implications for decision making capacity at the community level.

The Labrador decision making environment is influenced by significant political, social, and economic forces. As the processes currently underway (e.g. land claims, self-government and IBA negotiations, EIA and mine development) take long periods of time to complete, and are often the beginning of periods of significant change, it is expected that these trends will continue to have significant impact on this decision making system into the future. The drive for self-determination through land claims and self-government negotiations by LIA on behalf of their membership makes present and future roles and relationships between actors in the decision making system unpredictable. Making decisions based on current or future states (structural relationships and roles) of the system today is difficult. The significant investments of human and financial resources, as well as time required to pursue these processes, strains an already limited resource base. Few well-trained and experienced individuals are expected to meet an increasing number of tasks and challenges. The required focus (of attention and resources) on such processes, and unpredictability of the system, makes any form of scanning for future challenges and opportunities by the community an important yet formidable task, at best.

Simultaneously, there exists a trend of devolution of responsibility for environmental health service provision from federal and provincial levels to regional and municipal levels. This further challenges the resource base of the community as they are expected to provide an increasing degree of support for the monitoring and delivery of services. To meet these challenges, with little accompanying increase in financial resources, a higher degree of organizational, coordinative, and participatory capacity is required to harness more from a limited existing resource base. As the community assumes greater responsibility through the implementation phases of a land-claims agreement the need for increased organizational, coordinative and resource capacity will continue to rise in order to meet future demands. Additionally, these processes of political evolution are happening at a time of economic uncertainty and rapid social change for the north coast communities.

The cumulative effects of these processes and changes during this time, and the continuing impact of past events (e.g. relocation), leaves many in the community feeling disoriented and

alienated. An increasing degree of social pluralization within the community will require greater capacity to deal with an increasing number of perspectives and interests. The community is simultaneously dealing with a number of inter-related, complex problems while being challenged in meeting basic individual needs (e.g. some aspects of social and physical health). They are attempting to address these issues with a limited resource base in a region where few economic opportunities exist. Apart from few large scale development projects (e.g. Voisey's Bay), whose probability is strongly influenced by a number of factors outside the community (e.g. world markets, provincial and national political agendas), and potential funds from a land claims settlement, few opportunities exist for economic independence and self-reliance. These trends significantly challenge aspects of the community's decision making capacity.

Components of Decision Making Capacity

This section presents conclusions on the sub-components of decision making capacity outlined in the framework. Within each component, the sub-components are presented in descending order of strength relating to decision making capacity as assessed in Chapter 5 (strengths to weaknesses). Considering all sub-components, conclusions are then presented on each component and its influence on community decision making capacity now, and in the future. Finally, conclusions on the overall state of community decision making capacity, as assessed through the application of this framework, are presented.

Institutional Capacity

Four elements of institutional capacity were identified and investigated in this thesis.

Policies exist requiring public participation in the decision making processes

Overall Rating = 3

A degree of public participation is provided for in existing institutions and, opportunities in which a variety of perspectives could be involved are secured. These opportunities have added some strength to the community's decision making capacity as they have gathered and included a variety of perspectives and interests on issues. The protection of such opportunities through their inclusion in legislation and policy is important to ensure the

gathering and involvement of different public interests in an increasingly pluralistic society such as that of this north coast community.

The community has a basic set of understood policies that guide and empower people in decision making arrangements with other actors *Overall Rating = 3*

Some strength in the community's institutional capacity can be attributed to the fact that policies exist guiding decision making processes in cases over which the community has legislated authority. These processes aid in the community's ability to deal with issues and involve interested individuals'. However, when dealing with other actors in the system holding legislated authority, the strength of these processes is limited.

The community has decision making power in issues affecting its members
Overall Rating = 1

The community is significantly limited by their lack of legislated authority on issues related to environment and health inside the community and on the surrounding land. This element was the most significant institutional factor limiting the community's decision making ability in this study. With the arrival of religious, economic, medical and political agencies and individuals, decision making authority and responsibility was lost by the Labrador Inuit (Brantenburg, 1977; Brice-Bennett, 1994a,b; Tanner et al., 1994; Williamson, 1994). Further, the lack of recognition of the Labrador Inuit as Aboriginal peoples by the province of Newfoundland and Labrador has left the Inuit with little or no political power at the provincial level. This lack of legislative base for environmental health issues, such as food chain contamination, requires the community to argue into processes through appeals, in turn straining a limited financial and human resource base. However, due to the uncertainty of the decision making system, partnerships built with outside actors possessing legislative power on these issues can partially compensate for this lack of legislative base.

Institutions guiding community decision making processes are based in pre-existing local self-management systems *Overall Rating = INS*

Insufficient data existed for an assessment of this sub-components' influence on community decision making capacity. This is because few, if any, local self-management systems exist for many of the contemporary environmental health issues faced in this system.

These institutional circumstances are changing with the drive for self-determination by the Labrador Inuit through land claim and self-government negotiations, and the devolution of responsibility to regional and local levels by federal and provincial agencies. It is expected that some degree of legislated power for decision making on issues related to resource use, education, health and municipal affairs by the community will be formalized in a final land claims and self-government agreement in the near future. This will provide the legislative base the community currently lacks and significantly change the roles and relationships of actors in the decision making system. The community will be involved in the design of new political and legislative regimes for a variety of issues affecting its membership. However, this process alone will require a significant human and financial resource base both in the near and distant future.

Organizational / Coordinative Capacity

Ten sub-components of organizational and coordinative capacity were identified and investigated in this study.

The community has a decentralized administration of non-hierarchical, stakeholder controlled organizations Overall Rating = 4

The strength in community organizational and coordinative capacity lies in the fact that there is some degree of stakeholder representation in the community and its organizations. Through board representation and the electoral process, community residents are ensured some degree of representation in decisions being made and direction of community organizations.

However, control in these decisions by representatives is limited in most cases. As well, community representatives have little to no control in decision making cases within the decision making system when provincial and federal actors are involved.

The community has a multi-organizational structure and some form of inter-organizational coordination Overall Rating = 4

The structure of the community organizations includes components designed to address issues related to health, environment, economic development, culture and communication. Although some challenges in coordination were identified when multi-faceted issues were faced, the community possessed many of the needed resources to address them within the present

existing structures. The existence of these positions, has supported the community's capacity to deal with some multi-disciplinary environmental health issues in the past.

The community has multiple lines of accountability and yet exhibits some degree of decision making autonomy on issues affecting its membership Overall Rating = 3

The community is responsible to various provincial and federal ministers and agencies. However, little legislative power is held by the community and thus they are able to show little decision making autonomy. This is related to the evolution of the current political environment and circumstances leading to the lack of recognition of Aboriginal status for Inuit in the province of Newfoundland and Labrador (Tanner et al., 1994). It leaves environmental health issues to be dealt with in a provincial regime when many of the issues are more typical of Arctic Aboriginal problems.

The Labrador Inuit have long been the forgotten Inuit in Canada. As a result of the agreements between the governments of Canada and Newfoundland and Labrador at the time the province joined Confederation, the Labrador Inuit have not been afforded the same status (and thus the same degree of service and program delivery) as their Inuit counterparts in other regions of the Canadian North. However, the Labrador Inuit face many of the same issues as Inuit living in Arctic regions of the country. Federal jurisdiction extends only to the territorial North and being excluded from federal jurisdiction has kept the Labrador Inuit out of this "Arctic" regime and initial phases of those programs specifically designed to address some of the environment and health issues faced in these regions (e.g. Arctic Environmental Strategy, Northern Contaminants Program) which consider the various inter-related aspects of these problems (economic, social, cultural, environmental). The settlement of a land claim and self-government agreement is expected to change this significantly. A final agreement will remove the community from solely provincial jurisdiction and give them the decision making power and recognition to be dealt with as a legitimate actor in the Arctic system.

The community organizational structure has changed over time and adapted its policies / structures to address changes in its external environment Overall Rating = 3

With a growing trend towards devolution of responsibility for public service delivery and support, some community organizations have changed and adapted in an attempt to keep up

with the increasing demands put on them and in pursuit of self-determination and self-reliance. However, the unpredictability of the future of this system, and a limited resource base makes current adaptation efforts difficult.

Small groups form and dissolve within the community as issues are addressed

Overall Rating = 3

In the community of Nain, there are some very active individuals that are involved in a number of issues and some decision making processes have gained from the involvement of community groups that have formed to address specific issues. However, the involvement and impact of these groups is limited by reported structural and social barriers that individuals confront when participating. Many individuals feel that their participation is not welcomed or required. Barriers limiting individuals' ability to get members of the public involved are reported. Issues are fast-paced, complex, and multi-dimensional and they exist in a community where many report defaulting participation to "the committees". This leaves fewer active individuals to deal with more, few gaining experience in addressing community concerns and a limited ability within the community to deal with a large number of issues at the same time and thus limiting their overall capacity to make decisions.

Activities between groups within the community is supported and coordinated

Overall Rating = 3

Because of the number of organizations and vehicles for service delivery present in the community, Williamson (1994) refers to Labrador as the "committee capital of the world". Yet, human resources are stretched as many are expected to sit on numerous committees and take part in a number of community groups because of their experience. Also, confusion may result as so many committees exist, with some overlap and some competing for the same funds (Williamson, 1994). The potential benefits of these individuals and groups in supporting the community's decision making capacity is argued to be greater than that which has been realized thus far.

At various times, the community is involved in a number of cooperative arrangements with actors outside the community to address issues and the community directs their formation and re-formation ***Overall Rating = 3***

The community has built relationships with outside actors possessing expertise in certain fields. These links enhance the decision making capacity of the community as they complement the knowledge and abilities existing within the community. However, identifying and managing the development of these relationships requires resources in a community where resources are often scarce, and in an environment where issues are rapidly evolving. Therefore, some apprehension exists within the community to make these links and this limits the community's ability to respond to issues where a varied base of expertise is required to quickly comprehend, make decisions and act on issues.

The community is open to public scrutiny and comment and engages in self-evaluation exercises *Overall Rating = 3*

The community appears closed in some respects and not open to public scrutiny. However, caution is warranted in these circumstances where the decision making context is uncertain, and many issues are politically charged during times of negotiating for political autonomy and land and resource jurisdiction. Also, organizations in the community are very conscious of being portrayed in a negative manner as the impressions formed and reported by outside individuals can have an impact on community self-impressions. Impacts on community social well-being related to media attention on negative aspects of community environment and health issues have been observed elsewhere in the North in the past (Wheatley and Wheatley, 1988; Jetté, 1994). However, there is a need for openness to deal with past and current events and foster an environment conducive to community participation.

The community is able to link diverse interests through utilization of a variety of members with differing expertise in decision making cases *Overall Rating = 2*

A very small number of individuals are repetitively involved in almost all cases affecting the community because they have the experience and knowledge gained through past involvement. Only a few individuals are involved, assuming the majority of the responsibility for a large number of issues. In such a fast paced environment with a number of complex issues being addressed simultaneously, this limits the community's decision making abilities. Further, it limits future capacity as few gain experience to be involved later.

Community organizations began with the minimum number of members necessary to address issues at hand *Overall Rating = INS*

Insufficient evidence existed to adequately assess the impact of this sub-component on the community's decision making capacity.

With the realization of a land claims and self-government final agreement, the structure of the community is expected to change significantly. An increase in responsibility on the community to provide and deliver programs and services will increase stress on human resources and therefore increase the need for coordination and organization of individual efforts. In order to more effectively harness local human resource efforts, addressing the identified barriers to public involvement will be critical. As the community and region continues to evolve more issues will be faced and key individuals with the expertise and experience to meet these challenges will be required. A combination of more efficiently developing and utilizing existing human resources and identifying and managing the necessary links with outside expertise will be needed to meet these future demands.

Decision Process Capacity

Seven sub-components of decision process capacity were identified and investigated in this study.

The process followed changes over time dependent upon the actors, issues and factors involved *Overall Rating = 4*

Strength in the decision making processes identified is related to the fact that the processes change over time dependent upon the actors and issues involved. The processes followed dealing with traditional food safety issues change in this manner as the system lacks clearly defined roles and responsibilities among the agencies and organizations involved. The flexibility in this system, in combination with valuable relationships developed with other actors, has allowed the community a larger role, and greater potential impact than the processes would otherwise appear to grant them. This is a result of the transitional state of the system during a period of devolution of power and transfer of responsibility (Haysom, 1992; Tanner et al., 1994). However, this transition can lead to jurisdictional overlaps and confusion in decision making processes for food chain contamination investigations as reported by Peters and Légare (1997).

The community incorporates local concerns, cultural values into the decision making process Overall Rating = 4

A significant amount of strength in decision making capacity originates in the community's attempts to incorporate local concerns into decisions. The community considered and incorporated cultural concerns regarding Inuit - environment interactions and traditional and contemporary dependence on the terrestrial and marine environments in many arguments related to food chain contamination. Often these concerns formed the basis of the community's argument as Inuit have a unique and strong link to the land and resources within and surrounding the community and this relationship is otherwise not considered by other actors in the decision making system.

Decision making processes are open and iterative, collecting and incorporating new information as required and allowing feedback from the public Overall Rating = 3

The decision making processes that the community becomes involved in through jurisdictional authority or through involvement via a relationship with a partner or agency holding legislated power for the issue are open to public input and comment to some degree. However, examples of iteration in these processes (reviewing and incorporating new information into the decision making process) are few often because of short timelines imposed by other actors in the system, or the nature of the issues (e.g. immediate public health threat). Also, a number of barriers to being involved and being heard in these processes are reported. Little legislated decision making power is held by the community and provincial policy does not recognize aboriginal cultural and social interests in problems relating to health and the environment.

The processes followed incorporate qualitative and quantitative information, and local knowledge Overall Rating = 3

The community's decision making capacity is challenged by the fact that most decision making processes in this study are based primarily on quantitative risk oriented data. However, through their efforts in appeals at the provincial and national levels, the community has been able to include both qualitative and quantitative information as well as local knowledge on some issues. The need and recognition for a role for local knowledge in environmental health decision making processes, but a lack of knowledge of how it might be

utilized and applied was reported. A method by which to include these various forms of data must be found and supported to utilize that information best representing the interests involved in these issues.

A recognized and accepted procedure for making collective decisions exists *Overall Rating = 2*

The community's role in decision making cases related to food chain contamination is consistently "reactive". A desire for a formal, recognized decision making process for dealing with these issues was reported. Despite the fact that the community has developed a certain degree of proficiency in "reacting" to issues as they arise, this approach has required significant resource investments. Further, this proficiency can be attributed to the expertise and competence of a few key individuals, however, in light of current and future trends in the system, this cannot be viewed as a long term solution to meeting these challenges.

The community promotes and utilizes a process of anticipatory scanning and consideration of long and short range options for solutions to problems *Overall Rating = 2*

Little scanning of potential future issues is done by community organizations or individuals and the community appears to be consistently dealing with daily "crises". This creates an environment forcing the community into a reactionary role, challenges the ability to effectively deal with ongoing daily issues, and allows little opportunity for future direction and focus to be determined and pursued. The ability to scan and consider long and short term options to current problems requires a certain amount of resources (time, finances, human effort) currently limited in this community. The lack of clearly defined roles and responsibilities in this decision making system, and the required effort and focus on land claims and self-government negotiations makes any form of scanning a difficult exercise. Additionally, many well-qualified and experienced individuals are over loaded with activities in the community and therefore, simply left to react to crises as they occur. However, if expecting to reach set goals and gain some control over direction in this environment, the community must begin to consider both long term aspirations and short term options in decision making processes.

Some form of evaluation of these processes exists and compares goals and objectives to achievements and results *Overall Rating = 1*

The decision process capacity of the community is significantly limited by the lack of evaluation of past processes and events. This limits the adaptive ability of these processes and results in the community relying on individual's expertise, and reactive competence to deal with specific events.

As the community moves towards a final land claims and self-government agreement, their role in decision making processes will become more clear and will be accompanied by some degree of defined authority in the region. This will allow them to be involved in processes as a legitimate actor and save some resources previously utilized to appeal and argue into decision processes. As some degree of flexibility in the decision making processes has proven effective for the community in allowing the involvement of different actors, perspectives and knowledge bases, it is desirable to retain these characteristics in future states of the system. The new role assumed by the community will require individuals with certain expertise and experience in dealing with issues and increased ability to generate and organize information to meet decision making needs. These present and future needs will thus require a strengthened and varied resource base and clear vision to continue guiding the development of these resources internally within the community.

Participatory Capacity

Five sub-components of participatory capacity were identified and investigated in this study.

Opportunities exist for community members to become involved in decision making processes *Overall Rating = 3*

Some strength in decision making capacity can be attributed to the fact that there are some opportunities for individuals to become involved in issues over which the community has legislated power. However, this is not currently the case for food chain contaminants issues, as seen in the decisions reviewed for this thesis. Additionally, respondents indicate a number of barriers to their involvement in decision making processes. Relationships with other actors in the system having legislated authority on issues has provided the community with

additional opportunities for participation where they would otherwise be required to appeal and argue into processes, however this cannot be considered a dependable avenue for participation as it exists on a case by case basis.

Community members are involved in decision making processes from the beginning of problem identification phases *Overall Rating = 3*

Some very active community individuals are able to become involved in cases, and in some instances early in the process, as they are often consulted because of their experience in health and environment issues and past community action efforts. However, barriers to participation, including institutional limitations and social pressures in the community, were reported as limiting individual's involvement. The political and social evolution of the decision making system has resulted in the community having a certain degree of dependence on outside authorities, and a lack of involvement in decision making processes (Brody, 1975; Paine, 1971; Dacks and Coates, 1980). This evolution has left many in the community feeling powerless (Tanner et al., 1994; Williamson, 1994), uninvolved, excluded and not welcome in decision making processes at the community level. This lack of involvement limits decision making capacity, as many individuals in the community have valuable perceptions and knowledge of issues being faced.

Participants are listened to and their input has some effect on the decision making process *Overall Rating = 3*

Some strength in the participatory capacity of the community lies in the ability of individuals to have some effect on the outcome of decision making processes when they are involved. Involvement through legislated democratic processes for making collective decisions, such as plebiscites, Town Council meetings or LIA Board meetings, or involvement through relationships with actors or agencies in the decision making system having legislated power to make decisions on environmental health issues have shown the greatest results in this regard. When these issues are dealt with on a national level, the Labrador Inuit community have status as "Aboriginal actors". This provides them with greater attention and consideration and thus potentially greater effect on the final decision. Such status for the Labrador Inuit does not exist at the provincial level (Tanner et al., 1994) and thus makes the level at which issues

are dealt with important in determining the legitimacy of the role that the community plays, and ultimately their potential effect.

The community attempts to make participation opportunities accessible (e.g. culture, language) Overall Rating = 2

Some attempts are made by the community and its organizations to make participatory opportunities accessible to a wide range of individuals. Although some organizations have made efforts to deliberately consult or involve individuals from a number of sub-groups within the community, residents still report not being involved, and that their perspectives are missing from decision making processes. Many of these issues are dealt with in a very short time frame and require a high degree of technical understanding. Many of the issues reviewed here required resources to “translate” information into plain language for public comprehension. Thus to harness the knowledge and perspectives through public input, these barriers must be acknowledged and addressed.

Different members from a variety of sub-groups within the community are involved as participants at different times and in different issues Overall Rating = 2

A small number of individuals appear to be repetitively involved as the primary participants in many decision making events in the community. Historical and contemporary social evolution in Labrador communities has resulted in significant social discontinuities, separating groups within the community (e.g. youth and elders) and thus excluding some from community issues. There is expressed concern for the lack of involvement of some groups (e.g. Elders, youth) in community decisions. Economic and social challenges faced by some individuals appear to inhibit their involvement in community affairs as they are dealing with more basic personal concerns than those related to environmental contaminants in country foods. The presence of these basic social and economic issues challenges individuals` ability to participate in community issues and thus the community`s decision making capacity.

As the community becomes a legitimate actor with legislated power and jurisdiction in the decision making system, the opportunities for public consultation and involvement will increase. As more responsibility is assumed by the community and its organizations, a greater understanding of community perspectives and interests will be required to understand and

achieve community goals. In fact, some stages in the process towards a final land claims agreement will require public feedback and comment (e.g. ratification of Agreement In Principle). In order to facilitate this, community members must be well informed on issues and perceived barriers to their involvement must be identified and addressed. Processes to consult and involve individuals must be designed in consideration of cultural and linguistic challenges and the pluralistic nature of the evolving population.

Information / Communication Capacity

Eight sub-components of information / communication capacity were identified and investigated in this study.

The community makes allowances to transcend cultural and linguistic barriers in all communications Overall Rating = 4

Strength in the community's capacity results from their commitment to transcend cultural and linguistic barriers in communications. Some individuals in the community are still unilingual Inuktitut speaking and thus require information in their Aboriginal language. Today, few youth speak Inuktitut (Tanner et al., 1994; Williamson, 1994), further weakening the inter-generational links with Elders in the community and challenging collective decision making, understanding and action. Thus, the use of both official languages is crucial for effective communications on community issues. The community is still challenged in the dissemination of information of a technical nature and with the increasing complexity of impending issues (land claims, mineral development) this deficiency should be addressed to ensure comprehension among community members.

The community utilizes local organizations and individuals to communicate information to members of the community regarding local issues Overall Rating = 4

The OKalakatigêt Communications Society, local radio and television stations are strengths in this area as communications must consider cultural and linguistic requirements to be effective in their endeavours. Key-informants reported that local communicators must be used more despite the fact that some face resource challenges in disseminating information such as time and individuals required to comprehend, digest and translate technical information exist.

The community collects and controls both quantitative and qualitative information, including traditional or local knowledge *Overall Rating = 3*

Some degree of capacity is shown in the community's use of both qualitative and quantitative information in decision making cases in the past. Also, the community has made recent efforts to collect and organize both qualitative and quantitative information of their own. However, a recognized need for the collection and ownership of "hard data" (empirical evidence) is reported. Efforts are challenged by resource factors such as time, money and trained personnel required to gather and organize this data. Some efforts have been made to collect, organize, control and involve various forms of data in the community, and these efforts should be continued as the lack of information generation and control has limited the community's ability to argue their concerns and interests effectively in decision making cases.

**The community has a recognized communication strategy and goals for issues to deliver information to a variety of groups within the community as well as other organizations
*Overall Rating = 2***

The community's capacity to communicate is hindered by the lack of a recognized strategy for information dissemination. Messages originate from different sources, at different times and reach community members through a variety of mediums with varying degrees of success. There is expressed interest in developing and consistently utilizing a known and effective pathway for communication, and this should be pursued. These efforts must consider the rapid evolution of communication needs in this region. The community is characterized by a very fast growth rate, a predominantly young population, and inter-generational discontinuities related to rapid social change (Hall, 1990; Statistics Canada, 1992; Tanner et al., 1994; Williamson, 1994). Significant linguistic and technological changes complicate issues surrounding efforts to communicate effectively.

The community delivers information on local issues in a timely manner to allow informed responses and involvement in community issues *Overall Rating = 2*

The reactionary role taken by the community in many environmental health issues, and complexity of information often involved challenges the community's ability to communicate to the public in a timely manner. Often, the community does not have the individuals available to quickly translate and condense technical information into an easily accessible

format for public dissemination. Jurisdictional issues limit the community's access to pertinent information on issues affecting them in some cases. Difficulties in overcoming these challenges result in communications that are not delivered in ample time for community members to comprehend and respond with informed perspectives, or a perception among community residents that there is a lack of communication, poor communication or a number of barriers to communication in the community. These factors result in the majority of residents feeling "uninformed", and often translate into a low degree of interest in issues among community members.

The community supports multi-directional communication between organizations, groups, and individuals within the community *Overall Rating = 2*

The presence of communication and structural barriers hinders multi-directional communication between groups in the community. Inter-generational links, linguistic difficulties and social trends hinder communication between individuals within the community and must be addressed to support the flow of communication as it is the basis of informing and educating community members and essential in collective decision making efforts.

Communications are evaluative comparing goals / objectives to achievements / results and changes to address areas of needed attention in communications *Overall Rating = 1*

Limitations in the community's communication capacity result from their lack of evaluative exercises of communications. The fact that communications are not assessed for their effectiveness in delivery and comprehension strains, and will continue to strain, an already limited resource base in the community. A need for evaluations is reported however, the context of limited resources and rapidly evolving issues makes this a difficult but increasingly important endeavour.

The community attempts to address outside sources of information to clarify messages arriving in the community *Overall Rating = 1*

Communications in the community are further challenged by the large and growing number of sources of information entering the community relating to environment and health issues. They result in an increasing number of messages, sometimes conflicting, on the same issues reaching community members and often lead to confusion. Challenges in gaining access to

required sources to clarify messages originating outside the community, and resource limitations to identify and clarify messages entering the community are reported. When a collective dissemination strategy was used for health advice regarding the consumption of marine mammals in the North, partnerships with national agencies involved in these issues and with access to the necessary information and expertise to clarify messages partially compensates for local communications weaknesses.

The need for effective and efficient communications in the community will continue to increase with the current regional political and social evolutionary trends. As new organizational structures are developed, the opportunity to address identified communication barriers will exist and should be utilized. In order to facilitate this, there is a need to identify, evaluate, utilize and retain standard effective communication pathways in the community for a variety of issues. This will become increasingly difficult as the community and region advances technologically. A variety of relatively new communication methods (e.g. local cable TV station, internet access) are becoming more common in the coastal communities and must be considered in the assessment and development of standard pathways and methods for information dissemination. The community is, and will continue to become, increasingly diverse in terms of educational, cultural, and linguistic demographics and these characteristics must also be considered in future communications. As more responsibility is assumed by the community and its organizations, a greater need for information collection, organization and utilization will exist. The community will need to monitor and address issues previously under the authority of regional and provincial agencies, as well as determining and addressing their own priority areas within the environment and health fields. This will require the development and utilization of a greater resource base of educated, trained, and knowledgeable individuals.

Resource Capacity

Three sub-components of resource capacity were identified and investigated in this study.

Community leaders have a “capacity-oriented” view of the group and support this through a commitment to an “inside out” philosophy towards decision making processes

Overall Rating = 3

Some community leaders express a capacity oriented view as indicated by expressions and actions of commitment to building and using an internal base of resources in the community. However this view is often limited by other resource needs. For example, some leaders indicated a need for more training for organizational representatives, but expressed a lack of financial resources to provide these opportunities. Additionally, time constraints limit the ability to involve and thus provide experience to other individuals in dealing with specific environment and health issues, such as food chain contamination, as many of these issues are dealt with in very restrictive timelines, however experience must be transferred to ensure future community capacity.

The community has and utilizes a healthy, able and knowledgeable membership in decision making cases *Overall Rating = 2*

Few individuals appear to be regularly involved, and concern regarding the resulting lack of training and opportunities for experience through involvement is reported. The concern that the community is lacking in trained individuals in certain areas, specifically environment related disciplines, was also reported. The social discontinuities of the cultural transition existing in Labrador communities, moving from a life on the land to life in communities, and now into a wage based employment economy, may explain certain imbalances or deficiencies in human resources seen in this study. As the political environment of north coast communities rapidly evolves, many youth have still not seen the link between formal education and future opportunities in their community. As the Labrador Inuit Association negotiates the political future of the communities, the status of these opportunities is still somewhat unclear. The socio-economic situation of north coast communities, and the politics of federal-province funding agreements, is one that leaves little financial freedom for organizations requiring training opportunities for staff. However, to meet current and future demands some emphasis must be placed on the education and training of current staff and community members to become active participants in community issues.

The community is involved in strategic planning sessions to estimate future resource needs for decision making activities (information generation, collection, integration,

communication, evaluation, staff needs, training needs) and these activities are used to make a commitment to building resources internally Overall Rating = 2

The community's decision making capacity is further limited by a lack of planning and implementation exercises. Some organizations are involved in strategic planning processes, however the lead organization representing community members on environment and health issues reviewed in this thesis (LIA) does not. Key-informants expressed concern regarding the lack of attention being given to imminent future changes, needs in the community, and the resource requirements to meet these needs. The number of issues, lack of certain resources, and turbulence of the decision making environment makes planning exercises for this community extremely important, but also very difficult. Some degree of direction, and implementation of steps to achieve future goals is required as many forces, often conflicting, are acting on the community from both internal and external sources. This lack of "steering ability" limits the community's present and future capacity to make decisions and deal with contextual turbulence.

As the road to self-determination for the Labrador Inuit has been long, and the processes faced in the near future are expected to take considerable time, it is expected that these trends influencing the community's resource capacity will continue well into the future. With an increase in assumed responsibility and authority there will be increased stress and demands on the resource base to meet these needs. It is expected that some financial relief will come in the form of large scale development agreements (e.g. Impacts and Benefits Agreement for Voisey's Bay project), and land claims settlement funds, however others will have to be found to enhance the ability to meet future needs. This is particularly important regarding the need for trained and educated individuals in specific fields (e.g. environment) that the community will assume considerably more responsibility for in the future. To direct and steer through this turbulence, and support the achievement of community goals, there will be an increasing need for the development of interim steps and implementation of strategies to attain these while maintaining direction on long term goals. As this process of evolution has in many ways just begun, the importance of identifying, developing and utilizing a strong base of

internal resources will continue to be an integral component to the community's capacity to make decisions and navigate in their decision making environment.

Summary of Community Decision Making Capacity

The decision making capacity of the community was supported by a number of strengths, and limited or challenged by a number of weaknesses influencing their ability to confront and make decisions related to health and environment issues. Despite a very weak legislative base, the community has been able to argue into decision making processes and involve its' interests and perspectives on some occasions. This proficiency was directly related to the experience and competence of a few key individuals. Additionally, valuable relationships built with other actors holding legislated power supported the ability to become involved when the community would have otherwise been excluded from issues dealt with under provincial regimes. The community's incorporation of cultural and local interests added valuable and unique information to decision processes not offered by other actors in this system. The community possesses a number of additional positive elements enhancing their decision making capacity. The community's multi-organizational structure provides the potential to draw on individuals from a variety of fields (e.g. health, environment, economic development). Local communications experts, are able to provide information to members in required languages and cultural "contexts", and from trusted sources, often not successfully done by others in the region. However, these components or capacities all rely on a strong, developed and maintained resource base. With an increasing and unpredictable number of issues being faced by the community today, and expected in the future, the ability to "react" to crises as an effective way in which to deal with issues cannot be depended upon indefinitely. It strains a limited resource base, and does not allow the community to maintain any direction towards desired goals. The decision making capacity of the community is limited by other components unable to compensate for a resource base with specific deficiencies. A number of challenges are faced in coordinating and organizing community actions, and barriers are reported to participation in community processes. Few individuals are being trained in environmental fields, and few are gaining the experience required through direct involvement in decision making cases. Additionally, the community is limited by its lack of vision and

emphasis on implementation of interim steps to reaching goals, and developing and maintaining a well balanced resource base. It would appear, for such multi-disciplinary issues as those in the fields of environment and health, community capacity requires a balance of a number of components to ensure ability in confronting current and future issues. Strength in some areas can compensate for weaknesses in others, however, it is expected that reliance on one, or few components, cannot deal with contending forces indefinitely in a turbulent decision making environment.

Research Design and Methods in Review

The following section discusses general strengths and weaknesses of the research design and methods employed in this study, an assessment of the conceptual framework developed and its social utility and practical applicability, now and in the future.

This thesis represents an exploratory study in an effort to draw on three major areas of theory and practice and integrate them into a conceptual framework that could be, in time, used to guide practice. It is for these reasons that the conceptual net was cast wide and was inclusive rather than overly exclusive. The development of the framework, based on lessons from theory and practice, and used to direct the collection of field data in this study allowed for a comprehensive yet focused starting point for this exploratory investigation. The collection of field information from a variety of sources including documents, key-informant interviews, participant observations, and a survey of target groups within the community allowed the collection of data informing the issues from a variety of perspectives. The collection of data from both case decisions and the current decision making context ensured a more comprehensive review of the framework and potential implications of the components included.

Although the approach taken in this study was valuable as it was comprehensive and systematic in exploring a number of multi-dimensional attributes related to community decision making capacity, it was challenged from a number of perspectives. The breadth of components and sub-components gleaned from the literature and incorporated into the

construction of the framework provided for a cumbersome exercise in data collection, organization and presentation. Each method employed had its own strengths, limitations, and biases, however, it is argued that when used in combination to provide a degree of data triangulation, as in this study, the overall application of these methods was strengthened and biases minimized. As this study reviewed the capacity of one community in a single decision making system, it is difficult to determine whether these factors are influential in other communities or contexts. The value of the case study approach taken here was that it allowed the collection of a large volume of detailed information on a number of dimensions of capacity otherwise difficult to gather (Yin, 1989). However, the results, and their application to other communities, regions and contexts must be done so with caution. The cases available for review, specific to the topic of contaminants in country foods, were limited within the decision making system. This limitation may have resulted in a more narrow interpretation of factors influencing the community's ability to make decisions. However, it is argued that the extent of data gathered regarding the decision making context surrounding the cases, and other decisions related to environment and health in the community compensated for the limited availability of specific cases.

An Assessment of the Conceptual and Analytical Framework

The assessment of the framework will discuss the validity of the construction of the framework and approach used, the reliability of the data gathered and results drawn from this information, the generalizability of the study results to other community's, regions, and decision making contexts, the framework's clarity and its social utility and practical applicability. The assessment will be directed by the following questions:

- **validity** - was the framework consistent with literature theory ?, was there logical reasoning in its collection ?, what is the relationship between the framework constructs and the empirical evidence ?
- **reliability** - are the data temporally reliable ? are they consistent with other studies in this field ? are they consistent with other data reported for this community and region ?
- **generalizability** - to what extent are the results applicable to other community's, regions, decision making contexts ?

- clarity - is the framework understandable ?, did people understand what was being discussed ?, are there gaps in the framework ?, are there areas of redundancy in the framework ?,
- social utility and practical applicability - to what extent is it explanatory ?, to what extent is it predictive ?, is the framework useful to communities ? community groups and organizations ? researchers ? is it easily usable by these groups in its current form ?

As discussed in the general strengths of the approach taken in this study, the framework started from a comprehensive perspective on decision making capacity. It integrated contributions from three areas of literature deemed to be central to the idea of a community's capacity to make decisions in turbulent environments. By searching for areas of convergence within these fields of theory and practice, the framework identified six broad areas relating to the capacity to make decisions and then proposed sub-components to direct the collection of field data and assess decision making capacity within a specific case setting. The quality and quantity of data collected through this process have helped to better understand the components of capacity. However, the relationship between the empirical evidence gathered and the sub-components of capacity as outlined in the framework are not of a "one to one" nature. A large amount of evidence was required to assess a sub-components' strength and influence on decision making capacity.

As this study was exploratory in nature it is difficult to determine data reliability as compared with other findings on the same or similar topics, in the same location or elsewhere. The utilization of a variety of techniques and sources for data collection provided a degree of triangulation, or cross-validation within the data supporting a high degree of confidence in its reliability. The collection and review of documentation relating to aspects of the community's decision making capacity required a review of past research done in this community and region. This review, and the results presented in this thesis show that the observations and interpretations made in this study correspond with that found by others in this community in the past relating to the social, economic, and political challenges and trends in the Labrador Inuit as a result of past and current events and processes (Brice-Bennett,

1994a; Williamson, 1994; Tanner et al., 1994). It also discusses the implications that the contemporary history of the region continues to have on current and future community capacities and trends affecting this capacity. In this sense, the study is supported by similar findings reported by others working in the region (Brice-Bennett, 1994a; Tanner et al., 1994; Williamson, 1994). The results of this study yielded a comprehensive set of data on concepts relating to community decision making capacity. It facilitated an assessment of an individual community's capacity strengths and weaknesses and has added to our understanding of these concepts and their impacts on the ability to make decisions. However, because of the specific historical and contextual constraints surrounding the case setting for this work, generalizations to other communities, regions and contexts, must be done with caution.

The framework was inclusive in its development to explain the components related to decision making capacity at the community level. However, some components developed in the initial framework are not distinct units affecting the community's capacity. Instead, there are overlaps and links within and between the concepts that suggest areas for re-focusing future work on the framework. Specifically, the sub-components related to participatory capacity in the community, were directly related to, and in some instances duplicated within the sub-components related to decision processes. Also, the potential influence of relationships with other actors holding legislated power in the decision making system, and the competence of key individuals in the community involved in decision making processes were not accounted for in the framework.

The framework, and future adapted forms are applicable to a variety of situations and a number of different users dependent upon work undertaken to focus its specific attributes. It is recognized that it lacks the simplicity to be of practical use by community groups or individuals in leading a review of strengths and weaknesses for an assessment of overall community capacity in its current state. The detailed information required to support the arguments in this thesis support this argument. The framework is primarily explanatory in nature and although it leads to identification of potential future challenges, through consideration of trends in the system, any predictive power the framework may have is only in

a speculative sense. Further work on clarifying the most salient components and sub-components of the framework is required in order to direct the collection of simple, yet indicative data so that use by community groups and organizations is more feasible.

In its current form, the framework identifies and explains the relationships between components argued to be factors influencing a community's capacity to make decisions. It emphasizes the role of institutional power and a developed resource base in decision making capacity, and highlights the need for a balance across a number of components. It identifies the value of experienced, competent individuals, and strong relationships with other actors in being able to meet needs in decision making processes and compensate for other weakened capacities. Additionally, it discusses the limiting role that institutional, social and political barriers to organization, coordination, participation, and communication can play in a community's ability to make decisions. However, the advice gained from this investigation must be tempered by its exploratory nature and the unique context of the decision making system involved. The framework is also of use to researchers from a variety of disciplines as it provides the background for future studies into a number of areas of practice and theory. It provides the basis for investigation into the areas of decision making and community "capacity" for a context where little similar work has been conducted. It suggests future work in clarifying and focusing elements of the framework to make it a more useful tool.

The results presented here support arguments stressing the need for the development of future resources, and supporting of existing community strengths to deal with contextual turbulence. An adapted framework is of potential value to those agencies and individuals having direct impact on the community through the establishment of decision making relationships, setting of regional, provincial and national policies, and through the establishment of relationships aimed at supporting or "building" capacity in the community to deal with specific issues. These individuals might include, but not be limited to, other actors in this decision making system, provincial and national planners and policy makers dealing with environmental and aboriginal affairs, as well as agencies and individuals related to the protection and promotion of public health in northern regions.

In conclusion, this thesis adds to our understanding of the notions of community capacity for decision making in complex environments. However, the conditions investigated and described in this study are not unique to this community, region or decision making system only. They are characteristic of many issues and relationships across the Canadian North. Thus, the results of this thesis are applicable to a better understanding of decision making capacity in many northern communities. Through the combination of theory and practice in fields covering information and knowledge systems, community organization and planning, and benefit and risk management, this thesis contributes to a better understanding of these fields and their applicability in community planning research. The results show how the components of decision making capacity identified in the conceptual and analytical framework overlap and interconnect, and the argument is made that they are not mutually exclusive. By bringing these areas together in the framework to direct the collection of field data, the results have highlighted advancements in each area, their connections, and their contributions to understanding the issue of community decision making capacity. From the overlap of community planning and organization, and information and knowledge systems, the results show how local or traditional knowledge has become a legitimate element within the wider context of planning and decision making. Decision makers dealing with these issues need to incorporate this information in frameworks, and communities need to generate and control this knowledge for use in decision making processes. From the overlap of information and knowledge systems, and benefit and risk management, this thesis shows the need and value of the inclusion of both benefit and risk-based perspectives. The power that comes to the analysis by including both perspectives is highlighted in the case studies. The overlap of community planning and organization, and benefit and risk management shows how empowerment and autonomy building through land claims, Impact and Benefit Agreements, and devolution of power to local and regional levels can occur within communities who are involved, and out of necessity must cooperate with other actors, and through this develop a strong sense of who they are. These communities then begin to attain an increasing sense of being able to affect their environment and steer through complex conditions. Among the many groups rising through this multi-actor, risk management

process, a degree of self-reliance through inter-dependence is attained. This in turn, supports a greater degree of self-determination, steering ability, and community capacity. A certain level of competency across all dimensions of decision making capacity is required to steer through complex decision making environments and provide direction towards collective goals. This balance is required to ensure long term capacity and movement beyond approaches to problem solving characterized as crisis management.

Given these conclusions, there is merit in the framework developed here. From a practical perspective, the results provide the basis for direction in a variety of community development and planning processes. They include:

- Institutional arrangements including land claims, self-government, Impact and Benefit Agreements, and devolution of powers to local and regional levels must have institutional capacity, and legally binding arrangements providing communities a full and meaningful role;
- Relationships between actors and organizations in the North, and agencies, actors, and organizations elsewhere having required expertise for issues faced in northern communities must be strengthened, and where they do not exist, they must be created. The forging of these relationships must allow for direction and control to come from the northern partners and relationships must be based on a philosophy of capacity transfer, to support the development of these abilities in the North;
- Multi-actor decision processes must follow an agreed process, and incorporate all available information, including traditional or local knowledge, and information from both risk and benefit-based perspectives;
- Northern communities must be involved as legitimate actors in decision processes from the “problem identification” phases to decision identification and selection, and communication stages. Opportunities must exist for their involvement and these opportunities must make all efforts to be accessible (linguistically, culturally, financially, logistically) to northern actors;

- Government agencies, organizations, and actors involved in decision making processes in northern communities must recognize and respect local or traditional knowledge as a valuable and legitimate source of information. It must be included, whenever possible, in problem solving scenarios. Communication on northern issues must recognize and utilize northern and local communicators in dissemination activities. These individuals and agencies must be identified and be given priority for front-line dissemination to communities;
- All capacities must be properly resourced and supported;
- The commitment made to the processes supporting the development of these capacities, once initiated, must continue. The abandonment of such processes would be similar to the boom and bust of northern development and the repercussions far reaching.

Recommendations

With impending political, social, economic, and environmental changes in the region related to the current negotiations for land claims, self-government, and mineral exploration and development, it is argued that the trends identified in this study will continue for some time. In fact, with some potential changes on the horizon, such as a land claims settlement and the establishment of new political structures, the contextual state may become more or less complex, creating future uncertainty and unpredictability in the decision making system. The recommendations arising from this study consider these trends and are argued to be effective now and in the future as they focus on characteristics supporting the steering and directional abilities of the community in dealing with turbulence. Considering the challenges this environment creates for its communities and organizations, a balance of capacities, supporting the ability to change and adapt strategies at different times is desirable.

The recommendations are presented in two parts: recommendations directed at supporting and enhancing decision making capacity in the community studied, and recommendations directing future research and work on the framework developed in this thesis.

Recommendations for Community Capacity

1. In designing new institutions relating to jurisdiction and authority over resources, service delivery and decision making power, the organizations within the community (LIA, LIHC, Town Council) must:
 - negotiate for legislative authority on environment and health issues;
 - retain the current lines of accountability
 - secure opportunities for public involvement in environment and health decision making processes to collect and integrate public interests

2. In the design of new organizational structures in the community and region, the organizations (LIA, affiliates, and Municipal organizations) must retain the current characteristics showing strength in supporting decision making capacity. These characteristics must be protected and enhanced wherever possible in new organizational structures. The organizations should:
 - retain a high degree of stakeholder representation through board representation and elected positions;
 - clarify and strengthen links in a multi-organizational structure linking affiliates and the Town Council;
 - emphasize the importance of identification, development and maintenance of creative relationships with outside partners having specific expertise complementing existing community resources through dedication of resources toward developing and maintaining these links;
 - review and organize community committees for issues, reducing overlap and duplication;
 - increase training and experience opportunities through involvement of other staff in decision processes.

3. As expressed in this study by various key-informants, there is a desire for the development of a framework for decision making on environmental health issues in this system. The development of a process, and clear identification of actors and stakeholders to be involved could provide a basis for bridging current and future institutional and

organizational gaps. This decision framework, must consider decision processes currently operating within the community and provide opportunities for links where possible. The development of a process should include, but not be limited to:

- clarifying the role of, and securing consideration for, local knowledge;
 - integration of both qualitative and quantitative data;
 - involvement of community consultation and public participation early in processes;
 - effective and ongoing communication.
4. With the impending land claims and self-government agreements on the horizon, the community will need to consult and involve its members to gain support at specific stages of these processes. For this reason, the lead organization (LIA) must conduct a review of standard methods utilized by existing community organizations for consultation and participation of specific population sub-groups as well as the general community population. Such a review should begin with the barriers identified in this study and should continue to identify specific barriers associated with methods used. Recommendations for effective forms of specific group, and collective community consultation or involvement should be made and all community organizations (LIA and affiliates, Town Council) should identify specific ways in which barriers will be addressed. When consulting and involving public, all community organizations should utilize a variety of methods depending on the issues and group targeted within the community. These recommendations must be considered in the development of future decision making processes and participatory opportunities.
5. With the increasing need for information generation and organization for present and future decision making scenarios, and the benefits of having community generated information seen in the cases reviewed here, it is recommended that the lead environment and health organizations, LIA and LIHC make a long term commitment in this area through enhanced training and support for information generation and organization. It is recommended that a long-term commitment in this area include the identification of specific present and future information needs, and priority areas and the development of

appropriate resources to meet these needs. The importance of local knowledge of land and resources in decision making processes is one specific source identified in this study. The relationship between environment and health in issues reviewed in this thesis suggests the development of linked agendas in collecting and organizing information in the community and region by these organizations.

6. Due to the ongoing environment and health issues being faced in the system, and in consideration of future issues relating to environmental change (climate change, mineral development, nutrition and wildlife pollution issues) and their links to public health, it is recommended that an advisory committee be designed, involving members of LIA, LIHC, and the Town Council to identify, review, and make decisions and provide advice on environment and health issues in the community. This committee should make links with, or involve members of the community associated with community groups dealing with these issues (e.g. Health Committee of Nain Action Group). Through a land claims settlement, and IBA settlement, funds to enhance this form of scanning ability may be available.
7. It is unrealistic to rely solely on provincial and federal intervention in the generation and organization of information to meet decision making needs in this system. Therefore, LIA and LIHC should take advantage of research opportunities providing training, experience and support to develop research capacities in the community. The Eco-Research program is one such example through which LIA and LIHC were supported in enhancing their local research capacities and scanning abilities. Local researchers gained training and experience through involvement and local data on environment and health issues was collected and organized in the community. Similar programs and relationships with other researchers must be identified and developed.
8. With increasing need for community feedback, and desire for involvement, LIA, LIHC, the Town Council, and the OK Society must strengthen current communication capacities and address barriers identified in this study. It is recommended that the community

organizations undertake a review of current communication strategies to develop indicators of “effective communication” for environment and health issues. A review should include consideration of standard components of communication (message, source, channel-pathways, audience) and their influencing factors. A review should be directed at making recommendations for effective communication to community organizations as well as those outside the community delivering messages to the resident population. Through this review, recommendations for a general dissemination strategy must be developed by existing organizations, utilizing local communicators in its initial stages. This strategy must then be utilized by all community organizations in disseminating information. The development of a general dissemination strategy must include consideration for outside sources of information arriving in the community, new information technologies present in the community, and the need for a variety of forms of media and delivery methods to reach a wide variety of individuals.

9. With an increasing need to address complex and technically challenging issues, local communicators are called upon to comprehend and translate specific information across languages and to a variety of educational levels in understandable ways. It is therefore recommended that community communicators (OK Society, Town Council, LIA, LIHC) seek to develop partnerships with agencies or individuals that might support this component of delivering information locally. Additionally, resources must be found to develop these skills among local communicators on a variety of impending issues (e.g. mining and exploration; environmental contaminants and health; land claims and self-government) facing the community through a series of training opportunities (e.g. workshops). As these abilities are required in both languages in this system (English and Inuktitut) translators must be trained in these areas as well to ensure clear translation and comprehension of messages on a variety of issues.
10. As this community continues to undergo a fast rate of economic, political, and social change in a challenging decision making environment, the need for some form of collective direction is increasing. It is recommended that the community organizations

collectively undertake some form of visioning and strategic planning exercise. This process must identify common goals, links between organizations, and to develop interim steps required to meet these goals. A commitment to pursue these short term benchmarks should then be made. As identified in this study, there is concern for a lack of direction or knowledge in obtaining set goals within existing organizations. Expertise in specific fields are not being developed to the levels required to meet future needs in some cases (e.g. environmental fields). Additionally, the impacts of past and recent events in this region continue to have significant implications on current “steering” efforts by hindering such things as public participatory attempts as some report that they have never officially been addressed (e.g. lasting social impacts of community relocation). These issues must be identified, recognized and addressed with the community by LIA, the Town Council and organizations or agencies they deem necessary (e.g. provincial government involvement in relocation). Required resources to meet the identified goals must be developed within the community through the generation of some redundancy and flexibility in the existing resource base, securing of opportunities for local training and experience, and through strengthening links with outside sources (e.g. agencies and individuals) enhancing existing resources.

11. In response to this project and its findings, the community must undertake a project to identify potential strategies to address issues raised here. A project to develop a “capacity handbook” should be directed by the LIA or Town Council to identify current specific organizational strengths and ways of addressing challenges identified in this study. This project will then add potential information leading to adaptation of some of the components and sub-components developed in the framework.

Recommendations for Research:

12. To further focus the components developed in the framework used here, parallel work should be undertaken in other communities using this study as a starting point. A natural setting for this research could be another community in this decision making system. Work should be directed at identifying strengths and challenges in decision making on

similar issues, leading to adaptation of current components and sub-components in the framework.

13. Adaptations of the framework, based on empirical evidence must include consideration for the overlaps between decision process and participatory capacity, and importance of individual competence and experience, and relationships between actors and their influence on community decision making capacity as identified in this study.
14. Future work must be directed at identifying the most salient components and sub-components comprising community decision making capacity. Sub-components with a more direct relationship to empirical evidence (closer to a one to one relationship) must be identified to increase ease of use and practicality of the framework.

REFERENCES

- Anonymous. 1993. Traditional Ecological Knowledge: The variety of knowledge systems and their study. A Report submitted to the Great Whale Public Review Support Office. June, 1993. 41pp.
- Appleyard, D. 1976. *Planning A Pluralist City: Conflicting Realities in Cividad, Guayana*. MIT Press: Cambridge, Mass.
- Archibald, C.P., and T. Kosatsky. 1991. Public health response to an identified environmental toxin: managing risks to the James Bay Cree related to cadmium in caribou and moose. *Can. J. Pub. Health*. Vol. 82:22-26.
- Babbie, E.R. 1990. *Survey Research Methods*. Belmont, Calif. : Wadsworth Pub. Co., c1990.
- Baikie, M. 1990. Perspectives on the health of the Labrador Inuit. In, *Northern Perspectives*, 18 (2):21-22. Canadian Arctic Resources Committee, Ottawa, Ont.
- Baikie, M. 1992. Health and Health Services for the Labrador Inuit : A Review. Labrador Inuit Health Commission, North West River, Labrador.
- Banfield, A.W.F. 1974. *The Mammals of Canada*. University of Toronto Press, Toronto. 438 p.
- Barrie, L.A. 1986a. Arctic Air Chemistry: An Overview. In B. Stonehouse B. (Ed.) *Arctic Air Pollution*. Cambridge University Press: Cambridge.
- Barrie, L.A. 1986b. Arctic air pollution: An overview of current knowledge. *Atmospheric Environment*. 20 (4): 643-663.
- Barrie, L.A., Gregor, D., Hargrave, B., Lake, R., Muir, D., Shearer, R., Tracey, R., Bidleman, T. 1992. Arctic contaminants: sources, occurrences and pathways. *Science of the Total Environment*. 160: 1-75.
- Ben-Dor, S. 1966. *Makkovik: Eskimos and settlers in a Labrador community*. Institute of Social and Economic Research, Memorial University of Newfoundland, St. John's, Nfld.
- Berelson, B. 1952. *Content analysis in communication research*. Free Press: Illinois.
- Berg, B.L. 1989. An introduction to content analysis. In, *Qualitative research methods for social sciences*. Altgut Bacon: Boston.

- Berkes, F. (ed.). 1989. *Common Property Resources: ecology and community based sustainable development*. Belhaven Press: London.
- Berkes, F. 1992. *Traditional Ecological Knowledge in Perspective*. Natural Resources Institute, Winnipeg, Man., Canada.
- Berkes, F. 1993. Traditional Ecological Knowledge in Perspective, In J.T. Inglis (Ed.) *Traditional Ecological Knowledge, Concepts and Cases*. International Program on Traditional Ecological Knowledge and International Development Research Centre, Ottawa, Canada.
- Berkes, F. 1994. Co-management: Bridging the Two Solitudes. *Northern Perspectives*. 22(2-3): 18-20.
- Berkes, F., and Farkas, C.S. 1978. Eastern James Bay Cree Indians: Changing patterns of wild food use and nutrition. *Ecology of Food and Nutrition*. 7 :155-172. [H-50]
- Berkes, F., George, P., and Preston, R. 1991. Co-management: The Evolution in Theory and Practice of Joint Administration of Living Resources. *Alternatives*. 18(2): 12-18.
- Bernard, H.R. 1994. *Research Methods in Anthropology: Qualitative and Quantitative*. Sage Publications: London, U.K.
- Bird, B. 1995. The EAGLE project: re-mapping Canada from an indigenous perspective. *Cultural Survival Quarterly*. Winter 1995. pp. 23-24.
- Blishen, B.R., Lockhart, A., Craib, P., Lockhart, E. 1979. Socio-Economic Impact Model for Northern Development. Paper prepared for the Research Branch Policy, Research and Evaluation Group, Department of Indian and Northern Affairs. October, 1979.
- Boehmer, K. 1992. Environmental behaviour in Petulu, Bali: What traditional planning can contribute to Indonesian development. M.A. Thesis. Regional Planning and Resource Development, University of Waterloo, Waterloo, Ont.
- Bogdan, R.C., and Biklen, S.K. 1992. *Qualitative research for education: An introduction to theory and methods*. Allyn and Bacon: Boston.
- Bordens, K.S., and Abbott, B.B. 1991. *Research Design and Methods : A process approach* . Mountain View, Calif. : Mayfield Pub. Co., c1991
- Brantenburg, T. 1977. Ethnic commitments and local government in Nain, 1969-1976. In, R. Paine (Ed.) *The White Arctic*. Institute for Social and Economic Research,

- Newfoundland Social and Economic Paper No. 7, Memorial University, St. John's Newfoundland. pp. 376-410.
- Brice-Bennett, C. 1977. *Our Footprints Are Everywhere: Inuit Land Use and Occupancy in Labrador*. Labrador Inuit Association, Nain, Labrador. A0P 1L0.
- Brice-Bennett, C. 1986. Renewable resource use and wage employment in the economy of northern Labrador. Royal Commission on Employment and Unemployment, Newfoundland and Labrador. St. John's Nfld. September, 1986.
- Brice-Bennett, C. 1994a. The Northlanders: a history of the population, socio-economic relations and cultural change of Inuit occupying the remote northern coast of Labrador. Labrador Institute of Northern Studies, Happy Valley-Goose Bay, Labrador.
- Brice-Bennett, C. 1994b. The redistribution of the northern Labrador Inuit population: A strategy for integration and formula for conflict. Labrador Institute of Northern Studies, Happy Valley-Goose Bay, Labrador.
- Brody, H. 1975. *The People's Land: Eskimos and Whites in the Eastern Arctic*. Hammondsworth: Penguin
- Brody, H. 1978. Ecology, Politics and Change: The Case of the Eskimo. *Development and Change*. 9:21-40.
- Brown, L.D. 1986. Participatory research and community planning. In, B. Checkoway (ed.) *Strategic Perspectives on Planning Practice*. Toronto: Lexington Books.
- Byer, P.H. 1988. Elements of risk management. In C.D. Fowle, A.P. Grima, and R.E. Munn (Eds.) *Information needs for risk management*, Environmental Monographs no. 8. Institute for Environmental Studies, University of Toronto. 318 pp.
- Canadian Arctic Contaminants Assessment Report. 1997. Canadian Arctic Contaminants Assessment Report, Department of Indian Affairs and Northern Development, Ottawa, Ont. CANADA.
- Canadian Standards Association. 1996. Q850 Risk management : guidelines for decision-makers. 7th draft. Canadian Standards Association.
- Condon, R.G., Collings, P., and Wenzel, G. 1995. The best part of life: subsistence hunting, and economic adaptation among young adult Inuit males. *Arctic*. 48(1): 31-46.

- Covello, V.T., von Winterfeldt, D., and Slovic, P. 1986. Risk communication: a review of the literature. *Risk Abstracts*. 3: 171-182.
- Creswell, J.W. 1994. *Research Design: Qualitative and Quantitative Approaches*. Sage: Thousand Oaks, Ca. 227 pp.
- Dacks, G. 1981. *A Choice of Futures: Politics in the Canadian North*. Methuen: Toronto. 226 pp.
- Dacks, G., and Coates, K. (eds.) 1988. *Northern Communities: The Prospects for Empowerment*. Boreal Institute for Northern Studies, Occasional Paper No. 25: Edmonton.
- Dale, N. 1989. Getting to Co-Management: Social Learning in the Re-design of Fisheries Management. In E. Pinkerton, E. (Ed.) *Co-operative Management of Local Fisheries: New Directions for Improved Management and Community Development*. University of British Columbia Press: Vancouver, BC.
- Dewailly, E., Ayotte, P., Careau, H., Bruneau, S., and Grondin, J. 1994. Temporal and spatial trends of human exposure from foodchain contaminants in the Canadian Arctic. *Arctic Medical Research*. 53: 359-363.
- Doolan, N., Appavoo, D., and Kuhnlein, H.V. 1990. Benefit-risk considerations of traditional food-use by the Sahtu (hare) Dene/Metis of Fort Good Hope, N.W.T. *Circumpolar Health 90: Proceedings of the 8th International Congress on Circumpolar Health*. Edited by Postl, B.D., Gilbert, P., Goodwill, J., Moffat, M.E.K., O'Neil, J.D., Sarsfield, P.A., Young, T.K. Whitehorse, Yukon, May 20-25, 1990. pp. 747-751.
- Douglas, D.J.A. 1994. *Community Economic Development in Canada*. McGraw-Hill Ryerson, c1995.
- Dunn, E.S. Jr. 1971. *Economic and Social Development: A Process of Social Learning*. Johns Hopkins University Press: Baltimore.
- Emery, F.E. 1976. *Futures We Are In*. Leiden, Martinus, Nijhoff, 1976
- Emery, F.E, and Trist, E.L. 1965. The Causal Texture of Organizational Environments. In, F.E. Emery (Ed.) *Systems Thinking*. Penguin Books: Harmondsworth, England.
- Erskine, A.J. 1977. *Birds in Boreal Canada*. Can. Wildl. Serv. Report Series No. 41, Ottawa, ON. ISBN 0-660-01185-9.

- Etzioni, A. 1967. Mixed-scanning: A third approach to decision making. *Public Administration Review*. 27: 385-392.
- Etzioni, A. 1968. *The Active Society*. The Free Press: New York.
- Etzioni, A. 1993. *The Spirit of Community: Rights, Responsibilities, and the Communitarian Agenda*. Crown Publishers: New York.
- Fagence, M. 1977. *Citizen Participation in Planning*. Pergamon Press: Oxford.
- Feit, H.A. 1988. Self-management and state-management: forms of knowing and managing northern wildlife. In, Freeman, M.M.R., Carbyn, L.N. (eds.) *Traditional Knowledge and Resource Management in Northern Regions*. Occasional Publication Number 23. A joint publication of the IUCN Commission on Ecology and the Boreal Institute for Northern Studies.
- Forester, J. 1989. *Planning in the Face of Power*. University of California Press: Berkley.
- Friedmann, J. 1973. *Retracking America: a Theory of Transactive Planning*. Anchor Press: Garden City, N.J.
- Friedmann, J. 1978. Innovation, flexible response and social learning: A problem in the theory of meta-planning. In, R.W. Burchell and G. Steinbeck (Eds.) *Planning Theory for the 1980's: A Search for Future Directions*. Rutgers University: New Brunswick, NJ.
- Friedmann, J. 1982. Urban communes, self-management and the reconstruction of the local state. *Journal of Planning Education and Research*. 2(1): 37-53.
- Friedmann, J. 1987. *Planning in the Public Domain: From Knowledge to Action*. Princeton University Press: Princeton, N.J.
- Friedmann, J. 1992. *Empowerment: The Politics of Alternative Development*. Blackwell Publications: Cambridge, Mass.
- Funtowicz, S.O., and Ravetz, J.R. 1993. Science for the post-normal age. *Futures*. September: 739-755.
- Furgal, C.M. 1994. Predation on ringed seals by polar bears (*Ursus maritimus*), Arctic foxes (*Alopex lagopus*) and Inuit hunters. M.Sc. Thesis, Department of Biology, University of Waterloo, Waterloo, Ontario.

- Furgal, C.M. 1996. Addressing Decision-Making Capacity in Northern Communities: An integrative approach. Working Paper No. 36. Institute for Risk Research, University of Waterloo, Waterloo, Ontario.
- George, A.L. 1959. Quantitative and qualitative approaches to content analysis. In, Ithiel de Sola Pool (Ed.), *Trends in Content Analysis*. University of Illinois Press: IL.
- Government of Newfoundland and Labrador. 1956. Labrador Conference, February 13-16, St. John's Newfoundland.
- Government of Québec. 1991. *The Aboriginal Peoples and Québec: The Road to the Present*. Secretariat aux affaires autochtones, Gouvernement du Québec, 1991.
- Greene, J.C., Caracelli, V.J., and Graham, W.F. 1989. Toward a conceptual framework for mixed-method evaluation designs. *Education Evaluation and Policy Analysis*. 11(3): 255-274.
- Grondin, J., Dewailly, E., Bruneau, S., and Ayotte, P. 1994. Multidisciplinary health research on contaminants in the Arctic. *Arctic Medical Research*. 53: 367-371. [H-24]
- Hall, F. 1990. The Labrador Inuit Development Corporation. In, *Northern Perspectives*, 18 (2):23-24. Canadian Arctic Resources Committee, Ottawa, Ont.
- Hampden-Turner, C. 1975. *From Poverty to Dignity*. Anchor Books: New York.
- Haysom, V. 1992. The struggle for recognition: Labrador Inuit negotiations for land rights and self-government. *Inuit Studies*. 16(1-2): 179-197.
- Hild, C.M. 1995. The next step in assessing Arctic human health. *Science of the Total Environment*. 160.161: 559-569.
- Hobson, G. 1992. Traditional knowledge is science. *Northern Perspectives*. Vol. 20(1): 2.
- Hood, C.C., Jones, D.K.C., Pidgeon, N.F., Turner, B.A., Gibson, R. 1992. Risk Management. In, *The Royal Society, Risk: Analysis, Perception and Management*. The Royal Society: London.
- Howes, M., and Chambers, R. 1980. Indigenous Technical Knowledge : Analysis, Implications, and Issues. In D.W. Brokenshaw, D.M., Warren and A. Werner (Eds.) *Indigenous Knowledge Systems and Development*. University Press of America: Lanham, MD.

- Hrudey, S.E. 1996. Is there a safe level of exposure to a carcinogen ? *Environmental Science and Technology*. 29 (8): 370-375.
- Jacobs, P., and Chatagnier, H. 1984. Proceedings of the Kativik Environment Conference. Kativik Regional Government, Kuujjuaq, Nunavik.
- Jenness, D. 1965. Eskimo Administration: III. Labrador. Arctic Institute of North America Technical Paper No. 16. May, 1965.
- Jetté, M. (ed.). 1994. A health profile of the Inuit: report of the Santé Québec health survey among the Inuit of Nunavik, 1992. Montreal. Ministère de la Santé et des Services sociaux, gouvernement du Québec. Chapter 1-3
- Jick, T.D. 1979. Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*. 24: 602-611.
- Johnson, M. (ed.) 1992a. *LORE: Capturing Traditional Environmental Knowledge*. IDRC: Ottawa, Ont. 190pp.
- Johnson, M. 1992b. Dene traditional knowledge. *Northern Perspectives*. Vol. 20(1): 3.
- Jones, E.P., Nelson, D.M., and Treguer, P. 1990. Chemical Oceanography. In, W.O. Smith Jr. (Ed.) *Polar Oceanography: Part B: Chemistry, Biology, and Geology*. Academic Press: London.
- Jul, E., Mulvad, G., Pedersen, H.S., Malcom, G.T., Hansen, J.C., and Misfeldt, J. 1994. The relationship between a low rate of ischaemic heart disease and the traditional Greenlandic diet with high amounts of monosaturated and N-3 polyunsaturated fatty acids. *Arctic Medical Research*. 53: 282-284.
- Kasperson, R.E. 1986. Six propositions on public participation and their relevance for risk communication. *Risk Analysis*. 6(3): 275-281.
- Keith, R. F. and Neufeld, D.A. 1988. Northern Resources Planning and Management: Perspectives on Community Self-determination. In, G. Dacks and K Coates (Eds.) *Northern Communities: The Prospects for Empowerment*. Occasional Publication Number 25. Boreal Institute for Northern Studies. University of Alberta: Edmonton. 100 pp.
- Kemp, W. 1992. Development of a Program for the Collection and Application of Indigenous Knowledge. A Background Paper on Twelve Years of Work by Makivik

- Corporation and the Inuit of Nunavik, Northern Québec, Canada. Inuit Circumpolar Conference.
- Kemp, W.B., and Brooke, L.F. 1995. Towards information self-sufficiency: the Nunavik Inuit gather information on ecology and land use. *Cultural Survival Quarterly*. Winter 1995. 25-28.
- Kennedy, J. 1988. The changing significance of Labrador settler ethnicity. *Canadian Ethnic Studies*. 20: 3.
- Kinloch, D., Kuhnlein, H., and D.C.G. Muir. 1992. Inuit foods and diet: a preliminary assessment of benefits and risks. *Science of the Total Environment*. 122 : 247-278.
- Kleivan, H. 1966. *The Eskimos of Northeast Labrador: A History of Eskimo-White Relations 1771-1955*. Norsk Polarinstitut, Oslo, 1966.
- Korten, D.C. 1980. Community organization and rural development: A learning process approach. *Public Administration Review*. 40(5): 480-512.
- Korten, D.C., and Klaus, R. 1984. *People-Centered Development: Contributions Toward Theory and Planning Frameworks*. Kumarian Press: Hartford: CT.
- Kretzman, and McKnight, J.L. 1993. *Building Communities From the Inside Out: A path to finding and mobilizing a community's assets*. Centre for Urban Affairs and Policy Research, Neighbourhood Innovations Network, Northwestern University. ACTA Publications: Chicago, IL.
- Krewski, D., and Birkwood, P.L. 1987. Risk assessment and risk management. *Risk Abstracts*. 4(2): 53-61.
- Krimsky, S. 1992. The Role of Theory in Risk Studies. In, S. Krimsky and D. Golding (Eds.) *Social Theories of Risk*. Praeger: Westport, CT.
- Kuhnlein, H.V. 1989. Nutrients and contaminants in Arctic diets: the dilemma for Inuit people. *The MacDonald Journal; Arctic and Subarctic Studies*. 50 (4): 9-10.
- Kuhnlein, H.V. 1990. Nutrition of the Inuit: A brief overview. *Circumpolar Health*. 90: 728-730.
- Kuhnlein, H.V. 1992. Change in the use of traditional foods by the Nuxalk native people of British Columbia. *Ecology of Food and nutrition*. 27: 259-282.

- Kuhnlein, H.V., and Soueida, R. 1992. Use and nutrient composition of traditional Baffin Inuit foods. *Journal of Food Composition and Analysis*. 5: 112-126.
- Labrador Inuit Association. 1996. *Environmental Health Study*. Labrador Inuit Association, Nain, Labrador.
- Labrador Inuit Association. 1997. *Eco-Research Project Reports Binder*. Labrador Inuit Association, Nain, Labrador.
- Lachapelle, J. 1995. Cree and Inuit world views and knowledge of the land: Implications for scoping in the environmental impact assessment process: The Great Whale experience. M.A. Thesis. Department of Regional Planning and Resource Development, University of Waterloo, Waterloo, Ontario.
- Lamb, C. 1975. *Political Power in Poor Neighbourhoods*. Schenkman: Cambridge, Mass.
- Lee, G.E., and Williamson, H.A. 1983. Evaluation Assessment, Canada Newfoundland Native Peoples of Labrador Agreement. Coastal Associates and Consultants, Ltd., St. John's Newfoundland. 69 pp.
- Lien, J. 1985. *Wet and Fat: Whales and Seals of Newfoundland and Labrador*. Breakwater Books Ltd., St. John's, NF.
- Marshall, C., and Rossman, G.B. 1989. *Designing Qualitative Research*. Sage Publications: Newbury Park, CA.
- McNIGHT, J.L. 1987 Regenerating Community. *Social Policy*. 17(3): 54-58.
- Merriam, S.B. 1988. *Case study research in education: A qualitative approach*. Jossey-Bass: San Francisco.
- Miles, M.B., and Huberman, A.M. 1984. *Qualitative Data Analysis: A Sourcebook of New Methods*. Sage Publications, Beverly Hills, Ca. 263 pp.
- Moffat, M.E.K., O'Neil, J.D., and Young, Y.K. 1994. Nutritional patterns of the Inuit in the Keewatin region of Canada. *Arctic Medical Research*. 53: 298-300.
- Morgan, G., and Ramirez, R. 1983. Action learning: A holographic metaphor for guiding social change. Position Paper, York University.
- Morgan, M.G. 1993. Risk analysis and management. *Scientific American*. July 1993. 32-41.

- Morley, D. 1986. Approaches to planning in turbulent environments. In, Morley, D., and Shachar, (eds.) *Planning in Turbulence*. The Magnes Press: Jerusalem. pp. 3-23.
- Morrison, N., Kuhnlein, H.V. 1993. Retinol content of wild foods consumed by the Sahtu (hareskin) Dene/Metis. *Journal of Food Composition and Analysis*. 6: 10-23.
- Morse, J.M. 1991. Approaches to qualitative-quantitative methodological triangulation. *Nursing Research*. 40 (1): 120-123.
- Moss, W. 1988. Constitutional responsibility for the Aboriginal peoples of Newfoundland. A report prepared for Jack Harris, M.P. by the Research Branch of the Library of Parliament. House of Commons, Ottawa, ON.
- Mulvihill, P.R. 1990. Institutional and Organizational Arrangements for Adaptive Environmental Assessment in Canada's North. M.A. Thesis. Department of Environmental Resource Studies, University of Waterloo.
- Mulvihill, P.R., and Keith, R.F. 1989. Institutional requirements for adaptive EIA: The Kativik Environmental Quality Commission. *Environmental Impact Assessment Review*. December, 1989.
- National Research Council (NRC). 1989. *Improving Risk Communication*. National Academy Press: Washington, D.C.
- Ndubisi, F. 1982. A Phenomenological Approach to Design for Amer-Indian Subcultures. M.A. Thesis, University of Guelph, Guelph, Ontario.
- Ndubisi, F. 1992. Variations in value orientations: implication for guiding community decision behaviour in cross cultural settings. *Journal of Planning Education and Research*. 11: 51-65.
- Nelson, G. 1991. Research in human ecology and planning: an interactive, adaptive approach. *Canadian Geographer*. 35(2): 114-127.
- Osherenko, G. 1988. Wildlife management in the North American Arctic: the case for co-management. In, Freeman, M.M.R., Carbyn, L.N. (eds.) *Traditional Knowledge and Resource Management in Northern Regions*. Occasional Publication Number 23. A joint publication of the IUCN Commission on Ecology and the Boreal Institute for Northern Studies.
- Patton, M.Q. 1980. *Qualitative Research Methods*. Beverly Hills, CA: Sage Publications.

- Peacock, F.W. 1947. Some psychological aspects of the impact of white man upon the Labrador Eskimo. M.A. Thesis, University of Montreal.
- Peattie, L. 1967. Reflections on advocacy planning. *Journal of the American Institute of Planners*. 32(2): 80-82.
- Peters, E., and Légare, A. 1997. The role of Inuit and non-Inuit organizations regarding the investigation and communication of human health risks due to food chain contaminants in Nunavik and Labrador. A final report prepared as part of the Eco-Research Program: Avativut / Ilusivut Research Program. Department of Geography, Queen's University, Kingston, Ontario. August, 1997. (Draft)
- Peters and Légare, 1998. The role of Inuit and non-Inuit organizations regarding the investigation and communication of human health risks due to food chain contaminants in Nunavik and Labrador. *In*, Craig, L. (Ed.) Final Report of the Avativut / Ilusivut Eco-Research Program. Institute for Risk Research, University of Waterloo, Waterloo, ON.
- Rees, W.E. 1988. Stable Community Development in the North: Properties and Requirements. In, G. Dacks and K Coates (Eds.) *Northern Communities: The Prospects for Empowerment*. Occasional Publication Number 25. Boreal Institute for Northern Studies. University of Alberta: Edmonton. 100 pp.
- Rich, B. 1994. *Mortgaging the Earth: The World Bank, Environmental Impoverishment and the Crisis of Development*. Boston, Mass.: Beacon Press.
- Riedel, J.A. 1972. Citizen participation: myths and realities. *Public Administration Review*. 32: 211-220.
- Ross, D.P., and Usher, P.J. 1986. *From the Roots Up: Economic Development as if Community Mattered*. The Canadian Council on Social Development Series. James Lorimer and Company: Toronto.
- Sewell, W.R., O'Riordan, D.T. 1976. The Culture of Participation in Environmental Decision Making. *Natural Resources Journal*. 16: 1-21.
- Shkilnyk, A.M. 1984. *A Poison Stronger than Love: The Destruction of an Ojibway Community*. Yale University Press: New Haven, CT.
- Slovic, P. 1987. Perception of risk. *Science*. 236: 280-285.

- Smith, B. 1985. Planning in cross-cultural situation. M.A. Thesis, Regional Planning and Resource Development, University of Waterloo.
- Smith, L.G. 1981. Public participation in policy making: the state-of-the-art in Canada. *Geoforum*. 15(2): 253-259.
- Statistics Canada. 1992. Profile of Census Divisions and Subdivisions in Newfoundland- Department Supply and Services Canada, Ottawa, ON.
- Swift, J. 1978. Marginal societies at the modern frontier in Asia and the Arctic. *Development and Change*. 9: 3-19.
- Tanner, A., J. C. Kennedy, G. Inglis and S. McCorquodale. 1994. "Aboriginal Peoples and Governance in Newfoundland and Labrador". Report to the Royal Commission on Aboriginal Peoples, For Seven Generations: An Information Legacy of the Royal Commission on Aboriginal Peoples. Ottawa, Libraxus Inc. [CD-ROM]
- Taylor, J.G. 1974. *Labrador Eskimo Settlements of the Early Contact Period*. National Museum of Man, National Museums of Canada, Ottawa, ON, CANADA.
- Tesch, R. 1990. *Qualitative research: Analysis types and software tools*. Falmer: New York, NY.
- Tompkins, E. 1988. Pencilled out: Newfoundland and Labrador's Native People and Canadian Confederation, 1947-1954. A report prepared for Jack Harris, M.P. on the impact of the exclusion of Newfoundland and Labrador's native people from the Terms of the Union in 1949. House of Commons, Ottawa, ON.
- Trist, E. 1980. The environment and system response capability. *Futures*. April 1980: 113-127.
- Trist, E. 1983. Referent organizations and the development of inter-organizational domains. *Human Relations*. 36(3): 269-284.
- Urban and Rural Planning Division. 1997. Town of Nain Draft Municipal Plan. Prepared for the Town of Nain by the Urban and Rural Planning Division, Department of Municipal and Provincial Affairs, St. John's, NF.
- Usher, P.J. 1993. The Beverly-Kaminuriak Caribou Management Board: An Experience in Co-Management. In, J.T. Inglis (Ed.) *Traditional Ecological Knowledge, Concepts*

- and Cases*. International Program on Traditional Ecological Knowledge and International Development Research Centre, Ottawa, Canada.
- Usher, P.J., Baikie, M., Demmer, M., Makashima, D., Stevenson, M.G. Stiles, M. 1995. *Communicating about contaminants in country food: the experience in aboriginal communities*. Inuit Tapirisat Canada, Research Department, Ottawa, Ont. [on shelf]
- Vaughan, E. 1995. The significance of socioeconomic and ethnic diversity for the risk communication process. *Risk Analysis*. 15(2): 169-180.
- Ventriss, C. 1987. Critical issues of participatory decision making in the planning process: a re-examination. *The Journal of Architectural and Planning Research*. 4(4): 281-288.
- Voisey's Bay Nickel Company. 1997. Environmental Impact Statement of the proposed mine and mill project at Voisey's Bay, Labrador.
- Wandersman, A. 1981. A framework of participation in community organizations. *Journal of Applied Behavioural Science*. 17(1): 27-58.
- Wenzel, G.W. 1981. Clyde Inuit adaptation and ecology: The organization of subsistence. National Museum of Man, Mercury Series, Canadian Ethnology Service Paper no. 77.: Ottawa.
- Wenzel, G.W. 1986. Canadian Inuit in a mixed economy: Thoughts on seals, snowmobiles, and animal rights. *Native Studies Review*. 2(1): 69-82.
- Wheatley, M.A. 1993. Aboriginal health and the environment. Paper presented to the 9th International Congress on Circumpolar Health. Reykjavik, Iceland, June 20-25, 1993.
- Wheatley, M.A., and Wheatley, B. 1981. The effect of eating habits on mercury levels among Inuit residents of Sugluk, P.Q. *Etudes / Inuit Studies*. 5(1): 27-43.
- Wheatley, B., and Wheatley, M.A. 1988. Methylmercury in the Canadian Arctic environment past and present - natural or industrial ? *Arctic Medical Research*. 47(1): 163-167.
- Williamson, H.A. 1964. The Moravian Mission and its' impact on the Labrador Eskimo. *Arctic Anthropology*. 2(2): 32-36.
- Williamson, T. 1994. Labrador Inuit politics from household to community to nation. A Report for the Royal Commission on Aboriginal Peoples: The North. St. John's Newfoundland.

- Williamson, T. 1997. **From Sina to Sikujaluk: Our Footprint. Mapping Inuit Environmental Knowledge in The Nain District of Northern Labrador. Report prepared by T. Williamson for the Labrador Inuit Association. Labrador Inuit Association, Nain, Labrador.**
- Yates, D. 1976. Political innovation and institution building - the experience of decentralizing experiments. *In Theoretical Perspectives on Urban Politics*. Prentice-Hall: Edgewood Cliffs, NJ.
- Yin, R.K. 1989. **Case Study Research: Design and Methods. Applied Social Research Methods Series, Volume 5. Sage Publications: Beverly Hills, Ca.**

Appendix A

List of Key-Informants for Decision Making Context and Case Decisions

(only those providing consent to have their names appear in this report are listed)

Frank Andersen, Researcher, LIA

Mervyn Andersen, Vice President, LIA

Toby Andersen, Land Claims Director, LIA

William Barbour, President, LIA

Joe Brazil, Provincial Department of Forestry and Agrifoods, Wildlife Division

Henry Broomfield, Coordinator, Field Workers, LIA

Carol Flynn, Executive Director, LIA

Selma Ford, Community Health Representative, LIHC

Al Garman, Regional Director, Indian and Inuit Health Services, Health Canada, Atlantic Region

Thomas Humes, Regional Manager, Environmental Health Service, Indian and Inuit Health Services, Health Canada, Atlantic Region

Dr. Michael Jong, Chief Medical Officer, Health Labrador Corporation

Johannes Lampe, Mayor, Town of Nain

Abel Leo, Elder, Town of Nain

Richard Leo, Community Health Representative, LIHC

Amos Maggo, Wildlife Technician, LIA

Paulus Maggo, Elder, Town of Nain

Donna Matthews, Public Health Nurse, LIHC

Tim McNeill, Education Advisor, LIA

Judy Rowell, Environmental Advisor, LIA

Julius Saimat, Elder, Town of Nain

Tabea Solomon, Town Clerk, Nain Town Council

Maggie Webb, former Community Health Advisor, LIA current Director of Nursing, LIHC

Dion White, Environmental Health Office, Provincial Department of Government Land and Services

Winston White, Communications Officer, LIA

Fran Williams, Executive Director, OKalakatigêt Society

Vicki Williams, Town Manager, Nain Town Council

Representative, Health Protection, Health Newfoundland

Representative, Provincial Department of Forestry and Agrifoods, Wildlife Division

List of Quota Sampled Interview Participants

(only those providing consent to have their name appear in this report are listed)

Joanna Agnatok	Joshua Kojak	John Terriak
Sophie Agnatok	Johannes Lampe	Maggie Webb
Cathy Andersen	Richard Leo	Mary Webb
Frank Andersen	Donna Matthews	Ron Webb
Mervyn Andersen	Amos Maggo	Fran Williams
Toby Andersen	Jacko Merkuratsuk	
Tony Andersen	Joseph Buddy	
William Barbour	Merkeratsuk	
Henry Broomfield	Frances Murphy	
Katie Dicker	Edward Noah	
Rutie Dicker	Carla Pamak	
Carol Flynn	Richard Pamak	
Selma Ford	Judy Rowell	
Katie Harris	Levi Semigak	
John Haye	Thomas Semigak	
Julius Ikkusek	Molly Shiwak	
Betty Jararuse	Levi Solomon	
Sam Kalleo	Dorothy Tuglavina	
Tobias Kalleo	Gwen Tuglavina	

Appendix B

Key-Informant and Target Group Interview Topics

Decision Making Context

Key-Informant Discussion Topics

1. Individuals' and organization's role and responsibilities to the Inuit population of the Labrador coast ? Evolution of this role and the responsibilities ? how has it changed ?
2. Authority (legislation, understood agreements) utilized ? policies or procedures followed?
3. Organizational structure ? Who do you report to, take direction from ? evolution of the structure ? how has it changed ?
4. Individual's and organizations' involvement in environmental health issues in Labrador ?
5. Decision making processes followed in dealing with issues ? (procedures); consensus ?, democracy ?
6. Relationships (formal and informal) with other actors / organizations in the decision making community ? cooperation ? conflict ? little interaction ?
7. Challenges faced in daily involvement in issues ?, how are they dealt with ?
8. What trends exist in the region that you are dealing with ? (increasing responsibility, increasing devolution ? more problems ? less funds ?)
9. Needs to deal with these changing trends ?
10. Is there anything else you would like to mention in this interview ?

Decision Making Cases

Key-Informant Discussion Topics

1. Position and role in the case, your involvement ?
2. Responsibilities in this role and in respect to the case in question ?
3. Perspective of issues and problems involved in the case ?
4. Nature of information was the decision made based on ?
5. How was this information collected, by whom, when ?
6. Concerns or perspectives of nature of information collected ?
7. Involvement of TEK relating to this problem ? its involvement ?
8. Strengths and/or limitations of the data involved in the decision made ?
9. Process of decision making - how was the decision made and who was involved ? (e.g. democratic within the organization; consensus between actors; authority of one individual because of position)
10. Process of communication of decision to the public ?
11. When and who was involved in the message formation and delivery ?
12. Existence of monitoring for this issue pursued ?, if so who is involved, what work is being conducted, what is the nature of any communication during this process ?

13. General impressions of the process and product of this health advisory/advice ? (e.g. challenges faced, strengths / weaknesses, involvement / participation / actors / roles, information / data related, decision process related, communication related)

Quota Sampled Interview Topics

Topic: Role of traditional foods

1. Is the access to, and consumption of traditional foods important to you and your family?
2. Why are they so important to you ?
Probes: Do they contribute to your physical health ?, mental health, well-being, cultural health ?
3. Do you have access to traditional foods ? Where do you get your traditional foods from?
Probes: Do you hunt, do you trade for traditional foods, do you get them from family members, friends, others ?
4. On average, do you eat traditional foods every day, every week, at least once a month?

Topic: Safety of traditional foods

5. Do you think that the traditional foods people have access to are a good, healthy source of food?
Probes: How do you know this ?, where do you hear this from ?, if so what have you heard ?
6. Do you have any concerns regarding the traditional food sources or wildlife you use as foods?
Probes: Are you animal numbers, animal health, environmental change ? Are you concerned about your access to wildlife, quality of food ? (concern, source, information, questions)
7. Have these concerns or information you have heard influenced what types of traditional foods you eat or how much you eat ? Do you think you eat more traditional foods, or different ones than you have in the past ?
Probes: Have you changed your traditional food diet because of your concerns ?

Topic : Decision Making

8. Do you know of any health advisories, warnings or health advice given regarding the consumption of traditional foods ?
Probes: What did you hear ? When did you hear it ? Where did you hear it from ? Has this influenced your consumption of any traditional foods ?, How ?
9. Do you eat caribou liver ?
-if you stopped, when did you stop and why ?
-where did you get the information that you made this decision on ?
-do you have any questions about this ?
10. Do you eat marine mammal blubber (ringed seal, beluga, bearded seal), misirak ?
-why do you eat it ? - tastes good, you know it is good for you, it is a tradition ?
-have you heard any information regarding the nutritional value of seal and whale blubber and oil ?

-where did you hear this information ?, what did you hear ?

-do you have any questions about it ?

11. Do you know about the PCBs reported at the Saglek radar site ?

-what does this mean to you ?, what do you think about this ?

-how does it affect you ? or the Labrador Inuit ? - do you use the area ?

-do you have any questions about it ?, what would you like to know ?

Topic: Communication / Information

12. Who do you go to or who do you contact if you have questions regarding wildlife, traditional foods, nutrition or other environmental health issues ?

Probes: Do you ask friends, family members, wildlife tech, CHR, nurse, elders ?, others for this information ? Have you had any trouble finding the information you needed ? or other challenges related to this information ? - do you understand it ?

13. Do you feel informed about issues regarding wildlife and traditional foods and other environmental issues ?

14. How do you think some of these concerns you have raised can be addressed ?

Probes: Communication issues ? access to information or people issues ?

Topic: Institutions

15. Who is involved in making decisions and giving advice regarding the safety and health value of traditional foods ?

Probes: How do you usually hear about it ? Do people usually follow this advice ?

16. Who should be involved in making decisions and giving advice as to what traditional foods are healthy and safe to eat ?

Probes: Are there regional groups / committees that should be involved ? are there community groups / individuals should that be involved in making these decisions and giving out this advice?

17. If you think there are people or committees or groups that should be involved do you think it is difficult to get them involved ?

What might be some of the difficulties in getting them involved ?

Probes: Do they have the technical expertise ?, Do they have the experience ?, Are they available ?

How do you think these challenges can be dealt with ?

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18. Do you think there is a role for traditional knowledge in making decisions and giving advice about what is healthy and safe to eat ? Do you think it is currently being used ?

If not, what do you think are the biggest challenges to involving this information in these decisions ?

Probes: Is it collected and available, is it considered seriously, is it relevant to the issues at hand ?, other ?

Topic: Participation

19. Do you belong to any committees or groups (or a job) in the community / region addressing environmental or health issues people have been concerned about ?
 - name of group
 - issue(s) being addressed
 - please tell me about the group, who is in it, and how it was formed, when
 - group activities - information gathering, communication, actions you take
20. Do you regularly attend community meetings on topics regarding health and environmental issues ?
21. What challenges / difficulties have you experienced in your involvement ?
Probes: Have you had a problem understanding issues, getting information, being involved, communicating this information with others ? How can these challenges be addressed ?
21. Do you have any other concerns regarding participation in your community / region on environmental and health issues from your experiences ?, ideas on how you think they can be addressed ?
23. What would you like to see in order to make decisions regarding contaminants and traditional foods ?
Probes :-better / more information ?; more involvement / participation ?; more communication, anything else ?
24. Do you have any other comments or concerns about environmental and health issues in your community or region you would like to mention in this interview ?

Thank you very much for participating in this interview

Appendix C

Analytical Data Tables

Table 5.1.1. Field evidence of sub-components of institutional capacity in Labrador.

Sub-components of Institutional Capacity		
• Community has decision making power affecting its members		
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -LIHC Health Transfer Agreement - gives programming power to LIHC [D-48] -Town Council has power in emergency situations [D-60] -LIA bylaws outline power of Board members from communities in decision making - have powers to call meetings, vote on issues, raise concerns [D-32] -Municipalities Act gives decision making power to Town Council [D-87] e.g. Town Council of Nain turns down drilling application of mining company to drill inside watershed [D-57] -LIA has some decision making power in programming for Post-Secondary Education training through Post-Pathways program [D-1] 	<ul style="list-style-type: none"> -Env. Ass. Memorandum of Understanding only advisory [D-22] -lack of Inuit decision making power historically [D-1,2,3,4,5] -1948 Terms of Union with Nfld. gives no special rights to aboriginals [D-1] -expressions of lack of power [D-1, 6, 57] -little to no decision making power by aboriginal people [D-1] -LIA under Nfld Corporations Act, no legislative base to act on environment or health issues [D-32] -Canada Newfoundland Native Peoples Health Agreement, decisions made by province and federal government, aboriginal groups sit on board but allocations decisions made by province [D-72] -Nfld. Public Health Act power with province, may create and designate power to regional community health boards [D-73] -Public Health Act overrides Municipalities Act [D-73] -Hospitals Act allows formation of Health Boards [D-75] -Nfld. Environment Act power with province, public can appeal to Minister [D-78] -Nfld. Wildlife Act power with province, may appoint advisory board [D-80] -Nfld. Environmental Assessment Act power with provincial Minister, public can appeal to Minister though on concerns [82] -Nfld Urban and Rural Planning Act power with provincial Minister, may allocate to Town Council [D-85] -Nfld. Dangerous Goods Act power with provincial Minister unless overruled by Dept. National Defense [D-86] -Canada Health Act power with federal Minister [D-89] -Canada Wildlife Act - Constitution prevails (no status in Nfld. for aboriginal people) [D-90] -Canadian Environmental Assessment Act has advisory status only [D-91] -Canada Fisheries Act power with federal Minister [D-94] -Canada Transportation of Dangerous Goods Act power with federal Minister [D-95] -Canada Constitutional Amendments recognized Inuit (1982) - but Newfoundland and Labrador under provincial jurisdiction -province says aboriginal groups are not signatories of agreements therefore no power [D-1] -Inuit Tapirisat of Canada's aims include representing Inuit, but no legislative power base for Labrador involved [D-99]

Table 5.1.1. Field evidence of sub-components of institutional capacity in Labrador (continued).

Sub-components of Institutional Capacity		
	• Community has decision making power affecting its members	
Data Source	Supports Sub-component	Detracts from Sub-component
Key-Informant Interviews	<ul style="list-style-type: none"> -LIHC has some programming control through Health Transfer over community health services -through tri-partite negotiations Health Canada giving more responsibility to Inuit for health care in Canada Newfoundland Native Peoples Health Agreement -OKalakatigët Communications Society has direct control over communications programming in region 	<ul style="list-style-type: none"> -Town Council representatives express need to take control -Elders had control over community issues (Customary Law), all gone now -LIA gaining more authority, none in environmental issues right now, but involved to some degree
Participant Observations	<ul style="list-style-type: none"> -Health Transfer Agreement has given LIHC some decision making power -LIA by-laws utilized to make decisions with communities 	
Survey Interviews		
CASE 1 Cd in Caribou Liver Documents	<ul style="list-style-type: none"> -hunters use customary law to dictate hunting practices and quota in commercial hunt 	<ul style="list-style-type: none"> -province acting under provincial Wildlife and Public Health Acts -province follows World Health Organization Guidelines for contaminant levels (0.5 mg / wk and 0.06 mg / day) -LIA had no official authority in the investigation
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents		<ul style="list-style-type: none"> -Health Canada follows its guidelines for Recommended Weekly Intake (RMWI) levels of contaminants -set guidelines for action based on these -Health Canada Protection Branch authorized under Food and Drug Act - not applicable to country foods; so, in North, no law exists, only advisory authority
Key-Informant Interviews	<ul style="list-style-type: none"> -had some authority in decision through representation by Inuit Tapirisat Canada as aboriginal representative on Canada Green Plan - Arctic Environmental Strategy (only advisory) 	
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents		<ul style="list-style-type: none"> -federal EA exempt if under advise of Department of National Defense -Federal Environmental Assessment Office required Environment Screening Report for site -self-assessment process followed -no authority of Labrador Inuit -Transportation of Dangerous Goods Act gives power to shipper -cleanup guidelines set by Canadian Environmental Protection Act, by sea they are under Fisheries Act
Key-Informant Interviews	<ul style="list-style-type: none"> -DND consultant Environmental Sciences Group (ESG) allowed LIA involvement and some authority in decision making -allowed some authority in planning research program for current clean-up 	<ul style="list-style-type: none"> -no authority for LIA because no land claim settled even though that area is targeted for land selection
Participant Observations		
Survey Interviews		

Table 5.1.2. Field evidence of sub-components of institutional capacity in Labrador.

Sub-components of Institutional Capacity		
	<ul style="list-style-type: none"> Community has set of understood policies that guide and empower people in decision making arrangements with other actors 	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIA by-laws outline decision making processes, give some degree of power to individuals (consensus among Executive, voting of Board, and at Annual General Meetings) [D-32] -LIA has Guidelines for Ethical Research outlining role and responsibilities of actors in research agreements and empowers local representatives in relationship[D-32] -Town Emergency Plan outlines decision making processes for organizations and representatives giving individuals power [D-60] -Health Labrador Corporation Board has procedures(majority vote of members on issues) [D-74] -Municipalities Act has decision making procedures for Town Councils giving power [D-87] -Town Council makes collective decision and rejects drilling application - hold plebiscite to decide so [D-57] -Town Council held community dialogue to deal with local social issues to gather perspectives -Town Council held plebiscite on sale of alcohol in community 	<ul style="list-style-type: none"> -Canadian Environmental Assessment Memorandum of Understanding for Voisey's Bay outlines decision making and involvement, but only advisory process [D-22] -had a set of customary laws that dictated social, resource and political decision making, no longer followed [D-6] -communities had forms of dispute resolution and governance that were flexible, decentralized and consensus based (taken over by Moravians then Province) [D-1] -Can. Nfld. Native Peoples Health Agreement outlines management board responsibilities in overseeing applications for funding, but province holds veto power on board [D-1] -Wildlife, Public Health, Environment Acts do not outline decision making procedures involving aboriginal groups -Nfld. EA Act outlines decision making processes, but only advisory [D-82] -Urban and Rural Planning Act may appoint Board and may develop procedures, but only advisory [D-85] -Can. Env. Ass. Act - shall appoint board, has procedures, but only advisory
Key-Informant Interviews	<ul style="list-style-type: none"> -Elders have procedures for deciding on Church issues -LIA has research guidelines they are trying to make researchers follow outlining roles and responsibilities -Municipalities Act outlines decision making procedures for issues (plebiscites, votes, open meetings) 	<ul style="list-style-type: none"> - Public Health Act allows leeway in making decisions re: inspections with communities ("as approved by inspector")
Participant Observations	<ul style="list-style-type: none"> -LIA Ethical Guidelines for research used in some cases, not enforced in others -LIA by-laws used to address community concerns over leadership -common community practice to deal with issues know (community meetings) 	
Survey Interviews		<ul style="list-style-type: none"> -approx. half of elders, women, hunters and youth did not know who is involved in making environmental health decisions

Table 5.1.2. Field evidence of sub-components of institutional capacity in Labrador
(continued).

Sub-components of Institutional Capacity		
	<ul style="list-style-type: none"> Community has set of understood policies that guide and empower people in decision making arrangements with other actors 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver		
Documents		
Key-Informant Interviews		<ul style="list-style-type: none"> -aboriginal group had no knowledge of process for this advisory and no involvement -LIA left in reactionary role
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga		<ul style="list-style-type: none"> -Health Canada (HC) has set of recommended weekly intake (RMWI) levels for contaminants in human used for when to take action -HC follows their own human health assessment process (no aboriginal group involvement in that process)
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -reactive informal process through Ottawa meeting empowers aboriginal representatives to be involved in decision making process 	<ul style="list-style-type: none"> -no process existed for this, it was very new, but still consensus building with aboriginal groups -didn't understand process by which HC came to results
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site		<ul style="list-style-type: none"> -process exempt from federal EA process so aboriginal groups excluded, disempowering -appeal through letters to provincial and federal agencies, only option
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -LIA forced for involvement through appeal to provincial and federal departments and were heard -got local perspectives involved through consultation with fishermen's committee -held community meeting regarding shipping to get community perspectives -no agreed process in current clean up but agreed partnership because of actor (DND - ESG) consensus building active now -but this is only with one of the two actors involved 	
Participant Observations		
Survey Interviews		

Table 5.1.3. Field evidence of sub-components of institutional capacity in Labrador.

Sub-components of Institutional Capacity		
	• Institutions guiding community decision making processes are based in pre-existing local self-management systems	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -Canadian Environmental Assessment Memorandum of Understanding (MOU) attempts to incorporate local processes incorporating public forums, local knowledge [D-22] -LIA Ethical Guidelines in Research expresses need to be sensitive of local processes and concerns [D-33] -LIA by-laws for decision making allow for community meetings and input [D-32] (vote on issues) -Town Council holds community meetings on large issues -Municipalities Act - all meetings public and open [D-87] 	<ul style="list-style-type: none"> -Elders believe customary laws must be brought back, as processes today do not respect these ways -traditional forms of dispute resolution and governance were flexible, decentralized, and consensus based [D-1] -federal and provincial EA Acts allow for some form of public consultation and allow all to present concerns to panel [D-22, 82, 91] -little opportunity for food chain contaminants investigation process to begin due to local concerns for fish or wildlife ; inspection processes focus on response to concerns at market or export level [D-98]
Key-Informant Interviews	<ul style="list-style-type: none"> -many of the wildlife regulations (under the provincial Wildlife Act) are very close to the guidelines Inuit used to follow for hunting seasons and conservation 	<ul style="list-style-type: none"> -Elders have been taken out of roles of responsibility in community as Moravians, the Hudson's Bay then Province came into the region -not recognized anymore by anyone -need to bring back customary laws "In Nain we had customary laws to protect the land and wildlife..." (Elder)
Participant Observations	<ul style="list-style-type: none"> -LIA by-laws used to hold board and community meetings on major issues to consult public, long time manner of handling issues 	<ul style="list-style-type: none"> -LIA Ethical Guidelines for Research in place incorporating local processes, but not always enforced
Survey Interviews		<ul style="list-style-type: none"> -number of individuals mention observation as reasoning for safety of country foods (N=17)
CASE 1 Cd in Caribou Liver Documents	<ul style="list-style-type: none"> -through involvement of hunters in collection customary laws were used to build consensus on quota, location for camp etc. in commercial hunt 	
Key-Informant Interviews		<ul style="list-style-type: none"> -process did not allow any local "context" for advisory, or input -decision based on risk guidelines set by World Health Organization
Survey Interviews		<ul style="list-style-type: none"> -4/55 eat caribou liver, 8 stopped consumption, 7 of those 8 due to knowledge of benefits and risks of livers (includes knowledge through observation)

Table 5.1.3. Field evidence of sub-components of institutional capacity in Labrador (continued).

Sub-components of Institutional Capacity		
	• Institutions guiding community decision making processes are based in pre-existing local self-management systems	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 2 PCBs in ringed seal and beluga Documents	-through representation of Inuit Tapirisat Canada (ITC) local processes for decision making and communication were incorporated; allowed for consensus building	-Health Canada (HC) following own set of guidelines
Key-Informant Interviews	-contaminants experts meeting allowed for regional context and processes to be incorporated -able to agree through consensus building	-no health standards for arctic populations set and agreed upon (by any of the actors)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-recent informal research agreement between LIA and Department of National Defense Environmental Sciences Group, incorporates local processes of decision making, communication, consultation under direction of LIA (e.g. consultation with fishermen's committee)	-provincial and federal processes do not recognize local processes
Key-Informant Interviews	-change in process due to new actor allowed consultation of local knowledge through fishermen's committee -agreement and relationship with DND-ESG allows for recognition of local processes for consultation and communication (no agreed process, but agreed partnership)	-provincial and federal processes do not recognize local processes
Participant Observations	-DND defaults to LIA for local communications and consultation processes in relationship	
Survey Interviews		

Table 5.1.4. Field evidence of sub-components of institutional capacity in Labrador.

Sub-components of Institutional Capacity		
• Policies exist requiring public participation in the decision making processes		
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -Canadian Environmental Assessment Memorandum of Understanding outlines participation as advisory process [D-22] -LIA by-laws outline participation in form of elections, Board meetings, Sub-committees of the Board, Annual General Meetings, Extraordinary General Meetings [D-32] -Health Labrador Corp. Board has community representation appointed by Minister [D-74] -Nfld. Environmental Assessment Act "shall" provide for public hearings where strong public interest is shown [D-82] -Nfld. Urban and Rural Planning Act changes "must allow for public review, comments and hearings" [D-85] -Nfld. Municipalities Act all Council meetings "must be public" (held monthly), "Council may hold plebiscite on issues" "election for Council seats every four years" [D-87] -Canadian Environmental Assessment Act includes "to ensure public participation in assessment process" [D-91] -Inuit Tapirisat Canada's aims include "To help Inuit achieve full participation in Canadian society; To represent Inuit on matters affecting their well being" [D-99] 	-Nfld Environmental Act, and Wildlife Act "may" provide for public participation or consultation of some form [D-78, 80]
Key-Informant Interviews	<ul style="list-style-type: none"> -OK radio and TV society has regular call-in shows on issues as part of programming -LIA Exec. decides if community meetings are needed on issue, what methods to use etc. -Health Labrador Corp. Board has participation from members (quorum for meetings) required 	<ul style="list-style-type: none"> -"need to get people involved" (Town Council representative) -lack of involvement mentioned as a challenge by Elders
Participant Observations	<ul style="list-style-type: none"> -LIA policies for Board participation followed (Board called in to discuss land claims issue) -LIA extraordinary meeting called by public to discuss local political issues, request dismissed though 	
Survey Interviews		

Table 5.1.4. Field evidence of sub-components of institutional capacity in Labrador (continued).

Sub-components of Institutional Capacity		
• Policies exist requiring public participation in the decision making processes		
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-informal policy to consult hunters on resource issues utilized in commercial caribou hunt and sampling	-no institutional arrangements requiring participation were involved
Key-Informant Interviews	-LIA reported news (once known) at Annual General Meeting (but no opportunity for participation on issue)	
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-ITC following aims coordinated meeting to included Inuit representation and participation in issue	
Key-Informant Interviews	-LIA involved through efforts of ITC to involve aboriginal representatives	
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents		-assessment process did not require participation or consultation as it was self-assessment (limited forum was provided)
Key-Informant Interviews	-LIA consulted Board and Executive on issue and forced to get some community consultation and involvement in clean-up	
Participant Observations		
Survey Interviews		

Table 5.2.1. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	• the community has a decentralized administration of non-hierarchical, stakeholder controlled organizations	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIA administration centered in Nain, with offices in Goose Bay and Land Claims Office in St. John's, and representation through field offices in each coastal community [D-69,70] -LIA and affiliates (LIHC, LIDC) stakeholder controlled; organization directed by Board of elected representatives from communities, meet four times a year unless need more [D-69, 70] -LIA President, Vice-President and Board members elected from communities; advisors, executive director, and staff are hired [D-32] -LIHC and LIDC directed by sub-committees of Board [D-32] -LIHC head office in Northwest River, regional office in Nain, nursing stations in each community [D-40] -Town Council conventional municipal government elected from community residents (mix of Inuit and non-Inuit); stakeholder controlled; council meets monthly [D-1] 	<ul style="list-style-type: none"> -LIA has hierarchical structure with 3 member executive -Town Council is municipal government; some form of hierarchy (Mayor and Deputy Mayor elected from among elected councilors) [D-1]
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council stakeholder controlled through elected membership -OKalakatigët (OK) communications society based in Nain, directed by own Board (reps from region) private corporation -Health Labrador Corporation based in Goose Bay, directed by Board of community representatives appointed by Minister for three years -LIA stakeholder controlled through Board representation, but Board doesn't meet too regularly (scattered along coast etc.). -LIHC directed by Health and Education sub-committee of Board 	
Participant Observations	<ul style="list-style-type: none"> -LIA gets approval from Board on big issues (e.g. land claims position) 	
Survey Interviews		<ul style="list-style-type: none"> -37 individuals interviews mentioned challenges to participation - 17 of these mentioned power structures or barriers hindered involvement

Table 5.2.1. Field evidence of sub-components of organizational / coordinative capacity in Labrador (continued).

Sub-components of Organizational / Coordinative Capacity		
Data Source	• the community has a decentralized administration of non-hierarchical, stakeholder controlled organizations	
	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site	-LIA gets review by Exec. Committee and Board for position on Saglek clean-up, report to AGM - open to comments	
Documents		
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Table 5.2.2. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	• the community has a multi-organizational structure and some form of inter-organizational coordination	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -LIHC makes attempts at inter-organizational coordination through workshop [D-6] -Town Council makes inter-organizational effort in coordinating emergency plan [D-58, 59] -LIA has multi-organizational structure (LIHC, LIDC, Torngasok Cultural Centre); all directed by Board and sub-committees [D-69, 70] 	<ul style="list-style-type: none"> -little coordination in presentation of Town Council and LIA presentations to EA hearings (some overlap) [D-29] -Town Council has no official link with LIA -coordination issues exhibited with cord blood monitoring program (samples lost between organizations) [D-binder] -LIHC has no official link with Health Labrador Corporation
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council has coordination on some issues with RCMP and LIHC; with LIA on mining issues 	<ul style="list-style-type: none"> -some potential confusion in jurisdiction between Town Council and LIA, seek cooperation -only worked together in crisis situations; need to improve cooperation -OK Communications Society no link with local radio stations (no overlap either) -physical separation between LIA and LIHC makes some things harder -no link between LIHC and Social Services, or Health Labrador -Social Services and Health Labrador used to have interagency meetings, cut because of funding
Participant Observations	<ul style="list-style-type: none"> -Eco-Research Office coordinates Waste Management Action Committee of organizations in Town 	<ul style="list-style-type: none"> -overlap in Town Council and LIA presentations to EA panel, little coordination -used to have Health Advisor between LIA and LIHC, position no longer filled (will fill it in future with more social focus) -confusion on some issues between LIA and Town Council (community not sure who to go to) -LIHC / Social Services coordination difficult
Survey Interviews		
CASE 1		
Cd in Caribou Liver		
Documents		
Key-Informant Interviews		<ul style="list-style-type: none"> -only coordination was through provincial departments
Survey Interviews		
CASE 2		
PCBs in ringed seal and beluga	<ul style="list-style-type: none"> -Inuit Tapirisat Canada coordinated regional Inuit involvement with all federal governmental agencies involved -LIA environmental representative coordinates with health representative 	
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -coordination through Inuit Tapirisat Canada was an asset to process 	
Survey Interviews		
CASE 3		
PCBs at Saglek Radar Site	<ul style="list-style-type: none"> -inter-agency coordination for latest Saglek clean-up coordinated by DND 	<ul style="list-style-type: none"> -LIA had coordinated the arrangement of government / industry / Coast Guard / LIA committee together to deal with shipping activities on the coast, but it was stopped this year by Coast Guard representative
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -coordination between LIA and DND and province initiated by DND consulting group 	
Participant Observations		
Survey Interviews		

Table 5.2.3. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	• the community has multiple lines of accountability yet exhibits some degree of decision making autonomy on issues affecting its membership	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIA accountable to membership and provincial and federal agencies in use of natural resources [D-32] -LIHC accountable to membership and to Health Canada and Newfoundland Department of Health through funding arrangements [D-48] -Town Council accountable to residents and provincial government through Municipalities Act [D-87], Provincial Health Act [D-73] -LIA shows some autonomy through process of land claims negotiations [D-1], position in Environmental Assessment process for Voisey's Bay [20] -Town Council shows some autonomy through rejection of drilling application within watershed [D-57] 	-difficult to exhibit autonomy when few legislative powers exists for LIA
Key-Informant Interviews	-Town Council has brought together people and taken action on social issues in community outside of their mandate	
Participant Observations		
Survey Interviews		
CASE 1 Cd in Caribou Liver Documents	<ul style="list-style-type: none"> -LIA accountable to provincial wildlife for herd management -accountable lines of authority included provincial department of health and department of wildlife 	-no autonomy displayed by community as no decision making power existed
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-LIA through Inuit Tapirisat Canada shows some autonomy in decision to give "advice" on marine mammal fat consumption	
Key-Informant Interviews	-all aboriginal groups showed some form of autonomy in deciding on message to be delivered which was different than Health Canada original concern	
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-LIA attempts to intervene in process of removal of PCBs from Saglek during first clean-up wanting shipping assessed and regulated	
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Table 5.2.4. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	• community organizations began with the minimum number of individuals necessary to address issues at hand	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		* not enough information available
Documents	-LIHC started with 7 to address initial health duties and counseling and expanded [D-43] -LIA formed in 1972, small number, grown since [D-2] (actual numbers not known)	
Key-Informant Interviews	-Town Council and LIA haven't used organizational chart therefore only current numbers known -7 member Town Council -LIA largest organization in Labrador now -OK Communications Society hired 12 from coast	
Participant Observations		
Survey Interviews		
CASE 1		
Cd in Caribou Liver		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2		
PCBs in ringed seal and beluga		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3		
PCBs at Saglek Radar Site		
Documents		
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Table 5.2.5. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	<ul style="list-style-type: none"> the community organizational structure has changed over time and adapted its policies / structures to address changes in the external environment 	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -LIA expands structure to include research office due to need experiences through involvement in research program [D-39] -LIA added affiliates to address health, social and economic issues in region [D-40] -LIHC changed structure to address needs in communities ; psychology advisor position added. [D-43] -Community structural change has been imposed by outside forces (Moravian Church, Hudson's Bay, Province) [D-1] -resulted in increase in governmental presence and decrease in Church and Elders role -LIA adds Educational Advisor position and takes on Post-Pathways Education! Pogrom [D-2] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council created new position last year to deal with increase work load because of mineral exploration -OK Communications Society reinstated print material through increase in staffing as thought it was needed -LIA recently included Environmental Resources / Wildlife Management Staff as thought conservation and education was needed in long term -LIA creates Research Steering Committee to review outside research proposals (but unofficial committee, not recognized by organization as of yet) -LIA refilled communications officer position (empty for some time) because of increased need with land claims and mining issues -LIHC been expanding since inception in 1985 -added Public Health Nurses this year through Health Transfer Initiative to address local nursing issues 	<ul style="list-style-type: none"> -OK Communications Society - need more staff, need more training, need more funding to do what we want to -financial and human resources restrict LIA and LIHC from expanding into all the areas needed
Participant Observations	<ul style="list-style-type: none"> -LIA hiring new person for Renewable Resources and Education work as they feel it is an issue they need to address -LIHC adapting structure to include Health Educator and Health Researcher as see need to increase collection of own data and communication / education efforts on health issues 	
Survey Interviews		

Table 5.2.5. Field evidence of sub-components of organizational / coordinative capacity in Labrador (continued).

Sub-components of Organizational / Coordinative Capacity		
	<ul style="list-style-type: none"> the community organizational structure has changed over time and adapted its policies / structures to address changes in the external environment 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site		
Documents		
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Table 5.2.6. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	• small groups form and dissolve within the community as issues are addressed	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -women's group (TIA) forms in community addressing concerns of women in face of mineral development [D-28] -Concerned Citizen's Group forms to address community residents concerns in face of mineral exploration [D-30] -Nain Action Group forms out of community dialogue on social issues (includes Alcohol Awareness, Entertainment, Health, Community Services, Communications Committees within it) [D-50] - later formalized -number of service groups and small groups / committees exist in the community [D-49] (many formal committees though - approx. 20) -many committees forming and disappearing but little coordination and endurance "Labrador is the committee capital of the world" [D-2] 	-see factors inhibiting participation
Key-Informant Interviews		<ul style="list-style-type: none"> -community becoming overly structured with committees, no one is active anymore, they leave it to the committees (default) -organizational representatives mention need for more active membership in the community, hard to get people involved -also see factors inhibiting participation
Participant Observations	<ul style="list-style-type: none"> -lots of committees in town (many formal in structure though - started by organization etc.) -Waste Management Action Committee came together as result of Inuit Tapirisat Canada project in Nain (formally organized through Eco-Research Office) 	<ul style="list-style-type: none"> -many people do not get involved as they think "the committees will take care of it" -also see factors inhibiting participation
Survey Interviews		<ul style="list-style-type: none"> -number of challenges to being involved and getting others involved in community issues listed in interviews: structural or power related barriers, social issues within the community, personal challenges, financial, and those related to information and communication -also see factors inhibiting participation
CASE 1 Cd in Caribou Liver Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents		
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Table 5.2.7. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
• activities between groups within the community are supported and coordinated		
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIHC coordinates committee to implement results of Social Health and Environmental Change workshop [D-6] -Town Council of Nain set up and coordinated Task Force of interested residents to look at mining issues and perspectives in community [D-30] -Concerned Citizen's group forms from Task Force and recognized in community (invited to meeting) -Eco-Research starts and coordinates Waste Management Action Committee -Nain Action Group gets funds from LIHC for coordinator [D-50] -Town Council brings together community leaders to address social issues, coordinates an action committee, committee disbands over time [D-2] 	<ul style="list-style-type: none"> -so many organizations, committees, and groups some not coordinated and some compete for same funds [D-2] -two entertainment committees at one time in community
Key-Informant Interviews	-Town Council started Task Force of citizens on mining issues	
Participant Observations		<ul style="list-style-type: none"> -LIHC would like to start community health committees but hard to get people involved, so few involved in so much already -lots of committees in Town that people default to, but there is little coordination between them -little communication between some Committees (e.g. Waste Management Action Committee and Town Council were addressing same issue) -Nain Action Group not supported by all organizations, have hard time keeping active -Fishermen's committee still exists rarely used for resource issues anymore
Survey Interviews		-challenges to participation include information / communication, financial, human / personal, social, and structural / power related issues

Table 5.2.7. Field evidence of sub-components of organizational / coordinative capacity in Labrador (continued).

Sub-components of Organizational / Coordinative Capacity		
	• activities between groups within the community are supported and coordinated	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver	-some meetings with "hunters group" for consultation on management data to be collected in commercial hunt	
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site		
Documents		
Key-Informant Interviews	-LIA consults Fishermen's committee on shipping routes and times for Saglek Radar site cleanup	
Participant Observations		
Survey Interviews		

Table 5.2.8. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	<ul style="list-style-type: none"> at various times, the community is involved in a number of cooperative arrangements with actors outside the community to address issues and the community directs their formation and re-formation 	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -LIHC brings in outside actors to aid in Social Health and Environmental Change workshop [D-6] -LIHC controls links with these actors (e.g. support programs through Health Canada) -LIA hires researchers to conduct scoping sessions for Environmental Assessment process, controls relationship through application of Ethical Guidelines for Research [D-20] -LIA hires researcher to do traditional knowledge study in preparation for Environmental Assessment hearings, controls establishment of relationship [D-20] -through Eco-Research program, LIA involved in cooperative arrangements with outside researchers for work in Labrador, controlled through review by Steering Committee [D-39] -LIHC involved with outside health researchers in cooperative arrangements to ensure communities are benefiting from research (Centre for Nutrition and the Environment of Indigenous Peoples project) [D-43] -LIHC builds links with outside health educators to help in preparation and delivery of education information, Community Health Representatives direct relationship [D-45] -Town Council and OK Communications Society makes link with outside volunteer organization to give direction in community action (CESO) [D-57, 62, 63] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -OK Communications Society cooperates with Innu Nation representatives (Elders conference, 1996) -OK Communications Society has built working relationship with other aboriginal organizations -Steering Committee has made good relationships with outside actors (Memorial University, University of Waterloo, Inuit Tapirisat Canada, Quebec Centre for Public Health), directing these through use of Guidelines for Research -LIHC shares Chief Medical Officer of Labrador Health Corporation, only used when needed -water quality sampling in communities done by Community Health Representatives (CHRs) and sent to Health Inspector, some communities don't though 	<ul style="list-style-type: none"> -Town Council sometimes needs expertise they don't have (lawyer, planner) and need funds for this which is a challenge -health inspection service moving in direction of communities assuming more responsibility, this is a challenge because they will need resources (e.g. engineer) they don't have funds for -LIA Board apprehensive to approve LIA Steering Committee, because of fear of large increase in research in region
Participant Observations	<ul style="list-style-type: none"> -Eco-Research Office coordinating work with Dept. of Fisheries and Oceans scientist -through Eco-Research Office researchers build link with community, directed through research guidelines and steering committee -LIA utilizes relationships with outside researchers (once relationships are established) researchers are asked to review material, support in developing other proposals etc. 	<ul style="list-style-type: none"> -long review period for projects -LIA challenged by time to submit proposals with outside researchers to programs -some think community doesn't have resources (time, people) to coordinate projects with outside actors -opportunities for volunteer help are offered to community, few are taken advantage of (even if it is something they have expressed need to do) -organizational representative says they have little time to coordinate links with outside actors -LIA unaware of some work being done in region by outside actors (large area, few people are provided as reasons)
Survey Interviews		

Table 5.2.8. Field evidence of sub-components of organizational / coordinative capacity in Labrador (continued).

Sub-components of Organizational / Coordinative Capacity		
	<ul style="list-style-type: none"> at various times, the community is involved in a number of cooperative arrangements with actors outside the community to address issues and the community directs their formation and re-formation 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-Provincial Wildlife Division cooperates with LIA representatives to collect caribou herd samples, LIA not directing relationship	
Key-Informant Interviews	-LIA involved with provincial representatives in collecting herd data	-no cooperation (because of jurisdiction) with LIA on caribou advisory
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-LIA builds relationship with Inuit Tapirisat Canada under their direction to be involved in review of data on PCBs in marine mammals	
Key-Informant Interviews	-LIA/LIHC able to build some links through the process, to use later -had some involvement in development of message for advice	
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-most recent relationship forged with consultant for Department of National Defense (Environmental Sciences Group) strong, directed to some extent by community -ESG takes lead on communications, consultation from LIA	-earlier relationship with actors was confrontational, directed from outside because of authority and legislative power
Key-Informant Interviews	-took long time to develop relationship with DND, province still not involved in cooperative relationship on this case -DND takes direction on communication and cooperates with LIA on developing sampling program for site clean-up	
Participant Observations	-LIA building strong link with Department of National Defense consulting group, designing clean up studies for radar site, directing relationship (DND takes lead from LIA on some aspects)	
Survey Interviews		

Table 5.2.9. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	• the community is open to public scrutiny and comment and engages in self-evaluation exercises	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -Town Council open to scrutiny as all meetings are public [D-87] -Town Council and OK Communications Society making links with outside actors to aid in addressing issues in the community (open to comments and support) [D-63] -Town Council brings together community leaders to address social issues, open forum [D-2] -LIA asks for consultation of local concerns in Environmental Assessment process [D-25] -LIHC directs some community evaluation exercises in "Healthy Communities" Program [D-43] -LIHC opens workshops as part of strategic review and invites public comment, uses this to direct programs and initiatives [D-47] -LIA has participatory channels in process open to public [D-32] -LIHC conducts survey to collect regional health statistics and concerns to direct programming [D-42] -LIA conducts Environmental Health Study to gather residents concerns on environmental and health issues, used to direct future research initiatives 	<ul style="list-style-type: none"> -Inuit express discontent in land claims process and feel left out [D-2]
Key-Informant Interviews	<ul style="list-style-type: none"> -LIA has field offices in each community and field worker, supposed to be the liaison in the community and open to comments -LIHC has done needs assessments in each community and used this to direct programming and procedures 	<ul style="list-style-type: none"> -Elders feel community becoming highly structures, with committees for everything -"need to be able to freely comment on the things that area affecting the community, need to be open and honest about the problems before we can start fixing things and healing" (Town Council representatives)
Participant Observations		<ul style="list-style-type: none"> -people report having troubles with jobs for speaking out against community issues, others avoid community action -LIA Ethical Guidelines for Research include community control of data and power to refuse permit to print information that portrays community in negative way
Survey Interviews		<ul style="list-style-type: none"> -community individuals report not feeling informed (25/37), few report challenges including access to information (4), trust (1) -individuals reporting challenges to participation reported structural or power related issues in the community, as well as social pressures not to speak out in the community

Table 5.2.9. Field evidence of sub-components of organizational / coordinative capacity in Labrador (continued).

Sub-components of Organizational / Coordinative Capacity		
	• the community is open to public scrutiny and comment and engages in self-evaluation exercises	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-LIA involves hunters in sampling program	
Key-Informant Interviews	-LIA reports process and information at Annual General Meeting	-representative expressed interest in doing review of this case (evaluation) to learn from process
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-LIA argues for community consultation on shipping of PCBs down the coast -LIA requests radio call-in show for issue along the coast to inform people and gather community perspectives	
Key-Informant Interviews	-LIA consults fishermen's committee and holds phone-in radio show along coast on issue -new actor for Department of National Defense (Environmental Sciences Group) allows LIA lead and consultation on sampling program, communications strategy to communities -Eco-Research staff travels coast conducting open houses informing residents of research and Saglek issue and gathering concerns and perspectives	-representative expressed need to do an evaluation of this case to direct future decision making relationships
Participant Observations	-Eco-Researchers traveling coast holding open houses reporting to and getting feedback from residents -Eco-Research reports at Annual General Meeting	
Survey Interviews		

Table 5.2.10. Field evidence of sub-components of organizational / coordinative capacity in Labrador.

Sub-components of Organizational / Coordinative Capacity		
	<ul style="list-style-type: none"> the community is able to link diverse interests through utilization of a variety of members with differing expertise in decision making cases 	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -LIHC brings together different individuals (Elders, community health representatives, academic researchers, local and national government agency representatives, local and regional government representatives, youth, women and men to discuss social and environmental issues on the coast and action on how to address problems [D-6] -LIA surveys variety of individuals on traditional ecological knowledge study for input into EA hearings (hunters, Elders, women) [D-21] -women's group forms and raises concerns of women in face of mineral development in region [D-28] -Concerned Citizen's Group brings together active citizen's to address issues related to mineral development in region, membership of group diverse, but all "regularly active individuals" [D-30] -Eco-Research team coordinates Waste Management Action Committee made of representatives from all organizations in Town to address waste issues [D-39] -Nain Action Group forms to address health and social issues in community, membership is diverse (social services representatives, health workers, youth, women, men, elders, church representatives, RCMP) [D-50] -Town Council brings together community leaders to address issues of social health (Elders, local organizational representatives, Church officials, youth) [D-2, 50, 51, 52] -Town Council brings together organizational representatives to develop Emergency Plan for town [D-58, 59] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council coordinated a Task Force on mineral development issues comprised of a variety of individuals -LIA Board comprised of elected residents from communities along coast, variety of professions, experiences, backgrounds -Town Council made of elected representatives from community, variety of backgrounds and experiences -LIA staff made of a variety of individuals with different expertise 	<ul style="list-style-type: none"> -Town Council expressed concern that sometimes need expertise not present in town and don't have funds to get it (e.g. lawyer, planner, engineer) -Town Council "needs to communicate more with the public and get them really involved" -Elders express concern over a lack of their involvement in issues, and lack of respect -LIA representative expressed need for a more active membership -LIHC representative expresses need for "more people, more educated people, more experienced people, more funding, more time" -Provincial health representative expresses need for more training for Town Councils, more support from them in health issues -LIA Executive, on advice from Advisors decides when outside help is needed, and when issues need approval from Board or to go to community consultation
Participant Observations	<ul style="list-style-type: none"> -WMAC committee involved range of people from organizations in town -LIA uses Board consultation (wide membership) for large issues (e.g. land claims) 	<ul style="list-style-type: none"> -Elders are not involved in community issues -few in community are very active, doing most things, and most decisions are made at the higher levels within LIA (advisors and Executive) as expressed by community residents -Fishermen's committee exists but not really used anymore for decision making

Table 5.2.10. Field evidence of sub-components of organizational / coordinative capacity in Labrador (continued).

Sub-components of Organizational / Coordinative Capacity		
	<ul style="list-style-type: none"> the community is able to link diverse interests through utilization of a variety of members with differing expertise in decision making cases 	
Data Source	Supports Sub-component	Detracts from Sub-component
Survey Interviews		<ul style="list-style-type: none"> -see barriers to participation -34 of 46 that stated different people (than already are) should be involved in decision making mentioned "Other Local Individuals" - included Elders, hunters, women, youth, anyone who is affected by the decision -19 of 52 individuals said there were challenges to involving people in decision making (included - information / communication, participatory, structural, and other issues)
CASE 1 Cd in Caribou Liver Documents	<ul style="list-style-type: none"> -LIA involves hunters in collecting samples from herd -hunters chosen by skill to be involved in hunt 	<ul style="list-style-type: none"> -little chance for community representatives to be involved because of lack of legislated power -one individual from community involved in issue (Environmental Advisor) and not 'involved' at all
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	<ul style="list-style-type: none"> -LIA represented by Environmental specialist and Community Health specialist 	<ul style="list-style-type: none"> -time line was very tight on issue, little time for consultation
Key-Informant Interviews		
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	<ul style="list-style-type: none"> -LIA consults with membership through phone-in radio show on first clean-up and shipping activity and fishermen's committee about shipping times and routes -LIA involves hunters with experience of Saglek area in collecting samples for current clean-up program 	
Key-Informant Interviews		<ul style="list-style-type: none"> -lack of time for consultation in process, things moving so fast
Participant Observations		
Survey Interviews		

Table 5.3.1. Field evidence of sub-components of decision process capacity in Labrador.

Sub-components of Decision Process Capacity		
	• A recognized and accepted procedure for making collective decisions exists	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -Environmental Assessment process is outlined and known [D-20] -many community issues dealt with at "Town or community meetings" [D-50] -Town Council holds plebiscite on large issues with split opinion [D-51] -Town Council does community consultation in form of Town meeting [D-52, 54] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council followed process outlined by development plan in dealing with mining applications -format similar but different approach taken by different leadership in LIA (advisors present to Executive and president, consensus format at Executive) -different procedures depending on origin of information in the case of food chain contamination investigation and health advisory 	<ul style="list-style-type: none"> -Town Council expresses challenge in having to deal with more, changing context, lack of clear jurisdiction in some issues -Health representative expresses challenge due to lack of knowledge of changing roles in processes, "uncertainty in roles and direction of the system"; "need to be very flexible in how we address and plan to address issues now and in the future"
Participant Observations	<ul style="list-style-type: none"> -LIA uses Board to make decision on land claims position 	<ul style="list-style-type: none"> -no known, agreed upon process for dealing with food chain contamination issues -local representatives state need for a process, as it is always dealt with in ad hoc way because of time constraints
Survey Interviews	<ul style="list-style-type: none"> -17 / 32 express knowledge of who makes decisions on health and environment issues affecting the community 	<ul style="list-style-type: none"> -15 / 32 individuals surveyed (Elders, hunters, women, youth) don't know who makes decisions on health and environment affecting the community -25 / 32 (Elders, hunters, women, youth) do not attend community meetings
CASE 1		
Cd in Caribou Liver Documents	<ul style="list-style-type: none"> -Province follows process for food chain contamination investigation in cooperation with Provincial Department of Health -LIA reports information to membership at Annual general Meeting 	
Key-Informant Interviews	<ul style="list-style-type: none"> -"decision was made in consultation with the Department of Health, they had the authority to release this information through the Minister...LIA was not involved." (Wildlife rep.) 	<ul style="list-style-type: none"> -"LIA had no process for handling this"; "no process in place for this"; "we never heard until it was an advisory" (LIA, representatives)
Survey Interviews	<ul style="list-style-type: none"> -5 individuals interviewed report knowledge of the origin of this advisory as being from the province 	<ul style="list-style-type: none"> -16 / 55 individuals interviewed report knowledge of this advisory (11 / 16 are health and environment workers or elected officials) -6 report knowledge of its origin

Table 5.3.1. Field evidence of sub-components of decision process capacity in Labrador (continued).

Sub-components of Decision Process Capacity		
• A recognized and accepted procedure for making collective decisions exists		
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 2 PCBs in ringed seal and beluga Documents	-Health Canada follows outlined process for human health assessment -ITC coordinates "contaminants experts meeting" as consultation with regional representatives (process explained)	
Key-Informant Interviews	-"not a comfortable environment for regions representatives at the meeting in Ottawa"; "it brought in a regional context and benefits information, it was a form of consensus building"; "good mix of Inuit and government people at the meeting"; made the decision more realistic"; "made the decision through consensus"; "involvement of regional people allowed a diffusion of a potential problem"; "consensus building between a number of actors"	-"there is no process in place that people know of and are comfortable with"; "still a reactionary process and role for the community"; "it was rushed, there was no reflection on the process and message, just done"; "no planned process, it was made up along the way and "hoped" it would work"; "it was a first, it was radically different from before"; "consensus opportunity there for the first time"; "then there was an LIHC rep too, and we knew who that was"
Survey Interviews	-5/7 health and environment workers or elected official expressing knowledge of this advice express knowledge of its origin (Inuit Tapirisat Canada)	-8 / 55 express knowledge of "advice" given in this case -7 of 8 are health and environment workers or elected officials
CASE 3 PCBs at Saglek Radar Site Documents	-Department of National Defense and Provincial agencies follow process for Environmental Assessment as outlined by Federal Environmental Assessment Office -LIA appeals to Provincial Ministries for consultation -LIA reports information to membership at Annual General Meeting	
Key-Informant Interviews	-LIA presents information to membership at Annual General Meetings -"process is open to iteration this time because of the actors involved"; "it is agreed now to go slowly, there is no agreed process, but there is an agreed partnership"; "there is consensus building for the first time with this issue"; (LIA representative)	-"time constrained because of weather restrictions on shipping, therefore little process followed"; "still unsure of the process at this time"; "we are dealing with the jurisdiction problem simultaneously"; "because of the structure of organizations hard to know who has to approve things"; "logistically hard because all the actors are busy and are separate"; "still unsure of the process"; "no agreed process, but agreed partnership" (LIA representatives)
Participant Observations		
Survey Interviews	-3/18 health and environment workers or elected officials express knowledge of current PCBs at Saglek and origin of this information (reported as Department of national Defense and LIA) -11/55 express some knowledge of PCBs at Saglek radar site in the past	-3/55 express hearing of a specific report of PCBs at Saglek radar site (current year) (all health and environment workers or elected officials)

Table 5.3.2. Field evidence of sub-components of decision process capacity in Labrador.

Sub-components of Decision Process Capacity		
	<ul style="list-style-type: none"> Decision making processes are open and iterative, collecting and incorporating new information as required and allowing feedback from the public 	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIA scoping process for EA includes public input [D-20] -Memorandum of Understanding is open to public through hearings, iterative in nature as review evaluates if new information is required [D-20, 21, 23, 25] -LIA makes effort to make process iterative (including new information and local information through the process) [D-25] -LIHC makes effort to open processes to public through consultation on development of tuberculosis monitoring program [D-43] -Main Crisis Response team opens decision making process to public on social issues in community, allows for iteration [D-51] -Town Council gathers feedback from public through plebiscite on mining issues [D-51], sale of alcohol issue [D-53], their input decides action -Town Council opens process through community consultation on social health issues, iterative process through plebiscite after initial decision [D-52, 54, 57], direction taken from their input -LIA makes annual reports to membership at Annual General Meetings, members vote on passing changes in procedures and processes 	
Key-Informant Interviews	<ul style="list-style-type: none"> -decision to deny permit for mining company to drill within Town limits by Town Council, reversed in plebiscite held in Town -Executive and advisors decide if decisions needs to go to Board level or if outside expertise is needed, if more information is needed, or if there is a need to go to community meetings for an issue (iterative, not all decisions open to public) 	
Participant Observations	<ul style="list-style-type: none"> -LIA calls Board meetings to discuss large issues (e.g. land claims update) allows feedback from members 	
Survey Interviews		<ul style="list-style-type: none"> -34 / 45 individuals report "other local individuals" that should be involved in making decisions on environment and health issues that are not -37/55 individuals report challenges to being involved in issues -17/37 individuals reporting challenges to participation mention power or structural barriers to being involved in issues

Table 5.3.2. Field evidence of sub-components of decision process capacity in Labrador (continued).

Sub-components of Decision Process Capacity		
	<ul style="list-style-type: none"> Decision making processes are open and iterative, collecting and incorporating new information as required and allowing feedback from the public 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver		-process followed by province based on one sample set of data, not open to public -situation reported to be monitored and updated when new information available (no update as of yet)
Documents		
Key-Informant Interviews		-“we have to argue to be included in “Arctic” regions, and get left out of Arctic issues, like caribou”; “no follow through on this advisory”; it was final thing, made by a few people outside the region”; “ (LIA representatives) -“no follow up on this since, but Cd slow moving so no reason to monitor it regularly, usually test the user 10 years later”; “no change in the status of this advisory, no update that I am aware of” (Provincial representatives)
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga	-contaminants experts meeting in Ottawa bringing together scientists and regional representatives, allowed for feedback in process from regions, had some effect on decision as consensus building developed message to be delivered	
Documents		
Key-Informant Interviews	-“government officials felt they needed to do something with the information”; “the workshop brought in the regional context and benefits information” (LIA representatives)	-“the time line was too tight, especially considering this was before Christmas”; “rushed, no reflection on the process and message, it was just done” (LIA representatives)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site	-EA had some community input, self-assessment excluded proponent from full EA and public hearings -after change of Department of National Defense (DND) representative, LIA appeal forced some iteration in the process, got more data included on shipping risk, and local concerns directed shipping time and route -DND actor Environmental Sciences Group (ESG) opened process to include LIA, allowed through consultation some iteration and impact of LIA input -not enough information to make decisions yet, design sampling program for site	-“they don’t have enough information on shipping to proceed is the argument, but they are proceeding anyway” (LIA representative) -LIA forced to make appeal based on lack of consultation and input in plan to remove PCBs from radar site
Documents		
Key-Informant Interviews	-“it required more information and we were prepared to stop it”; “got more information on shipping involved, and gave us time to consult our fishermen’s committee”; “our involvement forced iteration”; “very different with ESG involved, they deal with us, the process is open to iteration because of the actor” (LIA representatives)	-“it was a single track process because of the information involved and the priorities”; “fast paced because of the weather restrictions” (LIA representatives)
Participant Observations		
Survey Interviews		

Table 5.3.3. Field evidence of sub-components of decision process capacity in Labrador.

Sub-components of Decision Process Capacity		
	<ul style="list-style-type: none"> Some form of evaluation of these processes exists and compares goals and objectives to achievements and results 	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT	-EA process is not evaluative [D-22]	
Documents		
Key-Informant Interviews		-"challenges include more responsibility, more authority, faster environment, more issues to deal with at the same time"; "feeling like you are playing catch up" (LIA representatives)
Participant Observations		-local representatives say they need a process for this type of issue but just deal with it at the time in the easiest way possible even though these issues are always time pressed, community always left in reactionary role
Survey Interviews		
CASE 1 Cd in Caribou Liver		
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga		-one of the weaknesses of this case reported was "there was no evaluation done"; "needs some evaluation done" (LIA representatives)
Documents		
Key-Informant Interviews		-"there is a lack of funding for us to do some work ourselves"; "there is a need for some evaluation of this case"; "the process was rushed, no reflection on the process and message, just done" (LIA representatives)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site		
Documents		
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Table 5.3.4. Field evidence of sub-components of decision process capacity in Labrador.

Sub-components of Decision Process Capacity		
	• The process followed changes over time dependent upon the actors, issues and factors involved	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -LIA does community consultation as required by EA process (Scoping) [D-20] -process followed dictated by that outlined in EA guidelines [D-22,23] -LIA tries to get further information included because of concerns (forces iteration) [D-25] -LIHC tries consultation on health programming [D-43] -Town Council holds community meetings on social health issues [D-51] -Town Council holds plebiscites on some issues needing decision on where there is a split of opinion [D-51] (sale of alcohol and mineral exploration are two cases) -Town Council uses community consultation to deal with mineral exploration and development issues [D-54] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council follows community consultation processes on large issues, plebiscites on issues needing decisive action and there is a split in opinion in the community, and the processes outlined in the development plan when it applies -LIA follows processes directed by outside actors because of lack of jurisdiction on many health and environment issues, attempts to gain role in process through a variety of efforts, follows internal processes of Executive and Board consultation (Executive decide if more information is needed, and if issue needs to go to the Board, Board decides on issues or recommends community meetings) and reporting at Annual General Meetings to membership for regional issues affecting the community -for food chain contaminants issues depends on who collected the information as to who is involved and what process is followed, if province collected information the decision would be made and would come through Health Labrador and LIHC, if LIA collected the information they could notify Health Labrador if they wanted, but are not required to do so (Health Labrador representative) 	"need to be very flexible in how we address and plan to address issues now and in the future" (Health Labrador representative)
Participant Observations		-LIA needs process to deal with these issues, they just deal with it at the time in the easiest way possible as these things are always time pressed and they are left in a reactionary role
Survey Interviews		

Table 5.3.4. Field evidence of sub-components of decision process capacity in Labrador (continued).

Sub-components of Decision Process Capacity		
	• The process followed changes over time dependent upon the actors, issues and factors involved	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver		-process followed dictated by province as they had jurisdiction to make decision
Documents		
Key-Informant Interviews		-no involvement of LIA except in the collection of samples -a weakness of this process was that it was made by a few people, all outside the region"; (LIA representative) -the decision was made by consultation between the departments of health and wildlife, the department of health had the authority to release it through the Minister (Provincial representative)
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga	-process followed for making the initial decision outlined by Health Canada human health assessment procedure -Inuit Tapirisat Canada (ITC) brings together regional representatives for consultation and consensus building meeting to develop message for information collected by Health Canada -LIA involved through ITC	
Documents		
Key-Informant Interviews	-experts meeting in Ottawa brought in regional perspectives, and was consensus building meeting with scientists and regional aboriginal representatives	-"still reactionary, no process in place that people know and feel comfortable with" (LIA representative)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site	-process dictated by outside actors holding jurisdiction in issue and federal review processes (EA and self-assessments) -LIA forces some iteration and emphasis on including other information in the decision being made -process changes significantly with inclusion of new actors in system (Department of National Defense - Environmental Sciences Group) (DND - ESG)	
Documents		
Key-Informant Interviews	-"through our involvement DND realized the need to involve us"; "involvement is increasing and we are gaining experience"; but it took a long time to get to this point"; "outside actor has been very flexible" (LIA representatives)	
Participant Observations		
Survey Interviews		

Table 5.3.5. Field evidence of sub-components of decision process capacity in Labrador.

Sub-components of Decision Process Capacity		
	• The community incorporates local concerns and cultural values into the decision making process	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -LIA includes local concerns in scoping sessions and other components of EA process [D-20, 25] -LIHC surveying local health concerns to include in programming directions [D-42] -LIHC surveys local desires regarding tuberculosis monitoring program to decide to continue program [D-43] -Nain Crisis Team open meeting to public to gather concerns and input on social issues in community (suicide) [D-50] -Town Council consults community and includes concerns to direct action on social health issues [D-51, 52] -Town Council incorporates local concerns through community meeting and plebiscite into decision to grant drilling permit to exploration company [D-54, 57] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council held plebiscite on exploration permit issuing and local concerns overruled Town Council ruling -community members expressed concern about sewage in the bay where people fish, Town Council now contacting authorities to look into the issue 	<ul style="list-style-type: none"> -“we need to communicate more with the public and get them really involved” (Town Council representative) -if the province collected information about contaminants in wildlife they would make the decision (wildlife and health) and Health Labrador and LIHC would be contacted to deliver the decision to the communities
Participant Observations		
Survey Interviews		
CASE 1		
Cd in Caribou Liver		
Documents		<ul style="list-style-type: none"> -data collected based on concern of provincial representatives knowledge of advisories in adjacent provinces about Cd in caribou and moose liver and kidney -no local concerns taken into consideration as no control of decision making process by LIA (no involvement) -no cultural considerations taken into account (no benefit information included re: importance of food to Inuit)
Key-Informant Interviews	<ul style="list-style-type: none"> -“this is a contaminant of concern and moose and caribou are eaten across the province”; “levels monitored because of the provincial responsibility to do so”; “concern of advisories given out in adjacent provinces”; “consumption levels greater than the World Health Organization (WHO) standards was the concern” (Provincial representatives) 	<ul style="list-style-type: none"> -Inuit were detecting signs of stress in the herd that biologists had no knowledge of -“concern because liver was a popular food”; “concern because of advisories given in other provinces”; “no concern for aboriginal concerns” (LIA representatives)
Survey Interviews		
CASE 2		
PCBs in ringed seal and beluga		
Documents	<ul style="list-style-type: none"> -contaminants experts meeting brought together regional aboriginal representatives and participants thought “that because of the known risks of altering diet, uncertainty in the data, the large safety factor applied in this process, that no diet altering advice should be given” (Department of Indian Affairs and Northern Development representative) -these items were consumed in Labrador -the workshop brought in “regional context” and benefits information, it involved regional perspectives to form the decision and message delivered to the public -“there was a consensus opportunity there for the first time” (LIA representative) 	
Key-Informant Interviews		
Survey Interviews		

Table 5.3.5. Field evidence of sub-components of decision process capacity in Labrador (continued).

Sub-components of Decision Process Capacity		
	• The community incorporates local concerns and cultural values into the decision making process	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CASE 3 PCBs at Saglek Radar Site</p> <p>Documents</p>	<p>-Department of National Defense (DND) will go ahead with shipping but agrees to include LIA concerns in shipping activity</p> <p>-LIA doesn't intervene with shipping because of concern of leaving PCBs on site at Saglek and it is a used hunting and fishing area</p> <p>-DND-Environmental Sciences Group (ESG) consults LIA representing local concerns and are included in sampling program (species important for hunting, fishing, concern of commercial fishing area nearby)</p>	<p>-LIA appeals to stop shipping on grounds of lack of consultation with coastal communities, concern impact of spill on ocean environment and link of Inuit and ocean (economic and health)</p>
Key-Informant Interviews	<p>-concerns in this clean up include the legacy issue, responsibility, how much was there as this was a commercial fishing area, a national park proposed, a traditional hunting area for Inuit and within land claims selection areas, perception of the public to the area</p> <p>-"they (DND-ESG) expanded the sampling to include our concerns (more species collected)"; "they are open to including both benefit and risk information" (LIA representative)</p> <p>-"it was a form of consensus" (LIA representative)</p>	<p>-"in initial clean up they wanted to base it all on economics and not consider aboriginal issues, public health, dependence on environment, environmental knowledge"; "they were one tracked regarding the information involved and their priorities" (LIA representative)</p>
Participant Observations		
Survey Interviews	<p>-concerns of individuals (41/55) (23/37 excluding health and environment workers and elected officials) reporting some knowledge of PCB issue at Saglek: wildlife (17), human health (17), concerns of other sites along coast (9), commercial char at Saglek (5), other issues (9)</p>	

Table 5.3.6. Field evidence of sub-components of decision process capacity in Labrador.

Sub-components of Decision Process Capacity		
	• The process followed incorporates qualitative and quantitative information and local knowledge	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -Town Council considers both benefits and risks and local concerns (qualitative and quantitative) information in mineral development issues [D-55, 56] -LIA collects and includes local knowledge (qualitative and quantitative, through Memorandum of Understanding) in Voisey's Bay EA process [D-21] -LIHC regional health survey includes qualitative and quantitative information - used in programming directions for health issues in coastal communities [D-42] 	<ul style="list-style-type: none"> -concern brought up in Social Change and Environmental Health workshop - "traditional knowledge that people have of their area is discounted and not generally accepted" (Labrador community member)
Key-Informant Interviews	<ul style="list-style-type: none"> -OK Communications Society includes a focus of collecting information from local people for programming 	
Participant Observations	<ul style="list-style-type: none"> -LIA including traditional ecological knowledge in EA process 	
Survey Interviews	<ul style="list-style-type: none"> -18/18 health and environment workers and elected officials feel there is a role for local traditional knowledge in decision making; currently used ? yes (3), no (5), unsure (9); challenges to involving it ? recognition of it (8), resources for gathering it and organizing it (7), getting it in the process and having weighted with science (6) 	<ul style="list-style-type: none"> -18/18 health and environment workers and elected officials feel there is a role for local traditional knowledge in decision making; currently used ? yes (3), no (5), unsure (9); challenges to involving it ? recognition of it (8), resources for gathering it and organizing it (7), getting it in the process and having weighted with science (6)
CASE 1		
Cd in Caribou Liver	<ul style="list-style-type: none"> -local knowledge used in sampling program (selection of site etc.) 	<ul style="list-style-type: none"> -decision based solely on quantitative information compared against World Health Organization standards as a result of involvement of LIA in process (jurisdiction / authority) -mean Cd in liver 1.56 ug/g (ppm) (wet weight) -mean Cd in kidney 12.5 ug/g (ppm) (wet weight) -greater than in Quebec where advisories given WHO standards : 0.5 mg Cd / wk intake, or 0.06 mg / day -average daily consumption 0.05-0.98 mg/day daily
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -"the information was all risk based, no benefits to aboriginal people considered"; "no context given for the advisory" (LIA representatives) 	<ul style="list-style-type: none"> -"data we had was good at the time" (Provincial representative)
Survey Interviews		
CASE 2		
PCBs in ringed seal and beluga	<ul style="list-style-type: none"> -"must consider benefits information and indirect affects in management" (Health Canada representative) -contaminants experts meeting includes "local perspectives" and qualitative information in process 	<ul style="list-style-type: none"> -Health Canada Recommended Weekly Intake Levels (RMWI) are used to provide advice and are based on quantitative information only, risks only -human health assessment process is risk based and quantitative information is included only
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -"meeting brought in regional context and benefits information"; "people said it was unrealistic, no advisory was to be given" (LIA representatives) 	
Survey Interviews		
CASE 3		
PCBs at Saglek Radar Site	<ul style="list-style-type: none"> -local knowledge incorporated into last sampling program through selection of areas, species, etc. to sample (seals, char, caribou) 	<ul style="list-style-type: none"> -process primarily quantitatively driven -no local knowledge or concerns included until appeal filed and LIA concerns heard for shipping activity
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -"we used local knowledge on weather, shipping routes etc., to argue" (LIA representative) -"information is starting to be balanced because of our input"; "using some of the local knowledge" (LIA representative) 	<ul style="list-style-type: none"> -"initially based on economics and science, not benefits, environmental hazards or health"; "they wanted to base it all on economics and not consider....environmental knowledge" (LIA representative) -"it costs to get the local information"; unclear on how the local knowledge is meshing with the science" (LIA representative)
Participant Observations		
Survey Interviews		

Table 5.3.7. Field evidence of sub-components of decision process capacity in Labrador.

Sub-components of Decision Process Capacity		
	<ul style="list-style-type: none"> The community promotes and utilizes a process of anticipatory scanning and consideration of long and short range options for solutions to problems 	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIA stressing long and short term considerations in process (EIS submission) through training needs, etc. [D-24, 25] -LIA Board meets four times a year unless otherwise needed for special meetings [D-32] -Town Council considers long and short terms concerns regarding mineral exploration proposal [D-55, 56] 	<ul style="list-style-type: none"> -LIA Executive meets when needed, not on regular schedule [D-32]
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council meets regularly, once a month, more if issues require it -LIA sets up Steering Committee to review research proposals, meets monthly -LHC have done needs assessment in communities to direct action -Health Lab. Corp. Board met monthly to being with, now meets about 5 times a year to deal with policy issues relating to health service provision 	<ul style="list-style-type: none"> -challenges reported by community organizational representatives: "have to deal with more, changing things, faster pace than before, more issues at the same time, feeling like we are playing catch up, very hard just to keep up with everything going on" -"there is no process for many of these decisions, we are having to be reactionary" (Labrador community organizational representative) -steering committee weakness is that the boundaries are still unclear, only able to work from project to project, no funding base
Participant Observations		
Survey Interviews		
CASE 1 Cd in Caribou Liver Documents	<ul style="list-style-type: none"> -LIA shows interest in collecting tissues samples from caribou herd for future herd management 	
Key-Informant Interviews	<ul style="list-style-type: none"> -"we wanted to check cesium next and took the lead on that one" (LIA representative) 	<ul style="list-style-type: none"> -"LIA forced to be reactive" (LIA representative)
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents		<ul style="list-style-type: none"> -Inuit Tapirisat Canada brought together regional representatives to get reaction on Health Canada information and include regional perspectives -LIA not included in NWT technical committee on contaminants so "out of the loop" and forced to be reactive
Key-Informant Interviews		<ul style="list-style-type: none"> -"took a very reactionary note with government officials": "still reactionary" (LIA representatives) -time constrained as well
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	<ul style="list-style-type: none"> -LIA considers long term issues of PCBs at Saglek in decision not to intervene in shipping of PCBs off site -through involvement with Department of national Defense - Environmental Sciences Group (DND - ESG) LIA able to consider long and short term options for final clean-up of Saglek 	
Key-Informant Interviews		<ul style="list-style-type: none"> -"always working against time" (LIA representative)
Participant Observations		
Survey Interviews		

Table 5.4.1. Field evidence of sub-components of participatory capacity in Labrador.

Sub-components of Participatory Capacity		
• Opportunities exist for community members to become involved in decision making processes		
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIHC holds workshop bringing together community representatives [D-6] -EA process involves people through scoping sessions and through public hearings [D-20, 23] -LIA involves people through workshop to design research study, and through involvement in study itself [D-39, 84] -Town Council members are elected from community [D-49] -LIA president, vice-present, and board members are elected positions [D-32] -Town Council holds community meetings on large issues [D-50, 51, 54] -Town Council holds plebiscite on issues [D-53, 57] -number of service groups and committees in town [D-1, 2] 	<ul style="list-style-type: none"> -public recommends forms of participation because there is a concern that there is not enough now in EA process[D-20] -LIA almost non-existent in food chain contaminants reviews in Labrador because of jurisdiction [D-98]
Key-Informant Interviews	<ul style="list-style-type: none"> -issues outside committees dealt on an open call policy by Town Council, if necessary meeting is held, regular monthly meetings open to public -people call into OK Communications society all the time and comments are considered -LIA uses different methods at different times when needing to involve the public, "it is up to the Executive and Board if community consultation is needed, but we've had a poor response to community meetings for the last while" -LIHC tries questionnaire to survey concerns but no responses -LIA occupies four seats on Health Labrador Board 	<ul style="list-style-type: none"> -"need a larger, stronger base of resources, and an active membership" (LIA representative) -"I think people are getting tired of the length of these processes, feel nothin will be decided at the meetings..."; "people want to be consulted but don't want to respond, we sometimes have a very hard time trying to get people involved or responding to programs" (local organization representatives)
Participant Observations	<ul style="list-style-type: none"> -local researchers involved in collection of traditional knowledge data -EA hearings take place in community -lots of committees in the community, but few people actually involved -some protests have taken place involving community members (fishing licenses, recent protest at Voiseys' Bay) 	<ul style="list-style-type: none"> -LIHC struggling with how to get more people involved and consulted in process
Survey Interviews		

Table 5.4.1. Field evidence of sub-components of participatory capacity in Labrador (continued).

Sub-components of Participatory Capacity		
• Opportunities exist for community members to become involved in decision making processes		
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-hunters from Labrador chosen by skill to be involved in hunt and sampling -otherwise no LIA involvement in issue	
Key-Informant Interviews		-“we have to argue to be included in Arctic regions, we get left out of Arctic issues like caribou” (LIA representative)
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-plans to involve Eco-Research staff in dissemination of information and perhaps hold community workshops on nutrition and health -regional representatives were involved in contaminants experts meeting	
Key-Informant Interviews	-“we were involved, had input and had some effect on the process”; “our involvement was great” (LIA representatives)	
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-some consultation with LIA representatives on issues -LIA involves fishermen’s committee in consultation regarding shipping activity -LIA involves community through phone-in radio show -LIA involved in latest clean-up plan with Department of National Defense (DND) Environmental Sciences Group (ESG) -LIA involves hunters in sampling program	-initial Environmental Evaluation was without consultation of involvement of LIA
Key-Informant Interviews	-“did involve some local perspectives...some level of consultation”; “through our involvement DND realized need to involve us...involvement is increasing, we are gaining experience” (LIA representative)	-“there was a complete disregard for our presence along the coast” (LIA representative) -“it took a long time to get to this point”; “we are stuck in a provincial regulatory regime and it is an Arctic problem”; “it is hard to keep up and stay in a driving role....very fast paced...the organization is stretched but we need to be involved in these things” (LIA representatives)
Participant Observations	-Eco-Researchers communicate research results and sampling program information for Saglek clean-up, gathering comments from public	
Survey Interviews		

Table 5.4.2. Field evidence of sub-components of participatory capacity in Labrador.

Sub-components of Participatory Capacity		
	<ul style="list-style-type: none"> Community members are involved in decision making processes from the beginning of problem identification phases 	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIHC involves community members in Social Health and Environmental Change workshop [D-6] -community representatives get involved in committees to implement workshop recommendations [D-6] -people involved through EA scoping hearings and other stages of consultation in process [D-20, 21, 23] -women's group is involved in issues relating to mineral development in community and region, making presentations at EA hearings, developing report, identifying potential problems related to women's issues [D-28] -LIA consults membership on issues related to environment and health, helping identify problems and target research areas [D-39] -Town Council and Nain Crisis Team opens meetings to public at initial stages to address social health issues in community [D-51, 52] -Town Council brings together community to discuss issues related to mineral exploration in Town watershed (after initial proposal was declined), results in plebiscite and reversal of decision [D-52, 53, 57] -community members get involved in Task Force on mineral exploration in community following Town Meeting [D-55, 56] -many people sit on up to 6 committees in town [D-2] -Eco-Research office holds workshop to get people involved in developing outline for environmental health survey 	<ul style="list-style-type: none"> -summary of workshop results includes "government still not listening to the people, who are knowledgeable in these areas; end result is people must take a stand and have our voices heard; we have lost too much of our identity, culture and way of life" (Workshop participants) [D-6]
Key-Informant Interviews	<ul style="list-style-type: none"> -Health Labrador Board involves 4 LIA representatives right now, have opportunity to voice perspectives and concerns and get input into the policy decisions that affect them 	Challenges: <ul style="list-style-type: none"> -"we need to take control, we need to get people involved, need to heal from the past"; "need to communicate more with the public and get them really involved"; "social issues, lack of involvement, lack of respect"; "reaching people, basic issues are not being met" Needs: <ul style="list-style-type: none"> -"larger, stronger base of resources, educated, active membership"; "more people, more educated people...." -"think people are getting tired of the length of these processes, feel nothing will be decided at the meetings, and some people have larger issues they want dealt with at these meetings than what the meeting is set to address...think many basic needs are not being met, so they talk about that"; "people want to be consulted but don't want to respond...have a very hard time trying to get people involved or responding to programs" (organizational representatives)
Participant Observations	<ul style="list-style-type: none"> -Board meets on land claims issues -volunteer organization addressing waste issues in community and identifying problems as well -attendance for community EA hearings increases slowly - 	<ul style="list-style-type: none"> -perspective that participation has history of being suppressed in region expressed by residents -little interest shown in being involved in political processes (few show up for LIA Board member nomination meeting) -LIHC struggle with how to get more people involved, when public have stated they want to be consulted -less than 50% voter turnout for LIA elections -few come to EA hearings in Nain (10-15 first sessions)
Survey Interviews		

Table 5.4.2. Field evidence of sub-components of participatory capacity in Labrador (continued).

Sub-components of Participatory Capacity		
	<ul style="list-style-type: none"> Community members are involved in decision making processes from the beginning of problem identification phases 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-LIA involves hunters in sampling program for caribou herd management, not involved in decision	-LIA has no involvement of review of information and development of advisory
Key-Informant Interviews		-“LIA was forced to be reactive, had no context to put it in”; “we never heard until it was an advisory” (LIA representatives)
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-LIA plans to involve Eco-Research staff in dissemination of information, bring in people and perhaps have community workshops on issue (all after advice been delivered in region) -Inuit Tapirisat Canada (ITC) involves regional representatives after NWT technical committee has review information	-time pressed because of approach to holiday season -
Key-Informant Interviews	-“it was very cooperative in a short time frame” (LIA representative)	“time line was too tight, especially considering this was right before Christmas”; “they had a self-inflicted time restriction imposed because of the Christmas holidays”; “it was rushed because of the Christmas holidays” (LIA representatives)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-LIA argued into process and change in Department of National Defense (DND) actor changed involvement of LIA -new actor for DND, Environmental Sciences Group (ESG) involves LIA from problem identification phase through involvement in sampling program design and development -LIA involved in reviewing data and commenting on not enough to make decisions -get local hunters involved in designing sampling program	-Initial Environmental Evaluation done without consultation of regional people -LIA nor involved until well into the process of the decisions to ship PCBs out of Saglek -time constraint on LIA to respond and decide not considered by proponent
Key-Informant Interviews	-“switch of individuals handling the case was good, the new representative worked with us” (LIA representative)	-fast paced because of the weather, did not include LIA in the process -“province still not recognizing our involvement”; “long time to get to this point; “stuck in a provincial regulatory regime and it is an arctic problem”; “hard to keep up and stay in a driving role”; “very fast paced” (LIA representatives)
Participant Observations		
Survey Interviews		

Table 5.4.3. Field evidence of sub-components of participatory capacity in Labrador.

Sub-components of Participatory Capacity		
	• Participants are listened to and their input has some effect on the decision making process	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -LIA includes local concerns in scoping sessions and other components of EA process [D-20, 25] -LIHC holds workshop and local concerns expressed directs committees action to deal with issues [D-6] -LIHC surveying local health concerns to include in programming directions [D-42] -Women's group submission to EA panel had impact on drafting guidelines for EA process [D-28] -LIHC surveys local desires regarding tuberculosis monitoring program to decide to continue program [D-43] -Nain Crisis Team open meeting to public to gather concerns and input on social issues in community (suicide) [D-50] -Town Council consults community and includes concerns to direct action on social health issues, results in plebiscite on alcohol sale [D-51, 52] -Town Council incorporates local concerns through community meeting and plebiscite into decision to grant drilling permit to exploration company [D-54, 57] -Town Council holds plebiscite on alcohol sale in community, abides by vote [D-55] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -Town Council held plebiscite on exploration permit issuing and local concerns overruled Town Council ruling -community members expressed concern about sewage in the bay where people fish, Town Council now contacting authorities to look into the issue 	<ul style="list-style-type: none"> -"we need to communicate more with the public and get them really involved" (Town Council representative) -if the province collected information about contaminants in wildlife they would make the decision (wildlife and health) and Health Labrador and LIHC would be contacted to deliver the decision to the communities
Participant Observations	<ul style="list-style-type: none"> -protest on dock 3 years ago over fishing licenses results in getting some processing work for plan in Nain 	<ul style="list-style-type: none"> -LIHC struggling with how to get more people involved and consulted in process -election candidate states concern over few Inuit involved in land claims process in radio interview
Survey Interviews		
CASE 1		
Cd in Caribou Liver	<ul style="list-style-type: none"> -hunters involved in sampling program and commercial hunt, using traditional knowledge and recommending quota, hunting location, this information used 	<ul style="list-style-type: none"> -no community involvement in decision or dissemination
Documents		
Key-Informant Interviews		<ul style="list-style-type: none"> -no involvement of LIA except in the collection
Survey Interviews		
CASE 2		
PCBs in ringed seal and beluga	<ul style="list-style-type: none"> -contaminants experts meeting brought together regional aboriginal representatives and participants thought "that because of the known risks of altering diet, uncertainty in the data, the large safety factor applied in this process, that no diet altering advice should be given" (Department of Indian Affairs and Northern Development representative) -the workshop brought in "regional context" and benefits information, it involved regional perspectives to form the decision and message delivered to the public -"there was a consensus opportunity there for the first time" (LIA representative) some effect of involvement -regions involved in drafting the message to be sent out and will do the communication 	
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -"the process involved regional people, we had input and had some effect on the process, we were listened to"; "our involvement was great" (LIA representatives) 	
Survey Interviews		

Table 5.4.3. Field evidence of sub-components of participatory capacity in Labrador (continued).

Sub-components of Participatory Capacity		
• Participants are listened to and their input has some effect on the decision making process		
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 3 PCBs at Saglek Radar Site Documents	<ul style="list-style-type: none"> -Department of National Defense (DND) will go ahead with shipping but agrees to include LIA concerns in shipping activity -new DND representative agrees to consult with LIA and consider their concerns regarding shipping activity -LIA involvement dictates shipping time and route along coast -DND-Environmental Sciences Group (ESG) consults LIA representing local concerns and are included in sampling program (species important for hunting, fishing, concern of commercial fishing area nearby) -LIA has impact on sampling program, hunters do as well, and also release of information to coastal communities 	<ul style="list-style-type: none"> -LIA has to appeal to stop shipping on grounds of lack of consultation with coastal communities, concern impact of spill on ocean environment and link of Inuit and ocean (economic and health) -no involvement to that point
Key-Informant Interviews	<ul style="list-style-type: none"> -"they (DND-ESG) expanded the sampling to include our concerns (more species collected)"; "they are open to including both benefit and risk information" (LIA representative) -they welcome LIA involvement and requested their advice for communication and sampling program -"it was a form of consensus" (LIA representative) 	<ul style="list-style-type: none"> -"in initial clean up they wanted to base it all on economics and not consider aboriginal issues, public health, dependence on environment, environmental knowledge"; "they were one tracked regarding the information involved and their priorities" (LIA representative)
Participant Observations	<ul style="list-style-type: none"> -local researchers involvement in communications plan for sampling program impacts on messages going out 	
Survey Interviews		

Table 5.4.4. Field evidence of sub-components of participatory capacity in Labrador.

Sub-components of Participatory Capacity														
	• The community attempts to make participation opportunities accessible (e.g. culture, language)													
Data Source	Supports Sub-component	Detracts from Sub-component												
CONTEXT Documents	<ul style="list-style-type: none"> -all workshops include translator for English and Inuktitut [D-6] -LIA bylaws require all material be printed in both languages [D-32] -consultation of individuals for Environmental Health Study is done in both languages [D-39] -EA guidelines require that efforts are made to make participation accessible [D-23] -Town Council tries to make process accessible through use of translators at meetings and through informing people ahead of time [D-54, 55, 56] 	<ul style="list-style-type: none"> -community makes recommendations for public participation as there is not enough now in EA process (public participation on Impact and Benefits Agreement negotiations team, consultation with Elders, more environmental monitors) [D-20] 												
Key-Informant Interviews	<ul style="list-style-type: none"> -"different methods are used at different times when we need to involve the public" (organizational representative) 	<ul style="list-style-type: none"> -"need to get people involved"; "need to communicate more with people, get them really involved"; "think people are getting tired of the length of these processes, they feel nothing will be decided at the meetings and some have bigger issues they want dealt with than what the meeting is set to address"; "think some people don't have the capacity to deal with some of the issues, they can't carry this information from one meeting to the next, also they don't care in some cases too"; "some basic needs aren't being met so they talk about that"; "people want to be consulted but don't want to respond" (organizational representatives) -"social issues, lack of involvement, lack of respect, loss of language are challenges" (Elder) 												
Participant Observations	<ul style="list-style-type: none"> -LIHC tries several methods to get public involved -translator involved at all community meetings and hearings 	<ul style="list-style-type: none"> -historical issues like relocation have strong influence in people's ability to be involved -people don't think they have useful perspectives, therefore they don't get involved -people default to committees in town and therefore don't get involved -few know about EA hearings' purpose, therefore few show up -Elders not respected in many cases because of social issues they are dealing with, therefore not involved and consulted -people intimidated to speak out in community -social issues overshadow some people's ability / desire to get involved (bigger things to deal with) -people sometimes confused about who to go to in community -some social issues in community restrict others ("acceptance", social health, inter-generational distances, anger, jealousy) 												
Survey Interviews	<p>Involvement in committees: Attend Community Meetings</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Active Citizens 5/5</td> <td style="width: 50%; text-align: right;">5/5</td> </tr> <tr> <td>Health and Env. Wrkrs 18/18</td> <td style="text-align: right;">17/18</td> </tr> <tr> <td>Elders 1/5</td> <td style="text-align: right;">0/5</td> </tr> <tr> <td>Hunters 2/9</td> <td style="text-align: right;">3/9</td> </tr> <tr> <td>Women 2/9</td> <td style="text-align: right;">2/9</td> </tr> <tr> <td>Youth 2/9</td> <td style="text-align: right;">2/9</td> </tr> </table>	Active Citizens 5/5	5/5	Health and Env. Wrkrs 18/18	17/18	Elders 1/5	0/5	Hunters 2/9	3/9	Women 2/9	2/9	Youth 2/9	2/9	<p>Challenges to Participation: 37/55</p> <p>Info / Communication related: 19</p> <p>Financially related: 5</p> <p>Personal related : 30</p> <p>Social (inter-personal): 4</p> <p>Structural / Power: related 17</p>
Active Citizens 5/5	5/5													
Health and Env. Wrkrs 18/18	17/18													
Elders 1/5	0/5													
Hunters 2/9	3/9													
Women 2/9	2/9													
Youth 2/9	2/9													

Table 5.4.4. Field evidence of sub-components of participatory capacity in Labrador (continued).

Sub-components of Participatory Capacity		
	• The community attempts to make participation opportunities accessible (e.g. accessible)	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents		-no involvement (other than help in collection of data) in decision making process because of jurisdictional issues
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-invited all aboriginal organization representatives to attend and ask questions and have input -preparatory information sent and explained prior to meeting	
Key-Informant Interviews	-"involved regional people, we had input"; "our involvement was great" (organizational representatives)	-"lot of government officials there, not comfortable environment for regional representatives for negotiations meeting"; "intimidating environment"; "time line was too tight"; "rushed, little background time"; "people never really knew who should be there" (organizational representatives)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-LIA reports information at Annual General Meetings, reported in both English and Inuktitut	-LIA has to argue into process to have concerns regarding shipping activity included in decisions -no allowances made to include them -LIA argues for community consultation in the form of consultation with fishermen's committee and phone-in radio show (broadcast in English and Inuktitut)
Key-Informant Interviews	-switch of individuals handling case of Department of National Defense was good, new representative worked with us -will report information to LIA membership (both languages)	-"hard to keep up and stay in driving role, very fast paced, lack of funds, time and people" (organizational representative)
Participant Observations		
Survey Interviews		

Table 5.4.5. Field evidence of sub-components of participatory capacity in Labrador.

Sub-components of Participatory Capacity																																															
	• Different members from a variety of different sub-groups within the community are involved as participants at different times and in different issues																																														
Data Source	Supports Sub-component	Detracts from Sub-component																																													
CONTEXT Documents	<ul style="list-style-type: none"> -LIHC workshop brings together different individuals from within and outside of the community (Elders, government representatives, youth, women, health officials, hunters) [D-6] -LIA involves variety of people in collection of traditional knowledge information for EA process (women, hunters, Elders) [D-21] -women's group gets involved in issues regarding mineral exploration and development in community [D-28] -Environmental Health Study has targeted variety of sub groups within community to gather concerns and perspectives [D-39] -Town Council representatives are diverse in background, ethnic origin, ages [D-49] 	<ul style="list-style-type: none"> -small number of people very active in the community, many of the same people on a few committees [D-30] -many people sit on up to 6 committees, few very active people in the community [D-2] 																																													
Key-Informant Interviews		<ul style="list-style-type: none"> -Elders express concern over lack of their involvement in community issues -need more people, more educated people, more active people 																																													
Participant Observations	-LIA Board mixed in age, gender, professional occupation, experience	<ul style="list-style-type: none"> -different groups (youth, women, Elders, outsiders) perceive different barriers to participation -political candidate expresses concern over need to involve youth more in decision making issues in radio interview -political candidate expresses concern over need to involve Inuit more in land claims process in radio interview -lots of committees in town but few people actually involved 																																													
Survey Interviews		<p>Challenges to Participation: 37/55</p> <table border="1"> <thead> <tr> <th></th> <th>Info / Comm</th> <th>Financial</th> <th>Personal</th> <th>Social</th> </tr> </thead> <tbody> <tr> <td>Structure</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Active Citizens</td> <td>1</td> <td>1</td> <td>4</td> <td>2</td> </tr> <tr> <td>Workers</td> <td>10</td> <td>3</td> <td>15</td> <td>2</td> </tr> <tr> <td>Officials</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Elders</td> <td>2</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Hunters</td> <td>3</td> <td>0</td> <td>5</td> <td>0</td> </tr> <tr> <td>Women</td> <td>2</td> <td>0</td> <td>2</td> <td>0</td> </tr> <tr> <td>Youth</td> <td>1</td> <td>1</td> <td>4</td> <td>0</td> </tr> </tbody> </table> <p>* see data tables for more detailed results</p>		Info / Comm	Financial	Personal	Social	Structure					Active Citizens	1	1	4	2	Workers	10	3	15	2	Officials					Elders	2	0	0	0	Hunters	3	0	5	0	Women	2	0	2	0	Youth	1	1	4	0
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Table 5.4.5. Field evidence of sub-components of participatory capacity in Labrador (continued).

Sub-components of Participatory Capacity		
	<ul style="list-style-type: none"> Different members from different sub-groups within the community are involved as participants at different times and in different issues 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver	-wildlife officer, hunters chosen by skill and Environmental Advisor involved	
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga	-involved Environmental Advisor, Community Health Advisor, Eco-Research staff -representatives of all Inuit organizations invited to meeting in Ottawa (consultation session), scientists and government officials involved as well -LIA President to be involved in dissemination of message	
Documents		
Key-Informant Interviews	-"there was an LIHC representative there and now we know who that is" (local representative)	-"people never really knew who should be there" (local representative)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site	-involved LIA Environmental Advisor, Executive, Legal Advisor, wildlife officer, Department of National Defense representative, Provincial Departments of Health and Environment representatives, Department of Fisheries and Oceans representative -will get some hunters involved as well through last clean up program	-no involvement of LIA until argued into process to have concerns on shipping heard
Documents		
Key-Informant Interviews		-"fast paced because of weather, did not include LIA in the process"; "province still not recognizing our involvement"; "logistically it is hard because we are all busy and in separate locations"; "the organization is stretched but we need to be involved in these things"; "lack of funds, time and people" (local representatives)
Participant Observations	-Eco-Researcher involved in communication of information to LIA membership regarding sampling program for final clean-up	
Survey Interviews		

Table 5.5.1. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	• The community collects and controls both quantitative and qualitative information, including traditional or local knowledge	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -LIA collects and organized traditional knowledge on land use and occupancy in region [D-21] -community has land-use and occupancy study done in late 1970s ('Our Footprints Are Everywhere') [D-100] -local researchers involved in collecting both qualitative and quantitative information on environmental health perspectives in community, waste management issues and with other outside researchers on primarily qualitative based information regarding environmental concerns [D-39] -LIHC collects both qualitative and quantitative information on health concerns and statistics in community [D-42] -LIHC actively involved in own health research projects collecting qualitative and quantitative information on local health issues through "Building Healthy Communities" initiative [D-43] -Town Council gather community perspectives through plebiscite on mining issues [D-57] -Ethical Guidelines for Research include ownership and control of information with community [D-33] 	-collected, coordinated and organized health data needed in Labrador [D-3]
Key-Informant Interviews	-OK communications society gathers information from a number of different sources, and includes focus on local information	-"some of the newer issues are huge and require a lot of background knowledge to deal with and understand" (organizational representative)
Participant Observations	<ul style="list-style-type: none"> -LIA making effort to collect traditional knowledge information on Voisey's Bay area -some community members collecting information of both qualitative and quantitative nature from outside the region -Eco-Research collects samples of mussels following consumption complaint, gets analysis done and responds to individuals with quantitative results 	-difficulties in involving local people in research (gathering local knowledge)
Survey Interviews		-22/55 individuals interviewed report challenges to collecting information in the community Challenges include : Access (7), Interpretation / Complexity (17)

Table 5.5.1. Field evidence of sub-components of information / communication capacity in Labrador (continued).

Sub-components of Information / Communication Capacity		
	• The community collects and controls both quantitative and qualitative information, including local or traditional knowledge	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver	-LIA aided in collection of liver and kidney samples from caribou during commercial hunt in 1985 -quantitative data collected analysing for cadmium (Cd) and cesium (Cs) levels	-Provincial official control information
Documents		
Key-Informant Interviews	-all quantitative based information	-"information was risk focused, no benefits to aboriginal people considered"; "no context given" (LIA representatives)
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga	-quantitative data collected and controlled by federal agencies regarding levels of organochlorines -some qualitative information included in development of communication message	-concern shown that social and cultural impacts and benefits must be considered, not included currently
Documents		
Key-Informant Interviews	-"benefit information was included by the group from Quebec Centre for Public Health"; "involvement of regional representatives brought benefit and context to argument"; "first time the feeling of risks and benefits was included" (LIA representatives)	-no Labrador data included in decision, little data to begin with, all risk based (quantitative) -"experts wanted to give out advisory of "sugar cube" size of mattak, people said it was unrealistic, no advisory was to be given" (LIA representative)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site	-documentation states some review of LIA land use occupancy study (Our Footprints are Everywhere - local knowledge, quantitative and qualitative information on land use, history, and link between Inuit and environment) -LIA argues for concern of PCB spill during shipping activity based on local information regarding shipping routes, hazards of sea, link between Inuit and local environment -LIA opposed to shipping of PCBs, stating that the decision is being made on deficient information -some concerns included in final decision and use of local knowledge on shipping routes and times involved -final clean-up program involves LIA and LIA involved in cooperative collection of quantitative based data with Department of National Defense Environmental Sciences Group (DND-ESG) -some local knowledge used in selection of sampling sites and species (no formal collection of this knowledge though)	-initial study and assessment all risk based, quantitative information collected and controlled by federal departments
Documents		
Key-Informant Interviews	-"they included risk analysis on shipping after our arguments...we used local information on weather, shipping routes etc. to argue...the decision was originally based on economics and science, not benefits, environmental hazards, public health" (LIA representative) -"information is starting to be balanced because of our input"; "we are using some local knowledge" (LIA representative)	-challenges: "LIA didn't have hard data to compete"; "it costs to get the information we want"; "it is unclear of how the local knowledge is meshing with the science" (LIA representative)
Participant Observations		
Survey Interviews		

Table 5.5.2. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	<ul style="list-style-type: none"> The community has a recognized communication strategy and goals for issues to deliver information to a variety of groups within the community as well as other organizations 	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -LIHC convenes workshop to discuss Social Change and Environmental Health issues on coast [D-6] -LIA newsletter now comes out monthly covering land claims and other issues, delivered to mailboxes [D34] -local researchers continue to use local radio and TV station for communication of results [D-39] -communication change to door to door method for some projects (blood cord study) [D-39] -Town Council holds community meetings to discuss issues of concern (consistently used method) [D-54, 55, 56] -Eco-Research always use regional radio and TV to deliver messages [D-binder] 	<ul style="list-style-type: none"> -workshop participants raise concern over lack of communication in community [D-6] -lack of communication and information concern raised in all EA scoping groups [D-20] -recommendations for communication made by scoping session participants include using local radio more, need for more communication, need for face to face contact from LIA representatives, need for a newsletter, need for more translation of information for Elders, full-time communications officer for LIA, more effective methods needed [D-20] -Town Council complains not enough communication regarding mining issues from company [D-29] -workshop representatives express need for better communication from LIHC [D-47]
Key-Informant Interviews	<ul style="list-style-type: none"> -communications officer for LIA delivers messages through press releases and field offices for LIA, also communicates through newsletter (monthly) -currently press releases go out to TV and radio stations when needed -LIHC tries number of methods, TV been working well 	<ul style="list-style-type: none"> -"need to communicate more with the public" (Town Council representative) -"communication is often difficult in Labrador" (Health Labrador representative)
Participant Observations	<ul style="list-style-type: none"> -OK communications society does news and cultural broadcasting for region in Inuktitut and English, only Inuktitut broadcaster in region -Town Council sent out message to community through radio and TV and increase attendance at EA hearings -Board relied on for communications as well, through word of mouth -word of mouth appears to be most common and accepted form of communication (expressed by local informant) 	<ul style="list-style-type: none"> -LIA political candidates express need to address communications issues with membership in radio interviews -few people hear about EA hearings and what they are for -communications one of main concerns coming from residents concerns expressed at EA hearings -perception of residents that communication coming from LIA is limited -no general communication plan, but LIA expresses interest in developing one
Survey Interviews	<p>Reported methods of hearing environment and health advisories (N=55):</p> <p>Word of Mouth: 23 TV/Radio: 6 Job: 16 Other: 1 Unsure: 8</p> <p>Reported sources of knowledge on safety of traditional foods: (N=55)</p> <p>Observation: 17 TV/Radio: 9 Other: 40 (word of mouth=15; job=8; absence of negative information=8; Elders=3; No reason=6)</p>	

Table 5.5.2. Field evidence of sub-components of information / communication capacity in Labrador (continued).

Sub-components of Information / Communication Capacity		
	• The community has a recognized communication strategy and goals for issues to deliver information to a variety of groups within the community as well as other organizations	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-official press release from Provincial representatives (copy sent to LIA officials) -LIA updates membership at Annual General Meeting	
Key-Informant Interviews	-press release through the Minister of Health in cooperation with the Wildlife Department	-“just saw the end result”; “we never heard until it was an advisory” (LIA representatives)
Survey Interviews		Knowledge of Advisory (N=55) (N / Originating Source / Method of Reception) Active Citizens N=2 / 1-LIA 1-Unsure / 1-Word of Mouth 1-Unsure Health and Environment Workers and Elected Officials N=11 / 5-Province 1-Family & friends 1-Unsure / 3-Word of Mouth 2-TV Radio 6-Job Elders N=0 Hunters N=3 / 1-Province 2-Unsure / 1-TV Radio 2-Unsure Women N=0 Youth N=0
CASE 2 PCBs in ringed seal and beluga Documents	-Inuit Tapirisat Canada (ITC) communicates information to all regional aboriginal organizations -Inuit leaders are to release information in each region -ITC coordinates communication release in all regions	
Key-Informant Interviews	-“our connection with ITC is good” (LIA representative)	-“internal communications still need work”; “need follow through on it”; “people felt it was ignored” (LIA representatives)
Survey Interviews		Knowledge of Advice (N=55) (N / Originating Source / Method of Reception) Active Citizens N=1 / 1-Other / 1-Word of Mouth Health and Environment Workers and Elected Officials N=7 / 5-ITC 2-Unsure / 1-Word of Mouth 5-Job 1-Unsure Elders N=0 Hunters N=0 Women N=0 Youth N=0
CASE 3 PCBs at Saglek Radar Site Documents	-LIA argues for phone-in show to communicate to membership -phone-in show with Department of National Defense (DND) and LIA representatives broadcast on region radio to inform membership and consult public -LIA consults fishermen’s committee regarding shipping routes and weather along coast -LIA updates membership at AGM	
Key-Informant Interviews		-“working against time”; “AGM communication depends on effectiveness of delegates”; “internal communications not so good” (LIA representatives)
Participant Observations	-communications plan thought of for Saglek issue - plan methods, messages and channels through which communication will be delivered	
Survey Interviews		Knowledge of Recent Scenario (N=55) (N / Originating Source / Method of Reception) Active Citizens N=0 Health and Environment Workers and Elected Officials N=3 / 3-LIA 3 DND / 3-Job Elders N=0 Hunters N=0; Women N=0; Youth N=0

Table 5.5.3. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	<ul style="list-style-type: none"> The community utilizes local organizations and individuals to communicate information to members of the community regarding local issues 	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -Draft EIS Guidelines require communication and local organizations to determine methods [D-23] -Concerned Citizen's Group spreads information on mining throughout community [D-30] -Ethical Guidelines for Research include requirement of proper communication in communities on research project and control of communications by LIA [D-33] -LIA published newsletter to communicate with membership [D-34] -OK Communications Society does all regional and local broadcasting of news and cultural programs in both languages [D-38] - all local people working for OK except training positions -local researchers are used to communicate research results to individuals in community [D-39] -LIHC communicates information to public regarding health issues [D-41, 42] -Town Council brings people together to communicate and discuss issues of concern (social issues and mineral exploration and development issues) [D-54, 55, 56] -Eco-Research always use local and regional radio and TV for communication of research results [D-binder] 	<ul style="list-style-type: none"> -communication recommendation during scoping sessions for EA include : "using local radio capacities for communication, need for more communication, need for LIA representatives to visit communities personally, want full-time LIA communications officer, ..." (local workshop participants) -community expresses need for better communication from LIHC at Healthy Communities Workshop [D-47] -community expresses concern over lack of communication from outside and inside the community during community meetings [D-55, 56] -outside consultant raises concern regarding communication and trust in the community "lack of reliable information from trustworthy sources" [D-63]
Key-Informant Interviews	<ul style="list-style-type: none"> -OK Communications Society is the first level of service because they have ownership of the system they use -OK Communications Society - only Inuktitut programming in the region, try and keep people informed on thing that might affect them -use people from along the coast, 12 full time employees, management and production staff are local and we bring in trainers for 6-12 month periods -LIA has full time Communications Officer, hired because of the need, links to field coordinator, takes direction from Executive Director and Land Claims Director, develops press releases and communications to go to the field workers -delivery to the communities happens through press releases and field workers, and newsletters ('Sukiuk') -LIHC tries number of communications methods, "one of most successful being the TV channel, still use notices, but people don't read it unless it's on TV it seems" (LIHC representative) -Health Officer has little time for communications / promotions (health promotions is communication), some of the local health professionals are doing health promotions now 	<ul style="list-style-type: none"> -"need to communicate more with the public " (Town Council representative) -challenges: "turnover in staff is hard....sometimes hard for the people to grasp the concepts and plan ahead.... having to train on an ongoing basis.... amount of information involved in some stories is overwhelming... and we don't have the lead time to prepare well...not being used as much as we should...we are not used by organizations in the region to get information out enough...our political organization doesn't use us enough" (communications representative) -challenges include there is only one communications officer
Participant Observations	<ul style="list-style-type: none"> -local radio for entertainment mostly, OK Society for news and cultural programming -Eco-Research put out newsletter, didn't last though -some community members collect information from outside the region themselves -Town sends out community notice and gets more people out to EA meetings -Eco-Research staff travel to communities to deliver information to people regarding project results (main communicators on this issue) 	<ul style="list-style-type: none"> -much of the information on regional issues comes from CBC radio in Goose Bay -community members expressing concern for lack of communications in community -some express perception that communication coming from LIA is limited

Table 5.5.3. Field evidence of sub-components of information / communication capacity in Labrador (continued).

Sub-components of Information / Communication Capacity		
	• The community utilizes local organizations and individuals to community information to members of the community regarding local issues	
Data Source	Supports Sub-component	Detracts from Sub-component
Survey Interviews	Survey responses Who do you ask for information ? (N=39) Local reps=6 Other local people=23 Regional reps=29 Provincial / National reps=17	
CASE 1 Cd in Caribou Liver Documents		-press release given out by province
Key-Informant Interviews	-LIA reported this information at Annual General Meeting	-provincial press releases went to post offices and were on posters, and the radio
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-through the involvement and direction of Inuit Tapirisat Canada (ITC) the message was delivered by the Inuit regional leader through radio	
Key-Informant Interviews	-used radio release and press release -ITC contacted regional radio stations	-"original communication processes for this did not include Labrador, we had to rely on ITC for this"; "
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-LIA and Department of National Defense holds phone-in radio show on regional radio (OK) to inform communities of issues -DND requests LIA direct communications strategy for final clean-up program -LIA presents information at AGM and communication will be handled by Eco-Research staff with support from DND Environmental Sciences Group (ESG)	
Key-Informant Interviews	-long phone in radio show on OK radio for first shipping activity as requested by LIA -reports given at AGMs by LIA to update membership -community meeting in Nain (unsure) -direct communication of LIA Advisor with Board of LIA on issue and fieldworkers as well -LIA plans to release fact sheets to membership on issues of sampling and clean up of site and will involve the Eco-Research group in the communications strategy -Eco-Research communicated with open houses in communities	-"planned to bring Eco-Research staff in for this before AGM but little time to do so"; we are good at reacting, we are quite flexible" (LIA representative)
Participant Observations	-Department of National Defense (DND) follows LIA lead to communicate information on Saglek, using local sources and methods	
Survey Interviews		

Table 5.5.4. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	• The community delivers information on local issues in a timely manner to allow informed responses and involvement in community issues	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -LIA newsletter comes out monthly to membership [D-34] -OK Communications Society has mandate to preserve and promote local culture and language, better develop communication, encourage public awareness of regional issues, promote region to outside areas.....done through daily programming in Inuktitut and English [D-38] -OK magazine for coastal communities and Goose Bay started as bi-weekly newspaper evolves into quarterly magazine after being non-existent for some time [D-38] -Town Council has community meetings prior to plebiscites on social and mining issues [D-54, 55, 56, 57] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -"try and keep people informed on things that might affect them"; "have regular call in shows about the big issues"; "currently press releases go out to when needed to TV and radio stations" (Communications representative) 	<ul style="list-style-type: none"> -"have to deal with more and at a faster pace than before"; "some of the newer issues are huge and require a lot of background knowledge to deal with and understand"; "amount of information involved in some issues is overwhelming and we don't have the lead time to prepare well" (Communications representative)
Participant Observations	<ul style="list-style-type: none"> -Eco-Researchers travel the coast for open houses delivering information about Saglek clean up happening that summer (1-2 months before) 	<ul style="list-style-type: none"> -poor turnout at EA hearings (10-15), few heard about it and what they were for beforehand (some ask during hearings) -Town Council sent out message to community and got more people the following days of the EA hearings -Inco slow to make information accessible to community (delay on Inuktitut version of mining report for EA hearings)
Survey Interviews		

Table 5.5.4. Field evidence of sub-components of information / communication capacity in Labrador (continued).

Sub-components of Information / Communication Capacity		
	<ul style="list-style-type: none"> The community delivers information on local issues in a timely manner to allow informed responses and involvement in community issues 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-data collected September 1986, first information released one year later -preliminary results given at LIA Annual General Meeting (AGM) -initial press release September 4, 1987 -final press release October 26, 1987	
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-Nov. 16, 1995 Inuit Tapirisat Canada (ITC) contacts regional Inuit representatives -December 8, contaminants experts meeting in Ottawa -December 18, press release on advice -January 12, 1986 internal distribution of information within LIA and LIHC	
Key-Informant Interviews		-“time line was too tight”; “rushed because of holidays” (local representatives)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-August 30, 1989 LIA holds phone-in radio show on shipping of PCBs along coast from Saglek site -Sept. 19 - shipping occurs down Labrador Coast -Department of National Defense (DND) Environmental Sciences Group (ESG) informs LIA of contaminated soil at Saglek (Feb. 1996) -March 1996 meeting with provincial and federal representatives -meetings continue into 1997 -LIA reports to AGM Feb. 1997, sampling program to start July 1997	-LIA hears over CBC radio that more PCBs found at Saglek (October 1993)
Key-Informant Interviews	-long phone in radio show before the activity -reports were given to AGMs as things progressed -there was direct communication with the Board as well but many were away during the summer	-“fast paced because of the weather”; “notified early and consulted”; “working against time”; “
Participant Observations		
Survey Interviews		

Table 5.5.5. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	<ul style="list-style-type: none"> The community supports multi-directional communication between organizations, groups and individuals within the community 	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -Concerned Citizen's Group meets with LIA and spreads information regarding mineral development issues in community [D-30] -Health Canada indicator for contaminants programs in communities includes "community awareness of issues" [D-83] 	<ul style="list-style-type: none"> -group at workshop raises concern of lack of communication, need more effective communication [D-6] -Town Council raises concern that not enough communication from company regarding mining issues [D-29] -community expressed need for better communication from LIHC [D-47] -community concerns include lack of communication and information from inside and outside sources [D-55, 56] Task Force on mining Questionnaire: 88% (351) said they do not have enough information Where should it come from ? Mining Company (26%) Province (21%) LIA (33%) Town Council (20%) -outside consultant reports on lack of communication in community [D-63] -lack of communication on land claims creates misunderstanding among public [D-2]
Key-Informant Interviews	<ul style="list-style-type: none"> -"we try and keep people informed on this that might affect them" (Communications representative) -communicate when needed through different sources -monthly newsletter from LIA as well 	<ul style="list-style-type: none"> -"very hard to keep up with everything"; "turnover in staff is hard"; "need to communicate more"; "need more staff, more training"; "faster pace than before" communications is a challenge"; "communication is often difficult" (organizational representatives) -"didn't know Eco-Research was communicating in communities, need to coordinate with them"; "challenges include keeping up with the information and issues" (organizational representative)
Participant Observations		<ul style="list-style-type: none"> -LIA urges for need of mining company to release more information -perception among residents that communication coming from LIA is limited -internal organizational communications are challenges as well because people moving around so much -residents ask for meeting with LIA to open processes and communicate more -community activists report being declines by LIA for access to drilling information in region
Survey Interviews	<ul style="list-style-type: none"> -majority of community people interviewed (not health and environment workers and elected officials) mention local unofficial representatives as sources of information (3/24 mention local representatives; 17/24 mention "other local individuals" - includes family and friends, elders, hunters in the community) 	<p>Do you feel informed ? (including Health and Env. workers) Yes=24/55; No=31/55 Challenges ? Access to Information=7/22; interpretation = 17/22 Solutions to Challenges? Information/Communication related=24/27 Participation related=8/27 Structure or Resource related=5/27</p> <p>(excluding Health and Env. workers) Yes=12/37; No=25/37 Challenges? Access to information=4/6; interpretation=3/6 Solutions to Challenges? Information/Communication related=10/11 Participation related=4/11 Structure or Resource related=0/11</p>

Table 5.5.5. Field evidence of sub-components of information / communication capacity in Labrador (continued).

Sub-components of Information / Communication Capacity		
	<ul style="list-style-type: none"> The community supports multi-directional communication between organizations, groups and individuals within the community 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver		
Documents		
Key-Informant Interviews		- "we never heard until it was an advisory" (LIA representative)
Survey Interviews		Consumption of Caribou liver ? Yes=4; Used to=8; Never have=43 Knowledge of Benefits and Risks=13 Knowledge of Advisory? (N=55) Active Citizens=2/5; Health and Environment workers and Elected Officials=11/18; Elder=0/5; Hunters=3/9; Women=0/9; Youth=0/9
CASE 2 PCBs in ringed seal and beluga		
Documents		
Key-Informant Interviews		- "communication processes for this did not include Labrador"; "internal communications still need work here"; "people felt it was ignored"; (organizational representatives)
Survey Interviews		Consumption of marine mammal fat ? Yes=42; Used to=2, Never have=11 Knowledge of benefits/risks=22 Knowledge of Advice? (N=55) Active Citizens=1/5; Health and Environment workers and Elected Officials=7/18; Elders=0/5; Hunters=0/9; Women=0/9; Youth=0/9
CASE 3 PCBs at Saglek Radar Site		
Documents		
Key-Informant Interviews	- "fairly certain about communications" (organizational representative)	- "internal communications not so good" (organizational representatives)
Participant Observations		
Survey Interviews		Knowledge of latest reports on PCBs at Saglek radar site (N=55) Active Citizens=0/5; Health and Environment workers and Elected Officials=3/18; Elders=0/5; Hunters=0/9; Women=0/9; Youth=0/9 Knowledge of issues at Saglek radar site in past ? Yes=41/55

Table 5.5.6. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	• The community makes allowances to transcend cultural and linguistic barriers in all communications	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIHC workshop translated for both Inuktitut and English [D-6] -traditional knowledge study utilizes translator for Inuktitut unilingual participants [D-21] -EIS Guidelines require consideration of linguistic barriers to communication [D-23] -LIA policy 50 covers translation and interpreting fees for communications of all information from organization; applies to all LIA publications [D-31] -regional communications society (OK) only provider of both Inuktitut and English programming [D-38] -LIHC communicates to communities bilingually as well, also has translator available for all hospital and health centres (will send one wherever needed for patient) [D-43, 45] -Town Council makes allowances at all meetings for translation and translation of minutes [D-54] -LIHC communicates through workshops, [D-6] -OK Communications Society communicates through radio, television and print [D-38] -LIA communicates through press releases, newsletter, community meeting when needed [D-31, 34] -local researchers using face to face contact, open houses, radio, television and print material to communicate results of projects [D-39] -Town Council communicates through community meetings [D-51, 52, 54, 55] 	<ul style="list-style-type: none"> -people complain about lack of translated information from companies regarding the mining activities [D-20] -LIA complains about of lack of consideration of unilingual Inuktitut individuals in their EA submission [D-24] -loss of aboriginal language a concern 1991 Census figures: Inuktitut mother tongue - 485, 165 report it as language in home [D-1] -estimate of Inuktitut speakers 15-20% of those 20-30 yr. old; 10-15% of those under 20 yr. old, less for <i>Kablunagajuit</i> [D-2]
Key-Informant Interviews	<ul style="list-style-type: none"> -OK Communications society is the only provider of Inuktitut programming along the coast, also provides a way of communicating for people as some do not have phones -LIHC also communicates through local cable television station, "we still use notices, but people don't seem to read it unless it's on TV it seems" (health representative) 	<ul style="list-style-type: none"> -"loss of language is a big issue" (local communications representative; Elder) -"need more culturally appropriate information for here, information we have often doesn't get across to people" (local health representative)
Participant Observations	<ul style="list-style-type: none"> -Eco-Research tried newsletter for communication for a while, but it didn't continue -Town Council uses local television station and radio as well to communicate (got more people to EA hearings with notice) -LIA uses fieldworkers to release information as well, house visits, radio interviews etc. 	
Survey Interviews		<ul style="list-style-type: none"> -Challenges in collecting information ? (N=22) Interpretation / Understanding Active Citizens=0/1; Health and Environment workers and Elected Officials=13/16; Elders=0/0; Hunters=1/3; Women=0/0; Youth=2/2 Needs for Decision Making (N=39) Information and Communication related issues (includes better information, simple information, better communications, more accessible, understandable) Active Citizens=5/5; Environment and health workers and Elected Officials=17/17; Elders=1/2; Hunters=5/5; Women=4/5; Youth=2/5

Table 5.5.6. Field evidence of sub-components of information / communication capacity in Labrador (continued).

Sub-components of Information / Communication Capacity		
	• The community makes allowances to transcend cultural and linguistic barriers in all communications	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver	-LIA reports update to Annual General Meeting (AGM) -provincial press release of advisory	
Documents		
Key-Informant Interviews	-"provincial press releases went to post offices and stuff like that"; "heard about it over the radio and saw notices up" (LIA representatives)	-"no context was given" (LIA representatives)
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga	-"need plain language communications" (LIA representatives)	
Documents		
Key-Informant Interviews	-used radio and press release	
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site	-information released on phone-in radio show, and at AGM updates -Eco-Research staff	
Documents		
Key-Informant Interviews	-had conversations with mayors of each community to inform them as well during the shipping scenario, and direct contact with LIA Board members and fieldworkers -reported updated information to membership at AGM, and plan to put out a fact sheet to go out to the membership -Eco-Research will hold open houses in the communities for this, basic press release went to the communications officer	-the information was technical in nature, hard to understand, -"transitional year for the Board members so some may not have links established in the communities for communications"; "AGM as communications mode depends on effectiveness of delegates" (LIA representative)
Participant Observations	-Eco-Research staff travel coast with written posters, radio announcements and face to face open house communications on Saglek clean up and other issues	
Survey Interviews		

Table 5.5.7. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	<ul style="list-style-type: none"> • Communications are evaluative, comparing goals / objectives to achievements / results and changes to address areas of needed attention in communications 	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<ul style="list-style-type: none"> -OK Communications Society has listener surveys done and these are used to direct programming [D-38] -most evaluation done on ad hoc basis, through word of mouth [D-38] -Town Council gathers some evaluation of communications and information source perspectives from residents and uses it in action in community [D-55, 56, 57] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -"have the readership or listener survey, other than not much time to do evaluations, although we'd like to"; "we use the survey to try and change what we are doing"; "people always call in and comment, we listen to these closely" (Communications representative) -LIHC has had good response to using local cable TV station for notices and uses this more now 	<ul style="list-style-type: none"> -"have the readership or listener survey, other than not much time to do evaluations, although we'd like to" (Communications representative) -"no evaluations done right now, no time and money" (Communications representative)
Participant Observations		<ul style="list-style-type: none"> -LIA political candidate expresses need to look at communications and review how and what they give out and how effective it is
Survey Interviews		
CASE 1		
Cd in Caribou Liver		
Documents		
Key-Informant Interviews		<ul style="list-style-type: none"> -"no follow up that I know of" (local representative)
Survey Interviews		
CASE 2		
PCBs in ringed seal and beluga		
Documents		
Key-Informant Interviews		<ul style="list-style-type: none"> -"no evaluation done"; "needs some evaluation"; "no review of it done" (local representatives)
Survey Interviews		
CASE 3		
PCBs at Saglek Radar Site		
Documents		
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Table 5.5.8. Field evidence of sub-components of information / communication capacity in Labrador.

Sub-components of Information / Communication Capacity		
	• The community attempts to address outside sources of information to clarify messages arriving in the community	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	-Town Council brought in provincial government representatives to address mixed messages entering community [D-54]	
Key-Informant Interviews	-LIA Communications officer makes links with outside communicators and acts as a communications liaison for the region	-"amount of information involved in some stories is overwhelming and we don't have the lead time to prepare well"; "hard to get access to the people you want to interview"; "having to deal with more and at a faster pace than before"; "not being used as much as we should"; "often hear about something on CBC before we hear it from the organization"; "they only use us for land claims mainly, and there is little to report there"(Communications representative) "need to start addressing communications sources from outside the region"; "challenges are keeping up with the information and issues" (Communications representative)
Participant Observations		
Survey Interviews	-much of the information on regional issues comes from outside sources (CBC radio)	
CASE 1		
Cd in Caribou Liver		
Documents		
Key-Informant Interviews		-"we never heard it until it was an advisory" (local representative)
Survey Interviews		
CASE 2		
PCBs in ringed seal and beluga	-released from Inuit Tapirisat Canada (ITC) in cooperation with regional Inuit organizations and through regional radio stations	
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3		
PCBs at Saglek Radar Site	-addressed messages by requesting regional phone-in radio show with Department of National Defense (DND) and LIA representatives prior to shipping event -through cooperation with DND Environmental Sciences Group (ESG) LIA able to direct communications on clean up of Saglek site -DND ESG takes lead from LIA on communications strategy for sampling and clean up program	-LIA hears more PCB contaminated soil at Saglek radar site - heard over CBC regional radio
Documents		
Key-Informant Interviews	-had phone-in radio show and meetings with each of the mayors to inform them of the issue and events -"we are good at reacting, we are flexible" (local representative)	-"always working against time" (local representative)
Participant Observations		
Survey Interviews		

Table 5.6.1. Field evidence of sub-components of resource capacity in Labrador.

Sub-components of Resource Capacity		
	• The community has and utilizes a healthy, able and knowledgeable membership in decision making cases	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT Documents	<ul style="list-style-type: none"> -LIA uses local researchers in cooperation with outside researcher to collected traditional knowledge data [D-21] -local individuals hired as researchers in office to work on local and regional issues [D-38] 	<ul style="list-style-type: none"> -workshop raises number of community health issues that are not being dealt with and are concerns in order to be able to move ahead on issues in the region (loss of wholeness of community, divisions in the community, loss of control, health and social problems) [D-6] -Town Council expresses concern over the health of the community (nutritional requirements of the population and challenges in meeting these) [D-29] -housing issues affecting social health of residents, houses without sewer and water still in town, health concern [D-60] -health and social issues of forced relocation along coast still come up repetitively as not having been addressed in community meetings [D-4] -addictions is a large social health issue: up to March 1995, 560 admissions to treatment centre, 337 individuals (some repeats)
Key-Informant Interviews	<ul style="list-style-type: none"> -use of local people by OK Communications Society -having own research department in the community has been s strength -the Steering Committee is made up of all local people with all different backgrounds 	<ul style="list-style-type: none"> -"need to be open and honest about the problems before we can start fixing things and healing"; "need to get back pride as Inuks"; "social issues, lack of respect are challenges"; "reaching people, basic needs are not being met" (local representatives)
Participant Observations		<ul style="list-style-type: none"> -experience limits the involvement of some individuals -some social issues common in the community and hindering people getting involved
Survey Interviews		<p>Challenges to Participation (N=37)</p> <p>Human / Personal = 30 ("education level is something you battle with; people's basic issues haven't been dealt with; personal problems stop people from being involved; people have to deal with basic health and social issues; people's addictions to beer and bingo are problems; alcohol gets in the way of some people participating" (local respondents)</p> <p>Social (inter-personal) = 4 ("no community cohesion; people are dismissed for different reasons") (local respondents)</p>

Table 5.6.1. Field evidence of sub-components of resource capacity in Labrador (continued).

Sub-components of Resource Capacity		
	• The community has and utilizes a healthy, able and knowledgeable membership in decision making cases	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver Documents	-LIA Environmental Advisor involved in collection of data, as with LIA hunters, but no involvement in decision making process	-jurisdiction keeps community out of decision making process
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga Documents	-LIA Environmental Advisor and LIA Community Health Advisor involved in case through Ottawa contaminants experts meeting -LIA President involved through coordinated release of message to public	
Key-Informant Interviews	-"there was an LIHC representative and we know who that is now" (local representative)	-"need workshop to educate people on this"; "not enough background information provided"; "rushed because of holidays" (local representative)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-LIA Environmental Advisor, and Executive involved (Land Claims Director, Legal Advisor, President) -LIA consults public through phone-in radio show -LIA Environmental Advisor consults local hunters regarding weather and shipping routes for shipping of PCBs along coast -LIA and Researcher attend consultation meeting for latest clean up and study -LIA to involve Eco-Research in communications on issue	-time constrained, LIA has to rush with process -
Key-Informant Interviews	-met with LIA Board and fieldworkers during shipping issues	-fast paced because of the weather -"didn't know much about the information, had it reviewed by independent assessor, I didn't understand it all well"; "challenges include lack of funds, and time and people" (local representative)
Participant Observations	-LIA uses local people for sampling program of Saglek radar site	
Survey Interviews		

Table 5.6.2. Field evidence of sub-components of resource capacity in Labrador.

Sub-components of Resource Capacity		
	<ul style="list-style-type: none"> Community leaders have a 'capacity-oriented' view of the group and support this through a commitment to an 'inside out' philosophy towards decision making processes 	
Data Source	Supports Sub-component	Detracts from Sub-component
<p>CONTEXT</p> <p>Documents</p>	<ul style="list-style-type: none"> -many of training and educational issues / future needs are going into Impact and Benefit Agreement negotiations between LIA and the mining company; leaders thinking of developing resources internally [D-6] -LIA uses outside researcher, in cooperation with local researchers to collect traditional knowledge information for Voisey's Bay EIS [D-21] -women's group (TIA) has capacity - oriented view of community; goals include building strength and supporting local women to excel in the community, get power for themselves, gain control, to increase economic growth based on local ability and skills, to support and encourage women in the work force [D-28] -Town Council expressed need to know educational requirements [D-29] -LIA considering long term needs for training and education to build resources internally in community [D-24] -LIA gives hiring priority to local people (LIA employees first, then all LIA members, then non-residents candidates) [D-31] -LIA allows leave for education, with pay - show of support of internal building [D-31] -LIA Ethical Guidelines for Research require hiring of local people (if employees are needed in project) [D-33] -LIA hires Inuit from Labrador first, outside individuals only as trainers [D-38] -local individuals hired as researchers in community [D-38] -researchers get some training from visiting researchers working in community [D-39] -LIHC trying to "Build Healthier Communities" with program of that name, internal view of communities and healing [D-45] -Community Health Representatives get ongoing training on a variety of issues they deal with [D-45] -LIHC has capacity oriented view of communities, assuming more responsibility and including training and education for local people [D-46] -Town Council uses local people to search for solutions to social problems in community [D-51] -LIDC shows 'internal' focus in mandate and projects [D-71] 	<ul style="list-style-type: none"> -LIA and affiliates main source of employment in communities, with land claims and mineral development, will they have enough trained people ? is current training sufficient to meet future needs ? [D-2] -due to lack of funding, expertise and facilities all human health assessment are done outside the province [D-98]

Table 5.6.2. Field evidence of sub-components of resource capacity in Labrador (continued).

Sub-components of Resource Capacity		
	<ul style="list-style-type: none"> Community leaders have a 'capacity-oriented' view of the group and support this through a commitment to an 'inside out' philosophy towards decision making cases 	
Data Source	Supports Sub-component	Detracts from Sub-component
Key-Informant Interviews	<ul style="list-style-type: none"> -turnover of staff is hard, have to train on an ongoing basis (communications representative) -"not a lot of resources in town, we do try and make use of them though, but usually have to go to the Provincial government for other things"; "okay to get the help, unless it is something that costs a lot of money, then we are in trouble" (organizational representative) -OK communications society employ 12 full time people from the communities along the coast, bring in trainers for 6-12 month periods, but they are just trainers -"having our own research department has been a strength, we have branched into more than just the Eco-Research program projects"; "but there is no secure funding base, this limits the vision and direction"; "all the researchers are local with a variety of backgrounds, which is good" -"just about 100 University graduates live along the coast, 3 are from environment related programs, we are concerned about this" (LIA representative) -"LIHC hired an experienced health researcher and educator from outside and are having local people train with them" (LIHC representative) -"some of the local workers are able to do some of the environmental health inspector's responsibilities"; "some of the local health professionals are doing health promotions now" (provincial representative) -"we are trying to build capacity in the region and LIHC by providing some training and funds to assume more responsibility" (national representative) 	<ul style="list-style-type: none"> -"sometimes need expertise we don't have here (e.g. Lawyer), and we need funds for this"; "need more staff, more training, more funding"; "need larger, stronger base of resources, educated, active membership"; need more people, more educated people, more experienced people, more time" (organizational representatives) -"trends in education and training are the same, Human Resources and Development are transferring authority to the provinces, this is scary because of our relationship with the province" (organizational representative) -"moving towards a permitting and licensing and complaints type system (for environmental health), this will cause problems on the coast because they don't have money or resources to get an engineer, a planner etc." (regional representative) -"the communities are needing more training, money, infrastructure, and accountability structures" (national representative) -"for some things the local health professionals do not have the experience a health inspector has, so they could add to what they are doing if they were used more" (provincial representative)
Participant Observations	<ul style="list-style-type: none"> -past president encourages LIA to purchase old school building for office space -Labrador residents involved in workshops -LIA vice-presidential candidate states need for education and training for youth "need healthy people to have a healthy community" -school group raises money from recycling program -research office going far beyond original plans and being utilized and expected as regional research office, managing several projects -LIHC hired health educator and is having local person train with them -LIHC starts new nursery care program, but needs more funding 	<ul style="list-style-type: none"> -little technical training opportunities for people in town -EA hearings are stating real need for education and training in the communities -experience limits the activity or involvement of some individuals -resident expressed concern over LIA Board getting denied training opportunity, being told they don't need it -told LIA has no money for training for researchers right now -strong lack of technical support in the community (computers) with so many depending on them
Survey Interviews		
CASE 1 Cd in Caribou Liver	<ul style="list-style-type: none"> -used local hunters in commercial hunt and sampling program -LIA carried out hunt in 1985, LIDC took over 1986 	-decision done by outside authorities
Documents		
Key-Informant Interviews	<ul style="list-style-type: none"> -LIA started collection for herd management, hunters were involved in the collection -Inuit took the lead on the subsequent review of cesium in these tissues 	-"few resources to deal with it" (organizational representative)
Survey Interviews		

Table 5.6.2. Field evidence of sub-components of resource capacity in Labrador (continued).

Sub-components of Resource Capacity		
	<ul style="list-style-type: none"> Community leaders have a 'capacity-oriented' view of the group and support this through a commitment to an 'inside out' philosophy towards decision making processes 	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 2 PCBs in ringed seal and beluga Documents	-two LIA representatives involved with outside managers in developing message for release	
Key-Informant Interviews		"lack of funding for us to do some work ourselves" (organizational representative)
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site Documents	-LIA representatives argue into process, two key LIA representatives involved -LIA gets concerns regarding shipping activity of PCBs down the coast considered through negotiations with Department of National Defense (DND) -LIA wildlife officer involved as observer on the barge carrying PCBs -two LIA representatives involved in review meeting with provincial and national representatives discussing final clean up at Saglek of contaminated soil -hunters involved from Nain in sampling program, and Eco-Research staff involved in communications strategy	"LIA didn't have any hard data to compete" (organizational representative)
Key-Informant Interviews		
Participant Observations	-LIA using local people for sampling program at Saglek	
Survey Interviews		

Table 5.6.3. Field evidence of sub-components of resource capacity in Labrador.

Sub-components of Resource Capacity		
	• The community is involved in strategic planning sessions to estimate future resource needs for decision making activities and these activities are used to make a commitment to building the resources internally	
Data Source	Supports Sub-component	Detracts from Sub-component
CONTEXT		
Documents	<p>-many of training and educational issues / future needs are going into Impact and Benefit Agreement negotiations between LIA and the mining company; leaders thinking of developing resources internally [D-6]</p> <p>-EA scoping sessions make recommendations for more training and public education for people to be able to take advantage of opportunities [D-20]</p> <p>-LIA involvement in development of EA Draft Guidelines requires some forethought on training and educational needs [D-23]</p> <p>-LIHC considers needs for training, employment and good employment conditions in process [D-26]</p> <p>-the Education Coordinator handles training programs in the communities and educational programming for the region</p> <p>-LIA has Post-Pathways - post-secondary attendance for 2 or more years; Pathways which is the purchasing of seats for our membership at institutions we think we will need people trained from</p> <p>-LIHC has money for health education training and (LIA) put some into Community Health Representative (CHR) training programs [D-45]</p> <p>-enrollment in training programs: [D-35]</p> <p><u>Pathways (college and technical school - 2yrs)</u> North Coast = Health and Environment (3); Business Administration (22); Other (9) = 34 Happy Valley Goose Bay and Northwest River area = Health and Environment (1); Business Administration (9); Other (12) = 22</p> <p><u>Post Pathways (University and post-secondary - 3-4 yrs)</u> North Coast = Health and Environment (10); Business Administration (17); Arts (10); Education (18); Other (6) = 61 Happy Valley Goose Bay and Northwest River = Health and Environment (23); Business Administration (13); Arts (12); Education (1); Other (10) = 59</p> <p><u>Inuit Access Program (high school equivalency)</u> North Coast (14); Elsewhere (0)</p> <p><u>Summer student program statistics:</u> health and environment related (7-fisheries guardians); office staff (9), other (25) [D-36]</p> <p>-positive but mixed review on summer program, most interested but many bored as most are office jobs [D-37]</p> <p>-LIHC has done strategic planning and used information to support and make commitment to building expertise in community (staff for new positions hired locally, training needs expressed)[D-46]</p> <p>-many suggestions from local leaders for action involve public information and education, training local people to work on these things, to do things internally to support healing [D-55, 56]</p>	<p>-"Things are changing so fast it seems you always have to get more training to keep up with things. People need to be trained as new things develop. Can training be geared towards Inuit culture though ?" (workshop participant) [D-6]</p> <p>-limited training opportunities for local researchers (one workshop, and a few meetings and conferences, but little actual training [D-39]</p> <p>-funding for training and education is a challenge [D-1, 2]</p> <p>-federal negligence and provincial lack of interest in status of Inuit in Labrador [D-1]</p> <p>-training for LIA Board is limited and periodic and Board changes every so many years [D-2]</p> <p>-LIA and affiliates main source of employment in communities, with land claims and mineral development, will they have enough trained people ? is current training sufficient to meet future needs ? [D-2]</p> <p>-most resources for education come from outside the region, therefore hard to leverage and implement [D-1]</p> <p>-resource pool small (financial and human resources) for dealing with all issues [D-1]</p>

Table 5.6.3. Field evidence of sub-components of resource capacity in Labrador (continued).

Sub-components of Resource Capacity		
	• The community is involved in strategic planning sessions to estimate future resource needs for decision making activities and these activities are used to make a commitment to building the resources internally	
Data Source	Supports Sub-component	Detracts from Sub-component
	<p><u>LIDC programs provide employment on a local basis</u></p> <ul style="list-style-type: none"> -shrimp fishery 50% LIDC owned (involves employment, training, fees to northern license holders) -stone quarry 100% LIDC owned (20 jobs now) -PAIL North Warning System operation and maintenance 25% LIDC owned (6 training positions in 1995, 6 more in 1996) -TSI operation and maintenance and service supplier to mining companies (51% LIDC owned (45 jobs on and off, 12 full time) -other projects in "progress" including sale of art and sawmill proposal [D-71] 	
Key-Informant Interviews	<ul style="list-style-type: none"> -2 funded post-secondary education programs (1. For public institutions, 2. For purchase of seats for LIA membership at institutions they think they will need individuals trained at) -also have Inuit Access program (high school equivalency) -LIHC has training for health education and Early Childhood Education programming <p><u>Statistics</u></p> <ul style="list-style-type: none"> -average year 200-250 people in training (60-75 % are in Happy Valley Goose Bay) -have educational leave and support for staff -before approximately 70% of students going to post-secondary programs were from outside the North Coast, now about 50% are -"we are trying to establish a training institute" (LIA representative) -"we hired an experienced researcher and educator from outside and are having local people train with them.....this should help assume more responsibility over time.....but funds are still tight" (LIHC representative) -Town Council has master plan for development updated regularly -"we are trying to build capacity in the communities by providing some training and funds to assume more responsibility" (national representative) 	<ul style="list-style-type: none"> -"challenges include little control over the public education system"; "need to increase capability to fill requirements of agreements with government and industry"; "need a larger, stronger base of resources, educated, active membership"; "need more people, more educated people, more experienced people, more time"; "need more staff, more training, more funding" (organizational representatives) -"need more resources of the Town Councils, to do what they have to and take the slack off the provincial agencies"; "the communities are needing more money, more training, more infrastructure, and accountability structures" (provincial and national organizational representatives) -"bring in trainers for 6-12 months for special positions to train local people" (OK Communications Society) -"LIA was involved in a self-government workshop a few years back, but never any planning or strategic planning sessions....this is scary because many people don't know how to get where they want to go from here, and we don't talk about it" (LIA representative) -"LIA Board hard to work with regarding education and training as they are always changing and have little specific experience in this....use them to help make policies about education" (LIA representative)
Participant Observations	<ul style="list-style-type: none"> -Health Communities and needs assessment for health care needs and training through LIHC indication of their strategic planning and training emphasis -summer training program for LIA provides some training opportunities for students, but many are office positions <p><u>High School Graduation Statistics</u></p> <ul style="list-style-type: none"> -Happy Valley Goose Bay 96/7 Grade 12=82 Grads=77 97/8 Grade 12=82 Rigolet 96/7 Grade 12=5 Grads=0 97/8 Grade 12=4 Makkovik 96/7 Grade 12=9 Grads=8 97/8 Grade 12=5 Postville 96/7 Grade 12=2 Grads=2 97/8 Grade 12=2 Hopedale 96/7 Grade 12=6 Grads=6 97/8 Grade 12=2 Nain: 96/7 Grade 12=17 Grads=14 97/8 Grade 12=15 -LIHC running Nursery School program as well, but lacking financial support 	<ul style="list-style-type: none"> -LIA states they have no money to train the research staff right now -LIA representative mentioned interest in a management training program, but they don't have one right now (everything is on hold because of land claims)
Survey Interviews		

Table 5.6.3. Field evidence of sub-components of resource capacity in Labrador (continued).

Sub-components of Resource Capacity		
	• The community is involved in strategic planning sessions to estimate future resource needs for decision making activities and these activities are used to make a commitment to building the resources internally	
Data Source	Supports Sub-component	Detracts from Sub-component
CASE 1 Cd in Caribou Liver	-hunters involved in sampling program (experience building)	-“few resources to deal with this” (LIA representative)
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 2 PCBs in ringed seal and beluga		-“we need community workshops on this to educate people” (LIA representative)
Documents		
Key-Informant Interviews		
Survey Interviews		
CASE 3 PCBs at Saglek Radar Site	-hunters involved in sampling program for clean up study (experience building)	
Documents		
Key-Informant Interviews		
Participant Observations		
Survey Interviews		

Appendix D

List of Documents Reviewed for Framework

General Documentation:

- Binney, G. 1931. *The Eskimo Book of Knowledge*. Hudson's Bay Company, London, UK. [D-14]
- Brice-Bennett, C. 1994a. *The Northlanders: a history of the population, socio-economic relations and cultural change of Inuit occupying the remote northern coast of Labrador*. Labrador Institute of Northern Studies, Happy Valley-Goose Bay, Labrador. [D-5]
- Brice-Bennett, C. 1994b. *The redistribution of the northern Labrador Inuit population: A strategy for integration and formula for conflict*. Labrador Institute of Northern Studies, Happy Valley-Goose Bay, Labrador. [D-4]
- Brice-Bennett, C. 1977. *Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador*. Labrador Inuit Association, Nain, Labrador. [D-100]
- CESO. 1996. *Insiders and Outsiders. A report on a visit by a CESO team to Nain, Labrador, March 1-6, 1996*. CESO, Atlantic Office, Truro, Nova Scotia. [D-63]
- Columbus, K. 1981. *A study of the health issues of the Labrador Inuit. A report prepared for the Labrador Inuit Association*. September, 1981. 81 pp. [D-3]
- Haysom, V. 1992. *The struggle for recognition: Labrador Inuit negotiations for land rights and self-government*. *Inuit Studies*. 16(1-2): 179-197. [D-18]
- Inuit Tapirisat Canada. 1977. *Inuit Tapirisat of Canada: Speaking for the first citizens of the Canadian Arctic*. Inuit Tapirisat Canada, Ottawa, ON. [D-99]
- Jim Lotz Associates. 1996d. *The CESO / Nain Connection*. Jim Lotz Associates, Nova Scotia, Canada. [D-62]
- Mackey, M.G.A. 1984. *An evaluation of household country food use. Selected households, Nain, Labrador. August 1980-June 1981*. Extension Service and Faculty of Medicine, Memorial University of Newfoundland. [D-7]
- Mackey, M.G.A. 1984. *Country food use in selected Labrador Coast communities. Comparative Report. June-July 1980 and June-July 1981*. Extension Service and Faculty of Medicine, Memorial University of Newfoundland. [D-8]
- Mackey, M.G.A. 1984. *Country food use in selected Labrador coast communities. Comparative Report. June-July 1980 and June-July 1981*. Extension Service and Faculty of Medicine, Memorial University of Newfoundland. [D-9]
- Moss, W. 1988. *Constitutional responsibility for the Aboriginal peoples of Newfoundland. A report prepared for Jack Harris, M.P. by the Research Branch of the Library of Parliament*. House of Commons, Ottawa, ON. [D-10]
- Northern Perspectives. 1990. *Life on the Edge: The Inuit of Labrador. Special Edition, Northern Perspectives*. 18(2). [D-19]
- Paine, R. (Ed.) 1971. *Patrons and Brokers in the East Arctic. Social and Economic Papers No. 2, Institute of Social and Economic Research, Memorial University of Newfoundland*. University of Toronto Press: Toronto, ON. [D-12]

- Pauktuutit. 197?. *The Inuit Way: A Guide to Inuit Culture*. Pauktuutit, Montreal, QC. [D-15]
- Peters, E., and Legare, A. 1997. *The role of Inuit and non-Inuit organizations regarding the investigation and communication of human health risks due to food chain contaminants in Nunavik and Labrador. A final report prepared as part of the Eco-Research Program: Avativut / Ilusivut Research Program*. Department of Geography, Queen's University, Kingston, Ontario. August, 1997. (Draft) [D-98]
- Tanner, A., Kennedy, J.C., McCorquodale, S., and G. Inglis. 1994. *Aboriginal peoples and governance in Newfoundland and Labrador. A Report for the Governance Project*. Royal Commission on Aboriginal Peoples. St. John's Newfoundland. [D-1]
- Tompkins, E. (Consultant). 1988. *Pencilled out: Newfoundland and Labrador's Native People and Canadian Confederation, 1947-1954*. A report prepared for Jack Harris, M.P. on the impact of the exclusion of Newfoundland and Labrador's native people from the Terms of the Union in 1949. House of Commons, Ottawa, ON. [D-11]
- Tongamiut Inuit Annait. 1997. *52% of the Population Deserves a Closer Look: A proposal for Guidelines Regarding the Environmental and Socio-Economic Impacts on Women from the Mining Development at Voisey's Bay*. Submission of comments on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project. April 16, 1997. Tongamiut Inuit Annait, Ad hoc committee on Aboriginal women and mining in Labrador. Nain, Labrador. [D-28]
- Webbs. 1997. *Webb Family presentation to the Environmental Assessment Review Panel for the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project*. April 17, 1997. Environmental Assessment Panel Office, Nain, Labrador. [D-30]
- Williamson, H.A. 1964. *The Moravian Mission and it's impact on the Labrador Eskimo*. *Arctic Anthropology*. 2(2): 32-36. [D-17]
- Williamson, T. 1994. *Labrador Inuit politics from household to community to nation*. A Report for the Royal Commission on Aboriginal Peoples: The North. St. John's Newfoundland. [D-2]
- Williamson, T. 1996. *Seeing the Land is Seeing Ourselves*. Final Report. Issues Scoping Project. Report prepared for the Labrador Inuit Association by T. Williamson. Labrador Inuit Association, Nain, Labrador. [D-20]
- Williamson, T. 1997. *From Sina to Sikujaluk: Our Footprint*. Mapping Inuit Environmental Knowledge in The Nain District of Northern Labrador. Report prepared by T. Williamson for the Labrador Inuit Association. Labrador Inuit Association, Nain, Labrador. [D-21]

Documentation of Organizations:

Labrador Inuit Association

- Axtell, T. 1981. *Northern Labrador communication study fieldworker report: Inuit and settler communication needs*. A report prepared for the LIA, Nain, Labrador. [D-64]
- Labrador Inuit Association. 1994b. *Bylaws of the Labrador Inuit Association*. Labrador Inuit Association, Nain, Labrador. [D-32]
- Labrador Inuit Association. 1996. *Labrador Inuit Association Policy and Procedures Employees Manual*. Labrador Inuit Association, Nain, Labrador. [D-31]

- Labrador Inuit Association. 1997a. Presentation on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project by the Labrador Inuit Association. April 17, 1997. Labrador Inuit Association, Nain, Labrador. [D-24]
- Labrador Inuit Association. 1997b. Labrador Inuit Association supplementary submission on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project. May, 1997, Goose Bay, Labrador. Labrador Inuit Association, Nain, Labrador. [D-25]
- Labrador Inuit Association. 1997c. Research Guidelines for the Labrador Inuit Settlement Area. Labrador Inuit Association, Nain, Labrador. [D-33]
- Labrador Inuit Association. 1997d. Newsletter of Labrador Inuit Association. Vol.1(1). Labrador Inuit Association, Nain, Labrador. [D-34]
- Labrador Inuit Association. 1997e. Summer Employment Program statistics. Unpublished data. Labrador Inuit Association, Nain, Labrador. [D-36]
- Labrador Inuit Association. 1997f. Review of summer employment program. Unpublished data. Labrador Inuit Association, Nain, Labrador. [D-37]
- Labrador Inuit Association. 1997g. Education program statistics. Unpublished data. Labrador Inuit Association, Nain, Labrador. [D-35]
- Labrador Inuit Association. 1997h. Board Training for Labrador Inuit Association. Workshop report prepared for the Labrador Inuit Association by Consilium. March 19, 1997. Labrador Inuit Association, Nain, Labrador. [D-69]

Eco-Research Office, Labrador Inuit Association

- Labrador Inuit Association 1997i. Eco-Research presentation to the LIA Annual General Assembly. Eco-Research Department, Labrador Inuit Association, Nain, Labrador. [D-39]
- Labrador Inuit Association. 1997j. Eco-Research Project Reports Binder. Labrador Inuit Association, Nain, Labrador. [D-84]

Labrador Inuit Health Commission

- Labrador Inuit Health Commission. 1991a. Planning for the Future: 1991 Health Conference Report. Labrador Inuit Health Commission, Northwest River, Labrador. [D-40]
- Labrador Inuit Health Commission. 1991b. Proceedings of the Workshop on Health Information Systems in Labrador. April 1991. Labrador Inuit Health Commission, Northwest River, Labrador. [D-41]
- Labrador Inuit Health Commission. 1995a. Presentations to the Building Healthier Communities Workshop, by the Labrador Inuit Health Commission. March 27-30, 1995. Labrador Inuit Health Commission, Northwest River, Labrador. [D-43]
- Labrador Inuit Health Commission. 1995b. Building Healthier Communities Workshop. March 28-30, 1995, Makkovik, Labrador. Labrador Inuit Health Commission, Northwest River, Labrador. [D-44]
- Labrador Inuit Health Commission. 1995c. Building Healthier Communities Follow-up Workshops. November 7-9, 1995. Final Report. Labrador Inuit Health Commission, Northwest River, Labrador. [D-45]

- Labrador Inuit Health Commission. 1995d. A Community Health Plan for Labrador Inuit. A Proposal Submitted to Medical Services Branch (MSB) of Health Canada by The Labrador Inuit Health Commission. Labrador Inuit Health Commission, Northwest River, Labrador. [D-46]
- Labrador Inuit Health Commission. 1996a. Workshop on Social Health and Environmental Change. March 26-28, 1996, Nain, Labrador. Labrador Inuit Health Commission, Nain, Labrador. [D-6]
- Labrador Inuit Health Commission. 1996b. Report on the Proceedings of the Building Healthier Communities Regional Workshop. March 12, 13, 1996, Hopedale, Labrador. Labrador Inuit Health Commission Northwest River, Labrador. [D-47]
- Labrador Inuit Health Commission. 1997a. Labrador Inuit Health Commission Regional Health Survey. Labrador Inuit Health Commission, Northwest River, Labrador. [D-42]
- Labrador Inuit Health Commission. 1997b. What Transfer Means to the Labrador Inuit. Labrador Inuit Health Commission, Northwest River, Labrador. [D-48]
- Labrador Inuit Health Commission. 1997c. LIHC Organizational Chart, Revised June/97. Labrador Inuit Health Commission, Northwest River, Labrador. [D-70]
- Labrador Inuit Health Commission. 1997d. Labrador Inuit Health Commission, Addendum to the presentation of the Labrador Inuit Association on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project. April 17, 1997. Labrador Inuit Health Commission, Nain, Labrador. [D-26]

Labrador Inuit Development Corporation

- Labrador Inuit Development Corporation. 1997. Labrador Inuit Development Corporation, Overview. Labrador Inuit Development Corporation, Nain, Labrador. [D-71]

OKalaKatigêt Communications Society

- OKalaKatigêt Society. 1995. OKalaKatiget Society Fact Sheet. OKalaKatiget Society, Nain, Labrador. [D-38]

Town Council of Nain

- Nain Action Group. 1997. Nain Action Group Newsletter. Nain Action Group, Nain, Labrador. [D-50]
- Town Council of Nain. 1991a. Report on a public consultation process conducted by the Town Council of Nain, June to November 1991. Town Council of Nain, Nain, Labrador. [D-51]
- Town Council of Nain. 1991b. Press Release on Plebiscite on Alcohol. Town Council of Nain, Nain, Labrador. [D-53]
- Town Council of Nain. 1992. Community Leaders' Dialogue Concerning Suicide. Issues Proposed for Action. August 10 to November 23, 1992. Town Council of Nain, Nain, Labrador. [D-52]
- Town Council of Nain. 1995a. Public meeting on mineral exploration in the Nain area, conducted by the Town Council of Nain. May 8, 1995, Nain Community Hall. Town Council of Nain, Nain, Labrador. [D-54]

- Town Council of Nain. 1995b. Town Council of Nain to Premier Clyde Wells, Newfoundland. Attached Task Force's Survey of Community Perspectives on Mineral Development. Town Council of Nain, Nain, Labrador. [D-55]
- Town Council of Nain. 1995c. Minutes of a public meeting with Premier Clyde Wells on the impact of mineral exploration and development in the Nain area. June 20, 1995, Nain Community Hall. Town Council of Nain, Nain, Labrador. [D-56]
- Town Council of Nain. 1996a. Town of Nain Information Directory. Town Council of Nain, Nain, Labrador. [D-49]
- Town Council of Nain. 1996b. Resolving the Nain Hill Issue. A Report to the Town Council of Nain, Labrador by Jim Lotz, CESO Volunteer Advisor. May 3, 1996. Town Council of Nain, Nain, Labrador. [D-57]
- Town Council of Nain. 1996c. Memorandum from Town Manager to Town Council re: Developing an Emergency Plan. April 18, 1996. Town Council of Nain, Nain, Labrador. [D-58]
- Town Council of Nain. 1997a. Emergency Planning Committee. May 29, 1997. Town Council of Nain, Nain, Labrador. [D-59]
- Town Council of Nain. 1997b. Town of Nain Municipal Plan Review. March, 1997. Report Prepared by World Geography Class, Jens Haven Memorial School. Town Council of Nain, Nain, Labrador. [D-61]
- Town Council of Nain. 1997c. Town of Nain Municipal Emergency Plan. Town Council of Nain, Nain, Labrador. [D-60]
- Town Council of Nain. 1997d. Presentation to Delegates, Board Members, and Invited Guests of Torngat Regional Housing Association 1997 Annual General Meeting. June 2-5, 1997 Postville, Labrador. Town Council of Nain, Nain, Labrador. [D-61b]
- Town Council of Nain. 1997e. Town Council of Nain, presentation to the Environmental Assessment Review Panel for the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project. April 16, 17, 1997. Town Council of Nain, Nain, Labrador. [D-29]

Provincial Government of Newfoundland and Labrador and Government of Canada

- Canadian Environmental Assessment Agency. 1997a. Memorandum of Understanding on Environmental Assessment of the Proposed Voisey's Bay Mining Development. Canadian Environmental Assessment Panel Office, Ottawa, ON. [D-22]
- Canadian Environmental Assessment Agency. 1997b. Draft Environmental Impact Statement Guidelines for the Review of the Voisey's Bay Mine and Mill Project. March 14, 1997. Canadian Environmental Assessment Panel Office, Ottawa, ON. [D-23]
- Canadian Polar Commission. 1996. For Generations to Come: Contaminants, the Environment, and Human Health in the Arctic. Report and Recommendations. Polaris Papers No. 10. Canadian Polar Commission, Ottawa, ON. [D-13]
- Government of Newfoundland and Labrador. 1997. Overview of The Department of Municipal and Provincial Affairs. Presentation on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project by Province of Newfoundland and Labrador. Environmental Assessment Panel Office, Nain, Labrador. [D-65]

- Government of Newfoundland and Labrador. 1997. Community Health Core Programs. Community Health, Department of Health, St. John's, Newfoundland. Presentation on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project by Province of Newfoundland and Labrador. Environmental Assessment Panel Office, Nain, Labrador. [D-66]
- Government of Newfoundland and Labrador. 1996. Department of Health Annual Report, 1994-1995. Department of Health, Government of Newfoundland and Labrador, St. John's Newfoundland. Presentation on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project by Province of Newfoundland and Labrador. Environmental Assessment Panel Office, Nain, Labrador. [D-67]
- Health Canada. 1994. Strategies for Population Health: Investing in the Health of Canadians. Health Canada, Communications Directorate, Ottawa, Ontario. Presentation on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project by Health Canada. Environmental Assessment Panel Office, Nain, Labrador. [D-68]
- Health Canada. 1996. Your Environmental Health Program. Health Canada, Ottawa, ON. [D-83]
- Indian and Northern Affairs Canada. 1987. Labrador. Inuktitut Special Edition. Indian and Northern Affairs Canada, Ottawa, ON. [D-16]
- Natural Resources Canada. Natural Resources Canada comments on the Draft Environmental Impact Statement (EIS) Guidelines for the review of the Voisey's Bay mine and mill project. March 27, 1997. Office of Environmental Affairs, Minerals and Metals Sector, Geological Survey of Canada, CANMET, Ottawa, ON. [D-27]

Legislation

- Government of Canada. 1984. Canada / Newfoundland / Native Peoples of Labrador Health Agreement. Ottawa, Ontario. [D-72]
- Government of Newfoundland and Labrador. 1995. Chapter P-37.1. An Act Respecting the Protection of the Health of the Public. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-73]
- Government of Newfoundland and Labrador. 1995. Consolidated Newfoundland Regulation 26/96. Eastern Newfoundland Regional Community Health Board Order. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland [D-74]
- Government of Newfoundland and Labrador. 1995. Chapter H-9. An Act Respecting the Management and Operation of Hospitals in the Province. The Hospitals Act. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-75]
- Government of Newfoundland and Labrador. 1995. Consolidated Newfoundland Regulation 803/96. Sanitation Regulations under the Public Health Act. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-76]
- Government of Newfoundland and Labrador. 1996. Consolidated Newfoundland Regulation 789/96. Diagnostic and Public Health Laboratories Regulations. . Statutes of the

- Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-77]
- Government of Newfoundland and Labrador. 1995. An Act Respecting the Protection of the Environment. . Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-78]
- Government of Newfoundland and Labrador. 1995. An Act Respecting the Fishery. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-79]
- Government of Newfoundland and Labrador. 1995. An Act Relating to Wildlife. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-80]
- Government of Newfoundland and Labrador. 1995. An Act Respecting the Recognition in Official Matters of That Part of the Province Situated on the Mainland of Canada Called Labrador. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-81]
- Government of Newfoundland and Labrador. 1995. Chapter E-14. An Act to Protect the Environment of the Province by Providing for Environmental Assessment. Statutes of the Province of Newfoundland. Printed by Earl G. Tucker, Queens' Printer, St. John's, Newfoundland. [D-82]
- Government of Newfoundland. 1990. Chapter U-7. An Act Respecting Urban and Rural Planning. In The Revised Statutes of Newfoundland. Volume 10. Published by D.C.B. Dawe, Queen's Printer: St. John's Newfoundland. [D-85-in library]
- Government of Newfoundland. 1990. Chapter D-1. An Act to Promote Public Safety in the Transportation of Dangerous Goods. In The Revised Statutes of Newfoundland. Volume 3. Published by D.C.B. Dawe, Queen's Printer: St. John's, Newfoundland. [D-86-in library]
- Government of Newfoundland. 1990. Chapter M-23. An Act Relating to the Establishment and Administration of Municipal Government in the Province. In The Revised Statutes of Newfoundland. Volume 7. Published by D.C.B. Dawe, Queen's Printer: St. John's, Newfoundland. [D-87-in library]
- Government of Canada. 1997. Chapter A-12. Arctic Waters Pollution Prevention Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-88]
- Government of Canada. 1997. Chapter C-6. Canada Health Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-89]
- Government of Canada. 1997. Chapter W-9. Canada Wildlife Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-90]
- Government of Canada. 1997. Canadian Environmental Assessment Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-91]
- Government of Canada. 1997. Canadian Environmental Protection Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-92]
- Government of Canada. 1997. Canadian Environmental Protection Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-93]
- Government of Canada. 1997. Fisheries Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-94]

- Government of Canada. 1997. Transportation of Dangerous Goods Act. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-95])
- Government of Canada. 1997. Constitutional Amendments. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-96])
- Government of Canada. 1982. Constitution. Consolidated Statutes of Canada. Internet (<http://canada.justice.gc.ca/> [D-97])

Appendix E

Text of Press Releases for Case Studies Reviewed

Case 1

Cadmium in Caribou

"...After consultation with the Provincial Department of Health, we wish to advise public not to eat the liver and kidney of moose and caribou. The results of recent laboratory testing of over 200 samples of these organs, indicate that the cadmium contained in one meal of either liver or kidney, combined with a person's normal consumption of cadmium in other foods, would likely be more than the weekly allowable intake of cadmium as recommended by the World Health organization. The Minister stressed, however, that there is no reason to avoid eating muscle of these animals.....The Wildlife Division will continue to monitor the situation through the Province and will make further announcements as information becomes available" (Minster of Culture, Recreation and Youth, Province of Newfoundland and Labrador, 1987).

Case 2

PCBs in Marine Mammal Fat

"This statement is made with the support and agreement of the leaders from Nunavut, Nunavik, Labrador and Inuvialuit regions. We have recently received a health assessment from Health Canada about contaminants in Inuit food. We would like Inuit to be the first to know about this health assessment. My purpose today is to provide you with the facts as we know them.

For the past several years, especially through the Contaminants Program of the Arctic Environment Strategy, scientists have been studying the amounts of contaminants in different parts (i.e. meat, liver, blubber) of Arctic wildlife to learn where and how these contaminants are accumulating in animals. Contaminants used in industrial and agricultural activities

around the world are being carried by wind and ocean currents to the Arctic, where they get into the food chain.

Through these studies, scientists have discovered elevated amounts of certain contaminants, particularly those found in the blubber of Arctic seals and whales. These contaminants include organochlorines, such as toxaphene and chlordane which are used as pesticides in agriculture. These levels are high throughout the Arctic including Alaska and Greenland, but they are not as high as in some other parts of the world such as the St. Lawrence River.

The studies show that this is not a new problem - these contaminants have been in marine mammals in the Arctic for at least ten or twelve years, and maybe more. The levels of some contaminants are increasing, but the levels of some others are staying the same or going down.

We have recently received Health Canada's assessment of the study results about contaminants in whales, seals and some fish. The quantity of toxaphene and chlordane in beluga and seal blubber, and of mercury in mattak, has led Health Canada to recommend maximum weekly consumption levels. In some cases these levels are lower than what many people currently eat.

Very little is known about the actual human health effects of these contaminants. Health Canada's recommended consumption levels are based largely on observed health effects in laboratory animals, and therefore incorporate very large safety factors. Scientists have not identified actual harmful effects from these contaminants, anywhere in the Arctic, on either marine mammals themselves, or the people who eat them. If there are any effects, for example on future generations, they may be very hard to detect.

The social, cultural and nutritional benefits to Inuit of hunting, sharing, and eating marine mammals, on the other hand, are very well known. These are unchanged by the presence of contaminants. It may be that marine mammal fats (mattak, uqsuq and misiraq) actually

protect Inuit from certain types of illness. Many other things, such as smoking and drinking, are much more hazardous than eating beluga or seal blubber.

So far as we are aware, the risks to public health from continuing to eat beluga and seal blubber are very small and are outweighed by the benefits to you of these foods. However, Inuit must judge for themselves what is an acceptable risk for themselves and their families.

We will continue to monitor the situation and keep you informed. We will also be working with the responsible government agencies (Health Canada and GNWT Health) to provide further information to you as soon as possible and in a form that you can understand. As a result of the good cooperative relationship that we have developed with science and health agencies, we will continue to work with these researchers to monitor contaminants in our food and environment. For example, Inuit in Nunavik and Labrador are currently involved in an Eco-Research project dealing with contaminants, and monitoring effects on new-borns and infants.

Contaminants in our food is unacceptable and we would like to see them eliminated. We therefore call on the international community to reduce the use and production of these chemicals. Inuit have been and will continue to be involved in the work of negotiating an international protocol on reducing the quantity of contaminants making their way to the Arctic."

For more information, contact (list of regional representatives - not necessarily presidents) (President, ITC - Rosemarie Kuptana, 1995).