

LOW LEVEL FLYING ACTIVITIES IN LABRADOR

Report on the Community Consultation

Conducted in

Kuujjuaq and Kangirsualujjuaq

Prepared for  
DPA Group Inc.

By

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Kuujjuaq, Québec

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## TABLE OF CONTENTS

	Page
List of Tables	ii
List of Figures	ii
<b>1. INTRODUCTION</b>	<b>1</b>
<b>2. DATA COLLECTION AND ANALYSIS</b>	<b>6</b>
2.1 Inuit Involvement and Community Consultation	6
2.1.1 Inuit Perceptions and Concerns	9
2.1.2 Inuit Land Use Data and Ecological Knowledge	10
2.2 Data Processing	12
<b>3. A REGIONAL AND COMMUNITY PROFILE</b>	<b>14</b>
3.1 An Historical Overview	14
3.2 Demographic Characteristics	20
3.3 Social and Economic Characteristics	24
3.3.1 The Public Sector Economy	28
3.3.2 The Private Sector Economy	29
3.4 The Subsistence Economic Sector	32
<b>4. LAND USE AND ECOLOGICAL KNOWLEDGE</b>	<b>41</b>
4.1 Community Land Use and Participation	42
4.2 Land Use Alterations Over Time	47
4.3 Understanding Land Use	51
<b>5. COMMUNITY PERCEPTIONS AND CONCERNS</b>	<b>55</b>
5.1 Community Concerns and Perceptions	55
5.1.1 Noise	56
5.1.2 Smoke Emissions	57
5.1.3 Mid Air Collisions	58
5.1.4 Summary of Main Concerns	58
5.2 Mitigation	59
5.2.1 Summary of Mitigative Measures	60
5.3 Requests	60
5.3.1 Summary of Requests	62
5.4 Sightings	62

### LIST OF APPENDICES

Appendix I	List of Maps
Appendix II	List of Hunters Interviewed and Their Hunting Status
Appendix III	Notes from Community Consultation in Kuujjuaq
Appendix IV	Notes From Community Consultation in Kangiqsualujjuaq
Appendix V	Monthly Harvest (%) of Key Species for Kuujjuaq and Kangiqsualujjuaq
Appendix VI	References

## LIST OF TABLES

	Page
Table 1. Inuit Populations of Northern Quebec (1987).	20
Table 2. Actual Population Growth Curve Numbers for Kuujjuaq and Kangiqsualujjuaq, 1977-2000.	25
Table 3. Kuujjuaq Harvest Tables, 1976-1980.	33
Table 4. Kangiqsualujjuaq Harvest Tables, 1976-1980.	34
Table 5. Harvest Totals from the Kuujjuaq Salmon/Char Fishery, 1962-1978.	49

## LIST OF FIGURES

Figure 1. Nunavik - Northern Quebec and its Environs.	2
Figure 2. Outer Limits of Lands Used for Kuujjuaq and Kangiqsualujjuaq.	15
Figure 3. Population Pyramid for Northern Quebec (%), 1985.	21
Figure 4. Population Pyramid for Kuujjuaq, 1985.	22
Figure 5. Population Pyramid for Kangiqsualujjuaq, 1985.	23
Figure 6. Population Growth Curves for Kuujjuaq and Kangiqsualujjuaq, 1977-2000.	25
Figure 7. Location of the Inuit Outfitting Camps.	31
Figure 8. Breakdown of Total Edible Food by Species Group (%), 1976-1980.	35
Figure 9. Breakdown of Harvest Totals (%), 1976-1980.	36
Figure 10. Breakdown of Harvest Totals (%), 1976-1980.	37
Figure 11. Breakdown of Harvest Totals (%), 1976-1980.	38
Figure 12. Average Total Edible Harvest for All Species, by Month (%), 1976-1980.	40
Figure 13. A Comparison of the Total Catch and the Average Catch per Fisherman, Koksoak Fishery, 1962-1978.	49

## 1. INTRODUCTION

In October, 1987, the Research Department of Makivik Corporation submitted a proposal to the consulting firm DPA to undertake a study in the communities of Kuujjuaq and Kangiqsualujjuaq on the potential impacts that might result from an increase in low level military flying exercises and from the construction of a Tactical Weapons Training Center in Goose Bay, Labrador. Although the territory utilized by the Inuit of these two communities is north of the major zone of impact, Section 3.1 of the Guidelines for the Preparation of an Environmental Impact Statement on Military Flying Activities in Labrador and Québec (FEARO, 1987) called for studies to identify the potential impacts of this activity on the environment, resources and inhabitants of these more distant territories. The position of the two communities in relationship to the proposed project is illustrated in Figure 1.

The study objectives and data gathering procedures described in the proposal were slightly revised and modified after discussions between Makivik Corporation and DPA. As a result, the primary objectives of the Makivik study were :

1. To prepare a regional profile of south-eastern Ungava Bay describing the characteristics common to both communities and which provides a brief overview of the history, economy and resources of the area.

2. To prepare a brief profile of each community using available statistical data as well as information collected during community field work. These profiles will stress demography, economic activities within the wage and subsistence sectors, education and training, and general social conditions.

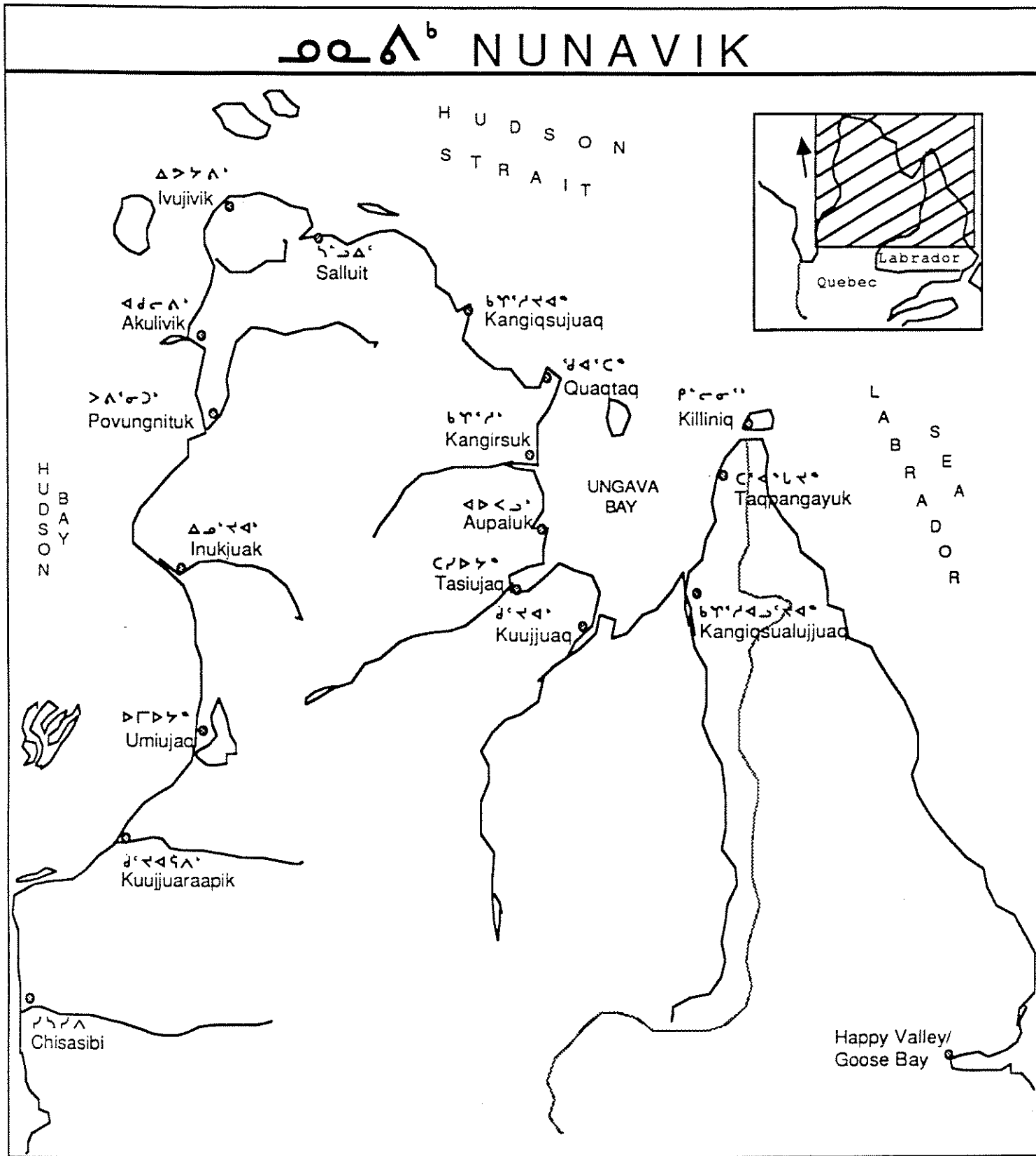


Figure 1. Nunavik - Northern Québec and its Environs.

3. To describe and explain the historical and current patterns of Inuit land use for each community and to support this land use data with information on the social and economic importance of harvesting activities.

4. To define the hunters' perception of the potential impacts from low flying military aircraft on land use activities and on the behaviour and ecology of local resources which in turn may have impacts on the human use of these resources and territory.

The information required to meet these objectives was derived from field work in each community and from other data already compiled by the Makivik Research Department and the Kativik Regional Government. In particular these sources included unpublished information on land use and ecology, harvest level data, and on the social and economic characteristics of the communities as compiled in several reports. The statements by Inuit about the future in relationship to major outside development projects were collected in individual and group interviews.

This final report summarizes the findings from this work. It is supported by a series of maps, already submitted under a separate cover, that illustrate the seasonal land use for each community as well as the ecological patterns for the Québec/Labrador Peninsula. The subject of these maps are identified in Appendix 1. In summary, two general and six specific conclusions can be stated. The two general conclusions are:

1. That the statements made by the Inuit, based on their land use and ecological information about the territory and its resources, imply a range of interpretations that denote:

a) specific use of particular territories based on the seasonal behavior and the environmental accessibility of resources;

b) the existence of land use as part of an ancient but constantly evolving system that reflects many other economic and social characteristics of Inuit culture;

c) the requirement to view land use and ecology as a long-term process that cannot be judged or limited by the existence of a particular pattern operating at one particular time;

d) the application of this principle means that the quantitative (with respect to harvest) or qualitative (with respect to social and cultural) values will change in accordance with the larger context of life in the two communities.

2. That the process of social and economic impact evaluation that began with this study must encourage further exchange of information about the project and continued participation by Inuit in studies, planning and decision-making.

The specific conclusions are:

1. That the Inuit of both communities have, and will continue to rely on the marine, terrestrial and avian resources of the Québec/Labrador Peninsula. The fact that the way this area and its resources are used have changed over time, should not be interpreted to mean that the importance of land has changed. The system is dynamic and this implies that the geography, technology, seasonality, economics and social context of its use will shift into different combinations over time.

2. That the economic potential from these resources is measured, primarily through their contribution to the household economy. The annual harvest of 388,000 pound for Kuujjuaq and of 303,000 pounds for Kangiqsualujjuaq yields a potential of approximately 1 kilogram of wild food per person per day from harvesting. This potential daily contribution depends upon variations in the seasonal harvest success. The resources also contribute to the development of a small commercial economy based primarily on outfitting camps for fishing and caribou hunting (with an estimated value of \$12 to 15 million for the George River region).

3. That the Inuit realize many of the resources they harvest are part of a much larger ecological systems that exist within the Québec/Labrador Peninsula or coastal waters. The existence of such extensive resource systems

means that localized impacts could be transferred over significant distances.

4. That the potential impact on both Inuit communities will be created as a consequence of ecological/resource disturbance which might then have an impact on the long-term subsistence and or on the emerging commercial economies that are based on these resources.

5. That the distance from the proposed Training Center will not create positive or negative impacts on social and employment conditions in either communities.

6. That the Inuit from both communities have well developed perceptions or concerns about certain potential "long distance" ecological or other impacts from the project. In particular, these are:

- . impacts from noise;
- . impacts from exhaust emissions;
- . impact of potential mid air collisions.

They also have put forward means to mitigate these potential impacts, which include:

- . protection of river valleys;
- . protection of critical habitats linked to the ecology and behavior of particular resources, such as caribou calving areas;
- . preventing the use of certain areas during critical periods.
- . minimizing flying along and over coastal areas especially during ecologically sensitive times.
- . not to use area 1A of the proposed flying area or at least not in May and June.



## 2. DATA COLLECTION AND ANALYSIS

### 2.1 Inuit Involvement and Community Consultation

Community consultation involves much more than simple explanations of why researchers want to carry out a study. The basic goal of the consultation process, especially with respect to impact assessment, is to incorporate the values, knowledge and perspective of Inuit for identifying problems and for then suggesting how best to resolve these problems.

Although this goal is easy to state, it is difficult to achieve. The type of problems to be solved and the data required for their solution, is most often the responsibility of outside researchers; the question, answer and discussion format of consultation is usually carried on through a translator; the data or perspective of Inuit that results from this process is then analyzed and interpreted by outside researchers according to a particular methodology; and the results are presented in specialized reports which are reviewed and evaluated within a framework of non-native standards and judgments. As a result, the communities' involvement is only during the first phase of consultation and not during the most critical stage, that of reaching conclusions. Eliciting perceptions and concerns held by Inuit about the potential impacts from a project can have other consequences. For example an effective consultation process can help to identify and resolve incorrect information or assumptions that Inuit may have when evaluating impacts. Alternatively, consultation with a community may create the reverse of this situation since it can "force" responses that are then easily refuted or even ridiculed by outside "experts", thus making it appear as though Inuit knowledge or opinion is not of real value.

Inuit question who controls the assessment procedure; what type of protection impact assessment actually provides for the bio-physical and

socio-economic environment of their community and region; why these protections are needed; and how specific impacts are determined and corrective or remedial measures established. Inuit state that, although it may be the mandate of project proponents to carry out impact assessment, it is the communities that are penalized when improper studies and poor consultation are carried out. As a result, Inuit are adamant in their opinions about what elements in the life of their communities are most important with respect to potential impacts from a project. They also caution researchers not to establish only one value system around which positive and negative impacts from development projects are evaluated.

Such an approach does not mean that southern-based concerns are disregarded, or basic principles of research and analysis ignored. It simply means that the context for identifying and solving problems must be enlarged and the time frame, methods, and statement of results be made accountable to Inuit. The proponent of a development project must therefore be able to interact with Inuit values and points of view in a manner that enables a cross cultural understanding of problems and their solutions.

The approach taken in this study emphasized Inuit participation and consultation through individual and group interviews. The approach was aided by the fact that this was not the first impact study in either community. There is a growing body of data, opinion and value statements that have resulted from other studies and which need to be incorporated in all future studies. After all, if "southern" science proceeds incrementally in the building of understanding, then the information gained through community consultation must accumulate and be integrated rather than be treated as isolated responses to independent events.

Upon arriving in each community, the researchers organized a joint meeting with the Municipal Council and the Landholding Corporation. The

meeting provided an opportunity to each community to be informed about the current status of low level flying activities in Labrador. The justification for, and activities associated with, a Tactical Weapons Training Centre were explained and the role of impact assessment in the decision-making process was clarified. This meeting encouraged the community leaders to express their concerns about the project and to develop a list of important individuals that the researchers should interview. (Note: No additional groups within the community were identified as being necessary to interview). The background information that was provided to the community leaders was repeated at the beginning of each individual or group interview in order to assure that each individual had a clear understanding of the purpose and context of the study.

Of the individuals interviewed the majority were men. No other group were referred to as necessary to over 30 years of age. This tended to occur both as a result of their selection by the community leaders and because they were, or had been, the most active out on the land. The representativeness of the land use of those interviewed would be very close to that of the rest of the communities, however, the duration of their stay on the land might be longer than that of the others.

Two types of information were collected during the community consultation; perceptions and concerns relating to low level flying activities, and specific data on land use and ecological knowledge. The first called for Inuit to discuss their ideas and feelings and the second required much more specific documentation about the activities of hunters and the behavior of wildlife. Individual interviews were used when acquiring specific land use information but group interviews were encouraged for the discussion of ecological information or when asking Inuit to comment on their perceptions and concerns about possible impacts from low flying military aircraft.

Group interviews tend to be more successful at encouraging an exchange of ideas and information between Inuit in relationship to the issues being discussed. Although it may take time and technique to create effective group dynamics, once it occurs, a process of active discussion results. In addition, it is necessary to maintain a certain level of continuity between interviews, while allowing each group discussion to develop along its own path. Most interviews were conducted with groups of two or three individuals with the assistance of an interpreter. A list of the individuals interviewed is found in Appendix 2.

#### 2.1.1 Inuit Perceptions and Concerns

The first phase of the community interviews collected information on the perceptions and concerns about low flying military aircraft from the communities of Kuujjuaq and Kangiqsualujjuaq. These interviews were structured around a general set of questions that were used to focus but not lead, the response. The discussions were recorded in written notes and are included in Appendix 3 and 4. The questions asked during the interviews stressed four topics :

1. The importance of land use and harvesting activity to the economy and "lifestyle" for individuals, families and for the community as a whole.

2. The impression of individuals about changes or shifts in the location of, or participation in, hunting activities.

3. The assessment of the causes for these changes and about their significance for individuals and for the community.

4. The establishment of individual perceptions concerning the potential impact on the community from low level military aircraft. This includes:

- a) Determining actual experience with such flying activity (location, season, frequency, description of the flight, vis-à-vis noise, altitude, directions, observable impacts at surface).

- b) Perception of potential impact of low level flying on land resources and therefore on hunting activity and harvest success.
- c) Perception about the potential impacts of a sea range on marine resources and hunting activity.
- d) Identification of sensitive areas, times of critical ecological activities or resources, and ofland use activity of hunters in relationship to low flying aircraft.
- e) General comments and ideas related to impact from low level flying activity based on speculation and assumptions.

It is obvious that much of the information sought by these questions cannot be expected to reflect specific facts, since hunters were asked for their opinion about a phenomena that few have actually experienced. This approach will only be valid if these "speculations" are allowed to serve as working hypotheses. When Inuit suggest possible associations between a resource and a disturbance, or when, from their observations, they are able to comment on changes in the number, geographical pattern, behavior or general conditions of resources, they are, in effect, identifying a problem and perhaps hypothesizing particular causes for this problem.

#### 2.1.2 Inuit Land Use Data and Ecological Knowledge

In the Canadian north, as well as in other parts of the world that are occupied by aboriginal or traditional societies, land use mapping has become a basic method to identify, and understand the interconnection between society and its territory. This relationship is social and economic, as well as intellectual and ideological. While land use maps cannot illustrate all of the important relationships that link people, resources and territory, they do provide a critical first step. Maps also have the very important advantage of providing a common

language in the communication of Inuit experience and knowledge. All hunters relate to a map without the need of translation and thus it conveys information without the problem or biases of written texts that often must be translated.

The second part of the interviews, therefore, concentrated on the collection of Inuit land use data and ecological knowledge. This was essentially a mapping exercise, although it also encouraged hunters to discuss other related issues. Many of the comments made by the Inuit during the first phase of interviews were reiterated and further developed in these discussions. Additional statements were made during the mapping sessions about potential impacts from low level military flying activities, including various means for mitigating these impacts. The importance of additional or clarifying statements about impacts that were made during the mapping sessions was one important reason why this procedure followed that of the more general discussions.

The mapping of land use and ecological knowledge in this and other studies, is based on three assumptions :

1. The land use maps define where Inuit go to harvest and to enjoy the many benefits of being on the land at present or in the past.
2. The land use patterns defined above are based on geographical configuration, intensity of use, and seasonality. By mapping past and present use, it is possible to identify and explain shifts in territory over time.
3. The territory defined on land use maps represents a relationship between Inuit and resources that is based on four factors :
  - a) the ecology of the resource base;
  - b) the knowledge and information base of the people;
  - c) the skills technology and economic capacity to search and harvest resources;
  - d) the requirements Inuit place on resources to satisfy nutritional, economic and cultural needs.

Interviews began with an explanation of why the data is important and how it will be used. This explanation was followed by a general discussion of a hunter's land use patterns. The actual procedure for mapping a hunter's land use and ecological data uses is through the use of acetate sheets placed over base maps of a scale of 1 to 500,000, for the area of interest. A colour code and letter system is utilized so that the amount of information on any particular map can be expanded. Separate overlays are made for each species and their ecological information, current day land use, and historical land use. All data is subdivided by species and season.

## 2.2 Data Processing

Makivik utilizes a computer system, with specialized hardware and software programming, that was designed specifically for land use and ecological mapping. The system allows information to be recorded and stored in the computer memory and then plotted out on base maps that are prepared for the project. There are three steps to this process : transcribing, digitizing and plotting.

In step one, that of transcribing, the field maps are recopied onto a new map overlay and the coding system standardized for digitizing. Transcribing of the map is carried out by one individual, while a second person reviews the final map to make certain no omissions occurred. The transcription of rough field maps is also used to take notes and make comments that may relate to the content of information or on the "spontaneous" methods that must always be used in any interview situation.

Step two involves digitizing the newly transcribed maps into computer files. This is done through the use of an electronic table and "pen". The acetate map is placed on this table and the lines are then traced with the "pen" and each of the line codes is entered into the

computer. Each map and its components are assigned a specific code so that the information in part or in whole can be retrieved when required.

In step three, the digitized information is plotted onto printed base maps. The maps used for this purpose have been modified from the standard topographic maps, to show only the coastline, rivers and lakes. Plotting is done by selecting the required information which is then printed. This process allows for the choice of categories such as present or past, seasonality, individual species or species group to be reclassified on composite maps.



### 3. A REGIONAL AND COMMUNITY PROFILE

#### 3.1 An Historical Overview

The Inuit population of Kangiqsualujjuaq and Kuujjuaq exploit the coastal waters of southeastern Ungava Bay and the land, rivers, and freshwater lakes that stretch to the south and east of Kuujjuaq. Combined, the communities have exploited a vast territory which comprises almost the entire area of the Québec/Labrador peninsula. The traditional lands and waters utilized by these two communities is illustrated in Figure 2. The population of Kuujjuaq has always focused on the major river systems that flow northward from the interior to the shores of Ungava Bay, and on the islands and estuaries of the coast itself. The Inuit now living in Kangiqsualujjuaq have roots that extend eastward across the mountainous peninsula to the coast of Labrador. They also utilize the coastal zone which connects to the eastern and western shores of the peninsula. When characterizing the pattern of land use, regardless of the community under consideration, it is neither possible nor accurate to limit the description to specific regularly used hunting areas. Although Inuit point out well defined camp sites and territories the decision to use these particular places is dependant on the ecological and environmental conditions that shift over time.

Although both communities share some of the same territory, they have, nevertheless, remained reasonably distinct in terms of the family units and other factors that characterize the division and use of territory within Inuit society. The two present day communities came into existence through a similar set of events that influenced their early stages of development. Recently, however, the two communities have had different patterns of growth. Kuujjuaq has become a large regional centre, while Kangiqsualujjuaq has remained a smaller, primarily Inuit community. This divergence is a function of the geographic position of Kuujjuaq which, in turn, had an important impact on its development.

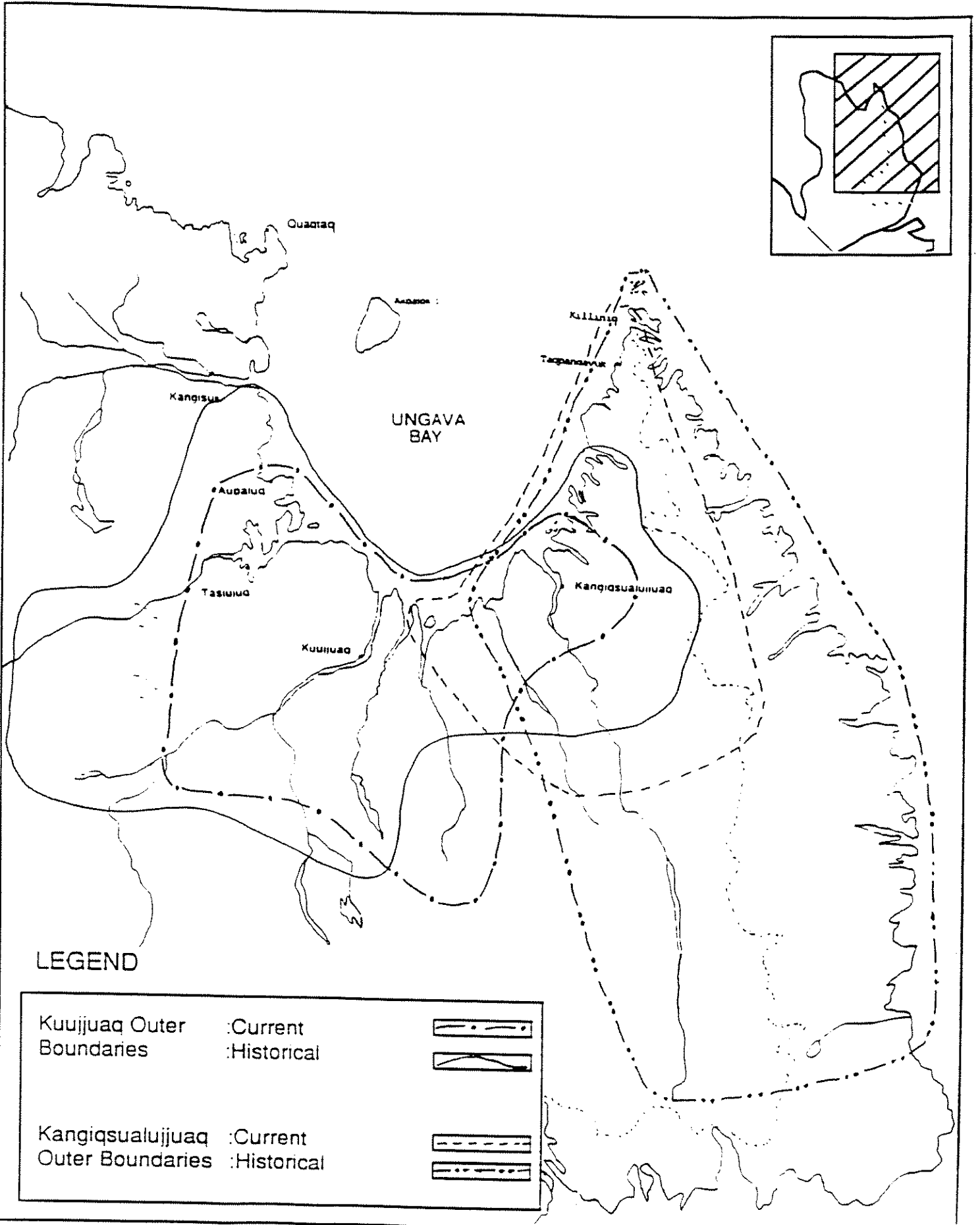


Figure 2. Outer Limits of Lands Used by Kuujjuaq and Kangiqsualujjuaq

The historical background of community development can be divided into four stages of growth. The first stage was defined by the existence of scattered, but socially linked groups of families that occupied reasonably well-defined hunting territories. This stage represents the development of modern Inuit culture within the southern and eastern regions of Ungava Bay and the Québec/Labrador Peninsula. Although this adaptation probably emerged in the mid 1700s it has direct antecedents that include some 4,000 years of prehistoric land use and occupancy. Throughout this time frame of Inuit human history, the patterns of prehistoric use appear remarkably similar to those of historical and recent times. Thus the organized use of territory and the existence of stable cultural groups gave rise to well defined patterns of settlement, harvesting and travel routes. The land use of today and the division of the Inuit into recognized social units within the communities is a reflection of the continuity between past and present. Archeologists assume that in prehistoric times as well as at present, the existence of sites within a particular cultural/temporal division did not mean that all sites were utilized all the time. Living sites, therefore, sit the boundaries of use but the use itself was a function of shifting conditions of the environment and living resources.

The second stage of development involved the eventual positioning of a trading post in the region. This trade with the outside world represented part of a very complex process of cultural contact and created the distinction between prehistoric and historic Inuit. Trading posts were usually located at a place generally convenient to summer shipping and yet accessible to the Inuit settlements so as to facilitate trade in all seasons. The creation of trading centers did not destroy the wider use of territory but it did mean that there was now a "center point" that would eventually lead to the development of present day communities. This process was reinforced in stage three through the gradual growth of the trading centre. This growth was fostered by the desire of some Inuit families to settle closer to the point of supply and by the selection of trading sites for other early "agents" such as missionaries and the R.C.M.P. detachment.

Stage four was defined by the enhancement of the "centralizing" process through other outside agencies as well as by more Inuit families locating at these points. This resulted in a formalization of this process through the development of government services and a government policy towards centralization. It began with minimal health and educational services, the positioning of northern service personnel in the new communities and the creation of economic development programs. It then progressed through major housing programs; and the establishment of formal municipal governments.

Kuuujuaq has always been an important center of development since the area was first made known to Eurocanadians by the Moravian missionaries in 1811. A Hudson Bay Company (H.B.C.) trading post was then established in 1830. It was located at old Fort Chimo which is approximately 10 kilometers north of Kuuujuaq on the eastern shore of the Koksoak River. This post was closed in 1842 because of supply problems but permanently reopened in 1866. In the early 1930s, the H.B.C. operated a small whaling industry in southeastern Ungava Bay.

The relocation of "old Chimo" to its present site took place in 1943 when the U.S. Airforce selected the area for a military landing strip and small supply base. The existence of the military base drew people into the region for employment or in search of improved services and access to materials. Although the trading post at old Fort Chimo, the use of the river for commercial whaling and the presence of a Moravian mission had always tended to attract people from more distant places, it was the development of the airbase that so greatly influenced the pattern of growth and the social mix of today's population. The regional centre position was further enhanced by improved air services to the South which in turn facilitated the selection of Kuuujuaq by government and other agencies for the administration of the region and its people. This factor was strengthened significantly with the selection of Kuuujuaq for the headquarter of the Kativik Regional Government and other agencies that were created by the James Bay and Northern Québec Agreement.

Kangiqsualujjuaq, on the other hand, did not experience any major outside events, nor were there geographic circumstances, that would have influenced its pattern of growth. A Hudson Bay post was first built near the present settlement in 1838. This post was also closed in 1842 and not operated again until 1925. During that period, Inuit had to move great distances, particularly to the Labrador coast, in order to maintain a flow of valuable trade goods. The creation of a H.B.C. post (1916) and RCMP Detachment (1920) at Killiniq, 180 kilometres to the north, also served as a source of supply for the Kangiqsualujjuaq people. Consequently, people had to move back and forth between the Labrador and the Ungava coast, utilizing the entire coastal zone north to Killiniq (Port Burwell) and south along the Labrador coast to approximately the present day community of Nain. In the early 1960s, programs of economic development were directed towards Kangiqsualujjuaq and Killiniq. By the mid-1970s, the federal and Northwest Territories governments made a decision to reduce their program at Killiniq and in 1978, the community was closed with many residents being relocated to Kangiqsualujjuaq. From that time, this community was the only centre on the western shore of the Québec/Ungava peninsula. At present approximately 30 former residents of Killiniq have returned to the region and are establishing a year round community at a place called Taqpangajuk which is approximately 160 kilometers north of Kangiqsualujjuaq.

In 1975 a very different period in the life of Inuit has its beginning with the signing of the James Bay and Northern Québec Agreement. In the present day communities, the Agreement has established a complex framework around which both the protection and development of the territory, its people and its resources are taking place. It is within this reality that life in the North will now evolve and it will take many years for this system to function efficiently and to truly reflect objectives stated in the Agreement or in those principles and activities of self government that will mark the post land claim era.

As a result of the Agreement, municipal governments are now united within the framework of a regional administration (Kativik Regional Government), a northern school board was formed to promote and control Inuit education (Kativik School Board) and health services were consolidated and upgraded under a northern health authority. The Agreement has resulted in "catch-up" programs for airstrips, housing and other community services and it provides a certain level of independent funding for economic development initiatives. Makivik Corporation was created to represent the social, economic and political development of Inuit and certain territorial rights were recognized through the creation of land categories. The Agreement created major regimes for hunting, fishing, trapping and for the environment. It also established structures for resource management (Coordinating Committee for Hunting, Fishing and Trapping) and for impact assessment (Kativik Environmental Quality Commission).

The Agreement calls for the territory utilized by all northern Québec communities to be subdivided into three categories. Category I represents the land most immediate to the communities and is the area within which most community based development will occur. Category II land, approximately 1,500 square miles around each community, was selected in order to protect some of the community's most important hunting territory. Inuit have exclusive rights for hunting, fishing and trapping within the Category II boundaries. Category III land represents all of the other territory north of the 55th parallel. Although it is not controlled by Inuit, the Agreement provides them with the right to hunt, fish and trap throughout the region. These hunting activities are not governed by normal hunting regulations of season and limit, but are subject to management through the principle of conservation.

### 3.2 Demographic Characteristics

In 1987 the population of Kuujjuaq was 1008 while that of Kangiqsualujjuaq was 413 Inuit. Kuujjuaq is the largest Inuit community in northern Québec, it also has the greatest non-native resident population\*. Kangiqsualujjuaq with only 413 still ranks as the sixth largest community (Table 1). All Northern Québec communities exhibit similar demographic characteristics (Figures 3, 4 and 5).

Table 1. Inuit Populations of Northern Québec (1987).

1) Chisasibi -	9) Kangiqsujaq - 350
2) Kuujjuarapik - 427	10) Quaqluk - 204
3) Umiujaq - 245	11) Kangirsuk - 324
4) Inukjuaq - 825	12) Aupaluk - 112
5) Povungnituk - 881	13) Tasiujaq - 139
6) Akulivik - 346	14) Kuujjuaq - 1008
7) Ivujivik - 242	15) Kangiqsualujjuaq - 413
8) Salluit - 632	16) Killiniq/Taqpangajuk* - 45

\*The population of Killiniq was redistributed to other communities along the Ungava Bay coast in 1978. There are presently 6 families attempting to relocate to a site, some 40 kilometers south of Killiniq, Taqpangajuk, where they are currently spending the winter.

Source : Planning Department, Kativik Regional Government, March 1988.

Both Kuujjuaq and Kangiqsualujjuaq have a population profile in which more than 50% of the individuals are less than 20 years of age (58% for Kangiqsualujjuaq and 56% for Kuujjuaq). At the top of the pyramid, the population that Inuit define as Elders (individuals 55 years and older), is approximately 6% for both communities. Individuals over 70 years of age form a mere 2% of the total. The remaining group (20 to 55 years of age) comprise approximately 40% of the total. This

\* Note: Statistics for non-native populations in both communities were unavailable from either Statistics Canada or K.R.G. Approximate numbers on the non-native workforce were obtained, however, this does not indicate whether or not the individuals are single or with families. Kuujjuaq: 160 non-native workers, Kangiqsualujjuaq: 10 non-native workers.





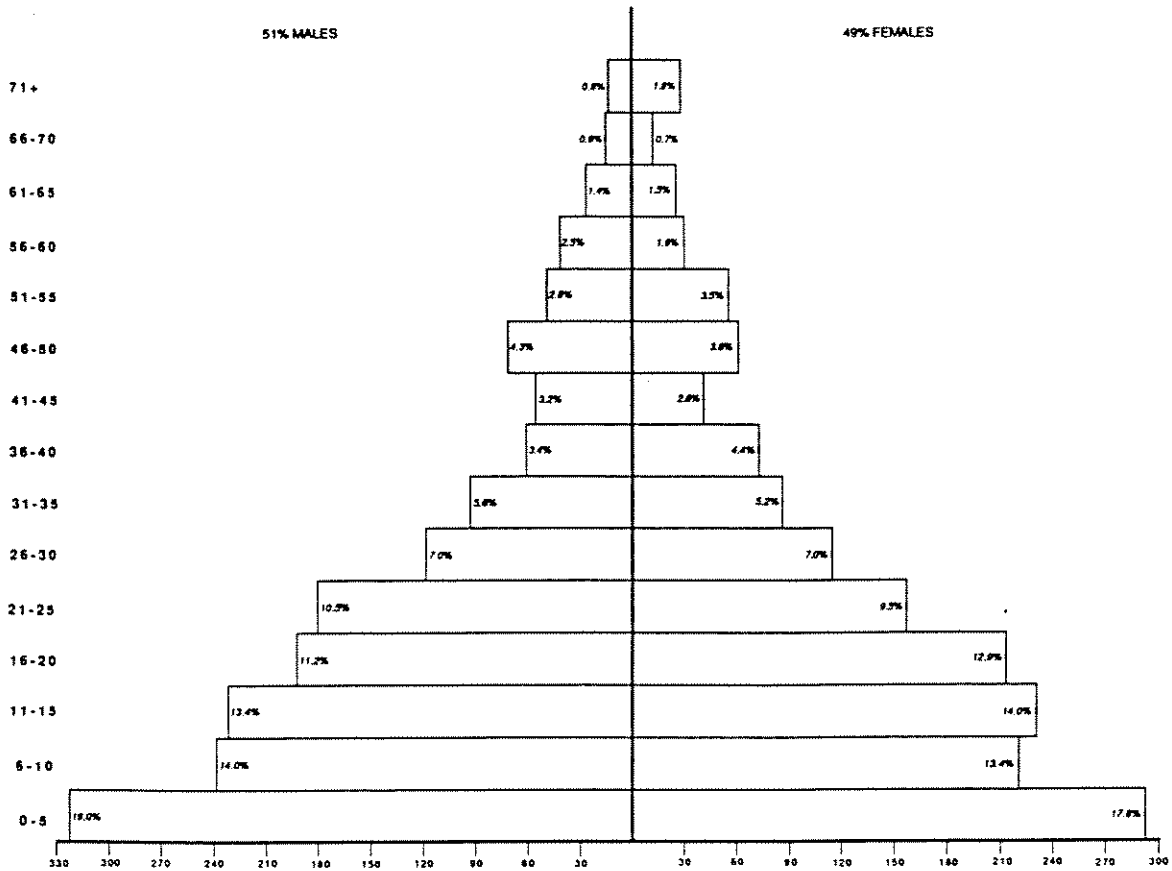


Figure 3. Population Pyramid for Northern Québec (%), 1985.  
(Source: Kativik Regional Government, Planning Department, 1987)

age group tends to represent the primary economic contributors to the communities. They are also the group that most influences the number, size, and composition of individual households.

The demographic characteristics shown in Figures 4 and 5 can be used as the basis for projecting population growth. Estimates about the rate of growth of the Inuit population have varied over the past several years. At one time, the Inuit were viewed as having one of the world's highest growth rates. More recently, the empirical data seems to suggest that this was either an incorrect assumption or that there has been a significant decline in the rate of growth. Demographers caution



even more significant after the signing of the Agreement. If it is assumed that the influx of people is now complete, which appears to be the case, and that it thus represents a response to specific events rather than a more general relocation then the 2.2% growth rate projections would be more appropriate. Based on this assumption the population for the year 2000 will be 1338 for Kuujjuaq and 646 for Kangiqsualujjuaq.

### 3.3 Social and Economic Characteristics

The social and economic characteristics of Kuujjuaq and Kangiqsualujjuaq are not easily generalized. Demography, traditional values, formal education, subsistence economies, government policies and programs, the need for new sources of income and employment, the politics of land claims and self-government, the impact of television and other media contacts with the outside world, the animal rights movement, the supply of housing and municipal services, and the change in the structure and role of the family along with changes in other traditional values or institutions, are all major themes that influence the behavior and choices of Inuit. What is essential to recognize is that this change does not mean an end to Inuit culture or traditions. Unfortunately, it has given rise to many superficial assumptions and interpretations by outsiders, especially in relationship to the use of, need for and control over territory and resources.

When these themes are combined with an amazing number of small details, the complex milieu of present-day community life begins to emerge. If one were to ask the question "What is life like in an Inuit community?" no single answer could be given. Life is diverse, options are more numerous and therefore priorities are less obvious. It is not only a time of experimentation and change, but it is also a time in which many traditional values and ways of doing things are recognized as an important means for maintaining one's identity as an Inuk and for

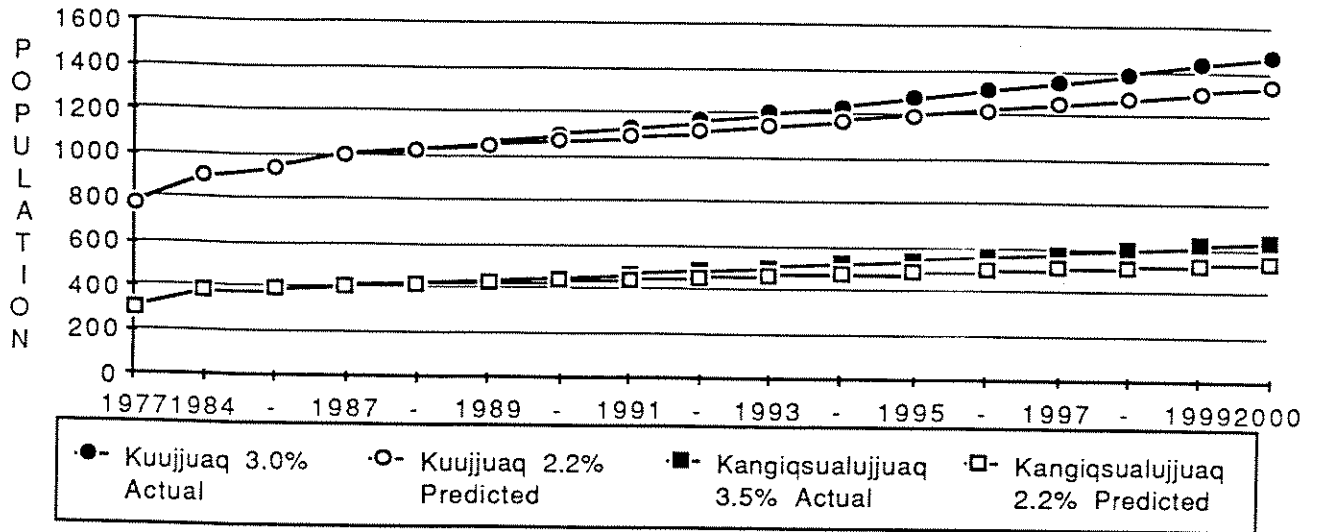


Figure 6. Population Growth Curves for Kuujjuaq and Kangiqsualujjuaq, 1977-2000

Table 2. Actual Population Growth Curve Numbers for Kuujjuaq and Kangiqsualujjuaq, 1977-2000

YEAR	Kuujjuaq 3.0% Actual	Kuujjuaq 2.2% Predicted	Kangiqsualujjuaq 3.5% Actual	Kangiqsualujjuaq 2.2% Predicted
1977	777	777	306	306
1984	905	905	385	385
1985	944	944	397	397
1987	1008	1008	413	413
1988	1038	1030	427	422
1989	1069	1053	442	431
1990	1101	1076	458	441
1991	1135	1100	474	451
1992	1169	1124	491	460
1993	1204	1149	508	471
1994	1240	1174	525	481
1995	1277	1200	544	492
1996	1315	1226	563	502
1997	1355	1253	583	513
1998	1395	1281	603	525
1999	1437	1309	624	536
2000	1480	1338	646	548

creating a sense of balance with, or a perspective on, rapid cultural change. The comments of a Inuk leader from Kuujjuaq serve as a precise summary of this situation:

In our communities everyone is caught in the middle of just about everything. Our life cannot be sorted out all at once and it is unfair that people from the South always put pressure on us to act like good little eskimos. We never have been the good little people the anthropologists love to write about... It is very difficult for us to solve our own problems when outsiders tell us what these problems are and then run around observing us with their notebook and a stopwatch. We have to set our own priorities and this will take time. We cannot be forced to do by tomorrow what white people are still trying to do in their own culture.

(Kuujjuaq, November 1987)

The social and economic conditions in Kuujjuaq and Kangiqsualujjuaq have certain elements in common, especially with respect to the resource harvesting and "traditional activities" sectors. In other sectors of the social and economic life, however, the relative difference in size along with the regional center position of Kuujjuaq, creates distinctions between the two communities. It also makes it more difficult for the researcher to find out what is going on.

In a community like Kuujjuaq, life is divided into visible and hidden levels. Family life, in terms of its positive values as well as problems, the non-wage money economy, hunting, fishing and trapping, and general social interactions are very difficult to observe and most individuals resent being questioned about such matters. In Kangiqsualujjuaq, community size tends to make certain observations easier, but here too there is much that an outsider will have difficulty "seeing". While it is possible to collect basic facts and figures, these by themselves do not provide the understanding required to explain how modern Inuit communities function.

The economy of Kuujjuaq and Kangiqsualujjuaq is based on two primary components; the acquisition of resources through harvesting, and the acquisition of income through wage employment, independent initiatives based on crafts or small business ventures, and transfer payments. These components are closely integrated since it is now widely accepted that the subsistence and money sectors do not form two separate types of economic commitments or independent patterns of activity.

Some of the most recent studies (Beaulieu, 1983, Office de la planification et de développement du Québec, 1986) of the Northern Québec economy were made in the early 1980 and have not been updated. At that time, it was estimated that the average per capita income from all sources was \$4,000, or approximately \$21,000 for each household. Estimates for Kuujjuaq were \$5,000 per person and \$25,300 per household while for Kangiqsuallujuaq the figures were \$3,500 and \$20,700 respectively. It is difficult to determine what these income figures actually imply with respect to the larger economic and social milieu of each community. Certainly they show that Inuit have a significantly lower income than southern Canadian averages. They do not indicate, however, that these income levels are most often derived from many different sources, even for a single individual, nor do they illustrate that the sources of potential income vary widely with season and are often cyclical in relation to the coming and going of specific construction activities. Most Inuit move between wage labor, subsistence income, and transfer payments in some combination in order to obtain the yearly income levels noted above.

Certain other factors also affect the overall "performance" of the community economy in any one year. There is unemployment but its level is difficult to establish because of the fact that people must move between employment sectors. Perhaps the only real method for determining unemployment would be to evaluate the number of permanent jobs within the public and private sectors in relationship to those people who state a preference for holding permanent positions. For

those who prefer to move between subsistence wage and transfer payment sectors it is extremely difficult to estimate unemployment levels. Another factor that must be considered is that of the cost of living. This factor is also difficult to specify in exact dollars since it has many different components. For example, Inuit housing and other municipal services are significantly subsidized during construction and maintenance while areas such as consumer prices are not. Some estimates for the cost of living differential are as high as 66% for the North. Finally, the major and continuing role of public sector funding must be noted. This funding forms the support structure for the entire Northern Québec economy, and therefore, the "health" of this economy is dependent on the fiscal and political priorities of the provincial and federal governments.

### 3.3.1 The Public Sector Economy

The wage sector of the economy is based primarily upon positions linked to municipal and other government sponsored agencies. This sector is supported by employment linked to the James Bay and Northern Québec Agreement such as Makivik Corporation and its subsidiaries. This employment sector is expanding slowly in Kangiqsualujjuaq to accomodate development linked to all of the activities required by the Agreement, but it is much better developed in Kuujjuaq primarily because of the "home office" influence of the Kativik Regional Government and Makivik Corporation.

A recent report issued by Kativik Regional Government in March 1987 (Lemire, 1987) notes the following factors with respect to government services. Fifty four per cent of all jobs are in public or para-public agencies. In Kuujjuaq it is 57.5% and in Kangiqsualujjuaq it is 49.4%. Approximately 30% of the employment is with the Kativik School Board, followed by municipal governments (25%), health and social services (19%), Makivik Corporation (4%), police and fire (2.5%).

Although it is difficult to translate this percentage into an actual number, it is fair to assume that income related to this sector of the economy is an important financial contributor to the economy of almost every household.

In addition to permanent positions, there are important contributions from construction or other types of temporary projects that are being carried out under government contracts. Again, no specific employment figures are available, but in 1986, for example, a total of 118 seasonal jobs in construction and related services were available throughout all of Northern Québec. Since school, housing, airstrip and municipal service infrastructures are the primary projects, it can be assumed that almost all of the construction jobs were dependent on government funding.

Although the figures are relative, both communities also have certain positions that are still held by non-Natives. A shift to Inuit is based primarily on the role of education through the school system or through adult education programs, that encourage the development of needed skills. Although it is probable that the public sector will not expand greatly, opportunities for Inuit employment can grow through education and the take over of positions now held by non-Natives. At present, it appears that approximately 18% of all jobs in the region are held by non-Natives. Of the total jobs for each separate employer the following percentages are held by non-Natives : Kativik Regional Government (49%), health services (27%); police (27%), Kativik School Board (24%). Almost 100 per cent of the Coop jobs and 97% of the municipal corporation employment are held by Inuit.

### 3.3.2 The Private Sector Economy and Outfitting

Private sector employment has not yet become a major source of income. The economy of a small population presents a particular



limitation on any business that depends on "daily sales" and inventory. Freight costs are extremely high although subsidies to Canada Post can be used to offset this for certain items; the potential local market is small and basically not affluent; there are no local financial institutions except for a local bank in Kuujjuaq. The Hudson Bay Company and Federation of Cooperatives are major private enterprises involved in retail trade. The Coop especially, is involved with the purchase and marketing of most native carvings and crafts in Northern Québec. Although it is estimated that for 1981 two million dollars was "earned" by carvers, very little (probably less than 5%) was derived by crafts people in either Kuujjuaq or Kangiqsualujjuaq. In 1987, it was estimated that private business provided about 2% of all jobs. In Kuujjuaq approximately 3% of the total employment was in small private business and for Kangiqsualujjuaq only about 1% of the total. These figures do not, however, include employment related to the resource sector such as outfitting or small scale commercial fisheries.

Outfitting camps bring substantial revenues into the region. Within the study area there are eleven camps operated by Inuit in the two communities. Figure 7 illustrates the location of the Inuit camps, those circled, and others operated from the South. With an estimated market value of \$150,000 per camp, the estimated revenue for the Inuit camps in the study would be \$1,650,000 a year (communication with M.L.C.P. officials\*).

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\* Due to the nature of the camps, actual figures were not readily available. A possible source of further information would be Mr. Marcel Bernard/M.L.C.P./Direction Régionale du Nouveau-Québec/1995 boul. Charest ouest/Ste-Foy/Québec/G1N 4H9.

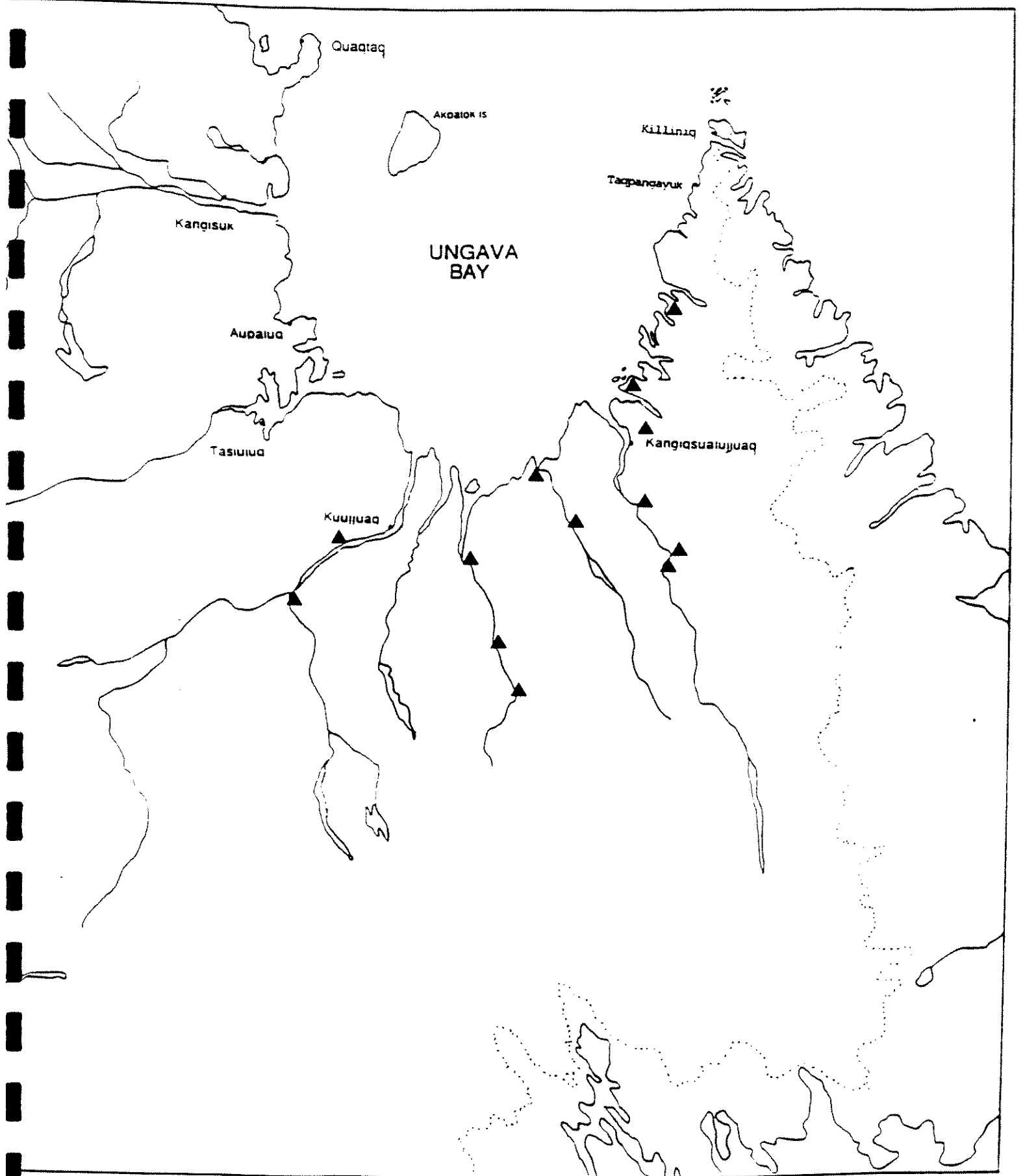


Figure 7. Location of the Inuit Outfitting Camps

### 3.4 The Subsistence Economic Sector

Kuuujuaq and Kangiqsualujjuaq still maintain what was described above as a mixed economy, meaning that people participate in the wage and income as well as in the subsistence harvesting sectors. These sectors are closely related in three important ways. The first is that, in order to harvest, one must have access to the money required to buy and maintain snowmobiles, boats, and all of the other equipment presently used for successful hunting. The second is that the cost of this hunting activity is offset by the harvest which enables wild food to replace the need for a purchased equivalent. The third is that harvesting activity is one of the significant means by which traditional knowledge, skills, as well as other customary behaviour, are exercised by adults and learned by younger children. As well, hunting is also a social activity that reduces tension from the job and from other stress creating conditions that are part of modern community life. Finally, one must consider the role of resource harvesting as an economic factor through outfitting, the commercialization of fish and trapping.

In Northern Quebec, a major study on wildlife harvesting was carried out from 1976 to 1980. During this five-year program, a constant record of harvest levels was kept by all households. The study design included statistical methods to derive, through projections, an assumption of total harvests, by month for both the major and minor resources. The yearly averages as shown by this study are described by species and communities in Tables 3 and 4 and in Figure 8. General comparisons of harvest by species for the two communities are shown in the graphs illustrated in Figures 9, 10 and 11. Many different interpretations based on these figures may be possible, but the obvious conclusion that should be drawn is that the wildlife harvesting sector remains active and vitally important to the overall economic and social health of each community.

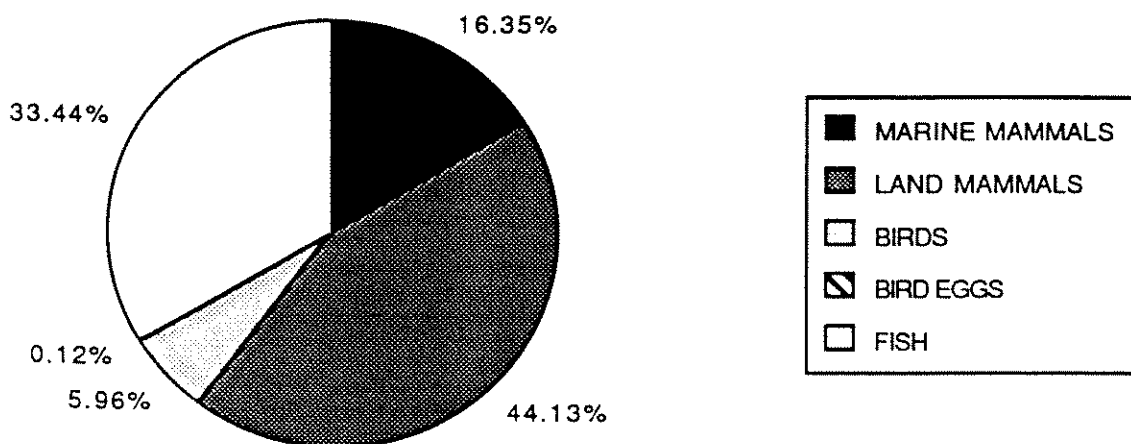
Table 3. Kuujjuaq Harvest Totals, 1976-1980

SPECIES	Average	Average	% of	% of
	# of Animals 1976 - 1980	Edible Pounds 1976 - 1980	Total Harvest	Species Group
Ringed Seal	492.00	15,492.00	4.00	24.44
Bearded Seal	86.00	18,652.00	4.81	29.42
Harp Seal	3.00	248.00	0.06	0.39
Ranger Seal	4.00	242.00	0.06	0.38
Beluga Whale	42.00	26,334.00	6.79	41.54
Walrus	4.00	1,796.00	0.46	2.83
Polar Bear	2.00	630.00	0.16	0.99
				100.00
Caribou	1,310.00	167,678.00	43.24	97.99
Arctic Fox	848.00	2,800.00	0.72	1.64
Arctic Hare	126.00	642.00	0.17	0.38
				100.00
Snow Geese	12.00	42.00	0.01	0.18
Canada Geese	1,722.00	8,092.00	2.09	35.00
Brant / Duck	925.00	1,566.00	0.40	6.77
Murre	342.00	342.00	0.09	1.48
Guillemot	53.00	40.00	0.01	0.17
Loon	53.00	146.00	0.04	0.63
Grouse/Ptarmigan	18,256.00	12,780.00	3.30	55.28
Snowy Owl	31.00	110.00	0.03	0.48
				100.00
Duck Eggs	1,745.00	402.00	0.10	84.28
Goose Eggs	353.00	75.00	0.02	15.72
				100.00
Arctic Char	6,317.00	28,428.00	7.33	21.92
Salmon	6,743.00	57,316.00	14.78	44.20
Lake Trout	3,506.00	24,540.00	6.33	18.92
Cod Fish	142.00	358.00	0.09	0.28
White Fish	2,723.00	4,086.00	1.05	3.15
Brook Trout	6,703.00	13,404.00	3.46	10.34
Sculpin	2,521.00	1,262.00	0.33	0.97
Land Locked Char	111.00	280.00	0.07	0.22
				100.00
<b>TOTAL</b>		<b>387,783.00</b>	<b>100.00</b>	
<b>Total by Species Group</b>				
MARINE MAMMALS		63,394.00	16.35	
LAND MAMMALS		171,120.00	44.13	
BIRDS		23,118.00	5.96	
BIRD EGGS		477.00	0.12	
FISH		129,674.00	33.44	
<b>Total</b>		<b>387,783.00</b>	<b>100.00</b>	

Table 4. Kangiqsualujjuaq Harvest Totals, 1976-1980

SPECIES	Average		% of	
	# of Animals	Average Edible Pounds	Total Harvest	% of Species Group
	1976 - 1980	1976 - 1980		
Ringed Seal	691.00	21,778.00	7.19	39.39
Bearded Seal	82.00	17,700.00	5.84	32.02
Harp Seal	12.00	1,160.00	0.38	2.10
Ranger Seal	9.00	550.00	0.18	0.99
Beluga Whale	19.00	12,040.00	3.98	21.78
Walrus	0.20	164.00	0.05	0.30
Polar Bear	5.00	1,890.00	0.62	3.42
				100.00
Caribou	1,011.00	129,382.00	42.72	98.55
Arctic Fox	489.00	1,614.00	0.53	1.23
Arctic Hare	58.00	296.00	0.10	0.23
				100.00
Snow Geese	6.00	20.00	0.01	0.22
Canada Geese	523.00	2,458.00	0.81	27.59
Brant / Duck	646.00	1,096.00	0.36	12.30
Murre	121.00	122.00	0.04	1.37
Guillemot	128.00	102.00	0.03	1.14
Loon	67.00	188.00	0.06	2.11
Grouse/Ptarmigan	6,949.00	4,864.00	1.61	54.59
Snowy Owl	17.00	60.00	0.02	0.67
				100.00
Duck Eggs	2,562.00	588.00	0.19	94.38
Goose Eggs	171.00	35.00	0.01	5.62
				100.00
Arctic Char	19,014.00	85,560.00	28.25	80.16
Salmon	623.00	5,368.00	1.77	5.03
Lake Trout	1,054.00	7,376.00	2.44	6.91
Cod Fish	65.00	162.00	0.05	0.15
White Fish	469.00	704.00	0.23	0.66
Brook Trout	3,328.00	6,656.00	2.20	6.24
Sculpin	965.00	484.00	0.16	0.45
Land Locked Char	170.00	424.00	0.14	0.40
				100.00
<b>TOTAL</b>		<b>302,841.00</b>	<b>100.00</b>	
<b>Total by Species Group</b>				
MARINE MAMMALS		55,282.00	18.25	
LAND MAMMALS		131,292.00	43.35	
BIRDS		8,910.00	2.94	
BIRD EGGS		623.00	0.21	
FISH		106,734.00	35.24	
<b>Total</b>		<b>302,841.00</b>	<b>100.00</b>	

### Kuujuaq Total Edible Food by Species Group (%) 1976-1980



### Kangiqsualujjuaq Total Edible Food by Species Group (%) 1976-1980

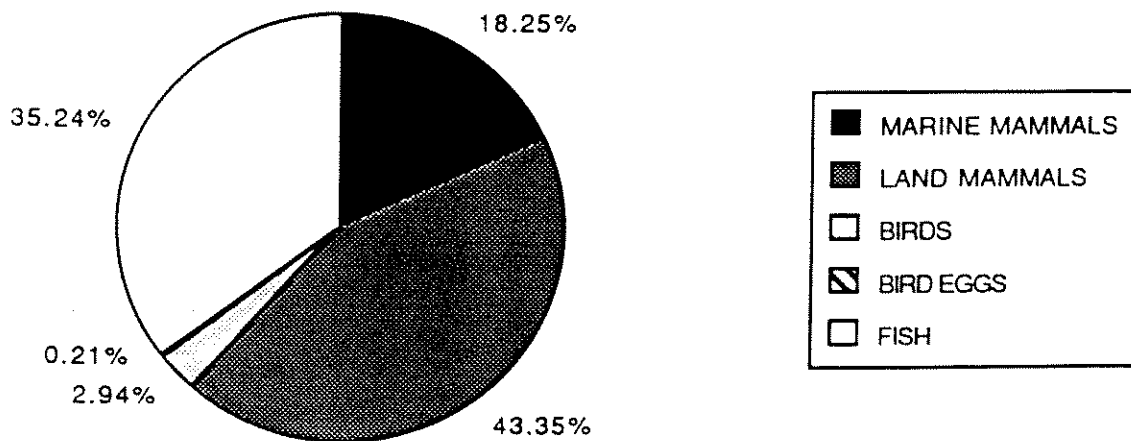
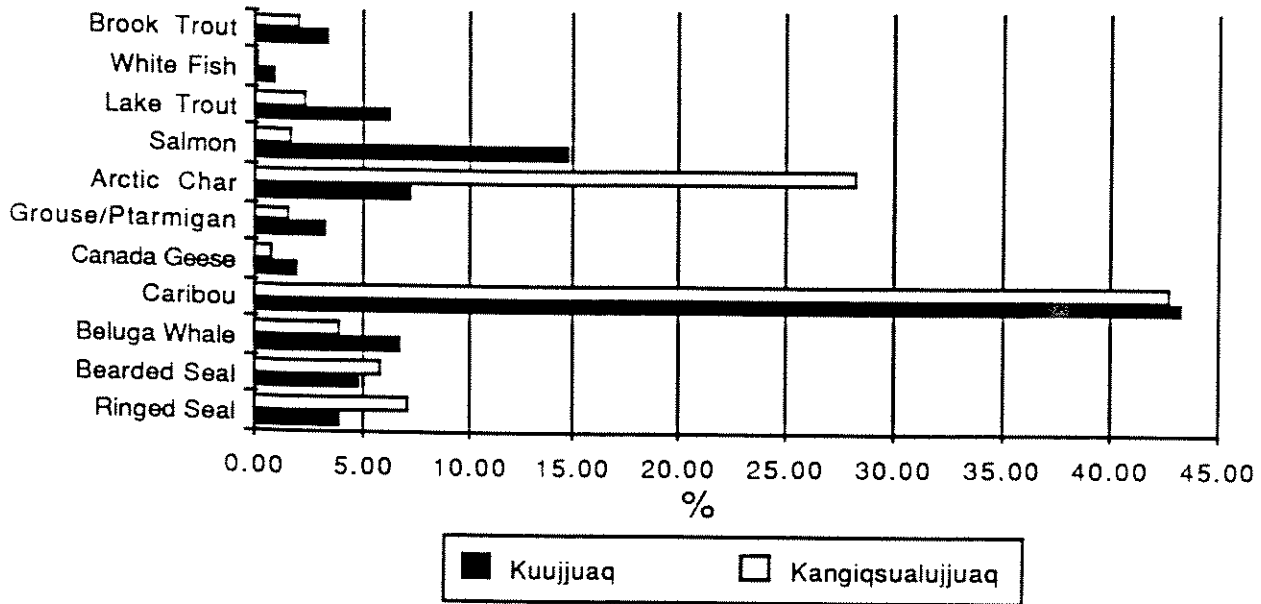


Figure 8 . Breakdown of Total Edible Food by Species Group (%),  
1976-1980

Comparison of Key Harvest Species (%) for  
Kuujuuaq - Kangiqsualujjuaq, 1976 -1980



Comparison of Land Mammal Harvests (%) for Kuujuuaq  
- Kangiqsualujjuaq, 1976-1980

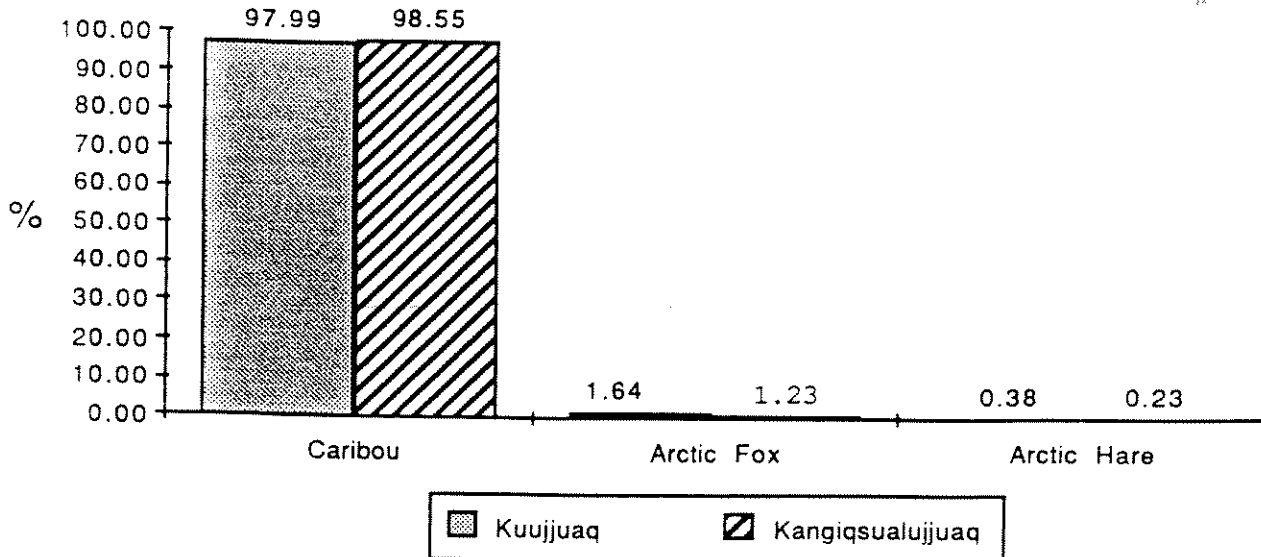
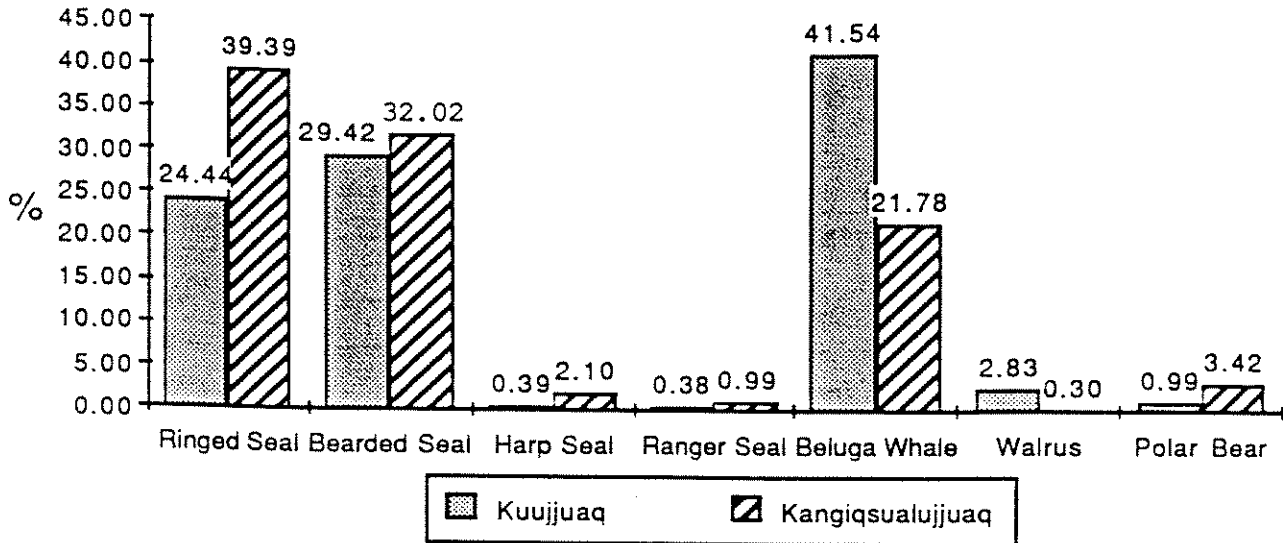


Figure 9. Breakdown of Harvest Totals (%), 1976-1980

Comparison of Marine Mammal Harvests (%) for  
Kuujuuaq - Kangiqsualujjuaq, 1976-1980



Comparison of Fish Harvests (%) for Kuujuuaq -  
Kangiqsualujjuaq, 1976-1980

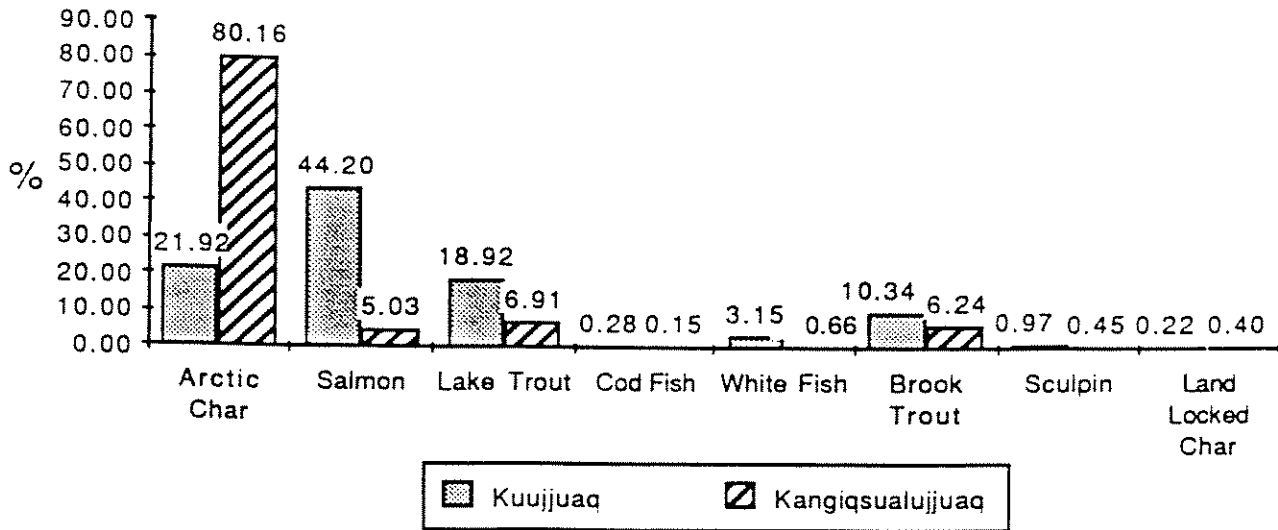
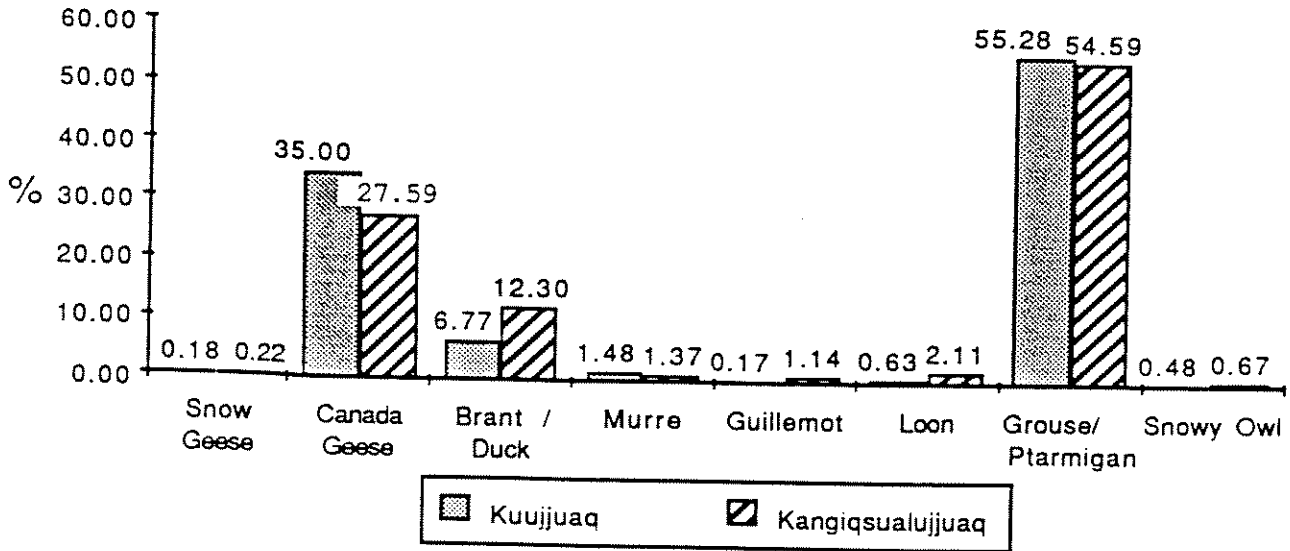


Figure 10. Breakdown of Harvest Totals (%), 1976-1980



### Comparison of Bird Harvests (%) for Kuujjuaq - Kangiqsualujjuaq, 1976-1980



### Comparison of Bird Egg Harvests (%) for Kuujjuaq - Kangiqsualujjuaq, 1976-1980

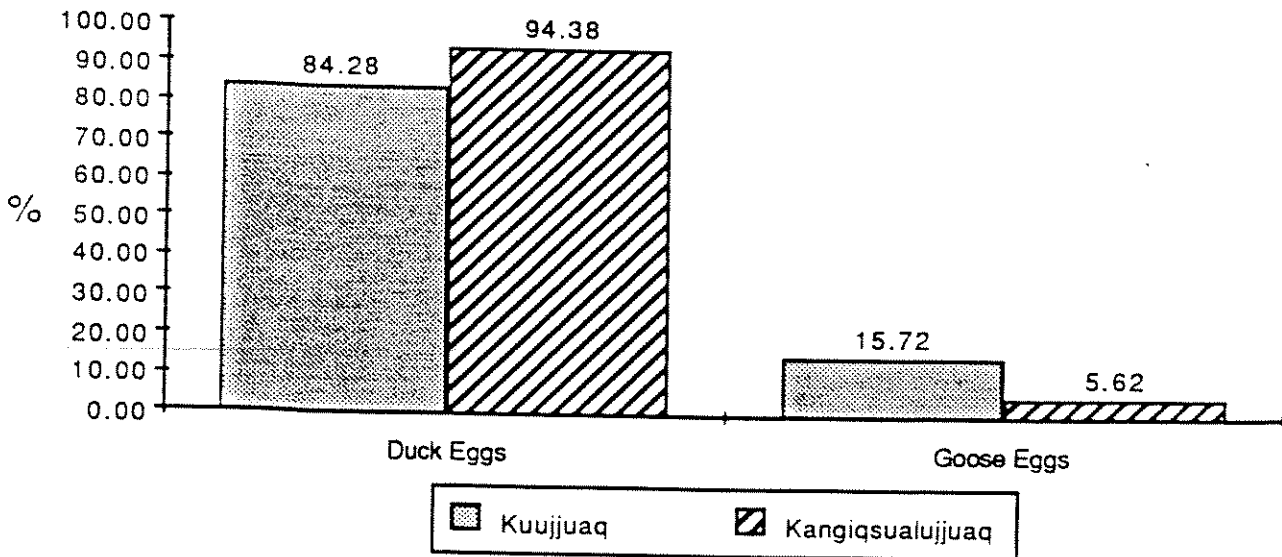


Figure 11. Breakdown of Harvest Totals (%), 1976-1980

A total of 28 species form the primary basis for Inuit harvesting in the two communities. From these species, land mammals, and particularly caribou, are the most important since they form approximately 45% of the harvest. The importance of land mammals in these two communities is somewhat different than the usual reliance on marine mammals that characterizes the Northern Québec harvesting economy. For all other communities the marine mammal harvest is approximately 51% instead of approximately 17% for these two communities. The emphasis on caribou reflects the positioning of Kuujjuaq and Kangiqsualujjuaq with respect to the spring and fall migration routes, and almost year-round grazing areas for the Québec/Labrador caribou herd. It also indicates the vulnerability of the communities to impact on this resource.

The average harvest for each of the five years is approximately 388 thousand pounds of edible food for Kuujjuaq and 303 thousand pounds for Kangiqsualujjuaq. Based on the population for each community, this harvest provides a potential daily per capita input of one half and one kilogram, respectively. Since harvesting does not provide an evenly distributed product, the daily input will vary by season. The general distribution of total harvest by month is shown in Figure 12 and monthly breakdowns for key species are provided in Appendix V. Variations by month are function of the seasonal abundance of wildlife and of the accessibility of territory based on environmental conditions.

The information on the number of animals that is shown in Tables 3 and 4 can also be used to establish an estimate on potential income that could be derived through the sale of seal skin, fox and polar bear. The price of furs has always been subject to significant fluctuations that were based on supplies versus the demand created by changing preferences of the consumer market in furs. Approximately ten years ago, seal skins could be sold for an average price of \$30 dollars which meant that Kuujjuaq hunters could derive almost \$15,000 dollars and Kangiqsualujjuaq hunters \$21,000 dollars, from the sale of ringed seal alone. At present, the average price has dropped to about \$3 per skin

as a result of the severe impact from the Animal Rights Movement. This same impact on the price of fur is threatening every aspect of subsistence not just in Northern Québec but throughout the circumpolar region.

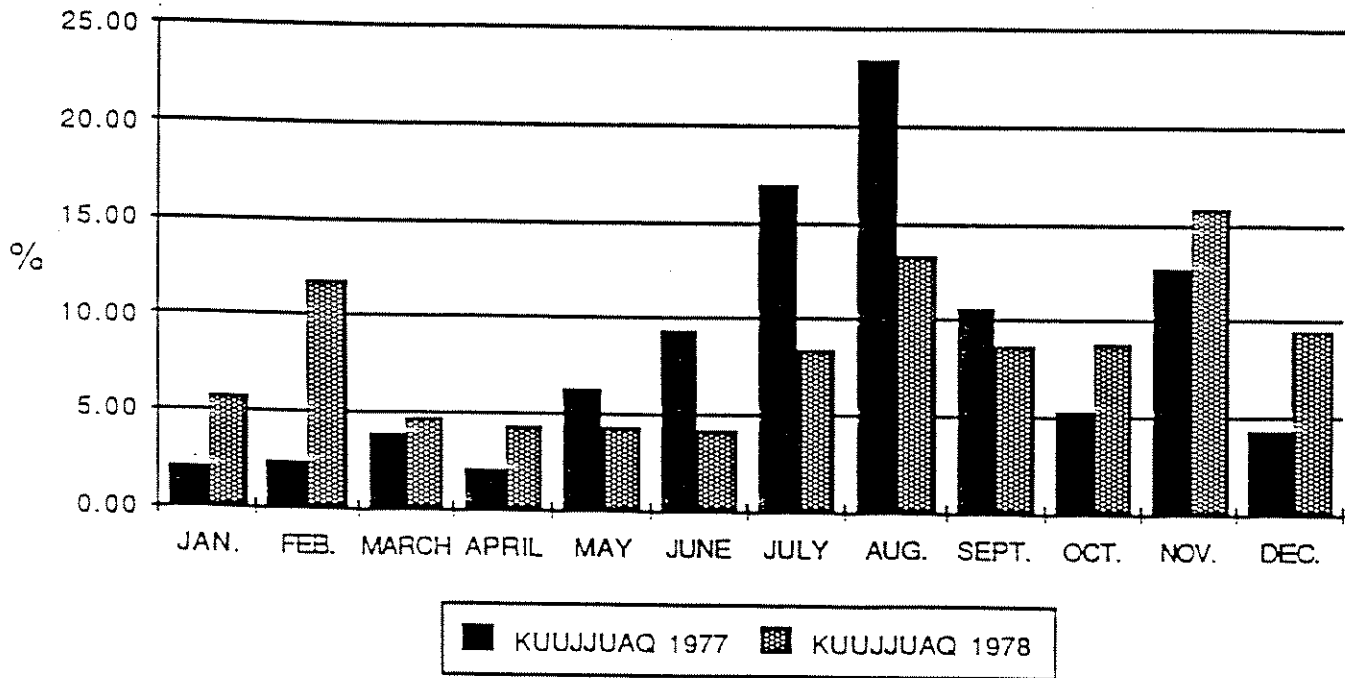


Figure 12. Average Total Edible Harvest for All Species, by Month (%), 1976-1980.

#### 4. LAND USE AND ECOLOGICAL KNOWLEDGE

In section 3.4, the importance of the subsistence economy was described and specific quantitative data on harvesting provided. This data should be considered as representing the most visible product that results from the patterns of land use that are illustrated in the maps accompanying this report (see Appendix I). The level of harvesting and the patterns of land use, however, do not represent all of the elements or products that flow from Inuit use of their territory and its resources. Knowledge about the region that has been accumulated and evaluated over generations provides the information base that enables decisions to be made. In addition, the existence of living sites and travel routes gives an indication that hunting activity was carried out within a social system based on families and close kinship groups. Smaller social groups were loosely united into larger social and territorial units.

Although the integrity of these units has been "broken up" by the formation of large communities, they still have an important function in land use, and they play a continuing role in the internal organization of Inuit communities. These social and territorial divisions are still relevant to the leadership and power structure in communities, and this in turn may affect many aspects of the economic sector. Perhaps this influence is most strongly felt within the economic sector that is attempting to develop the commercialization of local resources. In the community of Kuujjuaq and Kangiqsualujjuaq it is within the land use, harvesting and resource commercialization sectors that the Inuit raise most of their major concerns about impacts from low flying military aircraft.

#### 4.1 Community Land Use and Participation

The communities of Kuujjuaq and Kangiqsualujjuaq both exhibit similar patterns of seasonal land use. These similarities are based on the fact that both communities are situated on the boundary of the boreal forest and tundra; they both depend on major river systems that are also the only ones in Nunavik having significant runs of Atlantic salmon and; the inland regions south and east of both communities form core areas in the ecology of the Québec-Labrador caribou herd at all stages of its long-term population cycle. The following description can serve as a general summary of these patterns and their integration.

A description of the annual cycle can begin with early spring when Inuit prepare for the coming of Canada geese, the movement of fish, especially Arctic char and lake trout from their spawning areas, and the transition from snow and ice to exposed land and open water. In both communities people tend to move inland to major char lakes usually in late March or early April. In this period, Inuit fish through the ice using nets, or most often, jigs and spears. This is a productive activity that can provide from 10 to 50 char in a single day of fishing. For example, a hunter who reported details of one day's fishing in early April, 1978, stated that within approximately 5 hours of fishing he, his wife and a 14 year old son, harvested three "mail bags" of Arctic char that weighed almost 250 pounds. Since the weather is warmer it is often an activity in which women and children also participate.

This activity comes to an end when the snow begins to make travel more difficult or when the season progresses and geese move into the area. Goose hunting camps are primarily located along the coast for both communities. There is a persistence in these camps over the years that reflects a reasonable level of consistency in the ecology of Canadian geese. Localized shifts may occur as a function of the geese adapting to the specific environmental conditions of each spring. These

same shifts in conditions may also determine the ability of Inuit to use their preferred camps. This condition may affect the presence and hunting of geese can serve as a general principal that is reflected for harvesting nearly all major species.

Spring activities end with the coming of Eider ducks that nest primarily on coastal islands. At this time, Inuit begin travelling in open water or through moving ice by freighter canoe, taking advantage of the passages that are opened by the strong but dangerous tides and tidal currents of southern Ungava Bay.

The collection of Eider eggs and down signals the first movement of families from both Kangiqsualujjuaq and Kuujjuaq to their summer coastal camps. This activity is actively participated by both communities although more so by the people of Kangiqsualujjuaq than by those of Kuujjuaq. During this time, marine mammal hunting for seals is important as well as the hunting for beluga whale that move along the coastal waters of Ungava Bay which forms part of their westward spring migration. Spring camps tend to last until sometime in July when most hunters and their families return to the communities.

The next major activity begins sometime in late August when Arctic char and Atlantic salmon begin to move from the ocean to the inland freshwater lakes. This is an active and important time as shown by the harvest study data since the fall fishing produces some 84 thousand of pounds of edible food. In both communities, Arctic char are caught for local consumption but some are also sold commercially. The Atlantic salmon harvest, however, is primarily a commercial venture. In Kangiqsualujjuaq commercial exploitation is through outfitting camps that cater to summer fishermen whereas in Kuujjuaq, salmon are commercially caught by net for sale to the South. In Kuujjuaq, this activity is marked by the positioning of people at long standing fishing sites that are family controlled.

Other activities also take place during August and early September along the coast. In earlier times, beluga whales were hunted in the estuaries of rivers flowing into southern Ungava Bay but today these hunts are the subject of joint management and conservation measures that are designed to protect female beluga whales that frequent these estuaries. Some collection of berries and mussels take place at this time but this activity is primarily recreational in nature. After the summer season, Arctic char continue to be fished but in declining numbers and hunters again turn their attention to seal hunting in coastal waters. This activity is more important for Kangisualujjuaq since they have easier access to the sea. In both communities, however, the success of fall marine hunting is dependent on the weather conditions which are often dangerous and difficult for long periods.

Caribou hunting becomes important in the late fall usually after the first snow but before freeze-up. This is the time when the caribou begin their migration towards the west so hunting begins earlier in Kangisualujjuaq than in Kuujjuaq. Because of the size and distribution of caribou this hunting usually take place up the major rivers valleys but usually no more than forty or fifty miles inland from either settlement. As winter ice develops and the snow deepens, travel becomes easier and caribou hunting is dispersed over a wider inland area, coupled with winter fishing through the new ice. Caribou hunting suffers a general decline in productivity during the cold and darkness of full winter. With the return of light, caribou hunting once again important and Inuit maintain hunting territory from the coast inland for perhaps 35 or 40 miles in order to intercept the eastward migration. As winter begins to recede, caribou hunting is mixed with the hunting of ptarmigan which can sometimes produce major quantities of food. At this time fishing also begins to improve and leads to the movement of people to their fishing ground on inland lakes, noting the transition between winter and spring.

The participation of individuals in land use activities varies according to the season and type of activity. What is important to note, however, is that all activities attract a wide range of participants. It is difficult, perhaps even impossible, to try and divide participation into specific categories. If one is to attempt such a classification, references to more traditional patterns are important for understanding.

There is a danger to assume in the past that hunting was the domain of everyone. In fact, that was never the case. Then, as now, harvesting comprised activities that were concentrated within a small number of participants. Certain people were "providers" and each of the social/territorial groups that is reflected in the land use maps of southern Ungava Bay based its well-being on a limited number of efficient hunters. Everyone had a role to play, but not necessarily in the direct activities of harvesting. For the most part, and at a certain level of generalization, older males contributed knowledge and made decisions about where and how to hunt. The activity of hunting itself, however, was usually the domain of younger men between the ages of 35 and 50. Within this group the major participants were those who had the demonstrated skills to be successful in a harvest of different species. The people under the age of 35 would be considered as helpers or "learners" and their ability to undertake this activity would eventually help determine those who would eventually become a reliable provider. Those individuals who did not hunt had other roles to play such as making or repairing equipment, maintaining the household, preparing skins or food.

This same type of division of labour within and between age and sex groups still take place. The difference is that the choices and requirements have become more diverse and involve the money as well as the subsistence economy. The harvest study that took place between 1976 and 1981 attempted to discriminate between different types of hunters. In discussions with the community, however, during the design stage of this major study, Inuit were reluctant to specify strict divisions.



They indicated that harvesting was often carried out only by certain people but that all family members played a part. For that reason they felt that the only way to collect harvesting data was at the household rather than the individual level. In a concession to the researchers and to a general study design the Inuit felt comfortable with the defining of all males 18 years or older as potential hunters. From that general category it was then possible to determine and eliminate people who were non-hunters because of age, sickness, or other disabilities as well as those who classified themselves as non-hunters based upon their attitude or frequency of participation. This process resulted in the following categories for Kuujjuaq, with a 1975 population of 670 Inuit, 151 were males over 18 years of age and out of this group 135 or 89% considered themselves as potential hunters. For Kangiqsualujjuaq, with a population of 286, there were 48 males over eighteen, of which 42 or 87.5% classified themselves as potential hunters.

In each community there is a core group of serious full time hunters who do little else than spend their time in pursuit of resources. More common, however, are those who participate in a mix of activity between some form of steady wage employment and hunting. Within this category two options tend to persist. The first is that of full time wage earners who concentrate their hunting activities on weekends or during their summer holidays. These individuals are often skilled and serious hunters and tend to invest heavily in the purchase of new equipment related to hunting. The second option comprises those individuals who will work for a period of time in order to obtain money and then leave their work for long periods of time on the land. All households tend to have representatives in one or more of these participation groups with the exception being those households that have been recently formed by young married couples. In those cases, especially if they are both employed, they may rely on members of the extended family for obtaining food. In Northern Québec the sharing of food is still a very important principle, although the creation of a Hunters Support Program, which was formed by the Agreement, ensures that everyone has access to country food when needed.

Finally, it must be realized that participation in hunting is not a function of simply the older more traditional Inuk. This activity is taken seriously by younger individuals as well; in both communities hunting skills are being obtained and the time invested in hunting is also important for many younger people.

#### 4.2 Land Use Alterations Over Time

The land use patterns of both communities have altered over time due to a variety of factors ranging from changes in Inuit lifestyle to fluctuations in ecological cycles and movements. The comparison of the historical and current day maps for each community shows many of these changes quite clearly.

If the current and historic land use outer boundaries for both Kuujjuaq and Kangiqsualujjuaq are examined (see Figure 2), significant changes can be seen. In each case the extent of the boundaries has decreased since historic times, especially for Kangiqsualujjuaq. This can be explained by a change in Inuit lifestyle from a more nomadic type of living to that of being based in a single community. Other variables are also involved, of course, such as the advent of the skidoo and gas powered freight canoe.

Kangiqsualujjuaq shows a much greater change in its outer boundaries as a result of the closing of several communities. A number of groups from Kangiqsualujjuaq used to live either in Killiniq or along the Labrador coast between Killiniq, Hebron, and Nain. Their lives were spent following the seasons and the wildlife both through the interior by foot or dogteam and by various means along the coast. Nowadays, the main centre of activity revolves around the community of Kangiqsualujjuaq where they have developed a home base.

Other changes in land use have stemmed from the variations in ecological cycles and movements. Such shifts in patterns are especially noticeable when considering a species such as caribou. As the population of the George River caribou herd has fluctuated in numbers so to have their migration routes. As with many species of animals the caribou populations move through cycles of growth and decline. During the last decade the caribou numbers have increased considerably and they are now moving further up the Torngat Peninsula towards Killiniq. Currently, Inuit and scientists (Couturier et al, 1988) believe that the herd is on the verge of peaking and about to crash.

Beluga whale provides a second example of changes in ecological cycles. Historically, Kuujjuaq and Kangiqsualujjuaq Inuit used to hunt beluga whales at many points along the southern Ungava coast. Present day hunting has become much less, however, due to a greatly reduced number of belugas. Nowadays, there is one key hunting spot for belugas at the mouth of the Mukalic River, and even there the belugas do not always appear as they once did.

Historically, Inuit had to follow such changes much closely than today and hence travelled considerable distances to areas where they knew they would find game. One such area for caribou was near the headwaters of the Ford and Siimitalik rivers, southeast of Kangiqsualujjuaq. It was a region such as this that acted as a congregation place for Inuit from Kuujjuaq, Kangiqsualujjuaq, Hebron and Nain. In current times Inuit tend to do fewer long trips out on the land because their lifestyle has changed to a more sedentary one tied into a money economy.

A final factor that must also be acknowledged when trying to interpret the meaning of land use is that even if the lines do not shift, the data defined by such lines may vary. A brief example is illustrated by the figures in Table 5 and Figure 13. This data reflects changes in the intensity and utilization of the lower (northern) stretch of the Koksoak River at two different time periods. When Kuujjuaq was a

Table 5. Harvest Totals from the Kuujjuaq Salmon/Char Fishery, 1962-1978

Year	# of Fishermen	# of Salmon	# of Char	Total # of Fish	Ave. Catch/ Fishermen
1962	17	2,030	389	2,419	142.29
1963	26	2,504	104	2,608	100.31
1964	19	2,263	9	2,272	119.58
1965	11	2,217	206	2,423	220.27
1966	14	2,231	24	2,255	161.07
1967	23	2,041	257	2,298	99.91
1968	17	2,531	984	3,515	206.76
1969	18	2,511		2,511	139.50
N/A					
1978	87	4,493	592	5,085	58.45
<b>TOTALS</b>					
<b>Salmon</b>					
1962-1969	145	18,328			126.40
1978	87	4,493			51.64
<b>Char</b>					
1962-1968	127		1,973		15.54
1978	87		592		6.80

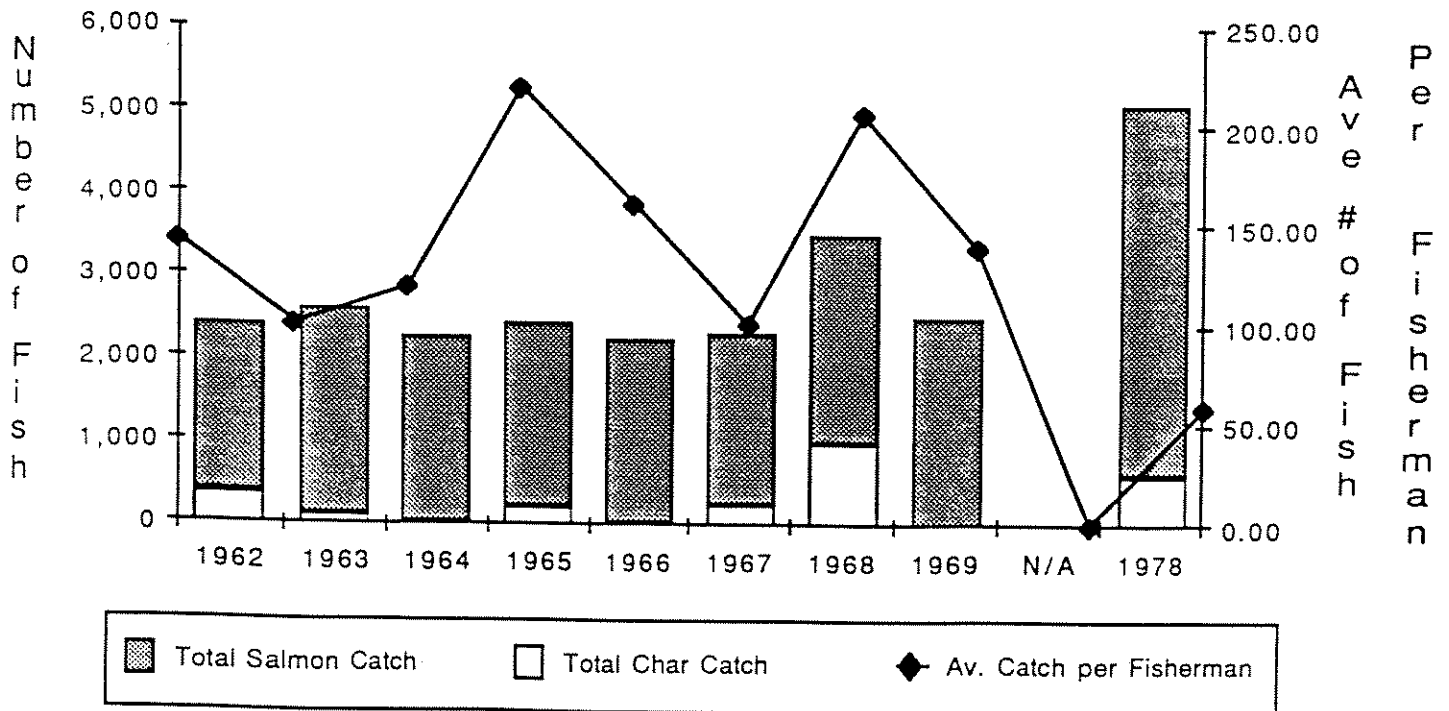


Figure 13. A Comparison of the Total Catch and The Average Catch per Fisherman, Koksoak Fishery, 1962-1978

smaller and still less developed community with respect to regional functions involving Inuit, the salmon fishery on the Koksoak River was an important source of economic potential. Over time this importance has remained but participation by Inuit has changed significantly.

Table 5 illustrates that from 1962 to 1968 a small number of fishermen (from 11 to 26) harvested a very consistent number of Atlantic salmon and Arctic char. The fishery was organized around well defined fishing sites that were utilized each year by the same fisherman and his family members. The outer boundaries and "intensity" of land use lines reflect an average catch per person that ranged from approximately 100-220 fish. Regardless of this range the total harvest, especially of the commercially more important salmon, remained very consistent from year to year.

On the other hand, some of the figures for 1978 reflect a significant change in the fishery. It was still a commercial exploitation, but no longer was it organized into a limited fishery based on stable family fishing sites. The 1978 land use map would depict a much more active fishery since 87 individuals reported a harvest. At the same time, there was a decline in the level of individual catch (down to 50 from a high of almost 200) but there was also an increase in total harvest (to around 4,500 fish) as a reflection of the greater number of fishermen.

If the land use maps for the two periods were compared to one another, the information might look very similar. For example, the outer boundaries of the fishery would cover the exact same areas for any one year or combination of years. The underlying information, however, would differ greatly both in terms of total catch and average catch. Great care must therefore be taken in the interpretation of the land use lines on any one map.

#### 4.3 Understanding Land Use

Any interpretation of this cartographic data base must begin by accepting the premise that land use activities remain vital to Inuit society because they continue to fulfill important functions. The ability to maintain these functions has been a result of the capacity of the land use activities to change with the times, and not to become a colorful but meaningless artifact of the past. The primary functions of land use and ecological knowledge are: 1) to maintain the harvest of resources for food and income; 2) to recognize that this harvest is dependent on natural ecological processes that in themselves represent the adaptations of each species to their habitat, to each other, and to the changes brought about by natural and human actions; 3) to facilitate a continuing need to recognize, define and control territory, the boundaries of which far exceed the limited spatial requirements of one particular type of seasonal hunting activity.

Equally important to these "practical" functions are two other considerations. The first is that land use activities serve important social, psychological and mental health functions within present day Inuit communities. The second consideration is the intellectual association between land use and knowledge. The maintenance of land use is not only dependent on ecological patterns, but also on the understanding and interpretation of these patterns. It is this factor that gives rise to a body of data which is then organized into what is now being referred to as "traditional" knowledge. This frame of reference assures that harvesting is much more than a (naive) or chance encounter with resources. It is a physically and mentally challenging exercise that incorporates technology, relies on social mechanisms, allocates resources, choices and priorities, calls on tradition, and relies on information in order to produce economic products and individual satisfactions. Together, these two considerations, when joined to the factors and activities that create them, are essential to what is the evolving definition of traditions, identity and life styles.

Based on these notions, the problem is then how to interpret the meaning of points, lines and areas on a land use or ecological map.

The Inuit have a clear understanding of what these lines actually denote as well as what they imply at a more general level of interpretation. They state, however, that this understanding is hard to explain. To begin, Inuit point out that they use land differently than just about any other group of people, even other indigenous hunters, such as the Crees. For example, an experienced older hunter from Kuujjuaq stated:

The maps we make are probably not going to be understood by people in the South. Inuit are not like farmers and we can't say that is where we grow our caribou or things like that. In the North, everything moves and has its own mind. We, hunters, try to understand all of that and it is what Elders try always to teach the young people.

But nothing here is the same for very long, we really have to have a very large understanding in order to be able to catch animals and feed our families. That does not mean that Inuit don't have favorite places. Sometimes we are almost like farmers because we know exactly where to go at a certain time.

Another hunter noted that :

For sure we are not farmers that can make food grow by planting seeds or feeding the animals behind fences. No one up here has a fence, but in a way what we know from our experience is the same as a fence, because we always try to keep using and learning about the land... These lines that show on my map are almost a big field.

The land use maps, therefore, illustrate the boundaries of movement and of knowledge which are required to maintain a harvest. The location

of boundaries are based on the location of animals from season to season and on the accessibility of places at different seasons of the year. Again a hunter from Kangiqsualujjuaq stated :

Inuit not only have to know about what animals do. They also must know everything about the land and the water. Being a hunter is often very dangerous and you have to have knowledge of everything to survive and catch enough to feed your family. We must know all about the wind, and about the color of the ice. People who think all we do is go out like the southern caribou hunters don't understand anything about our way of life...

That is where I went to school, right out on the sea ice. I learned from the Elders, especially my father's brother about many important things. I feel sorry for white people when they say I have no education. It is just not true.

These statements by Inuit hunters illustrate some of the essential elements that are required for interpreting the land use and ecological maps. Hunters make reference to the fact that harvesting requires a very different use of territory since

we, Inuit, do not tie our animals to a post and make them eat grass... Our animals are wild and they are completely free until the moment they are killed.

Another hunter noted that :

People from the South want to put us on a reservation just like they did with Indians... put a fence around the Inuit and say "stay there". You can never say that to a hunter, we can never stay in one place because we move with the animals. I often go to the same places because I know I can usually find certain animals there at a definite time of the year. But I also need the space to move around in. In



that way we are just the same as our ancestors and that is the way we will be, I mean our children if they follow us they will have to fight hard to protect all the land they need to be good hunters.

And finally, all of the other factors that are implied by hunting were summarized:

This map I just made tells a lot about where I go and what I do when I hunt. That isn't even half of the story because I can't put down a line that will ever explain how I feel because I am still a hunter.

## 5. COMMUNITY PERCEPTIONS AND CONCERNS

A series of interviews were carried out in both Kuujjuaq and Kangiqsualujjuaq in order to gain the respective community perceptions and concerns dealing with low level flying activities in Labrador. A second aim of the interviews was to collect land use and ecological data for the areas surrounding each village. Similar land use and ecological information had previously been collected by the Makivik Research Department for these communities and has been used to supplement the second interviews.

In each community an initial meeting was held with the Municipal Council and Landholding Corporation to introduce the project personnel and exchange information concerning the project. At this time, the community leaders were asked to develop a list of key personnel to be interviewed. These lists were adhered to as closely as possible by the interviewers for both sets of interviews. A total of 12 interviews were carried out in Kuujjuaq and 11 in Kangiqsualujjuaq. The following discussion is based on the notes taken during these interviews.

### 5.1 Community Concerns and Perceptions

The community members did not appear to have well formulated concerns regarding low level flying in Labrador. This may have been the result of a lack of understanding about the proposed increase in flying activity coupled with the fact that individuals have not experienced a low level flying "event". Indeed, both communities expressed a desire to experience a low level flight over their houses so that they might better understand what the impacts from the flying could be.

The results of the interviews clearly indicated that the people in both communities felt that the low level military flying activity would have very little, if any, impacts on the social and economic conditions

in either communities. People would not leave their home community for jobs in an unknown area and there would be no direct contact between these communities and "on ground" personnel or operations. Therefore the only relationship would be disturbances that might occur indirectly because of ecological disruptions created by the flying activity itself. Consequently, the economic and social characteristics of both communities that need to be understood in terms of this proposed project are based primarily on an understanding of the continuing importance of harvesting and other resource related activities such as outfitting.

Concerns were expressed, therefore, about the low level flying and its impact on resources and the environment. Three groups of impacts were recognized; (a) impacts on the wildlife, (b) impacts on the environment and (c) impacts on the people. All three were closely linked to one another. The communities perceived these impacts as being a direct result of the noise of the flying activities and the smoke emission from the jets.

#### 5.1.1 Noise

Due to the nature of their lifestyle, the Inuit are worried that the noise of the jets will scare away the animals that they normally hunt, especially caribou. This was expressed more by the people of Kangiqsualujjuaq than that of Kuujjuaq, perhaps due to their proximity to the flight area. Over the years, experience has shown the Inuit that animals are scared away by noise.

##### On noise and animal behaviour :

- when animals hear noise continuously they tend to move away;
- should there be any noise in the area the animals will move away;
- an example is the James Bay Project and that area
- there used to be a lot of beaver in that area but now there aren't any;
- the beavers have come to the George River area
- they weren't there before.

On noise and animal behaviour :

- the animals will move away;
- just like the animals move away from the camps
- that's why the people must move their camps,  
so as to follow the animals.

(perceptions of Kangiqsualujjuaq hunters, 1987)

Animal behaviour may be so affected that the Inuit believe migration routes could also change. Birds and marine mammals normally migrating along the eastern coast of the Labrador Peninsula were considered in danger of being impacted upon. This effect was perceived as highly likely due to the proposed target range on the eastern coast.

Inuit in both communities expressed concern over the issue of noise and caribou calving especially in section 1A. Caribou have their calving grounds mainly around the central/eastern half of the Labrador Peninsula. Calves are also born along the coast in between Kangiqsualujjuaq and Kuujjuaq. The Inuit feel that noise from the low flying jets could cause disturbances in the caribou calving cycle and possibly lead to a higher mortality rate among the young. This concern is especially relevant since there is a growing concern on the overall health of the herd and a possible shift to a "down turn" of the cycle.

#### 5.1.2 Smoke Emissions

Smoke emissions from the jets were the other main concern among the Inuit. On the various occasions when sightings of low flying jets were made, the Inuit remarked on the large amount of smoke given off by the jets.

The jets (2) were flying low. The noise came after the planes had passed... The planes gave off a lot of smoke. When the smoke trails crossed, it was like a cloud.

(comments of a Kangiqsualujjuaq hunter, 1987)

The Inuit are worried that the emissions will contaminate the grass and moss that the caribou and birds feed on, and the water that the fish live in. If this were to occur, the Inuit say, the whole ecosystem and food chain will become contaminated and eventually affect the people themselves. Even though the flight area is not near the immediate vicinity of the two communities, the Inuit realize that many of the rivers begin within the designated flying area and they feel, may therefore become polluted.

#### 5.1.3 Mid Air Collisions

One other concern was voiced by a small plane operator, that of collisions between jets and small planes. There are many summer hunting and fishing camps just north of the proposed flight area that are serviced by small bush planes. Since these planes fly between 50 and 300 feet there is the possibility of mid air collisions with the low flying jets, if their paths should happen to cross.

#### 5.1.4 Summary of Main Concerns

The noise of the low flying jets will scare the wildlife out of their usual behaviour patterns :

- migration routes may change
- especially due to the sea target range
- caribou calving grounds may be disturbed causing higher mortality rate for calves.

The presence of both low flying jets and small bush planes just north of the flight area was noted to possibly increase the chance of mid air collisions. The smoke emissions will cause pollution of the environment with subsequent contamination of the ecosystems, including humans.

## 5.2 Mitigation

During the course of the interviews the Inuit mentioned various ways that they believed might lessen the impacts on the wildlife of the area. Their observations were often just comments made during the interviews as opposed to direct statements pertaining to mitigation. Nevertheless, what was said is relevant.

The easiest means that the Inuit saw for preventing harm to their environment was, of course, for no low level flying to go on what so ever. They realized, however, that this was highly unlikely to occur.

One group of Inuit understood that while it might be good for the military to practise in the valleys it wasn't good for the animals.

The valleys should be sanctuaries for the animals.

The most important area would be along or near the rivers, therefore they (low-flying jets) shouldn't fly over the rivers.

(comments from Kangiqsualujjuaq hunters, 1987)

The valleys, said the Inuit, are where all of the animals live and feed. As a result, any flights along the valleys would increase the chance of creating impacts upon the wildlife and ultimately the Inuit way of life.

The Inuit agreed that the areas where the caribou have their calves should also be avoided. Indeed, one Inuit went so far as to say that a moratorium should be placed on low level flying during the month of June. This would allow the caribou to have their calves in relative peace as the birthing season is primarily in June.

If the coastal region of the peninsula was avoided the Inuit felt it would be beneficial. The concern, in this case, was for the marine mammals and sea birds that travel along the eastern coast of Labrador during their spring and fall migration.

Finally, the Inuit believed that there would be some positive mitigative effect if area 1A, of the proposed flying area, was not used by the jets. Some Inuit mentioned that no flying should go on in this area at all, while others suggested no flying during the months of May and June. Both measures are designed to lessen the possible impacts on caribou and caribou calving. Even if flying was restricted to areas 1 and 1B, the Inuit of Kangiqsualujjuaq believed that the noise from the jets would still affect the wildlife but to a lesser extent.

#### 5.2.1 Summary of Mitigative Measures

In most cases the mitigative measures put forward by the Inuit of Kuujjuaq and Kangiqsualujjuaq related to the exclusion of key areas from flying activities. Some Inuit proposed restrictions on specific months and others requested no flying at all. The following were mentioned:

- avoid flying in valleys and along rivers
- avoid caribou calving areas
- avoid the east coast of the Labrador Peninsula
- avoid flying in area 1A of the proposed low level flying area.

#### 5.3 Requests

Each community made several requests of the Department of Defence with respect to low level flying activities in Labrador. First and foremost among the requests was the desire of the Inuit to experience a low level flight over their community. In this way, the towns people would gain a better understanding of what low level flights really are

like and what impacts they might have. When offered the option of a video cassette and/or tape of a low level flight the Inuit said No. These two mediums can be faked, they said, and do not give a real life feeling for the flights.

The Inuit requested that more information be made available to them concerning the project and on going impact studies. They were also interested in hearing what impacts the residents of Goose Bay had experienced.

Those Inuit concerned with the danger of mid air collisions between low flying jets and small planes requested that the low flying jets have equipment allowing them to see the small planes.

The last series of comments directed at low level flying pertained to the enforcement of the project.

We don't disagree with the present low level flying as long as it doesn't disturb anything, and they (DND) follow the rules that are set down.

If they (DND) keep their word about the planes, I don't mind.

(comments from Kuujjuaq hunters, 1987)

There seemed to be some concern that the Department of Defence would not be able to enforce the boundaries and regulations on the low level jets. Afterall,

Where did the planes the George River people saw come from if it is past the supposed 250 miles limit?

(A question from a George River hunter, 1987)



This was of great concern to the Inuit as they wish no flights near their hunting grounds or the caribou calving grounds.

#### 5.3.1 Summary of Requests

The Inuit of Kuujjuaq and Kangiqsualujjuaq had four main requests to make on the Department of Defence in relation to the low level flying activities in Labrador. The requests are as follows:

- A low level flight to be made over the communities of Kuujjuaq and Kangiqsualujjuaq so that the Inuit can gain a better understanding of what to expect;
- that more information on the ongoing impact studies be made available to the communities;
- that the low level flying jets have equipment allowing them to avoid mid air collisions with small planes;
- that DND adheres to all the rules and stipulations set out for them to follow.

#### 5.4 Sightings

Of the two communities, only Kangiqsualujjuaq residents had made sightings of low flying jets. One Kuujjuaq resident with a hunting/fishing camp south of the George River had also seen some of the low flying jets.

In Kangiqsualujjuaq there have been several instances when Inuit have sighted low level jets. Some 15 years ago two jets were seen flying up the George River approximately 50 feet off the ground. Another two jets were also reported as having flown up the river but around 1980-81. In both cases these Inuit who had observed the jets commented on the loud noise arriving only after the jets had passed, and on the smoke trails left behind the jets.

Additional sightings of low flying jets were mentioned as having occurred by other Inuit, however, the actual stories were unable to be obtained. Nevertheless, one sighting was said to have been made on the Koroc River and the other near Keglo Bay. No dates were available.

One final story, although not a sighting, was told by an Inuk operating a camp south of Kangiqsualujjuaq. Last year he heard the noise of a jet during bad weather, however, the plane was not visible.

Appendix I  
List of Maps

LIST OF MAPS

**Kuujjuaq**

1. Land Use

Caribou	current/historical
Land Mammals	current/historical
Birds	current/historical
Fish (marine)	current/historical
Fish (freshwater)	current/historical
Marine Mammals	current/historical
  
2. Ecology

Canada Geese Migration Routes	
Caribou Grouping Areas	
Caribou Activity Areas	
Caribou Migration Routes	
  
3. Generalized Land Use Outer Boundaries      current/historical
  
4. Travel Routes
  
5. Living Sites (acetate upon base map)

**Kangiqsualujjuaq**

1. Land Use

Caribou	current/historical
Land Mammals	current/historical
Birds	current/historical
Fish (marine)	current/historical
Fish (freshwater)	current/historical
Marine Mammals	current/historical
  
2. Ecology

Canada Geese Migration Routes	
Maritime Bird Migration Routes	
Marine Mammal Migration Routes	
Caribou Grouping Areas	
Caribou Calving Areas	
Caribou Migration Routes	
  
3. Generalized Land Use Outer Boundaries      current/historical
  
4. Travel Routes
  
5. Living Sites (acetate upon base map)

Appendix II  
List of Hunters Interviewed and Their Hunting Status

Hunters Interviewed

<u>Name</u>	<u>Age</u>	<u>Hunting Status</u>
Kuujjuaq		
Willie Adams	35	time to time
Sammy Annanack	68	all the time
Norman Gordon	62	all the time
George Koneak	57	weekends
Tommy Kooktook	80	no more
Charlie Kudluk	38	weekends
Charlie Saunders	69	all the time
Sandy Saunders jr.	28	time to time
Tommy Sequaluk	53	weekends
Elijah Shipaluk	34	time to time
Jobieapik Snowball	73	all the time
Johnny Watt	61	all the time
Kangiqsualujjuaq		
Johnny George Annanack	62	time to time
Selas Annanack	30	time to time
Mark Annanack	37	all the time
Johnny Sam Annanack	47	all the time
Stanley Annanack Jr.	69	time to time
Joseph Annanack Jr.	28	time to time
David Etok	59	all the time
Joseph Morgan	deceased	
Jimmy Morgan	57	all the time
Nick Ittulak	73	weekends
Sam Joseph Annanack Jr.	63	all the time
Billy Annanack	30	weekends

Appendix III  
Notes from Community Consultation in Kuujjuaq

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Interview : Hunters #1 and 2  
Topic : Low Level Flying Interviews  
Date : November 18, 1987  
Interviewer : Danny Gallant and Willie Gordon

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Personal land use knowledge of Hunter #1

CARIBOU I used to go caribou hunting south of Kangiqsualujjuaq. In this area I also used to get my fox. When caribou were scarce they used to move north.

LAKE TROUT I used to go fishing in specific lakes. There were so many fish that you had no time to take the fish off the hook before you had another fish hooked.

CHAR Char on the Koroc go up river earlier than the ones on Lake Diana.

Hunter #2

CARIBOU When there was no more caribou around Tasiujaq we had to go to the Kangiqsualujjuaq area. Caribou historically didn't go near the coast in the winter they stayed inland. Nowadays, they travel near the coast.

Q. Was there any time that you didn't hunt?  
I never really stopped; I had to eat. Now I hunt once in a while for fresh meat, only when there is good weather.

Q. When did you get a skidoo?  
There was a shipwreck not far from Kuujjuaq and when they could'nt save all of the skidoo, they sold them off for \$200.  
At this time they also sold beer that was also on the ship. After the skidoo this is when people started to shoot dogs. They were shooting dogs because people were not taking care of them.

Indians would know more about the caribou to the south than we would. You should make sure that you ask them. The Indians used to come to Kuujjuaq to trade in the old day. In the old days, we used to travel further with dogteams, the dogs used to know their way around, skidoo do not. People used to gather where the caribou were.



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Topic : Low Level Flying Interviews

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Canada geese

The routes that the geese used were through the river valleys, at this time, the Brant ducks used to travel with them also. This was only historically.

Snow geese are to the west mainly; none around here.

Trapping is down a lot, the price of the furs has gone down.

In 1950's, Indians got a disease and 60 people died.

Low Level Flying

Q. What do you think about low level flying south of Kuujjuaq?

(Hunters #1 and 2). We have never really seen any so we really can't say. It may separate the town, some for, some against. If we don't see it, it wouldn't hurt us. But they may need more land and may come north. Can't satisfy everybody. We do not disagree with the present low level as long as it doesn't disturb anything, and they follow the rules that are set down.

(November 25, 1987)

Q. What do you think of the possible expansion of a NATO base involving up to 16 countries and an increase in flights?

(Hunter #2)\*. I do not think an expansion would be any good. There would be too many planes and they might scare the caribou away. They may also decide to move further north if there are too many of them. It is O.K. the way it is.

If the U.S. never came maybe all the people would have been wiped out by the measles. The U.S. doctors saved us. The army brought jobs and people were able to make money. The Hudson Bay Co. only gave credit to the good hunters, only they could have survived.

(Hunter #1)\*. My father was a translator for the Bay so we survived. The land belongs to everybody, keep everything on the land the same. Indians know more about the interiors and Inuit know more about the coast.

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\* These comments were obtained from a second interview after further clarification by the interpreter about the nature of the project. This was necessary due to a misunderstanding about the project by the interviewers.

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Interview : Hunter #3 and 4  
Topic : Low Level Flying Interviews  
Date : November 19, 1987  
Interviewer : Danny Gallant and Willie Gordon

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### Caribou Ecology

We had a camp at lake LaMoinerie southeast of Kuujjuaq. We used to meet people from Labrador at Pyramid on the George River. We also used to go to Indian house lake south of Pyramid.

We would have to go hunting for maybe 2 months at a time we needed a really good load. If a load was too small, the meat would be gone by the time we reached the communities or our families. We had to feed ourselves and the dogs.

People from Tuctuctuc near the mouth of the Tuctuc river would walk south in the summer for caribou. In summer the caribou used to go to Labrador but do not know where. The caribou used to go to Labrador in March.

While living in Tasiujaq we used to go to Lac Aigneau. This area was south of Tasiujaq and west of the Caniapiscau river. They used to be there in March but I don't know where they come from. There were not many, but enough.

There were no maps in the old days so can't really say where they were.

South of Kuujjuaq near Lac Machicapau there used to be migrating caribou coming from the south.

We saw antlers that were like powder, very old. The caribou never disappeared but they were scarce at times. The Kangisualujjuaq people were the only ones to have caribou at one time, not the people in Kuujjuaq, not in my generation. But my brother knew about this.

There was a trip to Lac Machicapau by plane a few years ago, maybe 1968 in the summer.

Around 1962, was the last time that we went out by dog team to hunt caribou at Lac LeMoyne (south of Kuujjuaq). The males came from the south and the females came from everywhere, first time I have seen so many.

Sedeganik : def.: the smell of the caribou. This is what they call the area where the caribou cross the Koksoak south of Kuujjuaq, approx. 68°30' west 59°07' north (symbol on map : ).

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Interview : Hunters #3 and 4

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North of Old Chimo there was a place where the Indians and the Inuit used to fence in the caribou and use a bow and arrow to kill them. The caribou came from the west and would cross the Koksoak River and we went after them by kayak.

#### Canada Geese

The geese follow the major river systems through the valleys on their way from the south to north and vice versa. Hunter #1 worked in a mine at Lac Napier and he said that the geese would never stop flying over them. I do not know about geese east of Kuujjuaq (Hunter #1). I spent one summer on the George river, east of Kuujjuaq in 1960, but I didn't see any geese. I was one of the first people to work for the co-ops in the early days.

Not many snow geese nowadays but a lot in the old days.

#### What is your view on the low-level flying?

- H.#3 We didn't have the power to stop it, one day they will be coming. They talked about it long ago. I don't really mind if I don't see them.
- H.#4 I feel the same as hunter #3. I understand that there are more geese on the other coast so I can understand why they are here. I feel the army saved our lives because the Bay would not give us credit. The people were dying off from the measles before the army came with the medicine. The army saved us, they helped us.
- H.#3 If they keep their word about the planes I don't mind.
- H.#4 I feel the same, I listen to the F.M. and if they stay to their word it is O.K.
- H.#3 Department of Transport came after the army was finished. There was a good doctor that did two operations in his house. They lived long lives after that.

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Interview : Hunters # 3 and 4

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November 25, 1987

O. What do you think of the possible expansion of a NATO base involving up to 16 countries and an increase of flights?

H.#3\* I don't see anything wrong with the increase of the flights over that area. People should remember that the calving grounds are everywhere.

H.#4\* I do not agree with everything that the other hunter said the other day. I saw the people in Labrador on T.V. and I feel I would like to help support them. Their lives are being changed by this. If there are more flights they wouldn't be able to live up to what they say.  
I heard about a plane scaring a beluga and the whale beached itself. When the Indians were here, one of them saw it. If it was for a time of war I wouldn't mind but not just for practice.

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\* These comments were obtained from a second interview after further clarification by the interpreter about the nature of the project. This was necessary due to a misunderstanding about the project by the interviewers.

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Interview : Hunters #5 and 6  
Topic : Low Level Flying Interviews  
Date : November 19, 1987  
Interviewer : Danny Gallant and Willie Gordon

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Hunter #5

I am originally from the Tasiujaq area, I moved to Kuujjuaq in the 1940's.

When I was young, people used to go caribou hunting around this area of lake Kakiaktukallak (southwest of Tasiujaq). As the caribou came closer the people stopped going to this area.

In the 1950's the caribou were near Lake Winnie (south of Kuujjuaq).

I spent a lot of time in the hospital and False river also at Diana lake.

As for the caribou at lake Kakiaktukallak I don't remember when the caribou arrived and when they left. The caribou of Kuujjuaq are different from the caribou of Labrador. There are too many people in Labrador so maybe the caribou came to Kuujjuaq.

Hunter #6

(He has just entered the room). I would like to talk about the critical areas on the map. After the crash of the caribou the herd was greatly reduced and the population was restricted to one particular area near lac Le Moinerie. The caribou used to travel between this area at lac Le Moinerie and the calving area in Labrador as the population increased.

Early 1950's not too many caribou left, by 1959 very few. Some times hunters in the old days didn't survive and their dogs had to be left behind.

Between the critical area and the calving area, the caribou travel in a time when the population is low.

This current low level flying is not much of a bother they can continue.

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Interview : Hunters # 5 and 6

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Geese and Sea Gulls

Geese and sea gulls come up at the same time. Hawks and falcons come up a little before the geese. The geese stay a little longer.

After the pass of a low level aircraft the lake becomes very oily, what is it and is it true. Nothing at present really bothers me about it. Only the oil on the lakes; most of the lakes have whitefish and lake trout.

Q. What do you think of the possible expansion of a NATO base involving up to 16 countries and an increase in flights?

Hunter #5\*

Last time he was cut short. I think that if there are that many planes that it may scare the calving females and they would leave their calves. With that many planes I think they would affect the wildlife in the area.

One time I was camping near Kangiqsualujjuaq, and I was trying to get a female that had just had a calve. I chased the female and it took off and never returned to its calve. If a plane scared them they may do the same thing.

Hunter #6\*

I don't think that an increase would be good at all. Just as it is now it is O.K., but once the other countries come in with NATO there would be an overlap.

I feel I would also like to support the other native groups involved. No increase in flights!

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\* These comments were obtained from a second interview after further clarification by the interpreter about the nature of the project. This was necessary due to a misunderstanding about the project by the interviewers.

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Interview : Hunters # 7 and 8  
Topic : Low Level Flying Interviews  
Date : November 20, 1987  
Interviewer : Danny Gallant and Willie Gordon

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Hunter #7

CARIBOU In the spring they (the caribou) would migrate down south from Kangiqsualujjuaq, as my father told to me, I am not sure myself (1959).  
The first time that I hunted was when I was 15 yrs old and at this age I started to remember the things that my father told me. I used to prepare the dogs and feed them for the older men, this is how we learned to do things.

There is a lake near the Koroc river that has big lake trout. In May near Koroc river for caribou.

Hunter #8

I used to walk for one month to a lake southeast of Kangiqsualujjuaq in the fall (October-November) for caribou. We used to meet people from Labrador there in winter when we went by dog team. Sometimes we only came back in the spring.

CARIBOU In the spring the caribou would migrate out of Labrador, in the fall they would return. This is not the same today. We never went further south.

FISH I can't really show you where the fish were because there were no maps in the old days, I can't really show you the lakes.

Q. What do you think about low level flying south of Kuujjuaq at present?

H.#8 As long as they don't fly near us, I don't mind. I used to be a guide for Bobby Snowball's camp, but now I am with the Kuujjuaq camp on the Koksoak river.

H.#7 As long as they don't fly near the Inuit hunting grounds I don't mind. There are small planes that fly around and when they see the canoes they leave. It is with the small planes that I have trouble with.

GEESE Not much geese in the Kangiqsualujjuaq area.  
I have asked the interpreter Willie Gordon to inform these two hunters that there was a portion of the interview omitted.

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Interview : Hunter #9  
Topic : Low Level Flying Interviews  
Date : November 23, 1987  
Interviewer : Danny Gallant and Willie Gordon

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I only remember by the stories my father told me.  
We went to an area by dog team past the Kangiqsualujjuaq area where we meet people from the Labrador coast, this was usually after Christmas. My father became friend with a person from Labrador.

0. Where did the caribou come from?  
My father didn't mention that, but this is where they were.

We used to go down the Rivière-Aux-Mélèzes in February-March this is where the caribou were, if not in this area we moved northwest to a larger area. This is where my grandfather was lost. Many people used the land route to get down river instead of the river.

Area around lac Le Moinerie, the last time I chased caribou across the lake with a 10 hp skidoo, very slow.

Area directly south of Kuujjuaq - 1968

A long time ago the caribou were fat.

South of Tuctuctuc in the winter and fall in 1977, 58° north, 68° west.

Southeast of Kuujjuaq on the Whale River 1972-1974.

Current day caribou hunting is much closer to Kuujjuaq than in the old days. I am one of th guides for the Kuujjuaq camp on the Koksoak river.

GEESE/  
SEA GULLS They both go along the same migration routes along the river valleys.

CARIBOU If the caribou start to disappear again they will always be at lac Le Moinerie. When there were not many caribou they didn't seem to migrate at all, they stayed where they were.



Interview : Hunter #9

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Q. What do you think about low level flying south of Kuujjuaq at present?

I can't say much about it because I don't go down there and never will. The Indians in the area should be concerned about it. If they had to move the area, I would not want it moved north, maybe west or south but not near us.

November 25, 1987

Q. What do you think of the possible expansion of NATO base involving up to 16 countries and an increase in flights?

Hunter\* Not a good idea to expand too many planes in the future. There are not only caribou but all types of animals that would be affected by the planes; mink, duck, otter and many others. I am not an expert but it doesn't look or sound good to me.

The Naskapi indians would be starving with no animals. I would like them to move to another country with their planes.

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\* These comments were obtained from a second interview after further clarification by the interpreter about the nature of the project. This was necessary due to a misunderstanding about the project by the interviewers.

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Interview : Hunter #10  
Topic : Low Level Flying Interviews  
Date : November 24, 1987  
Interviewer : Danny Gallant and Willie Gordon

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I am a pilot for Johnny May Air Charter.

My father has a camp on the George River.

My brother will speak to you about this, he has seen low level jets in the valleys.

I saw a few jets about 15 years ago.

There are advisories that there is military activity taking place in certain areas.

CARIBOU My real worry is that they don't disturb the calving grounds. Caribou are always moving, it would be very hard to keep track of them, they are always changing direction, someone would have to monitor them all the time. If it is only an infrequent flight over the herd, O.K., but no flights over the calving grounds at any time.

Just because people have designated a special area that the caribou are supposed to go to, to have their calves, they don't always make it. Between Kuujuaq and George River there are pockets of caribou calving along the way, groups of 1-15 of them.

People would not be too thrilled about the fighter planes going over them in the outfitting camps. My opinion would depend on the frequency of flights. If it becomes a military zone then it becomes very annoying. It would increase chances of mid-air collisions and would be very dangerous. My plane travels from 50'-300' depending on the weather.

If the pilots of the fighters are equipped to spot the smaller planes then it really is no problem.

In 1959 it was the first year that I saw so many caribou . If the calving area is distributed in the flight range as it is here then it would be very hard to pinpoint where they are calving.

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Interview : Hunter #11  
Topic : Low Level Flying Interviews  
Date : November 24, 1987  
Interviewer : Danny Gallant and Willie Gordon

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The low level fighter have been by the camp several times on the George River at Pyramid, you could see the pilots, 2 or 3 of them at a time. Our customers complain and are annoyed by them. It is very loud for a short period, charters may be longer lasting but they are part of the environment.

If an increase would take place then I would be opposed to it.

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Interview : Hunter #12  
Topic : Low Level Flying Interviews  
Date : November 24, 1987  
Interviewer : Danny Gallant and Willie Gordon

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I work for M.L.C.P., but my opinions are my own as an inuk.

Q. What do you think of the possible expansion of a NATO base involving up to 16 countries and an increase in flights?

Since 1976, the avr. weight of the caribou has gone down 32 lbs, length of the lower jaw has decreased by 2 cm. The overall physical condition of the caribou has decreased.

Since 1984-85, the population of the caribou has started to decrease. The survival of the calves is important. Part of the reason for the decline is the over utilization of their habitat. They are starting to migrate west earlier than usual.

Nobody has checked with M.L.C.P. office in Kuujjuaq about the low level flyings. We do temelety monitoring of caribou every 2 or 3 months or 4 or 5 times a year. The calving area has increased each of the last five years.

They (the D.N.D.) should have a good monitoring system in their general area of the low level flying. They should have monitoring during the calving season. In June they should stop flying, and let the caribou calve in peace. The calving area may continue to increase with the caribou in search of food. The only way of not bothering the caribou is by not flyiing over them during the month of June, a one month moratorium.

Appendix IV  
Notes From Community Consultation in Kangiqsualujjuaq

Kuujjuaq

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Interview : Kuujjuaq Municipal Council and Land Holding Corporation  
Topic : Low Level Flying Interviews  
Date : Tuesday, November 17, 1987  
Interviewer : Colin Bird

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The environmental aspects and caribou are more important than repeating what was said before.

No flying is going to come within 200 miles of Kuujjuaq.  
There will be no spin offs for the town's people.  
Therefore all that Kuujjuaq is worried about is the caribou.

They have no first hand experience on hearing or seeing how the planes fly;

- they would like to go see it for themselves.

M.C. Flying began in Goose Bay in 1941

More flying started in 1951

In the 1980's they began low level flying

- the amounts have increased since then;
- it may increase even more.

T. Kleist recommends that one fellow from Kuujjuaq should be involved so that he could report back to the people in Kuujjuaq.

M.C. There can be a discussion of the conclusions prior to the finalisation of the EIS.

- when the caribou migrate they wish the planes do not fly over them.

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Interview : Hunter #1  
Topic : Low Level Flying Interviews  
Date : Thursday, November 19, 1987  
Interviewer : Colin Bird

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Main concern is the dust (emissions) from the planes could affect the land and vegetation

- the moss that for the caribou eat takes around 20 years to grow and it could be damaged and/or poisoned;
- the most important areas would be along or near the rivers;
  - don't fly over the rivers or not at all.

Full time workers tend to hunt on weekends; others hunt nearly anytime or on Monday-Tuesday.

Fewer foxes this year;

- possibly due to the return of the weasel;
- when weasels appear foxes tend to leave (no explanation).

There are 9 full time positions in the village and 3 in the Municipal Council (2 held by whites);

- 5 in Coop;
- 2 in nursing (2 whites);
- 1 OPP officer;
- 3 school board and  
5 teachers (this doesn't include white people).

Last year fox furs were \$18 (low)  
- better this year maybe.

When planes fly over a hill they must accelerate and point upwards;  
- hence their dust hits the ground more.  
- this could lead to the contamination of the vegetation and water below it.

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Interview : Hunter #2  
Topic : Low Level Flying Interviews  
Date : Thursday, November 19, 1987  
Interviewer : Colin Bird  
Interpreter : T. Annanack

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This hunter is concerned about the low flying airplanes because he had seen them fly over the George River;

- maybe 15 years ago he saw 2 planes flying up the river about 30 feet off the ground;
- "They (the planes) left smoke all over the ground whenever they turned corners or went over a hill".

He's worried the smoke will get into the moss that the caribou eat; for lakes that have few feeding streams or that are small, the emissions may be important;

- it may kill the fish, etc...

He don't go hunting as much now because he is old (born in 1924).

This hunter and another one think that the big noise of the planes will scare humans and animals;

- for example : when people visit an area a lot, the animals disappear after 4 or 5 times;
- if planes fly over, all the animals will be scared away;
- just like the James Bay Project or the town of George River;
  - both caused the animals to move away from their usual places.
- in this case the animals will move to the east;
  - caribou, fox, otters, etc...
- the grass the geese feed on could also be affected;



Hunter #2

---

- the migration routes may change from the noise;
  - for example : the ducks between George River and Kuujjuaq haven't really been laying many eggs in recent years due to the noise of the engines, planes, guns, etc.
- the sea range may push marine mammals to the north;
  - it will have a large impact;
  - he had heard there were cancer causing materials in the ammunition;
    - are they going to use these shells?
  - animals will move away from the target range areas
    - both on land and sea.

This hunter is in favor of military defense.  
He is also in favor of the animals.

In recent years there have been fewer caribou around George River;

- those that migrate to the north of George River have moved further north;
- those who migrate to the south of George River have being following routes further north and further south.

In the last 15 years there has been an increase in the caribou population;

- there have also been more lost (sickness or natural causes?) so the population is staying about even.
- migration routes tend to move;
  - now they're moving further and further north.

When he was young he went by dog sled to Nain and Saglek Bay to hunt caribou in the spring.

In September/October he'd travel by foot to hunt caribou near Fort lake (south of George River).

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Meeting : Kangiasualujjuag Council  
Topic : Low Level Flying Interviews  
Date : November 20, 1987

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Perhaps MLCP should be consulted for more information on caribou locations and movements.

Current routes have changed since the days they knew;

- routes used to be along the coast from Kuujjuag to George River;
- now they have moved further south and take an inland route south of George River.

Maybe see MLCP - Johnny Adams.

Christina is concerned about the low flying airplanes;  
- she wishes that they avoid the area where the caribou have their calves.

There was someone who did some work on the caribou before, by helicopter  
- perhaps the man Murray mentioned : Stu Luditch.

Q. Is the low flying project the same as Kuujjuag and their new military airstrip?

M.C. Not related; the CF18 jets aren't supposed to fly low but patrol Canadian airspace from high up.

The people would like to hear and see the jets for themselves;  
- could a fly over be made so that they could experience it?  
- let them know when first.

There have been incidences when the planes have flown by over the village;  
- they came and went very quickly and were very loud.

The people would like to have more information on the project;

M.C. - they will send them the newsletter and translations of the information.

Q. When will the panel be back?

M.C. - Next fall after the work is completed.

---

Interview : Hunters #3, 4 and 5  
Topic : Ecology Interview  
Date : Friday, November 20, 1987  
Interviewer : Colin Bird

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### Caribou

The caribou migration in the spring moves from the west to the east

- the village heard they begin to move in March;
- around April they pass near George River.

Today's route takes them south of George River although some still come by.

The caribou calve in the mountains along the Larador coast;

- all along the coast, even as far as Nain;
- better to ask the Nain people about these spots;

They go into the mountains because there are less flies;

- they can have the wind on them wherever they stand so the flies can't bite through their thin fur.

Some caribou move north and some south.

Since the Schefferville railroad was built and James Bay LG project, a lot of caribou have appeared;

- even beaver and martin.

The calves are born in May/June.  
The caribou mate in October/November.

The bulls tend to follow the females.  
Around the middle of September if there are no females around, the bulls will begin to walk and search;

- even on an empty stomach.

The caribou stay in the mountains until the middle of August and then begin to move back to the west;

- the females and calves tend to lead usually.

In the past, mid 1940's, the caribou used to migrate north along the east side of the George River;

- not by Chimo;
- there were fewer caribou then;
- hunters from Nain, George River, and Kuujjuaq met sometimes while hunting by dog sled.

The caribou tend to first migrate south and then west towards Great Whale;

- the northern herd may pass by George River;
- the main herd travels further south.

The migration routes are moving further south, like in the past.

Some caribou aren't migrating but are calving in the same area.

The caribou move where there is food and leave areas where there is none.

There used to be migration route tracks left in the ground;

- then there were fewer caribou (?);
- nowadays there are more caribou and they go all over the place.

The predators of caribou have also increased their numbers as the caribou have;

- wolves primarily;
- some very skinny wolves were killed before then caribou were skinny.

### Geese

In the spring the geese come north in April/May;

- they tend to follow the rivers.

The geese stay where there is the least snow;

- this is usually inland;
- as the snow melts they move to the coast.

The geese tend to follow the same routes on the way back in the fall;

- their numbers tend to be more.

Low flying airplanes can be expected to affect both geese and other birds.

There are lots of animals that will be affected;

- the animals will move away;
- just like the animals move away from the camps;
  - that's why the people must move their camps so as to follow the animals.
- the animals will get used to the planes and the noise;
- if the food is polluted, however, then the animals will die.

Fish

Even if there are studies the people know that the fish will be affected;

- especially the lakes with small rivers and creeks.

Marine Mammals

The marine mammals will be affected by the noise of a sea range. In the fall the marine mammals come up the Labrador coast and go west. In the spring, they do the opposite.

Whales go west in the fall and east in the spring;

- just like the fish;
- they go out to sea in the spring and return to the lakes and rivers in the fall;
- the seals do this also.

They (DND) should hire local people and put them in certain places to see what happens;

- that way the people would see where the animals are and then the planes could avoid them.

The people believe they'll be ignored if they say no to the project.

It is therefore better for them to negotiate, so that both groups can do well, than not to be heard at all.

If something is going to be affected there will have to be an agreement acceptable to both parties.

Q. Will there be consultation on that?

Things will be affected in the future therefore something will have to be agreed upon.

A hunter (4) thinks this should be done for all things

- not just low level flying.

Even though Canada is gaining, the people may be losing, therefore, an agreement is necessary.

Even though we don't know if the animals will be affected it is better to think about the future in case.

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Interview : Hunters # 6, 7 and 8  
Topic : Low Level Flying Interview  
Date : Monday, November 23, 1987  
Interviewer : Colin Bird

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Hard to know what the impacts would be and where they might cause the most problems.

- They'd like to hear what the impacts are from the people near Goose Bay and the studies that went on there.
- Has Makivik consulted these other groups to know what the problems are?
  - No, other groups are doing that work;
  - Murray Coolican said that he thought the results of these studies, etc..., would be made available to the George River people.

The hunter #6 heard the guy on the radio on Friday but thought he was too short with his presentation and his comments were too general.

On animal behaviour and noise :

- when animals hear a noise continuously they tend to move away;
- there should be any noise in this area because the animals will move away;
- an example is the James Bay Project and that area;
  - there used to be a lot of beaver in that area but now there aren't any;
  - the beavers have come to George River area; they weren't there before;

The hunter doesn't want this to happen in George River due to the noise.

Q. Have they noticed changes like this that might be from the airplanes at Goose Bay?

Example : The hunter once caught a fox in a trap. Normally foxes are very alert but this time it wasn't so. The fox seemed deaf because it didn't hear him walking up, he just sat there. When the hunter touched it the fox jump up very startled. The deafness might have been due to the noise of the airplanes, he doesn't know.

In 1943, the people from George River had to travel far south to a place where they could hunt caribou. They met people from Nain, Kuujjuaq and Whale River. This was the only place they'd meet; this was in the spring.

In 1959, the caribou herd seemed to move further north towards George River. The people were very thankful that they didn't have to go as far to hunt the caribou. Each year the caribou have moved further and further north. The hunter suspects it might have been the planes that caused the migration routes to change.

In this period, the caribou were fewer and they wouldn't migrate or move very much;

- not like they do now.
- lately the caribou have been migrating more along the coasts, both coasts (Labrador and Ungava), and also further north.

0. When did they move further north? Why?

- the caribou have moved progressively east and north since 1959.
- by the early 1980's the caribou began to dominate the George River coast and further north;
- people began to operate caribou camps for southerners
  - very productive
- this had never happened before.

Why?

- One reason, perhaps the planes at Goose Bay.
- Long ago, there were a lot of caribou all along the coast north of George River, just like now;
  - it was always said they would return.
- There were especially many near Ablovialq Fjord; there were people living there and one man was so disturbed by all the caribou jumping into the water to cross the fjord that he put a whale head in the middle of their migration path so as to stop them.
- The caribou disappeared because they were disturbing someone.
- This was before Stanley and Nick's time.
  - the migration routes can still be seen in the ground.

Ablovialq was their favorite hunting area on the past;

- it was good for walrus, whales, etc...

If the military wants to practice in the valleys it may be good for the planes but not for the animals;

- the valleys should be the sanctuaries for the animals.

~~If~~ the caribou and animals leave they don't know where they would go to.

Therefore, absolutely NO to the planes.

Another hunter said he had seen a jet flying low near Keglo Bay;

- the jet was flying low and then climbed high in the sky;
- it left a big noise and lots of smoke.

Another hunter saw a plane (or two?) on the Koroc River;

- two planes were last seen on the George River near Ford Island.

Hunter #6 disapproves the project.

Hunter #7 has never stopped hunting;  
- he goes hunting every day;  
- he just took a break today.

It would help a lot if area 1A was left out of the flying;  
- even with 1B and 1 the caribou would still hear the noise.

Where did the planes the George River people saw come from if it is past the 250 mile limit?

Hunter #6 has had his, or at least run the Co-op caribou camp since 1981;  
- it is open for 6 weeks a year  
- it handles 50-60 people a season  
- the amount varies year by year depending where the migration is.

This hunter asks why are they using the Inuit land to practice in?  
- he's protesting the projects not for himself but for future generations;  
- the animals may not be able to survive if there are too many projects.

### Caribou

After having calves on the Labrador coast they move north;  
- the caribou come from the west around April and move to the calving grounds;  
- around August/September the caribou begin to head back to the east;

The females come first with the bucks following after  
- soon after.

The males stay near the coast and the females inland;  
- when the females go to the coast the males go inland.

Why?  
- it's the way it is.

There are more caribou nowadays  
When hunters #6 and 7 were young they had to go a long way to hunt them.

The George River people hope the caribou turn west at the top of the Labrador peninsula; that way the caribou would pass George River twice.  
- this is what they usually do.



The calving ground could be further west than that of the mountains  
There is not only one herd but many;

- some migrate later, others earlier;
- some calves are born before George River;
- as in recent years.

Q. When would be the best time for planes not to fly?

- it is hard to say when not to fly;
- they would like the planes to avoid the coastal region.

Calves are usually born by the month of June;

- the cycle is known to be getting later in recent years;
- it used to be in May, now it is June.

They have heard that Nain used to have a lot of caribou but now they are getting to be a lot less.

Q. Due to the airplanes?

- also due to the large helicopters that fly out of Nain and into the mainland.

The geese coming by the George River area tend to be very wild because they have seen lots of humans and heard lots of noise;

- the geese will be even wilder if there is more noise.

They are worried that chemicals or toxics will get into the food chain and affect the whole ecosystem;

- fish--seal/whale--human

In the spring (April/May/June) the various migratory birds come up the coasts north to Killiniq and then on.

- they come north to have their babies
- once the young are able to migrate then they head south one again.

The southern migration is along the coast;

- the distance from the coast varies.

In the older times, there were no geese to be found on the Labrador coast.

----- now there are many.

Some geese come from the south and others the southwest;

- they usually head north around May.
- they are pretty well always at the same time;
- the geese return south at the first sign of snow (September/October)
- they begin to gather at the end of September.

The geese may not be affected as much because they are more used to humans and being around them.

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Interview : Hunter #9  
Topic : Low Level Flying Interview  
Date : Monday, November 23, 1987  
Interviewer: Colin Bird

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What is going to happen if a plane crashes and kills caribou?

How can the military force the pilots to fly where they tell them to?  
- especially if the pilots are flying at 50 feet and no radar can follow the planes?

We (the Québec Inuit) won't feel any of the benefits of the flying, only the effects.  
- why have it here in our hunting grounds and not somewhere else?

He has heard of 2 planes flying over George River.

The military should fly over the community to let everybody know what it is like

- a tape or a video would not be any good as both can be faked;
- he'd like to experience it first hand;
  - have a demonstration;
- 95% of the population don't know what we are talking about (i.e. low level flying)
- let them touch, hear and see what it is that will be flying over the land.

What is there to hide?

What will happen if a plane crashes and hurts people, the land and everything?

This hunter has 17 lakes to work his fishing from along the George River up to Bobby May's camp.

He'd like to keep Canada clean;  
- it is a peaceful country.

He is worried the project will keep increasing in size and duration;  
- the promises will be broken like they always are;  
- like the JBNQA.

There must be some way to monitor the project.

Q. How?

- it is very hard to do anything about them;
- the Innu are already being ignored when they complain about things
- How are the Québec people going to be heard?
- Just stay away from us.
- He'd like to have the military come north and explain why they are needed (the military)

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Interview : Hunter #10  
Topic : Low Level Flying Interview  
Date : Tuesday, November 24, 1987  
Interviewer: Colin Bird

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As far as I am concerned, they can go to Turkey.

My main concern is for the heavy metals getting into the ecosystem and ending up in the human population many years down the line.

The military has no concern for the environmental impacts that such a project might have on the land and on the people

- they won't stop if we speak out
- they'll only stop if someone dies or if people may die from the project.

---

Interview : Hunter #11  
Topic : Low Level Flying Interview  
Date : Tuesday, November 24, 1987  
Interviewer: Colin Bird

---

0. Did you see any low flying jets?
- Yes, around 1980-81; there were two planes that flew up the river
  - before that some other people saw 3 other planes (pre 1980).
0. What do you remember about the planes?
- There were two planes flying about 75 feet off of the ground
  - the jets were travelling very fast
  - they were very noisy
  - the noise came only after the planes had gone by me.
0. Having seen the planes, what concerns do you have?
- When the planes slow down the engines put out a lot of smoke
  - the smoke will pollute the area below it
  - the impact may come after they have been flying in the area
  - maybe not straight away
- This could affect the caribou and the humans of the George River area
  - if the caribou feed on the area where the planes fly over, this could be transferred to the people.

### Caribou

The hunter marks the general areas of caribou calving

- usually calving goes on in June.

The caribou head east during their spring migration.

- some caribou come along the coast, others take an inland route.
- the inland route caribou usually arrive first around March/April
- the coastal caribou come later : April/May
- the caribou move towards the large area on the Labrador side of the peninsula
- there is also a group of caribou that comes from the south, perhaps from Schefferville
- there are 3 different caribou herds
- after the calves are made (May/June) the caribou begin to congregate around the calving areas in August and then begin their western migration in September
- in August they begin to walk and in September they begin to migrate. But I don't know the route they take.

---

Interview : Hunter #11

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I was born in 1938. I had hunted since I was a small boy and I am still hunting today. I'll keep hunting as long as my eyes are O.K. I go out during the week, sometimes for 5 days at a time. I like to be back on Sundays.

There have been changes in the caribou population numbers and their routes.

Some caribou are wild, some are tame.  
When I was around 10 years old (8-13) the caribou were wild. At a little sound the caribou would run away.  
Nowadays, even with the wind at your back, the caribou don't run away.

Q. Why?

- Everyday, every year, the world is changing, just as my father told me.
- This is just another change.

Q. No other reason?

- When I was young, there were only my people and dogs for our dog sleid. That was when the caribou was wild.
- With planes and skidoos the caribou grew tamer.

#### Caribou numbers

Before I was a hunter, there were a lot of caribou, but then they disappeared.

Now they are becoming plentiful again.

Reason for their growing fewer ?

- (1) Perhaps they moved to a different area where there were no people.
- (2) Sickness and starvation : a sick fox or dog might have contaminated the moss the caribou were feeding on.  
When I was young, all the animals were sick.

The caribou used to taste better than they do now because they only ate moss. Now they eat a little moss, leaves, etc... The taste isn't the same.

The moss is still there, the caribou are just eating different foods.  
Ex. they eat salt now, unlike before staying on the coast; they also eat weeds.

Interview : Hunter #11

---

The airplanes will affect all the animals and their way of life. If they (the military) are going to contaminate the land and animals, the people will have to be compensated with money or land.

Many of the rivers begin in the flying area so they may get contaminated and this would affect the people.

#### Marine Mammals

The people of Nain would know the impact of the sea range on the marine mammals. I know that the marine mammals migrate but I am not certain of the area below Hebron.

Walrus and seals head north in September/October and south in the spring.

Some seals migrate while others stay in the bays and inlets during the winter.

During ice break up, the marine mammals start from somewhere near Quaqtaq and follow the ice far from the Labrador coast and then return near Hebron.

June/August is ice break.

Even the polar bear follow their food, the seals.

#### Birds

Willow ptarmigan stay all year in areas south of George River.

Rock ptarmigan go inland for the winter and to the coast in the summer (March/April).

All the birds that migrate by the flight area may become polluted.

The birds that come north from the south spread every where. They tend to nest along the coast.

---

Interview : Hunter #12  
Topic : Low Level Flying Interview  
Date : November 24, 1987  
Interviewer: Colin Bird

---

I have a caribou camp near the northern limit of the jets. Before the jets, I saw a lot of caribou around my camp. Since then, there have not been as many.

I have heard the noise of the jets. Last year, I heard one but it was bad weather and I couldn't see it or them.

Another hunter used to run my camp that I have now. At that time there were lots of caribou and everyone would get one. Now, since the planes, the caribou are more alert to the hunters.

I had have the camp for 9 years. It is open for 6 weeks a year; I have 11 people working for me; around 37 tourists come each year.

0. Why are there less caribou?

- Because of the jets. The caribou have been scared further north.
- Ever since they heard of the planes flying there have been less caribou.

The caribou used to calve near area 1A; now they don't do this. Fewer bulls have passed by my camp than in the past (in the last 2 years).

The caribou have grown less since 2 years ago. When they heard the jet.

I have seen jets higher up, however, the noise of these is a lot longer (in duration). They are not as fast or as loud as the low jet.

I have noticed that if they fly in area 1A there'll be less caribou in the southern region and more to the north. Until 2 years ago there were less caribou up north and more int the south.

Next year, if I go back to the camp and there are few caribou I'll think it is due to the planes. I may move my camp in this happens. I'll ask the assistance from the military if this happens.

There are also float planes landing on the lakes. This scares the caribou away also. The planes are not from Kuujjuaq; maybe from Schefferville.

I saw 2 jets near George River about 12-13 years ago. The jets flew by when we were fishing. We saw smoke again later but not jets. I thought we heard a noise like a gunshot but louder. The jets were flying low. The noise came after the planes had passed. It was quiet when they were beside/above us. The planes gave off a lot of smoke. When the two smoke trails crossed it was like a cloud.

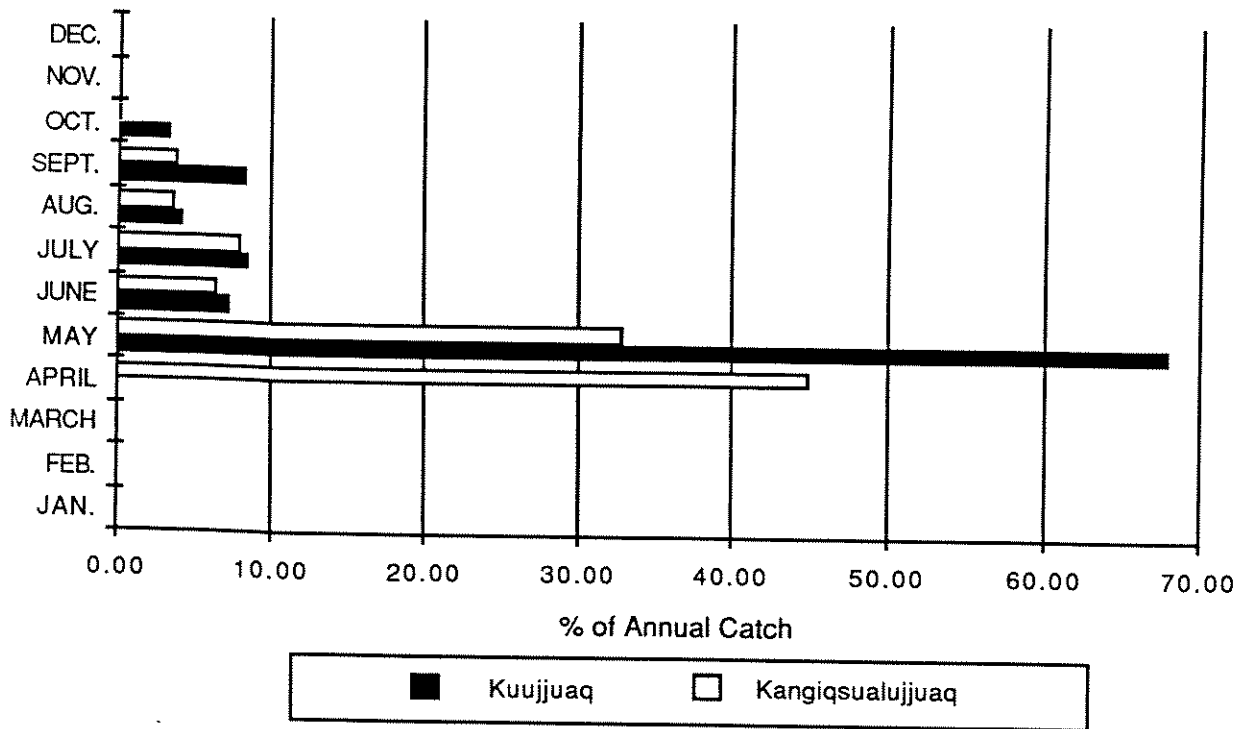
Appendix V

Monthly Harvest (%) of Key Species for Kuujjuaq and  
Kangihsualujjuaq

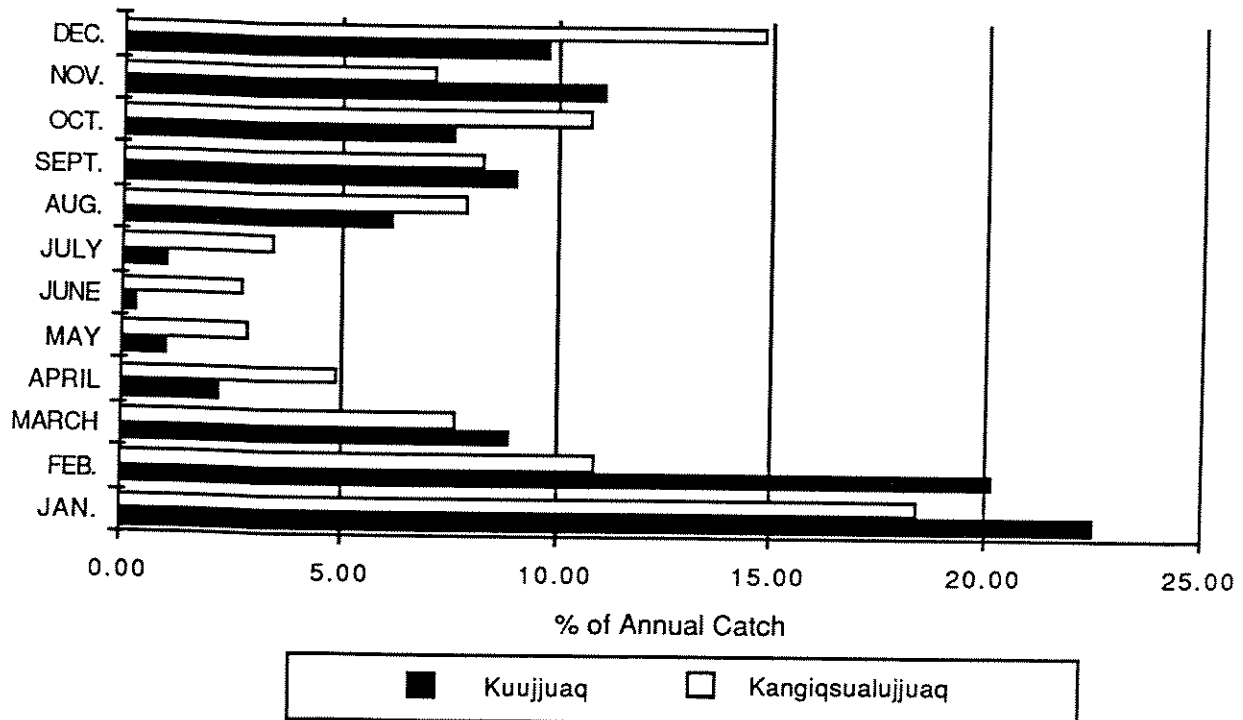


1977 - Comparison of Key Harvest Species  
 Kuujjuaq - Kangiqsualujjuaq

Canada Geese

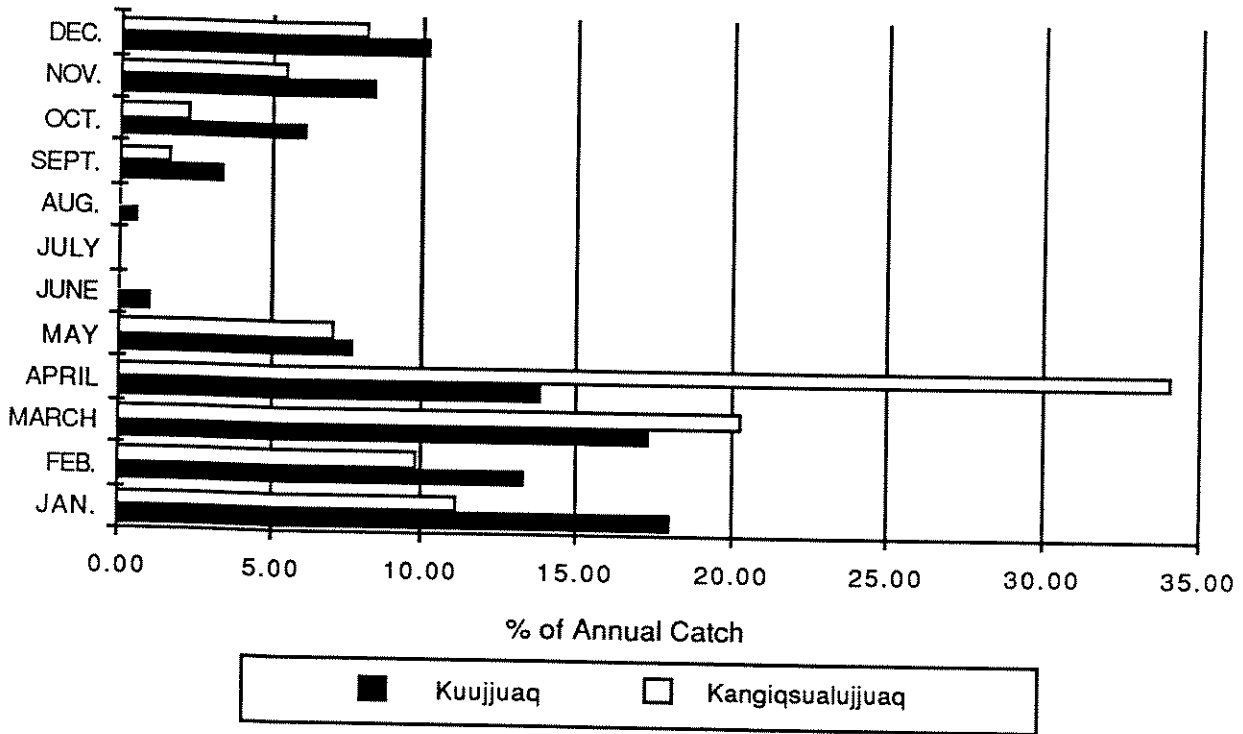


Caribou

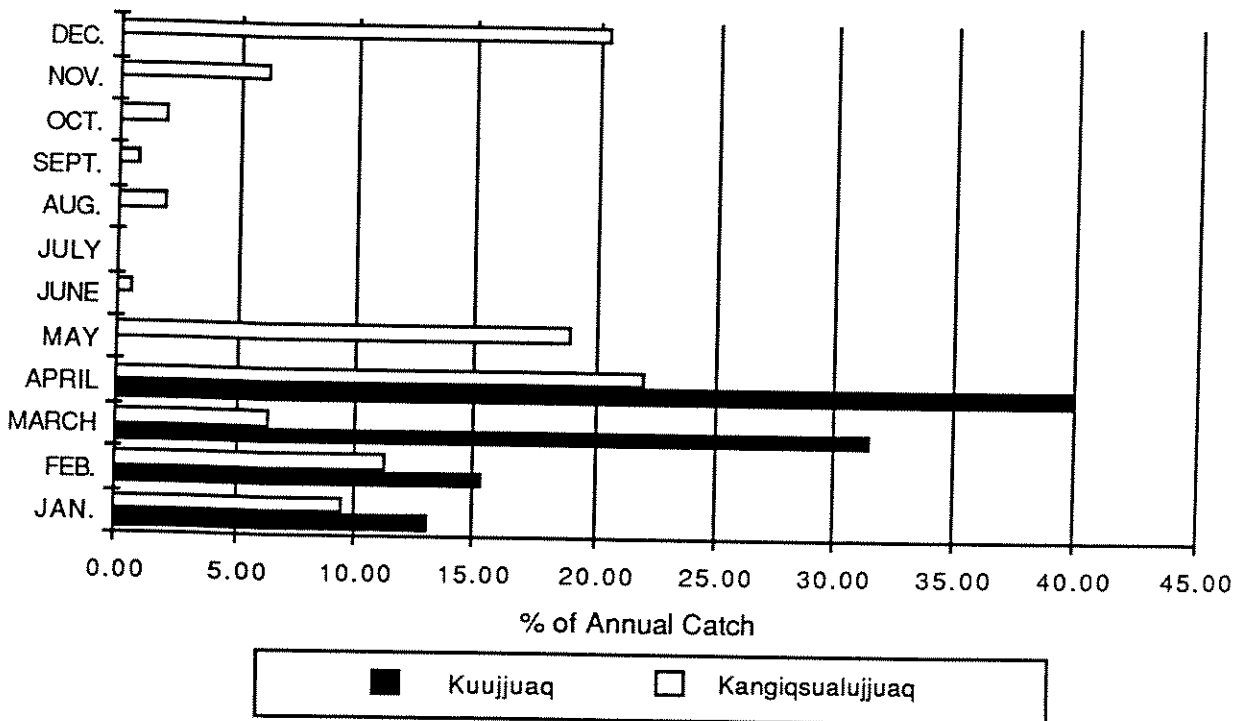


1977 - Comparison of Key Harvest Species  
 Kuujjuaq - Kangiqsualujjuaq

Ptarmigan

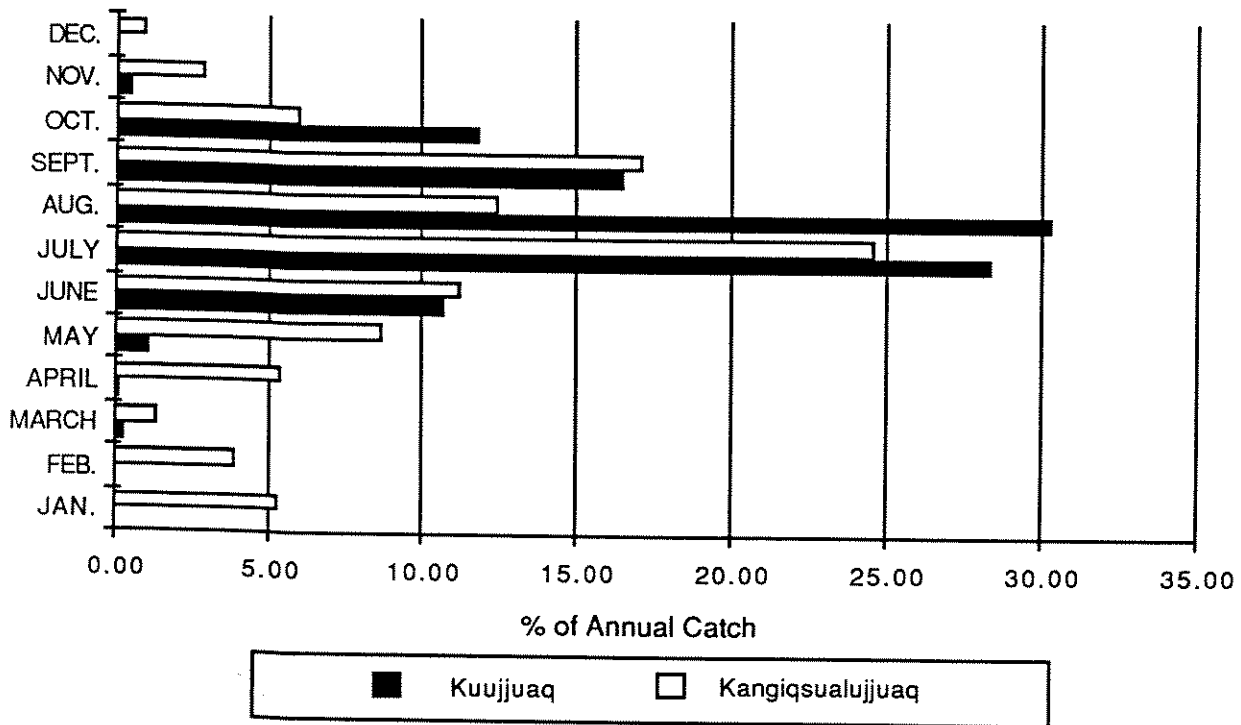


Partridge



1977 - Comparison of Key Harvest Species  
 Kuujjuaq - Kangiqsualujjuaq

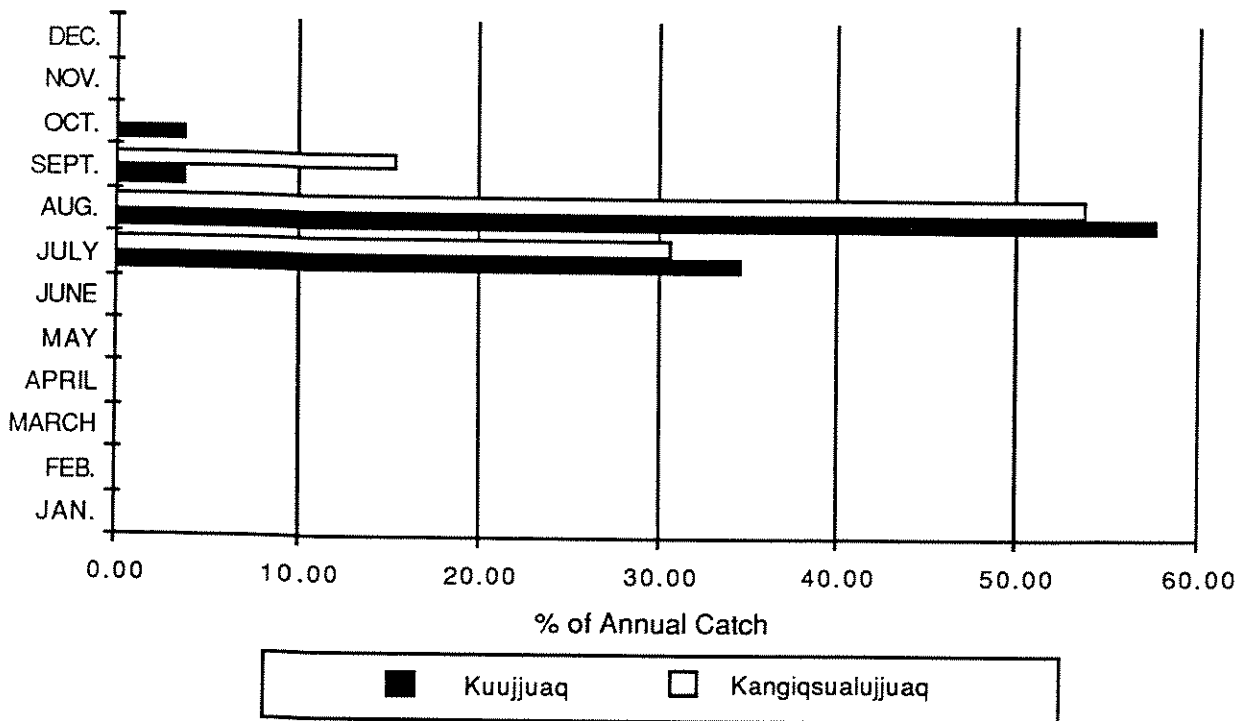
Ringed seal



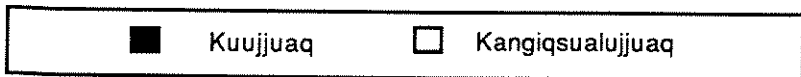
% of Annual Catch



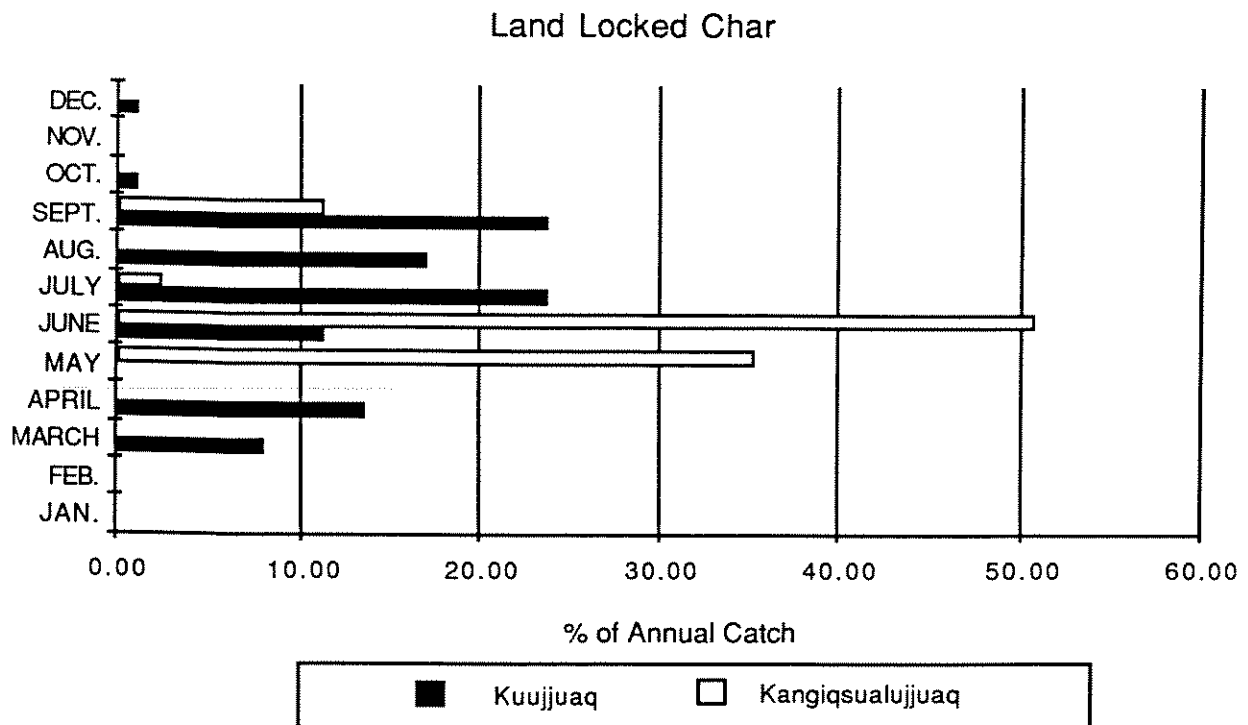
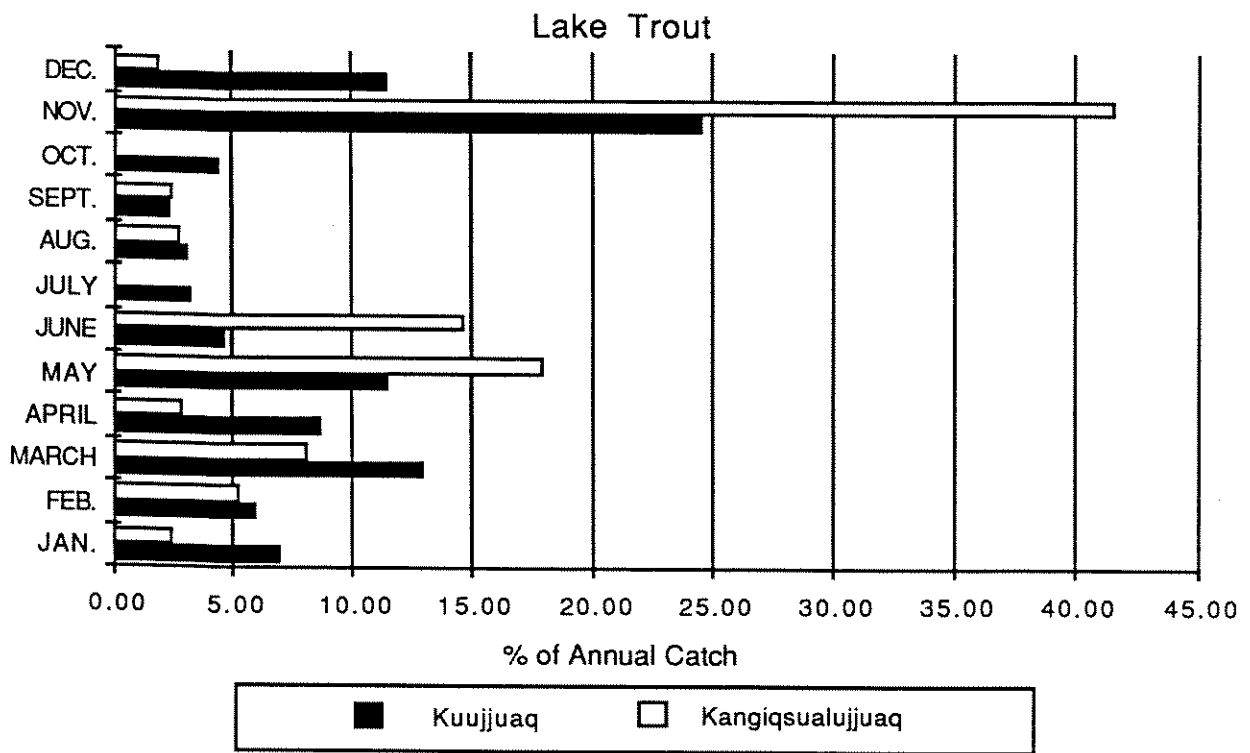
Beluga Whale



% of Annual Catch

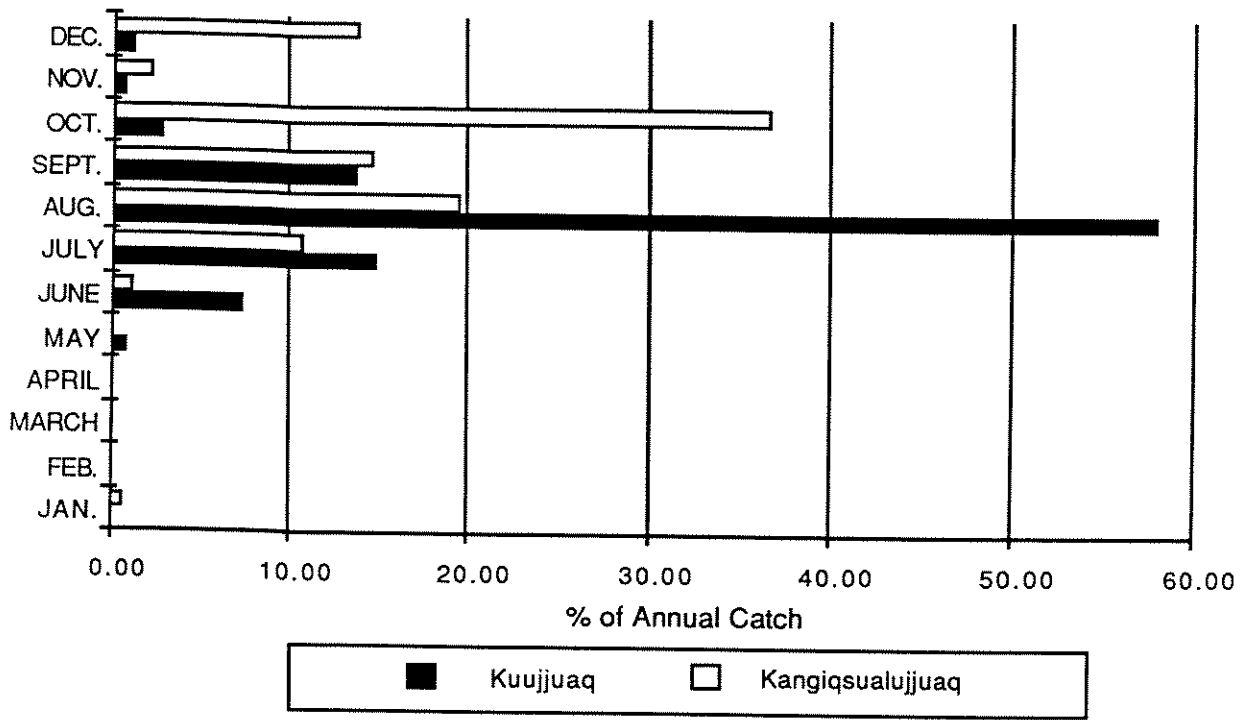


1977 - Comparison of Key Harvest Species  
 Kuujjuaq - Kangiqsualujjuaq

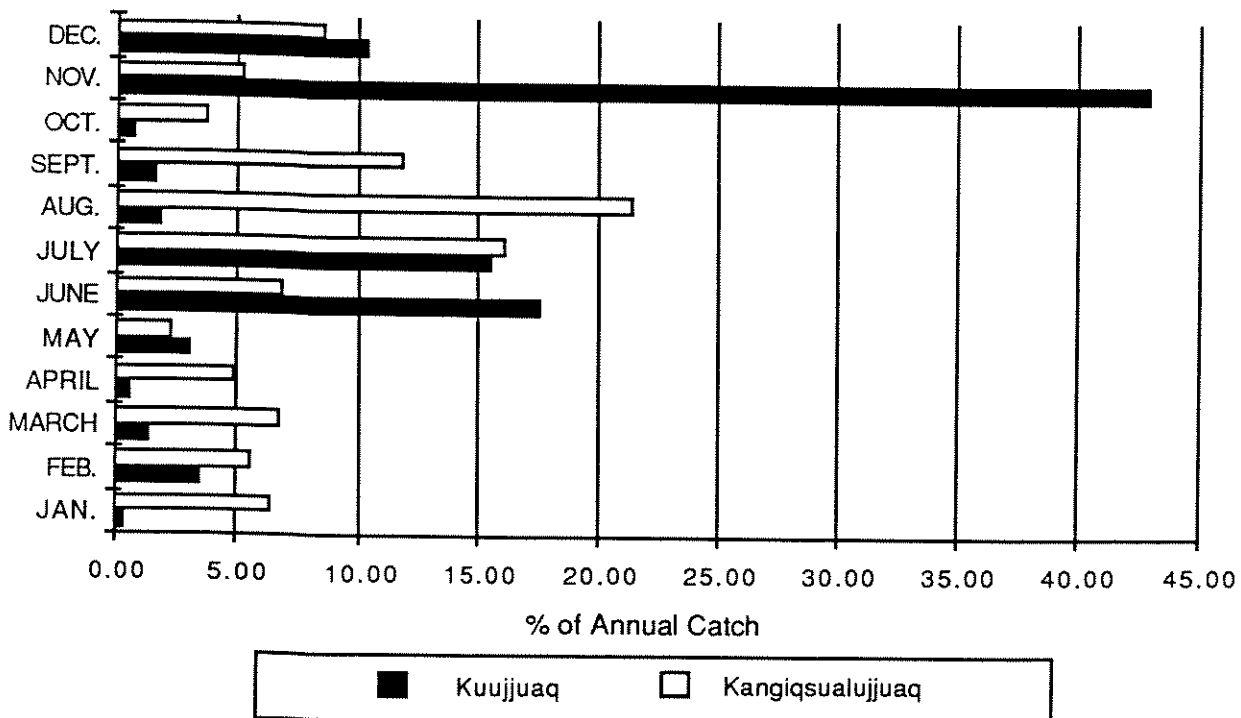


1977 - Comparison of Key Harvest Species  
 Kuujjuaq - Kangiqsualujjuaq

Salmon



Arctic Char



Appendix VI

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