

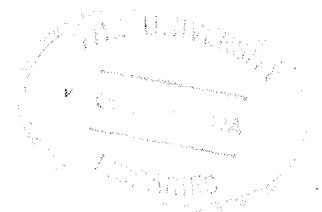
Caribou Management and
the Caribou Management Board:
Eskimo Point Perspectives

by

Donald M. Gordon

A Practicum Submitted in Partial Fulfillment
of the Requirements for the Degree
Master of Natural Resources Management

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ABSTRACT

One of the major obstacles to be overcome in facilitating effective co-management of the Kaminuriak and Beverly herds of barren-ground caribou is communication between users of the resource and those responsible for managing it. In a survey conducted in Eskimo Point during the summer of 1984, it was found that less than half the individuals surveyed were aware of the activities, goals and progress of the Caribou Management Board. Considerable support was voiced over increased use of local radio to resolve the current situation. Caribou News, a paper well-received by those surveyed, is but one communication mode which aids in the process of dialogue exchange.

The two functions of the Caribou Management Board (CMB), as perceived by those surveyed, are; (1) to educate and to be educated, and; (2) to take positive action on issues of local concern. Those issues include, (1) proper hunting technique and conservation, (2) the conducting of biological research and surveys, (3) environmental impacts on the resource and, (4) the proper functioning of the CMB. Indeed, the strength of and respect in the Board lie in its ability to seek and understand local concerns and to act, in a cooperative fashion, with the local user.

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Chapter I

INTRODUCTION

1.1 PREAMBLE

Co-management of Canada's wildlife resource involving native peoples, government bodies and wildlife biologists is a new and promising approach in the interest of conservation. The active involvement by all concerned parties and the resultant interchange of ideas are essential to ensuring the success of such a cooperative strategy. One of the most active fronts in wildlife co-management today is with respect to the barren-ground caribou (Rangifer tarandus groenlandicus) of northern Canada. Co-management efforts are and have been spearheaded over the past three years through the Caribou Management Board.

To contribute to the effective co-management of this resource, the views of users in Eskimo Point on a number of important management issues were obtained. This study will therefore aid in upgrading present management strategies and allow effective planning for future ones.

1.2 BACKGROUND

1.2.1 People and the Caribou Resource

As we move into the mid-1980's, it is becoming apparent to a number of Canadians that our northern wildlife resource is under severe pressures (Pruitt, 1978; Thomas, n.d.). In the context of barren-ground caribou and as Thomas (n.d.) has pointed out in his article, "At the Crossroads of Caribou Management in Northern Canada":

Some recent developments which pose a threat to caribou include: (1) proposed pipeline and ancillary activities in the eastern and western Arctic, (2) intensive exploration and seismic programs throughout the Arctic, (3) increased use of ice-breakers in arctic channels and inlets which could obstruct traditional movements, (4) road networks, constructed and proposed, across winter and summer ranges, (5) greatly increased air traffic, including low level flights which are known to harass caribou, (6) more frequent contact with man on the ground, (7) expansion in size and number of ground facilities such as airports, mines, towns and camps.

These impacts, along with hunting pressures, are of particular significance to northern wildlife due to the fragility of the Arctic ecosystem. In such an ecosystem, where the foodchains are simple, disruption of habitat can have direct and severe effects on larger wildlife species. As Pruitt (1978) has stated:

If one gene pool were to be eliminated or permanently changed in size (due to man's activities in the north) then the size, selection pressures and possible evolutionary changes of the others would be affected because there are few or no alternative sources of food. Since man's own survival in boreal regions depends on skilful management and rational use of native plants and animals, it is in his own enlightened self-interest to recognize the fragility of these foodwebs and to protect them from modification.

Northern wildlife issues are further complicated by cultural and jurisdictional considerations. In examining Figure 1.1, it becomes apparent that the governments of Manitoba, Saskatchewan, Northwest Territories and Canada all have an interest in, and concern with the Beverly and Kaminuriak herds of barren-ground caribou. In addition, the Metis, Cree, Inuit, and Dene cultures all use and are affected by the management of these herds.

Up until 1982 when the Caribou Management Board was formed, management of the Beverly and Kaminuriak herds was spearheaded by "southern" interest and understanding of the issues at hand. Management was based on scientific ideology which neglected the needs, concerns and knowledge of traditional users (Payne, 1981). Unsuccessful attempts at managing the resource by governments was a result of not involving traditional users in the management process, along with a rejection by traditional users of southern management strategies. As Connell (1983) has stated:

For the most part users have not participated in government management programs and have not been party to research results which are conveyed to the southern scientific community.

Lack of involvement has usually been indicative of a lack of communication over the years. As Luke Suluk (from Eskimo Point) stated in a recent issue of Caribou News (Feb., 1983):

I still see that biologists and researchers are not talking with our people. Nowadays, qadlunaat and Inuit in one small community don't even know

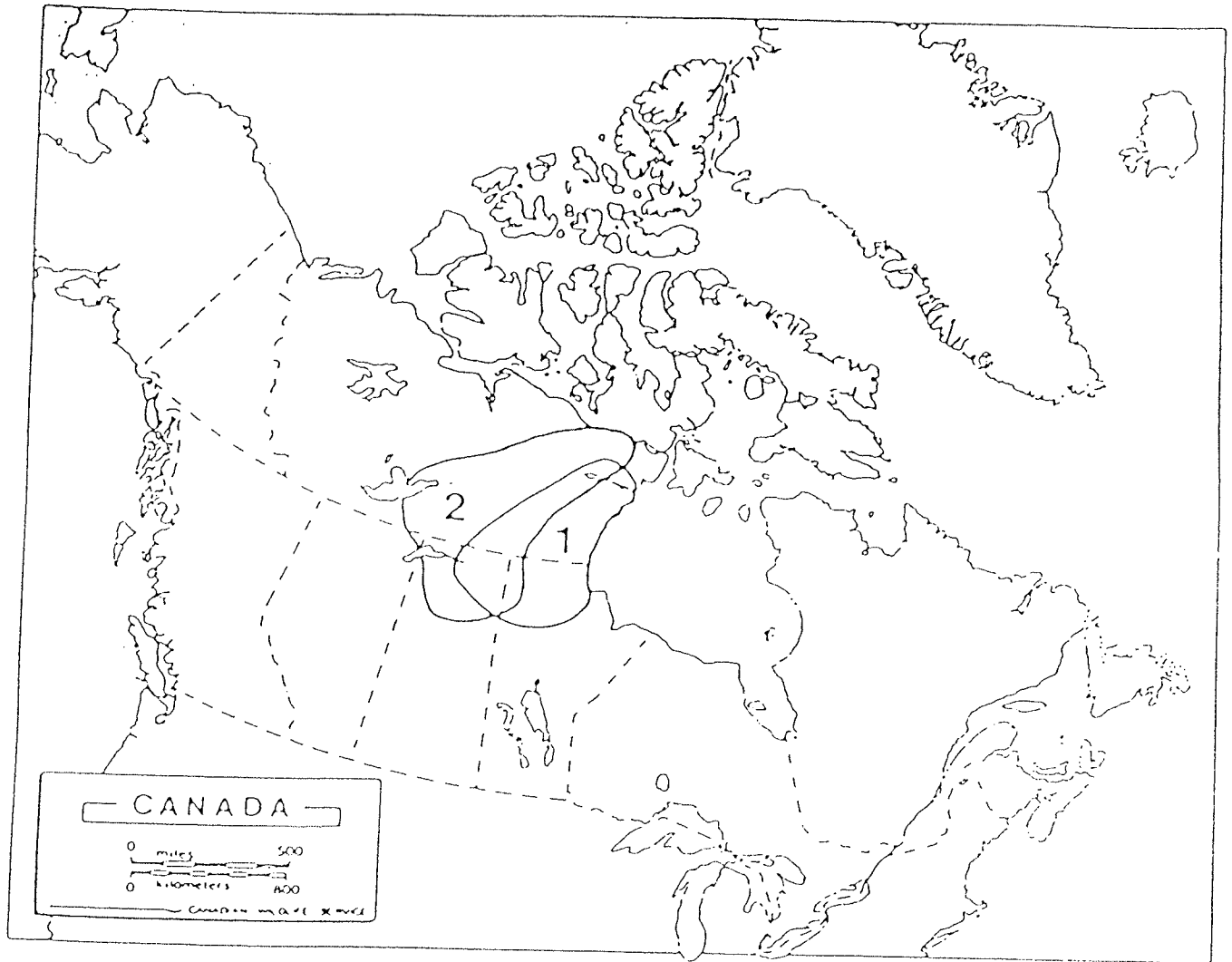


Figure 1.1. Location of the Kaminuriak (1) and Beverly (2) herds of Baren-ground Caribou in Northern Canada. (Thomas, n.d.).

each other. Inuit get to respect someone who talks with us, eats our food, and learns our language.

The history of caribou management in the North, coupled with a genuine concern by both traditional users and governments for the survival of the species has clarified the need for cooperative co-management of this resource. It is in the best interests of the resource, native users, and the people of Canada, that this very sensitive part of traditional culture be managed properly (Caribou News, Feb., 1983).

1.2.2 The Caribou Management Board

Concern for the caribou resource (Kaminuriak and Beverly herds in particular) by both government bodies and traditional users and a realization that a coordinated effort between users and governments was needed to efficiently manage the resource led to the signing of the Caribou Management Agreement on June 3, 1982 and the subsequent formation of the Caribou Management Board. Representatives from the Dene, Metis, Inuit and Cree cultures, along with the governments of Canada, Saskatchewan, Manitoba and the N.W.T. entered into the agreement and have representatives on the 13 member Caribou Management Board (Annual Report, 1982 - 83).

The main objective of the Caribou Management Board is to manage the Beverly and Kaminuriak herds "in the interest of

the traditional users while recognizing the interest of all Canadians in the survival of the resource. Of principal concern is restoration of herds to a size and quality which will sustain the requirements of the traditional users" (Connell, 1983). Other objectives of the Board, as spelled out in the agreement, are:

1. To establish a process of shared responsibility for the development of management programs;
2. To establish communication among traditional users and governments in the interests of co-ordinated caribou conservation and caribou habitat protection;
3. To discharge the collective responsibilities for the conservation and management of caribou and caribou habitat (Annual Report, 1982-83).

Responsibilities of the Board include the development of criteria for regulating the method of harvest, to include "methods of traditional user participation to assist in the management of the Beverley and Kaminuriak caribou herds", to monitor the herds over their ranges, to conduct an information program in order to relay information to and outline responsibilities of the various groups and individuals involved and to develop a caribou management plan (Annual Report, 1982-83).

Up until this point, the Caribou Management Board has made headway in making joint decisions on a whole host of

topics including hunting regulations, protection of calving ground areas and the need for fire protection measures. Board chairman, Jim Schaefer has emphasized however the continued need for "education and communication, fire management and long-term protection of calving grounds in the context of land use planning" (Roberts, 1984). To these ends, the Caribou Management Board is striving to complete its Caribou Management Plan and its Caribou Schools Program.

1.3 PROBLEM STATEMENT

Program success depends to a large extent on its adaptability and flexibility in reading and meeting present and future needs of the people being served. To this end, it is essential that the needs and perceptions of the representative groups be monitored to ensure that, as in this particular case, caribou management through the Caribou Management Board is carried out in the best interests of those most directly involved and affected.

1.4 RESEARCH OBJECTIVES

The overall objective of this research was to assess the effectiveness of the Board in terms of goals, activities and progress concerning past, present and future management issues. Perceptions of Board members and of individuals living in a representative Inuit community (Eskimo Point, NWT) were determined. Specific objectives of the study were:

1. To identify the issues of concern.
2. To compare general opinions and perceptions.
3. To comment on Board effectiveness in terms of goals, activities and progress.
4. To solicit opinion concerning management issues of past, present and future concern;
5. To provide recommendations to the Board so as to assist in providing direction for effective future caribou management.

1.5 RATIONALE FOR SELECTION OF ESKIMO POINT

Eskimo Point is a small, Inuit community located approximately 250 km north of Churchill about 240 air km SW of Rankin Inlet on the west coast of Hudson Bay. (Figure 1.2). Eskimo Point is one of seven communities located within the Keewatin district of the Northwest Territories (Devine, 1984).

The community of Eskimo Point was chosen as the focus for the study for three reasons. Although Eskimo Point, like most northern communities, operates within the confines of a wage economy, it is still seen as one of the traditional hunting communities in the Keewatin region (Shouldice, personal communication). From a cultural point of view then, Eskimo Point was a good candidate for survey purposes.

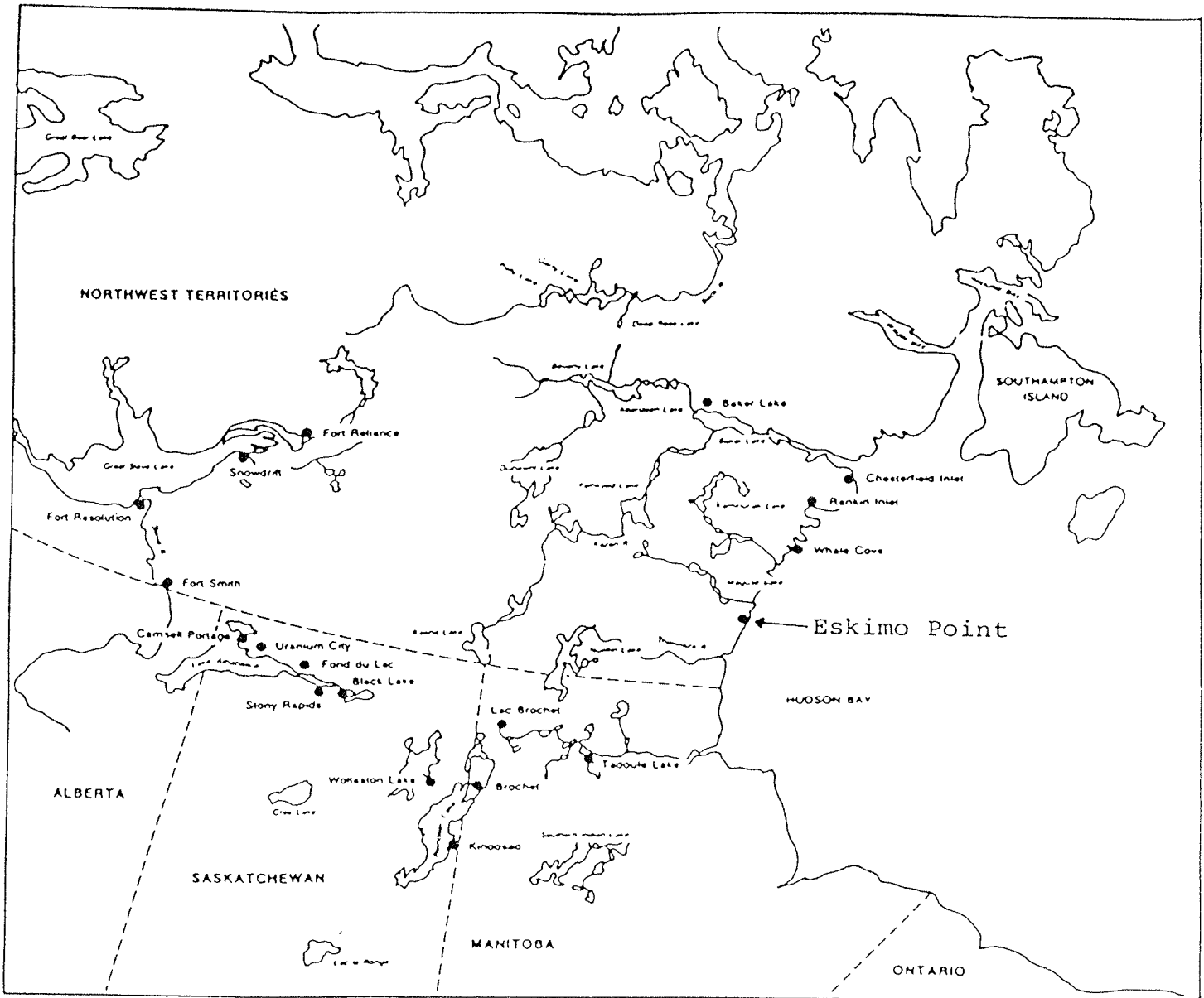


Figure 1.2. Location of Eskimo Point in the Keewatin region of the Northwest Territories. (Caribou News, Feb., 1985).

The second reason for choosing Eskimo Point was that the researcher had a contact and external advisor in anthropologist Dr. Michael Shouldice living in the community. Dr. Shouldice, of the Inuit Cultural Institute, provided advice and insights on how to approach the study in a manner which was acceptable to both the researcher and local people.

Finally, financial constraints limited travel to the more southern Keewatin communities.

1.6 DEFINITION OF TERMS

Program effectiveness is defined as the measure to which a program meets its objectives, produces intended and unintended results, is cost-effective, and "makes sense in terms of the relationships between its activities and its expected results" (Rogers, 1981).

An applicable definition of conservation, in a northern context, is provided by Connell (1983). She has stated that:

Conservation means the pursuit of the optimum natural productivity of all living resources and the protection of the ecological systems of the territory so as to protect endangered species and to ensure primarily the continuance of the traditional pursuits of the native people, and secondarily the satisfaction of the needs of non-native people for sporthunting and fishing.

Management may be defined as the decisions by which a resource is used or utilized in the interests of the people affected.

According to the Caribou Management Agreement (1982),
traditional users are defined as:

those persons recognized by the local population
on the caribou range as being persons who have
traditionally and (or) currently hunted caribou
for subsistence.

That same agreement defines the Kaminuriak caribou herd
as that herd which bears its young at Kaminuriak Lake,
N.W.T. Similarly, the Beverly herd of barren-ground caribou
is that herd which bears its young near Beverly Lake, N.W.T.
Both herds, by definition, have traditionally migrated into
northern Manitoba and Saskatchewan for the winter season.

In this study, non-Inuit refers to those persons with
white skin color or those persons which are of Euro-North
American ethnic origin.

Chapter II
REVIEW OF RELATED LITERATURE

2.1 BARREN-GROUND CARIBOU

Burch, in a 1971 report described barren-ground caribou in the following manner:

Tarandus are awkward looking, medium sized deer. The head is elongated and ends in a wide muzzle more reminiscent of a cow than of a deer. They have relatively small ears, and large eyes. The moderately long legs terminate in large hoofs which are admirably suited for swimming, and for walking on a wide variety of ground and snow surfaces.

The average weight of male, adult barren-ground caribou on mainland Canada is 108 kg as compared to 77 kg for a female (Kelsall, 1968). Both male and female caribou have antlers, although those of the female are much smaller. Generally speaking, caribou have two seasonal movements: a movement to the calving grounds in spring and a movement south to the winter range in the fall. Caribou have been observed to travel up to 30 km per day during the migration season (Kelsall, 1968).

Pruitt (1960) has observed that snow conditions have an effect on caribou movements and migrations. As he stated:

Since caribou appear to possess a threshold of tolerance to the hardness and density of snow cover through which they wade for some two-thirds of

their annual cycle, it follows that some aspects, at least, of their spectacular annual migrations might be correlated with nival factors.

Kelsall (1968) has also noted that observed uncertainty in caribou movements may be attributed to environmental factors. Kelsall (1968) noted a case whereby 20,000 to 40,000 caribou shifted their calving area over 800 km between 1956 and 1957. The Dene have summarized this unpredictability in a proverb which reads, " No man knows the way of the wind or the caribou " (Payne, 1980). This irregularity of movement meant starvation for many traditional Inuit who misread environmental conditions (i.e. snow) and (or) behavioral changes and patterns in the caribou themselves. This is particularly true of the Asiaqmiut group of Inuit in the Keewatin region of the N.W.T. who relied almost exclusively on the caribou resource for survival (Figure 2.1).

2.2 THE COMMUNITY OF ESKIMO POINT

In 1981, the population of Eskimo Point was recorded at 1,022 persons, with 49% being male and 51% female (Devine, 1984). Of that population, 95% were Inuit, while 5% were non-Inuit. Forty-eight percent of the population was 14 years of age or younger in 1981. The two languages spoken in the community are Inuktituk and English.

Up until the present century, Eskimo Point was used as a summer camp for the inland Padliqmiut (or, "dwellers of the outlets", owing to the many rivers running into Hudson's

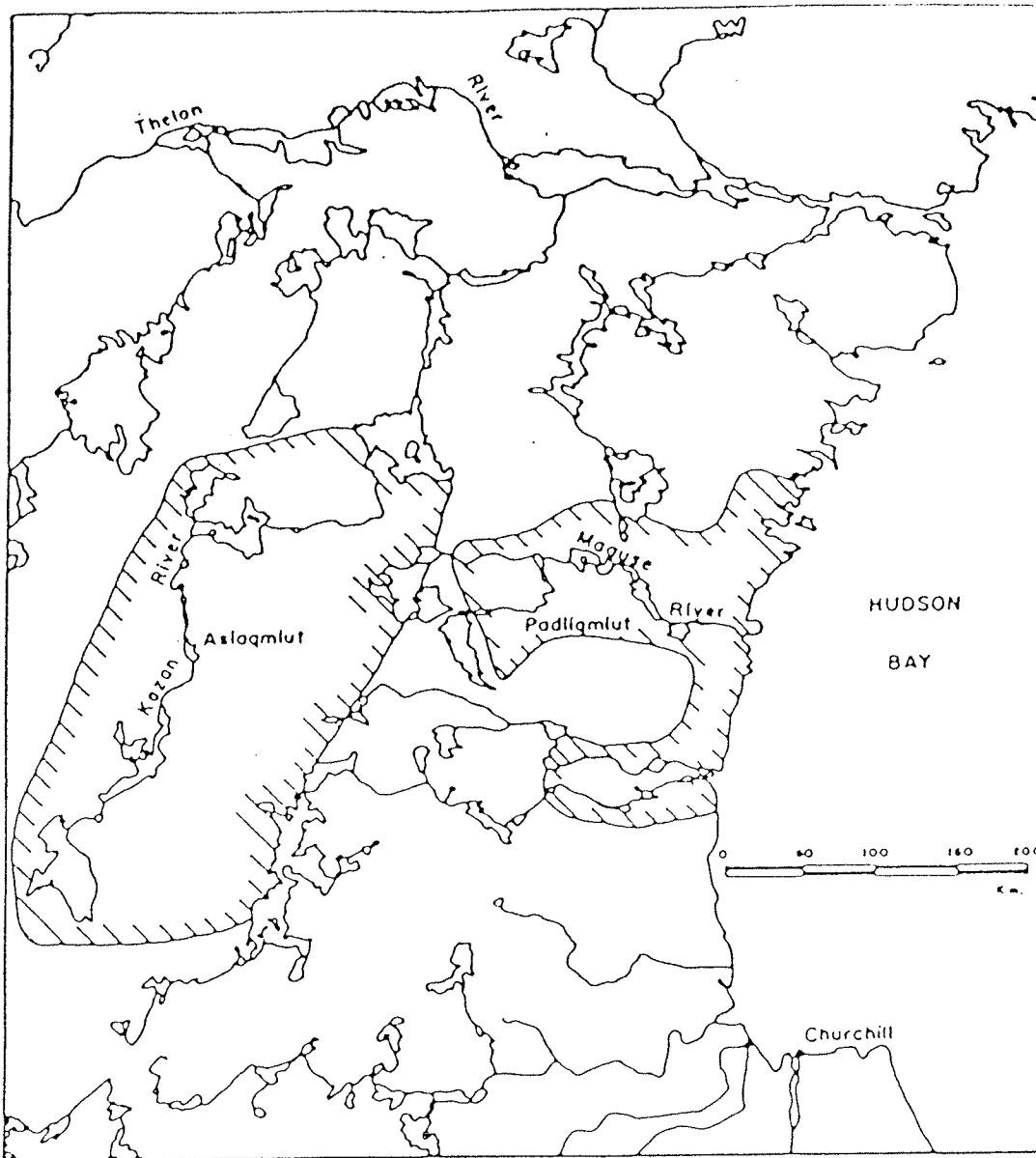


Figure 2.1. Traditional Inuit groups in the Keewatin region (from Burch, 1971).

Group	Resource Base	Est. Pop. Size	Est. Area	Density (people/km ²)
Padliqmiut	primary dependence on caribou, with seasonal emphasis on char and seals. Unable to transport sea mammal products to wintering area	400	30,000 km ²	0.013
Aslaqmiut	primary dependence on caribou (also some muskoxen, and lake trout). In times of starvation, no recourse to groups having more reliable resource base	700	70,000 km ²	0.010

Bay) of south Keewatin. (EPRA, 1970). Commonly called the "Caribou Eskimos", this group came to the coast during the spring and summer seasons to hunt seals and marine mammals. The mainstay of their diet, was, however caribou meat.

Eskimo Point became a trading post in 1921 with the establishment of the Hudson's Bay store (Devine, 1984). Starvation and disease in the 1940's and the establishment of a school in 1959 brought the majority of persons in the area into the community on a year-round basis. Today, "there are three clearly defined and locally recognized population segments" in Eskimo Point. (Oswalt and Van Stone, 1960). As Uppahuak (personal communication) pointed out, there are those who came from the inland regions, or the Asiaqmiut, those who lived predominantly along the coast (the Padliqmiut) and those from the Coral Harbour area.

The major economic activities of the town include, "trapping, hunting, fishing, handicrafts and mineral exploration" (Cullaton Lake gold mine, located 150 km west of Eskimo Point) (Devine, 1984). Additional employment is provided by numerous small businesses as well as by local government offices and services within the community. Per capita income was \$3,227 in 1981 (Devine, 1984).

Hunting and trapping activities are central to the lives of many of the Inuit living in Eskimo Point. Gamble (1984), in his study on the native harvest of wildlife in the Keewa-

tin region, NWT, found there to be 278 hunters (approximately 28% of the population) in the community. Collectively, they harvested 2,342 Kaminuriak caribou in the 1982-83 season. These were used predominantly for domestic consumption. Further, Devine (1984) estimated there to be 130 trappers in the community of Eskimo Point during the 1982-83 season. Between them, they harvested a total fur value of \$92,212.00.

2.3 TRADITIONAL USES

Traditional users of caribou utilized almost all parts of these animals for their continued existence. Meat, viscera, stomach contents and fat fulfilled all nutritional requirements, while skins were used for " clothing, foot gear, tents, house covers " and sleeping bags (Burch, 1971). In addition, antlers and bones were used as utensils and bone marrow was used as an emergency food source.

2.4 TRADITIONAL BELIEFS

As a result of their dependence on the caribou resource, Asiqmiut pre-Christian beliefs, " focused on the overriding concerns which the people faced in their everyday lives: the quest for food, the relief from illness " (Vallee, 1967). Supernatural spirits and forces guided everyday life, shaped the practice of magic and sacred rituals and led to the development of a great variety of rules of conduct. Although not uniform in content, the beliefs and practices from one

Inuit group to the next were similar throughout the Keewatin region.

A number of different spirits were concerned with different aspects of life. The female spirit, Pinga, was particularly important to the Kazan River people and was " watchful of the conduct of the people, rewarding them with game when they observed the rules of living, holding back game when they were violated " (Vallee, 1967). Similarly, the female spirit Nuliajuk of the Back River people would vent anger if unused carcasses were left on the tundra. All contact between spirits and people was facilitated through angakoks or shamans, who were Inuit with supernatural powers.

Observance of these taboos facilitated such things as getting a living, conserving resources and curtailing disease (Vallee, 1967). Usher (1982) has summarized the connection between the traditional way of life and resource (caribou) management by stating that:

I do not subscribe to the view that native people are 'natural' conservationists, as though this were a matter of genetics. There is, however, a considerable body of anthropological evidence which shows that many native social and religious practices served, in outcome if not by design, to conserve essential resources.

Indeed, the Inuit people were aware of caribou behaviors and had an intuitive understanding of harvesting to ensure survival for one particular year and promote it for the next. This knowledge, understanding and dependency had an inseparable spiritual side to it.

2.5 SOUTHERN APPROACHES TO CARIBOU MANAGEMENT

From a southern perspective, three different approaches to caribou management have been attempted over the past four decades. As Payne (1981) pointed out, the 1950's was an era of pragmatism, the 1960's an era of research, and the 1970's and early 1980's eras of communication. This shift in management philosophy from one whereby wildlife biologists exclusively managed the resource and tried to change the practices and viewpoints of native users to one of interjurisdictional arrangement and the establishment of common goals and management practices has begun due to jurisdictional, legal, and biological considerations, along with accompanying attitudinal changes.

2.6 HISTORICAL SHIFT IN THE MANAGEMENT APPROACH

2.6.1 Jurisdictional Factors

Management of Beverly and Kaminuriak herds of barren-ground caribou has been complicated by the fact that a number of user groups and government bodies are affected by the use and management of this resource. Consequently, this resource cannot be successfully managed to the exclusive interest of only one or two parties. There must be a coordinated and cooperative effort.

2.6.2 Applicable Legislation

Under the Canadian Constitution (B.N.A. Act of 1867), laws dealing with Indians and lands reserved for the Indians falls under section 91(24). This section stipulates that such matters are federal jurisdiction. As far as treaties are concerned, paragraph 13 of the provincial Natural Resources Transfer Agreement, 1930, states that Indians of the prairie provinces (Manitoba, Saskatchewan, and Alberta) can hunt, trap and fish on unoccupied Crown lands, reserves, occupied Crown lands where hunting is generally permitted, and in traditional hunting areas (Young, 1983).

According to the 1982 Constitution Act, Inuit are considered to be "Indian" people (Sinclair, personal communication). As Lysyk (1982) pointed out:

It is reasonably clear that the term "Indians" as employed in the B.N.A. Act, 1867, embraces at least two of three groups referred to in the sub. 35(2) (1982 Canadian Constitution Act) definition of "aboriginal peoples of Canada", that is to say, the "Indian" and the "Inuit" peoples. That the Inuit are "Indians" for purposes of the B.N.A. Act, 1867, was authoritatively determined by the Supreme Court of Canada in "Reference re. Eskimos".

In the Keewatin region of the N.W.T., all lands are considered to be under aboriginal land title (Figure 2.2). These aboriginal lands are subject exclusively to federal legislation. However, if existing aboriginal title is constitutionally recognized under section 35(1) of the 1982 Constitution Act, then aboriginal title cannot be extinguished by federal law (Hogg, 1982). As such, and as the law now ex-

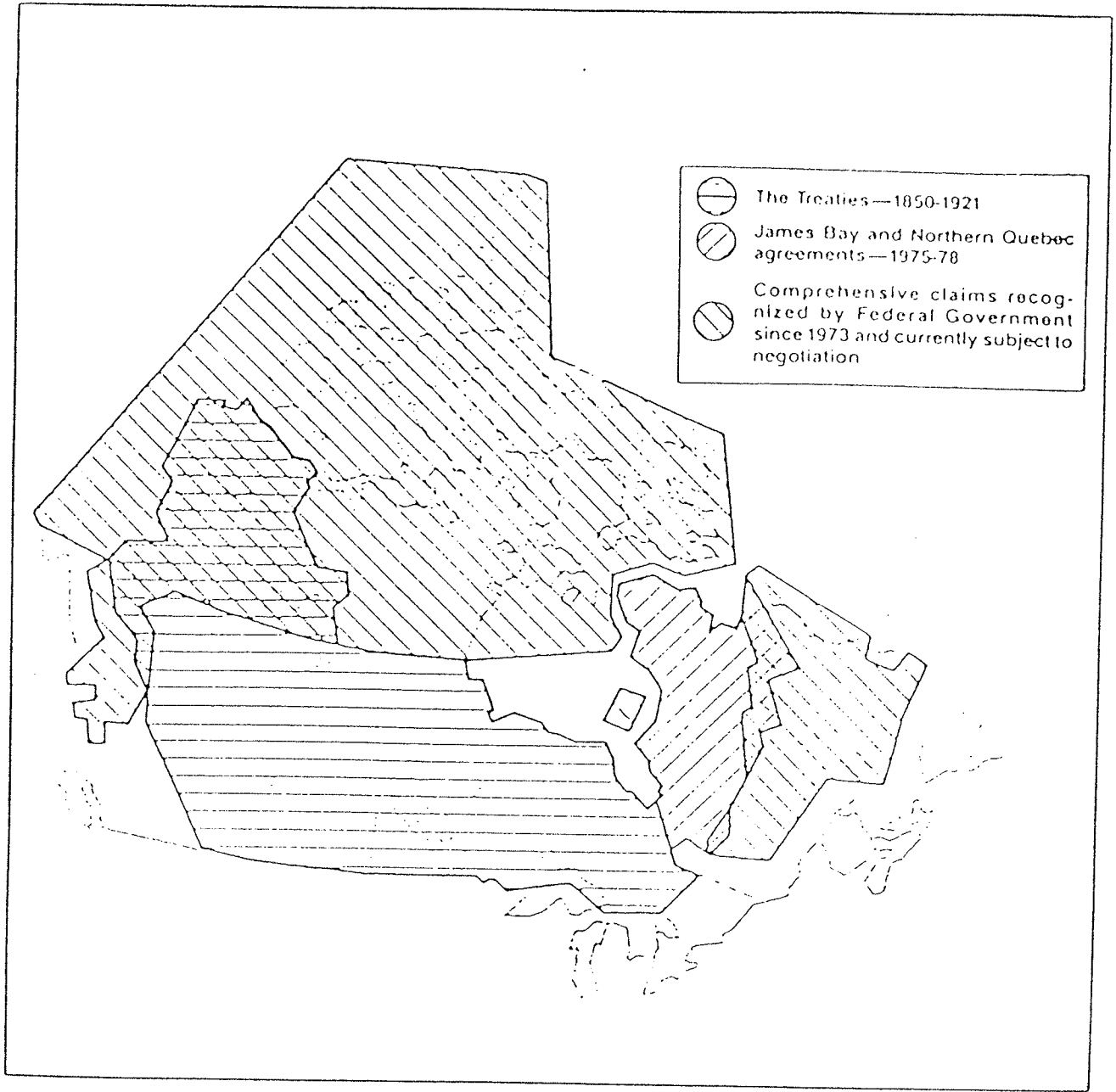


Figure 2.2. Treaty and Aboriginal Lands in Canada. (Usher, 1982).

ists, aboriginal rights allow hunting, fishing and trapping by the Inuit on their traditional lands. Usher (1982) has pointed out however, that:

The courts have generally held that aboriginal title does not imply ownership of land or its wildlife, but rather the right to use and enjoy these things. Native people therefore have no authority, on the basis of aboriginal title, to regulate the allocation, harvesting and use of fish and game in accordance with their customary laws.

Although "unilateral imposition of harvest controls by the responsible governments" could be used to control caribou utilization, particularly in times of herd decline, this has not been a viable solution (Connell, 1983). Connell (1983) has pointed out that "major problems have prevented the legal restriction on harvest of caribou in Canada from being effective." These problems, as outlined by Thomas (n.d.), are:

1. They did not apply to Treaty Indians.
2. Enforcement was almost impossible.
3. There was no support for the laws amongst native peoples.
4. Subsistence hunting could not be curtailed if starvation might result.

2.6.3 Southern Attitudes and Biological Factors

A fundamental attitudinal problem has plagued northern wildlife management in the past and hinders co-management at the present time. As Freeman (1983) stated:

There are several beliefs that wildlife scientists (managers) have come to hold, that support their conviction that the scientific approach to game management is superior to systems espoused by other groups of people. These include the conviction that quantification is necessary in science (where science is equated with ultimate truth), and a belief that indigenous societies have neither the knowledge nor the institutional means of managing natural resources, further justifying their assertion that the scientific way is, in the particular circumstance, the only way to manage living resources.

The following examples, however, point out that there are other equally valid ways of accumulating knowledge and applying it to "management". Many of the theoretical assumptions of the scientific method have not held for caribou management. By comparison, the qualitative, semi-quantitative approach of the Inuit is based on a vast wealth of accumulated knowledge and experience.

In 1953, a small community of Inuit peoples was established on the southern portion of Ellesmere Island. At that time, RCMP officers insisted that the Inuit "hunt only large and (or) male caribou" and "only take a few animals from each herd" (Freeman, 1983). Their insistence on such a strategy stemmed from the theory that herds would be unaffected by removing some of the non-reproductive males, therein conforming to such concepts as maximum sustainable yield. The Inuit predicted that this strategy would be to the detriment of the Peary caribou herds and that the herds would become extinct within their hunting regimes (Freeman, 1983). These predictions were based on a qualitative under-

standing of caribou behavior and "biology". The Inuit pointed out that older males are an important social segment in any herd in that they are able to dig through thick snow and ice for food and that they, in being more passive than other members of the herd, have an important "calming" influence. By 1968, the caribou were virtually eliminated from the area, despite the fact, according to Riewe, that "only 140 animals had been harvested there" (Freeman, 1983).

Freeman (1983) summed up the two positions on this issue when he stated:

behavioral knowledge of the species was the critical point of the Inuit position, contrasted with an inexact quantitative perspective proposed by the game management service.

A second example which illustrates a fundamental difference in philosophy between the scientific approach and conventional wisdom has to do with the concept of quotas. Basically, quotas, in a scientific sense, are set to stabilize animal populations. These quotas are often set with limited knowledge of the species but, it is felt that they will be beneficial in 'protecting' the species (Freeman, 1983). The Inuit people see quotas in a much different light. Their philosophy is based on the view that both the hunted and hunter need and rely upon each other. This spiritual view is summarized in an example given by Wenzel (1983):

The problems of only hunting a certain number of animals, and not going above a quota, means that that surplus of animals that's been created by game managers will leave an area because they're not being used. A bear gives itself, and if you're limited to 50 bears and there are 100 bears, that surplus may leave.

Furthermore, Wenzel (1983) stated that, "To not take an animal when you need an animal would in a sense be a misuse of that animal."

These fundamental differences between scientific theory and conventional wisdom have important implications when one or the other system is utilized in a management sense. As Freeman (1983) has pointed out, the scientific approach to management can only be successful when a basic knowledge about, "the current population size, population composition (sex and age distribution), age-specific natality rates, mortality rates, causes of mortality, and migrational patterns," of a particular species are known. Uncertainties with respect to hunting pressures, predation and population dynamics using the scientific approach have suggested to many persons that conventional wisdom be combined with scientific findings to successfully manage the caribou resource. The necessity of such a biological approach has become acutely apparent with recent findings on caribou numbers in the Kaminuriak herd. These findings have reinforced the need for co-management of the resource and have begun to change "southern" scientific attitudes towards traditional management approaches based on conventional wisdom and custom.

2.7 BIOLOGICAL SURVEYS

Population numbers in the Kaminuriak and Beverly herds of barren-ground caribou have been estimated using the transect method of aerial survey by wildlife biologists over the past 30 years. The first step in these surveys is to delimit the calving ground area. Once this is done, transects in 2.5 km intervals are flown with the number of breeding females recorded in strips 0.8 km wide (Caribou News, Sept., 1982). The number of breeding females recorded are then used to estimate the total number of animals in the herd. Surveys are again flown in the fall to determine herd composition and male to female ratios. Using this technique, estimates of the Kaminuriak herd population over the past three decades have been made (Figure 2.3).

Aerial photography, first used on a large scale basis with the Beverly herd in 1980, has, on all counts, revealed higher population numbers. For example, the 1983 survey of the Kaminuriak herd provided an estimate of between 180,000 - 280,000 animals using aerial photography, versus an estimate of between 100,000 - 140,000 animals using visual survey. Nevertheless, both methods have confirmed an unexplained increase in the Kaminuriak herd population from the 1980 count to the 1982 count.

Declining population trends in both the Kaminuriak and Beverly herds during the 1970's were realized not only by

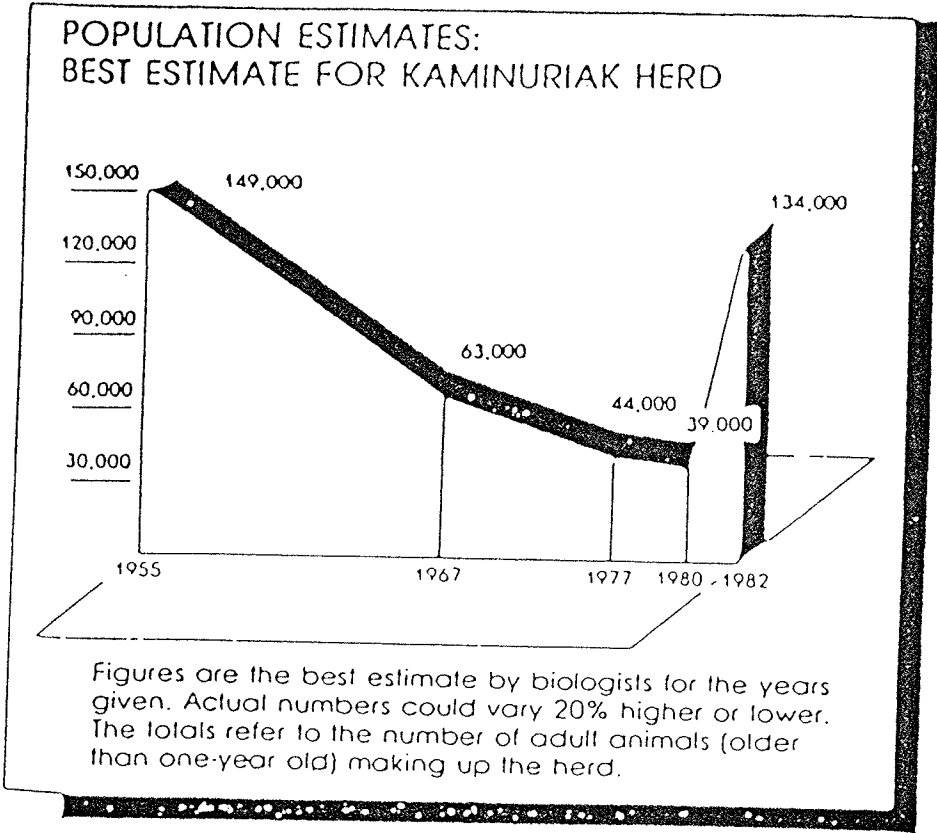


Figure 2.3. Kaminuriak caribou herd estimates over the past three decades. (Caribou News, Sept., 1982).

wildlife biologists in a strict quantitative sense, but by Inuit people as well. Although differing in their interpretation as to why this problem arose, insofar as the Inuit people held that fires and exploration activities "caused caribou to move away to areas where there is less disturbance" while wildlife biologists have historically held that overhunting is the primary problem, both groups asserted that remedial measures were necessary to protect the resource (Payne, 1980). In April, 1978, the Minister of the Department of Indian and Northern Development (DIAND) announced "a new policy of special land management zones and conditions to protect the Beverly and Kaminuriak caribou herds in the future" (Darby, 1978). This policy protected various calving, post-calving and major crossing site areas for caribou in the Baker Lake area.

Shortly thereafter, representatives from the Dene, Metis, Inuit and Cree cultures along with representatives from various government bodies entered into the Caribou Management Agreement and formed a 13 member Caribou Management Board in June of 1982. This interjurisdictional board came about due to the realization, for the reasons mentioned, that a coordinated effort between users and governments was needed to efficiently manage the resource.

2.8 RECENT INCREASES IN KAMINURIAK CARIBOU NUMBERS

One could surmise that the large increase in the Kaminuriak herd population from 1980 to 1982 is one of the biological factors which has aided in co-management of the resource. For years, many Inuit of Baker Lake have held that there has been considerable interchange of animals between the Kaminuriak herd and the Wager Bay herd, north of Chesterfield Inlet (Caribou News, Jul., 1981; Oct., 1981; Snowden, 1980). Before the observed increase in the Kaminuriak herd, biologists dispelled the notion of herd interchange. This difference of opinion was a "major reason why the Inuit were reluctant to accept management by governments alone" (Car. News, Sept., 1982). As a result of this increase, biologists, unable to explain these results on the grounds of higher reproduction/recruitment rates and reduced predation have, with the aid of traditional users and through the Caribou Management Board, begun to look at intermingling of the herds and shifts in migration routes through the use of radio collars (Figure 2.4). The end result, from a biological standpoint has been a more coordinated effort towards data collection and in the using of this data for management purposes.

At present, the Caribou Management Board has viewed recent population estimates optimistically in the sense of providing "breathing space" from a "crisis" situation. However, the Board has maintained and cautioned that the prob-

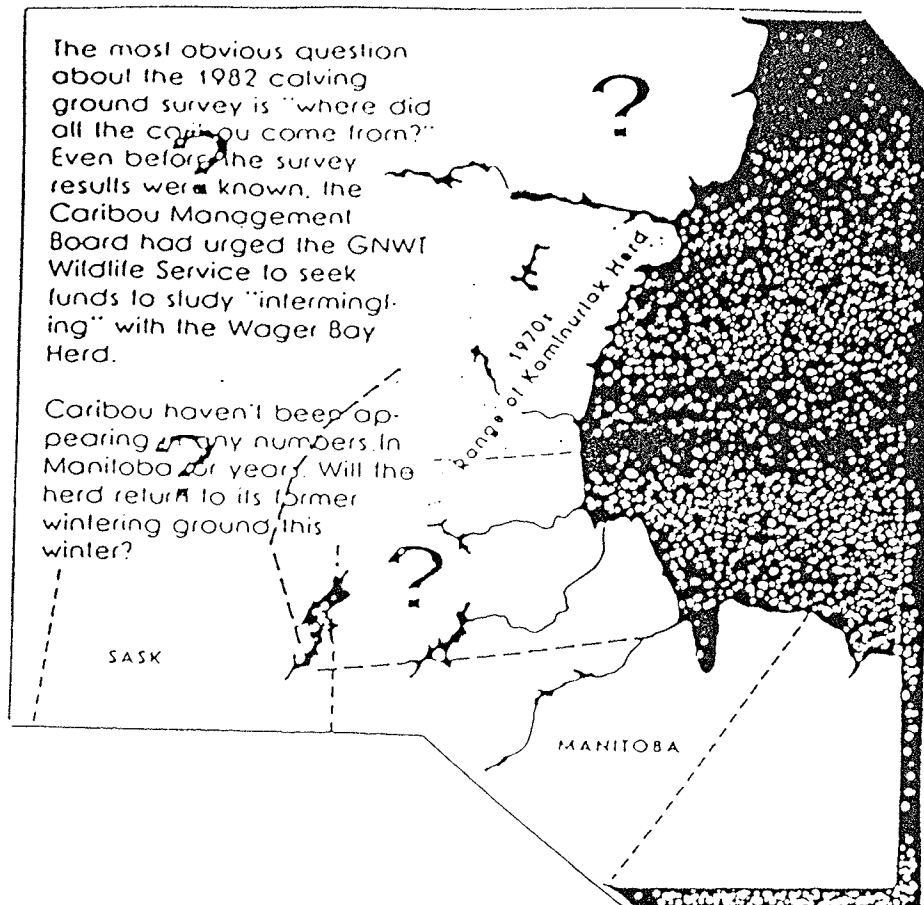


Figure 2.4. Questions concerning Kaminuriak caribou herd range and calving ground areas. (Car. News, Sept., 1982).

blems threatening the resource are ever-present and that proper co-management is essential.

2.9 CARIBOU MANAGEMENT IN PERSPECTIVE - A SUMMARY

The barren-ground caribou and wildlife in general in the NWT have been and continue to be an important part of Inuit lifestyle. Scott (1983) has pointed out that:

Modern communities of native people in the sub-Arctic and the Arctic regions of Canada are relying for very often half of the total value of their economy -- half of their total income or more is income derived from hunting, fishing and trapping.

Co-management of Canada's barren-ground caribou has come about due to jurisdictional, legal and biological considerations. The most instrumental event bringing traditional users and governments together has been recent findings and trends with respect to caribou population numbers. As a result, wildlife biologists have found it necessary to work with traditional users, to utilize some of their knowledge and to refine their own thinking and attitudes towards the validity and use of knowledge accumulating systems based on traditional wisdom and custom.

Co-management through the Caribou Management Board is an innovative and necessary approach in effective management of barren-ground caribou. In recognizing the fact that the Board has been in operation for only three years, problems still remain and arise with respect to acceptance of other

culture's management practices and ideology. The development of a genuine feeling of trust and confidence that each culture is contributing satisfactorily to the management of the resource in the interest of native users, and in the interest of conservation for all Canadians is an ongoing process. Despite these problems in trust and communication, action by the Caribou Management Board and studies which aid in effective co-management are steps in the right direction as far as preserving the caribou resource and as far as meeting the needs and concerns of all fellow Canadians.

Chapter III
METHODS AND LIMITATIONS

3.1 METHODS

3.1.1 Study Approaches

Three approaches were used in this study. The first involved a literature and video review of materials pertaining to caribou management, the Caribou Management Board and to issues of local concern to the Inuit of the Keewatin region, NWT. To that end, all published issues of Caribou News and several of the Donald Snowden videos (1980) dealing with caribou utilization by the Keewatin Inuit were reviewed. Further, video materials from kits one and two of the "Caribou Schools Program" were examined. These materials gave insights to study approach and appropriate types of questions to ask in such a study.

The second method was a discussion of caribou management with knowledgeable individuals in Winnipeg, and with members of the CMB during their Winnipeg meeting in January 1984. This information was used in the preparation of an interview questionnaire conducted in the community of Eskimo Point during the summer of 1984. (Questionnaire 1, Appendix A). The scope of the questionnaire included:

1. Caribou management in general - the need and function.
2. General knowledge of the CMB.
3. Improvements for the CMB.
4. Response to the publication, Caribou News.
5. Communication and dialogue exchange between the CMB and local townspeople.
6. Use of the caribou resource - sporthunting and commercial harvest.
7. Right of access to caribou by northern "residents".
8. Issues of current and future concern.

The third method used was conducting interviews in Eskimo Point. Except for minor variations, such as asking the third question first to determine general knowledge of the CMB at the outset, questions were asked in sequence (Questionnaire 1, Appendix A). The questions asked, and analyzed in the study, are provided in Questionnaire 2, Appendix A.

In comparing the two questionnaires, questions 4,6,8,10,11(a & b) and 13 of questionnaire 1 were not analyzed in the report. Although interesting, the majority of those questions were not answered in order to keep the scope and length of the study to a manageable size. The questions analyzed were the most appropriate in meeting the objectives of the study. Omitting a number of questions did not detract from the study nor neglect to address any of the objectives.

Question 10 was not asked on the advice of Dr. Michael Shouldice, who felt it would insult hunters of the community. Shouldice pointed out that it is common knowledge that caribou migrate back and forth from the tundra to the forests. To ask such a question would detract from the study by showing disrespect for the knowledge of local hunters.

A number of times throughout the study, the wording on questions had to be altered. On several occasions, the persons being interviewed could not understand what was being asked. Rewording was done as objectively as possible by the researcher.

In total, the survey in Eskimo Point took approximately six weeks to conduct in the months of July and early August. One week was then spent in Rankin Inlet, N.W.T., where 10 additional interviews were conducted to give perspective to the Eskimo Point study. Apart from providing perspective, those surveys were not used in preparing the results, conclusions and recommendations of this report. Because of the short time and limited number of surveys conducted in Rankin Inlet, the researcher was highly skeptical about 'community' perceptions, and comparison to the much longer and thorough study in Eskimo Point. In mid-August, CMB meetings in Fort Smith were attended and surveys distributed to CMB members similar to the ones used in Eskimo Point (Questionnaire 3, Appendix A).

In the study, different approaches were used to interview different segments of the population. Many young individuals and students were called into the Inuit Cultural Institute (ICI) and were interviewed at that location. Persons with full or part-time jobs were interviewed, for the most part, during afternoon hours at their place of employment. For Inuit persons who did not speak English, an interpreter (Annie Uppahuak) was used. In these instances, all interviews were conducted in respondents homes between the hours of 5:30 - 7:30 p.m. As to who those individuals were, the interpreter choose persons which were available for interview purposes. In total, 16 of 48 Inuit individuals were surveyed with the use of the interpreter.

3.1.2 Interview Technique

The technique employed in the study, for all individuals, involved the researcher asking the question (often times through his interpreter) to the respondent, then writing the response on the questionnaire form. Tape recordings were not used in Eskimo Point as it was felt that this approach would be too inhibiting for persons being surveyed. At all times, the researcher tried to keep the interviews as casual and as informal as possible.

3.1.3 Questionnaire Design

As can be observed from Questionnaire 1 of Appendix A, most of the questions used in the study were "open-ended". The questionnaire was purposely designed that way to solicit the most information possible from the people being surveyed. As a consequence of using such an approach, categorical responses for a number of the questions were created after the study had been completed with only descriptive statistics being used to analyze the results. Nevertheless, such an approach was employed to show basic trends and perceptions with respect to issues concerning caribou management and the CMB.

3.2 LIMITATIONS OF THE STUDY

One of the major limitations to this study is that only the perceptions and views of those Inuit living in Eskimo Point were provided. Although the study provides valuable insights to the concerns of persons in Eskimo Point, the results cannot be extrapolated for the rest of the Keewatin Region. Thus, the scope of the study is somewhat limited.

A second major limitation concerns the sample which was surveyed. A large proportion, relative to other study categories, of the Inuit sample (44%) was made up of individuals who considered themselves to be full-time wage earners who also hunted. Thus, the findings and conclusions of this

study were strongly influenced by the views of this occupational category.

In addition to there being a large sample of full-time wage earners, there were very few "full-time hunters" and "retired hunters" surveyed. Furthermore, very few young, unemployed individuals (commonly referred to as "dropouts") were included in the sample. This was a result of difficulty in finding and a lack of interest expressed by persons in this group. The study group was also comprised of predominantly male persons. Only 3 females (2 students, 1 full-time worker) were interviewed. Finally, the surveys of only 10 non-Inuit individuals were used in the study, as compared to 48 Inuit surveys. These facts concerning the make-up of the sample undoubtedly affected the findings of the study.

In Appendix B, the results of the study are broken down in terms of occupational categories. There is some difficulty in analyzing the results in this way since, on a few occasions, neither the interviewed persons nor the researcher could determine what category to place an individual. For example, a carver (who earns money for this activity) may have considered himself a "full-time hunter" instead of a "part-time hunter, part-time wage earner", when asked to classify his occupational category. Further, the interpretation of the researcher and interviewed persons undoubtedly varied with respect to classifying occupational category.

Differences in cultural interpretation with respect to questions asked, perceptual difficulties in summarizing conversations and in interpreting results, and, finally, misinterpretations on the part of the researcher in understanding significant cultural issues were also part of the limitations of this study. A prime example of differences in interpretation occurred when the question with respect to the need and function of caribou "management" (Question 2, Appendix A, Questionnaire 1) was asked. The researcher asked the question with a conceptual interpretation of management in mind. Most Inuit however, answered the question in a bureaucratic context (i.e. the need for a management board such as the CMB). Fortunately, this difference in interpretation was found by close examination of the responses recorded. For example, 20 individuals said that there was a need for the CMB when asked this question. Varying interpretations with other study questions may not however have been found.

Another consideration which may have influenced research findings was that a "southern" researcher came into a northern community and did a 6 week study. Some individuals may have resented that fact, thereby not participating fully and (or) not being willing to share their information and knowledge. Many researchers have been faced with this problem.

Another consideration was that a female translator was used. How the persons interviewed reacted to this and how

their answers to questions may have been influenced are unknown. From the researcher's perspective, however, the situation appeared to work well. There was cooperation between researcher and translator, and appeared to be little "friction" between translator and respondents.

The questionnaire, although quite complete in covering many of the "issues", was simply too long. Consequently, responses tended to be short or non-existent towards the latter part of the survey. Further, in writing responses down, there was danger of misrecording responses or summarizing them in a somewhat less than accurate fashion. In fact, the researcher was actually corrected on one occasion for misquoting an individual. In asking questions, the possibility that individuals were "lead" at times remains. Although the researcher was extremely conscious of this pitfall and tried to word and ask questions in a neutral way biases were likely introduced.

Finally, and as mentioned in the "methods" section, the nature of the interview questions ("open-ended") did not lend themselves to sophisticated statistical analyses. Further, the categorical responses created in the results section (Chapter 4) occurred after the study had been completed. Thus, the study generally relied on the use of descriptive statistics.

Chapter IV
RESULTS AND DISCUSSION

4.1 CONDUCTING THE INTERVIEWS

Throughout the Eskimo Point study, a conscious attempt was made to interview as many individuals from as many different occupational categories (ie full-time wage earners, full-time hunters) as possible (Table 4.1). All but one white individual used in the study were "residents" (living in) of Eskimo Point.

4.2 CARIBOU MANAGEMENT AND THE CARIBOU MANAGEMENT BOARD

4.2.1 The Caribou Management Board and Public Awareness

Of the persons in the sample (48 Inuit, 10 non-Inuit) from Eskimo Point, approximately 75% of them indicated that they had heard of the Caribou Management Board (CMB). Interestingly enough, of the 14 Inuit who said "no" to this question, 11 were under the age of 25 years. A breakdown of responses by occupation is shown in Table 1, Appendix B. These results are summarized in Figure 4.1.

When individuals were asked if they knew of Board goals, activities and progress, slightly less than 50% of the sample responded with a "yes" (Figure 4.2). A slightly lower

Table 4.1. Number of Persons Surveyed by "Occupational" Category in Eskimo Point, NWT.

Occupational Categories	Number of Individuals Surveyed
<u>Inuit</u>	
Student	
a) hunts	7
b) doesn't hunt	
Full time hunter	5
Part time hunter and part time wage earner	11
Full time wage earner	
a) hunts	21
b) doesn't hunt	
Retired	
a) hunter	3
b) wage earner	
Unemployed	1
Σ Inuit	48
<u>Non-Inuit</u>	
Student	
a) hunts	
b) doesn't hunt	
Full time hunter	
Part time hunter and part time wage earner	
Full time wage earner	
a) hunts	6
b) doesn't hunt	4
Retired	
a) hunter	
b) wage-earner	
Unemployed	
Σ non-Inuit	10
Total Sample: Inuit and non-Inuit	58

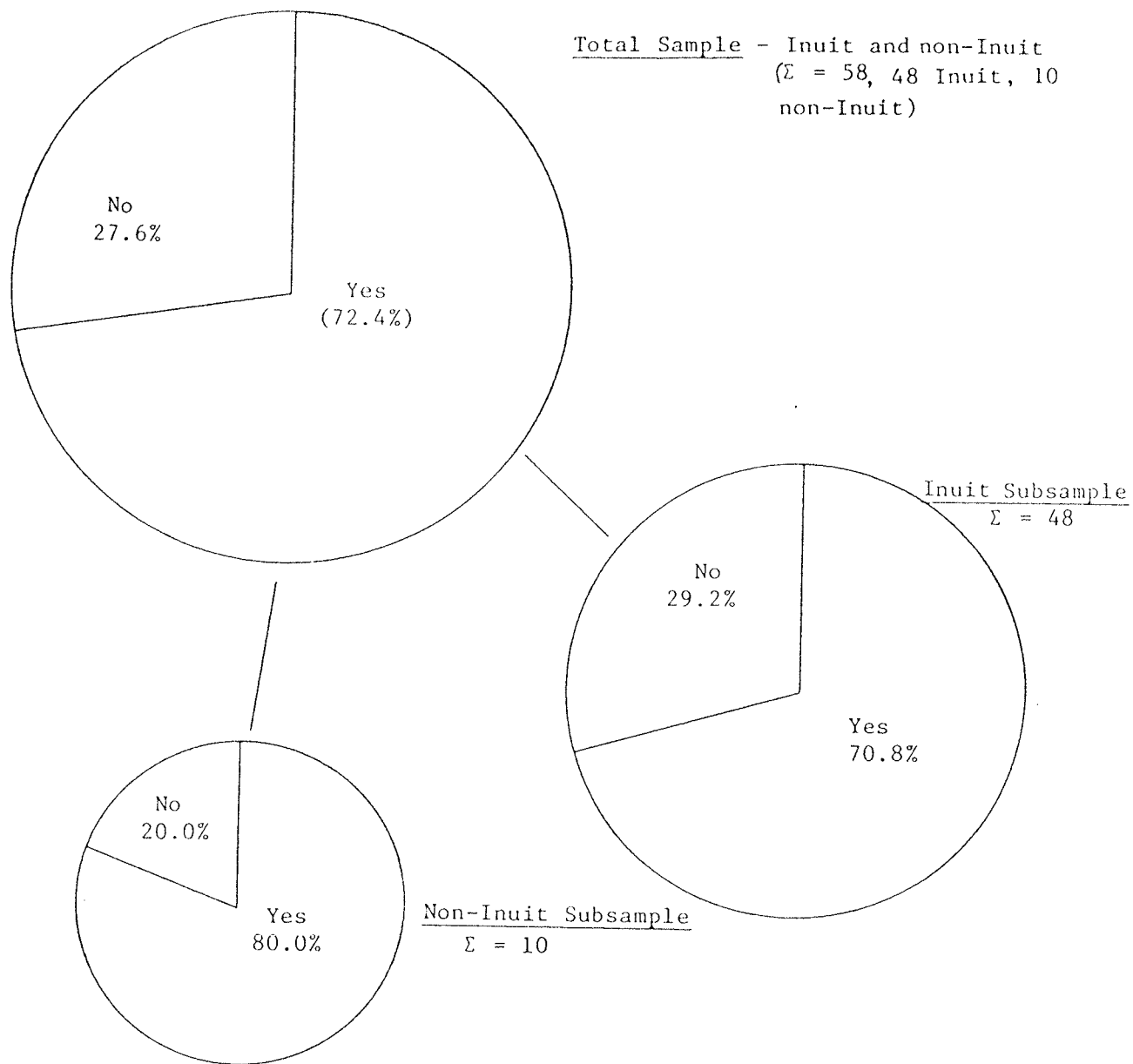


Figure 4.1. Percentage of sample which had heard of the Caribou Management Board. (Data derived from Table 1, Appendix B).
(Question Summarized: "Have you heard of the Caribou Management Board?")

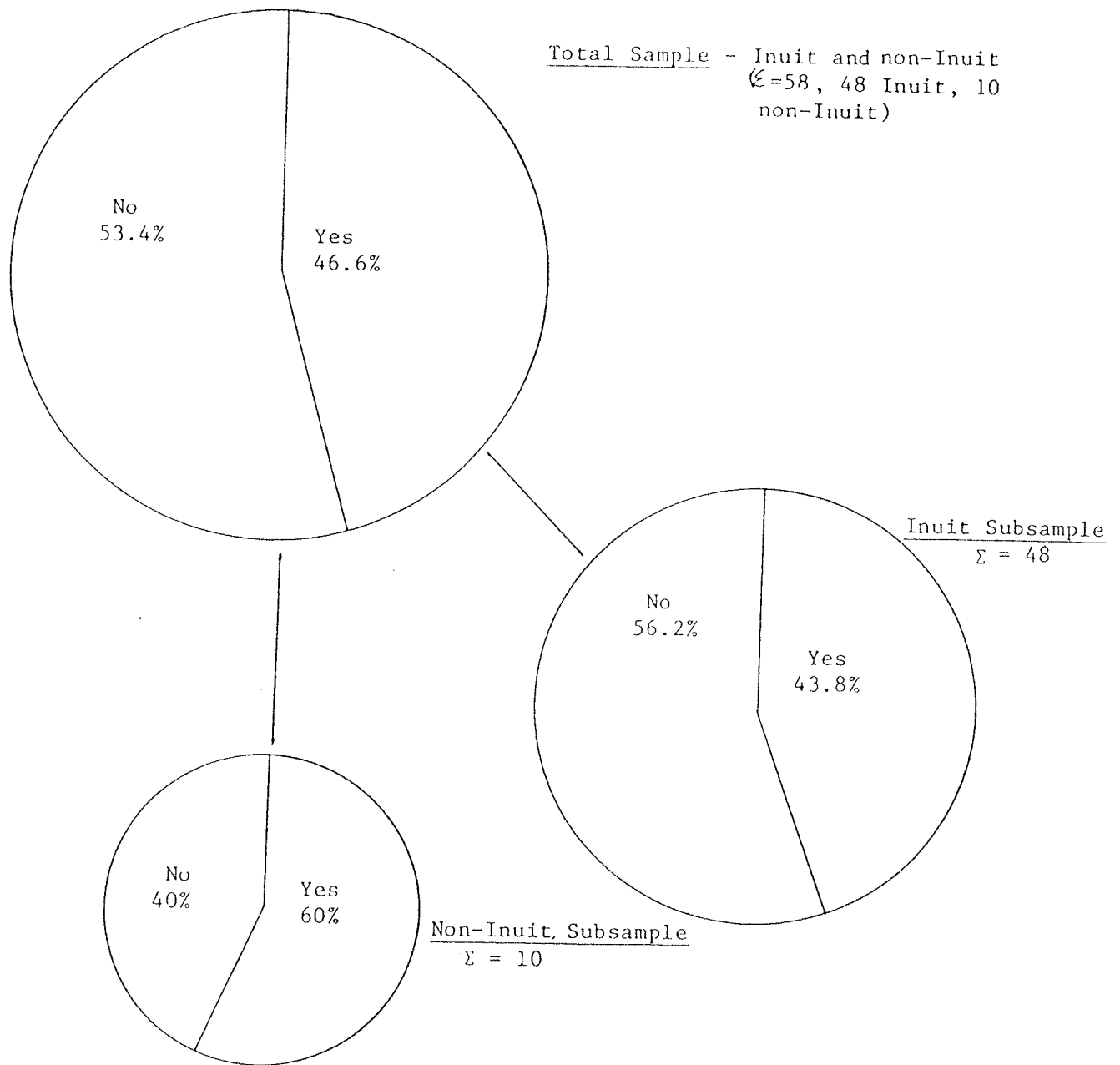


Figure 4.2. Percentage of sample which was aware of Board activities, goals and progress.
 Question Summarized: "Are you aware of Board activities, goals and progress?"

figure (44%) was recorded for the Inuit subsample exclusively. Individuals who said "no" to the first question were generally not asked this subsequent question.

A number of individuals offered reasons as to why they were not aware of Board goals, activities and progress. Two persons indicated that they have never had any great interest in the subject (caribou management) and have not taken the time to research it. Two other persons suggested that the CMB doesn't report happenings of meetings adequately enough to the local community. By way of contrast, four individuals stated that they felt the Board had made themselves and their mandate clear through both community representatives and through the publication, Caribou News, over the past couple of years.

Summary

From the responses to these two questions, it was found that the majority of people sampled had heard of the Caribou Management Board. However, just over half of the sample surveyed were unaware of Board goals, activities and progress.

4.2.2 The Need for Caribou Management

In asking the question, "Is there a need for caribou management?", it was expected that answers would be provided on a conceptual level -- that is to say, it was expected that

surveyed individuals would reply with the concept of management in mind, not the notion of a management body per se (a bureaucratic interpretation). It was found that most of the non-Inuit individuals surveyed responded as expected while most of the Inuit sample did not (Figures 4.4, 4.5).

Nine of the ten non-Inuit individuals surveyed responded to the question on a general, conceptual level. A couple of the more typical responses, favouring "management" were:

Sure there is -- caribou is a renewable resource if managed properly

and,

All species need to be managed -- even people and families need to be managed if they are to survive.

By way of contrast, about 80% of the Inuit responses were to the question of whether or not they felt that a management body was needed. Almost all of the respondents felt that it was (Figure 4.5). Typical responses favouring "management" in these terms were:

Yes it is necessary -- without a CMB, people might kill lots of caribou or too much.

and,

Yes -- the CMB is slowly developing and now more hunters know about them. Therefore, the Board should continue.

Further, over half of the Inuit who said "yes" to a management body (20 persons) stated that they felt the CMB was needed. Two of those persons went on to state, however,

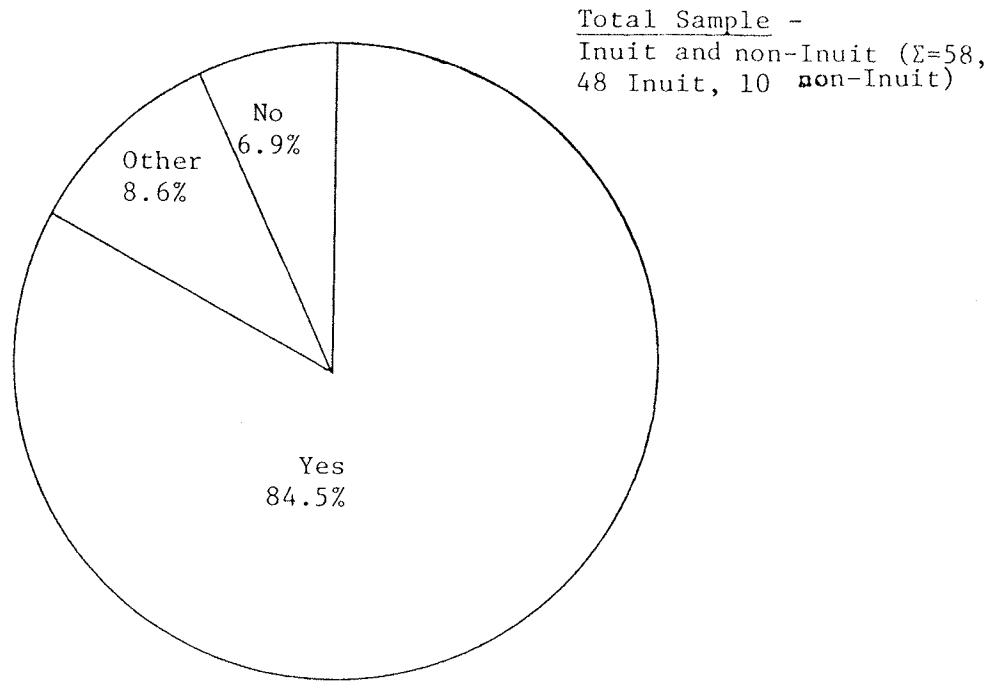


Figure 4.3. Percentage of people who felt there was a need for caribou management (Data derived from Table 2, Appendix B). (Question Summarized: "Is there a need for caribou management?")

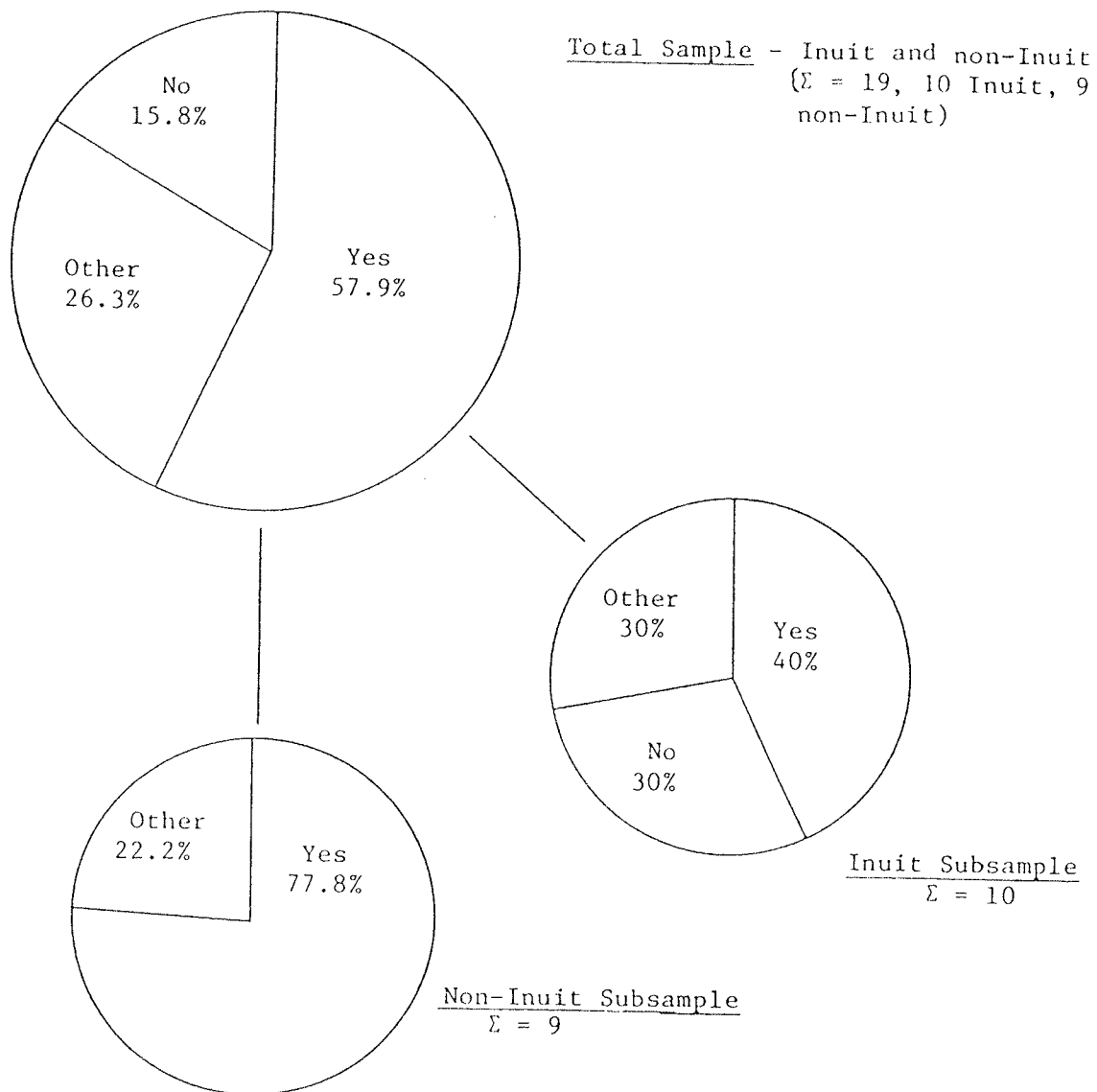


Figure 4.4. People who felt there was a need for caribou management in conceptual terms (Σ = 19, 32.8% of the total sample). (Data derived from Table 2, Appendix B). (Question Summarized: "Is there a need for caribou management?")

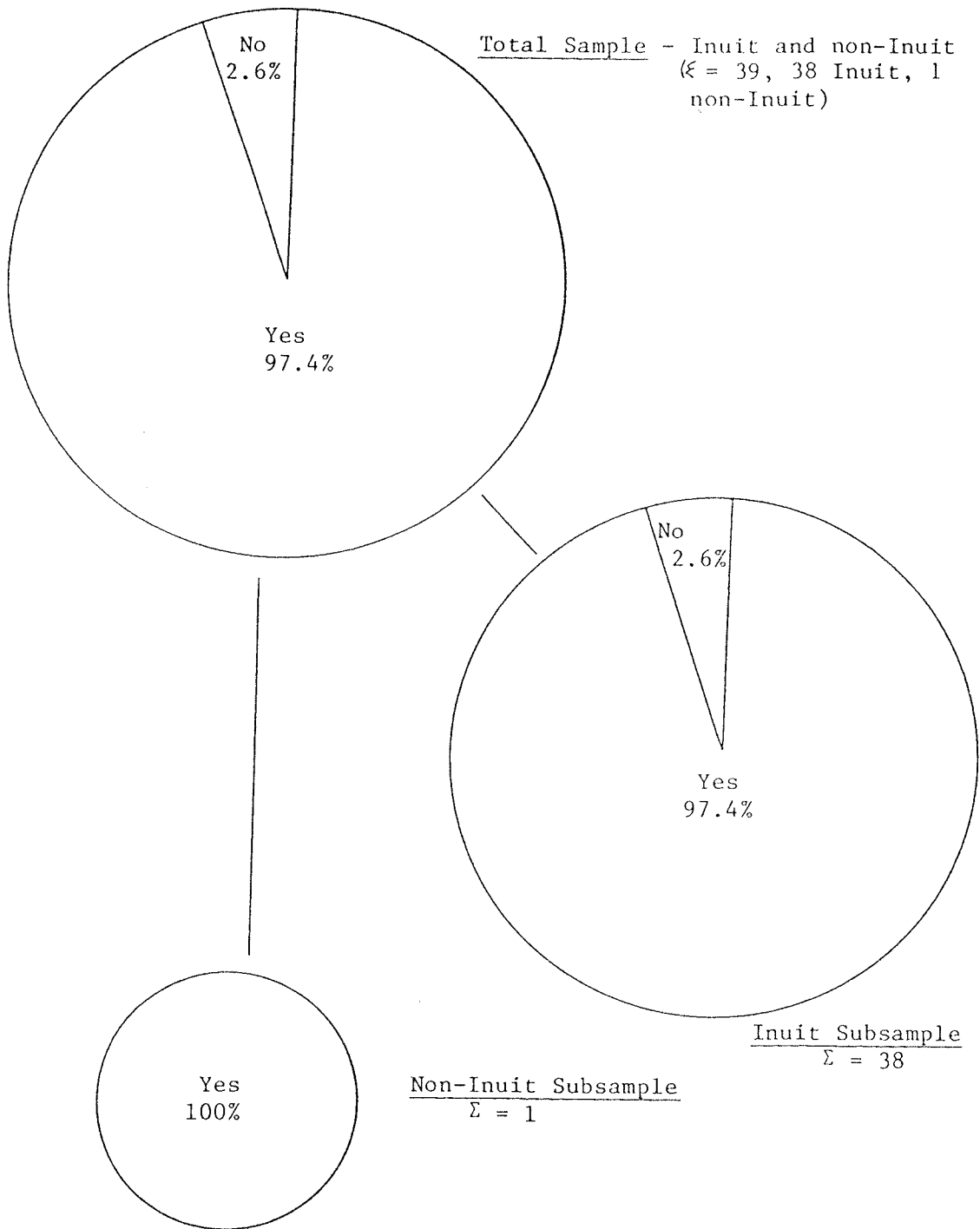


Figure 4.5. People who felt there was a need for caribou management in a bureaucratic sense. ($\Sigma = 39$, 67.2% of the total sample). (Data derived from Table 2, Appendix B). (Question Summarized: "Is there a need for caribou management?")

that caribou management was needed solely at the local level and that the CMB would be both redundant and unnecessary if the local Hunter's and Trapper's Association (HTA) did its job properly and had adequate funds to do so.

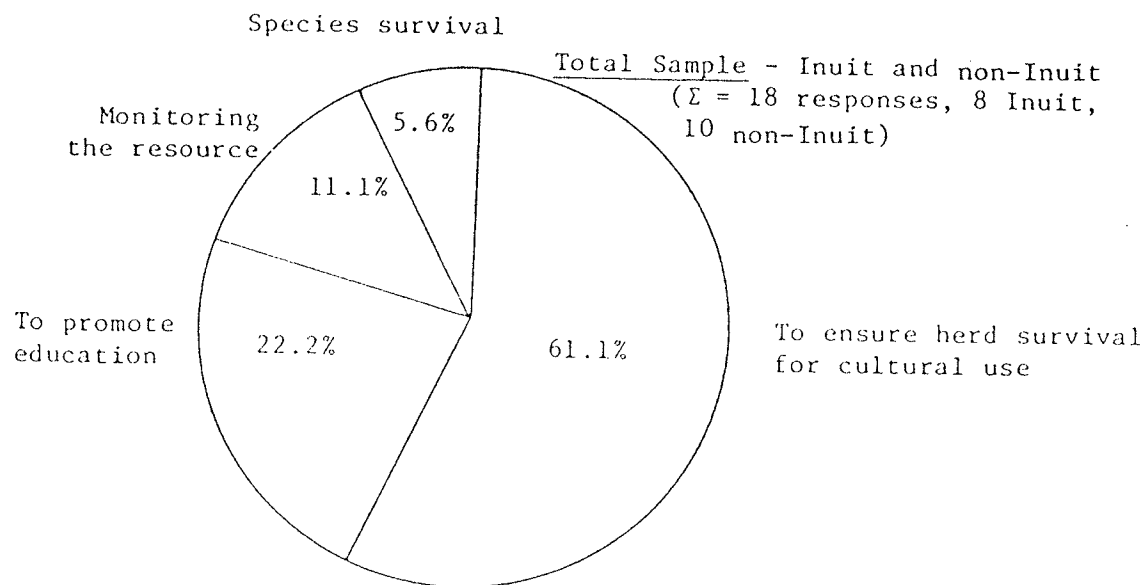
Despite this cultural difference in interpretation with the question, approximately 85% of the individuals surveyed said "yes" to either the concept of management or to a management body (i.e. CMB) to carry out these functions (Figure 4.3). A total of 4 individuals said "no" to either management or a management body concerned with the welfare of the caribou herds. A breakdown of responses by occupation is provided in Table 2, Appendix B.

Summary

In asking this question, it was found that the majority of respondents supported the term "management." Ninety percent of the non-Inuit subsample interpreted the question in conceptual terms while almost 80% of the Inuit subsample interpreted it with the thought of a management body (ie CMB) in mind.

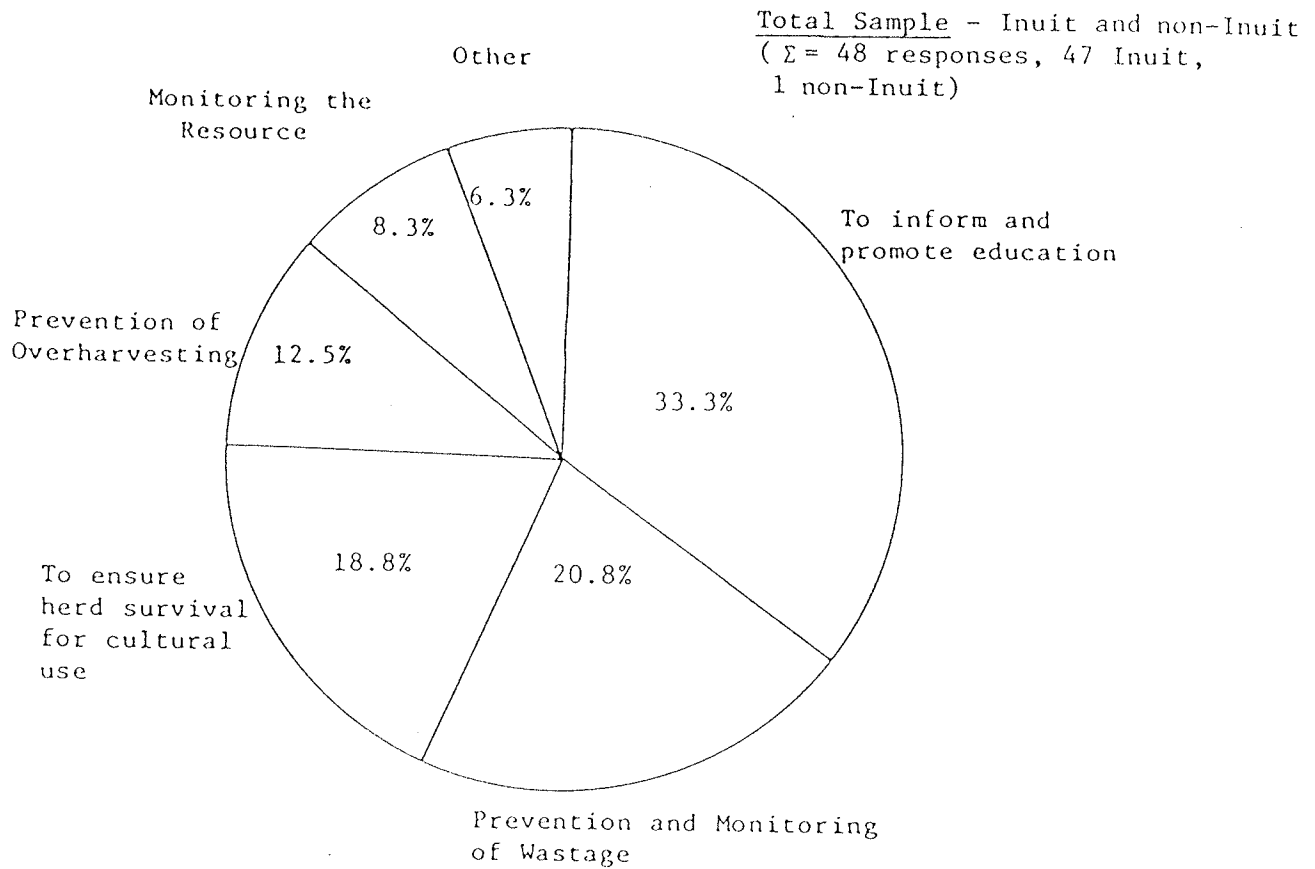
4.2.3 The Function of Caribou Management

In Figures 4.6 and 4.7, and Tables 3 and 4 of Appendix B, the comments of the local townspeople are summarized with respect to the question, "what is the function of caribou management?" Their responses were categorized under either



Note: 4 persons did not answer this question within the categories above.

Figure 4.6. The function of caribou management to persons with a conceptual interpretation of "management" in mind. (Data derived from Table 3, Appendix B). (Question Summarized: "What is the function of caribou management?")



Note₁: 3 persons did not answer this question in the categories above.

Note₂: More than one response per individual often recorded.

Figure 4.7. The function of caribou management to persons who interpreted "management" in a bureaucratic sense. (Data derived from Table 4, Appendix B). (Question Summarized: "What is the function of caribou management?")

a conceptual or bureaucratic interpretation of the term "management".

As summarized in Figure 4.6, caribou management is seen predominantly in terms of ensuring the survival of the resource for current and future cultural uses. Approximately one-quarter of the responses viewed caribou management in terms of education (with respect to wastage, harassment and proper hunting technique), as opposed to the use of some active management measures to ensure the survival of the resource.

In interpreting "management" in more bureaucratic terms, people were more specific in their answers as to what caribou management should be doing to manage the resource (Figure 4.7). For example, prevention of overharvesting and prevention of wastage were two common responses.

People tended to define caribou management in terms of what they felt the current issues of importance to be. To many, the function of caribou management is to educate and take action on the wastage of meat at the present time.

Much like the results summarized in Figure 4.6, it can be seen in Figure 4.7 that people saw the role of caribou management in one of two ways -- either as an active, decision-making body responsible for "management measures" and ensuring the survival of the resource or, as a more passive body, responsible for education, dialogue and information ex-

change, upon which people could act responsibly of their own accord. Of approximately 70% who felt the function of caribou management was to "look after" the herds, some of the more typical responses were:

The Board should try and do something about the caribou drowning at the "Big River" (Tha-Anne river) so that there won't be a lot of caribou dying.

Further:

The CMB should hire some Inuk to go inland to take out some unused caribou that the hunters kill.

Finally:

If no management, could kill too much in a year and have no caribou left.

About 30% of the "bureaucratic" subsample defined the function of caribou management in an educational context (Figure 4.7). For some, there is a legitimate belief that the sole function of a management body is to provide information and to serve as a forum of communication for the resource. Management measures are either not needed or are ineffective. As one Inuk stated:

We cannot control caribou, they control themselves and caribou are like weather, they come and go as they please.

The response of others however is undoubtedly a perception of what management should be doing now that the "crisis" situation has past. Many feel "management measures" are, at the present time, not needed and the only function of the Board is to serve in an educational, dialogical capacity.

As one individual stated:

There is a need for educating people on the spoilage of meat and, maybe in 20 years there will be a need for so-called "management measures."

Further, as one Inuk commented:

Caribou are doing allright by themselves right now.

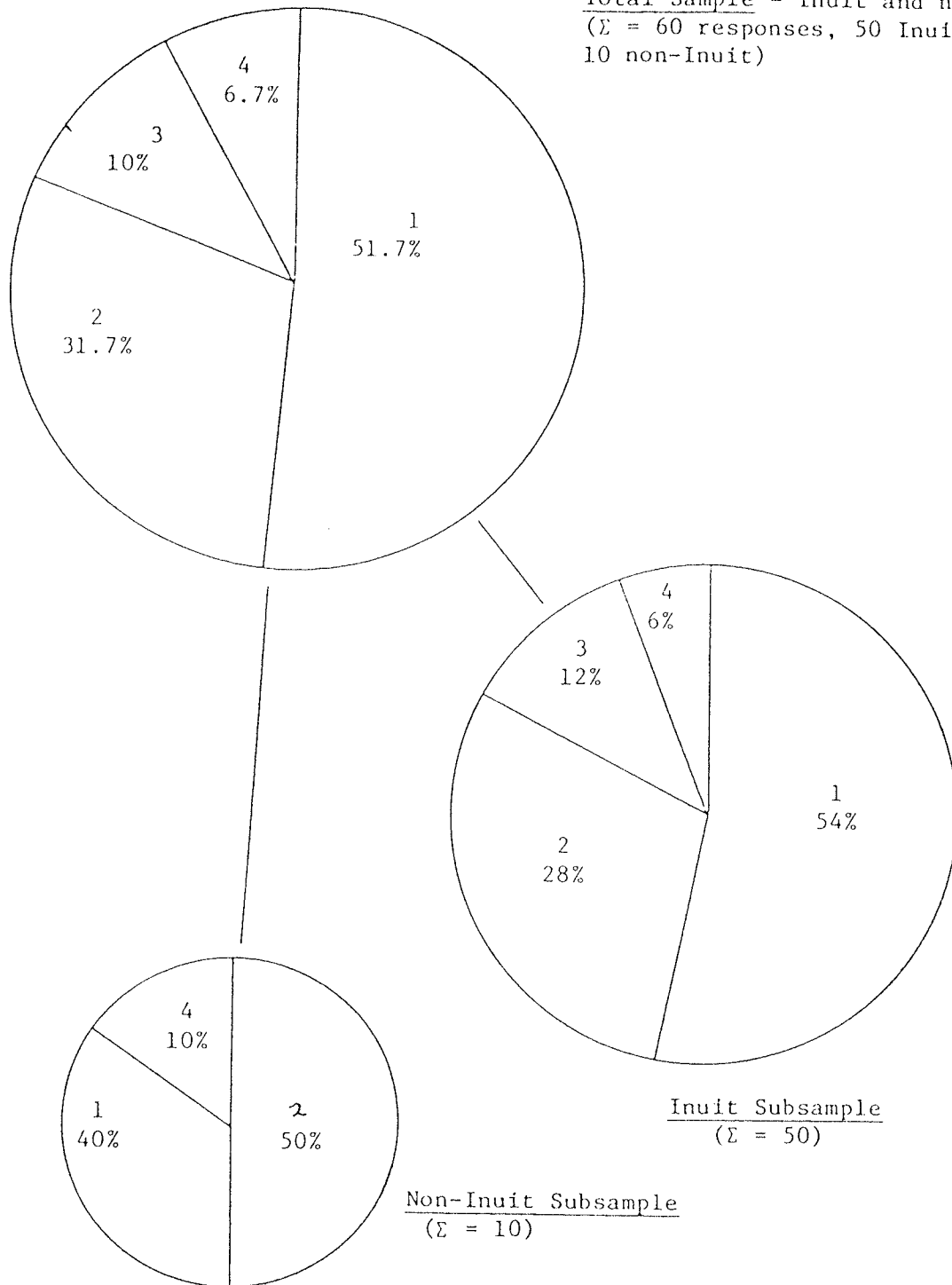
Summary

In discussing the function of caribou management, approximately three-quarters of those individuals surveyed and who defined management in either bureaucratic or conceptual contexts, were supportive of management in terms of "looking after" the resource for current and future cultural uses. About 25% of the total sample perceived the role of management in an educational context. It was evident that people were primarily concerned about the well-being and conservation of the resource both for present and future cultural uses.

4.3 IMPROVING THE CMB FOR THE FUTURE

As is shown in Figure 4.8, and in Table 5 of Appendix B, over half of the respondents did not comment on the question, "How would you improve the CMB for the future?" In a number of cases, the question was not asked of people since they had indicated no knowledge of the Caribou Management Board. In other cases, people simply did not have enough knowledge of the Board, its goals and activities to answer the question. One individual, although having some knowl-

Total Sample - Inuit and non-Inuit
 (Σ = 60 responses, 50 Inuit,
 10 non-Inuit)



Legend

- | | |
|--------------------------------|--|
| 1. Lack of Response | 3. Management "Action" or Measures Taken |
| 2. Communication/Contact/Input | 4. Other |

Figure 4.8. Improvements for the Caribou Management Board (CMB). (Data derived from Table 5, Appendix B).
 (Question Summarized: "How would you improve the CMB for the future?")

edge of how improvements could be made, did not want to offer his insights.

Of the people who did answer the question, a large proportion were concerned about communication, contact and local input with respect to caribou management. Improved communication and dialogue between the CMB, local people and wildlife groups received the most response within this category (Table 5, Appendix B). A number of the more unique suggestions made within this category included, an increased number of representatives from the Keewatin region to sit on the CMB, the use of 1940-50's anthropologists to act as advisors in making "management decisions" and more local/provincial political involvement (representative observers) in CMB meetings.

Ten percent of the responses indicated that they would like to see the Board take more "action" in terms of hiring people to take waste skins and meat off the land, in establishing "migration route corridors" and in the conducting of proper and accurate research (Table 5, Appendix B). In addition, 2 individuals expressed concern over the CMB in establishing itself as a credible management group, adequately representing the jurisdictions and ethic groups within its mandate.

Summary

Although a large percentage of those people surveyed did not provide answers to this question due to their own lack of knowledge or due to the discretion of the researcher asking the question, those who did were mainly concerned about communication, contact and local input between the CMB and local peoples. Improved communication and dialogue received the most support within this category. A number of responses supported Board "action" in managing the resource for the future.

4.4 COMMUNICATION AND DIALOGUE EXCHANGE

4.4.1 The Caribou News Publication

As can be seen from Figure 4.9, the majority of persons surveyed were aware of the Caribou News publication. Only 3 individuals had not heard of Caribou News. Of those who were aware, approximately 75% had read the publication at least once (Figure 4.10). Slightly over 70% of the Inuit subsample who were aware of the paper had read it. A breakdown of responses by occupation is provided in Tables 6 and 7 of Appendix B.

In reading through the surveys, a rather interesting correlation was discovered. Of the 16 individuals who had indicated that they had never heard of the CMB (Figure 4.1), 9 of those individuals (56%) had not read Caribou News (Figure 4.11).

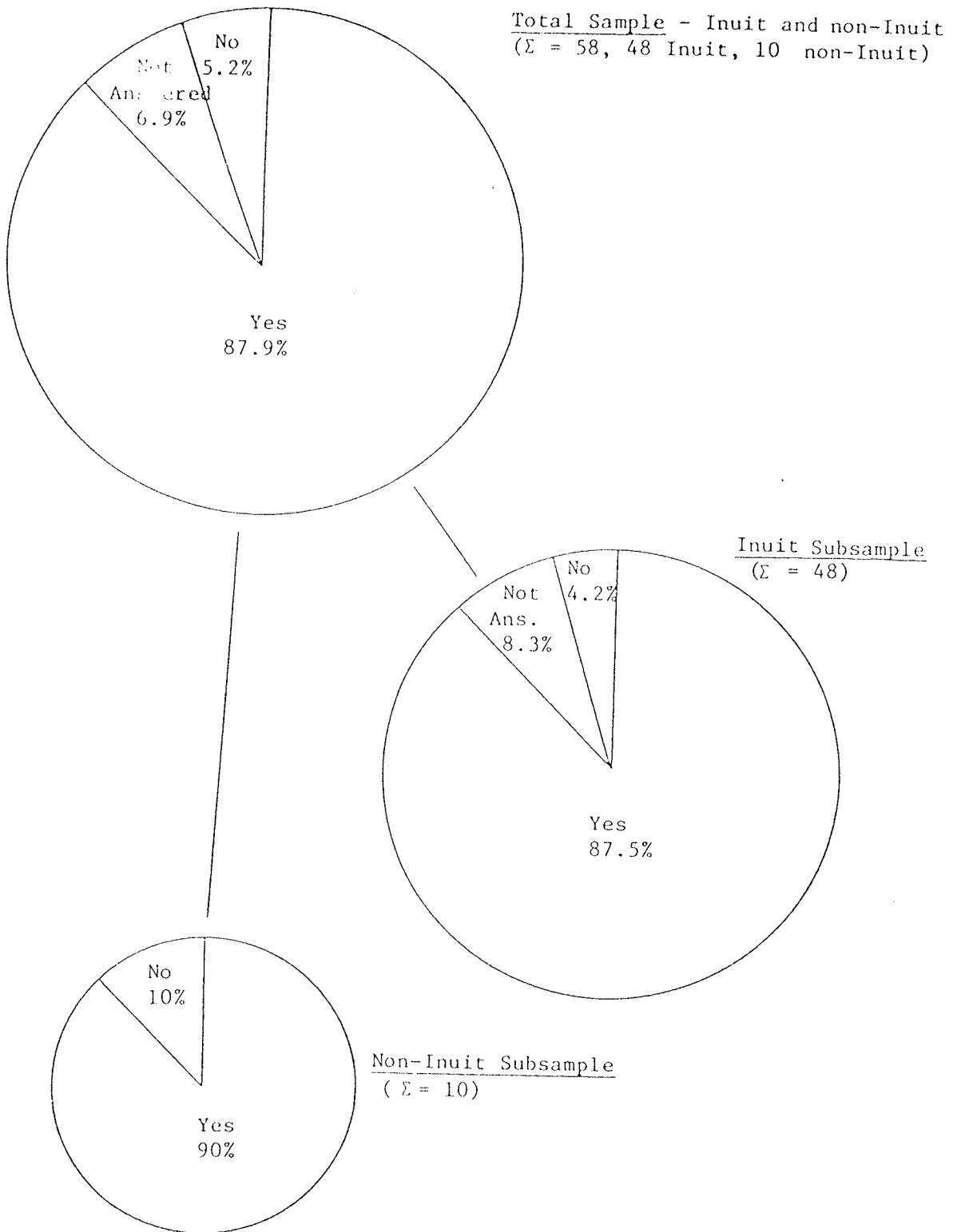
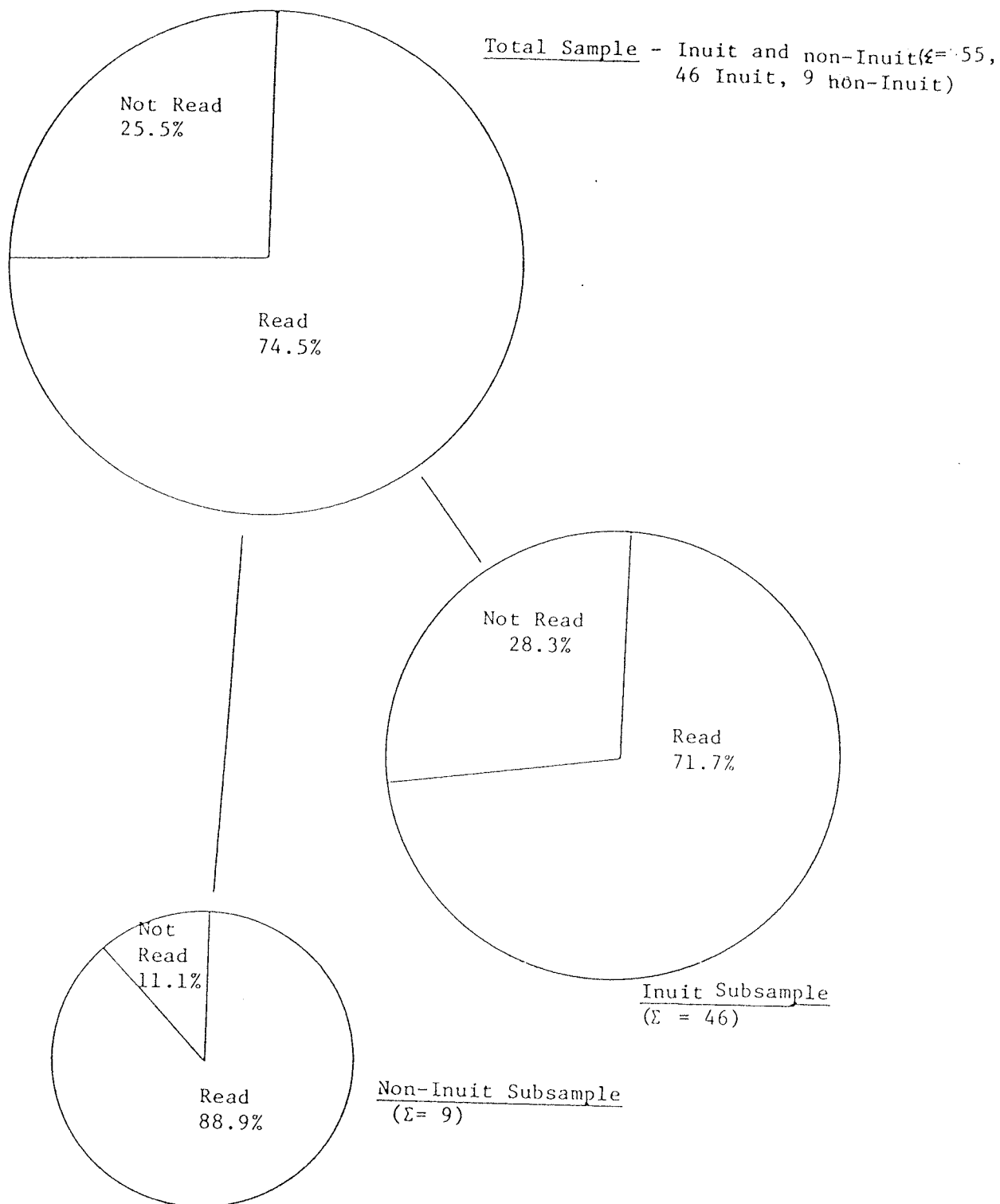


Figure 4.9. People Aware of the Caribou News Publication. (Data derived from Table 6, Appendix B). (Question summarized: "Are you aware of the publication, Caribou News ?")



Note: The four individuals who did not answer the previous question were included in this sample.

Figure 4.10. People who are aware of and have read Caribou News.
(Data derived from Table 7, Appendix B). (Question summarized:
"Have you read Caribou News at least once?")

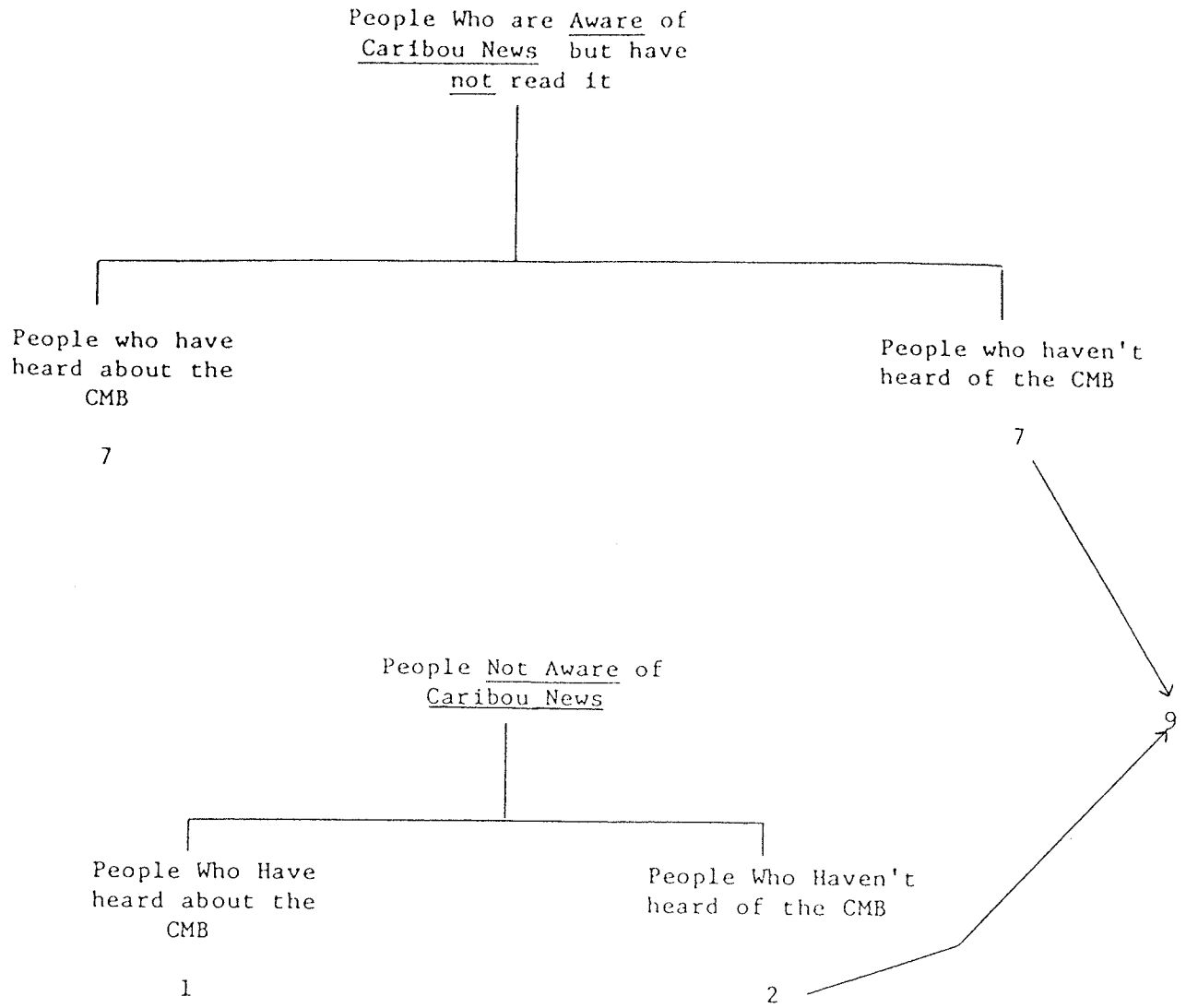


Figure 4.11. Correlation between people who have not read Caribou News and who have not heard of the CMB.

Numerous comments were recorded with respect to the publication. The general impression of the Inuit and non-Inuit persons who read Caribou News, was that it is a good paper with good content. People remarked that the articles were short and easy to read, the layout and graphics were well presented and that there was a good cross-section of opinions. One individual suggested that the paper was good because it upset people on a regular basis. Further, a number of individuals of both groups felt that the paper was effective in helping people to understand management issues and in keeping them informed of developments in the field, from a biological and local perspective. More than 40% of the Inuit subsample who read the paper felt that there was no need to change anything about the publication.

From the survey, a number of practical suggestions or guidelines for future issues were submitted. Both Inuit and non-Inuit residents stated that the paper should remain simple and stay closely in touch with northern communities. It was also suggested by a number of Inuit residents that there should be more content in the form of Inuit views towards caribou management. One individual suggested that an Inuk or local person should be instrumental in writing an article or section of the paper to give it that essential northern flavour. In addition to Inuit views on management, it was recommended by three individuals that the paper should continue to present basic skills and conservation practices

with respect to caribou utilization. These included proper methods of skin and meat preparation and methods to prevent wastage of the resource (i.e. through the use of freezers in the summer).

Generally speaking, there was a favourable response to the puzzles and quizzes in the paper. It was suggested that these, along with the rest of the paper could prove invaluable for educational purposes. One individual felt that a booklet or binder of Caribou News issues should be put together and used in the school curriculum.

A number of significant complaints were made with respect to the paper. It was noted that a couple of people were unhappy about getting the paper "late" while a couple of others were disappointed in not having the paper addressed to their homes. One person questioned the validity of using the news media to communicate ideas about caribou management to the local people. In his opinion, the north is presently suffering from an information pollution problem. Consequently, papers such as Caribou News often get lost in the shuffle. Far better, he suggested, would be the use of local television or radio to exchange ideas and stimulate dialogue on the subject. His point was well taken, particularly in light of the fact that of the 17 persons who indicated that they had not read Caribou News, 5 of those persons (29%) stated that they could not or did not read. Other reasons given for not reading the paper included, "No rea-

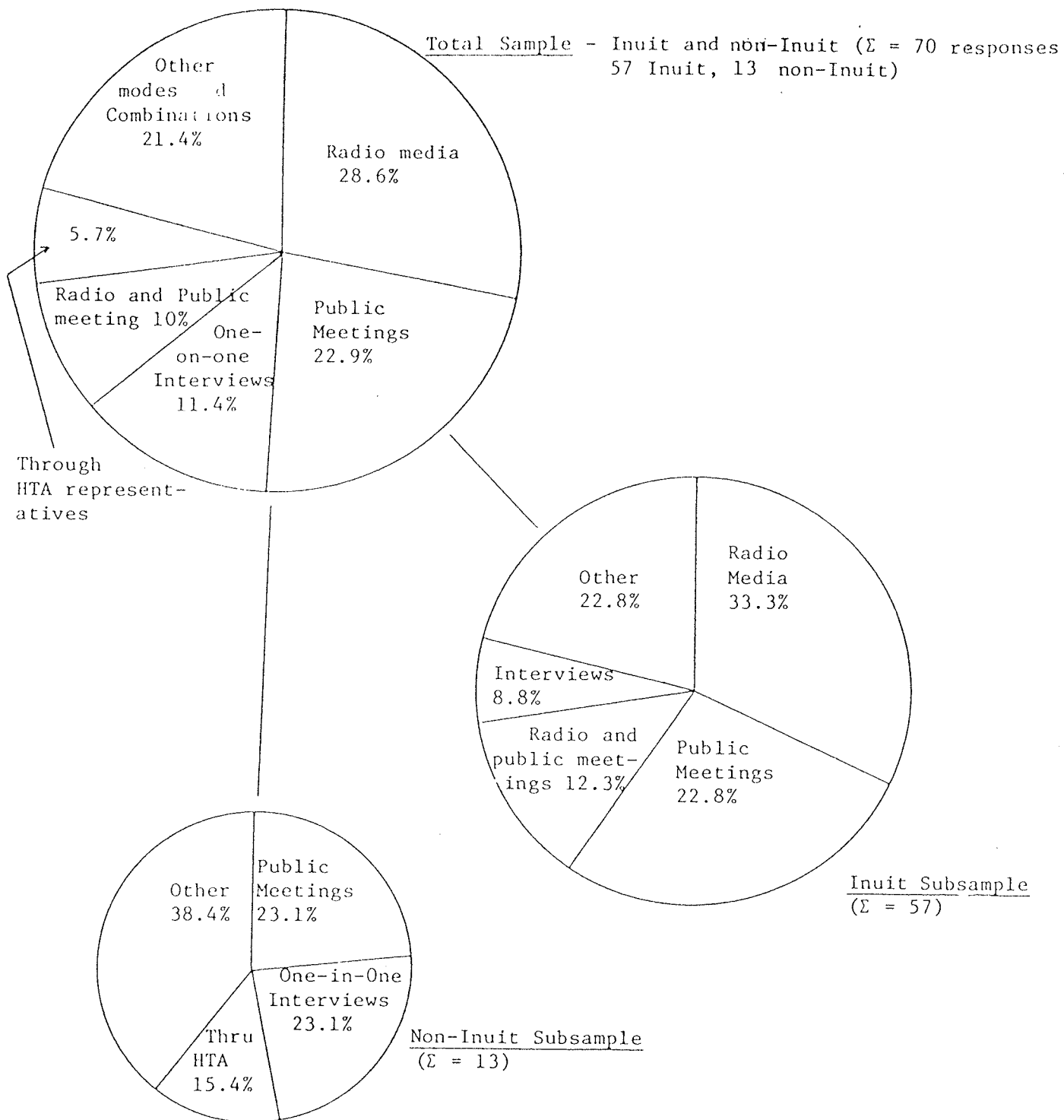
son" (3 individuals), "Hadn't heard of it" (3 persons) and, "Not interested" (6 persons).

Summary

In the study, it was found that almost 90% of those persons surveyed were aware of the publication and that approximately 75% of those who were aware had also read Caribou News. Generally speaking, the paper is well received and satisfies local needs with respect to the subject of caribou management. The most significant criticism of the paper revolved around the idea of using the news media in general to inform and stimulate dialogue on the subject. There is considerable merit in this argument since many individuals, particularly older hunters, are unable to read. Furthermore, it is of particular interest to note that over half of those individuals (9 of 16) who indicated that they had not heard of the CMB had also not read Caribou News.

4.4.2 Other Media Modes for Dialogue Exchange

To obtain more information concerning media modes for dialogue exchange, the question asked to local people was, "what is the best way or most effective means for government officials (or the CMB) and local users to exchange ideas about caribou and caribou management?" From the comments made by the Inuit and non-Inuit people of Eskimo Point, and as is summarized in Figure 4.12, and Table 8 of Appendix B,



Note: More than one response per individual was recorded a number of times.

Figure 4.12. The most effective means of dialogue exchange between government officials (CMB) and the local townspeople. (Data derived from Table 8, Appendix B). (Question Summarized: "If the CMB (or government officials) were to come to Eskimo Point, what would be the best way for the CMB and local users to exchange ideas about caribou and caribou management?")

a number of significant findings emerged. With more than one response per individual recorded, it was found that 20 of 70 responses favored the use of radio as a means of information exchange between government officials (ie CMB) and local users. One Inuk felt that radio interviews or talk shows produced the greatest results in stimulating free, uninhibited dialogue. Indeed, 10 of 20 respondents which supported radio use actually criticized the public meeting concept. A couple of people argued that people tend to "shy away from" or "sway off" public meetings either due to feeling inhibited or to avoid unnecessary hostilities and competition. One of the retired hunters which was interviewed remarked that public meetings are not appropriate. His view was that when misunderstandings or disputes arise, competitive, status-orientated comments such as, "I'm a better hunter," creep into the dialogue, with the result being that meetings tend to break down.

A number of other individuals (non-Inuit and Inuit) criticized public meetings on the grounds that this method of exchange had lost its impact on and appeal toward local people. One individual commented that caribou management was simply one of an overwhelming number of issues local people were asked to deal with. Information overload, involvement in too many other activities and lack of time and (or) interest were all reasons given as to why public meetings have been poorly attended in the recent past.

Nevertheless, it is of particular interest to note that almost 25% of the responses supported the public meeting concept. Further, this means of dialogue exchange received much support when in combination with radio use (to announce an upcoming meeting in terms of time and material to be discussed), newspaper coverage or organizational help from the local Hunter's and Trapper's Association (HTA). Just over 40% of the responses supported the public meeting forum when it was organized and advertised properly (Table 8, Appendix 2).

From the survey, it is of particular importance to note that 9 of 70 responses favoured the involvement of the HTA in any dialogue exchange between government officials (i.e. CMB) and local users (Table 8, Appendix B). This is reflective of the fact that the HTA is well established in Eskimo Point, as in most northern communities, and is well respected among the local townspeople.

In examining Table 8 of Appendix B, it is significant to note that approximately one-quarter of the responses supported a combination, usually in sequence, of dialogue modes to be used for effective communication between the various interest groups.

Some difference in response was observed between the Inuit persons and non-Inuit persons in the sample. As is shown in Figure 4.12, the use of radio media in dialogue ex-

change received tremendous support from the Inuit but only minimal support from the non-Inuit individuals surveyed. Both groups showed considerable support for public meetings and one-on-one interviews.

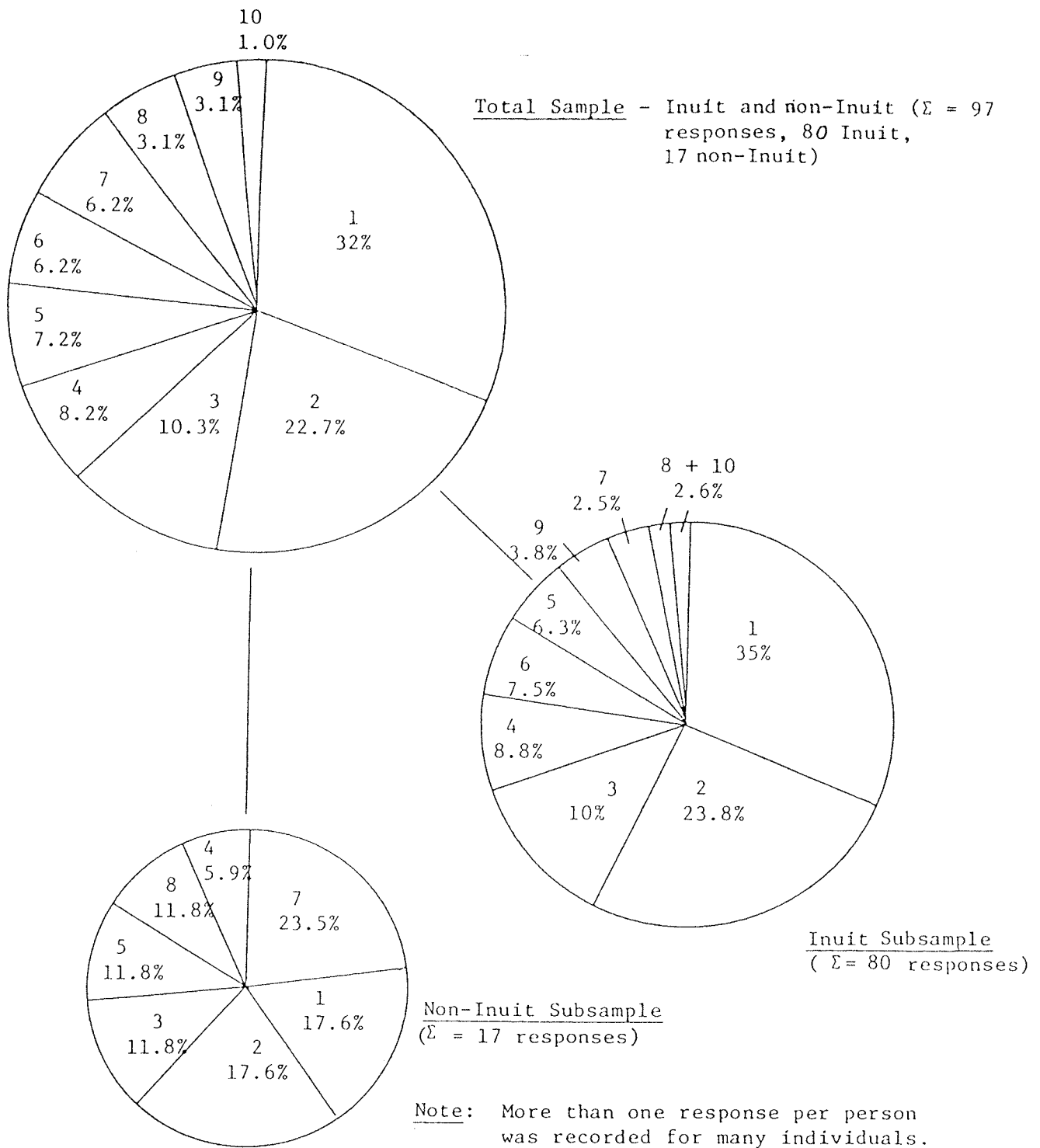
Summary

From the survey, it was found that radio use, particularly among the Inuit, is perceived to be one of the best means by which to facilitate effective communication between government officials (ie CMB) and local users. Considerable support was also voiced for public meetings, one-on-one interviews and especially for a combination of media modes, usually with local radio and public meetings being involved. Further, strong support was provided for involvement of the local HTA in any dialogue exchanges to take place.

4.5 ISSUES OF CONCERN

4.5.1 Current Issues of Concern

An examination of Figure 4.13, and Table 9 of Appendix B, reveals that, overall, the major issue of concern at the present time is with hunting technique and conservation. One-third of the total response supported this category in the survey. Specifically, it was found that wastage of both meat and skins in terms of leaving those parts out on the land was the concern of more than 80% of the respondents within this category. About 10% of the respondents were



Legend

- | | |
|---------------------------------------|---------------------------|
| 1. Hunting technique and Conservation | 6. Man-induced Impacts |
| 2. Caribou Biology | 7. Preservation of Herds |
| 3. Environment Impacts | 8. Quotas on "Residents" |
| 4. Caribou Management and the CMB | 9. Nothing |
| 5. Education | 10. Intersettlement Trade |

Figure 4.13. Current issues of concern. (Data derived from Table 9, Appendix B). (Question Summarized: "With regards to caribou, what are the major issues of concern to you?")

concerned with individuals hunting more than they needed (overharvest), while the remaining 10% were concerned with poor hunting technique (Table 9, Appendix B).

In essence, poor hunting technique and care are the reasons for wastage of the resource. Under the heading, "poor hunting technique" are included such things as sporthunting (hunting for fun), "off-season" hunting, overharvesting or overhunting, and lack of knowledge or education about the resource being harvested. With respect to sporthunting and harassment of the resource, one Inuk stated that some people,

chased after them at 50 or 60 miles per hour on skidoos or bikes.

This resulted in both,

poor meat eating and the possibility that yearlings could get lost from their parents by doing this.

Indeed, 3 respondents expressed concern over the harassment issue in the survey (Table 9, Appendix B). Two individuals (Inuit) also voiced concern over individuals who hunted the resource for fun and subsequently left the carcasses out on the land.

One of the older Inuks surveyed expressed his concern on the issue of "off-season" hunting by stating that,

caribou meat was of poor quality during the summer months due primarily to bug infestation.

He also indicated that the meat was of poor or lean quality around Christmas of each year. Typically, "off-season" hunting has lead to wastage of caribou meat.

Hunter education for both proper utilization and conservation of the resource is another area of concern. As one Inuk articulated:

Young people cut caribou at front or back to see if there is any fat -- if there is not much fat, young Inuks will hunt another one -- they shouldn't do this.

Seven of 48 Inuit surveyed were concerned about the lack of proper training that young Inuks were receiving at the present time. For example, one individual (Inuk) stated:

The young hunter should learn the 101 basics of caribou use from head to foot.

Another Inuk mentioned that young Inuit needed to be taught the proper ways of skinning caribou while a number of others simply stated that young people had to be taught not to waste the resource.

Lack of adequate storage facilities or freezer space was another reason given as to why wastage occurs. Thawing and subsequent rotting of naturally frozen meat results in much meat being thrown out each year. At the present time, there is only one community freezer capable of meeting the needs of 10 of the communities' families.

In the context of wastage of the resource, one of the most predominant concerns was that waste materials left out on the tundra would serve to divert migrating herds from their traditional routes. This could result in reduced access to the resource for communities such as Eskimo Point, or even worse, may force the herds to remain in more north-

ern locations throughout the year. One individual (Inuit) voiced his concerns by stating that:

Caribou will avoid travelling on those routes where dead caribou have been left. Everywhere caribou go should be kept clean -- north and south routes -- so that caribou will continue to use these routes.

To deal with this problem of carcasses littering the traditional migration routes, one of the older Inuks suggested that bombardiers be used during the winter season to pick up waste materials inland. Another person stated that an Inuk guide should be hired, 'to take skins out of the land.'

Diversion from traditional migration routes and (or) relocation of the herds was also an issue raised in the context of man-induced impacts created by settlement activities, exploration groups and mining operations. One Inuk expressed his concern by stating that there, 'may be some effects by exploration and mining -- i.e. a change in caribou migration routes.' In total, 4 individuals felt that exploration and mining camp activities was a major issue of concern (Table 9, Appendix B).

One of the students interviewed was concerned about the general cleanliness around each community settlement. He felt that fuel dumps and other material refuse left on the land could have a disturbing effect on the caribou herds, particularly in light of growing settlement populations.

Another issue of major concern has been summarized and called, "Caribou Biology". Fifty percent of the responses within this category expressed concern over population research and surveys being conducted at the present time. Undoubtedly, the question of methodology has been brought to the forefront as a consequence of recent findings and trends with both the Kaminuriak and Beverly herds. In addition, accurate knowledge of herd sizes has become a question of concern. As an interesting sidelight, 8 of 48 Inuit surveyed made a point of stating that the herds were of a large size and that there was really no concern with the health and well-being of the resource. To quote one of the students surveyed: "Caribou are doing allright by themselves right now". Being well-informed and having input into surveying and research processes was also regarded as being important to a number of individuals.

In the survey, concern was also shown over the issue of caribou management and the CMB. Input into the management process along with improved dialogue and information exchange between Board representatives and the local community was deemed essential.

About 10% of the respondents expressed concern over environmental factors and their impact on caribou herds. Considerations such as drowning at the 'Big River' (Tha-Anne river) serve among other things, to reflect the general awareness and concern of local citizens with the well-being and conservation of the resource.

Finally, a couple of notable differences in response were observed between the Inuit and non-Inuit persons surveyed. Proportionately speaking, the issue of quotas on non-Inuit, "northern residents" was of more concern to the non-Inuit persons interviewed than it was to the Inuit. Man-induced impacts and intersettlement trade were two concerns voiced by the Inuit but not by the non-Inuit persons surveyed.

Summary

It was found that a local issue, namely, the wastage of caribou meat and skins was of top priority among the concerns of the local townspeople. Comments were made as to why wastage occurred and suggestions forwarded as to how to deal with this problem. Two of the more favored suggestions were; (1) better education and training, particularly of young Inuks; and (2), the hiring of individuals to clean the land. Implications of wastage, such as the diversion of caribou from their traditional migration routes, were voiced.

Other issues of major concern were improved dialogue, education and information exchange between local townspeople, biologists and representatives of the CMB. Accuracy of biological surveys was frequently challenged by a number of individuals. Man-induced impacts, environmental impacts and education as an issue in itself also received support as being issues of importance.

4.5.2 Sporthunting

In response to the question, "Do you feel that sporthunting is an acceptable use of the resource?", it was found that approximately three-quarters of those individuals surveyed did not support unguided sporthunts. However, it was also found, that almost 85% of those individuals surveyed did support guided hunts (Figures 4.14 and 4.15, Table 10 of Appendix B). "Sporthunting" as defined by this question refers to hunters coming into the Territories from the "south" to hunt caribou.

A number of reasons were given by both Inuit and non-Inuit alike as to why guided sporthunts were acceptable while unguided ones were not. For a number of individuals, the following conditions, in whole or in part, had to be met before they would agree to guided sporthunts as being an acceptable use of the resource. To begin, a considerable amount of support for guided sporthunts was given on the grounds that it would provide a source of income for a number of the local townspeople (Table 4.2). Indeed, more than 25% of those persons surveyed supported guided sporthunts on these economic grounds. As one Inuk stated:

Outfitting is okay if it provides an economic base for a person in the community.

Another consideration receiving much support was the notion that, through the use of a guide, the harvested meat and skins would be utilized and unnecessary wastage prevented. As another Inuk commented:

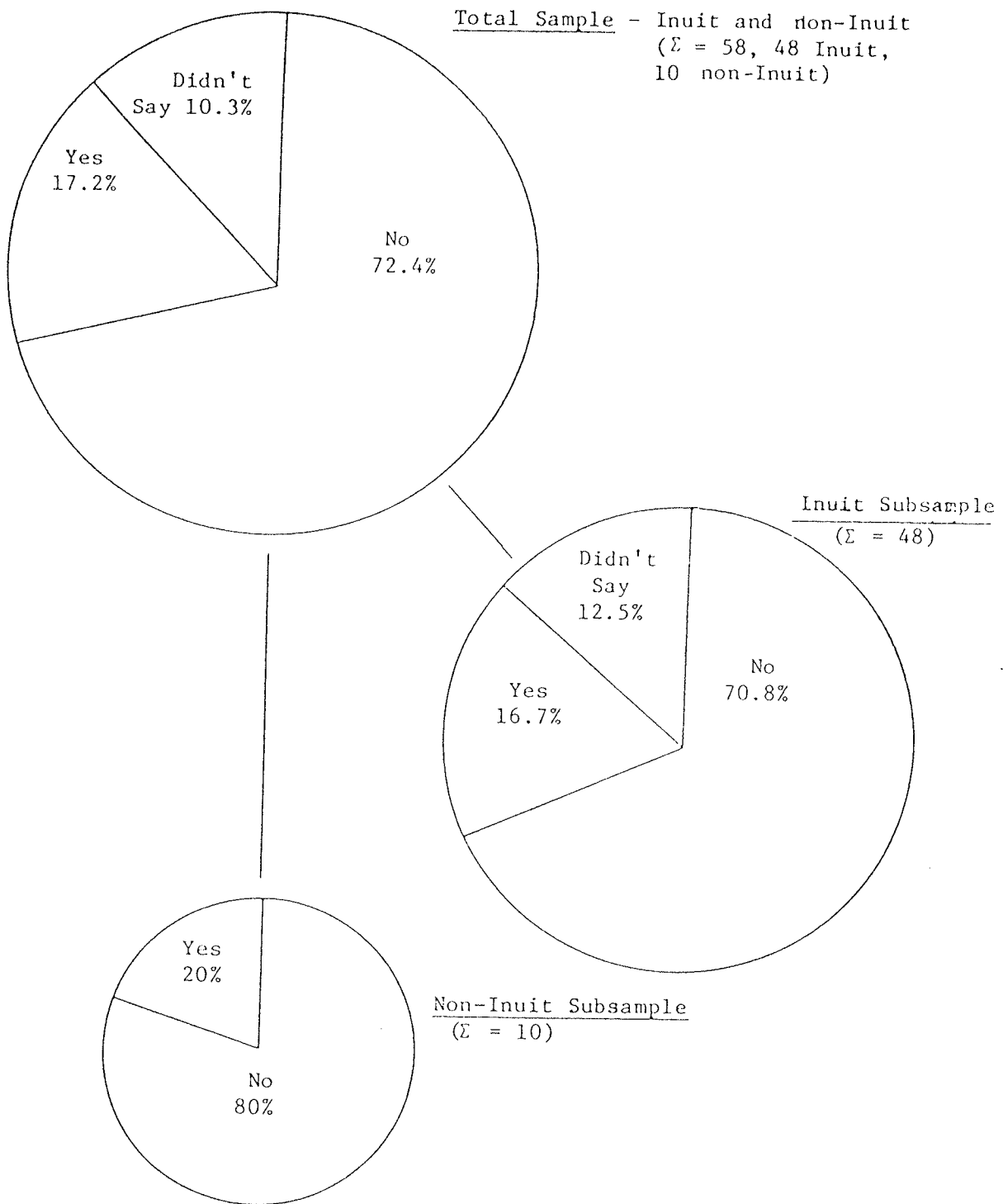


Figure 4.14. Unguided sporthunts as an acceptable use of the caribou resource. (Data derived from Table 10, Appendix B). (Question summarized: "Are unguided sporthunts an acceptable use of the caribou resource?")

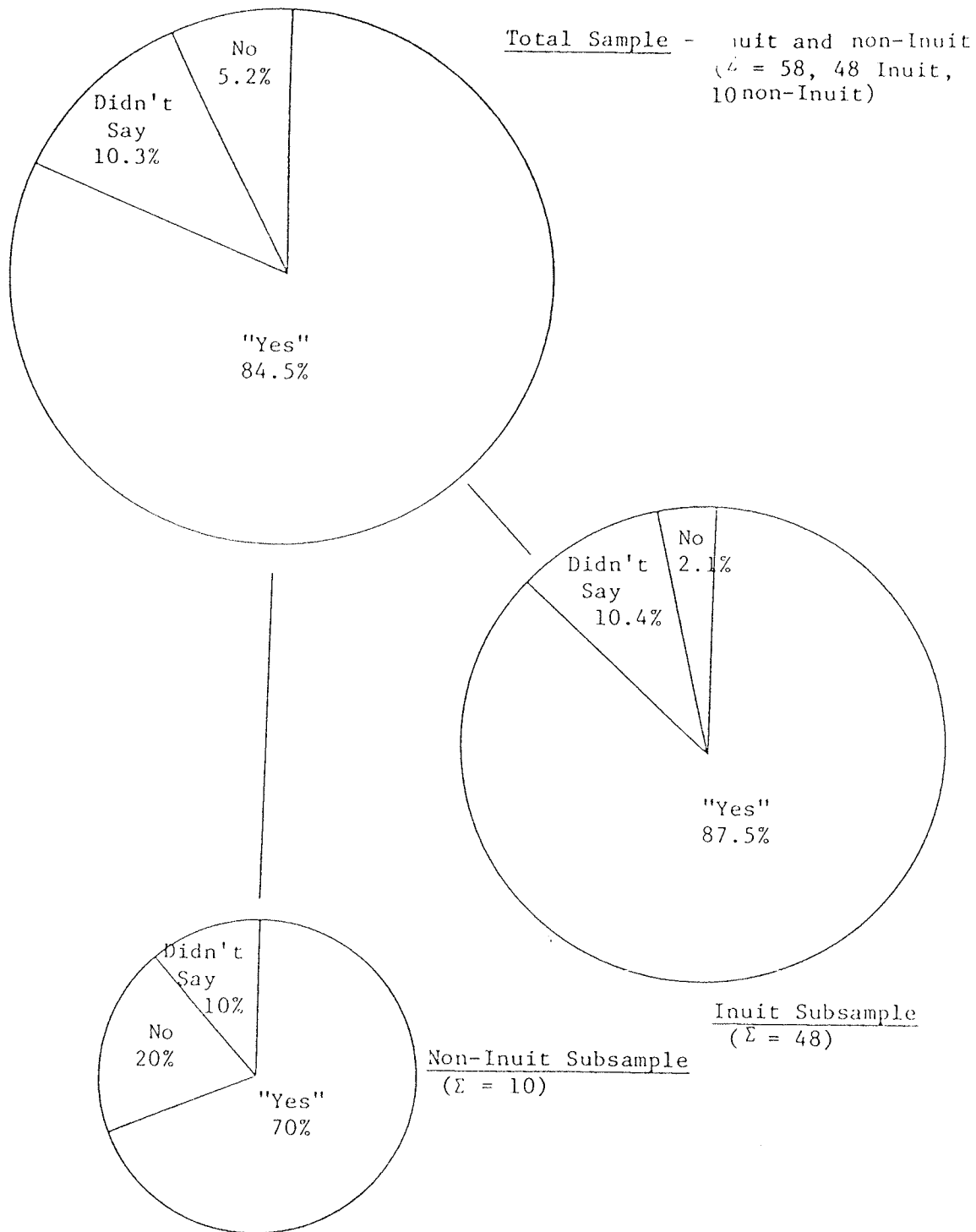


Figure 4.15. Guided sporthunts as an acceptable use of the caribou resource. (Data derived from Table 10, Appendix B). (Question Summarized: "Are guided sporthunts an acceptable use of the caribou resource?")

Table 4.2. Reasons for Saying "Yes" to Sporthunting with a Guide

REASON	RESPONSE
<u>Economic considerations</u>	Σ = 16 persons (27.6% of total)
- employment	4 non-Inuit
- source of income	12 Inuit
<u>Prevention of meat wastage</u>	Σ = 12 persons (20.7% of total)
- meat given to guide	12 Inuit
<u>Safety</u>	Σ = 12 persons (20.7% of total)
	3 non-Inuit
	9 Inuit
<u>If local needs are met first and herd will support it</u>	Σ = 3 persons (5.2% of total)
	2 non-Inuit
	1 Inuit
<u>Legal Considerations</u> - ie. if person has a licence	Σ = 3 persons (5.2% of total)
	1 non-Inuit
	2 Inuit
<u>If controlled and restricted</u>	Σ = 3 persons (5.2% of total)
	3 Inuit

When a person comes here to hunt for fur (antlers) and lets the meat go, it doesn't look good in the public's eye. It's not the money we're talking about. With a guide, then we know that the skin and food aren't going to be left behind.

A number went on to say that the meat and skins should be turned over to the guide after the hunt.

A third consideration receiving considerable support were safety factors. As one individual (Inuit) stated:

[A person coming up here] doesn't know much about the land and weather. It's easy to get lost.

Further, as another person stated:

It's fine with a local guide -- it provides employment and he knows the land.

Support for guided sporthunts was also acknowledged on the grounds that this use of the resource be, (1) properly controlled and restricted, (2) that it was legally permissible and that, (3) local needs were met first and that the herds could support such a use.

A number of individuals said "no" to both guided and unguided sporthunts (Figures 4.14 and 4.15). One individual stated that he simply did not believe in sporthunting for fun while another felt that proper control over this enterprise could not be ensured.

Finally, it was observed that the Inuit and non-Inuit persons surveyed responded in a similar fashion to the question of guided and unguided sporthunts. However, in the context of guided sporthunts, it was noted that proportion-

ately more Inuit said "yes" to this consideration than did the non-Inuit individuals surveyed.

Summary

Almost 85% of those people who were asked if sporthunting was an acceptable use of the resource supported guided sporthunts. This support was provided primarily on economic, safety and conservation (proper utilization of meat and skins) grounds. A number of people said "no" to guided sporthunts on the grounds that the enterprise could not be controlled properly and due to a belief that sporthunting simply was not an acceptable use of the resource.

4.5.3 Commercial Harvest

In asking the question, "How do you feel about taking animals out of the herd for sale; (1) to other Inuit communities/persons and; (2) to "southern" markets?", interesting findings were revealed (Figures 4.16 and 4.17, and Table 11 of Appendix B). With respect to the sale of caribou meat to other Inuit communities/persons, it was found that approximately 55% of the Inuit surveyed said "no" while about 30% said "yes" to the selling of meat within their own culture. Interestingly enough, 6 of 10 non-Inuit persons surveyed approved of the sale of meat to other Inuit communities. More than half of the Inuit sampled supported selling meat to "southern" markets and peoples (Figure 4.17). Similarly, 50% of the non-Inuit population sampled supported this use.

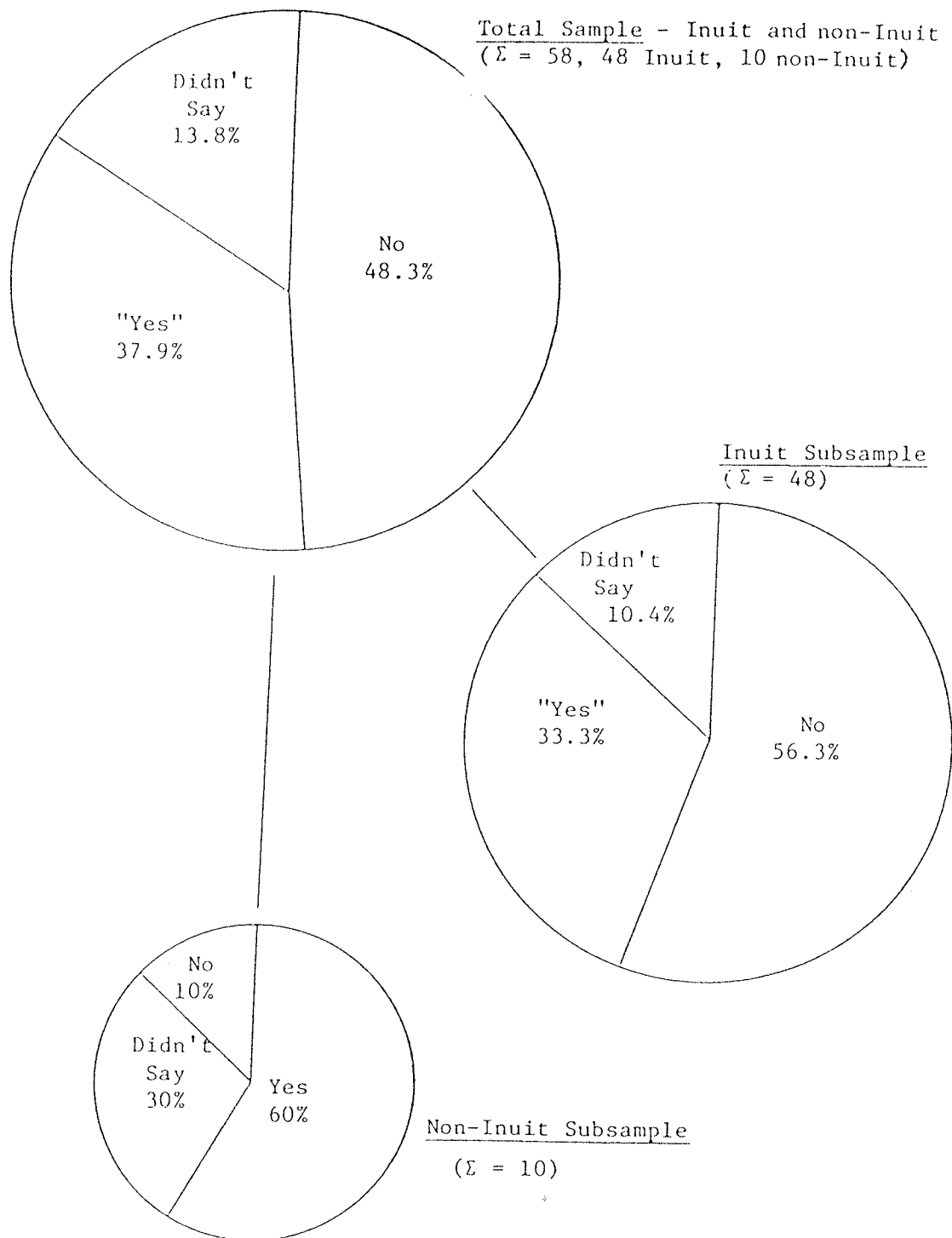


Figure 4.16. The sale of meat to other Inuit communities/people as an acceptable use of the resource. (Data derived from Table 11, Appendix B).
(Question Summarized: "How do you feel about taking animals out of the herd for sale to other Inuit communities/persons?")

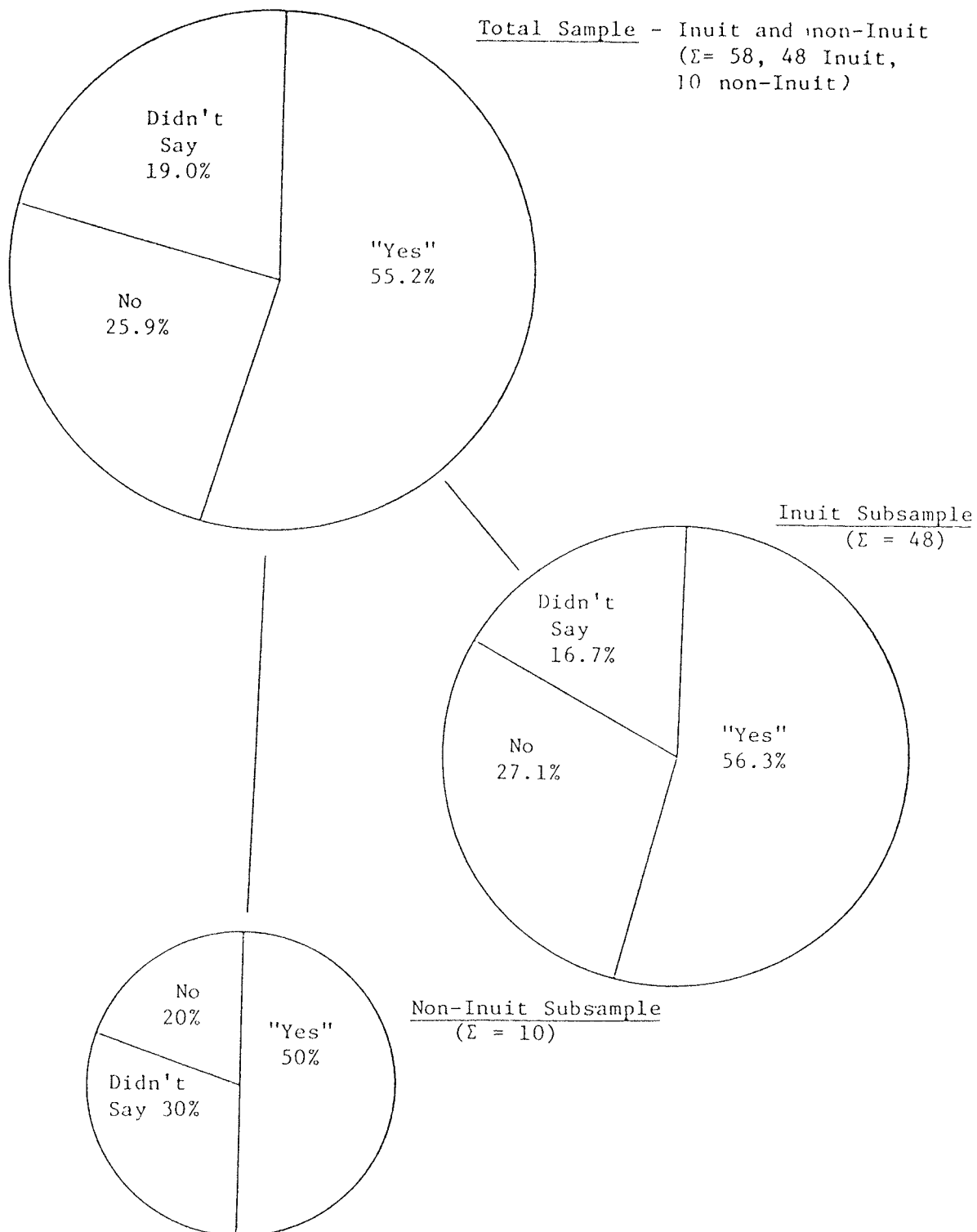


Figure 4.17. The sale of meat to "southern" markets as an acceptable use of the resource. (Data derived from Table 11, Appendix B). (Question Summarized: "How do you feel about taking animals out of the herd for sale to "southern" markets (i.e., Winnipeg)?")

In the survey, approximately 15% of the sample would not respond to the question of commercial sale to other Inuit communities/persons while almost 20% withheld response to the question in the context of "southern" markets.

In interpreting the results of Figures 4.16 and 4.17, great caution must be exercised. One-quarter of those persons surveyed qualified their "yes" response, especially with respect to the sale of meat to "southern" markets, by stating that they would only support such a use if the herds could support it and if this enterprise could be properly controlled and restricted (Table 4.3). Some of the more typical responses from three individuals were:

[I would] want to see how many caribou are around first, then if enough sell some down south also.

Further:

No problem selling to other Inuit communities or Whites -- as long as it is controlled and managed properly.

Finally:

As long as there is a surplus, then fine for this to occur.

Needless to say, the commercial sale of meat, especially to "southern" markets, is of low priority to many individuals and is dependent upon herd size and status.

A number of individuals supported the sale of meat, especially to "southern" markets, on economic grounds. Fifteen percent of the Inuit surveyed and 10% of the non-Inuit persons sampled suggested that this would be a worthwhile economic venture for northern communities.

Table 4.3. Reasons for People Responding "Yes" or "No" to the Commercial Sale of Meat

Reason	Number
"No" to the sale of meat and skins	37.9% of Total sample (22 of 58)
a) Not our Tradition or Culture	22/48 Inuit (45.8%) 0 non-Inuit (0%)
b) Depletion of herds (especially to "southern" markets)	19.0% of total sample (11 of 58) 8/48 Inuit (16.7%) 3/10 non-Inuit (30%)
"Yes" to the commercial sale of meat and skins (especially to "southern" markets)	
a) If herds could sustain it/if it could be policed/ controlled/restricted	24.1% of total sample (14 of 58) 9/48 Inuit (18.8%) 5/10 non-Inuit (50.0%)
b) Source of Income	13.8% of total sample (8 of 58) 7/48 Inuit (14.5%) 1/10 non-Inuit (10%)

Almost half of the Inuit who said "no" to the intercultural sale of meat said so on the grounds that it was not their tradition or culture to sell meat to fellow Inuks (Table 4.3). Some of the more typical responses, as voiced by three Inuit persons were:

Our tradition is to give meat to other Inuit and not to sell meat to them.

Further:

[It's] not good, we just give it to them -- not our way to sell meat to other Inuit people.

Finally:

No - Eskimos have always shared the meat -- if a person was starving, a hunter would go out and get food for that family.

Four Inuit, while not supporting the intercultural sale of caribou meat, suggested intersettlement trade as being a viable alternative.

As an interesting footnote, it was found that none of the 10 non-Inuit people surveyed suggested cultural factors as a reason that the selling of caribou meat within the Inuit culture was not acceptable.

In addition to "cultural" factors, approximately 20% of the total sample did not support the commercial sale of meat, either within the culture or to "southern" markets, due to potential depletion of the herds (Table 4.3). These individuals were concerned that the sale of meat would represent an excessive use of the resource and threaten the well-being of the herds. As one individual commented:

There must be cautions about hooking the caribou resource into a larger economic system. How could you satisfy the need (demand) of such a system?

Summary

It was found that there was more opposition than support, among the Inuit, for the intercultural sale of meat. Sale to "southern" markets received somewhat more support than opposition. Among the non-Inuit subsample, sale of meat in both contexts received more support than opposition.

Many who said "yes" to the sale of meat qualified their answers. Further, a substantial number of persons chose not to respond to this question. Several individuals suggested intersettlement trade as being a feasible alternative.

4.5.4 Non-Inuit, "Northern Resident" Quotas

Over half of the individuals surveyed supported the idea of giving "permanent" (i.e. lived in the community for 10 years) non-Inuit, "northern residents" the same hunting rights (a general hunting licence) as the Inuit now enjoy (Figure 4.18). Seventy percent of the non-Inuit persons sampled supported this idea while almost 50% of the Inuit subsample did so. As one Inuk stated:

[There should be] restrictions for one or two years then be treated like an Inuit person.

Further, as another individual (non-Inuit) stated:

Each person deemed as a resident should have the right to hunt to satisfy their needs -- if number of animals in the herd permits.

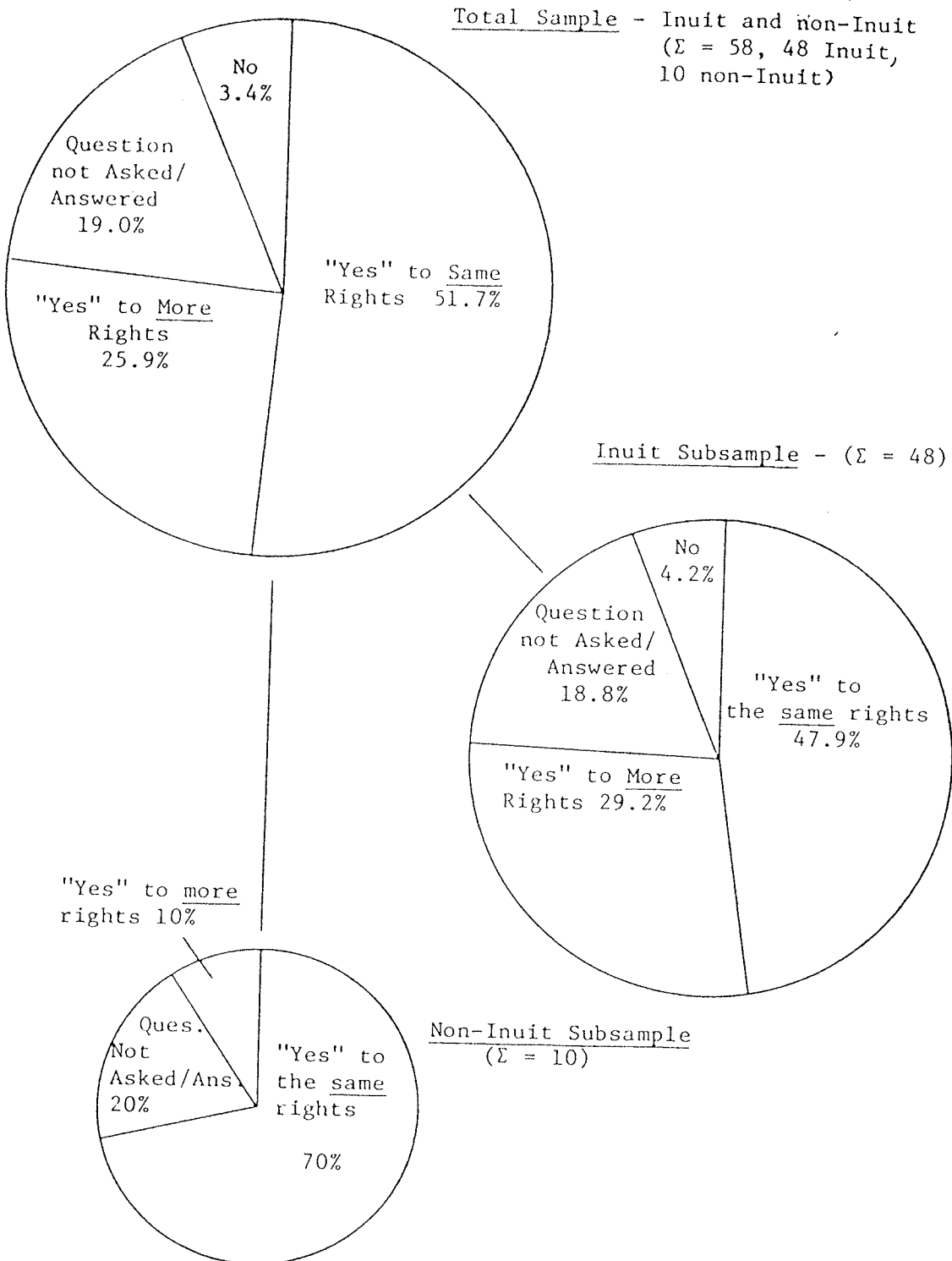


Figure 4.18. Quotas on Non-Inuit, "Northern Residents" (10 year).
 (Data derived from Table 12, Appendix B).
 (Question Summarized: "If I decided to make Eskimo Point my permanent home, should I have the same rights as the Inuit people to hunt caribou?")

For a number of individuals, the length of time spent in the North, although important, was but one component in the decision to provide equal access to non-Inuit, "northern residents." Cultural adaptation and attitude were also important, as the following quotes from 2 Inuit individuals suggest:

A full-time northerner, a person who does have an interest in the culture, learning the language-- should be allowed the food.

Further:

Okay, if learn ways and live here for a long time [to have the same rights].

A couple of individuals also stated that employment (or lack of employment) and income were important factors in making any such decisions. A person who was gainfully employed would merit different consideration than one who was unemployed.

Another important factor stated in deciding on non-Inuit, "northern resident" access to the caribou resource was community status. Twenty-five percent of the Inuit subsample and 40% of the non-Inuit subsample stated that marriage into the community would have an influence on the decision to increase non-Inuit hunting rights (Table 12, Appendix B). Some of the more common responses voiced by 3 (2 Inuit, 1 white) individuals were:

[Non-Inuit, "northern residents"] should have equal rights to hunt since most have an Inuk wife and have kids to be responsible for.

Further:

[It is a] must [to have the same rights] for a non-Inuit person married to an Inuk--it creates social problems and family disharmony if a restriction is placed on this non-Inuit man.

Finally:

If not married to an Inuit woman -- 5 or less per year.

If married to an Inuit -- unlimited -- may have to get caribou for her father who is too old to hunt.

Marriage into the community was of particular significance and concern for the 15 individuals who supported more hunting rights for non-Inuit, "northern residents" (Figure 4.18). For many of the 15, it was felt that marriage into the community would serve to increase hunting privileges for non-Inuit, "northern residents."

In reading through the surveys, it was found that there was a general feeling among a number of those surveyed that short-term residents (1 or 2 years) should be dealt with differently than long-term residents in terms of hunting access. Most of those individuals commented that access to short-term residents should be restricted.

In the question, a figure of 10 years was used to indicate permanency in a northern community such as Eskimo Point. A number of individuals suggested however that fewer years (i.e. 5 or 6) would suffice in granting non-Inuit, "northern residents" general hunting licences. As one of the older hunters remarked:

After 5 years -- should have same rights as Inuit to hunt.

In the survey, it was found that only 2 individuals stated that "no" additional rights should be granted to non-Inuit, "northern residents." Approximately 20% of the sample did not answer (or were not asked) the question in a manner which would indicate a "yes" or "no" preference. More than three-quarters of the total sample supported either more or equal hunting rights to non-Inuit, "northern residents" based on length of time spent in the community or on community status. A breakdown of these results by occupation is provided in Table 12, Appendix B.

Summary

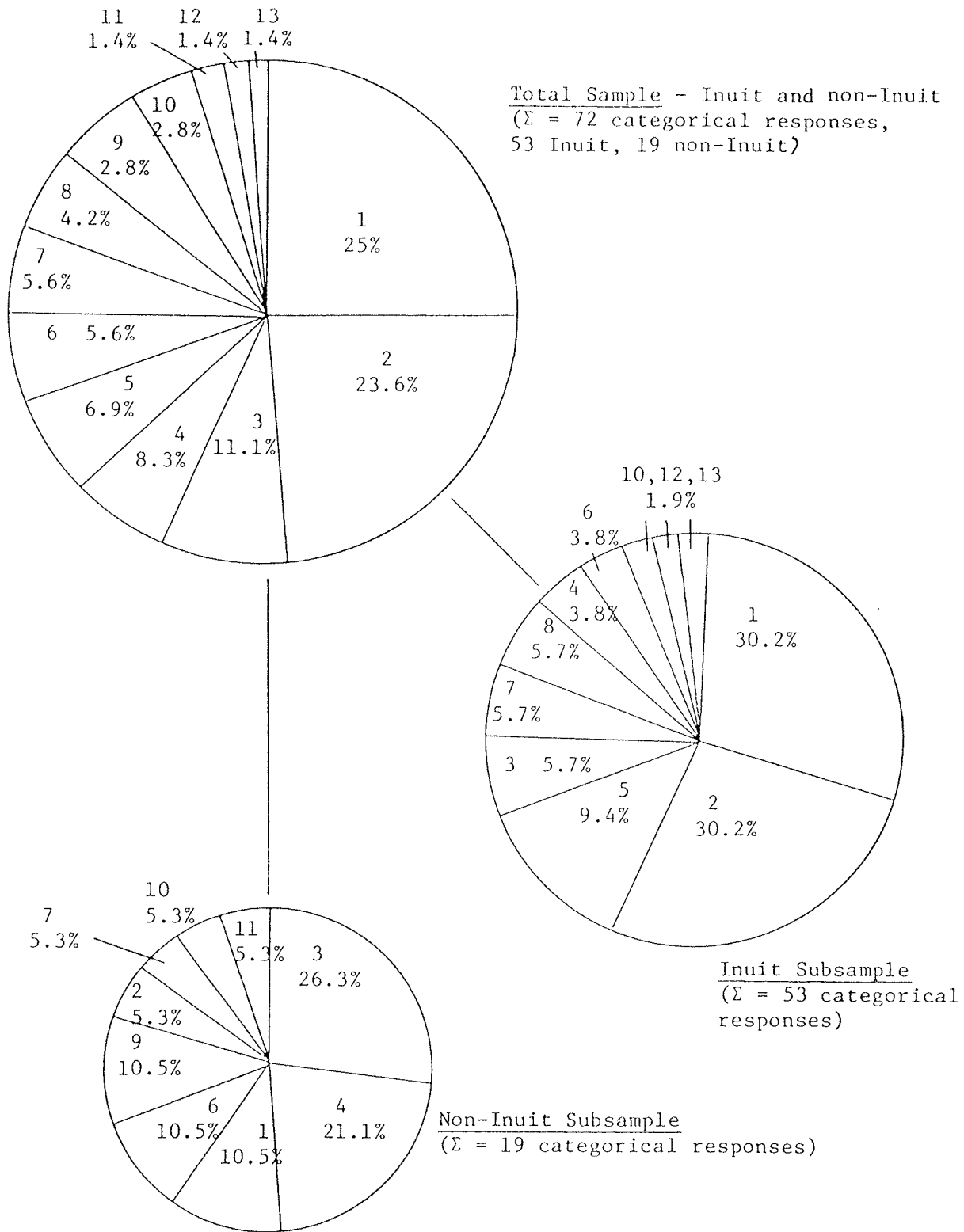
In analyzing the data to the question of non-Inuit, "northern resident" quotas, it was found that there are two significant factors influencing the decision to permit non-Inuit, "northern residents" more or equal access to the caribou resource. One factor is the length of time spent in the community. The second factor is community status of the person under consideration. Almost one-third of the sample suggested that intracultural marriage had a bearing on hunting rights. Further, it was suggested that personal circumstances such as attitude and economic status would have a bearing on the decision to provide non-Inuit, "northern residents" with general hunting licences.

4.5.5 Future Concerns with Respect to Caribou and Caribou Management

An examination of Figure 4.19, and Table 13 of Appendix B, reveals that "Caribou Management and the Caribou Management Board" was a major area of concern, particularly among the Inuit, with respect to future issues of concern. Almost 25% of the total response showed support for this category. Among the Inuit, over 30% supported this category as compared to 5% within the non-Inuit subsample.

Improved dialogue and local input between the local people and the CMB was the primary area of concern within the category, "Caribou Management and the CMB" (Table 13, Appendix B). In addition, it was found that 3 Inuit were concerned about the fate of the CMB in light of current land claims negotiations. There is concern with just how the CMB will fit into the overall Nunavut Wildlife Board for the region of Nunavut.

Slightly more than 10% of the categorical response indicated concern over the impact that growing northern populations and their settlements will have on the caribou resource. People were and are concerned about potential resource over-utilization and the disruption of caribou migrations due to increasing amounts of pollution and debris left out on the land. Three of those individuals surveyed (Inuk) offered alternative use options of the resource in the face of growing northern populations and potential over-



Legend

- | | |
|------------------------------|------------------------------------|
| 1. No other concerns | 8. Environmental impacts |
| 2. Car. Man. and the CMB | 9. Resource Use Conflicts |
| 3. Growth of North Pops. | 10. Impact of Animal Rights Groups |
| 4. Alternative Resource Uses | 11. Quotas on "Residents" |
| 5. Wastages/Imp. Hunting | 12. Explor./Mining Impacts |
| 6. Education | 13. Que. Not Asked |
| 7. Caribou Biology | |

Figure 4.19. Future Concerns with respect to Caribou and Caribou Management. (Data derived from Table 13, Appendix B). (Question Summarized: "With respect to caribou and caribou management, do you have any other concerns for the future?")

utilization. These included game ranching, community harvesting and the institution of a tagging lottery, similar to what is now in place for such species as polar bears. The remainder of the individuals (3) who suggested alternative uses of the resource did so on commercial or economic grounds. Suggestions such as game ranching and sporthunting were voiced to provide both employment and an income base for the community. Furthermore, community harvests were suggested as being economical in terms of equipment and time savings by individual hunters, especially if the resource were to become scarce.

One individual (non-Inuit) voiced concern over under-utilization of the resource in the future, despite growing populations. His rationale was based on his observation, over a number of years, that the interest in hunting and trapping by young people is dissipating as a result of changing lifestyles and as the north is becoming more "southernized" within wage economy structure and institutions.

As one would expect, reasonable concern was voiced over "wastage, conservation and improper hunting technique." In all probability the Inuit will always be concerned about the improper use of the caribou resource.

Approximately 5% of the categorical respondents voiced concern over future education. While a number of people suggested that individuals, particularly young Inuks, will

have to be trained to hunt properly, 2 individuals (Inuks) were concerned about young people receiving a good southern education. As one Inuk remarked:

Southern education must be encouraged by Inuit parents to give kids an alternative means of support other than living off the land.

This is of particular concern in the context of growing northern populations.

Although one would anticipate that "Caribou Biology" and "environmental impacts" would be of future concern to northern residents, it is interesting to note that a few individuals were concerned about the impact of animal rights groups and potential resource use conflicts. With respect to the latter, the 2 individuals (both non-Inuit) who introduced the issue of conflicting land use were primarily concerned with the potential tradeoffs that someday may have to occur between renewable (i.e. caribou and other wildlife species) and nonrenewable (i.e. gold mining at Cullaton Lake, NWT) resources. The extent of resource development and its impacts on migratory species such as caribou, the pending land claims negotiations including subsurface development rights, and the overall "economic values" of the conflicting land uses are all considerations worthy of considerable thought and concern in this context.

It is of significance to note that 25% of the responses were from people who had no other future concerns or comments (apart from the comments given earlier in the ques-

tionnaire) at the present time (Figure 4.19). This response, in part, was due to a lack of time and (or) interest on the part of the surveyed individuals due to the length of the questionnaire.

Finally, it is to be noted that while the Inuit voiced much of their concern over the issues of caribou management (30%) and wastage of the resource (9%), the non-Inuit persons surveyed showed the most concern over growing northern populations (26%) and alternative resource uses (21%) (Figure 4.19). A breakdown of responses by occupation is shown in Table 13 of Appendix B.

Summary

With respect to "future concerns", it is apparent that a whole host of issues including caribou management and the CMB, growing northern populations, alternative resource uses, wastage, education and caribou biology were of concern to the people sampled. The tremendous number of different "future concern" responses voiced by the surveyed persons, suggests both foresight and awareness of the local situation by the resident population. A brief synopsis of all study findings is provided in Appendix C.

4.6 BOARD RESPONSE TO THE QUESTIONNAIRE

While attending the Caribou Management Board meetings in Fort Smith during August, 1984, questionnaires, similar to the ones used in the interviews of people in Eskimo Point were typed out and distributed to members of the CMB. In early October, a second set of questionnaires were mailed out to the Board members who had not replied. All told, 3 of 13 questionnaires were returned. As a result, data from the CMB was not included in the study. Consequently, the overall objective which read, "... Perceptions of Board members and of individuals living in a representative Inuit community (Eskimo Point, NWT) were determined," was altered to a case study of the results obtained from Eskimo Point. A copy of the questionnaire given to members of the CMB is found in Appendix 1.

Chapter V
CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

5.1.1 Caribou Management and the Caribou Management Board

Based on survey results, there is considerable room for improvement in communication and dialogue between the CMB and townspeople of Eskimo Point. Approximately 30% of the total sample had not heard of the CMB while more than 50% were not aware of Board goals, activities and progress.

From the perception of local people there is definitely a "need" for caribou management from both conceptual and bureaucratic contexts. Approximately 85% of the total sample said "yes" to management defined in either conceptual or bureaucratic terms. More than half of those individuals surveyed who defined "management" in bureaucratic terms stated that they felt the Caribou Management Board was needed.

Improved communication and dialogue with the local people are the areas needing future emphasis from local residents viewpoint. Taking action on local issues such as the wastage of caribou meat is also an area of concern.

People in the survey defined the function of caribou management in one of two ways. From a conceptual interpretation, "management" was defined in terms of ensuring survival of herds for present and future cultural uses. This interpretation was almost exclusively offered by the non-Inuit persons surveyed. In a bureaucratic context, the interpretation adopted by most of the Inuit, the function of management (i.e. the CMB) is to educate and take action on local issues of concern (i.e. wastage). The end result of both interpretations is to ensure survival of the resource for current and future cultural uses.

5.1.2 Communication and Dialogue Exchange

From the survey, it appears that the Caribou News publication is generally well received and appeals to a large audience. Almost 90% of the people surveyed had heard of Caribou News, while three-quarters of those persons had actually read it at least once. However, Caribou News should not be the only media source to convey information on the subject. A number of people in the community cannot read or are not interested in learning to do so.

The results of the survey show strong support for radio use (29%) and a combination of media modes (radio, newspaper, public meetings) for dialogue exchange between the CMB and local townspeople. Involvement of local Hunter's and Trapper's Association (HTA) in any dialogue exchange or management action is of considerable importance.

5.1.3 Issues of Concern

Overall, the issue of primary importance among the people sampled concerned proper hunting technique and conservation (32%). Specifically, wastage of both meat and skins was of primary concern. Another local concern, namely, environmental impacts on the resource (i.e. drownings) also received considerable support (10%). "Caribou Biology" (conducting proper and accurate surveys) and concern over communication, dialogue and local input with the CMB rounded out the main issues of importance.

From both an Inuit (87%) and non-Inuit person (70%) perspective, guided sporthunts are generally seen as an acceptable use of the caribou resource, provided:

1. the herds could sustain such a use;
2. this activity would provide a source of income for local persons;
3. meat and skins would not be wasted and preferably turned over to the guide at the end of the hunt;
4. this use could be properly controlled and restricted.

The economic aspects of such an enterprise received favourable support from a reasonable percentage (18%) of the survey sample.

Although receiving considerable support from the non-Inuit individuals surveyed (60%), the sale of caribou meat to

other Inuit communities/persons was generally not supported among the Inuit subsample (56% said "no"), principally on cultural grounds. The sale to "southern" markets received considerably more support (56% said "yes") among the Inuit. However, many persons either said "no" or remained undecided with this issue. A number of qualifiers, such as "proper control" and "if the herds could support such a use" were attached to the "yes" responses of many individuals. The acceptability of selling caribou meat remains highly questionable, especially to the Inuit, at the present time.

On the question of non-Inuit, "northern resident" hunting rights, more rights could acceptably be granted to such individuals based upon length of time in the community and community status (i.e. intracultural marriage). Over 75% of those people surveyed said "yes" to more or equal rights based upon such considerations.

In terms of future concerns with respect to caribou and caribou management, the Inuit are most concerned about communication and local input with respect to the CMB (30%) and with local issues such as wastage of the resource (9%) and the growth of northern populations (6%). Among the non-Inuit individuals surveyed, the greatest concerns were generated with respect to the growth of northern populations (26%) and with alternative uses of the resource (21%).

5.1.4 Fulfilling Study Objectives

In the study, the effectiveness of the Board was assessed only in terms of dialogue exchange and communication with local users. Assessment in terms of how well management responsibilities are shared among the various user jurisdictions or in terms of cost-effectiveness were not undertaken. Perceptions of Board members were not included in the study due to lack of response.

With respect to specific objectives, issues of concern were identified by asking people what they felt current and future issues of concern were and by questioning them on specific topic areas such as sporthunting and the commercial harvest of meat. General opinions and perceptions were compared among individuals within the community of Eskimo Point only. Resource limitations (time, money) prevented any worthwhile comparisons with other user communities. Opinions concerning management issues of past, present and future concern were provided by the scope of the questions asked. Further, recommendations on those findings were provided in chapter 5 of this study.

5.1.5 Research Process - Interviewing User Groups and Management Personnel

One of the prerequisites to conducting a study of this nature is flexibility in approach. Interviewing people at their convenience is an absolute must. The credibility of

the study and cooperation received from local townspeople are furthered by the researcher becoming involved with the local people and in taking a real interest in their culture, language and customs. Involving a local townspeople (i.e. interpreter) in the study is essential, especially when language and cultural barriers exist. Above all, attitude is the key to making or breaking a study of this type. Willingness to learn, and not teach, greatly influences study success. Finally, it best be remembered that the persons surveyed have done the researcher a tremendous service and not the other way around.

Improving this particular study could be achieved by the researcher spending an extended period of time in the community, getting to know and appreciate the people, culture and local situation to a much greater extent. Further, having local residents help in both the design and implementation of the study would be an improvement. Thus, the study would be performed by the community, for the community.

As far as soliciting opinion from Board members and (or) government officials is concerned, a number of practical suggestions can be forwarded in order to ensure favourable response in future studies of this type. To begin, it is advised that representative officials be involved in the design and have input into the content of the study questionnaire from the outset. Being part of the process would encourage people to partake in the research, therein producing substantial results.

For written questionnaires, pre-contact with all officials should be carried out. Phone calls and (or) private meetings to discuss purposes of the questionnaire and any study details which may be confusing would be a helpful step in obtaining results.

Time permitting, a more appropriate means of soliciting information would be in conducting one-on-one interviews with each of the government officials or management personnel. That way, the possibility of written questionnaires getting lost or discarded would be avoided. Further, any misunderstandings with study questions could be clarified immediately.

In summary, the key to obtaining substantial research results from government officials and (or) management personnel is by involving such individuals in the research process from the outset and by establishing as much personal contact as possible. Interview questionnaires are to be preferred over written questionnaires in conducting such studies.

5.2 RECOMMENDATIONS

5.2.1 The Caribou Management Board, Communication and Education

1. The CMB, through community representatives and (or) the Hunter's and Trapper's Association (HTA) should make considerably more use of local radio to stimulate dialogue on the issues of caribou management and to improve the general level of awareness with respect to the goals, activities and progress of the CMB. In addition, local radio (television) should be used to properly advertise upcoming meetings, decisions and happenings within meetings. To this end, a weekly radio show (phone-in) on the subject, at a time when there is a large captive audience (i.e. at or just after dinner hour) is recommended.

2. Due to the negative perception of many persons towards public meetings, the CMB should hold, in lieu of, or in addition to public meetings, radio interviews with members of the CMB, local HTA and general public when they are in a particular community.

3. As a consequence of a number of persons' perception of the bureaucratic function of "management" (i.e. educational to many) and as a result of there no longer being a "crisis" situation with the herds, the Board should focus much of its effort on education and improved communications at present. In addition to the Caribou Schools Program, issues of Caribou News should be bound and used as curriculum material in both schools and adult education centers.

4. Caribou News should continue to publish local comments and editorials on the caribou resource and its use. Retaining a "northern flavour" is essential to the publication keeping its good rapport among local users.

5. Caribou News, local radio, CMB representatives and the local HTA should encourage input and stimulate dialogue on such subjects as alternative uses of the resource (i.e. game ranching, community harvesting) and the impacts that growing northern populations will have on the resource. Other areas of concern include improved technology and its impacts on resource utilization, proper hunting and conservation techniques, the potential tradeoffs between renewable (i.e. caribou) and nonrenewable resources (i.e. gold mining) development and the implications of settled land claims negotiations for caribou management and the CMB. Some careful thought and planning in these areas could alleviate some very real and potential problems.

6. Local users should assist in the design, preparation and conduction of biological surveys and studies. In this way, an interchange of ideas will be ensured and the co-management of the resource better facilitated.

7. It is essential that the CMB remain "community-based". To this end, the CMB should meet in and with people it is representing from small northern communities.

5.2.2 The Caribou Management Board and Issues of Concern

1. As the CMB develops its 10 year "Caribou Management Plan," it should not lose site of local community concerns. Sympathizing with and taking action on local concerns such as wastage of meat and drowning of caribou at the "Big River" (Tha-Anne River) is both a show of good faith and a sincere attempt to deal with issues which are of paramount importance to the local user in the Keewatin Region, N.W.T. The CMB, through community representatives and the local HTA, should coordinate programs and workshops dealing with local issues of concern to stimulate dialogue, jointly educate one another and arrive at possible solutions to the concerns at hand.

2. Guided sporthunts should be closely examined as a means of providing income to a number of local users. Although there are numerous details to be worked out, support for such an enterprise was evident among those sampled at Eskimo Point.

3. The commercial sale of meat should not be considered at present as a potential economic venture. Further research should be conducted to assess the validity of inter-settlement trade.

4. In considering factors such as the specific length of time a person has spent in a community and their community status (i.e. intracultural marriage), more hunting rights (increased access) should be considered for non-Inuit, "northern residents."

BIBLIOGRAPHY

- Annual Report, 1982-83. 1982. Nortex Information Design Ltd., Ottawa. 22 pp.
- Burch, E.S. 1971. "The Caribou/Wild Reindeer as a Human Resource", American Antiquity (37:339-368).
- Caribou News, July, 1981. Nortex Information Design Ltd., Ottawa, 16 pp.
- Caribou News, Oct., 1981.
- Caribou News, Sept., 1982 .
- Caribou News, Oct., 1982.
- Caribou News, Feb., 1983.
- Caribou News, Apr., 1983.
- Caribou News, Feb., 1985.
- Connell, B. 1983. Arrangements for Co-Management of Fisheries and Wildlife by Native People and Government in Canada. Natural Resources Institute, Winnipeg. 108 pp.
- Darby, B. 1978. Caribou: Monitoring Land Use Controls. (Report 1). NWT Wildlife Service, Yellowknife. 84 pp.
- Devine, M. 1984. NWT Data Book 84/85. Outcrop Ltd., Yellowknife, NWT. pp. 128-129.
- Eskimo Point Residents' Association (EPRA). 1970. Eskimo Point, NWT. EPRA, Eskimo Point. Unnumbered pages.
- Freeman, M.M.R. 1983. "New/Old Approaches to Renewable Resources Management in the North" (unpub.). University of Alberta, Edm., Alta., 25 pp.
- Gamble, R.L. 1984. "A Preliminary Study of the Native Harvest of Wildlife in the Keewatin Region, NWT." Dept. of Fisheries and Oceans, Winnipeg. 48 pp.
- Hogg, P.W. 1982. Canada Act 1982 Annotated. The Carswell Co., Ltd., Toronto. pp. 81-83.
- Kelsall, J.P. 1968. The Caribou. Indian Affairs and Northern Development, Ottawa. pp. 1-142.

- Lysyk, K.M. 1982. "The Rights and Freedoms of the Aboriginal Peoples of Canada", The Canadian Charter of Rights and Freedoms: Commentary. ed. Walter S. Tarnopolsky. The Carswell Co., Ltd., Toronto. pp. 467-470.
- Oswalt, W. and Van Stone, J. (1960). "The Caribou Eskimo Community of Eskimo Point." NCRC-59-2.
- Payne, H. 1980. "Conservation Comment". Dept. of Natural Resources, Winnipeg, Manitoba. 6 pp.
- Payne, H. 1981. "Communication: A Solution to the Barren-ground Caribou Crisis", Canadian Wildlife Administration. (7:1-3).
- Pruitt, W.O. 1960. Behavior of the Barren-ground Caribou. The Intelligences Printing Company, Pennsylvania. pp. 18-24.
- Pruitt, W.O. 1978. Boreal Ecology. Edward Arnold Pub. Ltd., London. 73 pp.
- Roberts, B. "Minutes of the Beverly and Kaminuriak Caribou Management Board Meetings". January, 1984. Winnipeg. 31 pp.
- Rojers, H.G. 1981. Principles for the Evaluation of Programs by Federal Departments and Agencies. Program Evaluation Branch, Ottawa. 46 pp.
- Shouldice, M. 1984. Personal Communication.
- Scott, C. 1983. Recorded Comments from CBC's "Ideas Series", Nov. 22 - Dec. 6, 1983. 34 pp.
- Sinclair, M. 1984. Personal Communication.
- Snowden, D. (1980). Kaminuriak Herd Film/Video Project. Donald Snowden Productions Ltd., St. John's, Nfld. Video No's 1, 4, 9, 13, 18, 24.
- Thomas, D.C. (n.d.). "At the Crossroads of Caribou Management in Northern Canada". CWS, Edmonton, Alta. 21 pp.
- Uppahuak, A. 1984. Personal Communication.
- Usher, P.J. 1982. "Fair game?", Nature Canada 2(1):6-43.
- Vallee, F.G. 1967. Kabloona and Eskimo in the Central Keewatin. St. Paul University, Ottawa. pp. 169-186.
- Wenzel, G. 1983. Recorded Comments from CBC's "Ideas Series", Nov. 22 - Dec. 6, 1983. 34 pp.

Young, K. 1983. "A Layman's Guide to Indian Hunting,
Trapping and Fishing Rights in Manitoba". University of
Saskatchewan Native Law Center, Saskatoon, Sask. 25 pp.

Appendix A
QUESTIONNAIRES USED IN THE STUDY

A.1 QUESTIONNAIRE 1 - QUESTIONNAIRE USED TO INTERVIEW
INDIVIDUALS IN THE COMMUNITY OF ESKIMO POINT, NWT
(CONDENSED)

Preliminary

1. Name
2. Status
3. Age
4. Occupation:
 - a) Student
 - Hunts
 - Does not hunt
 - b) Full-time hunter
 - c) Part-time hunter + Part-time wage earner
(spends some extended
time on land)
 - d) Full-time wage earner who:
 - hunts occasionally
 - does not hunt
 - e) Retired
 - hunter
 - wage earner
5. If person hunts, they:
 - a) Hunt locally (within 10 mi of town)
 - b) Will travel long distances from town
to hunt. (further than 10 mi from town).
6. Education:

Caribou Management

1. With regards to caribou, what are the major issues of concern to you?
2. Is there a need for caribou management? If so, why?
The Caribou Management Board
3. Are you aware of the Caribou Management Board? (* If no - How would you set up a Board for managing caribou which go into many areas and are used by many different groups?)
4. Are you satisfied with the way community representatives are chosen for the Board? Who from the community should represent the people on the Board? *
5. How should local hunters and government people meet to discuss caribou management? When and where should this be done? *
6. What responsibility and role should a) biologists and government officials and; b) users and their representatives play in the management of caribou? *
7. How would you improve the Board for the future?
8. Do you think the Board should help manage other types of animals which cross borders? * Present and Future Issues (specific) of Concern Regarding Caribou Management
9. Do you receive and have you read Caribou News? Is it accurate? How would you improve Caribou News or what should be changed in this paper?

10. Do the caribou of this area move back and forth from the tundra to the forests? If so, how should caribou be shared with hunters in other areas?
11. Is it acceptable for people from outside the local area to hunt caribou here? For example, how would you feel if these people were (a) hunting for survival or (b) sporthunting? Is outfitting as a source of income for the community, acceptable?
12. How do you feel about taking animals out of the herd for sale?
13. Many people in the south have anti-hunting and anti-trapping feelings. Do you agree with these thoughts or feelings? Do you see these feelings as affecting your way of life?
14. For future management, what other concerns do you have?

* Note - If persons had not heard of the CMB, questions were not asked or asked in the manner, "If there were a Board, do you"

A.2 QUESTIONNAIRE 2 - A SUMMARY OF THE QUESTIONS ASKED AND ANALYZED IN THE ESKIMO POINT STUDY

Questions and Considerations (in the order analyzed in the text)

a) Caribou Management and the Caribou Management Board

1. Have you heard of the Caribou management Board?
2. Are you aware of Board activities, goals and progress? (Alternate: Are you aware of what the Board does?)
3. Is there a need for caribou management?
4. What is the function of caribou management? (or, why is caribou management needed?)
5. How would you improve the Caribou Management Board for the future?

b) Communication and Dialogue Exchange

1. Are you aware of the publication, Caribou News?
2. Have you read Caribou News at least once?
3. What is your overall impression of the paper?
4. Would you change anything about the paper or how would you improve it?
5. If the CMB (or government officials) were to come to Eskimo Point, what would be the best way or most effective means for the CMB and local users to exchange ideas about caribou and caribou management?

c) Issues of Concern

1. With regards to caribou, what are the major issues of concern to you?
2. Are unguided sporthunts an acceptable use of the caribou resource?
3. Are guided sporthunts an acceptable use of the caribou resource?
4. How do you feel about taking animals out of the herd for sale; (a) to other Inuit communities/persons; (b) to "southern" markets (ie Winnipeg).
5. If I decided to make Eskimo Point my permanent home (ie I'd lived here for a number (10) of years), should I have the same rights as the Inuit people to hunt caribou? In addition, the majority of individuals were asked: Would it make a difference if I was married to an Inuk?
6. With respect to caribou and caribou management, do you have any other concerns for the future?

A.3 QUESTIONNAIRE 3 - QUESTIONNAIRE DISTRIBUTED TO MEMBERS OF THE CARIBOU MANAGEMENT BOARD (CONDENSED)

Questions

1. What is caribou management? Please define.
2. Is there a need for caribou management? Why?
3. With respect to caribou and caribou management what are the major issues of concern to you and to your community/region or department?
4. Do you feel that most people in the user communities (or your community) are aware of the CMB and what it does?
5. Is the CMB respected in the user communities? Please explain.
6. Who should choose the user representatives for the Caribou Management Board?
7. What part in the management of caribou should biologists, government officials and local hunters play?
8. How would you improve the Board for the future?
9. Do you feel that people read Caribou News in your community or region? What is their general impression of the paper?
10. What improvements or changes would you make to the paper?
11. Is there a better way of informing local communities on caribou management? Please discuss any alternatives?

12. A number of people from the south enjoy sporthunting. Are guided sporthunts an acceptable use of the caribou resource?
13. What restrictions (if any) should be placed on traditional users who cross provincial/territorial borders to hunt caribou for food?
14. What hunting rights should be granted to a non-traditional long-term resident of a northern community such as Eskimo Point, Tadoule Lake or others?
15. Is commercial sale of caribou meat an acceptable use of the resource?
16. Do you agree (in part or whole) with the anti-trapping and anti-hunting movements?
17. Do you feel that such movements have affected the way of life of the people living in the Canadian north?
18. Can you offer any solutions as to how to deal with this issue?
19. For future management of the caribou herds what other concerns do you have?

Appendix B

A BREAKDOWN OF RESPONSE TO THE SURVEY QUESTIONS
BY OCCUPATION

Table 1: Occupational Breakdown of People Who Have Heard of the CMB.

	Yes	No
<u>Inuit: n = 48</u>		
Student		
a) hunts	2	5
Full time hunters	4	1
Part time hunter and part time wage earner	8	3
Full time wage earner		
a) hunts	17	4
Retired		
a) hunter	3	-
Unemployed	-	1
	Sum of (Σ)	
	<u>Inuit</u>	
	34/48 (70.8%)	14/48 (29.2%)
<u>Non-Inuit n=10</u>		
Full time wage-earner		
a) hunts	4	2
b) doesn't hunt	4	-
	<u>Σ non-Inuit</u>	
	8/10 (80%)	2/10 (20%)
	<u>Total Inuit and non-Inuit</u>	
	42/58 (72.4%)	16/58 (27.6%)
$\Sigma = 58$		

Table 2: The Need for Caribou Management

	Conceptual			Not Now	Don't Know	Bureaucratic	
	Yes	No	Yes and No			Yes	No
<u>Inuit: n = 48</u>							
Student							
a) hunts		1				5	1
Full time hunter		1				4	
Part time hunter and part-time wage earner	2			1		8	
Full time wage earner							
a) hunts	2	1			2	16	
Retired							
a) hunter						3	
Unemployed						1	
Σ Inuit							
	4	3		1	2	37	1
<u>Non-Inuit: n = 10</u>							
Full time wage earner							
a) hunts	4		2			1	
b) doesn't hunt	3						
Σ non-Inuit							
	7		2			1	
<u>Total: Inuit and non-Inuit</u>							
Σ = 58	11	3	2	1	2	38	1

Table 3: The Function of Caribou Management

(Persons who interpreted "management" in a conceptual sense).

	<u>Categorical Response:</u>	<u>Number</u>	
		<u>Non-Inuit (n=9 sampled)</u>	<u>Inuit (n=10 sampled)</u>
1. To provide for the survival of the species-maintenance of stable population sizes	$\frac{1}{18}$ (non-Inuit) = 5.6%	1	
2. To ensure survival of the herds for current and future cul-ural uses. Survival for:	$\frac{11}{18}$ (6 non-Inuit + 5 Inuit) = 61.1%		
a. Future generations		3	2
b. Socio-economic considerations (tourist industry, commercial utilization, food & clothing requirements)		4	1
c. current conservation considerations (i.e., reduced wastage)			2
Total responses for 2		7	5
3. To promote education about harrassment, overuse, meat spoilage, wastage, proper hunting and management techniques, general conservation.	$\frac{4}{18}$ (2 Inuit + 2 non-Inuit) = 22.2%	2	2
4. Management in terms of monitoring the resource upon which to base decisions.	$\frac{2}{18}$ (1 Inuit + 1 non-Inuit) = 11.1%	1	1
Σ responses	18	11	8

Note₁: 4 persons didn't answer this question in the above categories.

Note₂: More than one response per category per individual was recorded.

Note₃: To arrive at the total categorical response, only one response per individual per category was recorded.

Note₄: Categorical responses (for all questions) were used in the construction of the figures in the text.

Table 4: The Function of Caribou Management

(Persons who Interpreted "Management" in a bureaucratic context)

	<u>Categorial Responses</u>	Number (Responses)	
		<u>Non-Inuit</u>	<u>Inuit</u>
1. To look after protection, ensured survival) the herds for current and future cultural uses. Survival:	$\frac{9}{48} = 18.8\%$		
a) for future generations			3
b) for socio-economic considerations (tourist industry, commercial utilization, food and clothing requirements, to preserve Inuit lifestyle)			6
Total Responses for (1)			9
2. Prevention of Overharvesting	$\frac{6}{48} = 12.5\%$		6 (3 students)
3. Prevention of, monitoring of or cleanup for wastage	$\frac{10}{48} = 20.8\%$		10
4. Monitoring of and/or prevention of caribou drowning at the "Big River" (Tha-Anna River)	$\frac{2}{48} = 4.2\%$		2
5. To promote sharing of the resource with others less fortunate (old, sick)	$\frac{1}{48} = 2.1\%$		1
6. To inform and promote education on:	$\frac{16}{48}$ (one non-Inuit)		
a) Wastage of caribou meat	= 33.3%	1	4
b) Proper hunting and conservation techniques		1	-
c) general conservation and management			8
d) Board goals, activities, progress			2
e) Herd status, behavior, biology and techniques			3
Total responses for (6)		2	17
7. Management in terms of monitoring to obtain accurate information to ensure wise, informed decision making.	$\frac{4}{48} = 8.3\%$		4

Table 4 (Continued)

		<u>Non-Inuit</u>	<u>Inuit</u>
Σ of Categorical Responses = 48 (1 non-Inuit, 47 Inuit)	Total Within Category Responses	2	49

Note: 3 people (all Inuit) didn't answer this question within the confines of the above categories. (i.e., didn't know what the function should be).

Table 5: Improving the CMB For the Future

$\Sigma = 10$ non-Inuit, 48 Inuit sampled. Total = $\Sigma = 58$ persons

Responses	Non-Inuit			Student who hunts	Full-time hunter	Retired hunter	Inuit		Unemployed
	Categorical Responses	Full-time wage who hunts	Full-time wage earner who doesn't hunt				Full-time wage earner who hunts	Part-time hunter and wage earner	
1. Lack of Response	$\frac{4}{10} = 40\%$								
a) Doesn't know enough about the Board to comment/question not asked or answered	Non-Inuit $\frac{27}{50} = 54\%$ Inuit $\frac{31}{60} = 51.7\%$	1	2	6	4	-	10	6	1
b) Wouldn't like to say		-	1	-	-	-	-	-	-
2. Communication/contact/input	Total								
a) Improved communication and dialogue between CMB, local people and wildlife groups.	$\frac{5}{10} = 50\%$ non-Inuit	2	-	-	-	2	3	3	-
b) More CMB meetings in public/more local input.	$\frac{14}{50} = 28\%$ Inuit	1	-	-	-	-	2	-	-
c) Representatives/CMB should do more radio work.	$\frac{19}{60} = 31.7\%$ (Total)	-	-	-	-	-	2	-	-
d) More HTA involvement in dialogue/setting up meetings.		-	-	-	-	-	1	-	-
e) More local/provincial involvement in CMB meetings.		1	-	-	-	-	-	-	-
f) 1940's-50's anthropologists to act as advisors in making "management decisions"		-	-	-	-	-	1	-	-

Table 5 (Continued)

Responses	Non-Inuit					Inuit			
	Categor- ical Re- sponses	Full- time wage earner who hunts	Full- time wage earner who doesn't hunt	Student who hunts	Full- time hunter	Retired hunter	Full- time wage earner who hunts	Part time hunter and wage earner	Unem- ployed
g) CMB "headquarters" moved to Winnipeg or Yellowknife	-	-	-	1	-	-	-	-	-
h) CMB should meet more in user communities	-	-	-	-	-	-	1	-	-
i) More annual meetings	-	-	-	-	1	-	-	-	-
j) Good local representation on the CMB	-	-	-	-	-	-	-	1	-
k) More representatives from the communities to sit on the CMB	1	-	-	-	-	-	-	-	-
3. Management "Action" Taken by the CMB	$\frac{6}{50} =$ 12% Inuit								
a) CMB should hire people to take waste meat and skins off of the land	$\frac{6}{60} =$	-	-	-	-	1	1	1	-
b) CMB should establish a "migration route corridor" where no development can occur.	10% Total	-	-	-	-	-	1	-	-
c) CMB should look into caribou getting killed at Quamniq hill near Padlei and drowning at the "Big River" (Tha-Anne river)		-	-	-	-	-	-	1	-

Table 5 (Continued)

Responses	Categor- ical Re- sponses	Non-Inuit				Inuit			
		Full- time wage earner who hunts	Full- time wage earner who doesn't hunt	Student who hunts	Full- time hunter	Retired hunter	Full- time wage earner who hunts	Part time hunter and wage earner	Unem- ployed
d) The conducting of proper and accurate research.		-	-	-	-	-	1	1	-
4. Other	$\frac{1}{10} = 10\%$								
a) The CMB to establish themselves as a credible "management group", not as a political entity.	Non-Inuit $\frac{3}{50} = 6\%$	-	1	-	-	-	-	1	-
b) The government (federal) should be consistent in their management practices, i.e., with Newfoundlanders and Inuit.	Inuit $\frac{4}{60} = 6.7\%$	-	-	-	-	-	1	-	-
c) The CMB are alright, seem to be doing well.	Total	-	-	-	-	-	-	1	-
Σ categorical responses = 60, 10 non-Inuit 50 Inuit		Σ = 65 responses within categories							

Note₁: More than one response per category per individual recorded on occasion.

Note₂: Categorical responses were used in the construction of figures in the text.

Table 6: People Aware of the Caribou News Publication (Σ=58, 48 Inuit, 10 non-Inuit)

	Yes	No	Question Not Answered
<u>Inuit</u>			
Student			
a) hunts	6		1
Full time hunter	4		1
Part time hunter and part time wage earner	10		1
Full time wage earner			
a) hunts	19	1	1
Retired			
a) hunter	3		
Unemployed		1	
Σ Inuit	42/48 (87.5%)	2/48 (4.2%)	4/48 (8.3%)
<u>Non-Inuit</u>			
Full time wage earner			
a) hunts	5	1	
b) doesn't hunt	4		
Σ non-Inuit	9/10 (90%)	1/10 (10%)	
Total: Inuit and non-Inuit	51/58 (87.9%)	3/58 (5.2%)	4/58 (6.9%)

Table 7: People Aware of and Have Read Caribou News at Least Once
 (N=55, 46 Inuit, 9 non-Inuit)

	Aware of it but <u>hasn't</u> read it	Read it
<u>Inuit</u>		
Student		
a) hunts	1	6
Full time hunter	4	1
Part time hunter and part-time wage earner	5	6
Full time wage earner		
a) hunts	3	17
Retired		
a) hunter		3
Σ Inuit	(28.3%) 13/46	33/46 (71.7%)
<u>Non-Inuit</u>		
Full time wage earner		
a) hunts		5
b) doesn't hunt	1	3
Σ non-Inuit	(11.1%) 1/9	8/9 (88.9%)
Total: Inuit and non-Inuit	(25.5%) 14/55	41/55 (74.5%)

Table 8: The Most Effective Means of Dialogue Exchange Between Government Officials (CMB) and the Local Townspeople.

	Radio and Private Meetings (ie. with older hunters)	Exchange of letters - mailed to homes	Through HTA first, then have a public meeting	Through HTA Board or Community representatives to talk to government	HTA, radio, then public meeting	HTA, then through local radio to discuss with public	Radio and Public Meeting
<u>Inuit</u>							
Student							
a) hunts	1						1
b) doesn't hunt							
Full time hunter							1
Part time hunter and part time wage earner							1
Full time wage earner							1
a) hunts	1	1	2	1	1	1	3
b) doesn't hunt							
Retired							
a) hunter				1			
b) wage earner							
Unemployed							1
Σ Inuit (x/57 = %)	(3.5%)	(1.8%)	(3.5%)	(3.5%)	(1.8%)	(1.8%)	(12.3%)
Total = 57 Inuit Responses	2	1	2	2	1	1	7
<u>Non-Inuit</u>							
Full time wage earner							
a) hunts				1	1		
b) doesn't hunt				1			
Σ = 13 non-Inuit Responses (x/70 = %)	(2.9%)	(1.4%)	(2.9%)	(15.4%)	(7.8%)		
Total responses: Inuit and non-Inuit = 70	2	1	2	4	2	1	7

Table 8: (Continued)

	Through newspaper in advance of meeting	Through Radio media -- interviews, exchange, show	Through TV media -- interviews, exchange, show	Up to the local community	One-on-one interviews with community people	Public meetings	A liaison person as an intermediary & community meeting
<u>Inuit</u>							
Student							
a) hunts		1			3	3	
b) doesn't hunt							
Full time hunter		1			1	2	
Part time hunter & part time wage earner							
Full time wage earner		6				5	
a) hunts	1	9	1	2	1	3	
b) doesn't hunt							
Retired							
a) hunter		2					
b) wage earner							
Unemployed							
Σ Inuit (x/57 = %)	(1.8%)	(33.3%)	(1.8%)	(3.5%)	(8.8%)	(22.8%)	
Totals	1	19	1	2	5	13	
<u>Non-Inuit</u>							
Full time wage earner							
a) hunts		1	1		2	2	1
b) doesn't hunt				1	1	1	
Σ non-Inuit (x/13=%)		(7.8%)	(7.8%)	(7.8%)	(23.1%)	(23.1%)	(7.8%)
Non-Inuit responses		1	1	1	3	3	1
Total Responses:	(1.4%)	(28.6%)	(2.9%)	(4.3%)	(11.4%)	(27.9%)	(1.4%)
Σ=70	1	20	2	3		16	1
(x/70 = %)							

Table 9: Current Issues of Concern

Response	Categorical Response:	$\Sigma=58$ Individuals								Total Response within each category
		Non-Inuit ($\Sigma=10$)			Inuit ($\Sigma=48$)					
		Full-time wage earner who hunts	Full-time wage earner who doesn't hunt	Student who hunts	Full-time hunter	Retired Hunter	Full-time wage earner who hunts	Part-time hunter & wage hunter	Unemployed	
1. Preservation of the herds to meet the needs of people who use the resource both now and in the future.	6(6.2%) Tot. 4(23.5%) non-Inuit 2(2.5%) Inuit	3	1	1			1			6
2. Utilization of the Resource Concern: Quotas on Northern Residents (White)	3(3.1%) Tot. 2(11.8%) non-Inuit 1(1.3%) Inuit	1	1	1						3
3. Environmental Impacts Concerns:	10(10.3%) Tot. 2(11.8%) non-Inuit									
a. forest fires	8(10%) Inuit						1			1
b. disease							3		1	4
c. accidental death or drownings at the "Big River"							4			4
d. Anything which impacts on caribou survival		1	1							2
4. Man-induced Impacts Concerns:	6(6.2%) Tot. 0(0%) non-Inuit									
a. Exploration Camp Activities	6(7.5%) Inuit						3		1	4
b. Harrassment by Ski-doods, Hondas							2		1	3

Table 9: (Continued)

	Categorical Responses	Non-Inuit			Inuit				Total Responses within each category	
		Full-time wage earner who hunts	Full-time wage earner who doesn't hunt	Student who hunts	Full-time hunter	Retired Hunter	Full-time wage earner who hunts	Part-time hunter & wage earner		Unemployed
5. Hunting Technique and Conservation Concerns:	31(32.0%)Tot.									
	3(17.6%)non-Inuit									
	28(35%)Inuit									
a. Wastage of Caribou skins & meat		1	2	4	3	2	12	7		31
b. Overharvest				1	1	1				3
c. Poor Hunting Technique							2	2		4
6. Inter settlement Trade of the Resource	1(1.0%)Tot.									
	0(0%)non-Inuit					1				1
	1(1.3%)Inuit									
7. Caribou Management and the CMB Concerns:	8(8.2%)Tot.									
	1(5.9%) non-Inuit									
	7(8.8%)Inuit									
a. How caribou are managed							1			1
b. Local input into caribou management		1					1	1		3
c. organization of management schemes at the local level										
d. legislation concerning caribou management							1			1
e. the CMB and the Nanavut Wildlife Management Board								1		1

Table 9: (Continued)

Categorical Responses:	Non-Inuit			Inuit			Total Response within each category		
	Full-time wage earner who hunts	Full-time wage earner who doesn't hunt	Student who hunts	Full-time hunter	Retired Hunter	Full-time wage earner who hunts		Part-time hunter & wage earner	Unemployed
f. improved dialogue & information exchange between Board reps & the local community					1	1	2		4
g. larger number of Keewatin representatives						1			1
h. training of Inuks to be biologists and Board Members					1				1
8. Caribou Biology Concerns:	22(22.7%) Tot.								
	3(17.6%) non-Inuit								
a. technique, regularity and accuracy with population research & surveys (ie. counting of caribou)	19(23.8%) Inuit								
b. collection of accurate harvest data		1	3		2	8			14
c. Health effects associated with radio collaring, spraying, drugging			1				1		2
d. use of traditional knowledge						2	1		3
e. "summer" research by southern biologists	1					1	1		3
						1			1

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Table 9: (Continued)

Categorical Response:	Non-Inuit			Inuit					Total Responses within each category
	Full-time wage earner who hunts	Full-time wage earner who doesn't hunt	Student who hunts	Full-time hunter	Retired Hunter	Full-time wage earner who hunts	Part-time hunter & wage earner	Unemployed	
f. knowledge of herd size & biology	1		1			2			4
g. Type of ongoing research						1			1
9. Education on conservation, management, overharvesting, waste, animal "respect", harassment by mining camps, proper hunting techniques, interjurisdictional use	7(7.2%)Tot. 2(11.8%)non-Inuit 5(6.3%)Inuit	1	1			4	1		7
10. Nothing or No Current Concerns	3(3.1%)Tot. 0(0%) non-Inuit 3(3.8%)Inuit				1		1	1	3
TOTAL Responses	97	10	7	12	5	8	53	20	116

Σ Total Responses within categories = 116 (more than one response per person within any particular category included).

Σ = 97 categorical; x/97 = Tot. % for each category, x/17 = non-Inuit response, x/80 = % Inuit response responses

Table 10: Sporthunting as an Acceptable Use of the Caribou Resource

Sporthunting

Non-Inuit

Full-time wage earner:

- a) who hunts
- b) who doesn't hunt

Inuit

- Student who hunts
- Full-time hunter
- Retired hunter
- Full-time wage-earner who hunts
- Part-time hunter and part-time wage earner
- Unemployed

TOTALS

$\Sigma = 58$ with and without a guide

Total x/58 = %

% non-Inuit - x/10 = %

% Inuit - x/48 = %

	<u>Without a Guide</u>			<u>With a guide</u>		
	Can't or Didn't Say (negotiable)	Yes	No	Can't or Didn't Say (negotiable)	" Yes "	No
a) who hunts	-	1	5	-	6	-
b) who doesn't hunt	-	1	3	1	1	2
Student who hunts	-	-	7	1	6	-
Full-time hunter	-	2	3	-	5	-
Retired hunter	-	1	2	-	3	-
Full-time wage-earner who hunts	5	4	12	2	18	1
Part-time hunter and part-time wage earner	1	1	9	2	9	-
Unemployed	-	-	1	-	1	-
	6	10	42	6	49	3
	10.3%	17.2%	72.4%	10.3%	84.5%	5.2%
	-	20.0%	80.0%	10.0%	70.0%	20.0%
	12.5%	16.7%	70.8%	10.4%	87.5%	2.1%
	$\Sigma=10$ non-Inuit, 48 Inuit $\Sigma=58$ persons			$\Sigma=10$ non-Inuit, 48 Inuit $\Sigma=58$ persons		

Table 11: The Commercial Sale of Caribou Meat

Commercial Sale

	To other Inuit ^{+ 1} communities/ people ²		To "southern" markets/ people			
	Can't or Didn't Say	Yes	No	Can't or Didn't Say	Yes	No
<u>Non-Inuit</u>						
Full-time wage earner:						
a) who hunts	1	4	1	1	3	2
b) who doesn't hunt	2	2	-	2	2	-
<u>Inuit</u>						
Student who hunts	-	3	4	-	4	3
Full-time hunter	-	-	5	-	2	3
Retired hunter	-	2	1	-	3	-
Full-time wage earner who hunts	3	7	11	5	12	4
Part-time hunter and Part-time wage earner	1	4	6	3	5	3
Unemployed	1	-	-	-	1	-
$\Sigma=58$ non-Inuit	8	22	28	11	32	15
x/58 = Total Percentage	13.8%	37.9%	48.3%	19.0%	55.2%	25.9%
x/10 = % non-Inuit	3/10=30%	6/10=60%	1/10=10%	30%	50%	20%
x/48 = % Inuit	5/48=10.4%	16/48=33.3%	27/48=56.3%	8/48=16.7%	27/48=56.3%	13/48=27.1%

+ Numbers denote priority choice if a conflict in response arose

Table 12: Quotas on non-Inuit,"Northern Residents" (10 year)

	Categorical Responses	Non-Inuit			Inuit				Unem- ployed	Total within category responses
		Full-time wage earner who hunts	Full-time wage-earner who doe- sn't hunt	Student who hunts	Full-time hunter	Retired hunter	Full-time wage earner who hunts	Part-time hunter & wage earner		
1. Individuals Saying <u>No</u> to <u>more</u> rights	3.4%(2 of 58) Total 4.2% Inuit (2 of 48) 0% non-Inuit	-	-	-	-	-	1	1	-	2
2. Individuals Saying <u>Yes</u> to <u>more</u> rights	25.9% Total (15 of 58) 29.2% Inuit (14 of 48) 10% non-Inuit (1 of 10)	1	-	3	1	1	6	3	-	15
3. Individuals saying <u>yes</u> to the <u>same</u> rights (general hunting licence).	51.7% Total (30 of 58) 47.9% Inuit (23 of 48) 70% non-Inuit (7 of 10)	4	3	4	4	2	6	7	-	30
4. Question not asked/answered (ie. alternatives pondered)	19.0% Total (11 of 58) 18.8% Inuit (11 of 48) 20% non-Inuit	1	1	-	-	-	8	-	1	11

Table 12: (Continued)

Responses	Non-Inuit			Inuit					Total within category responses	
	Categorical Responses	Full- time wage earner who hunts	Full- time wage- earner who do- esn't hunt	Student who hunts	Full- time hunter	Retired hunter	Full- time wage earner who hunts	Part- time hunter & wage earner		Unem- ployed
Totals*		6	4	7	5	3	21	11	1	58
Rights (more or the same) influ- enced by community status (ie. if person is <u>married</u> into the community)	27.6% Total (16 of 58) 25% Inuit (12 of 48) 40% non-Inuit (4 of 10)	2	2	2	1	1	3	5	-	16

*Note: In calculating percentages: $x/58 = \% \text{ Total}$, $x/48 = \% \text{ Inuit}$, $x/10 = \% \text{ non-Inuit}$

Table 13: Future Concerns with Respect to Caribou and Caribou Management

Responses	Categorical Responses	Non-Inuit				Inuit			Total within category responses
		Full-time wage earner who hunts	Full-time wage earner who doesn't hunt	Student who hunts	Full time hunter	Retired hunter	Full-time wage earner who hunts	Part time hunter & wage earner	
1. Growth of Northern Populations	11.1% Total (8 of 72)								
a) Impacts	26.3% non-Inuit								
i. Overutilization	(5 of 19)	2	2				1		5
ii. Underutilization	5.7% Inuit	1							1
iii. Pollution and Debris	(3 of 53)			2					2
2. Alternative Uses of the Resource	8.3% Total (6 of 72)								
a) Game ranching/ herding	21.1% non-Inuit (4 of 19)	1	2				1		4
b) Sporthunting	3.8% Inuit	1							2
c) Community harvesting	(2 of 53)	1	1				1		2
d) Tagging Lottery		1						1	2
3. Education - Southern and Northern	5.6% Total (4 of 72)	1	1				2		4
	10.5% non-Inuit (2 of 19)								
	3.8% Inuit (2 of 53)								

Table 13: (Continued)

Responses	Categorical Responses	Non-Inuit		Student who hunts	Full time hunter	Retired hunter	Inuit		Unem- ployed	Total within category responses
		Full-time wage earner who hunts	Full-time wage earner who doesn't hunt				Full-time wage earner who hunts	Part-time hunter & wage earner		
4. Wastage/improper hunting/conservation	6.9% Total (5 of 72) 0% non-Inuit 9.4% Inuit (5 of 53)			1			1	3		5
5. Exploration/Mining Activities & Impacts	1.4% Total (1 of 72) 0% non-Inuit 1.9% Inuit (1 of 53)						1			1
6. Resource Use Conflict	2.8% Total (2 of 72) 10.5% non-Inuit (2 of 19) 0% Inuit	1	1							2
7. Caribou Management and the CMB	23.6% Total (17 of 72)									
a. Improved dialogue- CMB & local people	5.3% non-Inuit (1 of 19)				2	3	2	1		8
b. Local input into management	30.2% Inuit (16 of 53)				1		1	1		3
c. Better coordination between groups & gov't in managing the resource		1					1			2

Table 13: (Continued)

Responses	Categorical Responses	Non-Inuit				Inuit			Total within category responses
		Full-time wage earner who hunts	Full-time wage earner who doesn't hunt	Student who hunts	Full-time hunter	Retired hunter	Full-time wage earner who hunts	Part-time hunter & wage earner	
d. Good representation on the CMB						1		1	2
e. Board "action" vs. dialogue							1	1	2
f. Increased native reps. on Board							1		1
g. Management headquarters moved to Kwtm.							1		1
h. The CMB, land claims and the future							3		3
i. Examination of management in other areas							1		1
8. Caribou Biology	5.6% Total								
a. Accurate Population Surveys	(4 of 72) 5.3% non-Inuit			1					1
b. Concern over research techniques-spraying, tagging, rad. coll.	(1 of 19) 5.7% Inuit (3 of 53)						2		2
c. inc. herd numbers and cont. well being			1						1
9. Impact of Animal Rights Groups	2.8% Total (2 of 72) 5.3% non-Inuit 1.9% Inuit	1					1		2

Table 13: Continued

Responses	Non-Inuit					Inuit				Total within category responses
	Categorical Responses	Full- time wage earner who hunts	Full- time wage earner who doesn't hunt	Student who hunts	Full- time hunter	Retired hunter	Full- time wage earner who hunts	Part- time hunter & wage earner	Unem- ployed	
10. Environmental Impacts	4.2% Total (3 of 72)									
a. drowning	0% non-Inuit									
b. disease mon- itoring	5.7% Inuit (3 of 53)			1			1	1		2
11. Quotas on "residents"	1.4% Total (1 of 72)							1		2
a. Non-Inuit	5.3% non-Inuit		1							1
b. Inuit	0% Inuit		1							1
12. No other concerns or comments (*note - fatigue, out of time)	25% Total (18 of 72) 10.5% non-Inuit 30.2% Inuit (16 of 18)	2		3	3		4	5	1	18
13. Que not asked	1.4% Total (1 of 72) 0% non-Inuit 1.9% Inuit						1			1

Σ=72 category responses. n = 58 (10 non-Inuit, 48 Inuit, Σ = 19 non-Inuit responses (categorical))
 Σ= 53 Inuit categorical responses. x/72 = (%) Total for each category. x/19 = % Non-Inuit responses,
 x/53 = % Inuit responses.

Appendix C
SYNOPSIS OF RESULTS OBTAINED

1. The Caribou Management Board and Public Awareness

In the study, it was found that three-quarters of the people surveyed had heard of the CMB. Slightly less than 50% knew of Board goals, activities and progress.

2. The Need for Caribou Management

It was found that approximately 85% of the individuals surveyed said "yes" to either the concept of management or to a management body (CMB) to carry out that function. More than half of those persons felt that the CMB specifically, was needed.

3. The Function of Caribou Management

Two views were expressed with this question. About one-quarter of the sample saw the function of management in an educational context. The remainder defined the function of management in terms of taking action on local issues of importance.

4. Improvements for the CMB

Over 50% of the sample did not respond to this consideration. Of those which did, 30% were concerned about improved communication, contact and local input. Ten percent wanted the Board to take action on issues of local concern.

5. Caribou News

Almost 90% of the sample were aware of Caribou News and three-quarters had read it at least once. Slightly over 70% of the Inuit subsample were aware of the paper and had read it. The general impression of the paper was good with more than 40% of the Inuit subsample stating that there was no need to change anything about it.

6. Other Media Modes for Dialogue Exchange

Almost 30% of the responses favored the use of local radio exclusively, to better facilitate communication between the CMB and local townspeople. About one-quarter of the responses favored the public meeting concept. When organized and advertised properly, this figure increased to 40%. Better than 10% favored involvement of the local Hunters and Trappers Association (HTA). One-quarter of the sample supported a combination of media modes to relay information.

7. Issues of Concern

One-third of the total response was concerned over hunting technique and conservation - especially - wastage in terms of leaving meat and skins out on the land. Almost one-

quarter of the total response was concerned with "Caribou Biology". Eight percent mentioned caribou management and the CMB while 10% of the response was concerned with environmental factors (i.e. drowning) and their impacts on the herds.

8. Sporthunting

About 75% of the sample did not support unguided spor-thunts. Approximately 85% supported guided sporthunts on the grounds that; (1) it provided a source of income; (2) meat was not wasted; (3) safety considerations; (4) it could be properly controlled and restricted; (5) it was legally permissible and; (6) if local needs were met first and the herds could support it.

9. Commercial Harvest

More than 50% of the Inuit subsample said "no" to the intercultural sale of meat. More than 50% of that same subsample said "yes" to selling meat to "southern" markets with a number of qualifiers attached -ie- if the herds could support it and if the enterprise could be properly controlled and restricted. Approximately 15% would not respond to the first consideration while 20% would not respond to the second. Several individuals suggested intersettlement trade as being a feasible alternative.

10. Non-Inuk, "Northern Resident" Quotas

More than three-quarters of the sample supported more or equal rights based on length of time spent in the community and on community status (i.e. intracultural marriage).

11. Future Issues of Concern

Twenty-five percent had no other concerns, while about 25% mentioned "caribou management and the CMB". Better than 10% were concerned over the impact that growing northern populations and their settlements will have on the caribou resource. Seven percent mentioned wastage, conservation and improper hunting technique as an issue of future concern.